

INSTITUTE *of*  
NUCLEAR  
MATERIALS  
MANAGEMENT

# ANNUAL REPORT TO THE MEMBERSHIP

October 1, 2019 - September 30, 2020



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# Institute of Nuclear Materials Management – 2020 Annual Report

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## **Annual Business Meeting**

**Tuesday, July 14, 2020**

**6:00 PM EDT**

## **INMM 61<sup>st</sup> Annual Meeting (Virtual)**

*[SEE ANNUAL REPORT TO THE MEMBERSHIP PUBLICATION]*

- |     |  |                             |
|-----|--|-----------------------------|
| 1.  | Call to Order  | Crawford                    |
| 2.  | Approval of Minutes  | McKinney                    |
| 3.  | President's Report   | Crawford                    |
| 4.  | Treasurer's Report   | Franks (for Treasurer Curl) |
| 5.  | Secretary's Report   | McKinney                    |
| 6.  | Committee Reports  | Crawford                    |
| 7.  | Chapter Reports  | Pepper                      |
| 8.  | Technical Division Reports   | Pepper                      |
| 9.  | New Business   | Crawford                    |
|     | <ul style="list-style-type: none"><li>• Outgoing Executive Committee Awards</li><li>• Recognition of Sustaining Members</li><li>• Recognition of New Senior Members</li><li>• Resolutions of Respect</li></ul> |                             |
| 10. | Drawings for Two Complimentary 2021 Memberships  |                             |
| 11. | Adjournment  |                             |

# ANNUAL BUSINESS MEETING MINUTES

Tuesday, July 16, 2019

6:30 – 8:00 p.m.

## Call to Order

The 60<sup>th</sup> Annual Business Meeting of the Institute of Nuclear Materials Management, an Ohio nonprofit corporation, convened on July 16, 2019, JW Marriott Desert Springs Resort & Spa, Palm Desert, CA, after notification to all members. President Cary Crawford announced that a quorum was present and called the meeting to order.

## Approval of Minutes

The minutes from the 2018 Annual Business Meeting were presented. A motion was moved and seconded to approve the minutes. Motion passed.

## President's Report

President Cary Crawford opened his remarks by welcoming Purdue University as our newest student chapter noting that they had already held a successful workshop.

The INMM has announced that the 2021 Annual Meeting will be in Vienna, Austria and we will be welcoming the ESARDA meeting participants, where an announcement has also been made. He encouraged all to make connections and to take an active role inviting those who may have had difficulty travelling to the US for the INMM Annual Meeting. He also welcomed active participation in meeting planning and encouraged those who will reach out to speak to an EC member in advance to ensure uniform messaging regarding the meeting.

Meeting attendance had been dropping slightly since 2013 but now seems to be holding steady. Participation this year is up slightly, and Crawford thanked those involved in their local organizations for marketing and supporting the meeting.

## Financial Report

Treasurer Bob Curl reported on the financials of the Institute. This fiscal year looks good; we're not gaining ground but we're not losing ground either. This year net revenue is up but he reminded everyone that INMM will host the PATRAM meeting this year which is a large part of this year's gain. Total revenue last year was a loss of \$115k so next year will need to be better to make up the difference. This year we're not gaining or losing ground. As of June 30, 2019 we show projected income of \$18k. He finished his report reviewing specific, key categories.

## Election Report

Secretary Chris Pickett announced the results of the FY2020 election. Candidates were put forward by the INMM for the positions of Secretary and Members-at-Large. Voting notification

with instructions for accessing the on-line voting system were distributed by email or post to all eligible members. Approximately 20% of the membership voted.

As a result of the balloting, the Officers and Members-at-Large constituting the INMM Executive Committee beginning October 1, 2019, are:

President	Cary Crawford
Vice-President	Susan Pepper
Secretary	Teresa McKinney
Treasurer	Robert Curl
Immediate Past President	Corey Hinderstein

Members-at-Large:

James Andre	9/30/21
Tina Hernandez	9/30/21
Therese Renis	9/30/20
Irmgard Niemeyer	9/30/20

### **Committee Reports**

President Cary Crawford noted that committee reports are included in the Annual Report to the Membership and encouraged members to read the reports. He highlighted several committees then thanked specific individuals whose committee work is important for the Annual Meeting. Specifically, Arden Dougan, Chair, Awards, Melissa Einwechter, Chair, Education and Training, Nancy Jo Nicholas, Chair, Fellows, and Jim Andre for his work on the Student Paper Competition.

### **Chapter Reports**

Vice President Susan Pepper noted that we received reports most of our 40 chapters; 16 professional and 24 student chapters. She encouraged all to read the chapter reports and then highlighted various activities and collaborations. She was impressed to see chapter interactions, professional chapters and government labs supporting student chapters, and support provided to non-US student chapters.

### **Technical Division Reports**

Past President Corey Hinderstein reported that the Technical Divisions had a busy year and highlighted several activities. She thanked Morris Hassler for his service in the Facility Operation Technical Division and introduced Ben Watts as the new Chair. She also thanked all involved in the Packaging, Transportation and Disposition Technical Division for their work planning the PATRAM meeting taking place soon after this Annual Meeting. She encouraged all to contact Division Chairs to become involved in division activities.

## **New Business**

The floor was opened for new business.

## **Recognition of Sustaining Members**

Vice-President Susan Pepper recognized the Sustaining Members of the INMM. Renewing Sustaining Members received a 2019 plate for their Sustaining Member plaque. And our new Sustaining Member, Nuclear Threat Initiative received their plaque and plate.

## **Recognition of New Senior Members**

Vice-President Susan Pepper also recognized nine new Senior Members. Each new Senior Member received a certificate. The new Senior Members were James Andre, Lake Barrett, Roberta Burbank, Andrea Favalli, Zoe Gastelum, Akira Goto, Nina Rosenberg, Masaki, Saito, and Jessica White-Horton.

## **Resolutions of Respect**

Vice President Susan Pepper read and presented one Resolution of Respect for INMM members who passed since the 2018 Annual Meeting. A Resolution was presented Eero "Arnie" Hakkila.

## **Drawings for Two Complimentary 2020 Memberships**

At the end of the meeting, there was a drawing for two one-year regular INMM memberships for FY2020. The winners were Thomas Grice and Jim Shuler.

There being no other business, the Annual Business Meeting adjourned at 7:29.

# President's 2020 Report

Cary Crawford

It has been an unprecedented year with a worldwide pandemic, leading to our first-ever Annual Meeting being offered in a virtual format. I'm quite certain many of you have gone from being relative novices at virtual meetings to now being experts. Now we are faced with the strong desire to have personal interaction, which is one of the large attractions to the INMM Annual Meeting. We are hopeful that you are able to actively engage in this year's virtual meeting and find ways to make it as "real" as possible. From the perspective of the Executive Committee, we have spanned the full range of emotions around this meeting. What started out as a belief that we could wait it out and not have to go virtual ended with a stark realization this wasn't going away any time soon and we would need to make a quick decision. That started the search for a robust platform that was different from the traditional webinar approach, allowing for a more interactive experience. As I'm writing this just prior to the Annual Meeting, we are now past the nervous phase and are simultaneously excited about the interactive opportunity and anxious about the potential technical glitches. However, by the time you are reading this, I am hopeful that our anxiety has proven unwarranted and we have had another successful annual meeting.

A major change in our Annual Meeting planning that might go unnoticed amid the many changes required to implement a virtual meeting is that in 2020 the INMM formalized the management of the Annual Meeting by creating an Annual Meeting Committee and organizing Annual Meeting-related activities, such as the Technical Program Committee, the Exhibits and Sponsorship Committee and the Registration Committee, underneath it. The purpose of this is to ensure that knowledge retention related to Annual Meeting organization since previously the overall responsibility for the Annual Meeting fell to the Vice-President, who may or may not have any prior experience implementing the Annual Meeting. Larry Satkowiak was installed as the Chair of the Annual Meeting Committee and Carrie Mathews took the helm of the Technical Program Committee, including the coordination of our outstanding slate of plenary speakers.

Let's all hope that this pandemic dissipates, and we are able to fulfill our commitment to hold yet another precedence-setting event. As you will recall, we are contracted to hold the 2021 annual meeting in Vienna, Austria, August 21-26, at the Austria Center, which is conference facility located next to the Vienna International Center. When I first stepped into the role of Vice President of the INMM, Corey Hinderstein and I immediately began working towards this effort to further promote our strategic objective of ensuring access to broader international audience. We have made great strides the last decade in expanding our presence, as evidenced by the map of INMM Professional and Student Chapters (on our website) and this move allows to work towards becoming "the leading international professional society for the stewardship of nuclear materials and related technologies to enhance global security". We are also gratified that ESARDA has agreed to hold this as a joint meeting so that we can further reach the

broadest audience. We look forward to beginning our planning in earnest immediately after the virtual Annual Meeting.

We would like to thank Therese Renis and Irmgard Neimeyer who are finishing their terms as members-at-large in September of 2020. It is also time for us to thank Corey Hinderstein for her six years of service as Vice President, President, and Immediate Past President of the INMM. Corey has done a stellar job in this position with noteworthy initiatives and challenges. Early on, she led us through the most thorough strategic planning process in recent memory, and I would argue in the INMM's history. This process not only created key objectives that led to efforts to diversify the Institute in many different aspects of the term (gender, racial, international, etc.), but also caused us to take a closer look at our management structure and processes. Unbeknownst to the leadership at the time, this would lead to changing our Association Management company and more intentional business structures. Other changes came with it to include a much stronger entry into the digital age, making much better use of social media and other digital technologies. Holding a virtual meeting this year would not have been as seamless had we not stepped through much of this strategic planning process, and I would like to thank Corey for her vision in this way. Finally, and as stated above, the ability to move towards a truly international organization was something on Corey's mind when I stepped into the Vice President role, and this made committing to the INMM's first Annual Meeting outside of the United States much easier. Please take the time to thank Corey for her service and Annual Meeting or elsewhere!

While I've certainly left off many activities of the Institute that have occurred this past year, I would like to thank each of our members for their support of the Institute and for bearing with us as we manage this new territory of virtual meetings. I look forward to seeing everyone at our Annual Meeting in Vienna next year.

# Treasurer's Report

**Robert U. Curl**

As of March 31, 2020, the Institute of Nuclear Materials Management's total assets were \$790,130. These assets included \$723,314 in cash, \$46,372 in receivables, and \$20,444 in fixed assets. The associated total liabilities were \$15,656 resulting in net assets of \$774,474.

The FY 2019 gross income was \$1,505,334 and the associated expenses were \$1,164,990 resulting in a net surplus of \$340,344 for the fiscal year. The main contributor to the gain was the income from PATRAM, which came in almost 18% over budget while expenses were 14% under budget.

In October the Executive Committee approved a FY 2020 budget with established at a projected income of \$733,780 and expense of \$750,740, which results in a net surplus of \$16,960.

However, as you know, due to Covid-19, it became clear that it would not be feasible for INMM to hold our Annual Meeting in person, due to travel restrictions, health concerns, and social distancing directives. So, we revisited the budget to include the change in expenses and projected income associated with our virtual event.

A breakdown of FY 2020 income and expense projections, by major category, is below.

REVENUE		EXPENSE	
Administration	\$110,680	Administration	\$327,260
Annual Meeting	277,295	Annual Meeting	108,442
Proceedings	991	Executive Committee Meeting	4,500
Journal	6,500	Journal	1,500
PATRAM	2,944	PATRAM	1,000
Spent Fuel Seminar	48,425	Spent Fuel Seminar	34,621
Likelihood of an Attack	13,600	Likelihood of an Attack	8,219
International Safeguards Workshop	14,152	International Safeguards Workshop	6,950
ESARDA Workshop	32,248	ESARDA Workshop	30,241
Emerging Digital Technologies	0	Emerging Digital Technologies	0
<b>Total Revenue</b>	<b>\$506,835</b>	Committees	47,230
		<b>Total Expense</b>	<b>\$569,963</b>

Any INMM Member wishing to obtain a copy of the FY 2019 year-end financial statement may do so by contacting Robert Curl, INMM Treasurer, or Elizabeth Franks, INMM staff.

# Secretary's Report

**Teressa McKinney**

According to INMM bylaws, "the Secretary shall notify each member in good standing of the results of the election before October 1 of each year." This notice in the Annual Report, the Communicator, and the Journal is construed as having met that obligation.

## **Board Elections**

In accordance with the bylaws, the Nominating Committee selected the following candidates to be placed on the ballot for Vice President and Members-at-Large of the INMM Executive Committee.

### **Vice President:**

Mark Schanfein

Houston Wood

### **Members-at-Large:**

Daniel Johnson

Sarah Poe

Leon Ratz

Heidi Smartt

We hope that those who voted found it easy to participate in the balloting process. Voting notification with instructions on how to access the online voting was sent by e-mail on May 15 to each of the 722 eligible Institute members, of which 204 fully completed the ballot (28.25%). As a result of the balloting, the Officers and Members-at-Large constituting the INMM Executive Committee beginning October 1, 2020, are as follows:

**President** – Susan Pepper

**Vice President** – Mark Schanfein

**Secretary** – Teressa McKinney

**Treasurer** — Robert Curl

### **Members-at-Large:**

Tina Hernandez – 9/30/21

Jim Andre – 9/30/21

Heidi Smartt – 9/30/22

Sarah Poe – 9/30/22

## **Immediate Past-President — Cary Crawford**

There were write-in votes for the following:

### **Vice President**

Peter Mason

Ken Sanders

### **Members-at-Large**

William (Bill) Bates

We continue to encourage members to recommend candidates to the Chair of the Nominating Committee. It has been the practice of the nominating committee to select candidates who have had INMM involvement in committees or chapters, who are generally familiar with the overall operations of the INMM and have a working knowledge of the Executive Committee. Candidates for the Executive Committee may also be nominated for any of the elective offices or positions by fifteen (15) members who submit a petition to the Secretary. (See INMM Bylaws for details)

### **Bylaws Changes**

Also included in this year's ballot was a proposed change to the INMM Bylaws.

The amendments to the Bylaws were proposed because INMM's two primary governing documents - Bylaws and an Operations Manual - had duplicate and often conflicting information and it became necessary to separate them into two separate and distinct documents. Consequently, the Bylaws were revised to reflect the essential WHAT's of the Institute and the Operations Manual has been revised to reflect HOW the Institute accomplishes its routine business.

Of the 204 votes received for this Bylaws change, 195 (95.59%) approved, and 10 (4.90%) did not. The Bylaws changes were passed by majority vote.

# N14 Technical Standards

## Packaging and Transport of Radioactive And Non-Nuclear Hazardous Materials

- Matthew R. Feldman, N14 Chair
- William (Bill) Lake, N14 Vice Chair
- Ronald B. Natali, CQA, N14 Secretary

### N14 Report to INMM Executive Committee

#### Committee Activities

Revision of two existing standards is currently underway:

- N14.5-20XX - Leakage Tests on Packages for Shipment
- N14.7-20XX - Guidance for Packaging Type A Quantities of Radioactive Materials

Each of these standards is being revised to ensure they meet existing regulatory requirements.

The annual meeting that was planned for this year was postponed due to COVID-19. When this pandemic settles down and we return to a new normal annual meeting details will be announced. Alternatively, N14 will have a virtual annual meeting.

#### Standards Activities

**N14.1-2019** – Uranium Hexafluoride – Packagings for Transport  
Chair, Steve Hansen, VP Regulatory Compliance, TAM International

N14.1-2019 has been published. The N14.1 draft standard was prepared by the writing committee and submitted to the N14 Consensus committee for approval. Comments were received and resolved, and the standard was approved December 2019. In the future when the ISO 7195 is finalized it is anticipated that the N14.1 Chair will review the new standard and determine if N14.1 needs to be revised prior to the normal 5-year revision process.

**N14.5-2014** – Leakage Tests on Packages for Shipment  
Chair, Todd Sellmer, Manager Packaging and Information Systems

September 4, 2018 the N14 Secretary submitted to the ANSI Project Initiation Notification System (PINS) to let ANSI know that N14 would be revising N14.5-2014, Leakage Tests on Packages for Shipment. The PINS announcement was open for public review and comment for 30-days and at the end of this time period there were no comments. The N14.5 writing committee is currently revising this standard and as of July 2020 they are working on their final

revision. It is anticipated that the revised draft standard will be submitted to the N14 Consensus committee for balloting by the end of August 2020.

**N14.6-1993** – Special Lifting Devices for Shipping Containers Weighing 10,000 Pounds (4500 kg) or More  
Chair – Vacant

The work on N14.6 has stalled due to lack of writing committee leadership. The N14 chair, has been working for the past couple of years to get a new chair and establish a new working group for this standard. But so far no one has volunteered to chair this writing committee. There have been a number of requests to know when this will be revised, but as noted above until there is writing group chair the standard will remain withdrawn. The standard has been officially withdrawn by ANSI because the standard is older than 10 years.

**N14.7-2013** – Guidance for Packaging Type A Quantities of Radioactive Materials  
Chair, Mark Hawk, DOT Packaging Consultant  
Vice Chair, John (Woody) Woodbury, Packaging Management Council Coordinator, DOE Consultant

In April 17, 2017 the N14 Secretary submitted to the ANSI Project Initiation Notification System (PINS) to let ANSI know that N14 would be revising N14.7-2013, Guidance for Packaging Type A Quantities of Radioactive Materials. The PINS announcement was open for public review and comment for 30-days and at the end of this time period there were no comments. The main reason for this revision is to update the standard to the current Department of Transportation (DOT) requirements identified in their final rule HM-250. Due to the large number of comments received (over 250) from the N14.7 writing committee Mr. Woodbury volunteered to step in as a vice-chair to assist the N14.7 chair in tracking and resolving the comments and move the standard along. As of July 2020 the N14.7 Chair is working to have the standard ready for balloting by the N14 Consensus membership at the end of July.

**N14.33-20XX** – Characterizing Damaged Spent Nuclear Fuel for the Purpose of Storage and Transport  
Chair, Steve Maheras, PhD. Email Address - Steven.Maheras@pnnl.gov

Dr. Steve Maheras was selected by ballot to be the new N14.33 Chair as of March 1, 2020. June 2020 the N14 Secretary sent to the N14 Chair all of the most current work that Mr. Bill Lake has completed while acting as N14.33 Chair. The N14 Chair is work with Dr. Maheras to train him as to his responsibilities as the new N14.33 Chair and bring him up to date as to the status of this standard.

**N14.36-2020** – Measurement of Radiation Level and Surface Contamination for Packages and Conveyances  
Chair, Ashok Kapoor, Consultant

The N14.36 writing committee submitted a revised version of the standard for balloting in late 2018. Due to substantive resolution to comments received during the initial round of balloting an additional round of balloting was required per N14 procedure. That balloting was finalized earlier in 2020 and the revised N14.36-2020 was approved by ANSI on May 14, 2020.

### Administrative Notes

N14 Chair Matt Feldman officially retired from Oak Ridge National Laboratory (ORNL) on March 13, 2020. On March 16, 2020 Feldman started a staff position with Pacific Northwest National Laboratory (PNNL). His new email address is matthew.feldman@pnnl.gov and he intends to continue his stewardship of N14 into the foreseeable future.

# INMM Accredited Standards Committee N15

## Methods of Nuclear Material Control

### Annual Report to the INMM INMM Membership

### July 2019 – July 2020

Status of INMM Accredited Standards Committee (ASC) N15 Standards

INMM ASC N15 has four active standards:

- N15.8-2009 (R2015) – Methods of Nuclear Material Control, Special Nuclear Material (SNM) Control and Accounting Systems for Nuclear Power Plants;
- N15.36-2010 – Measurement Control Program, Nondestructive Assay Measurement Control and Assurance;
- N15.51-2017 – Measurement Control Program, Nuclear Materials Analytical Chemistry Laboratory;
- N15.56-2014 – Nondestructive Assay Program, Non-Destructive Assay Measurements of Nuclear Material Holdup: General Provisions.

All four active standards were published by ANSI and are available for purchase online at <http://webstore.ansi.org/>.

INMM ASC N15 has several standards under review or development, including:

- **N15.8-2009** (R202x) – Methods of Nuclear Material Control, Special Nuclear Material (SNM) Control and Accounting Systems for Nuclear Power Plants (active). The active standard N15-8-2009 (R2015) is undergoing its 5 year review cycle as part of periodic maintenance under ANSI requirements. Based upon the recommendation and request from U.S. Nuclear Regulatory Commission (U.S. NRC) stakeholders to reaffirm the standard, the N15 Board submitted a Project Initiation Notification System (PINS) notification to ANSI on May 07, 2020. The intent to reaffirm was announced in ANSI Standards Action publication on May 22, 2020. The N15 Board is working with NRC stakeholders to prepare N15.8-2009 (R202X) for N15 consensus body ballot vote.

- **N15.19-1989** – Volume Calibration Techniques (not active). An N15 writing team has reviewed Parts 1 through 6 of the International Organization for Standardization (ISO) Standard 18213, “Tank Calibration and Volume Determination for Nuclear Materials Accountancy,” as part of the ANSI process for adopting the ISO standard as an American National Standard. The final round of comments on a consolidated draft have been collected and reconciled. Once the writing team is satisfied with the changes, the standard will be technically edited and submitted for voting by the N15 consensus body ballot roster.
- **N15.28-1991** – Guide for Qualification and Certification of Safeguards Personnel (not active). An N15 writing team (WT) has completed a comprehensive final review and reached consensus on the draft revised standard. The WT goal was to update the standard and incorporate content on the systematic approach to training as applied to safeguards and security personnel. Technical editing was performed and the edits resolved. The N15 Board conducted an INMM ASC N15 consensus body ballot vote August 28 to October 9, 2019. The ballot results were affirmative or affirmative with comment, and one negative vote. All comments received during ballot vote are being addressed by the writing team. The revised draft standard will be submitted for a second consensus body ballot vote.
- **N15.36-2010** – Nondestructive Assay Measurement Control and Assurance (active). This active standard is undergoing its 5 year review cycle as part of periodic maintenance under ANSI requirements. The writing team has completed review and revision of the N15.36 standard using teleconferences and webinars throughout 2019, 2020 and COVID-19. The N15.36 revision draft was submitted for technical editing and the team is working with the technical editor to resolve comments. The final draft N15.36 standard will then be submitted for N15 consensus body ballot vote.
- **N15.41-1994** – Measurement Control, General Principles (not active). A writing team under the leadership of Phillip Gibbs (Chair) and Jackie Shipwash (N15 Writing Team Liaison), are working to review and complete the revision of N15.41 standard and has revisited multiple areas of technical content. The N15.41 writing team is working to expand/clarify the discussion on several key aspects of measurement control as it relates to nuclear security, e.g. the role that measurement control plays with respect to inventory difference (ID) evaluation and the management of measurement uncertainty (random and systematic error) with respect to the ID evaluation process. The group hopes to complete work before the end of 2020.
- **N15.56-2014** – Nondestructive Assay Program, Non-Destructive Assay Measurements of Nuclear Material Holdup: General Provisions (active) - This active standard is undergoing its 5 year review cycle as part of periodic maintenance under ANSI requirements. On November 21, 2019 the N15 Board submitted to ANSI the intent to revise the current active standard. The notification was published in ANSI Standards Action on December 6, 2019. Ram Venkataraman, ORNL, accepted the position of Chair and has assembled a writing team of interested parties to begin the review and revision of N15.56-2014. The team held their first webinar in April 2020 to discuss key topics for the revision, develop a plan and schedule.

- **N15.57-201X** - Methods of Nuclear Material Control – Inventorying UF6 Cylinders at Conversion, Enrichment, and Fuel Fabrication Plants (new standard). On June 25, 2019 the N15 Board submitted a PINS notification to ANSI of the intent to develop a new standard based upon stakeholder interest and request to develop a voluntary consensus standard for the labeling and tracking of UF6 cylinders. The PINS announcement was published in ANSI Standards Action on July 12, 2019. Michael Whitaker and Jessica White-Horton, ORNL, co-chairs, are assembling a writing team to begin drafting the new American national standard for the U.S. industry to improve the efficiency of conducting a physical inventory of UF6 cylinders for material control and accountability purposes under nuclear safeguards. The team plans to use the global identifier described in World Nuclear Transport Institute (WNTI) consensus standard: WNTI Standard for UF6 Cylinder Identification ([www.wnti.co.uk/media-centre/publications/wnti-standards.aspx](http://www.wnti.co.uk/media-centre/publications/wnti-standards.aspx)) as a guide. They are also working with INMM ASC N14 and the ANSI N14.1 – Packaging of Uranium Hexafluoride for Transport writing team for coordination between the two standard developers.

### **Outreach and Collaboration**

- **N15.56-2014** - Nondestructive Assay Program, Non-Destructive Assay Measurements of Nuclear Material Holdup: General Provisions (active). N15.56 writing team member(s) continue to participate as members of an American Nuclear Society (ANS) writing team preparing a new nuclear criticality safety standard titled: ANSI/ANS-8.28 - Administrative Practices for the Use of Nondestructive Assay Measurements for Nuclear Criticality Safety. This new ANS standard is meant to be used in conjunction with N15.56.
- **ASC N15/INMM 5.1 Subcommittee** (Analytical Chemistry Laboratory Measurement Control) - Communications with nuclear material analytical laboratories, domestic (e.g., DOE and NRC) facilities and international (e.g., ABACC, IAEA, IRMM, ITU, JAEA) agencies are maintained by extending invitations to participate in the annual meetings of INMM ASC N15 and the N15/INMM 5.1 Subcommittee and by seeking their input on nuclear measurement methods throughout the year. The INMM 5.1 Subcommittee provides input into the IAEA International Target Values for nuclear safeguards measurements.

The INMM ASC N15 Board submitted to ANSI in September 2019 the N15 vote for 2020 ANSI Organizational Member Forum (OMF) Chair and Vice Chair positions. (The OMF provides a forum for standards developers, U.S. professional societies, trade associations and academia “to discuss national and international standards development and conformity assessment issues of interest”.) An N15 Board Officer participated in ANSI World Standards Week activities, Nov 4-8, 2019 in Washington, D.C. The N15 Board participated in the ANSI 2020 ASD Compliance Form, New BSR-9 Form and 2020 Essential Requirements Webinar held January 22 and February 11, 2020, and an ANSI OMF forum Webinar June 17, 2020 to discuss COVID-19 response activities, the United States Standards Strategy, and ANSI Executive Committee (ExSC) activities including proposed procedural revisions.

The N15 Board participated in INMM Executive Committee meetings in November 2019 and March 2020, provided review and input into draft revised INMM bylaws, contributed to development of a new INMM position for “Marketing Chair”, and participated in INMM financial planning sessions spring – early summer 2020. N15 Board of Officers plan to hold one joint annual INMM ASC N15 and INMM N15/INMM 5.1 Subcommittee meeting via WebEx in July 2020 in conjunction with the INMM 61th Annual Meeting (Virtual), and to attend, when possible, INMM Technical Division or User Group meetings to speak about N15 activities. These two N15 meetings (joint for 2020) include domestic and international attendees, professionals, retirees and students. Announcements of the annual N15 meetings are emailed to the N15 general membership and interested parties.

**Summary.** The N15 Board would like to thank all who contribute to and participate in the development of INMM ASC N15 voluntary consensus standards. We invite all those with a material and stakeholder interest in N15 standards to attend our meetings. Please visit the INMM ASC N15 website at <https://inmm.org/page/n15> .

Respectfully submitted on behalf of N15 by,

Melanie May, Chair  
[melanie.may@hq.doe.gov](mailto:melanie.may@hq.doe.gov)

Lynne Preston, Vice Chair  
[lynne.preston@hq.doe.gov](mailto:lynne.preston@hq.doe.gov)

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Jackie Shipwash, N15 Writing Group Liaison  
[Jackie.Shipwash@tetrattech.com](mailto:Jackie.Shipwash@tetrattech.com)

## Annual Meeting Committee Report

Lawrence Satkowiak, Chair

The Annual Meeting Committee was established after the 2019 Annual Meeting with the November EC meeting as a starting point. Briefly, the AMC works closely with INMM Headquarters Staff, and is responsible for planning, organizing, and conducting the INMM Annual Meeting. The AMC Chair provides oversight for the Technical Program Subcommittee, the Plenary Subcommittee, and the Registration Subcommittee in conjunction with INMM Headquarters staff. Carrie Mathews serves as the Technical Program chair as well as the AMC deputy chair.

During late 2019, the AMC focus was on the planned 2021 Annual Meeting (AM21) in Vienna, Austria in August. To that end, the AMC chair, INMM Vice-President Susan Pepper and

President Cary Crawford arranged to meet with Association Headquarter's (AH) staff on the margins of the IAEA Nuclear Security Conference in February, 2020, and tour the planned meeting facilities at the Austria Centre adjacent to IAEA main building (Vienna International Centre). Morris Hassler, Exhibits and Sponsorship Committee Chair, also joined us to assess the exhibit space. We all agreed that the venue would be a good fit for the INMM and its needs. During that same week, we met with IAEA Director General Grossi and several of his staff, Tammy Taylor (Comprehensive Test Ban Treaty Organization), and Roger Howsley (World Institute for Nuclear Security) to solicit their organizational support for AM21.

In March, the Technical Program Committee met and collectively reviewed the abstracts submitted for the 2020 Annual meeting, AM20, to be held in Baltimore, MD, in July. The abstracts were sorted into sessions, with an emphasis on cross (multiple technical divisions) cutting subjects and a technical program was developed. A job well done by the whole TPC and Technical Division Chairs. The opening and closing plenary speakers were identified and invitation letters were sent out. We were all looking forward to another great annual meeting in Baltimore's beautiful inner harbor. Then the coronavirus (COVID-19) reared its ugly head.

In late March an ad hoc INMM Annual Meeting Contingency Planning Committee was established with senior leadership from the AMC, the Executive Committee and AH in anticipation of a possible disruption of AM20 due to COVID. As part of our contingency planning we did a cost-benefit analysis of three possible scenarios, a full in-person meeting, partial in-person partial virtual meeting, and a fully virtual meeting. Canceling the meeting completely was also discussed but was dismissed from both a financial perspective and a sense of responsibility to our INMM constituency. By late April to early May, it became obvious that an in-person meeting would not be possible in July. We began exploring options in terms of a service provider to assist with virtualizing the meeting since this was completely outside of our experience base. AH had a positive experience with Falcon Events, a concierge streaming service that provide end-to-end services for conference events. By mid-May, the decision was made to do a completely virtual AM20, a contract was signed with Falcon Events and the transformation of our standard Annual Meeting (our 61st) into a virtual event began. Through the heroic efforts of our TPC chair (Carrie Mathews), AH staff (Beth Hogan, Liz Franks, Julia Vargo and others), and everyone else involved, a new program was developed and is being implemented. INMM is fortunate to have someone like Carrie with her drive, passion, and organizational skills in that position, a job well done!

**Registration Subcommittee Report-** INMM is currently in search of a Registration Subcommittee Chair. A solicitation for a volunteer was sent out with no response. Since AM20 is a virtual meeting, all registrations are being handled by AH. We will continue search for a volunteer to fill this role after AM20.

## Exhibit and Sponsorship Committee Report

Morris Hassler, Chair

As with the rest of the 2020 Annual Meeting, the Exhibits and Sponsorships Committee have been challenged to move a Virtual experience. I applaud AH and the Executive Committee in deciding upon a virtual platform that does accommodate a virtual exhibit hall. However it has been difficult convincing our exhibitors and sponsors to try this new media and way of reaching customers, colleagues, and other vendors and we did not have the growth we desired over last year's Annual Meeting. As of this report, we have two Platinum sponsors, two Silver sponsors, one Bronze sponsor, and three exhibit only sponsors. We had two exhibitors/sponsors (one Gold and one Silver) that wanted to cancel but we were able to convince them otherwise and to move their exhibit/sponsorship to 2021. This equates to revenue of \$62,450 with \$15,000 will be a liability for next year's exhibit/sponsorship revenues.

AH quickly modified a prospectus for a Virtual Exhibit Hall and other respective advertisements and offerings. Below are some of the highlights to how the Virtual Exhibits and Sponsorships were offered in an email blast to potential Exhibitors and Sponsors.

#### FALCON EVENTS

Our vendor-partner this year, producing the virtual meeting, is [Falcon Events](#). Falcon will be contacting and working with you directly to build out your page, and answer any questions you may have for this new process.

#### VIRTUAL BOOTH EXPERIENCE

You will be given a virtual booth to exhibit your materials and deliver your message. Our virtual platform will provide you a branded page, with hosting capabilities for various documents, media files, and live engagements. A great feature of your virtual booth is that INMM will be able to deliver analytics to you, the exhibitor, regarding what attendees visited your booth and what assets they clicked on within your booth. You will receive analytics via email within 7 business days following the conclusion of the annual meeting. Something we would not have for an in-person event.

#### OPTIONS FOR VIRTUAL BOOTH

**Logo and Description:** Dress up your exhibit page with your company logo, description, and any other unique characteristics that will make your space unique to your brand.

**File Hosting:** documents, brochures, presentation slides, PDFs, on-demand audio and video hosting

**External Links:** we can list external links that users can click on and be taken to a web experience that you provide, and provide you analytics on who clicked on such links

**Surveys and Contests:** Utilize our platform's integrated survey feature to schedule 1-on-1 meetings with attendees, capture lead information; or even get creative and create a door prize game. \*Door prizes are an additional fee and must go through INMM Headquarters.

**Live Chat:** Embed a live chat room within your booth space that you can moderate in real time. Facilitate group and private chat sessions with attendees. If you opt to use this feature,

we encourage the exhibitor to be in their respective chat room during scheduled exhibit hall hours.

**Face-to-Face Video Conference:** Facilitate your own live conversation with attendees during the annual meeting. You provide your video conference platform link (e.g., Zoom, Webex, GoTo), and we will build it into the platform for attendees to see and have the option to attend.

If you as an exhibitor would like to have a live engagement with attendees (Live chat or face-to-face), please plan to be present for some of the scheduled exhibit hours. Falcon Events will reach out and confirm which exhibit hall hours you wish to be present, so that we can list those times on your exhibit page. Attendees may visit your booth during concurrent sessions to view your booth, but we ask for your virtual attendance during the dedicated times set.

Once again, we will build on the success of last year’s dedicated hours for visiting the exhibitors as shown in the table below. However, this year it is done in a virtual fashion at every break and we do not have to “tear down” on Wednesday at noon so we get a couple of extra break times for the exhibitors. These are designed to give maximum exposure to the exhibitors and value to those that purchase the packages. See the figure on the next page to virtual exhibit/sponsorship offerings were presented in the 2020 virtual meeting prospectus.

*Dedicated Exhibit Hall Times (We've added more dedicated hours!)  
All times are EDT*

<i>Monday, July 13</i>	<i>Tuesday, July 14</i>	<i>Wednesday, July 15</i>	<i>Thursday, July 16</i>
<i>2:15 pm – 2:45 pm</i>	<i>12:10 pm – 12:40 pm</i>	<i>12:10 pm – 12:40 pm</i>	<i>11:40 am - 12:00 pm</i>
<i>4:30 pm – 5:00 pm</i>	<i>3:50 pm – 4:20 pm</i>	<i>3:50 pm – 4:20 pm</i>	<i>1:40 pm - 2:00 pm</i>
	<i>5:40 pm – 6:00 pm</i>		

Overall, I believe we have done the most with the challenges that we were given and the short time period to adjust. We will take the lessons learned from this virtual experience to see how we can enhance the exhibitor/sponsor experience next year in Vienna!

Sincerely,  
Morris Hassler, Chair

	PLATINUM LEVEL \$15,000	GOLD LEVEL \$10,000	SILVER LEVEL \$5,000	BRONZE LEVEL \$3,250	EXHIBIT ONLY LEVEL \$2,100
Verbal Recognition During Opening Session	✓				
Session Support <i>Logo added to the session signage (Session can be selected for optimum exposure)</i>	\$2,000 Value	\$2,000 Value			
Dedicated Email Blast-Content provided by supporter, sent by INMM *	2 Emails	1 Email			
Video Commercials to be played in the Virtual Meeting Platform*	2	1	1		
Social Media Post, sent by INMM*	Facebook and LinkedIn	Facebook or LinkedIn	Facebook or LinkedIn		
Supporter Logo Package* <i>Recognition on Conference Website, Conference Emails, Digital Preliminary Program</i>	✓	✓	✓	✓	
Support Level Recognition Display for Booth	✓	✓	✓	✓	
Attendee Registration List <i>(Name, Organization, Title)</i>	Pre and Post	Pre and Post	Pre and Post	Post	Post
Inclusion in Exhibitor Passport Program	✓	✓	✓	✓	✓
Complimentary Full Conference Registration	8	6	4	2	
Complimentary Booth Representative Registration	2	2	1	1	1
Exhibition Booth Space	Tier 1 Virtual Booth Page Placement	Tier 1 Virtual Booth Page Placement	Tier 2 Virtual Booth Page Placement	Tier 2 Virtual Booth Page Placement	Tier 3 Virtual Booth Page Placement
Exhibit Recognition <i>Conference Website, Preliminary Agenda</i>	✓	✓	✓	✓	✓
FREE ad per exhibiting company purchased in the <i>Journal of Nuclear Materials Management</i>	Full page ad	Full page ad	1/2 page ad	1/2 page ad	1/2 page ad

## Awards Oversight Committee Annual Report

The INMM Awards Committee includes two subcommittees: the DSA and MSA Subcommittee and the Special Awards and Recognition Subcommittee. The DSA and MSA Subcommittee is chaired by Joseph Indusi and reviews nominations for the Edway R. Johnson Meritorious Service Award (MSA) and the Vincent J. DeVito Distinguished Service Award (DSA). The Special Awards and Recognition Subcommittee is chaired by Heidi Smartt and reviews nominations for the Early Career Award and the Charles E. Pietri Special Services Award and prepares Resolutions of Respect for INMM members who passed away during the previous year. Awards will be presented during the President's Reception or at the Opening Plenary of INMM's Annual

Meeting and the Resolutions of Respect will be presented during the INMM's Annual Business Meeting.

The **Charles E. Pietri Special Service Award** recognizes noteworthy contributions to the industry or the Institute.

The **Early Career Award**, which recognizes outstanding achievements by an INMM member early in his or her career.

The **Vincent J. DeVito Distinguished Service Award** honors members of the nuclear materials management community for their long-term, noteworthy service to the nuclear materials management profession.

The **Edway R. Johnson Meritorious Service Award** honors members of the Institute for their long-term, outstanding contribution to the INMM and the profession.

In 2019, the following awards were made by the INMM:

- Vincent J. DeVito Distinguished Service Award – Augustine J. Caffrey, Thomas E. Sampson
- Edway R. Johnson Meritorious Service Award – Lawrence J. Satkowiak
- Early Career Award – Justin K. Reed and Zoe N. Gastelum

We had no resolutions of respect for the 2019 year.

The 2020 nominations were reviewed by the subcommittees during April and a recommendation was forwarded to the INMM Executive Committee in May. Following notification of the Executive Committee's decision, the Awards Committee worked to prepare scripts and collect photographs for use in the Awards Ceremony. Awards will be presented at the INMM Annual Meeting.

Resolutions of Respect were prepared for:

Darryl B. Smith, Gennady Pshakin and Felicia Duran

The Awards Committee consists of the following members:

Susan Pepper	Joseph Rivers	Nancy Jo Nicholas
Arden Dougan	Shirley Johnson	Heidi A. Smartt
Joseph Indusi	Michele Smith	Andreas Enqvist
Obie Amacker	Larry Satkowiak	Igor Tsvetkov

Respectfully submitted,  
Arden D. Dougan, Chair  
Awards Oversight Committee

# INMM Communications Committee

Megan Porter, Chair

## Report to the Executive Committee and Membership - July 2020

Formal hand-over of documentation and responsibilities for the Chair of the Communications Committee took place in May. Since then, Megan Porter has been contacting all sub-committee chairs for further information about the status and needs for each sub-committee. Meetings have now been held with all sub-committees.

The Communication Committee and most sub-committees are looking for additional support in terms of appointments for the Communication Committee deputy chair, INMM Communicator sub-committee co-chairs, Public Relations and Outreach sub-committee deputy chair, and the Website Sub-committee deputy chair.

Other support may be sought from WCAPS - <https://www.wcaps.org/> - at the suggestion of an INMM member. This group consists of young women who are early in their career and very enthusiastic about taking on new challenges and was founded by Amb. Bonnie Jenkins.

### **INMM Communicator (Jay Disser and Katherine Bachner, Co-chairs)**

The Communicator team continues to develop content for its blog, hosted here: <https://www.inmmcommunicatorblog.com/>

There has been continued discussion about the potential to incorporate the blog into INMM's website, which offers both potential benefits (ease of access, fewer subscription services) and challenges (continuity, given the recent switch to the current platform).

The Communication Committee has begun a search for new co-chairs for the blog, and will host a call with potential candidates in July to discuss responsibilities and go-forward vision.

### **Public Relations and Outreach (Sarah Frazar, Chair)**

The PR and Outreach committee has prepared a Media Framework memo with open questions to be discussed with the Communication Committee Chair and oversight. Further guidance from the EC may be sought as the plan is progressed. The Public Relations and Outreach committee deputy chair position is still vacant and will need to be filled in due course.

### **Website (Karl Horak, Chair)**

The website committee continues to cooperate with INMM HQ on updates and content on the website, rolled out in December 2019. The Website committee deputy chair position is still vacant and will need to be filled in due course.

### **Social Media and Apps (Steven Horowitz, Chair)**

The Social Media sub-committee is working with the larger Communications Committee to determine a strategic path forward for establishing the role of social media for INMM

communications. In addition, the social media committee continues to seek volunteers to help generate engaging content.

### **Technical Division Liaisons**

Now that the committee has participation from most technical divisions with an appointed liaison, per the request of the EC, the Communications Committee is strategizing on how to best utilize the expertise of these individuals. The committee is considering adding a technical division liaison chair position to coordinate these volunteers, which would need to be approved by the EC and added to the Operations Manual.

Respectfully submitted,

Megan Porter

## **INMM Education and Training (E&T) Committee**

Report to the INMM Membership, July 2020

### **INMM Annual Meetings**

#### **E&T Abstracts and Papers**

The 2019 Annual Meeting featured six dedicated E&T sessions and two posters. There were two E&T panels, one on communication and one on virtual reality. The themes which generated the most papers were training approaches and university and other institute curriculum development, with an increased emphasis on courses in nuclear safety.

Thirteen abstracts were submitted under topics related to E&T for the 2020 Annual Meeting. Sessions this year will focus on training collaborations, resource development, and university initiatives.

#### **Student Paper Award**

The J.D. Williams Student Paper Award is in its 17th year .

Qualifying papers are made available to the Technical Division chairs who distribute them to career professionals in the technical division for the technical review, which accounts for 80% of the total evaluation. Papers are rated in five categories of equal weight: relevance to INMM, research quality, argument quality, thesis and conclusion, and writing quality/publication readiness.

Scores from the technical review are provided to the Student Paper Competition leads for tallying and preparation for review of the verbal presentation at the Annual Meeting, which constitutes the remaining 20% of the total evaluation. A team of career professionals observe the verbal presentations (multiple observers per presentation) and report scores to the competition leads. Presentation scoring includes marks for speaking skills (delivery, knowledge, poise, eye contact, and questions) as well as visual aid quality (organization, graphics, text, spelling and grammar, and the conclusion). Prior to the Closing Plenary, all scores are tabulated,

reviewed by the competition leads and other judges, winners determined, and the final results prepared for reporting at the Closing Plenary. In addition to recognizing the top two papers overall and the best poster, since 2014, division finalists (from each technical division not otherwise awarded) have also been recognized.

To support volunteer judges and provide additional standardization and guidance for the 2019 Annual Meeting, a detailed criteria rubric/matrix for volunteer judges that outlined characteristics of excellent (4 pts), good (3 pts), marginal (2 pts), and inadequate (1 pt) scores for each of the criteria outlined above was developed. This additional guidance was well-received by judges.

Thank you to all of our volunteer judges!

The first and second place paper winners were:

- 1st place: Seeing “Past the Uncertainties of Nuclear Energy in South Korea” by Lindsey Rand, University of Maryland
- 2nd place: “Epithermal Neutron Transmission Imaging for Nuclear Security Applications” by Ethan Klein, Massachusetts Institute of Technology

The best poster winner was “Consideration of Administrative Monetary Penalties in Nuclear Security Regulation” by Jelena Vucicevic, University of Ontario Institute of Technology.

We encourage INMM members to participate in the judging of student papers and presentations. To volunteer, please contact John Creasy.

### **Student Activities**

The Student Activities Subcommittee opted not to sponsor any student attendees at the Annual Meeting, but is considering other ways to engage with students both at the Annual Meeting and outside.

### **International Safeguards Professional Certification**

Melissa Einwechter is supporting the Safeguards Certification Program Working Group, spearheaded by the International Safeguards Technical Division and led by David Hanks. Calls were held November 6 January 22, and April 9. Thus far, the group has finalized the working group charter, set out near- and medium-term goals, and begun assembling potential certification structure and audience.

Respectfully submitted,

Melissa Einwechter, E&T Committee Chair  
Karen Hogue, E&T Committee Deputy Chair  
Amanda Sayre, Student Activities Subcommittee Chair  
John Creasy, Student Paper Competition Lead

## 2020 Fellows Committee Report to the Membership

By Nancy Jo Nicholas, Fellows Committee Chair

The Fellows Committee meets annually, normally during the INMM Annual Meeting, and conducts business by phone or email to serve the needs of the Institute, advise the Executive Committee, perform assigned tasks, and promote the vision of the INMM. The Fellows serve as a strategic resource for the Executive Committee and, in particular, the INMM Officers. Many Fellows have both the time and ability to think through alternatives and present options to the EC. The Fellows are tasked periodically with both short- and long-term assignments. This year the Fellows were asked to contribute ideas for the 2020 Annual Meeting to highlight connections and collaboration cross-cutting the INMM technical division that could be presented as ‘grand challenges’ that the INMM should focus on in 2020.

Last summer at the JW Marriott Desert Springs during the 60th Annual Meeting Stephen Croft, Jake Jekowski, Michael Whitaker and Houston Wood were elevated to the rank of Fellow of the INMM after many years of strong contributions not only to the INMM, but also to the field of nuclear materials management. The Fellows Luncheon held during that Annual Meeting provided an opportunity to personally congratulate the newest Fellows who were warmly welcomed by those of us in attendance.

In March of this year the annual solicitation for nominations for the advancement to the grade of Fellow was distributed to Chapter Presidents and all of the current Fellows. Subsequently, the Fellows Committee reviewed and evaluated the nomination material that was submitted, and forwarded a recommendation to the EC for final deliberations. The new Fellows will be announced this year in July during our first-ever virtual Annual Meeting.

The current Fellows Committee members are:

Nancy Jo Nicholas, Chair

Paul Ebel

Jill Cooley

Shirley Johnson

Joe Rivers

Ken Sanders

Ted Osabe

## INMM Historian

Annual Meeting and Executive Committee Report - July 2020

The INMM Historian Position was created following Executive Committee (EC) discussions at the 2019 60<sup>th</sup> Anniversary Annual Meeting held in Palm Desert California and the job description was subsequently posted on the INMM website, seeking applications. Jack Jekowski was selected by the EC

in late September and officially started in that position at the beginning of the new fiscal year (October 1<sup>st</sup>), with the selection being officially announced at the November EC meeting held at AH Headquarters.

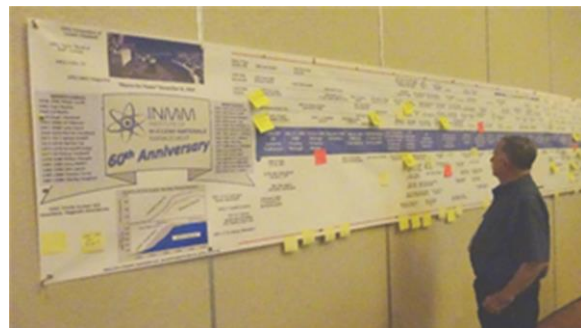
The requirements for this position, as identified by the EC in the job posting are:

*The INMM Historian, a newly created position in the INMM organizational structure, facilitates and encourages the preservation of the Institute's history by ensuring pertinent historical information is identified and maintained and by creating and maintaining an archive for materials related to INMM and the history of the nuclear materials management industry. The Historian will develop mechanisms and procedures for making historical records widely and easily accessible.*

*Duties include:*

- *Regularly search for and identify information of historical significance*
- *Create and oversee the development and maintenance of INMM Historical Archives.*
- *Develop a Collections Plan for Institute activities for the annual archival collection of materials that relate to the workings of the INMM;*
- *Establish appropriate Committee interfaces with Communications, Journal, etc...*
- *Development of a Long-Range Plan for INMM Archives.*
- *Creation of electronic access to the collection, which will be itemized and searchable.*
- *Provide input to the Annual Meeting Chair, Technical Division Chairs, and others for the purpose of showcasing archived information periodically during INMM events (i.e., Annual Meeting).*
- *Ensure that Historian activities are represented at each Executive Committee meeting and written, and oral reports are provided consistent with the deadlines established by INMM HQ.*

The decision to create a Historian position was driven in part by preparation efforts for the 2019 60<sup>th</sup> Anniversary Annual Meeting held in Palm Desert, California. For that event Larry Satkowiak led an effort to create a large, 23-foot-long banner showing significant events for the Institute over the past 60 years. The banner was unveiled at the Tuesday afternoon celebration “party” held in the Vendor area and was subsequently hung in the Plenary Hall at the Annual meeting for attendees to add information to. It was recognized during the preparation of that banner that the Institute needed to do more to capture the historical knowledge of the Institute members.



During the March 2020 EC meeting some proposed initial activities to enhance the Institute's historical archives were presented to the leadership and approved following discussions. These proposed activities are shown below with comments provided about their status:

1. *Review the current INMM website link (<https://inmm.org/page/history>) and offer some quick and easy suggestions for changes and additions. In the interest of economy, we should not immediately consider dramatic changes to the current website. The value of putting an interactive timeline, for*

*example, as many organizations have been able to fund, may be a “nice” feature, but might not provide any more information than a posted timeline (In pdf form) like we prepared for the 60<sup>th</sup> Annual Meeting. For sure, we can post some of the papers presented at the 60<sup>th</sup> Annual meeting from Jim Larrimore and Doug Reilly, and we can solicit continuing input from membership once our updated 60<sup>th</sup> Anniversary timeline is posted.*

**Actions:** I have spent the majority of my time during the COVID-19 Shutdown developing materials to enhance the History portion of the INMM Website (see Attachment 1). I will work with AH to develop an intuitive and attractive presentation format with easily understood links. Attachment 1 includes two website maps, the first shows the current links and information, and the second shows the proposed flow of new information that has been created. I would encourage members of the EC to review these suggestions and provide input for enhancing the website as I work with AH to develop a schedule for implementation of the new History website.

2. *Follow-up to the review that I did in the fall of 2019 of the JNMM Archive by visiting the LANL and Sandia Libraries to see if missing issues are available to be reproduced, and also follow-up with Deanna Bright on the archives left by Ed Johnson to see if any missing JNMM issues are available from that source – and what other information is available, for example older newsletters before the JNMM started to be published. I would plan to work with AH to determine how best to capture the information that LANL or Sandia might have.*

**Actions:** I have been in contact with Alan Carr, the Historian at Los Alamos National Laboratory (LANL), and he has checked their library and believes they have most of the issues that are missing from our archive. Unfortunately, as those discussions occurred the Laboratory shut down due to the COVID-19 Pandemic. Once the Lab opens up, I will follow up with him. I have been unable to reach the Sandia Historian, Rebecca Ullrich. Additionally, Deanna Bright from AH Headquarters has begun a search through archived INMM materials in boxes left by Ed Johnson and believes some of the missing issues may be in those materials. I will coordinate efforts with Deanna after the 2020 Annual Meeting and determine how best to add the missing issues to the current archive.

3. *Update the 60<sup>th</sup> Anniversary Meeting Timeline chart for possible display at future Annual Meetings, working with Larry Satkowiak. This will be a continuing effort.*

**Actions:** I have entered all of the “yellow stickie” updates provided at the 60<sup>th</sup> Annual Meeting and also added many new events identified in my review of timelines shown in Attachment 1. I still plan to review of the JNMM Archive for more historical events, as well as to reach out to the Technical Divisions and Chapters for additional historical information. This updated timeline, which is in a large-format PowerPoint slide will continue to be enhanced and ultimately presented as a pdf link on the INMM History site. The Timeline may also become a centerpiece for our Annual Meetings to encourage membership to add information, and to demonstrate the significant impact the Institute has had on the nuclear timeline for the world.

4. *Put out a call to the Technical Divisions and Chapters to solicit historical information about their formation and events. This call would go out to the Steve Mladineo (Technical Divisions) and Claudio (Chapters) to solicit information from them. Typical information would include:*
  - a. *When was the Technical Division/Chapter formed and who were the original Officers/Executive Committee members?*

b. *Were they any particularly interesting stories associated with the formation of the Chapter or Division? For example, the Southwest Chapter had Obie Amacker as the guest speaker in their organizing meeting and he challenged the Chapter to engage students more – resulting in the effort to form Student Chapters and create the Student Paper competition.*

c. *A list of Executive Committee members and dates they serve*

d. *A list of major sponsored events with dates, particularly INMM sponsored Workshops*

**Actions:** No action to date but will do that in and around the activities of the 2020 Annual Meeting.

5. *Review of Historical timelines available from the broader nuclear community, including DOE/NNSA, National Laboratories, NRC, NGOs, and other International organizations such as ESARDA to possibly provide links from our INMM History webpage. Such a compilation may allow us to preclude building an expensive interactive timeline specific for INMM. This will be an on-going effort to identify sources of historical information that we can link to. Additions of links to our History website should be a minimum effort by AH.*

**Actions:** As discussed above, I have included a number of existing timelines associated with “all things nuclear”, in Attachment 1, and will work with AH to post these on our History Website for membership to access for research. Some of these sites have spectacular interactive versions such as the ones that Sandia, LLNL and Oak Ridge have developed. I will seek out additional references over time to add to the site as appropriate.

6. *Put out a general call to our longer-term members, perhaps starting with our Fellows, to write up their remembrances of the “early days” and reflections on how the Institute has changed. This could be done at the opening and closing Plenary and also during the Sunday afternoon Technical Division meetings – I would be happy to be the central collection point for the information to put it into a format that could be easily added to our website.*

**Actions:** No action to date.

7. *Identify Historians in the various organizations from (5) above and establish a relationship with them to see if assistance can be provided and ideas for enhancing our site solicited. This will be a longer-term effort over time. The Historians I have already tried to contact all seem to be working in a total overload mode.*

**Actions:** No Action to date.

8. *Develop a long-range Collections Plan with AH, including cost estimates, for the development of the INMM Historical Archives that could be updated on a regular basis. Determine the value added of information and who users of the Archives would be to tailor the Plan. This will be longer-term effort as I learn how other organizations have developed their plans, and work with the EC and AH to determine what is of greatest value to the Institute at the lowest cost.*

**Actions:** No action to date. I intend to look at collection plans developed by other organizations such as the Labs to see if there is a standard format or process that is used.

## **Attachment 1 – Suggested Content for New INMM History Website**

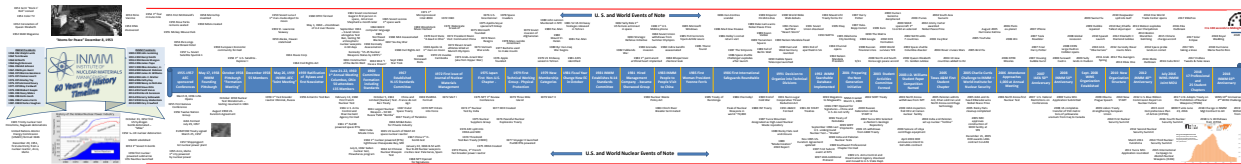
### **The INMM History**

(Note: the current version located at <https://inmm.org/page/history>)

The Institute of Nuclear Materials Management (INMM) was founded on May 17, 1958, and a “formation meeting” was held in Pittsburgh, Pennsylvania in October 1958. By December there were 55 members of the newly formed organization. The first INMM Annual Meeting was held on May 26, 1959 and was jointly sponsored by the INMM and the U.S. Atomic Energy Commission (AEC). Prior to its formation, the AEC had hosted three years of joint meetings with representatives of the Management and Operating (M&O) contractor community. Those meetings led to the discussion of forming an independent organization to provide expertise in the area of nuclear materials management. Since then, the Institute and the INMM Annual Meeting have grown significantly, serving as an international resource for scientific, technical and policy expertise in nuclear materials management, with over 1,200 members, 16 Professional Chapters, 10 of which are international, and 24 Student Chapters, 10 of which are International. The Institute encompasses the entirety of the nuclear materials management profession as captured in its Mission statement (<https://inmm.org/page/whowear>).

INMM has been instrumental in promoting excellence in nuclear materials management around the world through its activities, including workshops, the Annual Meeting, the peer-reviewed Journal of Nuclear Materials Management (JNMM - <https://inmm.org/page/journal>), formal and informal partnering and collaboration agreements, support of national standards (ANSI), and educational programs. The INMM was instrumental in helping establish the World Institute of Nuclear Security (<https://wins.org/>), and actively collaborates with a number of world-wide organizations, including the International Atomic Energy Agency (IAEA - <https://www.iaea.org/>), the European Safeguards Research and Development Association (ESARDA - <https://esarda.jrc.ec.europa.eu/>), and U.S. Nuclear Industry Council (USNIC - <https://www.usnic.org/>).

### 60<sup>th</sup> Anniversary of the INMM



The INMM celebrated its 60<sup>th</sup> Anniversary in 2018, and the held the 60<sup>th</sup> Annual Meeting in July 2019 with special activities during that event, including the display of a 60-year Time Line for the Institute, presentations by members on the historical events and remembrances over the past six decades and a special Anniversary cake that was shared with attendees during a mid-week break at the Annual Meeting that was held in Palm Desert California. [[Click here for a full resolution pdf of the timeline](#)]

You can also read more about INMM's history and some personal recollections of some of our longer term members in four articles that were published in the JNMM about the first 25 and 50 years, and four papers that were presented at the 60th Anniversary Annual Meeting. [[Link to the eight articles shown after timelines list](#)]

Also, see the roster of [INMM Past Presidents](#) [here]

### Recounting the History of “All Things Nuclear”

There are many references on the Web which provided historical timelines of “all things nuclear” that can serve as useful references for membership for research purposes or to simply understand the events that have shaped the nuclear world we are in today. [Please visit our compilation of these sites \[here\]](#).

### Compilation of Nuclear History Websites and Timelines:

- **U. S. Department of Energy (DOE) History Timeline**

<https://www.energy.gov/management/office-management/operational-management/history/doe-history-timeline>

This timeline provides a decadal summary from 1938 through 2000, and then a more detailed history of events within the DOE by year from 2001 through 2016. Additional information on various historical aspects of the work that has been done by DOE and its predecessor agencies (ERDA and the AEC), and the NNSA since 2001 can be found under various links located at:

<https://www.energy.gov/management/office-management/operational-management/history>

This is a rich resource of many reports and documents on the Manhattan Project, nuclear testing, and the Nevada National Security Site (NNS – formerly the Nevada Test Site

<https://www.atomicheritage.org/>

<https://www.atomicheritage.org/history/timeline>

The Atomic Heritage Foundation (AHF), founded by Cynthia Kelly in 2002, is a 501(c)3 nonprofit organization in Washington, DC, dedicated to the preservation and interpretation of the Manhattan Project and the Atomic Age and its legacy. The Timeline provides a detailed history of events associated with the development of nuclear weapons through 2011. Also, see

<http://nuclearweaponarchive.org/>

<https://www.energy.gov/management/history/historical-resources/labs-and-field-site-histories>

This link provides links to the histories of the various DOE Laboratories.

[https://www.osti.gov/opennet/manhattan\\_district](https://www.osti.gov/opennet/manhattan_district)

The DOE Office of Classification and the Office of History and Heritage Resources, in collaboration with the Department's Office of Scientific and Technical Information, have made the full text of the entire thirty-six volume Manhattan District History available on this OpenNet website. Unclassified and declassified volumes have been scanned and posted.

- European Safeguards & Research Development Association (ESARDA)

<https://esarda.jrc.ec.europa.eu/>

[https://esarda.jrc.ec.europa.eu/images/files/ESARDA\\_Course/2019/Presentations/01-Monday-History\\_of\\_Non-Proliferation-Jonter.pdf](https://esarda.jrc.ec.europa.eu/images/files/ESARDA_Course/2019/Presentations/01-Monday-History_of_Non-Proliferation-Jonter.pdf)

History of Nonproliferation: Emergence of the NPT Regime, 1945-2017 – slide presentation, part of the 18<sup>th</sup> ESARDA 2019 Course Presentation series. This presentation separates the history of nonproliferation into four periods, 1945-1953 (nuclear disarmament), 1954-1968 (atoms for peace), 1969-1991 (export control), and 1991-2017 (Additional Protocols).

[https://esarda.jrc.ec.europa.eu/images/files/ESARDA\\_Course/2019/Presentations/02-Monday-EURATOM\\_historical\\_facts-Gerlini.pdf](https://esarda.jrc.ec.europa.eu/images/files/ESARDA_Course/2019/Presentations/02-Monday-EURATOM_historical_facts-Gerlini.pdf)

EURATOM history.

ESARDA 50-year timeline (link to pdf).



- International Atomic Energy Agency (IAEA) History Research Project

<https://iaea-history.univie.ac.at/>

This is the entrance site to the IAEA historical archives.

<https://iaea-history.univie.ac.at/timeline/>

A short timeline in pictures and text of the IAEA.

<https://iaea-history.univie.ac.at/oral-history-videos/>

A set of videos of long-term members of the IAEA.

- Sandia National Laboratories

<https://www.sandia.gov/about/history/index.html>

There is a highly detailed and interactive timeline available on the home page of this website, as well as a rich resource of links to detailed historical documentation of the Laboratories' efforts over the past several decades.

<https://www.nuclearmuseum.org/>

The National Museum of Nuclear Science and History website. Located in Albuquerque, NM, this museum was at one time closely affiliated with Sandia, but now is independently operated.

- Los Alamos National Laboratory

<https://www.lanl.gov/about/history-innovation/index.php>

General website with historic photos, Directors, etc.

<https://www.lanl.gov/museum/>

Bradbury Science Museum website. This museum is in Los Alamos, NM and closely affiliated with activities at the Laboratory.

- Lawrence Livermore National Laboratory

<https://www.llnl.gov/about/history>

This is the overall history website for LLNL

<https://www.llnl.gov/archives/1950s#event-the-1950s>

This is an interactive timeline, similar to the one that is available on the Sandia National Laboratories' website starting in the 1950's and going through 2019.

- Oak Ridge National Laboratory

[https://www.ornl.gov/content/seventy-five-years-great-science#historical\\_overviews](https://www.ornl.gov/content/seventy-five-years-great-science#historical_overviews)

This is the generic History site for Oak Ridge

<https://www.ornl.gov/timeline#event-oak-ridge-national-laboratory75-years-of-great-science-19432018>

This is an interactive timeline similar to the one provided on the Sandia and LLNL websites, from 1940 to 2019.

<https://amse.org/>

The American Museum of Science and Energy (AMSE), originally named the American Museum of Atomic Energy, was established in 1949 in a former cafeteria building at the Oak Ridge Site to provide educational programs focused on the Department of Energy's (DOE) past, present, and future missions. In 1975, the museum moved to the Tulane Avenue facility, where it continued to provide the general public with energy information. The name of the museum was changed to the American Museum of Science and Energy in 1978. AMSE moved to its present location in Main Street Oak Ridge in 2018.

- Savannah River Site

<https://www.srs.gov/general/about/history1.htm>

This site provides a pictorial history of Savannah River Site from the 1950's to 2010.

- Nevada National Security Site (formerly the Nevada Test Site)

<https://nationalatomicmuseum.org/videos/oral-history-videos/>

This is a set of oral histories of the NNSS, part of a historical perspective offered by the National Atomic Testing Museum which is independently operated in Las Vegas, Nevada.

- MIT Nuclear Weapons Education Project – Nuclear Weapons Timeline

<https://nuclearweaponsedproj.mit.edu/Node/115>

This is part of a larger effort by MIT to provide educational material on nuclear weapons. The Timeline is an interesting compilation of some significant milestones in the development of nuclear weapons, with quite a bit of specific information about each event (from an academic perspective).

- Arms Control Association Timelines

<https://www.armscontrol.org/factsheets/Timeline-of-the-Treaty-on-the-Non-Proliferation-of-Nuclear-Weapons-NPT>

This timeline provides a history of the Non-Proliferation Treaty (NPT) through today.

- American Nuclear Society

<https://www.ans.org/about/history/>

This is a short history of the ANS.

**This is the content for a webpage to link to recollections of our members that have been published:**

### [The INMM's First Twenty-Five Years](#)

John L. Jaech

INMM President, 1983–1984

JNMM Summer 2008, Volume 36, No. 4

John Jaech recalls the first twenty-five years of the Institute from the beginning of the INMM, which was preceded by a U.S. Atomic Energy Commission- sponsored annual conference on the accountability of nuclear materials. An informal organization originally, as the Institute established the peer-reviewed [Journal of Nuclear Materials Management](#) in 1972, and continued to grow from its initial focus on U.S. domestic safeguards and methods of control that included accountancy into international safeguards, non-destructive analysis (NDA), physical security and waste management, the need for professional management support was determined to be necessary. John recalls the prestige associated with the INMM being asked in 1983 to form a team of experts led by E.R. (Ed) Johnson to tour Chinese nuclear facilities and provide lectures on nuclear materials management.

### [Historical Perspective of the Institute of Nuclear Materials Management](#)

By Vince DeVito INMM Secretary, 1973–2008

JNMM Summer 2008, Volume 36, No. 4

Vince (Vinny) DeVito recalls the history of the Institute from its earliest days working closely with the U.S. AEC to formally establish the organization on May 17, 1958 at a meeting in Pittsburgh, PA. A formation meeting was held later that year in October and Dr. Ralph Lamb was selected as the first Chair of the organization. By the end of the year there were fifty-five members. A general membership meeting was subsequently scheduled to coincide with the AEC *Contractors, Source, and Special Materials Management* meeting the following May in Washington, D.C. where it was decided to host an INMM Annual Meeting June 21-22, 1960. Also, in 1959 the first constitution and bylaws were established, as well as several standing committees, and a newsletter was created which ran until 1972 when the *Journal of Nuclear Materials Management* (JNMM) was first published. In 1962 a corporate membership was established, later changed to Sustaining Membership in 1983. In 1967 the INMM sponsored the N-15 Standards Committee (Methods of Nuclear Material Control), for the USA Standards Institute (later to become ANSI). In April of 1981 the INMM assumed sponsorship of the N-14 Committee (Packaging and Transportation of Radioactive and Non-nuclear Hazardous Materials). During the 1980's several certification programs were established, but eventually were closed, and the Institute established the Awards program (1978) and membership grades (1983 – Senior, Student, Fellow and Emeritus). With membership growing to 685 in 1980, the decision was made to hire a Management firm, Messervy and Company, to assist with coordination of the Annual Meeting and membership. Later sold to the Sherwood Group, which subsequently became Kellan, the INMM now uses Association Headquarters (AH) in Mount Laurel, New Jersey for its management coordination.

### [Reflections on the Past and Future of INMM](#)

Ed Johnson

INMM Chair, 1965-1966

JNMM Summer 2008, Volume 36, No. 4

Ed Johnson Reflects on the early days of the Institute and how intertwined its work was with the companies that were processing uranium and other special nuclear materials, including measurement techniques, measurement errors, laboratory differences, accounting methods and reporting. Ed also describes in great detail the unique experience he had as the lead of the People to People Delegation to China in 1983 that included several individuals from the INMM meeting with counterparts and giving

presentations in China. He finishes up with the recent establishment of the World Institute for Nuclear Security (WINS) and the Institute's key role in creating that organization.

#### [50th Anniversary Reflections](#)

Yvonne M. Ferris

INMM President, 1985–1986

JNMM Spring 2009, Volume 37, No. 3

Ms. Ferris, the first woman president of the INMM, talks about the increased participation by women in the INMM over the first 50 years, including as Officers, Executive Committee members, and Committee Chairs. She also is encouraged by the increasing number of student participants giving papers at the Annual Meeting and the growth in Chapters.

Sixty Years On, Time for Reflection on IAEA Safeguards?

James A. Larrimore

Former International Safeguards Division Chair

INMM Proceedings, 60<sup>th</sup> Annual Meeting

Paper a138.2

<https://resources.inmm.org/annual-meeting-proceedings/sixty-years-time-reflection-iaea-safeguards>

Over the sixty years of INMM's existence, IAEA safeguards have continually evolved, starting with specific facility safeguards and developing into facility-based NPT safeguards. The challenge of the undeclared nuclear weapons program in Iraq led to recognition of the need to strengthen safeguards and to the adoption of the Model Additional Protocol. This presentation addresses whether it would be timely to review and bring up to date the policies and the documentation for the full spectrum of IAEA safeguards implementation. While the IAEA would have the lead in such an enterprise, it is suggested that Member States could be important contributors.

Reminiscences

Dr. T. Douglas Reilly

INMM Senior Member

INMM Proceedings, 60<sup>th</sup> Annual Meeting

Paper 123.1

<https://resources.inmm.org/annual-meeting-proceedings/reminiscences>

Dr. Reilly recounts more than 38 years of his experiences involved in nuclear safeguards programs as he travelled the world for Los Alamos National Laboratory. After finishing graduate work in a salt mine under Lake Erie in 1969, Dr. Reilly moved to Los Alamos where he started work in Bob Keepin's new safeguards program. Throughout 38 years in safeguards and nonproliferation, Dr. Reilly worked in LASL, LANL, JRC-EURATOM (Ispra, Italy), DOE (DC), and the IAEA (Vienna, Austria), and travelled and worked in over 50 countries, with folks from over 130 countries, who devoted their lives to limiting the spread of nuclear weapons. The INMM is not well known to the general public. However, like any people and organizations in life, it and its people play an important role in world affairs.

Safeguards in France: 60 Years of History and Recent Developments

Julie Odden

Comite technique Euratom

INMM Proceedings, 60<sup>th</sup> Annual Meeting

<https://resources.inmm.org/annual-meeting-proceedings/safeguards-france-60-years-history-recent-developments>

France has been party to the Euratom Treaty since its creation in 1957 and all its civil nuclear activities have been subject, for more than sixty years, to international safeguards applied by the European Commission. In 1981, its safeguards agreement with the IAEA and Euratom entered into force. These two milestones paved the way of a long history of concrete implementation of safeguards in France. After a brief history of safeguards implementation, the paper will recall the scope of Euratom and IAEA safeguards in France today and how the application of the controls translates in practical terms for French authorities and operators.

An Arms Control Primer

Morag K. Smith, et. al.

Los Alamos National Laboratory

<https://resources.inmm.org/annual-meeting-proceedings/arms-control-primer>

The Arms Control, Treaty Verification, and Dismantlement Subcommittee has started the development of a primer and annotated bibliography. This primer will summarize the history of arms control, current treaties and their implementation, as well as possible future technical options, serving as an introductory resource and refresher for both technical and non-technical individuals. The work is planned to be as collaborative as possible, asking subject matter experts from across the community to participate.

J. Jekowski  
6-21-20

# INMM History Website pages - Current

<https://inmm.org/general/custom.asp?page=history>

<https://inmm.org/page/pastpresidents>

<https://cdn.ymaws.com/inmm.org/resource/res>

By Jan of INMM

The INMM's First Twenty-Five Years

Jaech "The INMM's First 25 Years"

DeVito "Historical Perspective of the INMM"

By Jan of INMM

Historical Perspective of the Institute of Nuclear Materials Management

<https://cdn.ymaws.com/inmm.org/resource/resmgr/>

Johnson "Reflections on the Past and Future of INMM"

By Jan of INMM

Reflections on the Past and Future of INMM

<https://cdn.ymaws.com/inmm.org/resource/resmgr/docs/history/history-ed-johnson.p>

Ferris "50th Anniversary Remembrances"

By Jan of INMM

50th Anniversary Remembrances

<https://cdn.ymaws.com/inmm.org/resource/resmgr/docs/history/vol-37-no-3-yvonne-ferris-la.pdf>

J. Jekowski  
7-3-20

# INMM History Website pages - Proposed

<https://inmm.org/general/custom.asp?page=history>

The screenshot shows the INMM History page layout. Red arrows point from various elements to descriptive text blocks:

- Arrows point from the "Mission and Vision" and "JNMM" sections to a text block describing links to existing INMM sites.
- Arrows point from the "International Partners" section to a text block listing WINS, IAEA, ESARDA, and USNIC.
- An arrow points from the "60th Anniversary" section to a text block describing a new list of nuclear timelines.
- An arrow points from the "60th Anniversary" section to a text block describing previous articles and presentations.
- An arrow points from the "Past Presidents" section to a text block describing a previous list of presidents.

Links to existing INMM sites:

- Mission and Vision
- JNMM

Links to international partners:

- WINS
- IAEA
- ESARDA
- USNIC

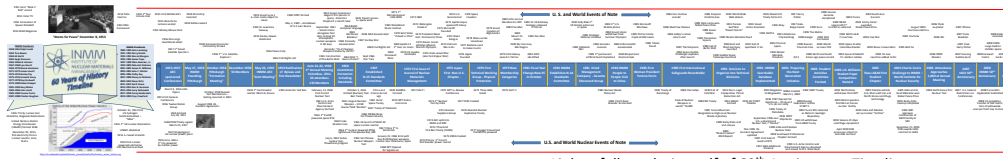
Link to hyperlinked list of nuclear timelines

Link to previous four articles plus presentations from Jim Larrimore, Doug Riley, Morag Smith, and Julie Oddou. Each link will have a short summary of the article as an introduction.

Link to previous list of Presidents  
<https://inmm.org/page/pastpresidents>

The screenshot shows the "INMM Past Presidents" page, listing names and dates of past presidents from 1958 to 2019.

Note: Need to update this webpage to include Cary Crawford term



Link to full resolution pdf of 60<sup>th</sup> Anniversary Timeline

A thumbnail image showing a list of hyperlinked titles for various nuclear timelines, including "U.S. and World Nuclear Events of Note" and "60th Anniversary Timeline".

<https://resources.inmm.org/annual-meeting-proceedings>

<https://cdn.vmeaws.com/inmm.org/resource/resmgr/docs/history/history-john-jaech.pdf>

DeVito "Historical Perspective of the INMM"



Jaech "The INMM's First 25 Years"

<https://cdn.vmeaws.com/inmm.org/resource/resmgr/docs/history/history-ed-johnson.pdf>

Johnson "Reflections on the Past and Future of INMM"



Ferris "50<sup>th</sup> Anniversary Remembrances"



<https://cdn.vmeaws.com/inmm.org/resource/resmgr/docs/history/vol-37-no-3-yvonne-ferris-la.pdf>



Oddou "Safeguards in France: 60 years of History and Recent Developments"

Smith "An Arms Control Primer"

<https://resources.inmm.org/annual-meeting-proceedings/arms-control>



Riley "Reminiscence"

<https://resources.inmm.org/>

New text that provides some additional detail on the history, a notional snapshot of the 60<sup>th</sup> Anniversary Timeline (with a link to a full resolution pdf); and separate links to: 1) a new list of nuclear timelines; 2) the four previous recollections papers plus the four additional papers delivered during the 60<sup>th</sup> Anniversary Annual Meeting (Jim Larrimore, Doug Riley/Morag Smith nad Julie Oddou); and 3) the link to the previous list of Past Presidents.  
Future links may include Chapter histories, a history of workshops conducted over the years, etc.

# July 2020 Membership Committee Report

A few updates from the Membership Committee:

- Since the last EC meeting in March, the Committee has recommended approval of 57 new regular member and 32 new student member applications.
- The Membership Committee recommended and the EC approved 6 new Senior Members this year. These individuals will be recognized at the Virtual Annual Meeting on July 14, 2020:

- David Chichester
- Jason Harris
- Edward Ifft
- Gerard Jackson
- Yosuke Naoi
- Heidi Smartt

## Membership Recap:

Current membership statistics each year are as follows with previous years for comparison.

\*June 2020 numbers include information through July 10, 2020

Member Type	June-16	June-17	June 18	June 19	*June 20
<b>Regular</b>	<b>749</b>	<b>815</b>	<b>717</b>	<b>616</b>	<b>637</b>
<b>Fellow</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>28</b>	<b>29</b>
<b>Emeritus</b>	<b>6</b>	<b>8</b>	<b>9</b>	<b>9</b>	<b>8</b>
<b>Senior</b>	<b>96</b>	<b>86</b>	<b>80</b>	<b>79</b>	<b>76</b>
<b>Senior Emeritus</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>9</b>
<b>Sustaining</b>	<b>25</b>	<b>15</b>	<b>20</b>	<b>22</b>	<b>19</b>
<b>Fellow Emeritus</b>	<b>16</b>	<b>22</b>	<b>14</b>	<b>12</b>	<b>15</b>
<b>Honorary Member</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
<b>Life Fellow</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Student</b>	<b>244</b>	<b>152</b>	<b>160</b>	<b>165</b>	<b>167</b>
<b>Total Members</b>	<b>1172</b>	<b>1135</b>	<b>1038</b>	<b>943</b>	<b>964</b>

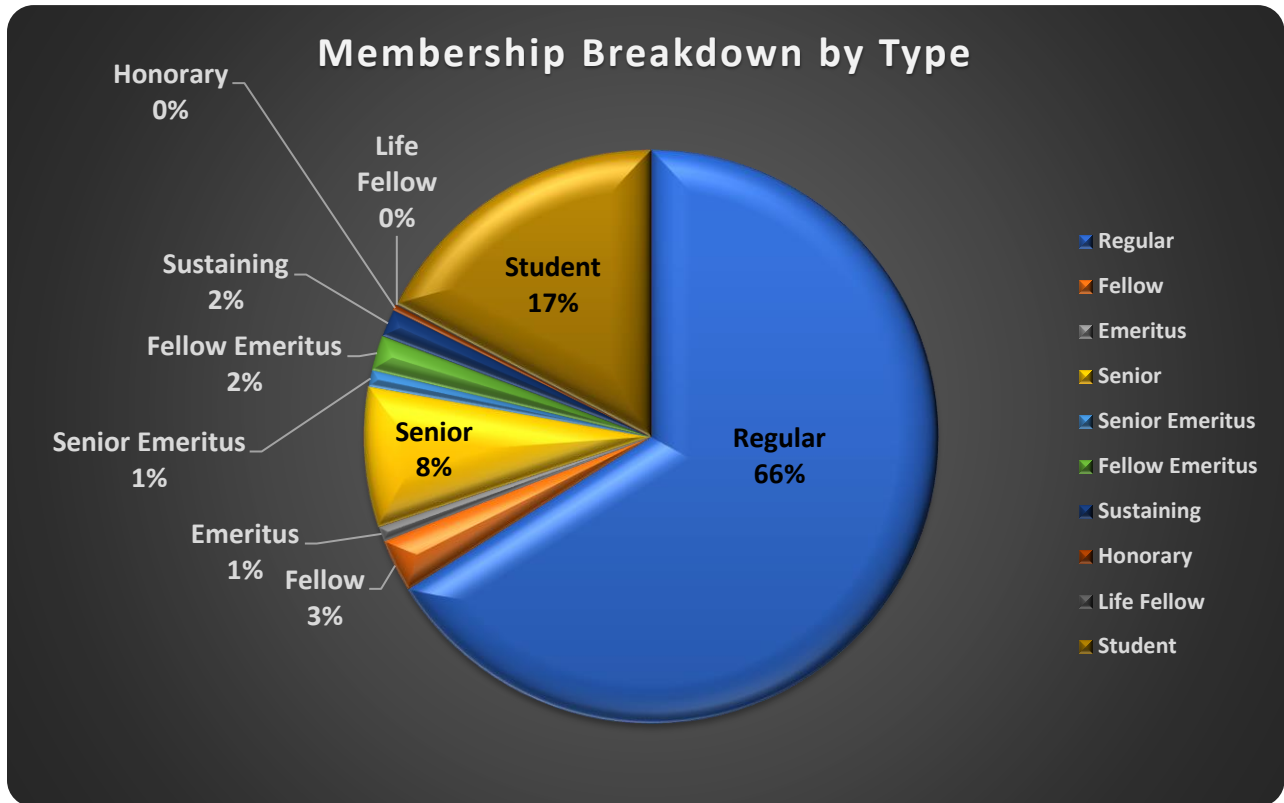
## Members of the Committee:

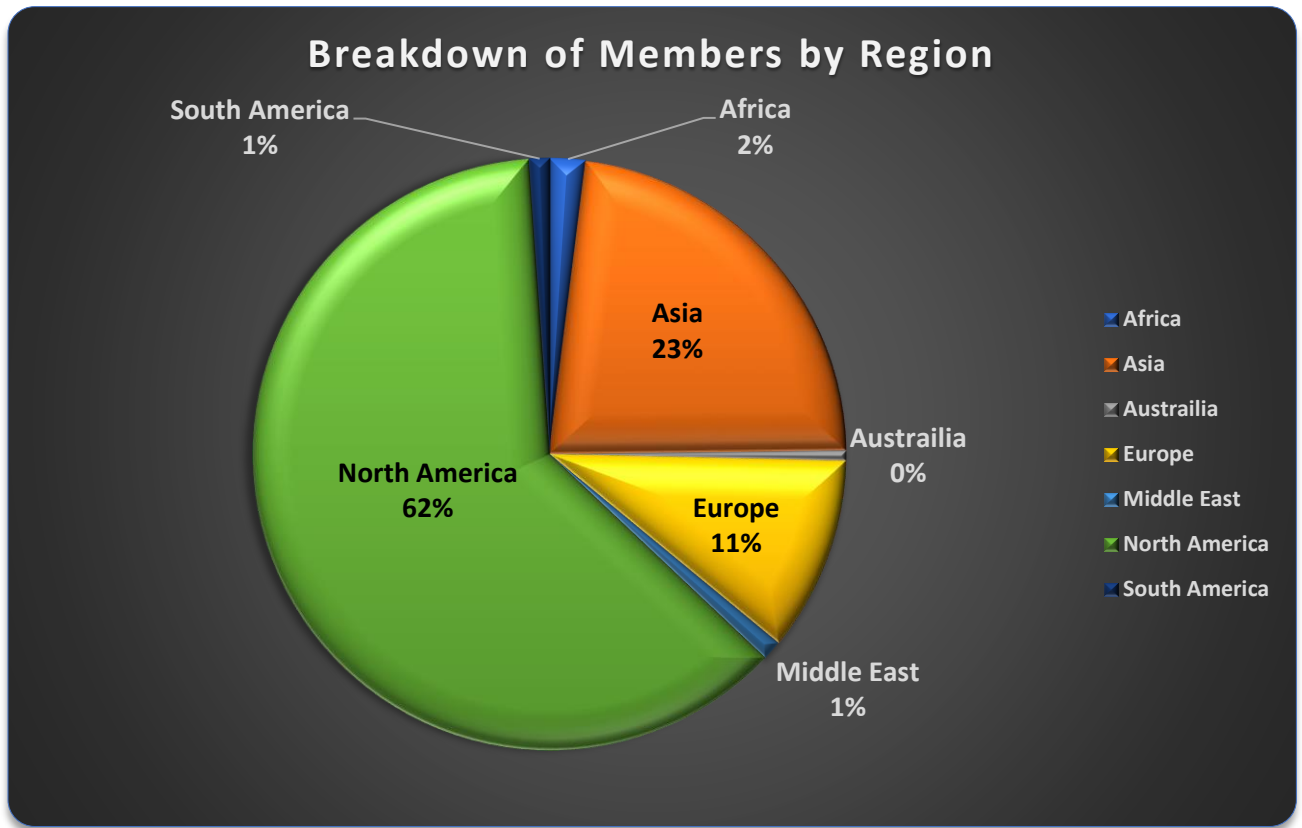
Please join us in welcoming our newest committee member, Cassandra Pate, Idaho National Laboratory

- Al Garrett, Pacific Northwest National Laboratory
- Leigh Gunn, National Nuclear Security Administration
- James Miller, International Atomic Energy Agency

- Mark Mount, Retired, Lawrence Livermore National Laboratory
- Therese Renis, International Atomic Energy Agency
- Michelle Romano, US Nuclear Regulatory Commission
- Mark Schanfein, Idaho National Laboratory
- Jessica Horton, Oak Ridge National Laboratory

Respectfully submitted,  
James Miller  
Chair, Membership Committee





Where our Members Live:



Australia



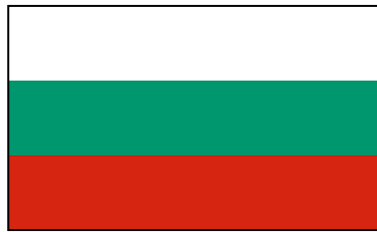
Austria



Belgium



Brazil



Bulgaria



Canada



Finland



France



Germany



India



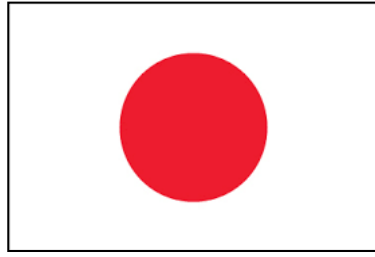
Indonesia



Israel



Italy



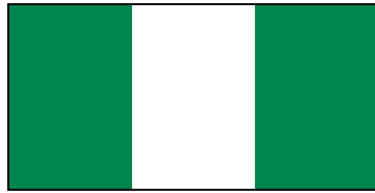
Japan



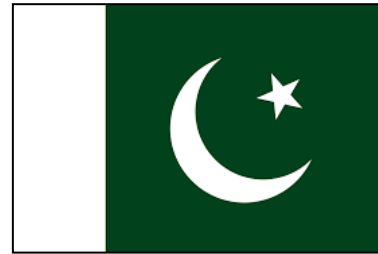
Jordan



Morocco



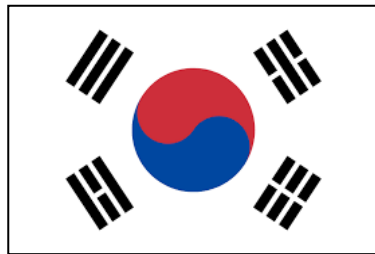
Nigeria



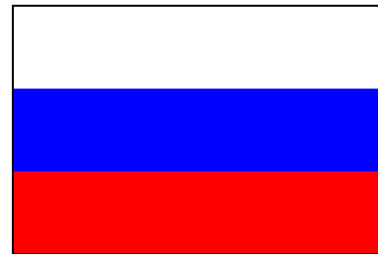
Pakistan



Portugal



Republic of Korea



Russia



South Africa



Sweden



Ukraine



United Kingdom



United States

## Strategic Planning Committee

### Annual Update

In November 2019, a strategic planning meeting took place after the INMM EC during which the INMM Strategic Plan was reviewed and color coding was given to all the actions in the Strategic Plan”

After the last INMM Executive Committee (EC) meeting in March 2020, a “Strategic Planning” (SP) meeting was held and at the same occasion the Chair function for the INMM Strategic Planning Committee (SPC) was handed over from Jack to Willem. The meeting was a useful brainstorming also on how to merge the SP discussions (typically held back to back with the INMM EC meetings) with the SPC work. This should assure that the SP is both kept up to date and that there is more ownership of the SP process. Also, the interaction between SPC and EC can be increased, since there is a request to have more content discussions during the EC also. The SPC is thus encouraged to make proposals to discuss specific points for the part related to the SP discussions in the upcoming EC meetings.

In July 2020 an extended SPC meeting is planned with invitations to the current membership and representatives of the INMM Technical Divisions and several Committees. This meeting will focus on the outcome of the March 2020 meeting and will use some of the very valuable output produced by the SPC before esp.:

- The Nuclear Fuel Cycle Chart with mapping of the INMM divisions
- The list of relevant other organisations for INMM (table from 2017)
- The write-up on the outcome of the INMM Closing Plenary in July 2018

Jack Jekowski and Willem Janssens

#### From Jack Jekowski

1. **Taking the Long View Industry News Column.** Three “Taking the Long View” columns were submitted to the Journal of Nuclear Materials Management (JNMM) during this annual reporting period:

**Vol. XLVII, No. 3** - *“Taking the Long View in a Time of Great Uncertainty: The New NNSA Strategic Vision to Modernize the U.S. Nuclear Stockpile”*, which describes the new Strategic Vision, Governance & Management Framework and Strategic Framework issued by the NNSA this past year, and how it ties into the overall modernization of the nuclear stockpile in the U.S. and the efforts by other Nuclear

Weapons States to similarly modernize their stockpiles. All of these changes must be viewed within the context of the strategic challenges identified during the 2018 INMM Annual Meeting Closing Plenary. **Vol. XLVII, No. 4** - *“Taking the Long View in a Time of Great Uncertainty: “60 Years of History and the Challenge to Stay on Top of Things”*, which focuses on the 60 year history of the Institute and related activities at the 60<sup>th</sup> Annual Meeting, and how members can “stay on top of things” by subscribing to special news services.

**Vol. XLVIII, No. 1** - *“Taking the Long View in a Time of Great Uncertainty: Scenario Planning in the Age of COVID-19”*, which provides an historical perspective on scenario planning articles and techniques from previous “Taking the Long View” columns in the context of the global COVID-19 Pandemic, and its impact on the Institute and nuclear materials management with respect to verification, modernization, and cleanup activities. Implications associated with “beyond design basis threats” for the U.S., Department of Energy and the U.S. Nuclear Regulatory Commission initiatives are also discussed. Other future potential cataclysmic events are identified and how the lessons learned from the COVID-19 response should be used to provide better planning for response to those events.

2. **60<sup>th</sup> Anniversary Timeline.** Work has continued on updates to the 60<sup>th</sup> INMM Anniversary Timeline that was created for the 2019 Annual Meeting in Palm Desert. This effort has been moved to the Historian role that Jack Jekowski has been selected to fill, and once complete will be posted to an update to the History link on the INMM website. Understanding the history of the Institute and the external global events that have helped to shape its activities and mission is a critical element in the overall strategic planning process with respect to lessons learned, and how paths to the future might be influenced for better outcomes.

## Strategic Financial Growth Committee

July 2020

Members: Susan Pepper (Chair), Morris Hassler, Sean Gleason, Willem Janssens, Melanie Mae, Chris Pickett, Liz Franks (AH)

The Strategic Financial Growth Committee (SFGC) was discussed and established by the Executive Committee in the fall of 2019 and the INMM advertised for a Chair of the Committee in early 2020. As there were applications, the EC decided to establish it as an ad hoc committee and Susan Pepper agreed to Chair it.

At its first meeting on April 9, the SFGC identified the developed a list of activities for increasing revenue for the INMM. The SFGC decided early on to recommend the formation of an INMM Marketing Committee. After some discussion, it was decided to form a Marketing Subcommittee under the SFGC, and Sean Gleason volunteered to be its Chair, with the intention that the subcommittee might become a standing committee after its role and responsibilities become established.

The SFGC submitted a proposal to the June EC meeting to bestow honorary memberships on the 2020 INMM Annual Meeting plenary speakers – Gustavo Zlauvinen, Lisa Gordon-Hagerty, Massimo Aparo, Rita Baranwal, and Ernest Moniz. Honorary memberships granted to individuals who are well-respected in the field but not likely to join the INMM can bring more visibility to the INMM and opportunities for outreach. The EC voted to grant honorary memberships to all five of the 2020 plenary speakers.

Based on the goals identified by the SFGC, Cary Crawford, Susan Pepper, Larry Satkowiak and Carrie Mathews met on June 24 with NNSA Administrator Lisa Gordon-Hagerty and her staff to plan for Ms. Gordon-Hagerty’s plenary address. Read ahead materials were provided for the meeting. We took this opportunity explain how the INMM supports the missions of the NNSA and the opportunities available for NNSA to financially support the INMM.

Finally, the SFGC discussed the diversification of the INMM’s members and contributed to a proposal for the creation of a “scholarship” to cover the annual meeting registration fees for African Americans who are new to the INMM community. The proposal was shared with NTI, Carnegie, and Ploughshares. NTI and Carnegie have expressed interest in financially supporting this initiative.

Additional members are welcome to join the committee.

Respectfully submitted by Susan Pepper

# INMM California Chapter Annual Report

July 2020

## Office

President	Ruth Kips (LLNL)
Vice President	Dan Johnson (WINS)
Treasurer/Secretary	Greg White (LLNL)
Member-at-Large	Yana Feldman (LLNL)
Member-at-Large	Jon Essner (LLNL)
Member-at-Large	Scott Kiff (SNL)

## **Past Activities**

The INMM California Chapter (INMM-CA) organized several internal chapter meetings throughout the year and celebrated its growing number of active members with a social event for the Thanksgiving holiday.

## **Planned Activities**

Due to the COVID-19 pandemic, the workshop on Emerging Digital Technologies (EDT) for Nonproliferation and Nuclear Security that was to be held on September 9-11, 2020 at Lawrence Livermore National Lab (LLNL) will now be postponed to sometime in 2021 (dates TBD). The workshop will be hosted by the INMM California, Southwest, and Pacific Northwest chapters and aims to address challenges and opportunities from emerging digital technologies for the nuclear materials management community. This joint workshop on Emerging Digital Technologies for Nonproliferation and Nuclear Security will focus on the following areas:

- Development of emerging digital technologies and approaches specific to nuclear security and nonproliferation
- Novel applications of existing digital technologies and approaches to the nuclear security and nonproliferation domains
- Studies on impacts, risks, consequences and implications related to the implementation of emerging digital technologies and approaches

Since the EDT workshop had to be postponed until next year, the INMM California, Southwest, and Pacific Northwest chapters are organizing a webinar on Sept 9, 2020 starting at 8 am (Pacific time zone). We have confirmed two speakers: Nidhi Kalra (RAND Corporation) and Dimitri Finker (IAEA). The Stanley Center for Peace and Security will help host/sponsor the event. See draft announcement in Attachment 1.

- The chapter continues to be in contact with the Nuclear Science and Security Consortium (NSSC) in Berkeley, CA, ready to assist the NSSC in hosting workshops.

#### **Bank Balance**

The California Chapter of the INMM continued to add to its membership rolls throughout 2019 and has a current balance of \$2,564.07.

Respectfully Submitted:

Ruth Kips

President of the California Chapter of the INMM

# Attachment 1



**In-person Workshop postponed to 2021 –**

**REGISTER NOW for Virtual Pre-Event Sept 9, 2020**

**Due to travel restrictions and health concerns associated with the COVID-19 pandemic, our Emerging Digital Technologies Workshop will be postponed to 2021. New workshop details will be coming soon. In the meantime, please join us for a virtual panel discussion on September 9 from 08:00 AM – 09:30 AM Pacific Time (UTC-7) to start the discussion on challenges and opportunities from emerging digital technologies for the nuclear materials management community, featuring:**



**How to deal with Opportunities and Threats emerging from New Tech - Nidhi Kalra (RAND Corporation)**

Senior information scientist at the RAND Corporation. She has previously served as director of RAND's San Francisco Bay Area office and co-director of RAND's Center for Decision Making Under Uncertainty.



**The Role of Innovation in IAEA Safeguards - Dimitri Finker (IAEA)**

Technology foresight specialist at the IAEA, previously chief technology officer at Freshmile, an innovative start-up active in the field of energy storage and electric vehicles and Section Head at AREVA.

# INMM Central Region Chapter Report

July 2020

President: Jessica White-Horton, [whitejl@ornl.gov](mailto:whitejl@ornl.gov)

Immediate Past President: Linda Paschal,  
[paschallj@ornl.gov](mailto:paschallj@ornl.gov)

Vice President: Kate Buckley, [buckleykm@ornl.gov](mailto:buckleykm@ornl.gov)

Treasurer: Jackie Shipwash,  
[Jackie.Shipwash@tetrattech.com](mailto:Jackie.Shipwash@tetrattech.com)

Secretary: Allyn Milojevich,  
[allyn.milojevich@cns.doe.gov](mailto:allyn.milojevich@cns.doe.gov)

Member At Large (1st term): Daniel Hartman,  
[jhartma7@vols.utk.edu](mailto:jhartma7@vols.utk.edu)

Member At Large (1st term): Commie Byrum,  
[byrumcr@ornl.gov](mailto:byrumcr@ornl.gov)

Member At Large (2nd term): Jason Harris,  
[jtharris@purdue.edu](mailto:jtharris@purdue.edu)

Member At Large (2nd term): Tracey-Ann  
Wellington, [wellingtonta@ornl.gov](mailto:wellingtonta@ornl.gov)

Treasurer’s Report:

FY2020 FINAL (As of July 01, 2020)		
Central Region Chapter Financial Statement – 10/01/2019 – 07/01/2020		
		Notes
Chapter Balance: 10/01/2019	<b>\$16,787.35</b>	
Income:		
Reimbursement from Michigan from FY19 Workshop	\$181.83	
Dividends/Interest	\$19.80	
Expense:		
FY20 University of Michigan – Student Stipend	\$1500.00	
Chapter Balance: 07/01/2020	<b>\$15,488.98</b>	

## 1 Completed Activities in Current FY

Date	Activity
Dec 2019	Submitted updated CRC Bylaws to INMM National with revisions and required additions.

## Upcoming Activities in Current FY

Date	Activity
Jul 2020	<p>The CRC chapter of the INMM is planning to hold their annual meeting virtually following the 61<sup>st</sup> INMM Annual Meeting.</p> <p>Other originally planned events have been curtailed due to the COVID-19 pandemic.</p>

## Student Chapter Officers/Faculty Advisors:

- University of Michigan
  - Faculty Advisor: Sara Pozzi [pozzisa@umich.edu](mailto:pozzisa@umich.edu)
  - Erik Hall, [erikhall@umich.edu](mailto:erikhall@umich.edu) (academic year 2010-2020)
- University of Missouri
  - Faculty Advisor: Kathleen (Kate) Trauth [trauthk@missouri.edu](mailto:trauthk@missouri.edu)
  - Dana Wegge, [weggedana@gmail.com](mailto:weggedana@gmail.com) (academic year 2019-2020)
- Purdue University
  - Faculty Advisor: Robert S. Bean [bean@purdue.edu](mailto:bean@purdue.edu)
  - Student Chapter President: Peter Nowicke, [pnowicke@purdue.edu](mailto:pnowicke@purdue.edu) (academic year 2019-2020)
- University of Tennessee at Knoxville
  - Faculty Advisor: Jason Hayward [jhayward@utk.edu](mailto:jhayward@utk.edu)
  - Student Chapter President: Mairead Montague, [mmontag1@vols.utk.edu](mailto:mmontag1@vols.utk.edu) (academic year 2019-2020)

# INSTITUTE OF NUCLEAR MATERIAL MANAGEMENT

## Japan Chapter

July 1, 2020

**1. Officer and Members-at-Large (as of July 1, 2020)**

President	Masao Senzaki
Vice-President	Junichi Ishihara
Secretary	Shotaro Mori
Treasurer	Taro Shimada
Members-at-large	Kazuyuki Demachi
	Masato Hori
	Hideaki Kaneko
	Masaki Saito
	Masako Ikegami
	Hiroshi Tajiri

**2. Executive Committee Meeting**

The 172<sup>nd</sup> Executive Committee Meeting (JECM) was held on October 31. Primarily, following topics were discussed:

- Discussed INMM membership dues increase and counter measures for the Japan Chapter’s member.
- Discussed INMMJ – FY 2020 financial and business plans especially newly established Student Sector activities expenses
- Reviewed outcome of the 9<sup>th</sup> Joint INMM/ESARD- INMMJ workshop conducted in October 2019,
- Discussed and selection of eligible person for of the Distinguished Service Award recipient for the INMMJ 2019

The 173<sup>th</sup> JECM scheduled on March was not held due to the influence by COVID 19. Subsequently the following topics were discussed and determined through the e-mail communication and the electronic voting.

- Change of INMMJ’s Secretary and member at large
- Appointment of Chairperson and Vice Chairperson of the Planning Committee, and INMMJ Annual Meeting Program Committee

**3. Strategic Planning Meeting**

In order to make further advancement of the chapter’s activity. The meeting was held on January 15<sup>th</sup> and February 25<sup>th</sup>. Primarily, following topics were discussed:

- Discussed INMM membership dues increase and counter measures for the Japan Chapter’s members.
- Reviewed result of the 9<sup>th</sup> Joint INMM/ESARD- INMMJ including the accounting balances
- Discussed possible candidate for the chapter’s EC members for the next term.



**Photo-1 The 6<sup>th</sup>**

**4. Workshop**

The 6<sup>th</sup> Workshop/Seminar was held in September 20<sup>th</sup> at Tokyo Institute of Technology that the theme is “Building of the nuclear security culture”. Total of 41 people were participated

The 7<sup>th</sup> Workshop (theme : “Improvement of insider threat measures”) scheduled on March 13<sup>th</sup> was postponed due to COVID 19 problem.

## 5. Annual Meeting

The 40<sup>th</sup> INMMJ Annual Meeting was held on November 19-20, 2019 at Tokyo International Exchange Center Plaza HEISEI.  
Total of 81 people were participated and total of 32 papers were presented at the technical session and 10 papers were presented at poster session.



**Photo-2 Plenary**



**Photo-3 Poster**

The 41<sup>th</sup> INMMJ Annual meeting will be held on November 19-20, 2020 at Tokyo International Exchange Center Plaza HEISEI.

## 6. The 9<sup>th</sup> INMM/ESARDA Joint Workshop in Tokyo

The 9<sup>th</sup> INMM/ESARDA Japan Chapter workshop was held on October 7-10, 2019 at Tokyo International Exchange Center Plaza HEISEI.

Total of 121 people were participated from 15 countries and 2 organization.  
Theme: Future Challenge for the Enhancement of International Safeguards and Nuclear Security.  
The Workshop features four working groups:

WG-1 ; International Safeguards

WG-2 ; Nuclear Security

WG-3 ; Nonproliferation Arms Control

WG-4 ; Nuclear Knowledge Retention

The Workshop will focus on current issues under the main topics:

- Challenges of International Safeguards
- Enhancements of Nuclear Security
- Safeguards and Nuclear Security Concerns in Decommissioning of Fukushima Nuclear Power Plants



**Photo-4 Group**



**Photo-5 Plenary**

## 7. Nuclear Materials Management Bulletin

The 9<sup>th</sup> INMMJ Nuclear Materials Management Bulletin was published in September 2019 that the 9<sup>th</sup> Bulletin topics is “History and prospect of the Nuclear Security in Japan”

**8. Membership Status (as of June 30, 2020)**

Regular member : 142

(including 1 Fellow Meritorious, 1 Fellow and 14 Senior members)

Student member : 10

\*Sustaining member : 31

(\*: Relevant only to Japan Chapter)

**9. Current Budget**

See FY2020 Financial Budget Plant as listed below.

Respectfully Submitted by Masao SENZAKI (Japan Chapter President)

## INMM Japan Chapter FY2020 Financial Budget Plan

Converted 1US\$ to 110JPY

Category	Japanese Yen	US\$	Note
<b>【Income】</b>			
Carry forward from FY2019	3,501,922	31,836	
Regular membership dues	1,721,000	15,645	
Student membership dues	22,000	200	
Sustaining membership dues	3,200,000	29,091	
Stipend from INMM	-	-	
Annual meeting registration	800,000	7,273	
INMMJ Work-Shop registration	150,000	1,364	New recording
INMM/ESARDA/INMMJ Joint WS	2,876,350	26,149	
Advertisement	760,000	6,909	
Miscellaneous	15,000	136	
Bank deposit interest	300	3	
<b>【Total Income】</b>	<b>13,046,572</b>	<b>118,605</b>	
<b>【Expense】</b>			
Annual membership dues paid to INMM	1,612,600	14,660	Regular Fee:\$100
Annual meeting and workshop room charge	500,000	4,545	
Meeting expense	267,600	2,433	
Annual meeting social activity	300,000	2,727	
INMM/ESARDA/INMMJ Joint WS	3,274,570	29,769	
Office supply	70,000	636	
Printing	422,500	3,841	
Honorarium	70,000	636	
Labour charge	1,522,800	13,844	
Travel and transportation	858,000	7,800	
Postage	94,300	857	
Miscellaneous	156,000	1,418	
Office equipment (including computer software)	120,000	1,091	
Information system (website development etc)	656,000	5,964	
Advertisement	260,000	2,364	
Book expenses	20,000	182	New recording
Student group activities fee	500,000	4,545	New recording
Haginoya fund	-	-	
<b>【Total expense】</b>	<b>10,704,370</b>	<b>97,312</b>	
<b>【Income - Expense】</b>	<b>2,342,202</b>	<b>21,293</b>	
Carry forwards to FY2021	2,342,202		



**Northeast Region Chapter Report  
to the INMM Executive Committee  
July 02, 2020**

The NE Chapter Executive Committee members are the following:

<b>Office</b>		<b>Term Ending</b>
President	Kate Bachner	October 2020
Vice President	Melanie May	October 2020
Secretary	Christopher Ramos	October 2021
Treasurer	Gerard Jackson	October 2020
Member-at-Large	Anagha Iyengar	October 2021
Member-at-Large	Azaree Lintereur	October 2021
Member-at-Large	Lynne Preston	October 2020
Member-at-Large	Chuck Teal	October 2020
Immediate Past President	Arden Dougan	October 2020

The Northeast Chapter continues to conduct periodic Executive Council Meetings via teleconference. The approved minutes from the latest meeting are posted to the Chapter Web Site.

We currently have approximately \$6,471.01 in our bank account: \$6,417.71 in checking and \$53.30 in the Share account.

**Summary of Accounts**

INMM NE Chapter Pen Fed: Account	Ending Balance This Statement
<b>Regular Share Account</b>	<b>\$53.30</b>
<b>Access America Account</b>	<b>\$6,417.71</b>
Total Deposit Accounts	\$6,471.01

—

**Chapter Activities**

The Northeast Chapter, in support of the Penn State Student Chapter, will assist with the holding of a workshop on Quantifying the Likelihood of an Attack on a Nuclear facility, when circumstances allow.

The 2020 Annual Northeast Regional Chapter Membership Meeting will be held virtually on the INMM Annual Meeting Official Conference Platform, on Wednesday, July 15<sup>th</sup> at 9 am.

The Northeast Chapter plans to resume the Nuclear Policy Talk series at George Washington University's Elliott School of International Affairs in the fall of 2020, if the COVID-19 allows. If not, we will look into virtual options for a policy talk.

Respectfully Submitted:  
Kate Bachner, President



## Leadership

The Pacific Northwest Chapter (PNW) Executive Committee (EC) members are the following:

Office	Name	Term Ending
President	Roberta Burbank	October 2020
Vice President	Mark Engelmann	October 2020
Secretary/Treasurer	Jim André	October 2020
Member-at-Large	Jacob Benz	October 2020
Member-at-Large	Shirley Johnson	October 2020
Member-at-Large	Amanda Sayre	October 2020
Immediate Past President	Harrison "Skip" Kerschner	October 2020

The EC is supported by Ramon Castillo, INMM Member for Communications Development; Jennifer Anderson, Chapter Associate for Membership; and Christine Ortega and Theresa Flores, Chapter Associates for Administrative Support.

## Activities

**Participation in INMM Annual Meeting** – The Chapter made its presence known through active engagement at the 60<sup>th</sup> Annual Meeting in Palm Desert, California:

- The Chapter represented its recent events and the launch of its new website in the Exhibitor Hall at the Pacific Northwest National Laboratory (PNNL) booth.;
- The Chapter hosted a social gathering for the Pacific Northwest student chapters and friends of the PNW Chapter, which was very well attended;
- In conjunction with PNNL, held two standing-room-only hands-on sessions on an "Introduction to Plutonium: the Hanford Perspective";
- Provided strong support for the team executing the JD Williams Student Paper Competition;

- Had two members raised to Senior Membership and one elected to the Executive Committee as a Member-at-Large.



Doug MacDonald demonstrating cyber-physical security at exhibitor booth

The Chapter is looking forward to participating in this year's ground-breaking virtual 61<sup>st</sup> Annual Meeting, including hosting its annual social gathering for the Pacific Northwest student chapters and friends of the PNW Chapter.

**Workshop Activities** – Collaborating with the Southwest and California Chapters on the “Emerging Digital Technologies for Nonproliferation and Nuclear Security” workshop now being planned for April 2021 at Lawrence Livermore National Laboratory.

**NuScale Power tour** – A tour of the NuScale Power simulator facility in Richland, WA was held in Summer 2019. It was a very interesting tour and well enjoyed by all, even by the less technically inclined. The passion of the NuScale team came through in their presentations of the facility and we appreciated the opportunity to discuss their small modular reactor technology with them.

**Growing Our Membership** – A membership drive luncheon was held in January 2020 for Chapter members, guests, and PNNL staff. Following a presentation and discussion of INMM and its professional benefits, attendees were provided an opportunity to join the Institute or become involved in the Chapter's activities. Long time INMM members shared their experiences and value for their membership of the INMM. From a total attendance of 28 individuals, several participants directly expressed an interest in future Chapter activities and shared what they took away to others that couldn't attend. Overall, this effort has resulted in

143 new members representing two organizations (including one new) joining the Institute since January.



Attendees at the Membership Luncheon



Mark Engelmann presenting at the Luncheon

Following up on the success of this first membership drive luncheon, another event is being planned for Chapter members and guests remote from the Richland, WA area.

**Student Outreach** – The Chapter provides outreach and support to its regional university chapters and other students in its region with the goal of building awareness and education in the topics of nuclear materials management and provide networking opportunities:

- Shirley Johnson provided a technical presentation on her experiences as a Safeguards Inspector for the International Atomic Energy Agency (IAEA) to the University of Utah’s student chapter on March 5, 2020. They were an enthusiastic group and it was a good reconnection between our two Chapters.
- The Chapter arranged for a virtual presentation in collaboration with the Student Chapters at the University of Washington and Oregon State University on IAEA Nuclear Material Verification Technologies on May 27, 2020. Dr. Christopher Orton spoke on his experience as an expert supporting the IAEA’s development and use of Cerenkov Viewing Devices while both as a technical adviser to the NNSA’s Office of International Nuclear Safeguards and at the IAEA’s the Department of Safeguards.
- With assistance from the PNW Chapter, the U.S. Naval Academy has officially established its student chapter.
- The effort to establish a student chapter at Washington State University continues with ongoing discussions regarding establishing and maintaining a membership base on campus.
- The Chapter planned for a special INMM Award for the Mid-Columbia Science Fair (MCSF) held March 14-16, 2020 to be awarded to a student whose science project best addresses questions or issues relating to managing hazardous or precious materials. Unfortunately,

the MCSF was truncated and the final ceremony award cancelled due to the Stay At Home Order for COVID-19. MCSF draws middle and high school students from across the southeastern Washington region.

**Technical Society Relationships** – The Chapter works to grow and maintain its relationships with other professional technical societies in the region in order to leverage the varied reach each organization has in the nuclear community of the Pacific Northwest:

- The Chapter was a co-host with the Eastern Washington Section of the American Nuclear Society (ANS-EWS), the Columbia Chapter Health Physics Society, and the Columbia Basin Section of the American Society of Mechanical Engineers of a Tri-Cities Technical Societies Networking BBQ in late summer 2019.
- The Chapter was represented at the ANS-EWS technical session on Energy Policy, Resource Adequacy, and the NuScale Small Modular Reactor at the Idaho National Laboratory discussing Energy Northwest’s involvement in the Pacific Northwest’s power supply.
- The Chapter was represented at the ANS-EWS panel discussion with Pacific Northwest energy supply leaders discussing electrical power planning and supply management and at an ANS-EWS technical session on “What Risk Does Nuclear Waste at Hanford Pose?” presented by Dr. James Conca.



Dr. James Conca presenting on Hanford Tank Waste

**Communications Development** – Ramon Castillo continues to lead the Chapter’s website and social media presence, coordinating with INMM HQ. The new website has been launched; the Facebook page is “INMM PNW Chapter”, a closed group with access available by request.

**By-laws Revision** – The Chapter is resubmitting its By-law revisions in response to comments received from the Chapter Relations Committee.

**INMM-HQ Activities** – PNW Chapter individual member contribution at the level of the parent Institute follows:

- Jim André is serving as a Member-at-Large on the Executive Committee and continues his participation in the Technical Program Committee
- Jacob Benz is the Chair of the Arms Control, Treaty Verification, and Disarmament Subcommittee of the Nonproliferation and Arms Control Technical Division
- Sarah Frazar is the Chair of the Public Relations and Outreach Subcommittee of the Communications Committee
- Skip Kerschner continues representing INMM as a voting member on the American National Standards Institute N13 committee on “Radiation Protection”
- Carrie Mathews is the Chair of the Technical Program Subcommittee of the Annual Meeting Committee
- Steve Mladineo continues as the Technical Division Oversight Chair
- Amanda Sayre is the Chair of the Student Activities Subcommittee of the Education and Training Committee

## Membership

PNW Chapter membership remains free to members that have registered with the National INMM. The Chapter has 4 recognized chapter associates actively supporting chapter leadership and 667 members. Those members include 5 emeritus members. The Chapter is also associated with 2 sustaining membership organizations.

## Treasurer’s Report

Chapter Balance June 30, 2019	\$21,476.80
Total Income from CDs	\$240.66
Total Expenses	<b>\$476.41</b>
PNW mtg at 60 <sup>th</sup> Annual Meeting	<b>136.50</b>
Networking BBQ	<b>65.00</b>
Renew Internet Domains	<b>158.52</b>
Membership Luncheon	<b>106.39</b>
WA State Annual Report	<b>10.00</b>
Chapter Balance June 30, 2020	\$21,241.05

## Key Upcoming Activities

- Discuss partnering on future events with the local section of the American Nuclear Society
- Schedule Summer and Fall technical sessions for remainder of 2020
- Continue actions to charter Washington State University student chapter
- Conduct a virtual Membership Drive to increase participation from locations outside the Richland, WA area
- Complete PNW By-Laws update and submit for INMM EC approval
- Continue planning with the Southwest and California Chapters for a joint professional workshop in April 2021

Respectfully Submitted:

*Roberta Burbank*

Roberta Burbank  
President, Pacific Northwest Chapter

# Report of INMM Russian Federation Chapter

INMM Russian Federation Chapter (RFC) continues the activity to reorganize of RFC in present unusual conditions:

- To revise the member list to make it more realistic, taking into account modern situation (political, epidemic aspects et al), now there are only 12 INMM members.
- To create the plan of events (national and international) when COVID-19 will be overcome.

Members of RFC participated in some important events. Main of them listed below:

- Participation in meetings of the IAEA Advisory Group on Nuclear Security (AdSec) for Director General (A. Izmaylov) and in other INMM activity (international regulations development, training courses et al).
- Participation in the IAEA International Conference on Nuclear Security: Sustaining and Strengthening Efforts (ICONS 2020), (A. Izmaylov and others).
- Practically, all members of RF Chapter are working in different Russian institutions and conduct current work in several Nuclear Security areas (nationally and internationally). Some members are working as independent experts.
- Now we are ready to take part in the 62nd INMM Annual Meeting, Vienna, Austria, August 2021.

Alexander Izmaylov  
President of the INMM RF Chapter  
INMM Fellow

## Southeast Chapter Report

### Southeast Chapter Officers

President: Jeff Allender  
Vice President: (vacant)  
Treasurer: Bill Swift  
Secretary: Cathy Mussi  
Members-at-Large: Rick Poland, Franklin DuBose, Robert Watkins, and Sean Branney  
Immediate Past Presidents: Glenn Abramczyk, Bradley Loftin

**Other Key Roles:** John Dewes (Corporate Liaison), Paul Ebel (Educational Outreach Officer), Rich Koenig (Nominations and Elections Chair)

### Activities

- The Southeast Chapter regrets the relocation of its President and leader, Bradley Loftin, to the Central Chapter. We focused in the first part of the year in attending and

speaking at the July Annual Meeting, including attempts to build enthusiasm among our Federal customers. Southeast participation declined last year, partly because PATRAM was hosted in the United States.

- The Chapter provided key support to the Packaging, Transportation, and Disposition Technical Division for planning and leading the 35th INMM Spent Fuel Management Seminar, held in Alexandria VA January 28-30, 2020. A stimulating program spread out over three days, with sessions focused on the spent fuel political landscape; recycling and spent fuel management; international perspectives; and modeling and testing for storage/transportation. Panels addressed utility perspectives, business models for decommissioning, views from operators and manufacturers, private spent fuel storage solutions, and transportation for interim storage.
- Response to the COVID-19 pandemic limited chapter activities severely beginning in March. The Chapter is working to develop future activities that recognize lessons learned from the limits on group gatherings and travel. In particular: greater experience with WebEx/Zoom type videoconferences proves the viability of meetings joining geographical “clusters” where smaller groups, including government and industry participants and Student Chapters, can meet, interact, plan, and minimally socialize. Especially after students and professionals return to campus and work, we seek to expand participation by industry and academic groups that have a lesser population of nuclear engineering and policy focus, and that have not by themselves reached the “critical mass” for routine local or student INMM events.

### **Other Notable Activities:**

#### Student Chapters

- The SE Chapter continues to provides a “Speaker Series” where subject matter experts from the Chapter can travel to and meet with Student Chapters, other institutions, and civic groups, supporting efforts to boost interest and membership.
- The Chapter continues to foster discussion with the University of North Carolina, NC State, and Duke in the effort to re-establish the Triangle Student Chapter. Interface continues with nuclear programs in other states: Student chapters that include multiple institutions in a localized area have significant potential.

Respectfully Submitted: Jeff Allender  
Southeast Chapter President

### **Southeast Chapter Financial Statement – 7/11/2020**

- Chapter Balance: 6/15/2020: \$4,372.54
- The Southeast Chapter also has a CD valued at \$1,050.01 as of February 14, 2020.

## **U.S. Southwest Professional Chapter of the INMM Report to the Executive Committee Annual Report for Fiscal Year 2020**

The FY20 Executive Committee of the Southwest Professional Chapter is as follows:

President: Adam Williams, Sandia National Laboratories  
Vice President: Tina Hernandez, Sandia National Laboratories  
Secretary: Marc Paff, Los Alamos National Laboratory ('20)  
Treasurer: Heidi Smartt, Sandia National Laboratories ('19)  
Members at Large: Margie Root, Los Alamos National Laboratory ('21)  
Michelle Silva, Los Alamos National Laboratory ('21)  
Steven Horowitz, Sandia National Laboratories ('20)  
Jeff Martin, Sandia National Laboratories ('20)  
Past President: James Miller, Los Alamos National Laboratory  
Communications: Scott Kraus, Aquila Technologies

Activities this Fiscal Year:

1. The Annual Meeting of the INMM Southwest Chapter was convened at the JW Marriott Desert Springs Resort in Palm Desert, CA, Monday evening, July 15, 2019 in the Griffin Room. Copies of the Minutes from the July 23 2018 Annual Meeting and SW Chapter Annual Report were provided to attendees, and a sign-up sheet was provided.
  - a. 11 people attended the meeting, including 5 members of the SW Chapter EC.
  - b. Dennis Mangan Student Award winner announcement – James Miller informed the membership that award was presented to Mary Arnhart (UNM/SNL). Mary was unable to attend this year's Annual Meeting, but SW chapter will pay for her travel to the 2020 Annual Meeting in Baltimore (subject to change due to COVID-19).
  - c. Recognition of awards received by INMM Members within the Southwest Region at Opening Plenary:
    - i. Jack Jekowski (INMM Fellow)
    - ii. Zoe Gastelum (Early Career Award)
    - iii. Thomas Sampson (Vincent J. DeVito Award)
  - d. Nominations for officers for 2020
2. INMM SW EC Meeting October 18, 2019
  - a. EC discussed plans for upcoming winter chapter meeting in Santa Fe
  - b. EC discussed upcoming workshops
  - c. EC discussed nominations and plans for officer elections
3. INMM SW EC officer elections held in November 2019 for FY20 EC (results shown above)
4. INMM SW EC Meeting December 6, 2019
  - a. The new EC held their first meeting

- b. Plans for the Annual Winter Dinner meeting for January 10, 2020, were finalized
  - c. Strategies to attract a larger student audience to dinner meeting were agreed upon
  - d. New INMM website layout was discussed
  - e. Plans for supporting a social at the 2020 Annual Meeting were discussed
5. 2020 INMM SW chapter Annual Winter Dinner, January 10, 2020
- a. A total of 75 people, including 15 students, attended the Annual Dinner Meeting at the Inn at Loretto in Santa Fe
  - b. Will Tobey of the Harvard Kennedy School Belfer Center, gave a presentation on analysis by Harvard of the Iranian nuclear archive recovered by Israel in 2018



**Figure 1. INMM SW EC President Adam Williams addresses the chapter's Annual Winter Dinner Meeting**



**Figure 2. Will Tobey delivers keynote speech on Iran nuclear archive during chapter's Annual Winter Dinner Meeting in Santa Fe, NM**

6. INMM SW EC Meeting February 7, 2020
  - a. Discussed Winter Meeting and plans for Spring Technical Exchange and Annual Meeting; other chapter business
7. INMM SW EC Meeting March 27, 2020
  - a. Discussed contingency plans for Spring Technical Exchange and Annual Meeting due to COVID-19; ended up cancelling Spring Tech Exchange at later date; other chapter business
8. INMM SW EC Meeting June 5, 2020
  - a. Discussed plans for virtual platforms for future meetings, and moved annual business meeting to virtual format in light of Annual Meeting not taking place in Baltimore; other chapter business
  - b. Discussed postponement of Emerging Digital Technologies workshop originally scheduled for September 2020

## Budget:

7/1/2019	Starting balance FY20		\$8,565.83
	Just Trust Me Workshop proceeds	+\$5,682.00	\$14,247.83
1/8/2020	Withdraw change for winter dinner	-\$200.00	\$14,047.83
1/30/2020	Winter dinner room rental deposit	-\$900.00	\$13,147.83
1/13/2020	Winter dinner remainder due for room rental	-\$2,567.83	\$10,580.00
1/22/2020	Check to H. Smartt for supplies (tent cards, adhesive name stickers, meal choice stickers – not used this meeting as Loretto provided; will save for next time)	-\$56.76	\$10,523.24
1/24/2020	Deposit from winter dinner (including previously withdrawn change)	\$3,075.00	\$13,598.24
6/05/2020	Current Balance		\$13,598.24

Respectfully submitted,  
Adam Williams, INMM-SWC President  
Marc Paff, INMM-SWC Secretary

## ***Vienna Chapter Report***

**The VIENNA CHAPTER Executive Committee members are the following:**

<b>Office</b>	<b>Name</b>	<b>Term Ending</b>
<b>President</b>	<b>Brian Boyer</b>	<b>2020</b>
<b>Vice President</b>	<b>Igor Tsvetkov</b>	<b>2020</b>
<b>Secretary</b>	<b>Sarah Poe</b>	<b>2020</b>
<b>Treasurer</b>	<b>Jonathan Beaumont</b>	<b>2020</b>
<b>Member-at-Large</b>	<b>Florin Abazi</b>	<b>2020</b>
<b>Member-at-Large</b>	<b>Naida Dzigal</b>	<b>2021</b>
<b>Immediate Past President</b>	<b>Elisa Bonner</b>	<b>2020</b>

We will be having elections this summer for the 2020/2021 term.

Chapter Activities:

- 1) We planned and worked hard to put on the Vienna International Science Fair in April 2020. The COVID19 crisis postponed the event such that we plan to use our logos and ideas from 2020 for 2021.
- 2) INMM Vienna Chapter ably hosted a dinner on (11 Feb 2020) during the International Conference on Nuclear Security: Sustaining and Strengthening Efforts (ICONS 2020). The INMM President, Cary Crawford and INMM Vice President Susan Pepper attended along an enthusiastic group of visitors and Vienna locals (45 partaking from INMM Vienna, the International Conference on Nuclear Security: Sustaining and Strengthening Efforts (ICONS 2020) , and the United Nations-Nuclear Young Generation (UN-NYG)) at the Universitätsbräuhaus in the 9<sup>th</sup> District of Vienna
- 3) Brown Bag Lunch Series – with the COVID-19 restrictions we were limited in events such as this in 2019/2020.
- 4) We plan on having a social event when we can do such an event under VIC and Austrian COVID19 restrictions where we advertise the upcoming INMM Annual Meeting in 2021 in Vienna to the members and beyond.
- 5) INMM Vienna wishes to be engaged with the IAEA and others in the INMM to assist in a successful 62nd Annual Meeting in Vienna hopefully seeing all together face to face in August 2021.

Number of Active Members: INMM lists 46 members

**Financial report 2019-2020:**

All transactions in EUR

Transactions not yet completed

Period start	2019.10.31	2018.10.31	2017.10.31
Period end	2020.11.01	2019.11.01	2018.11.01

Incomes	FY2020	FY2019	FY2018	FY2017
Rollover from previous year	6842.91	9006.04	7113.82	6094.00
Corp. Donations:				
Berkeley Nucleonics	-	250.00	-	-
Bot Engineering	-	1320.00	1236.00	-
Canberra	-	-	-	-
EPO	-	2500.00	2500.00	-
INMM HQ	-	-	1594.48	-
OPEC	-	1000.00	1000.00	-
Scionix	-	-	500.00	-
Ortec	-	-	-	-
Webster University	-	-	-	-
WiN IAEA	-	-	250.00	-
WINS (Nuclear security)	-	-	-	-
Youth Nuclear Congress	-	-	250.00	-
ISTI	-	-	250.00	-
Beaver brewing	-	-	250.00	-
Borealis	5500.00	-	-	-
<b>Total funds available</b>		<b>14076.04</b>	<b>14944.30</b>	<b>13299.00</b>
<b>Net incomes</b>	<b>5500.00</b>	<b>5070.00</b>	<b>7830.48</b>	<b>7205.00</b>
Expenses		FY2019	FY2018	FY2017
<u>Organization</u>				
Judge's Heuriger	-	150.00	100.00	
<u>Certificates paper and supplier</u>				
Supplies	-	166.47	-	
Posters	666.88	-	-	
Printer	489.91	-	-	
<u>Gifts</u>				
Student awards (gift cards)	-	1000.00	-	
Bags and T shirts	2325.00	798.19	-	
School gifts (coordinators)	-	-	-	
Ribbons	-	540.00	-	
Maks and cards (cancellation)	2215.82	-	-	
<u>Science fair</u>				
Insurance/rental	-	500.00	-	
Refreshments	-	53.95	-	
<u>Catering</u>				
EUREST	-	3622.21	3617.71	
<u>Other</u>				
Chapter website	180.00	-	-	
Translation of statute into german	-	328.31	-	
Account fees	24.37	74.00	158.50	
Re-imburse BOYER	-	-	56.85	
Re-imburse IVANOVA	-	-	14.94	
Re-imburse ROMANO	-	-	240.00	
Re-imburse MATHEWS	-	-	150.24	
Re-imburse RORIF	-	-	1500.00	
Re-imburse BONNER	-	-	100.02	
<b>Total net expenses</b>	<b>5901.98</b>	<b>7233.13</b>	<b>5938.26</b>	<b>6185.18</b>
<b>Balance</b>	<b>6440.93</b>	<b>6842.91</b>	<b>9006.04</b>	<b>7113.82</b>

Respectfully submitted,

Brian Boyer - President  
 Igor Tsvetkov - Vice President  
 Sarah Poe - Secretary  
 Jonathan Beaumont - Treasurer  
 Naida Dzigal -Member-at-Large  
 Florin Abazi – Member-at-Large  
 Elisa Bonner - Past President

## The Ahmadu Bello University

The Ahmadu Bello University Student Executive Committee members are the following:

Office		Term Ending
*President	Abubakar sadiq Aliyu	*30 <sup>th</sup> Oct. 2021
Vice President	Abdulkadir Shehu Tijjani	30 <sup>th</sup> Oct. 2021
Secretary	Abubakar Abdulkadir Abubakar	30 <sup>th</sup> Oct. 2021
Treasurer	Alhassan Sa'ad Aliyu	30 <sup>th</sup> Oct. 2021
Member-at-Large	Oparanti Samson Okikiola	30 <sup>th</sup> Oct. 2021
Member-at-Large	Abdulsalam Abubakar Yero	30 <sup>th</sup> Oct. 2021
Member-at-Large	Peter Atsinafe Alfred	30 <sup>th</sup> Oct. 2021
Member-at-Large	Dogo Joshua Dekilo	30 <sup>th</sup> Oct. 2021
Immediate Past President	John Simon	30 <sup>th</sup> Oct. 2021

**Faculty Advisor: Prof. Sadiq Umar**

### Activities

- Election on 10<sup>th</sup> – 13<sup>th</sup> October , 2019 ( immediate Past administration)
- Handing over on 12<sup>th</sup> December, 2019
- EC meeting 23<sup>rd</sup> January, 2020
- Seminar on Understanding the basic concept of Nuclear materials and security, 19<sup>th</sup> February, 2020 (find attached some pictures from the seminar)

### Planned Activities

- Two seminars before the end of this year.
- National Workshop on Promoting Nuclear Technology and Security Awareness among Nigerian Students (December, 2020)
- Career talk for secondary school students (November, 2020)
- Facility visit to centre for energy research and development, Ile-ife.(January, 2021)

**Respectfully Submitted:**

Abubakar Sadiq Aliyu

## Treasurer’s Report

**INMM ABU STUDENT CHAPTER Financial Statement – 12/12/2019 – 4/07/2020**

### Chapter Balance: 12/12/2019

#### Income:

S/N	Transaction	Amount in Naira	USD Equivalent
1.	Balance Handed Over to Us from previous administration	74,000	205
2.	Donation from Advisor during seminar	5000	14
<b>Income total</b>		<b>79,000</b>	<b>219</b>

#### Expenses:

S/N	Transaction	Amount in Naira	USD Equivalent
1.	Publications	2500	07
2.	Refreshment for EC meeting	4000	11
3.	Refreshment for maiden seminar	8000	22
<b>Expenses total</b>		<b>14500</b>	<b>40</b>

### Chapter Balance: 05/07/2020

**79,000 – 14,500 = 64500 (NGN)**

**205 – 40 = 165 (USD)**





## INMM Amity Chapter Report 2020

**Event: Guest lecture by Dr Manpreet Sethi, April 2020**

The INMM chapter at Amity University, Noida organized a guest lecture by **Dr Manpreet Sethi** who is a distinguished fellow at the Centre for Air Power studies, New Delhi. Her skills include public policy, monitoring international development on the front of nuclear deterrence and research in military nuclear doctrines of nations around the globe. She delivered the talk on the doctrine of the Indian sub-continent in terms of the usage of nuclear armaments and how it differs from that of its two neighbors.

Outcome:

1. Understanding the rationale of ‘use’ and modernization of nuclear weapons
2. Appraise about the implications of nuclear weapons for Southern Asia
3. Understanding North Korea’s (DPRK) nuclear strategy
4. Develop insights into JCPOA agreement and USA’s stance on it
5. Illustrate the current global nuclear landscape

**Event: Poster Presentation on Nuclear Technology, May 2020**

This activity was hosted on 2nd May 2020. The topic presented by the students was interesting and almost touched various aspects of Nuclear technology. Different posters were made on Nuclear Science where the students were made to present their posters and talk for 15 minutes about it. The presenter and their topic are as follows:

follows:

1. Ikshitha Chalamalla - Perspective of people about Nuclear energy.
2. Alok Kumar - Applications of CFD in the Nuclear Industry.
3. Omkar Acharya - Radiation exposure - Radon.
4. Urvee Shrivastava – Nuclear Safety, security and safeguards.
5. Niranjana Chavan - Time Distance and Shielding
6. Amit K Shah - Applications of Radioisotopes

**Ms. Ikshitha** talked about how people view nuclear reactors and radiation. She implied that usually

the citizen has a negative perspective towards nuclear energy while the scientist community

thinks that nuclear energy has high potential.

**Mr. Alok** discussed the flow problem in the reactor core. He elaborated through Computational Fluid

Dynamics that the design of some reactor containment buildings should be modified to prevent

future accidents.



**Mr. Omkar** discussed Radiation exposure due to Radon. This was the most discussed topic in the event and much insightful information was gained by the students. He discussed about the Radon gases present in the environment and how it can damage the lungs. He also discussed methods to prevent that from happening.

**Ms. Urvee** discussed Security, safety, and interface where she explained about various aspects of nuclear security and methods to enhance nuclear security.

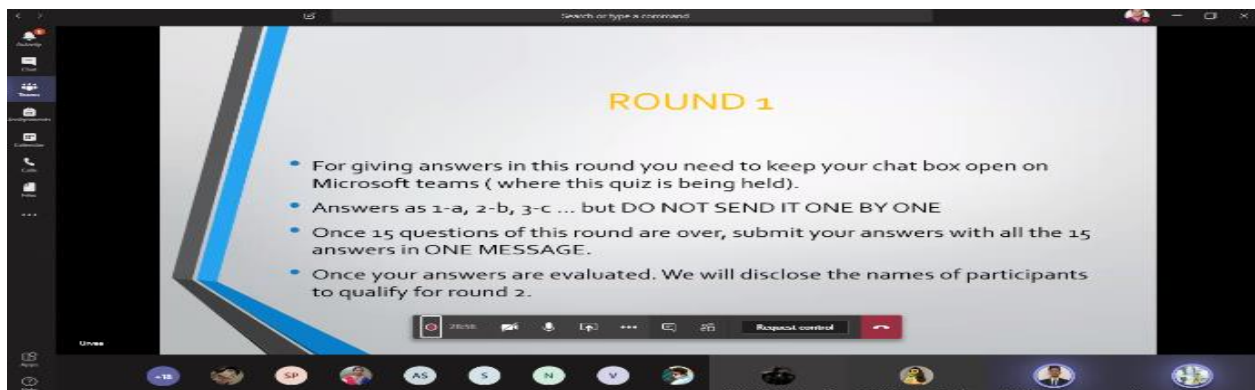
**Mr. Niranjan** discussed radiation protection and the ALARP (As Low As Reasonably Possible) and the three methods to reduce exposure which reduce the time of exposure, increase the distance from the source, and proper shielding.

**Mr. Amit** discussed the application of radioisotopes where he talked about the application of radiation in the food industry, healthcare system, pest control, etc.

After the poster presentation was over the faculty members discussed posters and they planned to announce the winner in the next event.

#### **Event:** Bazinga: Nuclear Quiz (May 2020)

The Nuclear related quiz was organized on Teams. There were 4 rounds, each comprising of 15 questions. After each rounds evaluation 50% participants could compete in the next round. Finally, we had in last round 6 people competing in the last round. Students from not only nuclear but varied background participated and competed well. The pictures of the various rounds, questions and results can be found below.



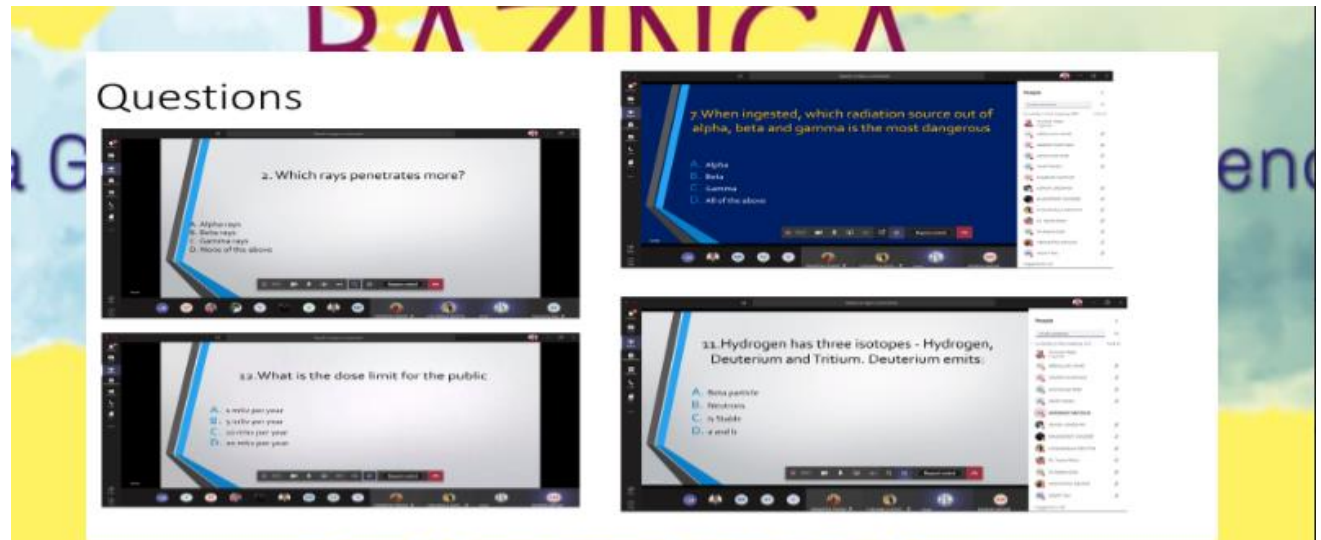
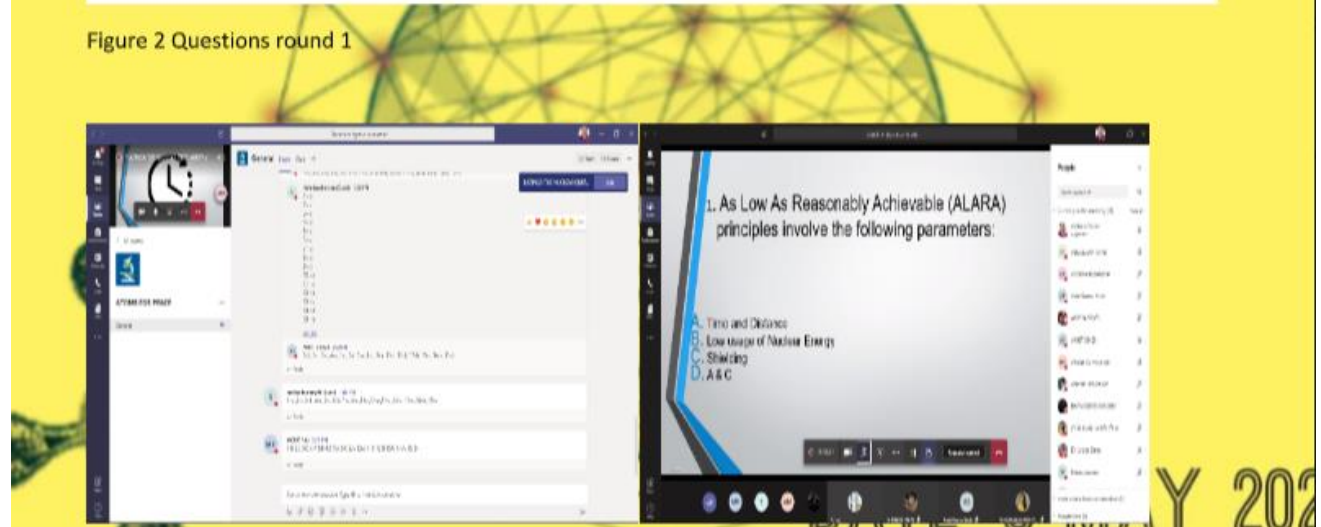


Figure 2 Questions round 1



## Alumni Lectures

Title: Cybersecurity in nuclear and non-nuclear industries

Outcome:

1. Understanding the fundamentals and need for cyber security
2. Understanding the current state of cybersecurity with help of case studies
3. Differentiate between a safe and unsafe state (identify cyber-attacks)
4. Develop insights into the website we browse and potential traps
5. Appraise with career opportunities in nuclear



AMITY INSTITUTE OF NUCLEAR SCIENCE AND TECHNOLOGY  
AMITY UNIVERSITY UTTAR PRADESH

Delegation of the European  
to the International Organik  
in Vienna

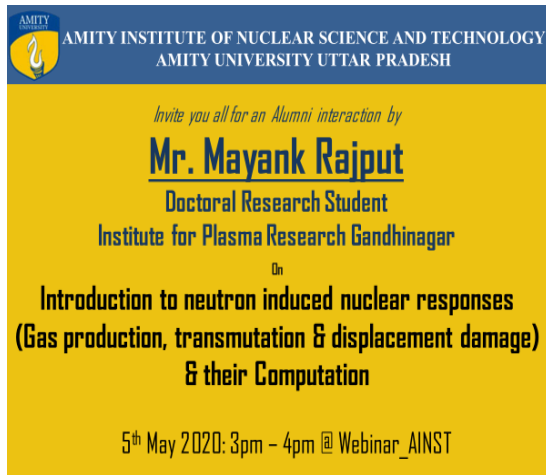
Invite you all for an Alumni lecture on  
**CYBERSECURITY**

**Focuses of Webinar**

- What is Cybersecurity & its principles
- Current state of cybersecurity (nuclear and in non-nuclear industries)
- Cyber-attacks & what to do about them
- Future Opportunities and Benefits

**SPEAKER**  
**Ms. Deeksha Gupta**  
PhD Scholar  
Framatome GmbH

24<sup>th</sup> April 2020; 5.30PM to 6.30PM  
Register: [www.amity.edu/guestlectures](http://www.amity.edu/guestlectures)



AMITY INSTITUTE OF NUCLEAR SCIENCE AND TECHNOLOGY  
AMITY UNIVERSITY UTTAR PRADESH

Invite you all for an Alumni interaction by  
**Mr. Mayank Rajput**  
Doctoral Research Student  
Institute for Plasma Research Gandhinagar

On  
**Introduction to neutron induced nuclear responses  
(Gas production, transmutation & displacement damage)  
& their Computation**

5<sup>th</sup> May 2020: 3pm - 4pm @ Webinar\_AINST

## Expert Lecture

**Dr. Sunil Chirayath, April 2020**

Title Nuclear material accountancy and control

Outcome:

1. Understanding of the Fundamentals of nuclear security
2. Appraise about the material accountancy principles and methodology
3. Identification of risk of sensitive facilities and how to cater to the risk
4. Identify scope for nuclear engineers in nuclear security and in international agencies like IAEA.
5. Develop motivation to learn the fundamentals of radiation detection and isotope identification for safety and security applications.

**Dr. Nitendra Singh**

Title: 'Latest trends in Nuclear Reactor Industry

Outcome:

1. Awareness amongst students about the development of nuclear reactors and the latest in the industry.
2. Understanding as to how severe accidents have helped in emergence of the reactor technology
3. Illustrate robustness of the reactor technology with technology advancement (with regards to proliferation)
4. SMR reactor type identification and development
5. Appraise about the fusion facility ITER

**May 2020.**

On nuclear materials and effects of radiation on them.

**AMITY UNIVERSITY**

**AMITY INSTITUTE OF NUCLEAR SCIENCE AND TECHNOLOGY**

**AMITY CENTRE FOR ADVANCE RESEARCH AND INNOVATION**

*Invite you for a Webinar on*

**Radiation Effects in Ceramics and Glasses for Nuclear Technology**

**Dr. Maulik K. Patel**

**University of Liverpool**

**Dept. Mechanical Materials and Aerospace**

Date : 5<sup>th</sup> June 2020      Time : 4-5PM

Registration link Amity <http://tinyurl.com/y7es7vkl>

Outside Amity: [www.amity.edu/guestlectures](http://www.amity.edu/guestlectures)

## KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY

The *KAIST* Executive Committee members are the following:

Office		Term Ending
*President	Andhika Yudha Prawira	*2020/10
Vice President	Phil Seo Kim	
Secretary	Young-Eun Jung	
Member-at-Large	Chulmin Kim	
Member-at-Large	WungJae Wang	
Member-at-Large	SeongWoo Kang	
Member-at-Large	Jung Hwan Kim	

Member-at-Large	Young Jun Kim	
Advisor	Man-Sung Yim	

**\*Faculty Advisor: Man-Sung Yim**

**\*Number of Current INMM members: 8**

**\*Date of Last Officer Meeting – required one time per year (October 1 – September 30):  
June 5, 2020.**

## Introduction

KAIST student chapter was approved by INMM committee on February 2015 as new student chapter in Asia region. In this period (October 2019-February 2020), the number of our member is expanded. The KAIST Chapter meeting was held at the Faculty room in KAIST on the first Friday every 3 months. All student members attended this meeting. In addition, the regular meeting focused on making a plan for the future, as well as preparing research areas for the upcoming Annual meeting throughout the academic year



Figure 1. KAIST INMM Chapter Year End Workshop

## Activities

1. 2019 NEREC Summer Fellows Program
  - ✓ *Date : July 8-August 17, 2019*
  - ✓ *Place : KAIST, Daejeon; China; and Japan*
  - ✓ *2 INMM Chapter members participated as graduate fellows at the Nuclear Nonproliferation Education and Research Center (NEREC) Summer Fellows Program*
  
2. 2019 NEREC Conference on Nuclear Nonproliferation
  - ✓ *Date : August 5-6, 2019*

- ✓ *Place : Seoul, South Korea*
- ✓ *2 INMM Chapter members presented 2 poster presentations at the conference*

Paper	Writer
Bridging Over Troubled Waters: The Role of NNWS in Disarmament Verification Initiatives	Cameron Henderson, Andhika Prawira <sup>1</sup> , Jaewoo Shin
Reconsidering ABACC applicability on DPRK Case	Yuri Sano, Daesoon Kwak, Suood Almazrouei <sup>1</sup>

<sup>1</sup>*KAIST INMM Member*

3. Guest Lecture and Dinner Discussion with Dr. Young Ham (Lawrence Livermore National Lab)

- ✓ *Date : September 26, 2019*
- ✓ *Dr. Young Ham from Lawrence Livermore National Laboratory presented his research on the safeguards verification*
- ✓ *After the lecture, INMM members had a discussion on the working at the IAEA and opportunity at US National Lab for international students.*
  
- ✓ *Lecture Title*  
*Addressing a Critical Nuclear Safeguards and Nonproliferation Issue: Verification of Spent Fuel Dry Storage Casks*



Figure 2 Guest lecture and discussion



4. Fall Workshop of the Korea Institute of Nuclear Materials Management

- ✓ *Date : November 28, 2019*
- ✓ *Place : Busan, South Korea*
- ✓ *1 INMM Student Chapter member presented his research on the insider threat detection using human bio-signal*

Paper	Writer
Biosignal-Based Trustworthiness Evaluation System to Mitigate Insider Threat	Chul Min Kim, Jung Hwan Kim

5. 2019 Year End Workshop

- ✓ *Date : December 23, 2019*
- ✓ *Place : KAIST, Daejeon*
- ✓ *INMM Chapter Members participated in the year end workshop where we shared the on-going research of each member. The workshop was advised by Prof. Man-Sung Yim as student chapter advisor*

6. Teacher’s Day Chapter Dinner

- ✓ *Date : May 14, 2020*
- ✓ *Place : Daejeon, South Korea (and online via Zoom)*
- ✓ *Teacher’s day is one of the Korea’s tradition. We had a dinner with members who are currently in Daejeon along with Prof. Man-Sung Yim*

7. Participating in MEPHI Science Diplomacy School

- ✓ *Date : May 15-16, 2020*
- ✓ *Place : Online*
- ✓ *One KAIST INMM chapter member participated in MEPHI Science Diplomacy School. He wrote an essay titled: The Korean Peninsula and Burned Bridges; Main Challenges towards 2020 NPT RevCon*

## 8. Regular Chapter Meeting and Seminar

- ✓ *Date : June 5, 2020 (and monthly basis)*
- ✓ *Place : Daejeon, online*
- ✓ *Due to current COVID situation and the KAIST campus measure that avoid gathering on campus, the chapter meeting and seminar are held online. Students presented their own research and we discuss several on-going nuclear issues. This term we mainly focus on the SMR and its safeguard and security aspect.*

{ CURRENT CHAPTER'S BANK BALANCE }

**FY2020 FINAL**

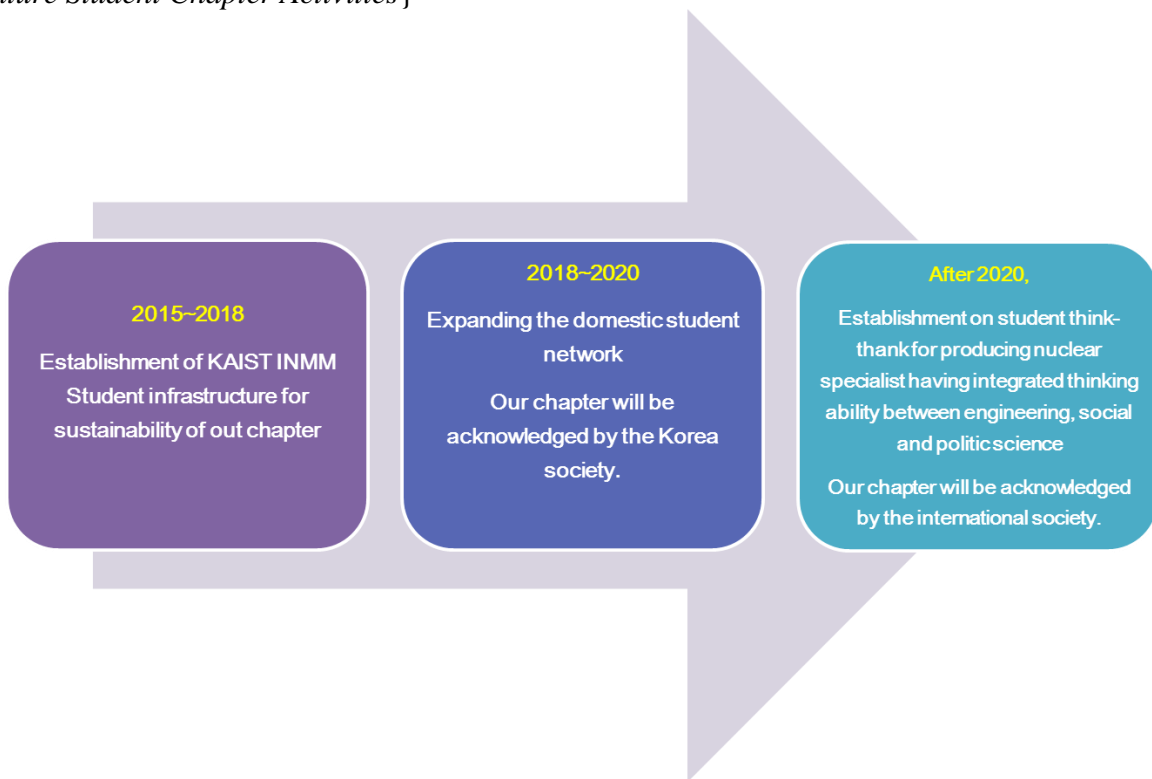
INMM KAIST Student Chapter **Financial Statement – 10/01/2020 – 09/30/2020**

	Income	Expenses	Notes
<b>Chapter Balance: 10/01/2020</b>			
<b>Income:</b>	<b>\$400</b>		INMM Chapter Stipend
<i>Income Total:</i>	\$400		
<b>Expenses:</b>	<b>\$175</b>		Student membership Fee
<i>Expenses Total:</i>	\$175		
<b>Chapter Balance: 09/30/2020</b>	<b>\$225~</b>		
	KR₩257,803		

{ Conclusion }

During the February-July period, KAIST INMM Chapter had participated in several events related to nuclear security and nonproliferation. Due to current COVID pandemic situation, it is hard to held an offline event/gathering in groups. Therefore, we still held our group meeting and seminar through Zoom and other online platforms.

*{Future Student Chapter Activities}*



The KAIST chapter is planning to do an online webinar in the second half of 2020 due to the limitation of travels because of COVID-19 pandemic. Thankfully, all of the domestic event can be held as planned in South Korea.

Respectfully Submitted:  
Andhika Yudha Prawira  
andhika@kaist.ac.kr

INSTITUTE OF NUCLEAR MATERIALS MANAGEMENT  
OREGON STATE UNIVERSITY CHAPTER  
July 7, 2019

The Oregon State University (OSU) Executive Committee members are the following:

<b>Office</b>		<b>Term Ending</b>
President	Kyzer Gerez	June 2020
Vice President	Duncan Vince	June 2020
Secretary	Anneli Brackbill	June 2020
Treasurer	John Marchant-Daisley	June 2020
Outreach Chair	Nathan Wiltbank	June 2020
Advisor	Dr. Camille Palmer	
Immediate Past President	Nathan Wiltbank	June 2019

### Activities

The activities of the OSU chapter this year largely consisted of hosting and advertising speakers who discussed topics relevant to INMM. The COVID-19 pandemic was a major complication to the chapter's plans at the end of the school year, and the effect of the pandemic is further discussed later in the report.

On October 25, the chapter held a meeting to listen to Brittany Robertson, an OSU graduate student, talk about her current research project. Her project involves characterizing and identifying an unknown nuclear fuel sample found in the home of a former employee of the Pacific Northwest National Laboratory.

On November 26, Ari Foley, also an OSU graduate student, held a discussion on the Nuclear Nonproliferation Treaty. She provided background on the history of the NPT and went over the key articles of the treaty. Then, she asked participants to think of aspects of the treaty that should be changed or removed in light of the history of implementing the NPT.

The department is also holding a seminar titled "Introduction to Safeguards and Nuclear Non-proliferation" this term, and the chapter is involved in advertising the talks. Speakers discussed topics such as the current and future status of the NPT to specific radiation detectors used by IAEA inspectors. One notable speaker was Ambassador Thomas Graham, who spoke about the Trump administration's stance towards nuclear weapons.

With the pandemic, our plans for the end of the school year had to be changed. The chapter's largest event is planning the trip to Richland, Washington for PNNL Lab Day. Unfortunately, this event was cancelled due to the pandemic. The chapter was also expecting a visit from Amanda Rynes, a staff member INL, who was planning on carrying out an international safeguards simulation with students. Lastly, the chapter was coordinating with the OSU ANS chapter on organizing a visit to INL. The one major event we were able to hold at the end of the year was a Zoom talk organized by the Pacific Northwest Chapter. The OSU and University of Washington chapters hosted and advertised the talk. Christopher Orton, a nuclear safeguards

INSTITUTE OF NUCLEAR MATERIALS MANAGEMENT  
 OREGON STATE UNIVERSITY CHAPTER  
 July 7, 2019

expert at PNNL, spoke about his experience as an advisor at the IAEA and the Cerenkov Viewing Devices used by inspectors. About ten of the attendees were from OSU.

Respectfully Submitted:  
 Kyzer Gerez

**Treasurer’s Report**



**Unencumbered Balance Index**

FY: 2020  
 Index: MUNR78 - MUN - Inst of Nuclear Material Mgmt  
 Fund: 929777 - MUN - Inst of Nuclear Material Mgmt  
 Organization: 160411 - MUN - Facilities and Prgms Adm Svcs  
 Program: 45611 - MEA - Educational Activities Gen  
 As of: 06/30/2020

Projected Balance: \$1,635.88

**Cash Balance**

<b>Account</b>	<b>Actual</b>
A0901 Cash On-Hand - Interfund	\$3,778.55

Report Category	Account	Budget	Actual	Unencumbered Balance	Encumbrance	Projected Balance
<b>Income</b>		<b>\$0.00</b>	<b>\$1,725.00</b>	<b>\$1,725.00</b>	<b>\$0.00</b>	<b>(\$1,725.00)</b>
	08003 Student Organization Support	\$0.00	\$1,725.00	\$1,725.00	\$0.00	(\$1,725.00)
<b>Other Expenses</b>		<b>\$0.00</b>	<b>\$89.12</b>	<b>(\$89.12)</b>	<b>\$0.00</b>	<b>(\$89.12)</b>
	28612 Hosting Groups & Guests	\$0.00	\$54.12	(\$54.12)	\$0.00	(\$54.12)
	28901 Dues & Memberships -Program Related	\$0.00	\$35.00	(\$35.00)	\$0.00	(\$35.00)
<b>MUNR78 Totals:</b>						
	<b>Income</b>	\$0.00	\$1,725.00	(\$1,725.00)	\$0.00	\$1,725.00
	<b>Expense</b>	\$0.00	\$89.12	(\$89.12)	\$0.00	(\$89.12)
						<b>\$1,635.88</b>

The projected balance is the sum of expenses and revenue for the 2020 fiscal year. The number listed under actual represents the total funds in the account. The current chapter balance is \$3,778.55 as of June 30, 2020.

# ANNUAL REPORT

## INMM- PDPU CHAPTER 2019

Gandhinagar - 6 July 2020

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**INMM**



**Chapter**

## Introduction

Founded in 2014, the INMM PDPU Chapter is now one of the most competitive among all student chapters of PDPU. Though we have limited student base but, we conduct most number of activities, field trips, debate and discussion events. This year we are planning to increase our student base too to a credible number by encouraging enthusiasts from other departments too. We believe to make our student chapter most delightful with brainstorming events spreading a message to this world about How sustainable and safe is Nuclear energy.

- ◆ It is dedicated to the safe, secure and effective stewardship of nuclear materials and related technologies through the advancement of scientific knowledge, technical skills, policy dialogue, professional capabilities, and best practices. As an international organisation, the Institute supports many professional and student chapters in countries round the world.
- ◆ Students Members over the year have expressed their pleasure over being part of the institution that is helping in using ATOMS FOR PEACE, along that they showed enthusiasm in availing the opportunity and making most of it.
- ◆ Following the path laid by the seniors they want to play their role and make more progress in spreading the lesson of peace in deeper parts and breaking the myths around use of Radioactive material and handling.

**MEMBERS:**

Ms. Mudra Chavda ( President)

Mr. Arpit Nayak

Mr. Smit Shah

Mr. Sumit Bainjwal

Mr. Khanjan Joshi

Mr. Aasi Ansari

Faculty Advisor - Mr. Manish Kumar

Head Of the Department - Dr. Anurag Mudgal

**Below are our events that have been conducted over the year 2019:**

1. BARC VISIT - JANUARY,2019
2. CONFERENCE ON “INCORPORATION BOTH TECHNICAL AND HUMAN ELEMENTS TO REDUCE HAZARDS AND VULNERABILITY IN SENSITIVE FACILITIES” IN MAY 2019
3. NUCLEAR SECURITY WORKSHOP -PANDIT DEENDAYAL PETROLEUM UNIVERSITY- INSTITUTE OF NUCLEAR MATERIAL MANAGEMENT CHAPTER. SEPTEMBER,2019.
4. PDPU INMM STUDENT CHAPTER REPRESENTATIVES - WINS WORKSHOP,AMITY UNIVERSITY, NOIDA.
5. NEW MEMBERS JOINING - ELECTIONS OF STUDENT CHAPTER : OCTOBER
6. TRAINING WORKSHOP ON DEVELOPING EMERGING NUCLEAR SECURITY PRACTITIONERS.

## BARC VISIT - JAN 30,2019.

All INMM members of PDPU CHAPTER along with one FACULTY ADVISOR(Mr. Manish Kumar) presented three posters regarding nuclear security at **Indigenous Nuclear Fuel Program in India (INFPIN)-2019, Bhabha Atomic Research Centre (BARC), Mumbai.**

The following facilities were visited inside BARC:

(1) **DHRUVA Reactor:** First of all, the DHRUVA reactor was explained in detail by a small model of it. Then, Control room was shown and explained the different control panel and functionalities. A pocket dosimeter was given and everyone went inside the reactor building. Major processes and operations were explained inside the reactor building. They brief about some ongoing experiments inside the reactor building.

(2) **Food Irradiation Facility:** It is explained with help of different irradiate sample like groundnut, rice, banana, pineapple and prawns etc. which was kept for display there.

(3) **Roli Camera:** We visited Radiography division with help of PDPU second year project student, **Tanvi Menaria**. They explain about and related shielding criteria of Roli camera which is used for Radiography.

We would like to sincerely thank to **Prof. C. Ganguly** sir for his efforts without which this trip would not have been possible, in this short time. Our deepest thanks to the **Department of Nuclear Science and Technology, PDPU** for their cooperation and guidance that helped us to grab this astounding opportunity.



POSTER PRESENTATION BY INMM STUDENTS



Students of INMM CHAPTER, PDCU, along with the  
FACULTY ADVISOR Mr. Manish Kumar

**DHRUVA Reactor, Food Irradiation facilities, Radiography division  
different etc of Bhabha Atomic Research Centre (BARC), Mumbai  
January 30, 2019**

**CONFERENCE ON “INCORPORATION BOTH  
TECHNICAL AND HUMAN ELEMENTS TO  
REDUCE HAZARDS AND VULNERABILITY  
IN SENSITIVE FACILITIES”** IN MAY 2019

This workshop brought together personnel to share ideas and exchange best practices on assessing hazards and vulnerabilities to safe and secure operation of sensitive facilities, the impact good safety and security culture can provide, and development of good practices as an important element in overall security. The workshop analysed the human element as a part of the comprehensive security system and identify practical approaches to evaluating and providing defence in depth. To this end, Pandit Deendayal Petroleum University (PDP), INMM Student Chapter PDP with technical support from Sandia National Laboratories (SNL), Oak Ridge National Laboratory (ORNL), and Texas A&M University is organised a three-day workshop on May 14-16, 2019 to address these issues. The workshop included group discussions, case studies, and exercises as part of the engagement for bringing more awareness on nuclear security.



PARTICIPANTS OF CONFERENCE

# NUCLEAR SECURITY WORKSHOP

WINS - PANDIT DEENDAYAL PETROLEUM UNIVERSITY.

4-6, SEPTEMBER, 2019.

As a part of it the participants who constituted:

- **Students**
- **Professors**
- **Research Scholars**
- **Policy Researchers**
- **Experts**
- **Advisors**

Dr. Daniel Johnson , WINS, Vienna and Dr. James Miller, Los Alamos Laboratories, USA have been the International Delegates and Mentors for event. They all with utmost passion and enthusiasm have attended expert lectures, participated in activities conducted by WINS and LOS ALAMOS. There were 6 sessions and 6 Experts and researchers with at least experience of 10 years in field of Nuclear security were present.

Student delegates were from:

1. AMITY UNIVERSITY, NOIDA, INDIA.
2. MODY UNIVERSITY, INDIA.
3. BANARAS HINDU UNIVERSITY, INDIA.
4. IIT KANPUR, INDIA.
5. UPES, DEHRADUN, INDIA.
6. SCHOOL OF LIBERAL STUDIES , PDPU, INDIA.
7. Observer's Researcher Foundation, INDIA.

## SESSIONS AND TAKEAWAYS:

Throughout the three-day course, participants heard lectures from Indian subject matter experts, engaged in discussions sessions led by WINS and LANL along the PDU INMM STUDENT CHAPTER students have been volunteering , and participated in multiple table-top exercises to reinforce the learning from the course.

Among other topics, the participants learned about:

- Common threats to nuclear and other radioactive materials
- The potential security risks posed by insiders and how to mitigate the threat

The intersection between nuclear safety and security and how to integrate the disciplines

- The similarities and differences between safety and security risks
- The personal accountabilities and responsibilities that STEs have for security
- The fundamental role of the human factor in security
- The different stakeholders involved in nuclear security and how best to communicate
- The balance between sharing information and secrecy
- Key safety and security concepts such as defence in depth
- Radioactive sources and how they are categorised according to activity level
- Risks and threats to radio active sources
- The role of security culture in improving security
- Real-life case studies of “loose” radio active material in India

Participants were encouraged to “broaden their nuclear horizons” and learn more about nuclear security as well as nuclear policy issues outside of their technical areas of study. Participants were also informed about the WINS Academy and strongly encouraged to enrol in the Academy.

The event was organised in partnership between:

- DrManish Kumar, Professor, PDU and ADVISOR,PDU INMM CHAPTER.
- Mr.DanielJohnson,SeniorAdvisor,WINS
- DrJamesMiller,Scientist,LANL

The key part played by the chapter is in VOLUNTEERING for the event along active participation.



## **“Peaceful nuclear energy relies on credible and effective nuclear security”**

With the motto, PDPU INMM Student Chapter in collaboration with World Institute for Nuclear Security, Vienna and Los Alamos Laboratories, USA came forward at Gujarat Energy and Research Institution Auditorium in PDPU campus, Gandhinagar, India providing a platform for 50 participants around Globe to listen, learn, brainstorm and exchange their views on Nuclear security and safeguard culture existent in the world and in discussing the backlogs of section and on how to better the conditions to make optimal, better and sustainable use of ATOMS FOR PEACE.

## PDPU INMM STUDENT CHAPTER REPRESENTATIVES - WINS WORKSHOP, AMITY UNIVERSITY, NOIDA.

The training course helped participants in better understanding the interfaces between safety and security at nuclear facilities and learnt how to optimise the relationship, using their knowledge, skills and professionalism as scientists, technicians and engineers. The key areas of knowledge covered in the training course :

The relevant international instruments covering both nuclear safety and security; how these instruments define the

- responsibilities of the State, the regulator, and the operator in India;
- National legal frameworks and policies related to both nuclear safety and nuclear security in India;
- The objectives of nuclear safety and security, how they are similar and how they differ; the importance of coordinated approach to nuclear safety and security;
- The difference and similarity between safety risk and security risk, as expressed in **probabilistic safety assessment (PSA)** or **probabilistic risk assessment (PRA)** in safety; the identification of risk based on deterministic and probabilistic methods;
- How nuclear safety can support nuclear security effectiveness and vice versa; circumstances in which actions to serve one objective can be antagonistic to the achievement of the other;
- What is meant by **“safety culture”** and **“security culture”**, and how these two concepts share many common elements including the role of organisational leadership;
- The cultural differences between safety and security professional communities, the problems that may arise because of those differences, and methods to overcome this challenge and facilitate integration;
- The concept of “human reliability” and how it can be applied in both a safety and security context to ensure safe operation of a nuclear facility.



AMITY UNIVERSITY - SEPTEMBER,2019.

## PDPU - INMM CHAPTER - ELECTIONS FOR 2020 - OCTOBER, 2019

Being the Master course in Nuclear Engineering and Technology we had brief talk with regards to the activities that have been conducted last year.

The office bearers have also briefed us on their responsibilities that they held in year and how best they would be able to make optimal use of resources to carry forward objectives of INMM.

Hearing the President speech, a farewell from her post to becoming the senior advisor a new reelection was conducted among all the members from PDPU, 9 in total.

3 Candidates were nominated:

- DEEPIKA DAVULURI
- BERIN ANIESH
- RAHUL MEGHWAL

And **DEEPIKA** was elected as new president with a majority of 4 votes over the rest.



NEW TEAM

## TRAINING WORKSHOP ON DEVELOPING EMERGING NUCLEAR SECURITY PRACTITIONERS.

PANDIT DEENDAYAL PETROLEUM UNIVERSITY : 20-22, NOVEMBER,2019.

With the motto, PDPU in collaboration with Pacific Northwest National Laboratory, Vienna and Gujarat University, India and Gujarat Forensic Sciences University, India came forward at PDPU campus, Gandhinagar, India providing a platform for 50 participants around Globe to listen, learn, brainstorm and exchange their views on Nuclear security and safeguard culture existent in the world and in discussing the backlogs of section and on how to better the conditions to make optimal, better and sustainable use of ATOMS FOR PEACE.

Realising this, as more countries rely on nuclear energy, new generations of nuclear security professionals must be trained and they must become part of and contribute to a culture of information sharing and accountability on the brims of many risks, including those posed by terrorist organisations and cyber hackers, will continue to grow and evolve.

INMM Student Chapter organised a session addressing participants over the Activities outlining during the year and inviting our new members. Volunteering for the event has been done by the new members and INMM goodies were distributed. The guest speakers were also gifted the goodies as a token of gratitude for the conference.



VOLUNTEERING BY INMM MEMBERS AT THE EVENT



GUEST SPEAKERS HONOURED WITH INMM T-SHIRTS.

# The Pennsylvania State University (PSU) Student Chapter

The Pennsylvania State University (PSU) Student Chapter Executive Committee members are the following:

Office	Name	Term Ending
*President	Matthew Durbin	May 2021
Vice President	Chad Lani	""
Secretary	Faruk Logoglu	""
Treasurer	Chris Bailber	""
Outreach Chair	Alibek Kenges	""
Membership Chair	Sussana Angermeier	""
Member-at-Large	Sebastian Ritter	
Member-at-Large	Minsuk Seo	
Immediate Past President	Marc Wonders (2019)	
* Student Chapter Advisor	Prof. Azaree Lintereur	

**Number of Current INMM members: 12 (Including our Advisor)**

**Date of Last Officer Meeting: June 25<sup>th</sup>, 2020**

### Summary of Activities:

May 7, 2020: Another general body meeting was held via Zoom, and officer election speeches were heard. Voting opened at the end of meeting via PSU's studentorg platform and closed the 10th. Results were announced May 11th.

April 23, 2020: The INMM student chapter hosted a general body meeting via the Zoom platform. Members discussed life since Covid-19, and the meeting allowed for connection and networking among members.

March: Beginning mid March, Penn State's non-essential events were canceled, and courses and work transitioned to a remote environment due to Covid-19. This canceled the remainder of scheduled in person meetings, as well as a workshop in planning in collaboration with the NE chapter, and the NSPP technical division.

February 25, 2020: PNNL's Steve Mladineo gave a talk about the NNSA Graduate Fellowship Program, a great opportunity! The meeting was followed with a dinner with Steve and members.

February 21, 2020: Matthew Flanders gave a talk about his plasma research and experiments. The talk was followed by questions and answers.

February 14, 2020: Vincent Cintron gave a talk about the Cuban Missile Crisis and “the man who avoided the nuclear conflict”. The talk was followed by questions & answers.

February 7, 2020: Matthew Durbin gave a talk about the nuclear weapon policies of certain countries and the talk was followed by a discussion.

October 31, 2019: Minsuk Seo presented on his project Nuclear Glass Waste. The talk was followed by question and answer session.

October 24, 2019: Faruk Logoglu presented on his research “Coated Micro-Particles Improved Neutron Detection with LiF/ZnS and B/ZnS”. The presentation was followed by question and answer session.

October 17, 2019: Matthew Durbin presented on his project using machine learning algorithms to improve the PSD capabilities. Presentation was followed by the discussion about side projects.

October 12, 2019: Members participated in PSU’s science outreach event “Haunted-U”, in which we showcased various demos on nuclear science.

October 10, 2019: Marc Wonders talked about the Nuclear Engineering Student Delegation (NESD) and his experience regarding it. The talk was followed by a questions&answer session.

October 3, 2019: In conjunction with the PSU Nuclear Engineering Department, INMM co-hosted NTI VP Corey Hinderstein, who gave a Nuclear Engineering Seminar Series talk entitled “Chicken or Egg: The Relationship between Policy Development and Technical Innovation for Nuclear Nonproliferation and Security.” After the seminar, Corey discussed her experiences with INMM and her career with our student chapter.

September 26, 2019: Joshua Gallagher presented on his research quantifying radiation damage in GaN (Gallium Nitride) semiconductor material. Presentation was followed by discussion about the project and Q&A.

September 19, 2019: Dr. John Echols gave a talk about his position and his research at ORNL (Oak Ridge National Laboratory). He also answered questions ranging from research to the working environment in a national lab. The talk was followed by the discussion about the climate change conference Drawdown. Dr. Leigh Winfrey joined the meeting and gave her insights.



September 12, 2019: Chad Lani presented on his research “Symmetric and Asymmetric Temporal Analysis”. He also talked about the history of PNNL (Pacific Northwest National Laboratory). Presentation was followed by discussion about the project and Q&A.

August 24-25, 2019: The PSU Nuclear Alumni society (Penn State Nuclear Engineering Society or PSNES) met with department and student leadership to discuss opportunities to collaborate and get involved.

July 14-18, 2019: Two INMM students and our faculty advisor traveled to Palm Desert, CA for the 60th annual INMM meeting. Students gave talks on neutron scatter cameras, directional gamma detection, and presented our Student Research Initiative focused on future challenges in Nuclear Physical Protection and Security. Penn State brought home two Student Paper Awards in their respective division!



### **Chapter’s Bank Balance:**

Our current balance is \$1295.13. Due to Coronavirus, a planned T-Shirt fundraiser as well as our “Risk Quantification Workshop” in collaboration with the NE Chapter and NSPP technical division had to be postponed. These were our main planned sources of income. Detailed in the Treasure’s report, our expenses for the year were \$254, and income was \$10.

### **Planned Activities:**

**INMM 2020 Annual Meeting:** Two students and our faculty advisor will give presentations. Additionally, our chapter will support up to 10 students who wish to attend the virtual conference, by partially funding the student registration cost.

**Risk Quantification Workshop:** In conjunction with the NSPP technical division and NE chapter, a workshop on nuclear security and risk quantification was originally planned on being held in the spring of 2020. This event has been postponed due to the Coronavirus, but we hope to hold this workshop at a later date. In person and virtual options are being explored.

**T-Shirt Fundraiser:** Designs are underway to make T-Shirts to sell to our membership and supporters. If in person meetings resume in the fall, we will start the fundraiser then.

**Continued Regular Meetings:** If allowed to by PSU leadership, and deemed safe by our membership, we will continue to hold weekly meetings in person during the Fall. Virtual options are also being considered. Most meetings consist of student members giving talks or leading discussions on their research, projects, or other topic of interest. We also attempt to invite special speakers outside of our student membership to give presentations during select meetings.

Respectfully Submitted: Matthew Durbin  
PSU INMM Student Chapter President

**Treasurer's Report**

**FY2020 FINAL**

**PSU Student Chapter Financial Statement – 10/01/2019 – 07/01/2020**

**Chapter Balance – \$1539.25**  
**10/30/2019:**

	<b>Income</b>	<b>Expenses</b>	<b>Notes</b>
	\$10		Mug Sales
		\$150.21	Pizza
		\$52.21	Snacks and Drinks
		\$51.70	Supplies for Outreach (Haunted – U)
<b>Total</b>	<b>\$10</b>	<b>\$254.12</b>	

**Chapter Balance – \$1295.13**  
**7/01/2019:**



Texas A&M University INMM Student Chapter  
 College Station, Texas  
 Current President: Mr. Jackson N. Wagner  
 EC Report:

### Summary

Howdy! Greetings from Aggieland. In the course of the 2019-2020 fiscal year, the INMM Student Chapter at Texas A&M University has hosted four general meetings, participated in one outreach event, and jointly hosted two social events with other student organizations. The chapter has 32 dues-paying members of whom, 12 are national INMM student members.

### Events

September 11th, 2019 – Recruiter Maren V. Disney from Pacific Northwest National Laboratory gave a presentation at a general meeting regarding the National Nuclear Security Administration Graduate Fellowship Program (NGFP).

September 13th, 2019 – Nancy Jo Nicholas, Los Alamos National Laboratory's Associate Laboratory Director for Global Security, came to meet with members of the INMM student chapter and other student organizations based within the Texas A&M University Nuclear Engineering department (including the student chapters of the American Nuclear Society, Health Physics Society, and Women in Nuclear – ANS, HPS, and WiN, respectively) during a meet and greet event hosted by the Texas A&M System's National Laboratory Office.

October 1st, 2019 – The INMM Student chapter and the other three student organizations based in the Nuclear Engineering department (ANS, HPS, and WiN) hosted a social for Nuclear Engineering Students to enable students to mingle and learn more about the four organizations.

November 13th, 2019 – Mr. John Fulton of Sandia National Laboratories spoke about his work and student opportunities in SNL's Accident Consequence Modeling and Assessment department in a joint meeting with Texas A&M's HPS student chapter.

November 23rd, 2019 – The INMM Student chapter and the other three student organizations based in the Nuclear Engineering department (ANS, HPS, and WiN) hosted a chili cook-off for Nuclear Engineering students.

February 6th, 2020 – The INMM student chapter hosted a screening of Parmanu: The Story of Pokhran for students.

February 18th, 2020 – The INMM student chapter hosted a few visiting students from Japan for a working lunch with Texas A&M students in a joint event with Texas A&M's Center for Nuclear Security, Science, and Policy Initiatives (NSSPI). The goal of the lunch was to discuss the future of nuclear energy in Japan.

April 22nd, 2020 – The INMM student chapter elected new officers for the next academic year. These elections were conducted virtually for the first time due to meeting restrictions imposed by Texas A&M University and local and state governments in response to the COVID-19 pandemic.



### Future Plans

- 1) **INMM Workshop(s)** – Student members will work with the INMM national organization to organize workshops for student members and professionals alike to discuss topics of interest relevant to INMM’s mission.
- 2) **Lab Tours** – Student members will have the opportunity to tour a lab within the Nuclear Engineering department at TAMU. It will mainly be targeted at younger members within the chapter who have not had previous experience with nuclear technology, such as detectors.
- 3) **Meetings with Professionals** – Throughout the year, the Student Chapter will aim to invite various professionals from the nuclear security and safeguards industry to speak at chapter meetings. The goal is for the professionals to share their work and life experiences with student members.
- 4) **Outreach** – One of the major goals for the Student Chapter is to increase outreach efforts for this coming year. The Student Chapter will strive to educate the public and the youth about the benefits of nuclear technology.
- 5) **National Membership** – Another major goal of the Student Chapter is to promote the national INMM membership and increase number of national members in the Student Chapter.

We look forward to having another productive year and hope that any volunteers interested in developing a workshop will contact a TAMU INMM representative.

Sincerely,



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Jackson N. Wagner

President, Texas A&M INMM Student Chapter



*Faculty Advisors*

Position	Name	Email
Primary Advisor	Dr. Sunil Chirayath	sunilsc@tamu.edu
Secondary Advisor	Dr. Craig Marianno	marianno@tamu.edu

*Incoming Student Chapter Executive Committee (2019-2020):*

Position	Name	Email
President	Jackson Wagner	jackwags@tamu.edu
Vice-President	Anna Armstrong	agarmstrong@tamu.edu
Secretary	Mariah Ramirez	mariah.ramirez@tamu.edu
Treasurer	Anthony Galindo	anthgalindo@tamu.edu
Bush School Liaison	Ryan Peabody	rpeabody@tamu.edu
Undergraduate Liaison	Kimberly Zabava	kz820210@tamu.edu
Community Outreach	Dinyar Kadkhodaian	dinyark@tamu.edu

*Outgoing Student Chapter Executive Committee (2018-2019):*

Position	Name	Email
President	Jackson Wagner	jackwags@tamu.edu
Vice-President	Athena Sagadevan	athenaas92@tamu.edu
Secretary	Mario Mendoza	marmen13@tamu.edu
Treasurer	Valeria Garcia-Ramos	valeriagr@tamu.edu
Bush School Liaison	Ben Johnson	benjohnson660@tamu.edu
Undergraduate Liaison	Jedidiah Romo	jromo2684@tamu.edu
Community Outreach	Henry Rysz	henry.rysz@tamu.edu

**Financial Activity**

Date	Activity	Income	Cost	Balance
1-Aug-19	Beginning Balance	-	-	\$1,576.48
2-Sep-19	T-Shirt Sales	\$180.00	-	\$1,756.48
2-Oct-19	Dues	\$100.00	-	\$1,856.48
7-Oct-19	Social #1	-	\$23.52	\$1,832.96
8-Oct-19	Meeting #1	-	\$103.75	\$1,729.21



# INMM

## TEXAS A&M CHAPTER



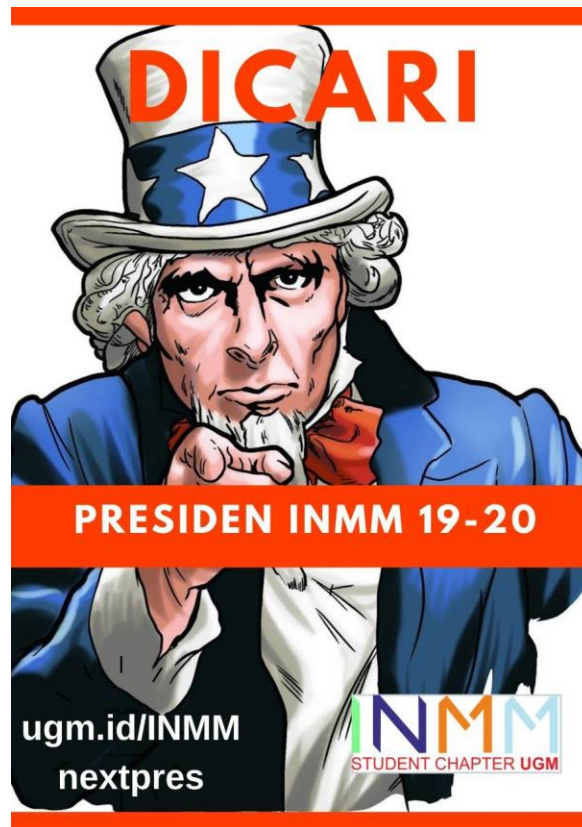
<b>Date</b>	<b>Activity</b>	<b>Income</b>	<b>Cost</b>	<b>Balance</b>
24-Oct-19	Workshop Income	\$1,911.51	-	\$3,640.72
10-Mar-20	Dues	\$57.00	-	\$3,697.72
19-Mar-20	Meeting #2	\$113.75	-	\$3,583.97
19-Mar-20	Meeting #3	\$42.50	-	\$3,541.47
19-Mar-20	Meeting #4	\$43.94	-	\$3,497.53
19-Mar-20	Meeting #5	\$11.49	-	\$3,486.04
8-Apr-20	Meeting #6	\$158.91	-	\$3,327.13

# Student Chapter Universitas Gadjah Mada



## A. Activities and Accomplishments

### 1. President Election



Date : 28 September 2019 – 3 October 2020

Venue : Department of Nuclear Engineering and Engineering Physics

Description :

The new elected President of INMM SC UGM is Fadhlur Rahman Alfaruqi from nuclear engineering.

## 2. INMM Discussion #1



UNIVERSITAS  
GADJAH MADA



### INMM Discussion #1

Guest Lecture:  
**Indonesia's Role for Nuclear Nonproliferation:  
IAEA Experience and Opportunity**



**Deandra Moerdaning**

- Intelligence International and  
Security Graduate,  
King's Collage War Studies Department  
- Former Intern at IAEA



**Wednesday**  
**November 13<sup>th</sup>, 2019**  
**7 PM**

**Room TN 7**  
Department of Nuclear Engineering and  
Engineering Physics, UGM



@inmmucugm



@ecw1113k

Date : 13 November 2019

Venue : Department of Nuclear Engineering and Engineering Physics

Description :

That event was held by INMM SC UGM to shared experiences of invited speaker Deandra Moerdaning who former Intern at IAEA, and discuss about Indonesia's disarmament effort.

### 3. Open Recruitment INMM SC UGM 2020



Date : 23 January – 14 February 2020

Venue : Department of Nuclear Engineering and Engineering Physics

Description :

The new selected members of INMM SC UGM are 10 people. Initially, there were students from geophysics, public administration, and management students who registered to the open recruitment. However, only management students from the majors outside the nuclear engineering pass the registration steps; thus the new selected members were mostly who come from the nuclear engineering major.

<b>Expenditures</b>	<b>20 USD</b>
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## 4. Welcoming party

Date : 25 February 2020

Venue : Oz Cafe

Description :

The new selected members of INMM SC UGM join welcoming dinner and introduction presentation for the new members and discuss about upcoming event of INMM SC UGM.



<b>Expenditures</b>	<b>50 USD</b>
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## 5. ConvoClub #1

Date : 28 February 2020

Venue : Department of Nuclear Engineering and Engineering Physics

Description :

Discuss the targets and strategies for joining the conference and continuing publication.

<b>Expenditures</b>	<b>6 USD</b>
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## 6. INMMDiscussion #2

Date : 14 June 2020

Venue : Google meet

Description :

The first webinar was held by INMM SC UGM to shared experiences of invited speaker Andhika Yudha Prawira who KAIST student and former INMM SC UGM President, and discuss about Physical Protection System SMRs.



The poster features logos for Universitas Gadjah Mada, INMM Student Chapter UGM, and a stylized yellow and blue wave icon. The main title is "INMM Discussion #2". Below it, the text reads "Guest Lecture : Sistem Proteksi Fisik SMRs". A circular profile picture of Andhika Yudha Prawira is shown next to his name and credentials: "Andhika Yudha Prawira -Teknik Nuklir 2012 -KAIST M.S and Ph.D Student". A dark blue button contains the text "+INMMPodcast #1 Pengalaman kuliah di KAIST". The event details are listed as "Sunday June 14<sup>th</sup>, 2020 1 PM Googlemeet". At the bottom, there are social media icons for Twitter, Facebook, and Instagram, along with the handles "@inmmucugm" and "@ecw1113k".

## 7. INMMDiscussion #3

Date : 19 June 2020

Venue : Google meet

Description :

That event was held by INMM SC UGM to shared experiences of invited speaker Hanna Yasmine, and discuss about Indonesia's Irradiator development.

The poster features logos for Universitas Gadjah Mada (UGM), INMM Student Chapter UGM, and a circular logo with a stylized 'S'. A yellow and grey zigzag graphic is positioned to the right of the logos. The title 'INMM Discussion #3' is highlighted in yellow. Below it, the text 'Guest Lecture : Irradiator di Indonesia' is centered. A green rounded rectangle contains a photo of Hanna Yasmine and her name, along with her credentials: '-Teknik Nuklir 2013' and '-PSMN BATAN'. A dark blue rounded rectangle below this contains the text '+INMMPodcast #2'. To the right, the date and time are listed: 'Sunday June 19<sup>th</sup>, 2020 1 PM' and 'Googlemmeet'. A yellow square icon is located to the left of the date. At the bottom, social media icons for Twitter, Facebook, and Instagram are followed by the handle '@inmmscugm', and a LINE icon is followed by '@ecw1113k'.

## 8. INMMDiscussion #4

Date : 28 June 2020

Venue : Google meet

Description :

That event was held by INMM SC UGM to shared experiences of invited speaker Wahid Luthfi, and discuss about reactor modelling with MCNP and SRAC.



The poster features logos for Universitas Gadjah Mada, INMM Student Chapter UGM, and a circular logo with a bird. A yellow and grey zigzag graphic is positioned to the right of the logos. The main title is "INMM Discussion #4" in bold black text with a yellow highlight. Below it, the text reads "Guest Lecture : 'Pemodelan Reaktor dengan MCNP & SRAC'". A circular portrait of Wahid Luthfi is shown next to his name and credentials: "Wahid Luthfi - Teknik Nuklir 2012 - PTKRN BATAN". A dark blue rounded rectangle contains the text "+INMMPodcast #3". To the right, the date and time are listed as "Sunday June 28<sup>th</sup>, 2020 1 PM" and "Googlemeet". A yellow square icon is located to the left of the date. At the bottom, social media icons for Twitter, Facebook, and Instagram are followed by the handle "@inmmscugm", and a LINE icon is followed by "@ecw1113k".

## 9. INMMDPodcast #1

Date : 28 June 2020

Description :

The first Podcast was held by INMM SC UGM to shared experiences of invited speaker Andhika Yudha Prawira who KAIST student and former INMM SC UGM President..



## INMM Podcast #1



***“Kuliah di TN biar bisa ke luar negeri”***



**Andhika Yudha Prawira**

-Teknik Nuklir 2012  
-KAIST M.S and Ph.D Student

**Link Podcast :**  
**di Deskripsi**



sumber gambar : wiki/microphone

## B. Executive Committee

Faculty Advisor : Susetyo Haryoputero  
President : Fadhlur Rahman Alfaruqi until 2020

Secretary and treasure : Moh Miftakhul Dwi Fianto

Research and development : Muhammad Guntur

Human resource development : Hizkia Agusnin

Design and multimedia : Rizki Novanto

Public Relation : Togi Simanjuntak

Number of current INMM members : 20

Date of last executive meeting : May, 27 2020

### C. Treasurer's Report

<b>FY2020 FINAL</b>
<b>Financial Statement – 10/01/2019 – 06/30/2020</b>

	Income	Expenses	Notes
<b>Chapter Balance: 10/01/2019</b>	<b>677 USD</b>		
<b>Income:</b>			
<i>Income Total:</i>			
<b>Expenses:</b>			
Open recruitment INMM SC UGM 2020		20 USD	
Welcoming party		50 USD	
ConvoClub		6 USD	
<i>Expenses Total:</i>		76 USD	
<b>Chapter Balance: 06/30/2020</b>	<b>601 USD</b>		

# FLORIDA STUDENT CHAPTER ANNUAL REPORT

**Chapter Name: University of Florida Student Chapter**

## **Activities and Accomplishments Since Last Report:**

Activities over the past year have focused on general body meetings and study sessions run by the chapter. At these meetings, food and drink were provided by UF student government and departmental funding obtained for the chapter.

During the general body meetings, several members presented their current research in a 15 minute lecture. At the end of the general body meetings, all students were welcomed to play board games together. In one meeting, a “1 minute Presentation Game” was held where members competed for a prize (sponsored by the MSE department). Several Python workshops were also held during the

general body meetings with strong attendance from non-INMM members. Executive board meetings were held monthly to discuss the previous month's events and upcoming plans.

A trip to Savannah River National Lab was planned, however the point of contact was consistently too busy to host the group and has since left the lab. Finding an appropriate time for undergrad students to take time from classes or exam studying was a challenge.

Social events off campus included the tailgate and Super Bowl parties with refreshments provided by the MSE department funding. In November, the INMM chapter visited a local corn maze with a large turnout.

An outreach event was held in January. Several members volunteered as science fair judges at a local middle school for the day. We worked with other local volunteers from 8:30am-2:00pm. The members who volunteered spent time teaching the students about the scientific method and providing a positive example of young STEM professionals.

Many events planned for the end of the spring semester were canceled due to COVID-19 which included a visit to the local freshwater springs with INMM and ANS members.

### **Upcoming Activities:**

General Body Meetings – Monthly during semester, typically on the 20<sup>th</sup> of each month

Guest Speaker Internal to University – Kyle Hartig

Presentation at PhD orientation – August 2020

Tour to Savannah River National Lab – Spring 2021

Tailgate Party – October 2020

Programming Workshops – TBD (likely starting after first general body meeting)

Presentation at incoming PhD student visit – February 2021

Science Fair Judging – January 2021

More member potlucks off campus- TBD

Turtle Walks at the St. Lucie Nuclear Power Plant- Spring 2021 (depends on turtle breeding season)

President – Ezra Cockram

Vice President – Taylor Harvey

Treasurer – Surafel Woldegiorgis

Secretary – tbd

Outreach Chair – tbd

Number of Active Members: 12

Term of all officer positions ending May 5th, 2021

### **Previous Officers from May 2 2019 to May 8th 2020**

President - Noah McFerran

Vice President – Taylor Harvey

Treasurer – Jack Morrison

Secretary – Ezra Cockram

Outreach Chair – Surafel Woldegiorgis

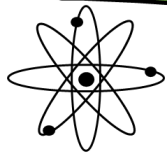
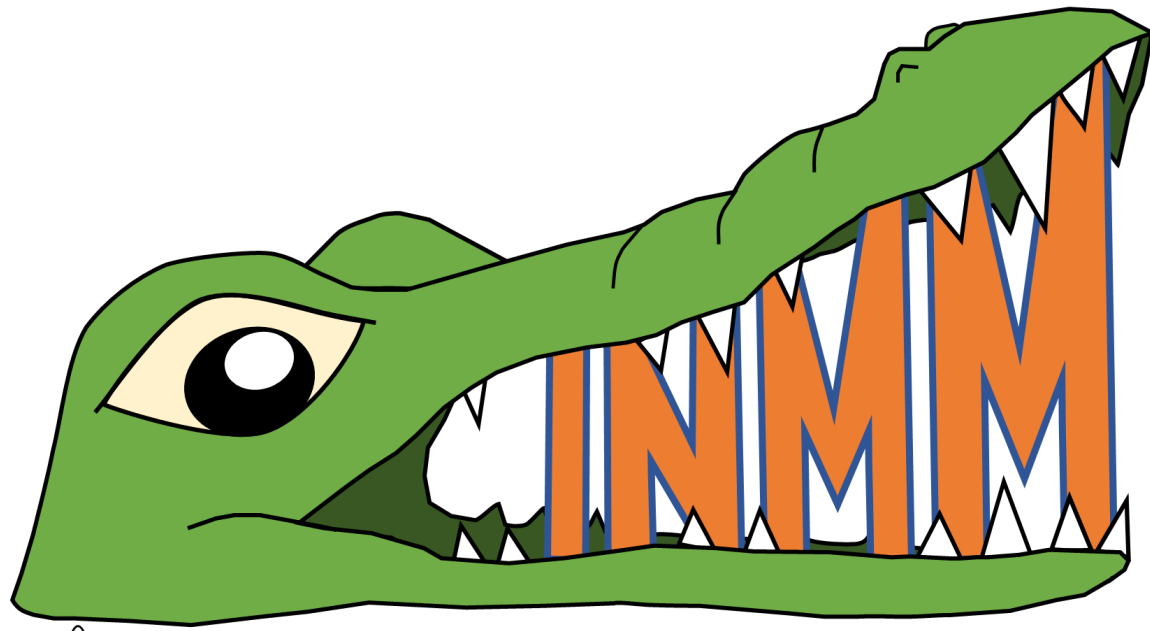
Respectfully submitted: Ezra Cockram

## Treasurer's Report

### FY2018 FINAL

#### UF Student Chapter Financial Statement – 7/15/2018 – 7/15/2019

	Income	Expenses	Notes
	\$346	\$346	
<b>Chapter Balance: 6/12/2019</b>			
<b>Income: \$330</b>			
UF Mat Sci & Eng Dep funding	276		
<i>Income Total: \$346</i>			
<b>Expenses: \$406</b>			
Food and drink for events		346	
Tailgate Supplies		60	
<i>Expenses Total: \$406</i>			
<b>Chapter Balance: \$0 6/12/19</b>			



Institute of Nuclear Materials Management  
**Florida Student Chapter**

**Superbowl Watch Party**



### 5-Minute Presentation Game



# The University of Michigan

The University of Michigan STUDENT CHAPTER Executive Committee members are the following:

Office		Term Ending
*President	Erik Hall	*Summer 2020
Vice President	Nathan Giha	Summer 2020
Secretary	Tingshuan Wu	Summer 2020
Treasurer	Tingshuan Wu	Summer 2020
Member-at-Large	William Steinberger	Summer 2020
Member-at-Large	Charles Leak	Summer 2020
Member-at-Large		
Member-at-Large		
Immediate Past President	Chris Meert	Summer 2020

**\*For Student Chapters, please add advisor:** Professor Sara Pozzi

## Activities

- Our Chapter has released newsletters for September and October 2019 and has hosted informal
- seminars by Dr. Alexis Trahan and Dr. Marc Paff, both from Los Alamos National Laboratory.
- Our October newsletter was also shared with Purdue, Tennessee, and Missouri's student chapters.
- We had an informal seminar and discussion on the ethics of nuclear weapons lead by U-M Philosophy Professor David John Baker on 2019-10-25.
- We had a virtual seminar and question/answer session about NNSA Consequence Management with Dr. Dan Blumenthal on 2020-01-15.
- Since January 2020, our chapter has not hosted any events due to COVID-19.

The current bank balance of Our Chapter as of 2020-07-6 is USD 1268.25. Attached is the Treasurer's balance statement for 2020.

Respectfully Submitted:  
Erik Hall

\* Items marked with an asterisk are required

**Treasurer’s Report** (*Excel Spreadsheet or Word Table*)

**2020 FINAL**

University of Michigan **Financial Statement – 2020-01-31 – 2020-07-06**

**Balance as of 2020-07-06: USD 1268.25**

Date	Description	Income	Expense	Balance
<b>2020-01-31</b>	<b>Balance</b>			<b>1450.08</b>
<b>Income:</b>				
<b>Total</b>		<b>0.00</b>		
<b>Income</b>				
<b>Expenses:</b>	Refund for U-M Workshop		181.83	
<b>Total</b>			<b>181.83</b>	
<b>Expenses:</b>				
<b>2020-07-06</b>	Net	<b>0.00</b>		
<b>2020-07-06</b>	<b>Total</b>			<b>1268.25</b>

## University of New Mexico INMM Student Chapter Executive Committee Report 2019

Despite complications presented by the COVID-19 pandemic in the U.S., the University of New Mexico (UNM) Institute of Nuclear Materials Management (INMM) student chapter is pleased to report a successful 2019-2020 academic year. This year has seen growth in terms of interest from students as well as interest from professionals in the surrounding community. This interest has helped support our mission of facilitating curiosity and discussion within the realm of nuclear materials management.

The fall semester started with a presentation and demonstration from a Sandia National Laboratories (SNL) scientist regarding physical protection of nuclear materials. At this meeting, the UNM chapter received a presentation on developments in physical protection of nuclear materials at all stages. Some projects included development of conceptual technology, testing variations of technology, and simulating attacks on laboratory property where nuclear materials may be housed. The presentation was followed by a small simulation of what challenges an attacker may face that our members were eagerly able to engage with.

Other topics that were presented throughout the year include: Storing Nuclear Waste in the Future, Peaceful Nuclear Explosions Throughout History, Criticality Research at Sandia National Laboratories, and National Nuclear Security Agency (NNSA) Fellowship Opportunities.

One special event that the UNM chapter participated in was put on by the Santa Fe Council on International Relations. They hosted a seminar for high school students that simulated a debate between global powers on the use of nuclear energy. A few nuclear engineering students from our chapter helped advise participating high school students on nuclear energy and applicable technical information to drive debate and discussion.

With this academic year's renewed charter, there has been immense growth in interest from the student body, especially by nuclear engineering and policy students, in addition to vibrant support from faculty members and reassuring responses from local professionals representing organizations such as the NNSA, Los Alamos National Laboratories, and SNL.

Moving forward, we, as an executive board, are anticipating the challenges presented by social distancing during the COVID-19 pandemic in the U.S. For the upcoming 2020-2021 academic year, we will be converting our meetings into an online format and continuing to present on topics relevant to INMM. We are also exploring ways to maintain social contact throughout this time by utilizing technological platforms, such as Zoom and Discord, so that our members may still make personal connections within the group.

The budget for the previous year is as follows:

<b>Item(s)</b>	<b>Cost</b>	<b>Date(s)</b>	<b>Reason for Purchase</b>
Jimmy Johns 24 mini sandwiches	\$70.11	11/15/2019	Food for meeting
Jimmy Johns 12 minis + 6 cookies	\$54.98	11/01/2019	Food for meeting
Jimmy Johns 12 minis + 12 Cookies	\$57.15	03/06/2020	Food for meeting
Garcia's Kitchen - Cheese enchiladas	\$79.94	10/18/2019	Food for meeting
Garcia's Kitchen - Taco bar, chips and salsa	\$115.64	12/06/2019	Food for meeting
Garcia's small ench. casserole, green chile, 1 doz. rolled chicken ench., 1 lb. chips, 1 pnt. salsa	\$87.74	02/14/2020	Food for meeting
Dion's 3 Large Pizzas - 1 Veggie (added artichokes), 1 Carnivore, 1 Half cheese/half combo	\$63.27	01/31/2020	Food for meeting
Smith's - Cake, brownies	\$22.97	12/06/2019	Food for meeting
<b>Total</b>	<b>\$551.80</b>		

The 2019-2020 roster of officers is as follows:

Phoenix Baldez – President

Matthew Lazaric – Vice President

Monica Lemmon – Treasurer

Arielle Mattis – Public Outreach Chair

Mark Wetzel – Secretary

We did not accept dues this semester, but based on our record of regularly attending members, we averaged around 25-30 participating members each meeting.

# University of Tennessee Student Chapter

## **2019-2020 Officer Board**

President: Mairead Montague

Vice President: Sean Alcorn

Secretary: Nathaniel Howard

Treasurer: Alexander Kincaid

Webmaster: Katelyn Bennett

**Faculty Advisor:** Jason Hayward

Immediate Past President: Daniel Hartman

## **Fall 2019 Activities**

1st General Body Meeting: (September 2020) Recruitment meeting with new members and explaining all that INMM has to offer.

**Ortec Tour:** (October 2020) 4 members attended in our first tour of Ortec Facilities.

**Game Night:** (November 2020) Social meeting with ANS to promote camaraderie and inter-organization cooperation.

## **Spring 2020 Activities**

2nd General Body Meeting: (January 2020) Jessica White-Horton came to speak about INMM Annual Meeting, poster sessions, and Purdue University Workshop.

**Ortec Tour:** (February 2020) 14 Members attended

## **Current Financial Status**

Due to COVID-19 and other extenuating circumstances, our stipend, which was originally going to help cover transportation and housing costs for various workshops and events, remains unspent. We look forward to future opportunities for workshops and meetings where we can use this money to help fund member experiences.

## **Other Updates**

T-shirts and stickers have been designed and purchased using part of our INMM CRC stipend.

Our elections were not held in the spring of 2020, as they were originally planned. Due to COVID-19 we are postponing officer board elections until September 2020.

## INSTITUTE OF NUCLEAR MATERIALS MANAGEMENT

University of Washington CHAPTER

7/6/2020

The University of Washington INMM Chapter Executive Committee members are the following:

Office		Term Ending
*President	Olympia Hunt	July 2020
Vice President	Stephen Chadwick	July 2020
Member-at-Large	Claire Tanaka	
Member-at-Large	John Lambert	
Member-at-Large	Sophie Ossorio	
Member-at-Large	Mani Singh	
Immediate Past President	James Penna	June 2019

**\*For Student Chapters, please add advisor:**

Advisor	Dr. Halvor Udem
Advisor	Dr. Christopher Jones

### Activities

- It has been a priority of our events to provide a networking space for students (undergraduate and graduate) to connect with working professionals in the field of National Security:
- Fall Quarter Events:
  - o **Dr. Robert Butterworth**, a National Security expert specializing in strategic space and nuclear force with a career of experience in academia and government service, provided a landscape of understanding regarding the history and ongoing and complexities of nuclear weapons.
  - o **Thomas Countryman**, former Under Secretary of State for International Security Affairs, and Assistant Secretary of State for International Security and Nonproliferation, United States Department of State, provided a private address to at the University of Washington, speaking on the general issue of nuclear proliferation, with some specific remarks regarding the India/Pakistan situation.
  - o **Hannah Haegeland**, Sandia National Laboratory, Albuquerque, formerly at the Stimson Center, and Jackson School graduate, provided a private address to University of Washington students discussing her research and analysis of crisis management in the India/Pakistan conflict.
- Winter Quarter Events:
  - o **Student Info Session:** An evening informational session for students interested in learning more about the UW INMM chapter.

INSTITUTE OF NUCLEAR MATERIALS MANAGEMENT

University of Washington CHAPTER

7/6/2020

- **Student Security Project Kickoff:** A kickoff meeting for our student security project.
- **UW Professor Rick Lorenz**, spoke on the legality of the use of Nuclear Weapons with respect to the 1949 Geneva Convention. The evening lecture was attended by UW students, faculty, and community members.
- Spring Quarter Events:
  - **Scott Montgomery** – an author, geoscientist, and affiliate faculty member in the Jackson School of International Studies, Professor Montgomery discussed his upcoming book, co-authored with Ambassador Thomas Graham, regarding the changing global nuclear threat landscape.
  - **Dr. Leesa Duckworth** – UW INMM hosted a virtual National Security Career Workshop with Career & National Security Specialist, Dr. Leesa Duckworth. The presentation was attended by students and faculty from multiple universities in the PNW region.
  - **Dr. Christopher Orton** – IAEA Nuclear Material Verification Technologies. The PNW, OSU, and UW INMM chapters co-hosted this virtual presentation that was attended predominantly by industry professionals concentrated in the PNW region.

Chapter's current balance: \$538.77

Planned activities: No planned activities to report

Respectfully Submitted: Olympia Hunt

## INSTITUTE OF NUCLEAR MATERIALS MANAGEMENT

University of Washington CHAPTER

7/6/2020

**Treasurer's Report**

<b>FY2020 FINAL</b>			
<b>University of Washington Chapter Financial Statement – 10/01/2019 – 09/30/2020</b>			
	Income	Expenses	Notes
<b>Chapter Balance at 10/01/2019:</b> <b>\$502.51</b>			
<b>Income:</b>			
	\$500		Donation from Dr. Halvor Udem
<i>Income Total:</i>	<i>\$500</i>		
<b>Expenses:</b>			
		\$6	Cost of checks for honorariums
		\$67.83	Food for meeting
		\$182.66	Accommodation for speaker
		\$150.00	Honorarium for speaker
		\$57.25	Food for meeting
<i>Expenses Total:</i>		<i>\$463.74</i>	
<b>Chapter Balance at 07/06/2020:</b> <b>\$538.77</b>			

# Virginia Commonwealth University

The INMM at Virginia Commonwealth University Executive Committee members are the following:

Office		Term Ending
President	Michael Cartwright	August 2020
Vice President	Cody Lloyd	August 2020
Secretary	Luleit Shire	August 2020
Treasurer	Justin Bresson	August 2020
Physics Liaison	Raven Witherspoon	August 2020
Past President	Hunter Andrews	August 2020

Faculty advisor: Dr. Braden Goddard

Number of active members: ~15

## Activities

Progress from 6/1/2019 to 6/1/2020 includes:

- Attending the INMM 60<sup>th</sup> Annual Meeting
  - 2 members
  - 2 papers presented
- Hosting three invited speaker presentations, two joint student professional society socials (INMM, ANS, ASME), and a joint student professional society debate meeting

The invited speaker meetings are:

- ANS, ASME, INMM social – Ultimate Frisbee, 08/22/2019
- Grace Kier (Big Nuke Energy) “Big Nuke Energy,” 10/10/2019, attendance ~15
- Nuclear Debate (ANS, INMM, ASME), 11/07/2019

## Treasurer’s Report

The Chapter’s finances, as of 06/1/2020, has a balance of \$0 in the VCU Club Account and \$950.34 in the Wells Fargo account.

- Milos Manic (VCU) “Machine Learning and Cybersecurity,” 12/05/2019, attendance 14
- INMM Social – Dinner meeting, 12/06/2019
- William Newmann (VCU) “Evolution of U.S. Nuclear Strategy,” 02/06/2020, attendance 15

## Upcoming Activities

- Jeff Kaplow (William and Marry) “Nuclear Intelligence,” Fall 2020
- VCU student Ricardo Lopez will present his research at the 2020 INMM Annual Meeting in July



<b>FY2019 FINAL</b>			
<i>INMM at Virginia Commonwealth University Financial Statement – 06/01/202 – 06/01/2020</i>			
	Income	Expenses	Notes
<b>Chapter Balance: 06/01/2019</b>	<b>\$950.34</b>		
<b>Income:</b>			
VCU Club Account 2019-2020	\$2248		VCU donation for club activities
<i>Income Total:</i>	<i>\$2,248</i>		
<b>Expenses:</b>			
VCU Club Account		\$240	Dinner for 10/10/2019 speaker's presentation
VCU Club Account		\$211	Dinner for 11/17/19 speaker's presentation
VCU Club Account		\$200	Dinner for 12/05/2019 speaker's presentation
VCU Club Account		\$60	Dinner for 12/06/2019 social meeting
VCU Club Account		\$200	Dinner for 02/06/2020 speaker's presentation
VCU Club Account		1,337	Returned unused VCU club activities funds
<i>Expenses Total:</i>		<i>\$2,248</i>	
<b>Chapter Balance: 06/01/2020</b>	<b>\$950.34</b>		

## Facility Operations Technical Division

Report to the INMM  
March 2020 — June 2020

The Facility Operations Technical Division (FOTD) provides an opportunity for the nuclear materials management community to engage in discussions and challenges facing the stewardship of nuclear materials; storage of nuclear materials; inventories of nuclear materials; operational challenges with facilities using, or formerly using, nuclear materials; the integration

of safety, safeguards, and security of nuclear material at facilities; and nuclear material challenges within the commercial nuclear fuel cycle. The primary focus remains on the mitigation of challenges related to operational needs and requirements that are not being sufficiently addressed.

FOTD continued to refocus, rebrand, and re-energize. A name change was discussed but put on hold while members of the division continue to review the current scope to better define the intent and purpose of the FOTD. This effort will result in the rewriting of the division charter, which dates to June 2014. These revisions will better incorporate the focus of nuclear material stewardship (inventory, supply, demand, storage, etc.), and approaches to nuclear material management in new nuclear material facilities, as well as facilities with nuclear materials undergoing decommissioning.

This refocus has resulted in the offering of a more varied range of speakers and paper submissions and development of dedicated technical sessions at the Annual Meeting. While the focus will continue with activities and information related to the complete fuel cycle, there will be a shift to include new technologies that are being incorporated into the environment. This year's sessions will concentrate on current impacts to operations, nuclear forensics, and material management.

Due to COVID-19, we have changed our current way of doing business with the shift from in-person meetings to virtual platforms. This is now affecting the 2020 INMM Annual Meeting resulting in changes to the format and social/networking aspects of the meeting. FOTD had been moving forward in building a more robust technical sessions but found some presenters have had to withdraw; thus, diluting the content of the sessions.

FOTD hopes to get back on track next year in revising its scope, building its membership both domestically and internationally, and developing a workshop.

Ben Watts, Division Chair  
[Ben.Watts@tetrattech.com](mailto:Ben.Watts@tetrattech.com)

## Technical Division Report – July 2020

### International Safeguards

*The INMM International Safeguards Technical Division (ISD) provides a forum for the exchange of information on the continuing development of international safeguards within the nuclear nonproliferation regime and for the enhancement of a broad understanding of the implementation and effectiveness of safeguards. The division examines technical issues, facilitates publication of studies related to safeguards, and supports workshops on the advancement of safeguards technology and procedures.*

After more than six years of service, Michael Whitaker (ORNL) stepped back from his position as ISD Chair in November 2019, after the highly successful Joint INMM/ESARDA/INMMJ Workshop in Tokyo (see below), for whose organization he was responsible on the part of INMM. In March 2020, Irmie Niemeyer (Forschungszentrum Jülich) took over this position, and Zoe Gastelum (SNL) has volunteered to serve as Deputy Chair. On behalf of ISD, Irmie and Zoe thank Michael for his strong leadership as ISD chair, his dedication and his constant contributions to international safeguards in the past years.

The three ISD working groups continued to engage with its members by several activities:

- **Open Source / Geospatial Information (OSGI)**

**Chairs: Zoe Gastelum (SNL) and Yana Feldman (LLNL)**

<https://www.linkedin.com/groups/4037205>

The Working Group (WG) held its first virtual technical exchange on March 12, 2020 over Skype. WG members and interested researchers updated their colleagues on their research related to open source and geospatial information and discussed upcoming events, recent publications, and other activities of interest to the members. Nearly two dozen participants joined the exchange from around the world. A summary of the meeting has been published in the [ESARDA Connector, Issue 2, Spring 2020](#). The WG is planning to host its annual meeting in a virtual format on July 10, 2020, where one of the group's members, Melissa Hanham, Deputy Director of Open Nuclear Network (ONN), a programme of One Earth Future, and director of its Datayo Project, will provide training in the use of overhead satellite imagery techniques to monitor WMD-related activities.

- **Safeguards Information Management (SIM)**

**Chairs: Gary Hirsch (ORNL) and Joshua Rutkowski (SNL)**

The working group focuses on good practices and new concepts and approaches for managing safeguards-related information, with an objective of more efficient and effective international safeguards. Its focus includes efforts for reporting such as under Comprehensive Safeguards Agreements, Additional Protocols, and Voluntary Offer Agreements. Joshua Rutkowski has volunteered to serve as co-chair to the group.

- **Certification Program Working Group for the International Safeguards Professional (CWG ISP)**

**Chair: David Hanks (NRC)**

The working group for assessing the need for and, if needed, developing an International Safeguards Professional (ISP) certification program will focus on establishing the relevant content, minimum level of knowledge and proficiency for each topical area, and identifying potential methods of certification for an ISP involved in the implementation of international safeguards as applied by the International Atomic Energy Agency (IAEA).

Since its kick-off during the 2019 ISD technical meeting in July, the CWP ISP discussed the WG's charter. During three conference calls (Nov 6, 2019; Jan 22, 2020; April 16, 2020), the group discussed the name as well as the near and medium term goals of the certification program, including the safeguards relevant content and target personnel that should be covered in the program. The group also started to outline a blended certification structure. The next conference call is scheduled for July 12, 2020.

### *Events since July 2019*

***9th INMM/ESARDA/INMMJ Joint Workshop “Future Challenges for the Enhancement of International Safeguards and Nuclear Security” in Tokyo, Japan 7-10 October 2019***

INMM, ESARDA, and the INMM Japan Chapter hold their 9th INMM/ESARDA/INMMJ Joint Workshop “Future Challenges for the Enhancement of International Safeguards and Nuclear Security” in Tokyo, Japan 7-10 October 2019. The program featured an opening plenary with invited speakers, four working groups, and a closing summary. The working groups (WGs) for the 2019 workshop were: WG1 - International Safeguards; WG2 - Nuclear Security; WG3 - Nonproliferation and Arms Control; WG4 - Nuclear Knowledge Retention. WG1, WG2 and WG3 had concurrent sessions running throughout the workshop while WG4 held a plenary session for all participants. Following the successful workshop with about 120 participants, the summaries of the four working groups and the attendees’ list were distributed to the workshop participants in Dec 2019. The INMM Japan Chapter made the presentations and photos available on their website in Feb 2020.

***Future Events***

***Policy and Technical Fundamentals of International Nuclear Safeguards Workshop, July 12, 2020***

This workshop will provide participants with a basic overview of nuclear safeguards, including the nuclear fuel cycle, safeguards treaties and legal issues, safeguards approaches, safeguards application for nuclear facilities, nuclear material control and accounting. The majority of the coursework for the workshop will be completed online with a half-day virtual panel session to be conducted in conjunction with the Annual Meeting of the INMM.

More information: [https://cdn.ymaws.com/inmm.org/resource/resmgr/annual\\_meeting/am61/flyer-advert-2020-updated\\_2.pdf](https://cdn.ymaws.com/inmm.org/resource/resmgr/annual_meeting/am61/flyer-advert-2020-updated_2.pdf)

***Emerging Digital Technologies for Nonproliferation and Nuclear Security Workshop, Sept 9-11, 2020, Livermore/CA***

To address challenges and opportunities from emerging digital technologies for the nuclear materials management community, the INMM’s California, Southwest, and Pacific Northwest chapters are hosting a joint workshop on Emerging Digital Technologies for Nonproliferation and Nuclear Security.

Call for paper: [https://cdn.ymaws.com/inmm.org/resource/resmgr/docs/events/workshops/inmm\\_edt\\_-\\_callforabstracts\\_.pdf](https://cdn.ymaws.com/inmm.org/resource/resmgr/docs/events/workshops/inmm_edt_-_callforabstracts_.pdf)

***42nd ESARDA Annual Meeting, November 16-19, 2020, Fontenay-aux-Roses/France***

Due to the COVID-19 outbreak, the 2020 ESARDA Annual Meeting was rescheduled to take place in autumn this year. As usual it will be a closed meeting reserved to ESARDA Steering Committee, Executive Board and Working Groups’ members. Traditionally, an ISD Meeting will be held on the first evening.

Submitted respectfully.

*Irmie Niemeyer, Chair; Zoe Gastelum, Deputy Chair*

# **Nonproliferation and Arms Control (NAC) Technical Division**

Executive Committee and Annual Report

25 June 2020

The Nonproliferation and Arms Control Technical Committee activities since June 2019 are summarized below. New leadership for NAC will be announced in the Autumn of 2020. ***The Chair and Deputy Chair would like to take the opportunity to thank all those that contributed to the activities of the Division over the years. It has been wonderful working with you all!***

#### **Technical Division Meeting in July 2019**

After reports on on-going activities, July's NAC Technical Division Meeting at the Annual INMM Meeting hosted presentations on:

- International Partnership for Nuclear Disarmament Verification by Rob Floyd, Director General, Australian Safeguards and Nonproliferation Office;
- The Use of HEU for Space Power by Susan Voss, Global Nuclear Network Analysis, LLC
- Iran - Status and Implications by Corey Hinderstein, Nuclear Threat Initiative;
- Lessons learned for negotiating with DPRK from previous nuclear negotiations by Edward Ifft, Hoover Institution; and
- Issues related to the upcoming NPT Review Conference by Mark Goodman, U.S. Department of State.

#### **Arms Control, Treaty Verification, and Disarmament Sub-committee**

The sub-committee regularly "meets" via telecon. The ACTVD team has continued to make progress on the subcommittee's two ongoing priorities, the Arms Control Primer and the Mentorship Program. A Primer paper has been accepted for presentation at the upcoming INMM conference. The focus of the paper and presentation will be to highlight progress to date, showcase the type of output products, and solicit interested parties to contribute to the Primer over the course of the next year. The mentorship has collected feedback from pilot participants and is updating structure and content to reflect lessons learned. Material is currently under development to promote the next iteration of the program, using the INMM conference as a main vehicle to solicit interest. The goal is to have participants in the second program iteration to be paired and engaging each other by the end of the calendar year. The one-pager promotional flyer for both the Primer and Mentorship Program can be found in Attachment 1.

#### **Export Controls Sub-Committee**

The Export Control Subcommittee is excited to announce this year's panel session on "Up-and-Coming Research in Export Controls" scheduled for **Tuesday, July 14<sup>th</sup> at 12:40-2pm EST**. The panel features experts who will discuss their research in proliferation risks of the secondary market (Amanda Sayre), current and emerging proliferation patterns (Brian Starks), strategic trade research networks and their role in countering WMDs (Andrea Viski), and the protection of national security through compliance (Karla Niemi). This panel aims to create a discussion between practitioners, universities, nongovernmental organizations, and industry at the forefront of strategic trade research and practice. We look forward to the panel and hope you will join us! If you are interested or have any questions, please contact Paige Gasser ([gasser1@llnl.gov](mailto:gasser1@llnl.gov)).



**Attachment 1**

Institute of Nuclear Materials Management NONPROLIFERATION & ARMS CONTROL TECHNICAL DIVISION

# ACTVD

ARMS CONTROL, TREATY VERIFICATION, AND DISARMAMENT SUBCOMMITTEE

The ACTVD Subcommittee provides a forum for the education and exchange of information on policy, approaches and technologies that support wide-ranging arms control and treaty verification objectives. The subcommittee activities will strive to foster discussions and thinking which can lead to novel concepts, approaches, and technical solutions to address the current and future challenges.

## CURRENT PROJECTS

### ACTVD Primer

The ACTVD Subcommittee is continuing the development of a primer and annotated bibliography. This primer will summarize the history of arms control, current treaties and their implementation, as well as possible future technical options, serving as an introductory resource and refresher for both technical and non-technical individuals.

Important dates:

- July 13, 2020 – Primer INMM Presentation

### ACTVD Mentorship Program

The ACTVD Subcommittee is continuing a program to provide mentorship opportunities in the field of arms control and treaty verification. This program will engage experienced and new professionals/students, facilitating learning opportunities through the transfer of knowledge and experiences, in order to advance the capabilities and capacity of current and future experts.

Seeking both technical and nontechnical experienced professionals (including retirees) to be mentors to the next generation of arms control and treaty verification experts.

Seeking new or transitioning professionals and students, interested in learning and pursuing a career within arms control, treaty verification, and disarmament.

Important dates:

- July 15, 2020 – Call for Mentors and Protégés opens
- October 15, 2020 – Deadline for applications
- November 30, 2020 – Deadline for Participant matching
- December 31, 2020 – Deadline for engagement plan

[WWW.INMM.ORG/TECHNICAL-RESOURCES/NONPROLIFERATION-ARMS-CONTROL](http://WWW.INMM.ORG/TECHNICAL-RESOURCES/NONPROLIFERATION-ARMS-CONTROL)

## UPCOMING EVENTS

### PRIMER SESSION

See agenda

To contribute to the Primer, use the contact below to request information.

### INMM 61<sup>TH</sup> ANNUAL MEETING

Virtual

July 13-16, 2020

### INTERESTED IN ACTVD?

Interested in getting involved with the subcommittee or the development of the ACTV Primer? Contact the ACTVD Subcommittee!

### APPLY TO THE MENTORSHIP PROGRAM

To apply to the ACTVD Mentorship Program, use the contact below to request information to apply.

### CONTACT

[actvd.inmm@gmail.com](mailto:actvd.inmm@gmail.com)

## Attachment 2



In-person Workshop postponed to 2021 –

REGISTER NOW for Virtual Pre-Event Sept 9, 2020

**Due to travel restrictions and health concerns associated with the COVID-19 pandemic, our Emerging Digital Technologies Workshop will be postponed to 2021. New workshop details will be coming soon. In the meantime, please join us for a virtual panel discussion on September 9 from 08:00 AM – 09:30 AM Pacific Time (UTC-7) to start the discussion on challenges and opportunities from emerging digital technologies for the nuclear materials management community, featuring:**



**How to deal with Opportunities and Threats emerging from New Tech -  
Nidhi Kalra (RAND Corporation)**

Senior information scientist at the RAND Corporation. She has previously served as director of RAND's San Francisco Bay Area office and co-director of RAND's Center for Decision Making Under Uncertainty.



**The Role of Innovation in IAEA Safeguards - Dimitri Finker (IAEA)**  
Technology foresight specialist at the IAEA, previously chief technology officer at Freshmile, an innovative start-up active in the field of energy storage and electric vehicles and Section Head at AREVA.

## Overview

To address challenges and opportunities from emerging digital technologies for the nuclear materials management community, the Institute of Nuclear Materials Management's California, Southwest, and Pacific Northwest chapters are hosting a joint workshop on Emerging Digital Technologies for Nonproliferation and Nuclear Security and are soliciting abstract proposals in the following areas:

- Development of emerging digital technologies and approaches specific to nuclear security and nonproliferation
- Novel applications of existing digital technologies and approaches to the nuclear security and nonproliferation domains
- Studies on impacts, risks, consequences and implications related to the implementation of emerging digital technologies and approaches to nuclear security and nonproliferation

Examples of digital technologies and approaches for this domain might include:

- Physical technologies and infrastructure, such as next generation sensors, autonomous and unmanned systems, "wearables," virtual and augmented reality
- Analytical methodologies and platforms, such as artificial intelligence, machine learning, cloud computing, video and data analytics, multiparty computing and simulation
- Information security and assurance, such as encryption, blockchain and quantum security
- New and big data, such as patterns of life, social media, multimedia, informational sensing

# Nuclear Security and Physical Protection Technical Division

Report to the Executive Committee of the INMM  
July 2020

The Division is treading water during these interesting times. The Workshop on the Quantification of the Likelihood of Attack that was scheduled to be hosted by the Pennsylvania State University from March 31 – April 2 was postponed due to the closure of the Penn State campus. The workshop will be rescheduled once it is safe to do so.

The NSPP continues to participate in the Joint Committee on Nuclear Risk Management (JCNRM) working group that is investigating risk-informing security, to include the quantification of the likelihood of attack. This initiative complements the workshop that is currently on hold. There will be a virtual meeting of this working group in September with another meeting in February, either virtual or in person.

The NSPP has a number of sessions at the Annual Meeting. It is difficult to say how this will play out.

No presentations were made to student chapters as a result of the pandemic. The division will continue to monitor the pandemic, and when appropriate, will identify additional workshop opportunities.

## Packaging, Transportation and Disposition Division June 2020 Report

The **19th International Symposium on the Packaging and Transportation of Radioactive Materials (PATRAM 2019)** was held August 4-9, 2019 at the New Orleans Marriott in New Orleans, Louisiana. There were 386 oral and poster sessions submitted for PATRAM and the agenda was developed to accommodate this technical program. 675 people registered for the event with 32 exhibitors. INMM, in conjunction with WNTI, worked with industry, DOE, DOT, NRC, JSME and IAEA for a very successful PATRAM 2019.

The **20th International Symposium on the Packaging and Transportation of Radioactive Materials (PATRAM 2022)** will be held in southern France in September 2022. WNTI, in conjunction with INMM,

are working with the PATRAM stakeholders around the world for PATRAM 2022. WNTI and INMM continue to communicate on this activity.

The INMM Packaging, Transportation and Disposition (PT&D) Division presented the **INMM 35<sup>th</sup> Spent Fuel Management Seminar** January 28-30, 2020, at the Hilton Alexandria Old Town, in Washington, DC. The U.S. Nuclear Infrastructure Council (USNIC) has been a partner with INMM since 2011 in these very successful and enduring seminars. INMM / USNIC are planning to present the **INMM 36<sup>th</sup> Spent Fuel Management Seminar** in January 2021 in Washington, DC.

The world's increasing need for safe, efficient and secure nuclear energy is driving the need for a new applications and evolution of safe RAM storage, transportation and disposition systems. New and innovative solutions are needed for "Used Fuel Disposition" and other radioactive materials. The objective of the INMM Packaging, Transportation and Disposition Division is to be the international forum for meeting these challenging worldwide needs.

Respectfully Submitted,

Jeff England  
Chair, Packaging, Transportation and Disposition  
Disposition

Robert Watkins  
Co-Chair, Packaging, Transportation and

Bradley Loftin  
Spent Fuel Management Seminar Chair