2019
Annual Report to the Membership

October 1, 2018 – September 30, 2019

Institute of Nuclear Materials Management
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Institute of Nuclear Materials Management

ANNUAL BUSINESS MEETING

JW Marriott Desert Springs
Desert Springs, California USA
Tuesday, July 16, 2019
6:30 – 8:00 p.m.

AGENDA

1. Call to Order
2. Approval of Minutes
3. President’s Report
4. Treasurer’s Report
5. Secretary’s Report
6. Committee Reports
7. Chapter Reports
8. Technical Division Reports
9. New Business
   a. Outgoing Awards
   b. Recognition of Sustaining Members
   c. Recognition of New Senior Members
   d. Resolution of Respect
10. Drawings for Two Complimentary 2019 Memberships HQ
11. Adjournment

Crawford
Pickett
Crawford
Curl
Pickett
Crawford
Pepper
Mladineo
Crawford
ANNUAL BUSINESS MEETING MINUTES
Tuesday, July 24, 2018
6:30 – 7:30 p.m.

Call to Order
The 59th Annual Business Meeting of the Institute of Nuclear Materials Management, an Ohio nonprofit corporation, convened on July 24, 2018, at the Baltimore Marriott Waterfront Hotel, Baltimore, MD, after notification to all members. President Corey Hinderstein announced that a quorum was present and called the meeting to order.

Approval of Minutes
Due to technical issues, the minutes were not provided for approval. The full annual report with the minutes will be sent out after the annual business meeting via email to the entire membership for electronic approval.

President’s Report
President Corey Hinderstein opened her remarks by reminding the membership that she was in the final year of her Presidency. It had been a busy year for the nuclear materials management community – including the potential for the denuclearization of the Korean Peninsula and drones being flown over nuclear facilities.

Within the INMM, the INMM launched a new website and rebranded with a new logo and on October 1, 2017, the INMM changed association management companies. She introduced the new executive director, Lacy Lee Baker, and members of the management team. Hinderstein also reviewed changes in INMM leadership. Willem Janssens and Kerry Dunn completed their terms as Members-at-Large and would be replaced by Therese Renis and Irmgard Niemeyer. Nancy Jo Nicholas was confirmed as the new Chair of the Fellows Committee, replacing long-time chair Obie Amacker. Zoe Gastelum assumed leadership of the Communications Committee, replacing George Baldwin. And David Lambert was selected to chair a newly created ad hoc committee on Cyber/Physical Security Integration.

The Institute has two new student chapters: University of Sharjah in the United Arab Emirates and Virginia Commonwealth University in the United States.

Financial Report
Treasurer Bob Curl reported on the financials of the Institute. The FY2018 budget was conservatively planned to have a small deficit. The major source of revenue continues to be the Annual Meeting,
which accounts for 76% of the Institute’s revenue. As of September 30, 2017, the INMM’s total assets were $648,742. These assets included $581,337 in cash and $67,405 in receivables. The associated liabilities were $77,248 resulting in net assets of $571,494.

**Election Report**

Secretary Chris Pickett announced the results of the FY2018 election. Candidates were put forward by the INMM for the positions of Vice-President and Members-at-Large. Voting notification with instructions for accessing the on-line voting system were distributed by email or post to each of the 912 eligible members. It is important to note that this is the first time in the Institute’s history that there were two Vice-Presidential candidates on the ballot. 35.09% of the eligible members voted by the deadline as opposed to 24% that voted the prior year.

As a result of the balloting, the Officers and Members-at-Large constituting the INMM Executive Committee beginning October 1, 2018, are:

- **President**: Cary Crawford
- **Vice-President**: Susan Pepper
- **Secretary**: Chris Pickett
- **Treasurer**: Robert Curl
- **Immediate Past President**: Corey Hinderstein
- **Members-at-Large**:
  - Michael Baker 9/30/19
  - Teri Leffer 9/30/19
  - Therese Renis 9/30/20
  - Irmgard Niemeyer 9/30/20

In addition, two amendments to the INMM Bylaws were proposed by the Executive Committee:

1. To eliminate the Executive Committee voting option for each INMM Chapter chartered outside the United States and having 50 or more Regular Members.
2. To expand the duties of the Past President to serve as liaison to all organizations with which the INMM maintains a formal relationship, rather than singling out one organization.

The first amendment was approved by 93.11% of the voters and the second amendment was approved unanimously.

Pickett encouraged all members to review the INMM organizational structure and chapter activities to find an activity in which they can become involved.
Committee Reports
President Corey Hinderstein noted that committee reports were included in the 2018 Annual Report to the Membership and encouraged members to read through the reports. She highlighted key activities. Hinderstein encouraged members to respond to calls for nominations for committee and technical division chairs and to otherwise participate in committee work.

Chapter Reports
President Corey Hinderstein stated that because there are so many chapters, their reports are no longer published in the printed version of Annual Report to the Membership, but they will be included in the electronic version that is available at www.inmm.org. The Chapters are very active in planning and conducting local and national activities and in some cases, they collaborate with each other, with the technical divisions, and with international partners. Hinderstein encouraged members to read the Chapter reports to learn more about INMM local and regional activities and to learn about opportunities to support the Chapters and the INMM overall.

Technical Division Reports
Past President Larry Satkowski reported that the Technical Division reports can be found in the 2018 Annual Report to the Membership. He highlighted some key activities that had taken place over the past year and like his colleagues on the Executive Committee, he encouraged members to become involved and suggested that the Technical Divisions provide many opportunities.

New Business
The floor was opened for new business.

Chapter Anniversary Awards
President Corey Hinderstein recognized the INMM Chapters that reached milestone anniversaries in 2018.

Recognition of Sustaining Members
Vice-President Cary Crawford recognized the Sustaining Members of the INMM. Renewing Sustaining Members received a 2018 plate for their Sustaining Member plaque.

Recognition of New Senior Members
Vice-President Cary Crawford also recognized eight new Senior Members. Each new Senior Member received a certificate. The new Senior Members were Sunil Chirayath, Jay Disser, Robert Floyd, Claudio Gariazzo, David Hanks, Harrison Kerschner, Ho-Dong Kim, and James Russell.
Resolutions of Respect
Vice President Cary Crawford read and presented four Resolutions of Respect for INMM members who passed since the 2017 Annual Meeting. Resolutions were presented for Walter Kane, Mitsuho Hirata, and Andrei Sviridov.

Drawings for Two Complimentary 2018 Memberships
At the end of the meeting, there was a drawing for two one-year regular INMM memberships for FY2019. The winners were Nandan Chandregowda and Ramon Castillo.

There being no other business, the Annual Business Meeting adjourned.
President’s 2019 Report
Cary Crawford

It has been a successful year despite some transition occurring within our association management leadership. As many of you know, Lacy Lee Baker, our Executive Director, resigned shortly after the INMM last year for family reasons and we brought on Brenden Breen to fill that role. Therefore, this will be Brenden’s first year with our Annual Meeting while the rest of the Association Headquarters (AH) team will be going into their second round due to our transitioning contracts to AH the year prior. While this always creates challenges, it also creates opportunities to look at how we do business from a set of fresh lenses. AH brings significant experience in association management and has been asking tough questions regarding how we do business, why we are different from industry standards in places they see opportunities for improvement, and an overall commitment to the growth of the INMM. While change is always difficult, I appreciate these questioning attitudes and willingness to challenge the status quo for the improvement of our institute.

What I’m most excited to share with the INMM family is the decision to take the annual meeting outside of the US. As of this writing, we are simply awaiting my signature to finalize the contract to hold the 2021 annual meeting in Vienna, Austria. This process has not been easy and carries with it a significant amount of financial analysis, risk and networking to determine the viability of taking this meeting outside of the US. When I first stepped into the role of Vice President of the INMM, Corey Hinderstein and I immediately connected on the topic of the international nature of the institute. 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). However, we cannot continue to claim to be, as our strategic plan states, “the leading international professional society for the stewardship of nuclear materials and related technologies to enhance global security” while only holding our meetings in the US. Therefore, we see this 2021 Annual Meeting as a key to fulfilling our strategic vision and hope to have your strong support in this effort. Between now and then, we will be discussing support for this meeting with key stakeholders and are depending on your support in both attendance and promotion of this effort. In the meantime, don’t forget our 2020 meeting in Baltimore!

We are encouraged by our continued growth in student and professional chapters, with Purdue University being our latest. In fact, with the support of the US Central Region Chapter, we were able to approve the Purdue University student chapter in time to approve their workshop on Active Nonproliferation. The energy behind getting this successful workshop approved and held was impressive and we look forward to including this new chapter into our fold.

We would also like to thank Willem Janssens and Kerrie Dunn who finished their terms as members-at-large in October of 2018 and welcome Therese Renis and Irgard Neimeyer as they filled these roles on a 2-
year term. We would also like to thank Mike Baker and Teri Leffer who will be ending their terms at the end of September, 2019. Finally, we would also like to offer a strong thank you Chris Pickett for his years of service as Secretary. He will be stepping out of this role the end of September and Teressa McKinney has been elected to fill this role. We look forward to working with Teressa after her years of service as the Technical Program Committee Chair.

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. I look forward to seeing everyone at our annual meeting in Palm Desert.
Treasurer’s Report

Robert U. Curl

As of June 30, 2019, the Institute of Nuclear Materials Management’s total assets were $1,178,739. These assets included $1,145,000 in cash, $5,160 in receivables, and $28,578 in fixed assets. The associated total liabilities were $15,855 resulting in net assets of $1,162,883.

The FY 2018 gross income was $604,531 and the associated expenses were $719,606, resulting in a net loss of $115,075 for the fiscal year. The main contributor to the loss was lower than budgeted revenue for the annual meeting in Baltimore resulting in a $135,855 miss in that budget line alone.

The updated (including workshops) FY 2019 budget was established at a projected income of $1,385,318 and expense of $1,367,670, which results in a net surplus of $17,648.

A breakdown of FY 2019 income and expense projections, by major category, is presented below.

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<thead>
<tr>
<th>REVENUE</th>
<th>EXPENSE</th>
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<tbody>
<tr>
<td>Administration</td>
<td>Administration</td>
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<tr>
<td>$89,500</td>
<td>$347,967</td>
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<tr>
<td>Annual Meeting</td>
<td>Annual Meeting</td>
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<tr>
<td>407,418</td>
<td>238,500</td>
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<td>Proceedings</td>
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<tr>
<td>600</td>
<td>25,000</td>
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<td>Journal</td>
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<td>46,100</td>
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<td>39,125</td>
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<td>18,625</td>
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<td>Purdue Workshop</td>
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<td>42,500</td>
<td>30,218</td>
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<tr>
<td><strong>Total Revenue</strong></td>
<td><strong>Total Expense</strong></td>
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<tr>
<td><strong>$1,385,318</strong></td>
<td><strong>$1,367,670</strong></td>
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Any INMM Member wishing to obtain a copy of the FY 2018 year-end financial statement may do so by contacting Robert Curl, INMM Treasurer, or Brendan Breen, INMM Executive Director.
Secretary’s Report
Chris A. Pickett

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

Secretary:
Teressa McKinney
Mark Schanfein

Members-at-Large:
Jim Andre
Sunil Chirayath
Jay Disser
Tina Hernandez

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 1 to each of the 723 eligible Institute members of which 220 fully completed the ballot (30.43%). As a result of the balloting, the Officers and Members-at-Large constituting the INMM Executive Committee beginning October 1, 2019, is as follows:

President – Cary Crawford
Vice President – Susan Pepper
Secretary – Teressa McKinney
Treasurer — Robert Curl
Members-at-Large:
Irmgard Niemeyer – 9/30/20
Therese Renis – 9/30/20
Tina Hernandez – 9/30/21
Jim Andre – 9/30/21
Immediate Past-President — Corey Hinderstein
There were write-in votes for the following:

**Vice President**
Carrie Matthews

**Members-at-Large**
Karen Miller, James Miller and Eric Smith

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)
INMM Accredited Standards Committee N15
Methods of Nuclear Material Control
Annual Report to the INMM
July 2018 – July 2019

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;

All four active standards were published by ANSI and are available for purchase online at [http://webstore.ansi.org/](http://webstore.ansi.org/).

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

- **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 and reached consensus on a comprehensive final review of 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 has been completed and the edits resolved. The draft revised standard has been submitted to the N15 Board for INMM ASC N15 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 made significant progress to review and revise the standard. They have reviewed all the required Administrative Elements for a quality nondestructive assay program and analyzed the applicability of several of the sections to the intent of the standard. The
team is working towards an N15.36 revision draft ready for review by late summer of 2019 and a final draft by the end of the year.

- 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. Areas of focus include controls charts, measurement models (per Jaech’s book), method selection and qualification, hold-up measurements, and the measurement system’s role in loss detection. 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 2019.

**Outreach and Collaboration**

- Tracking UF6 cylinders – There continues to be an emerging and growing interest in developing a voluntary consensus standard for the identification, labeling, and tracking of UF6 cylinders. In 2017, the World Nuclear Transport Institute (WNTI), issued a standard for identifying uranium hexafluoride (UF6) Cylinders titled: WNTI Standard for UF6 Cylinder Identification (www.wnti.co.uk/media-centre/publications/wnti-standards.aspx). This consensus standard was written “to provide a standardized format and application method for a global identifier for the UF6 cylinders most commonly used across the nuclear industry”. In 2018, two of the leading cylinder-owning companies began purchasing new cylinders that followed the recommendations of the WNTI standard. Michael Whitaker and Jessica White-Horton are assembling a team of interested parties to begin drafting the scope, purpose and title of a proposed N15 standard for the U.S. industry that would use the global identifier described in the WNTI standard for material control and accountability purposes. They are planning to focus first on how the site, national, and international verification staff can begin to use the 2D barcode to improve efficiency when conducting a physical inventory of UF6 cylinders. 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 standard developers.

- N15.56-2014 - Nondestructive Assay Program, Non-Destructive Assay Measurements of Nuclear Material Holdup: General Provisions (active). The N15.56 writing team chair and a writing team member 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, JAEO) 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 provided written feedback to ANSI in response to a request to all standards development organizations for information on any Artificial Intelligence (AI)-related standards activities underway or planned for the future. N15 did not identify any AI-related activities.

- The N15 Board participated in INMM Executive Committee meetings in November 2018 and March 2019, and held a training/information session for N15 writing team chairs in February 2019. N15 Board of Officers plan to hold annual INMM ASC N15 and N15/INMM 5.1 Subcommittee meetings in July 2019 in conjunction with the INMM 60th Annual Meeting in Palm Desert, CA, and to attend the INMM Technical Division meetings to speak about N15 activities. These two meetings 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.

- ANSI audit (Regular 5-Year) - During 2018 ANSI performed a remote (mail-in) audit of INMM ASC N15 activities against the ANSI Essential Requirements for compliance with due process requirements for the development of American National Standards. The audit is required to maintain accreditation under periodic maintenance and is conducted at regular 5-year intervals. The final ANSI audit report was received on May 18, 2018 and N15 submitted a corrective action plan to ANSI address audit findings. ANSI reaccredited revised N15 Operating Procedures on November 02, 2018, and closed the 2018 audit. Based upon the results ANSI modified the time interval between N15 periodic audits from 5 to 6 years.

- ANSI/INMM Agreements – On December 27, 2018 ANSI and INMM approved a revised ANSI/INMM N15 License Agreement for the Adoption of ISO Standards to address changes requested by the International Organization for Standardization (ISO), and jointly approved a new formal ANSI/INMM ASC N15 Sales Agreement.

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://www.inmm.org/Technical-Resources/ANSI-Standards/N15-Standards.aspx.

Respectfully submitted on behalf of N15 by,

Melanie May, Chair
melanie.may@hq.doe.gov

Lynne Preston, Vice Chair
lynee.preston@hq.doe.gov

Chino Srinivasan, Secretary
b.srinivasan@science.doe.gov

Jackie Shipwash, N15 Writing Group Liaison
Jackie.Shipwash@tetratech.com
COMMITTEE REPORTS

ANNUAL MEETING TECHNICAL PROGRAM COMMITTEE
Teressa McKinney, Chair

The Institute of Nuclear Materials Management Technical Program Committee met March 5, 2019, to establish the program for this year’s annual meeting. Numerous volunteers spent the day organizing more than 300 abstracts into more than 60 sessions. Every technical session was assigned a chair and co-chair as well as title for each session. Planning for the opening and closing plenary speakers were also discussed.

Respectfully submitted, Teressa McKinney, Chair, Technical Program Committee

Technical Program Committee

<table>
<thead>
<tr>
<th>Glenda Ackerman</th>
<th>KC Drypolcher</th>
<th>Corey Hinterstein</th>
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<td>Arden Dougan</td>
<td>Charlie Harmon</td>
<td>Nancy Jo Nicholas</td>
<td>Heidi Smart</td>
<td>Karen Miller</td>
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<tr>
<td>Mona Dreicer</td>
<td>Morris Hassler</td>
<td>Susan Pepper</td>
<td>Scott Vance</td>
<td>Bryceon Shulman</td>
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AWARDS OVERSIGHT COMMITTEE
Arden D. Dougan, Chair

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 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 are presented during the Opening Plenary Session of the INMM’s Annual Meeting and the Resolutions of
Respect are presented during the INMM’s Annual Business Meeting on the Tuesday night that falls during the INMM Annual 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 2018, the following awards were made by the INMM: Distinguished Service Award - Stephen Croft, Robert McElroy, Alejandro Jaime Vidaurre-Henry Special Service Award - Japan Nuclear Fuels Limited

Resolutions of Respect were prepared for: Mitsuho Hirata, Walter Kane, Andrey Sviridov, and Charlie Vaughn

The 2019 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 Opening Plenary on July 15, 2019.

We have no resolutions of respect for the 2019 year.

The Awards Committee consists of the following members: Susan Pepper   Joseph Rivers   Nancy Jo Nicholas Arden Dougan   Shirley Johnson Tina K. Hernandez Joseph Indusi   Michele Smith   Andreas Enqvist Obie Amacker   Larry Satkowiak Igor Tsvetkov

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

COMMUNICATIONS COMMITTEE
Zoe Gastelum, Chair

The Communications Committee held a teleconference on May 21 to elicit updates and work on new actions to support the upcoming EC meeting and Annual Meeting in July. The Website, Communicator, and Social Media Sub-Committees were all represented, with an updated from PR and Outreach Sub-Committee provided beforehand. INMM HQ also attended.
The Communications and Education & Training Committees have planned a joint session for the 2019 Annual meeting, on communicating scientific information. The session will include papers and a panel discussion, both held the morning of Tuesday July 16. The Communications Committee will be represented with one paper on the recently launched INMM Communicator Blog (presented by Bachner), and a panel presentation on INMM communications strategy (presented by Gastelum).

We have continued our effort to collect member stories and memories via Survey Monkey for a 60th Anniversary memory book/slideshow. We expanded our broadcast to include our social media platforms.

The Communications Committee has worked with Susan Pepper and others on the INMM EC to develop a draft value proposition for INMM membership. Once socialization has been completed with the Membership Committee, we will begin sharing the value proposition via the INMM website, blog, and our social media platforms.

**INMM Communicator (Jay Disser and Katherine Bachner, Co-chairs)**
The Communicator team has launched its new blog, hosted here: https://www.inmmcommunicatorblog.com/
The blog has already facilitated more frequent posting and timely dissemination of relevant information and includes some new features such as bios of the INMM EC members, and the INMM communications policy regarding email solicitations (and spam). Updates to the Communicator will be presented by the co-chairs at the INMM Annual Meeting, in a special session on communications.

6 readers have subscribed to receive regular updates from the blog. The committee is working with HQ to combine the Communicator Blog with the INMM News for a central information repository.

**Public Relations and Outreach (Sarah Frazar, Chair)**
The PR and Outreach committee is preparing a memo for the INMM EC, regarding benefits and risks for engaging with the media. This memo (which will be ready for the November 2019 meeting) intends to inform the INMM EC about options, which can be followed by a media engagement strategy if the EC agrees. Additional volunteers to support drafting the memo will be recruited at the Communications Committee in-person meeting in July.

**Website (Karl Horak, Chair)**
The website committee has requested updates from all INMM Technical Division Chairs for their respective webpages. Several chapter sites were also updated. The website committee is planning a website deep dive with the INMM EC to determine the best path forward to resolve current issues related to information layout and content with the site.
Search functionality for JNMM archive continues to be a problem and appears to be a year or more out of date.

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

Our latest social media analytics report from May 2019 reflects increasing followers on our Facebook and Twitter platforms, with 21 new Twitter followers since January 2019 (5.2% growth) and 27 new Facebook fans (6.1% growth). This quarter, the social media committee updated our connections across Twitter, Facebook, and LinkedIn to include all the organizations identified in the 2013 INMM Collaboration Matrix.

The social media committee continues to seek volunteers to help generate engaging content.

Respectfully submitted,

Zoe Gastelum

**Committee Membership**

Zoe Gastelum, chair  
Meili Swanson, deputy-chair  
Sarah Frazar, chair, Public Relations and Outreach Subcommittee  
Jay Disser, co-chair, INMM Communicator Subcommittee  
Katherine Bachner, co-chair, INMM Communicator Subcommittee  
Karl Horak, chair, Website Subcommittee  
Holli Klein, deputy chair, Website Subcommittee  
Steven Horowitz, chair, Social Media and Apps Subcommittee  
Kelly Jenkins, deputy chair, Social Media and Apps Subcommittee  
Brendan Breen, INMM Headquarters Liaison  
Steve Wyrick, Management

**Current email distribution for the Committee:**

zgastel@sandia.gov; mswanso@sandia.gov; sarah.frazar@pnnl.gov; jay.disser@inl.gov; kbachner@bnl.gov; karlhorak@comcast.net; holli.klein@gmail.com; shorow@sandia.gov; kjenkins@anl.gov; steven.wyrick@srnl.doe.gov

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**EDUCATION & TRAINING COMMITTEE**

Melissa Einwechter, Chair

**Student Research Initiative**

Thank you to the eight university chapters that submitted applications for the 2018-2019 Student Research Initiative: Ahmadu Bello University, Korea Advanced Institute of Science and Technology, Middlebury Institute at Monterey, Penn State University, Universidade Federal do Rio De Janiero,
Universitas Gadjah Mada, University of Ibn Tofail, and Virginia Commonwealth University. There will be another opportunity to participate in 2019-2020 and selected chapters will have travel, registration, and per diem at the 2020 Annual Meeting covered for their presenter. To be eligible, chapters must be in good standing (at least 7 paying INMM members) and meet INMM’s abstract and paper submission deadlines. We look forward to your participation!

2019 Annual Meeting
Education and Training received 27 abstracts this year and will host 6 sessions on E&T topics and 2 poster presentations. There are also two panels, one on communication and one on virtual reality.

Student Paper Award
This year’s annual meeting includes 51 student papers, of which 32 are eligible for the J.D. Williams Student Paper Award Competition (papers not submitted by the paper submission deadline are ineligible for the award). The eligible papers are authored by students from 19 different universities and colleges, and represent a 52% increase over last year.

As in previous years, we would like to offer a very hearty thank you to Jim André, for his coordination of this annual competition. We are also grateful to him for the time and effort to train the future coordinator, Karen Hogue. Thank you Jim!

For members interested in judging oral paper and poster presentations, volunteers are always welcome. Please contact Melissa.Einwechter@npo.doe.gov, Karen.Hogue@cns.doe.gov, and JP.Andre@pnnl.gov.

Committee Growth
We are actively seeking members who would like to become more involved with Education and Training. Please contact Melissa Einwechter at <Melissa.Einwechter@npo.doe.gov> or any of the other committee members if you are interested in supporting this important mission area in nuclear materials management!

Respectfully submitted,

Melissa Einwechter, E&T Committee Chair
Karen Hogue, E&T Committee Deputy Chair, incoming Student Paper Competition Coordinator
Amanda Sayre, Student Activities Subcommittee Chair
Jim André, Student Paper Competition Coordinator

EXHIBIT & SPONSORSHIP COMMITTEE
Morris Hassler, Chair

This has been a busy Spring and early Summer! I want to give a special thanks to AH Director of Meetings and Exhibits, Beth Meehan, as well as Alyssa Carroll, AH INMM Meeting Coordinator, who have been fantastic in planning, designing, communicating, and taking care of prospective exhibitors and sponsors.
This year we made some pretty significant changes to the Exhibits and Sponsorship Prospectus to try to improve revenues for the Annual Meeting. I am happy to report that we have been very successful in providing a larger offering to our exhibitors/sponsors and at the end of June have $71,500 in exhibits and $6,950 in sponsorships for a total exhibit/sponsorship revenue of $78,450! This greatly exceeds our projected budget revenue of $45,500 which was the 2018 actual revenue received.

AH came up with a great prospectus with an appealing layout and some very creative options for potential exhibitors/sponsors which also allowed for maxim contributions from governmental participants. Below are some to the specifics opportunities that were listed in the 2019 prospectus:

- Un-opposed Exhibit Hours. Connect with attendees without the competition of sessions for a more direct, focused approach! Over 6 hours of uninterrupted networking with industry leaders and 500+ participants from around the world!
- An optimal Conference layout with Session rooms located near the Exhibit Hall for optimal branding.
- Networking Social Events in the Exhibit/Poster Hall.
- Poster Sessions & refreshment breaks that take place in the Exhibit Hall.
- Engaged attendees who are eager to learn about your products & services.
- Exhibitor Passport Program. Each attendee will receive a “passport” when registering. Participants can visit each booth to receive a stamp or sticker. Upon completion, they will place the passport into a raffle bin. Participants must be in attendance to win. Prize announcements will take place in the final exhibit hall break on Wednesday morning. INMM will be hosting a prize, but other exhibitors are welcome to join in on the fun. If you donate a prize, you will be included on a special recognition sign at the conference, as well as in our program book.

By far, the biggest change in revenue was in the greatly expanded pre-packaged exhibit levels. Concentration on increasing exhibit revenue, instead of sponsorships, and having higher levels of exhibit offerings allowed for a wider range of participation from exhibitors that are constrained by restrictions on sponsorships. Previous exhibit booth prices were limited to around $2,000, whereas, the 2019 offering allowed exhibit packages up to $15,000 while at the same time keeping the $2,100 exhibit booth option available for those who wanted that option. We increased our exhibit revenue from $36,000 in 2018 to $71,500 in 2019 with this approach. See Figure 1. to see how this was presented in the prospectus.

Another significant change in 2019 is the layout of the exhibit hall and the dedicated hours for visiting the exhibitors. These are designed to give maximum exposure to the exhibitors and value to those that purchase the packages. See Figure 2. on the exhibit floor layout which highlights the tiered exhibit locations giving premium visibility and access to those who purchase the higher tiered packages. We will carefully monitor this approach and poll the exhibitors to assure value as we plan for the 2020 Annual meeting.
Figure 1. Pre-Packaged Exhibit Levels
Figure 2. Exhibit Floor Layout

The committee also worked to keep many of the historical type of sponsorship areas while adding some new options. Below in Figure 3, are some the sponsorship and educational opportunities made available.

Figure 3. Educational and Sponsorship Opportunities
We still have some work to do in this area in both promotion and offerings as we only had about $7,000 of these taken which was less than the $9,500 in 2018. We need to understand the impact of the prepackaged exhibit options that may have affected the revenue generation on these. One sponsor did complain that they had lost the recognition of being a “Platinum” or “Gold” sponsor with these and could not afford the levels of the pre-packaged exhibits with that recognition. This something that the committee will look at for next year.

Overall, I believe our efforts to maximize exhibit revenue were extremely successful this year and we have room to work on increasing our sponsorship revenue for next year. Additionally, we will solicit feedback from our exhibitors/sponsors to see what worked well and not so well and what they perceived as getting maximum value.

Sincerely,
Morris Hassler, Chair

FELLOWS COMMITTEE
Nancy Jo Nicholas, Chair

The Fellows Committee meets annually, during the INMM Annual Meeting, and conducts business by phone or email to serve the needs of the Institute, advise the Execute 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 EC has asked the Fellows to help look at ways for INMM to improve gender balance both within the Institute and in the broader nuclear materials management community.

Last summer in Baltimore at the 59th Annual Meeting Sara Pozzi and Morris Hassler were awarded the status 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 these two 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. New Fellows will be announced in July during the 60th
Annual Meeting in Palm Desert, and they will welcomed by all Fellows in attendance during our luncheon meeting.

The current Fellows Committee members are:

- Nancy Jo Nicholas, Chair
- Obie Amacker
- Paul Ebel
- Jill Cooley
- Shirley Johnson
- Joe Rivers
- Ken Sanders
- Ted Osabe

GOVERNANCE COMMITTEE
Charlie Harmon, Chair

The HTML version of the Ops Manual was posted in April 2019 and has been approved by the EC. We continue to repair some links that did not survive the transition. Unlike the previous pdf versions of the Ops Manual, the new HTML version is not easily downloaded as a standalone document. Individual Sections can be copied and pasted into a local document if necessary.

The latest revision date is posted at the bottom of the front page. We continue to work on posting revision dates on each of the major sections and hope to have that done before the November EC Meeting.

Recent changes to the Ops Manual include a revision to the Annual Meeting Committee and clarification of the related Vice President Duties. We have also removed the Specific Policies Section from the Ops Manual and have listed them separately in the Institute of Nuclear Materials Management Policies and Documents (Institute Policies) Section along with the Operations Manual and Bylaws.

We anticipate sending a notice to the Division Chairs and Management Oversights following the Annual Meeting asking them to review their respective sections of the Ops manual and revise as necessary.

Institute Policies are supposed to be reviewed every 5 years. The following Institute Policies are due for Review:

- Logo Use Policy
- Respectful Behavior Policy
- Event Cancellation Policy
- JNMM Policy on Special Issues

Regards, Charlie Harmon, Chair
In the last 12 months, the JNMM has published two special issues. One (Vol 46 No 3) was organized by the Open Source and Geospatial Information Working Group. The other (Vol 47 No 1) was organized by the organizing committee for the Workshop on Emerging Technologies, Techniques and Methods for Nuclear Materials Science Processing and its Applications to Nonproliferation and Nuclear Forensics that was held at PNNL in May 2018. In addition, we published the usual INMM Annual Meeting issue (Vol 46 No 4), which also includes several contributed papers. The next issue (Vol 47 No 2) is at the galley proof stage as this report is being written. It is likely to be published before the EC meeting at the Annual Meeting.

In addition to the above, the JNMM currently still has a number of contributed manuscripts in the peer review process. We have also received an expression of interest for yet another special issue. It is still early but if the anticipated schedule holds this next special issue will be published within the next 12 months.

Effective immediately, the JNMM has added another staff resource to support the technical editors. Deanna Bright will manage the administrative duties for the peer review process, while Amy Chezem will continue to manage the content and production. With this change, the associate editors will start to communicate through Deanna. A notice regarding this change will be sent out before the July EC meeting. The paper submission guidelines will continue to show Amy as the point of contact until Deanna is up to speed on the whole process.

We have not abandoned the quest to improve the JNMM impact factor. We have subscribed to a service that evaluates our impact factor. However, it requires a few years of publication history for them to issue their first evaluation of our impact factor. We are not quite there yet.

As always, we ask you to encourage your colleagues to submit their work for peer review and possible publication in JNMM.

Respectfully submitted,

Markku Koskelo  
Technical Editor

Brian Boyer  
Assistant Technical Editor
MEMBERSHIP COMMITTEE
James Miller, Chair

A few updates from the Membership Committee:

- Since the last EC meeting in March, the Committee has recommended approval of 30 new regular member and 25 new student member applications.
- The Membership Committee recommended and the EC approved 9 new Senior Members this year. These individuals will be recognized at the Annual Meeting in Palm Desert in July:
  - James Andre
  - Roberta Burbank
  - Zoe Gastelum
  - Nina Rosenberg
  - Jessica White-Horton
  - Lake Barrett
  - Andrea Favalli
  - Akira Goto
  - Masaki Saito

Membership Recap:

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

<table>
<thead>
<tr>
<th>Member Type</th>
<th>June-14</th>
<th>June-15</th>
<th>June-16</th>
<th>June-17</th>
<th>June 18</th>
<th>June 19</th>
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<tr>
<td>Regular</td>
<td>924</td>
<td>818</td>
<td>749</td>
<td>815</td>
<td>717</td>
<td>616</td>
</tr>
<tr>
<td>Fellow</td>
<td>25</td>
<td>26</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>28</td>
</tr>
<tr>
<td>Emeritus</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>8</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Senior</td>
<td>106</td>
<td>101</td>
<td>96</td>
<td>86</td>
<td>80</td>
<td>79</td>
</tr>
<tr>
<td>Senior Emeritus</td>
<td>8</td>
<td>7</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Sustaining</td>
<td>28</td>
<td>30</td>
<td>25</td>
<td>15</td>
<td>20</td>
<td>22</td>
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<tr>
<td>Fellow Emeritus</td>
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<td>16</td>
<td>22</td>
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<td>12</td>
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<tr>
<td>Honorary Member</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
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<td>3</td>
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<tr>
<td>Life Fellow</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Student</td>
<td>152</td>
<td>160</td>
<td>244</td>
<td>152</td>
<td>160</td>
<td>165</td>
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<tr>
<td>Total Members</td>
<td>1266</td>
<td>1166</td>
<td>1172</td>
<td>1135</td>
<td>1038</td>
<td>943</td>
</tr>
</tbody>
</table>

Members of the Committee:
Al Garrett
Leigh Gunn
James Miller
Mark Mount
John Oyer
Therese Renis
Michelle Romano
Mark Schanfein
Jessica White-Horton

Respectfully submitted,
James Miller
Chair, Membership Committee

INMM MEMBERSHIP COMPARISON (January 1, 2019 – June 30, 2019)

<table>
<thead>
<tr>
<th>Type</th>
<th>31-Jan</th>
<th>28-Feb</th>
<th>31-Mar</th>
<th>30-Apr</th>
<th>31-May*</th>
<th>30-Jun</th>
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<tbody>
<tr>
<td>Regular</td>
<td>759</td>
<td>769</td>
<td>779</td>
<td>789</td>
<td>609</td>
<td>612</td>
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<tr>
<td>Fellow</td>
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<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>Emeritus</td>
<td>10</td>
<td>10</td>
<td>11</td>
<td>11</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Senior</td>
<td>76</td>
<td>76</td>
<td>75</td>
<td>75</td>
<td>70</td>
<td>79</td>
</tr>
<tr>
<td>Senior Emeritus</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Fellow Emeritus</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Sustaining</td>
<td>22</td>
<td>22</td>
<td>22</td>
<td>23</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>Honorary</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Life Fellow</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Student</td>
<td>179</td>
<td>197</td>
<td>206</td>
<td>223</td>
<td>161</td>
<td>163</td>
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<tr>
<td>TOTAL CURRENT MEMBERS</td>
<td>1,101</td>
<td>1,129</td>
<td>1,148</td>
<td>1,176</td>
<td>923</td>
<td>937</td>
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<table>
<thead>
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<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>NEW Regular</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>4</td>
<td>12</td>
<td>4</td>
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<tr>
<td>NEW Sustaining</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEW Student</td>
<td>18</td>
<td>9</td>
<td>17</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL NEW MEMBERS</td>
<td>28</td>
<td>19</td>
<td>28</td>
<td>8</td>
<td>14</td>
<td>6</td>
</tr>
</tbody>
</table>

| MEMBERSHIP TOTALS | 1,129 | 1,148 | 1,176 | 1,184 | 937 | 943 |

*2018 Non-Renewals Dropped in May

YTD Membership Mix

- Regular: 66%
- Life Fellow: 0%
- Sustaining: 2%
- Fellow Emeritus: 8%
- Fellow: 3%
- Emeritus: 1%
- Senior Emeritus: 1%
- Senior: 8%
- Honorary: 0%
- Student: 17%
Strategic Planning Committee
Jack Jekowski, Chair

The current Membership on the Committee includes:

<table>
<thead>
<tr>
<th>Name</th>
<th>Title/Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jeffrey Allender</td>
<td>Program Manager, Savannah River National Laboratory</td>
</tr>
<tr>
<td>Katherine Bachner</td>
<td>Scientific Associate, Brookhaven National Laboratory</td>
</tr>
<tr>
<td>Franklin DuBose</td>
<td>Consultant, BDM Consulting, LLC</td>
</tr>
<tr>
<td>Jeff England</td>
<td>Director, Transportation and Packaging Solutions, NAC International</td>
</tr>
<tr>
<td>Braden Goddard</td>
<td>Assistant Professor, Mechanical and Nuclear Engineering, Virginia Commonwealth University</td>
</tr>
<tr>
<td>Willem Janssens, Deputy Chair</td>
<td>Head of Department Nuclear Security and Safeguards European Commission, Joint Research Centre</td>
</tr>
<tr>
<td>Jack Jekowski, Chair</td>
<td>Principal Partner, Innovative Technology Partnerships LLC</td>
</tr>
<tr>
<td>Daniel Johnson</td>
<td>Senior Advisor, World Institute for Nuclear Security</td>
</tr>
</tbody>
</table>

YTD Membership By Region

- North America: 57%
- Asia: 25%
- Europe: 13.45%
- South America: 1.5%
- Africa: 1.25%
- Middle East: 1%
- Australia: 0.8%
- Africa: 25%
The Purpose of the Strategic Planning Committee, as identified in the Institute’s planning documents is:

The Strategic Planning Committee will assist the Executive Committee in performing both short- and long-term analysis of the effectiveness of the Institute for Nuclear Materials Management (INMM). The Committee will conduct ongoing strategic planning and respond to initiatives requested by the Executive Committee to ensure that the organization is effectively meeting the needs of the professional nuclear materials management community. The Executive Committee will appoint a Chair of this Committee, who will then select volunteers to serve on the Committee and assist the Chair.

Accomplishments and Highlights of Committee Activities July 2018 – June 2019

1. Membership Changes to the Strategic Planning Committee (SPC). During the past year, Willem Janssens was named as a second Deputy Chair of the SPC. With Sean Morrell on detail at the IAEA, and Willem in his various positions in the International community, we will be able to strengthen that aspect of our activities, including having representation at international events. The new position was effective October 1, 2018. Additionally, we added Dr. Azaree Lintereur, Assistant Professor, Mechanical and Nuclear Engineering, Penn State University to the SPC. Dr. Lintereur is the Faculty Advisor for the Student Chapter at PSU and was recommended by Dr. Braden Goddard, who responded to a request for nominees at our SPC annual Committee meeting in Baltimore.

2. Global Security Summit. An extraordinary Closing Plenary was held in Baltimore in 2018, moderated by our President, Corey Hinderstein (in her final year in that role), and designed to challenge the
membership to think about the future of the Institute through a series of seven questions\(^1\) created by the EC as a component of our new Strategic Plan. Stimulated by an international panel of five experts\(^2\), attendees were able to register their perspectives on remote polling devices, and results were documented to compare and contrast the perspectives of the five experts to the weighted perspectives of the attendees.

3. Organizational Strategic Planning. The SPC will continue to work with the EC and Headquarters staff to implement the new Strategic Plan. With the appointment of Willem Janssens as a Deputy Chair for the SPC, work on the organizational Strategic Plan should also be more integrated with the efforts of the SPC. During this period, the data from the special Closing Plenary session last year was analyzed and presented to the EC for use in future planning activities. This information is provided in Attachment 1 to this report. The top level challenges identified were:

- Top global challenge/risk/threat to nuclear proliferation - Lack of political progress on nuclear disarmament
- Top global challenge/risk/threat to nuclear security - Implementation/security practices at sites
- Which concerns you more - Both nuclear proliferation and nuclear security
- Greatest cyber threat - Ability to interfere with safety systems at facilities
- Top three areas of INMM focus - Connecting policy and technical communities to develop solutions; helping improve processes and resources for education, training and knowledge; and increasing public awareness, engagement, and education on materials management.
- Technology Game changer – Artificial Intelligence/machine learning
- Increase INMM attention – Outreach to nuclear industry

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\(^1\) Seven questions were provided to the panelists prior to the Closing Plenary with several multiple choice answers, including “other”. After asking the attendees for their input, the panelists and the attendees were queried for more details. The questions posed were: 1) What is the current top global challenge/risk/threat with respect to nuclear proliferation?; 2) What is the current top global challenge/risk/threat with respect to nuclear security?; 3) Which risk set concerns you more?; 4) What are the greatest cyber threats related to nuclear materials management?; 5) What are the top 3 areas the INMM should focus on?; 6) Which technology has the best chance to become a “game changer” (plus or minus), for the INMM?; and 7) Where should the INMM increase its attention?

\(^2\) Panelists included Dr. Jacques Baute, Director, Division of Information Management, Department of Safeguards, IAEA; Dr. Bassam Abdullah Ayed Khuwalleh, Assistant Professor, Nuclear Engineering Program, University of Sharja; Mitsuo Koizumi, Manager of Technology Development Promotion Office of Integrated Support Center for Nuclear Nonproliferation and Nuclear Security of the Japan Energy Atomic Agency; Sonia Fernandes Moreno, Planning and Evaluation Officer, Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials; and Julie Oddou, Head of the Committee Technique Euratom, Atomic Energy Commission (CEAR).
4. **Strategic Planning Committee Meeting.** The annual SPC meeting was held on Tuesday afternoon during the INMM Annual Meeting. The 14 attendees included members of the Committee and other interested observers. A review of activities and events at the Annual Meeting, including the Closing Plenary session were discussed, as well as respond to the WINS Challenge. Minutes from the meeting were distributed to attendees, SPC members and others.

5. **Action Item #030216-10. Consider and make a recommendation to EC regarding potential roles for INMM to facilitate training and the development of educational material.** This activity is aligned with the second WINS Challenge. Dr. Sunil Chirayath, the President of the SW Chapter at the time, working with Texas A&M and the International Safeguards Division presented the four-hour “capstone” session for the “Policy and Technical Fundamentals of International Nuclear Safeguards”. Sixty-seven attendees took advantage of this comprehensive on-line course, with 17 successfully completing the course by the Annual Meeting, receiving their Certificates of Completion. Since then, 31 more individuals successfully completed the on line tests, resulting in 48 completions. Recent discussions with the new SW Chapter Executive Committee have identified some initial opportunities that will be pursued to continue to offer this type of professional training through Universities affiliated with the Institute, leveraging partnerships with Los Alamos National Laboratory and Sandia National Laboratories.

6. **Action Item #071517-1. Develop a matrix of NGO and foundations for possible support for INMM activities.** Discussions during the 58th Annual Meeting in Indian Wells demonstrated an interest in creating a matrix that would identify NGOs, foundations and other sources of funding or in-kind support that might offer opportunities for our student members to pursue research projects. A matrix created by the SPC four years ago identified organizations with similar collaborative missions that can be used as a starting point for this effort. Jack Jekowski and Claudio Gariazzo have committed to start this process and a preliminary matrix was presented at the March 2018 EC meeting for discussion. After the Annual Meeting Dr. Braden Goddard sent Jack some spreadsheets of Scholarships and Fellowships references that are used by Virginia Commonwealth University to help students. We will continue to develop this concept with the hope that we can provide additional value to our student membership.

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7. Taking the Long View Industry News Column. Three “Taking the Long View” column was submitted to the Journal of Nuclear Materials Management (JNMM) during this period:
   a. Vol. XLVI, No. 4 - “Taking the Long View in a Time of Great Uncertainty: New Challenges for the Institute”, which describes the challenges emerging from the Annual Meeting, including the new WINS Challenge:
      i. “By 2025, every person in this room, and every person worldwide who is employed professionally in the nuclear materials management, security, nuclear forensics and safeguards fields will have the opportunity to take certified professional development courses to help demonstrate their professional competence.”
   Other challenges include the issues being addressed by the newly-formed Cyber/Physical Security Integration Committee, and the challenges that lie ahead for the Institute and the world as identified in the Closing Plenary strategic issue session.
   b. Vol. XLVII, No. 1 - “Taking the Long View in a Time of Great Uncertainty: 60 years in the Making”, which focuses on the 60 year history of the Institute, how it is intertwined with other organizations, in particular, the IAEA and the NPT, and what lies ahead for the next 60 years.
   c. Vol. XLVII, No. 2 – “Taking the Long View in a Time of Great Uncertainty: Listening to our Members and Advancing the INMM Mission in the Midst of Global Turmoil”, which provide highlights of the analysis performed on the highest priority items from the closing Plenary session of the 2018 Annual Meeting. For reference purposes, an excerpt from this article is included in Attachment 2 to demonstrate how each strategic area can be analyzed to further develop alignment with the INMM’s strategic planning efforts.

8. Alternative Session Format for Annual Meeting. This initiative will continue to be explored as the Institute identifies opportunities to better engage the membership during Annual Meetings. More panel sessions were held this year and are well attended and conducive to discussions subsequent to the meeting. For the 2019 Annual Meeting, an opening Plenary will be made each day.

9. Encouraging Women to Pursue Careers in Nuclear Materials Management. The SPC will continue to research this topic and monitor the U.S. and International community for items of interest that might be used as benchmarks. This effort is also aligned with the Institute’s Charter membership in the Gender Champions in Nuclear Policy (see https://www.gcnuclearpolicy.org/). Joining this initiative was promoted by the Nuclear Threat Initiative last year. The SPC will continue to research this topic and monitor the U.S. and International community for items of interest that might be used as benchmarks. During this period, as a result of the newly formed Cyber/Physical Security Integration Committee, we learned from Shadya Moldonado Rosado (PNNL) that there is a Women in CyberSecurity (WiCyS) organization that may provide opportunities for the Institute to collaborate with in this emerging programmatic area.

10. Nuclear Fuel Cycle Linkage. The most current version of the Nuclear Fuel Cycle chart was distributed at the November EC meeting for consideration in promoting the work of the Institute.
11. Historical Timeline of INMM. A notional 60th Anniversary timeline was distributed at the November EC meeting, and the Spring JNMM Taking the Long View column examined the decadal role of the INMM in the context of other milestones including the IAEA and the NPT.

**Planned actions for 2019-2020**

- Continue to identify strategic topical areas for the Institute to focus on in the coming years derived from 2018 Closing Plenary priority topic areas.
- Continue to identify possible opportunities to improve participation in the Institute by women in appropriate fields of study.
- Assist members of the EC and others in the development of strategic relationships with similar-missioned organizations identified on the Collaboration Matrix.
- Work with various Committees and individuals to further develop opportunities to enhance the revenue of the Institute and mitigate the impact of the U.S. restrictions on conferences.
- Work closely with the Student Activities Committee Chair, Amanda Sayre and the chair of the Education and Training Committee, Melissa Einwechter, to identify strategic issues with respect to engaging the next generation of Institute membership, including strategies to attract more women into disciplines needed by the nuclear community.
- Work with the SPC to develop topics for the Industry News “Taking a Long View” column, and provide feedback to the EC on critical events and their strategic implications to the Institute.
- Develop new methods of engaging participants in the Annual Meeting through innovative approaches.
- Work with the EC to support implementation of organizational strategic goals.

**Strategic current events impacting the Institute today:**

As we enter an ever-more uncertain world in 2019 and 2020 (a U.S. Presidential election year), we will continue to face many uncertainties that impact the mission of the Institute and the work of its members, including:

**International**

- Continuing tensions between the West and Russia. Tensions continue to increase between the U.S and Russia as both countries have, in effect, withdrawn from the Intermediate Range Nuclear Missiles (INF) Treaty, and the hypersonic Arms Race has taken on new dimensions. Cybersecurity issues have also taken center stage with a recent New York Times article, as the run up to the U.S. Presidential election has already started.
- Escalation of tensions and territorial claims in the East and South China Sea. The long standing territorial conflict between China and Japan, as well as other Southeast Asia nations, over islands and sovereignty in the East and South China Sea continues. Some analysts are now speculating that a military confrontation is inevitable. China’s increasing success with hypersonic vehicles also is a great concern to the West, as is its increasing investment in military technologies. The unusual relationship
between China and North Korea, and now, the U.S. Trump Administration, creates a complicated environment in which to speculate on a path forward. With the additional uncertainties associated with tariffs and the ensuing threat of a major trade war, even the creation of future scenarios for how these issues will be resolved becomes difficult.4

- Iran. The decision by President Trump to withdraw from the Joint Comprehensive Plan of Action (JCPOA - the “Iran Deal) on May 8, 2018 has triggered international turmoil as the other members of the Iran Deal, including the European Union, now must respond with their positions as Iran has begun showing signs of increasing their uranium enrichment efforts. Recent implementation of sanctions by the U.S, and actions allegedly taken by Iran to disrupt shipping in the Straits of Hormuz has created increased tensions that provide a prelude to war. The U.S. position is no longer “business as usual” as the disruptive approach to diplomacy by the new Administration continues.

- North Korea (DPRK). The summits between President Trump and Kim Jung-un were also certainly not “business as usual”. Despite some initial hope that a long-standing stalemate on the Korean Peninsula has been shattered with the official signing of an agreement on June 11, 2018 to move forward toward denuclearization, many are not optimistic about the eventual outcome because of previous behaviors by the rogue nation, as evidence mounts following the summits of increased activity at some of North Korea’s nuclear sites, while U.S. Intelligence Chiefs recently gave testimony before Congress that North Korea is unlikely to dismantle its nuclear weapons program.5

- Global Instability. The unrest in the Middle East continues, although recent moves by the U.S. to withdraw troops, announcing that the battle with ISIS has been won, provides some hope for the region. Elections in Israel have not resulted in a stable government, with new elections scheduled for September, further creating unknown paths to the future.

- Nuclear Renaissance. Although some countries have decided to forgo nuclear power as a result of the Fukushima accident of 2011, the United Arab Emirates (UAE) is currently building four nuclear reactors, with the first unit construction completed at the Barakah Nuclear Energy Plant in Al Dhafra. However, scheduled startup will be delayed at least a year as operational readiness reviews need to be completed. Saudi Arabia also has begun the process of building two nuclear power plants, one of which may be operational in 2020. Technological struggles in Japan, however, to contain the spread

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of radioactive contamination at the Fukushima site, and the enormously expensive technologies being
developed to achieve the clean-up (such as the ice wall designed to contain contaminated cooling
water) continue to influence global opinions on the safety and cost of nuclear power as they push the
limits of science and technology. Some promise continues to be held for Small Modular Reactor (SMR)
technology, but pilot installations have yet to be implemented and demonstrated.

- India-Pakistan Relations. Tensions between these two nuclear armed nation states rise and fall as both
nations continue to strengthen and modernize their strategic weapons systems. The U.S. relationship
with Pakistan has also ebbed and flowed over the past year – with attention recently focused more on
the summit with North Korea and the Iran Deal.

- Cyber Threat. The growing threat posed by both state and non-state hackers to infiltrate even the
most secure networks has created an alarming vision of the future, where Congressional investigations
continue on the possibility of foreign governments intervening in the U.S. elections. Another
important aspect of the cyber issue is the growing threat to critical infrastructure using remote
communications, particularly those that are associated with nuclear facilities. As a result of the
-growing threat by both state and non-state actors, the U.S. has named both Space and Cyberspace as
“warfighting domains”, raising the level of importance in the defense posture for both of these new
areas. DOE Secretary Perry has launched a new initiative to establish a special cyber program and an
Assistant Secretary for Cyber and Infrastructure Protection; the Pentagon has stood up CYBERCOM as a
Unified Combatant Command; and a new NIST cyber security control compliance requirement is now
in all DoD contracts and subcontracts, and will be audited in 2019.

- Nuclear Modernization. Growing international tensions and security uncertainties continue to drive
modernization efforts of all the major nuclear weapons possessing states, particularly as aging
infrastructure, weapons and delivery systems bring into question their ability to meet deterrent
needs, and new technologies including hypersonic delivery vehicles and artificial intelligence create
new challenges for deterrence strategies. Despite efforts to reduce the size of nuclear stockpiles,
these modernization programs, including those of the U.S., are a harbinger of a new Cold War. A U.S.
Congressional Budget Office study identified the planned 30-year modernization effort of the U.S.
alone will be in excess of $1.2T. These plans were confirmed with the release of the 2018 Nuclear
Posture Review on February 3, 2018. Whether U.S. plans get derailed by the new Congress is yet to be
determined, but many public statements by the Democratic majority indicate that the U.S. nuclear
posture will be called into question.

- Brexit. The impending withdrawal of the United Kingdom from the European Union adds a further
unknown to the development of Western economic and security collaborations, including issues
surrounding its own nuclear weapons deterrent. The recent resignation by the May government
further complicates the path to the future, as the U.K. struggles with a divided electorate. The
complications associated with the withdrawal are also arising in other national security areas,
including disputes occurring over the U.K. role in the Galileo program, the $12B European Global
Navigation Satellite System (GNSS) designed to complement or even replace the U.S. GPS system, as well as other military partnerships with the EU member states.

U.S.

- New U.S. Administration. The potential impact of new U.S. policy as a result of the election of President Trump has been addressed in “Taking the Long View” columns. With the new balance in Congress as a result of the mid-term elections, the world anxiously awaits the “next surprise” in U.S. national policy. It behooves the Institute to closely monitor this dramatically changing environment particularly as it pertains to the technical and policy issues associated with the JCPOA; North Korean nuclear ambitions; geologic storage of spent fuel and high-level defense waste; nuclear power; and nuclear weapons modernization efforts.

- U.S. Budget Deficit. The economic malaise that has impacted the global community is reflected in the growing U.S. budget deficit, which now approaches $22T. The economic uncertainties that continue to be exacerbated by global conflicts, the uncertain future of the European Union, and global oil markets impacted by the U.S. withdrawal from the Iran Deal and political upheavals in Venezuela, add unknowns to the stability not only of the U.S. economy but the world. Recent decisions by President Trump to use tariffs as a negotiating tool with other countries have also brought about significant uncertainties in global markets. The partisan battles in the U.S. Congress have also created short term problems, and more battles lie ahead over U.S. policy positions on immigration, threatening the longer range plans for many programs, including defense.

U.S. Nuclear Security Enterprise

- MOX and Pits, Interim Storage, WIPP and Yucca Mountain. As the WIPP site moves back to operational capability, five years after the accidental release of contamination resulting from a breached storage container, there is a growing optimism that the nation’s efforts to permanently dispose of legacy waste are on track, including initial efforts by the new Administration to restart the Yucca Mountain project, and proposals for the licensing of a Consolidated Interim Storage Facility (CISF) to hold spent fuel from nuclear plants across the U.S. Caught up in the politics of the mid-term elections, however, the Yucca Mountain Project once again stalled for FY2019, and battle lines were drawn as the NNSA has shut down the Mixed Oxide Fuel Fabrication Facility (MFFF) at the Savannah River Site (SRS), and was criticized for “surreptitiously” moving Plutonium from SRS to the Nevada National Security Site.\(^6\) Political struggles also continue with the decision by NNSA to establish a new Pit manufacturing facility at SRS using the shell of the MFFF, while the new Governor of New Mexico has said she would fight the CISF facility proposed for Southeastern New Mexico.

- Future of the Enterprise. The future of the Nuclear Security Enterprise is yet to be determined. The Governance and Management (G&M) Implementation Plan issued by NNSA in response to

Congressional language in the FY2016 National Defense Authorization Act (NDAA) demonstrates that a major change in governance and relationships is about to occur within the Enterprise. A newly issued (May 2019) NNSA Strategic Vision and Governance & Management Framework has set the stage to address the issues identified in the Augustine-Mies and CRENEL reports as competitions for the Management & Operating (M&O) contracts, including the Savannah River Site also introduce new variables into this system as potentially new contractor entities are selected. The solicitation for SRS may be delayed for another year, as the political issues associated with the re-missioning of the site for PIT manufacturing has raised the complication that oversight might be moved from DOE Environmental Management (EM) to NNSA.

INMM

- The INMM itself faces “history in the making” in its 60th year as it attempts to adapt to this dramatically changing international and U.S. environment, including the continuing impact of U.S. government restrictions on conferences, the loss of participation from Russia due to international tensions, and the changing demographics of its membership. Other organizations, including the American Nuclear Society (ANS), have recently indicated they are facing similar challenges due to the new generational issues, the political divide, and international complexities. It would behoove the INMM to monitor the actions of those similar organizations and identify best practices that may be applicable.

Respectfully Submitted,

Jack Jekowski
Strategic Planning Committee Chair
505 280-2217
jpjekowski@aol.com

Ad Hoc Cyber/Physical Security Integration Committee
David Lambert, Chair

Accomplishments:
- Several teleconferences and emails with Committee Members and other interested parties to coordinate cyber-related subjects for presentation at the 60th Annual Meeting in 2019
- Draft workshop concept circulated to WINS and the USDOE Office of Environment, Health, Safety and Security
Ongoing Activities:

- Developing general cyber-related tutorial/educational materials for sharing with INMM Technical Divisions

60th Annual Meeting

Several abstracts related to cyber- or computer-security have been submitted and some of them have been considered for at least one special session on the topic
PROFESSIONAL CHAPTER REPORTS

INMM California Chapter

The INMM California Chapter (INMM-CA) will be well represented at the 60th annual INMM meeting, held in Palm Desert, July 14-18, 2019.

The CA Chapter hosted another INMM Middlebury Institute of International Studies of Monterey, Student Chapter visit to Lawrence Livermore National Laboratory on May 10, 2019.

The CA Chapter will be co-hosting an INMM workshop on Emerging Digital Technologies at Lawrence Livermore National Laboratory, April 22-24, 2019.

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

The California Chapter of the INMM continued to add to its membership rolls throughout 2019, and has a current balance of $2994.59.

Kind regards,

Ruth Kips
President of the California Chapter of the INMM

Dan Johnson
Vice President of the California Chapter of the INMM

JAPAN CHAPTER
Masao Senzaki, President

1. Officer and Executive Committee Member (as of June 2019)
   - President  Masao Senzaki
   - Vice-President  Junichi Ishihara
   - Secretary  Tomonori Iwamoto
2. Activities & Accomplishments Since the Last Report

a. Annual Meeting
The 39th INMMJ Annual meeting was held at Tokyo University on November 20, 21 2018, under sponsored by Tokyo University. Total of 118 people were participated. Total of 32 papers were presented at the technical session and 9 papers were presented at poster session.

b. Workshop/Seminar
The 4th workshop was held at Tokyo International Exchange Center Plaza HEISEI on October 11th for the cyber security measures of nuclear facilities plant control and operation system taking into consideration of cyber threat. Total of 57 people were participated.

The 5th workshop was held jointly with Atomic Energy Society of Japan on April 26th.
-Theme: Technical development and future issues for improvement of nuclear forensics capability supporting for the nuclear security. Total of 29 people were participated.
   The 8th INMMJ Nuclear Materials Management Bulletin was published in September 2018 that the 8th Bulletin topics are as follows;
   ● Automatically extended US-Japan Nuclear Cooperation Agreement and future perspective.
   ● A study of the Trump administration responding nuclear non-proliferation regime.
   ● The 9th INMMJ Nuclear Materials Management Bulletin was published in May 2019 that the 9th Bulletin topics is “History and prospect of the Physical Protection in Japan”

4. Upcoming Activities
   a. The 40th INMMJ Annual Meeting will be held on November 19-20, 2019 at Tokyo International Exchange Center Plaza HEISEI.
   b. The 6th Workshop/Seminar will be held in September for “Building of the Nuclear Security Culture”.
   c. The 9th INMM/ESARDA Japan Chapter workshop will be held on October 8-11, 2019 at Tokyo. The meeting will take place at Tokyo International Exchange Center Plaza HEISEI. (URL: http://www.jasso.go.jp/en/index.html)
   i. Theme: Future Challenge for the Enhancement of International Safeguards and Nuclear Security;
      1. Challenges of International Safeguards
      2. Enhancement of Nuclear Security

5. Current Budget
   a. See FY2019 Financial Budget Plant as listed below.

6. Membership Status (as of June 2019)
   a. Regular member : 136 (including 1 Fellow
   b. Meritorious, 1 Fellow and 13 Senior members)
   c. Student member : 9
   d. *Sustaining member : 32
      i. (*: Relevant only to Japan Chapter)
# INMM Japan Chapter FY2019 Financial Budget Plan

Converted 1US$ to 110JPY

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1.0 INTRODUCTION
The Institute of Nuclear Materials Management Nigeria Chapter was admitted in 2012 in California and celebrated at the 53rd Annual conference in Orlando, Florida. Since then the chapter has actively supported the Nigeria Atomic Energy Agency and the Nigerian Nuclear Regulatory Authority activities in the area of safety, security and safeguards of nuclear and radioactive materials in Nigeria. The Nigeria professional chapter has hosted one workshop and provided technical support to the Ahmadu Bello University Student chapter in an effort to develop and promulgate best practices for safe, secure and effective use of nuclear materials in Nigeria. Membership of the chapter cuts across the different stakeholder organization in Nigeria including the Nigeria Atomic Energy Commission, Ahmadu Bello University, Nigerian Nuclear Regulatory Authority, Energy Commission of Nigeria and a host of others. In this report, we present the chapter activities and accomplishments, upcoming activities and current officers including members in good standing.

2.0 ACTIVITIES AND ACCOMPLISHMENTS
2.1 Visits to Institute for Security Studies (ISS)
In a bid to increase its membership and funding support, the chapter followed up on a previous visit to one security institute (Institute for Security Studies) and three nuclear stakeholder organizations namely: Nigeria Atomic Energy Commission, Nigerian Nuclear Regulatory Authority and Energy Commission of Nigeria. There is still no response from the nuclear stakeholder organizations. However, the ISS has indicated interest in partnering with INMM.

2.2 Workshop
A. Ahmadu Bello University Student Chapter Workshop on: Nuclear Security Stakeholders: Roles and responsibilities in Safety, Security and Safeguards.
The INMM Nigeria Professional Chapter participated in the INMM Student Chapter workshop of the Ahmadu Bello University from January 29 – 30, 2019 as facilitators. The Workshop entitled “Nuclear Security Stakeholders: Roles and responsibilities in Safety, Security and Safeguards” featured the following presentations by professional Members.

1. Scenario of Nuclear Security Threat (S. A. Jonah)
2. Overview of Nuclear and Radiological Materials (Y. V. Ibrahim)
3. Credibility of Nuclear Threats (Y. V. Ibrahim)
5. Understanding the Scope of Nuclear Security Stakeholders (I. Sambo)
7. Role of Scientist, Technicians and Engineers (STE) in Nuclear Threat Mitigation (S. A. Jonah)
8. Integrated Approach to Security (Y. V. Ibrahim)

The Nigeria Professional Chapter has secured Nuclear Security Sustainability Grant from the PNTR; USA. The LOC for this Workshop have been constituted and since held three meetings. The workshop is planned for three days and has the following modules.

1. Introduction to Nuclear security
2. Nuclear Security Culture Fundamentals
3. Insider threat and Mitigation
4. HRP Overview
5. Unusual Behavior
6. Hiring Process and Procedures
7. Initial and Continuous Evaluation
8. Medical Evaluation
9. NIRR-1 Pilot HRP Implementation
10. Development of process and procedure documents for respective organizations
11. Presentation by various institutions

In addition, a round table discussions on ‘Benefits having reliable and trusted personnel at nuclear facilities were held. Lead papers for the round table discussion were presented by representatives from each table.

Participants will be drawn from all stakeholder institutions such as nuclear facilities, regulatory agencies and Medical personnel. Security agencies responsible for security review and response like the police, customs, civil defense, Department of State Security, military and Office of the National Security Adviser will also have the opportunity to participate in the workshop. Threats to nuclear facilities can be external or internal and hence the need for programs to mitigate these threats most especially the internal threat.

3.0 UPCOMING ACTIVITIES

The Chapters officers have agree to organize an annual workshop in 2019. The upcoming events will include:

1. Annual workshop
2. Elections
3. Symposium

4.0 CURRENT BUDGET

The Chapter does not have an account yet due to the logistics of opening an account. However, the Chapter is hopeful of having its account with one of the Nigerian banks soon.

The Chapter does not have internal sponsors for its activities. However, the Chapter is largely supported by PNTRS and CRDF Global.

5.0 CURRENT ROSTER OF OFFICERS AND NUMBER OF ACTIVE MEMBERS

The Chapter has the following as its officials and members in good standing.

**Current Chapter Officers**

The current officers of the chapter are as follow:

S. A. Jonah - President
A. M. Umar - Vice-President
Y. V. Ibrahim - Secretary
M. N. Agu - Treasurer
A. Abdul - Member-at-Large

Active Members
S. A. Jonah
A. M. Umar
Y. V. Ibrahim
Adamu Abdul
Rose Onoja
Sadiq Umar
Baba Bashir
Abba Adams
Patrick Eneji

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 $6,770.98 in our bank account: $6,717.71 in checking and $53.27 in the Share account. Our anticipated Expenses equal $300.00, leaving an end of year balance of $6,470.78.
Chapter Activities

The Northeast Chapter provided judges for Best Papers in the International Safeguards and Cyber-Physical Security presentation tracks at the 2019 ANS Student Conference held at Virginia Commonwealth University on April 6, 2019. We provided a total $300.00 for the best paper awards in these two tracks.

The 2019 Annual Northeast Regional Chapter Membership Meeting will be held on Wednesday, July 17, 2019 from 6:00-7:00 PM at the J W Desert Springs Resort and Spa in Palm Desert, CA.

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 2019.

Respectfully Submitted: Kate Bachner, President

PACIFIC NORTHWEST CHAPTER

Leadership

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

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<th>Office</th>
<th>Name</th>
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<tr>
<td>President</td>
<td>Roberta Burbank</td>
<td>October 2020</td>
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<tr>
<td>Vice President</td>
<td>Mark Engelmann</td>
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<tr>
<td>Secretary/Treasurer</td>
<td>Jim André</td>
<td>October 2020</td>
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<td>Member-at-Large</td>
<td>Jacob Benz</td>
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<td>Shirley Johnson</td>
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<tr>
<td>Member-at-Large</td>
<td>Amanda Sayre</td>
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<tr>
<td>Immediate Past President</td>
<td>Harrison “Skip” Kerschner</td>
<td>October 2020</td>
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</table>

The EC is supported by Jennifer Anderson, Associate Member (Membership); Ramon Castillo, INMM Member (Communications Development); Cathy Darby, Associate Member; and Christine Ortega, Associate Member.

Activities

Participation in PNNL Lab Day – The Chapter took part in PNNL Lab Day where students from the region visit to learn about the field of nuclear material safeguards and get exposed to opportunities at the lab.
Workshop Activities – Immediate Past Chapter President Skip Kerschner and others in the Chapter have been working with the Southwest and California Chapters to develop a workshop tentatively titled “Emerging Digital Technologies for Nonproliferation and Nuclear Security”, targeted to be held in April 2020.

NuScale Power tour – A tour of the NuScale Power simulator facility in Richland, WA will take place in June. NuScale is developing a new small modular light water reactor and the first project siting one of their reactors is underway.

Technical Society Relationships – The Chapter works to grow and maintain its relationships with other 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-sponsor with the Eastern Washington Chapter of the Academy of Certified Hazardous Materials Managers and the Eastern Washington Section of the American Nuclear Society (ANS-EWS) of a seminar by Deep Isolation on their use of directional drilling for the storage and retrieval of commercial spent fuel and defense highlevel radioactive waste.
• The Chapter had attendance at the ANS-EWS technical session on “Breakthroughs in Neutrino Detection” discussing a new neutrino-interaction mechanism that has enabled a new class of detectors that may be useful in nuclear material safeguards.
• The Chapter had attendance at the ANS-EWS technical session on “Role of Nuclear in the ‘Green New Deal’” where the necessity of including nuclear power in the nation’s future energy strategy was demonstrated.

University/Student Outreach – Progress continues with Washington State University (WSU) to establish a new student chapter there.

Communications Development – Ramon Castillo continues to lead the Chapter’s website and social media presence, coordinating with INMM HQ.

Charter Revision – With receipt of the new Chapter By-laws template, the Pacific Northwest Chapter is reviewing and revising its current By-laws. Completion is anticipated shortly so they may be submitted for approval at the Annual Meeting.

Chapter-Logoed Shirts – The Chapter designed polo shirts emblazoned with the Chapter logo and made them available to the membership.

INMM-HQ Activities – PNW Chapter member activity at the national level continues as follows:
• Steve Mladineo continues as the INMM Technical Division Oversight Chair
• Skip Kerschner continues representing INMM as a voting member on the American National Standards Institute N13 committee, “Radiation Protection”
• Amanda Sayre continues as the Chair of the Student Activities Subcommittee of the Education and Training (E&T) Committee
• Sarah Frazar continues as the Chair of the Public Relations and Outreach Subcommittee of the Communications Committee
• Glenda Ackerman continues as the Chair of the Education and Outreach Subcommittee of the E&T Committee
• Jim André continues his participation in the Technical Program Committee and leading the JD Williams Student Paper Competition for the E&T Committee at the Annual Meeting
• Jacob Benz is the Chair of the Arms Control, Treaty Verification, and Disarmament Subcommittee of the Nonproliferation and Arms Control Technical Division

Membership

Chapter membership remains free to members that have registered with the National INMM. The Chapter has 53 members and 3 associate members. It should be noted that our associate members provide significant support for our on-going activities.

Treasurer’s Report

Chapter Balance January 25, 2019 $22,103.16
Income $580.64
Expenses $743.57
Chapter Balance May 25, 2019 $21,940.23

Key Upcoming Activities

• Attendance at the 60th Annual Meeting
• Schedule technical sessions for remainder of 2019
• Identify lead(s) for Student Chapter and membership communications
• Continue actions to charter Washington State University student chapter
• 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 2020

Respectfully Submitted:
Roberta Burbank President, Pacific Northwest Chapter
Southeast Chapter Officers
President: Bradley Loftin
Vice President: Jeff Allender
Treasurer: Bill Swift
Secretary: Cathy Mussi
Members-at-Large:
Rick Poland
Franklin DuBose
Robert Watkins
Sean Branney
Immediate Past President: Glenn Abramczyk
Other Members: Jeff Allender (website), John Dewes (Corporate Liaison), Paul Ebel (Educational Outreach Officer), Rich Koenig (Nominations and Elections Chair)

Notable Activities from the Past Year:
The Southeast Chapter, as lead by the Packaging, Transportation, and Disposition Technical Division, helped to lead and plan the 34th INMM Spent Fuel Management Seminar held in Alexandria, VA January 22-24, 2019. An exciting agenda, including a visit from Congressman Rick Allen (Georgia’s 12th District), was presented over the course of three days. Topics included the current political landscape, current technical challenges, updates from industry representatives, a panel including future leaders in the industry, a presentation on NWMO-Canada and their efforts, and a stakeholder’s perspective.

Other Notable Activities:
- Student Chapters
  - The SE Chapter is continuing to develop a “Speaker Series” where subject matter experts from the Chapter would travel to and meet with the Student Chapters in an effort to boost interest and membership.
  - The Chapter is still attempting to reestablish contacts and commitments with the Faculty Advisor at the University of South Carolina who had previously shown interest in forming a Student Chapter.
  - The Chapter will continue to foster discussion with the University of North Carolina, NC State, and Duke in the effort to re-establish the Triangle Student Chapter.

Respectfully Submitted: Bradley Loftin Southeast Chapter President

Treasurer’s Report: FOR THE JULY 2019 ANNUAL REPORT

Southeast Chapter Financial Statement – 7/13/2019 Chapter Balance: 7/13/2019: $4,372.54 The Southeast Chapter also has a CD valued at $1,049.48 as of February 22, 2019.
Vienna Chapter

The Vienna Chapter has a new set of officers in place as of November 1, 2018.

Officers
President – Brian Boyer
Vice President – Igor Tsvetkov
Secretary – Sarah Poe
Treasurer – Jonathan Beaumont
Member at Large – Claude Norman, Florin Abazi
Past President - Elisa Bonner

We have been embarking on a few initiatives for the 2018/2019 year.

1. We again held the INMM Vienna Chapter Science and Engineering Fair on March 30, 2019 at the Vienna International School. This year’s theme was “S.P.A.C.E. Science Physics Arithmetic Chemistry and Engineering Here on Earth...Looking Ahead...Looking Up...the Moon to Mars.” We had a Facebook page advertising this event to encourage participation from schools in and around Vienna, including schools from throughout Central Europe. Ms. Ania Kaminski headed this effort for us this year.
2. Brown Bag Lunch Series – We have sponsored several brown bag lunches this year. We have attendance from INMM chapter members and other interested people in the IAEA and the Vienna nuclear material management community. We would like to encourage any INMM visitors to Vienna, to the IAEA or elsewhere, to contact the chapter and be a speaker at our lunch series. Talks this year have included:
   a. Dr. Leslie Fishbone - Albert Einstein: His Life and Greatest Scientific Achievements,6 February 2019
   b. Ms. Kate Glynn - Preventing Insider Threat: a Cross-Industrial Analysis,13 February 2019
   c. Mr. Diego Cándano Laris - The Nuclear Suppliers Group (NSG) and its role in the non-proliferation regime, 13 March 2019 – this was very well received and we hope to do more with Mr. Cándano Laris to get a series of events with NSG.
3. We plan on having a social event this summer where we shall advertise the upcoming INMM Annual Meeting in 2021 planned to take place in Vienna to the INMM chapter members and others interested in nuclear materials management.
## 2018-2019 Vienna Chapter Budget

All transactions in EUR

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<thead>
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<th>Income</th>
<th>FY2019</th>
<th>FY2018</th>
<th>FY2017</th>
</tr>
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<tbody>
<tr>
<td>Rollover from previous year</td>
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<td>714</td>
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<td>Corp. Donations:</td>
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<td>Beta Engineering</td>
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<tr>
<td>Canberra</td>
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<td>EPJ</td>
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<td>Schonix</td>
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<td>Ortec</td>
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<td>Webster University</td>
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<tr>
<td>WDN IAEA</td>
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<td>250</td>
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<tr>
<td>WINS (Nuclear security)</td>
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<td>-</td>
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<tr>
<td>Youth Nuclear Congress</td>
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<td>250</td>
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<tr>
<td>ISTI</td>
<td>-</td>
<td>250</td>
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<tr>
<td>Beaver breeding</td>
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<td>250</td>
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| Total funds available | 14076 | 14944 | 13299 |
| Net incomes | 5070 | 7820 | 7205 |

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<tr>
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<th>FY2018</th>
<th>FY2017</th>
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<tr>
<td>Organization</td>
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<td>School gifts (coordinators)</td>
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<tr>
<td>Ribbons</td>
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<td>Science Fair</td>
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<td>Insurance/rental</td>
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<td>Catering</td>
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<tr>
<td>EUREST</td>
<td>3622.21</td>
<td>3617.71</td>
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<td>Other</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Translation of statute into german</td>
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<td>Account fees</td>
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<td>158.5</td>
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<tr>
<td>Re-Imburse IANNOVA</td>
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<tr>
<td>Re-Imburse ROMANO</td>
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<tr>
<td>Re-Imburse MATHENS</td>
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<td></td>
<td></td>
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<tr>
<td>Re-Imburse RORIF</td>
<td>1500</td>
<td></td>
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</tr>
<tr>
<td>Re-Imburse RONNER</td>
<td>100.02</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Total net expenses | 7238 | 5938 | 6185 |
| Balance | 6842 | 9006 | 7114 |
STUDENT CHAPTER REPORTS

AHMADU BELLO UNIVERSITY STUDENT CHAPTER
Contact: inmm.abuchapter@yahoo.com

Chapter Leadership
- President - John Simon (E-mail - Sjkahugu@yahoo.com)
- Vice President - Muhammad Nura Abdulkareem (mnura7051@gmail.com)
- Secretary - Abdulsamad Asuku (E-mail - asukuabdulsamadyisa@yahoo.com)
- Treasurer - Hulda Goje (E-mail - gojehulda@gmail.com)

Member-at-large Member-at-large
1. Taiwo Austine Oluwasegun
2. Hannatu Jura Ibrahim
3. Jamilu Yusuf Abdullahi
4. Bello Ayodeji
5. Ruth Thomas

Faculty Advisors
- Dr Umar Sadiq
- Dr Ibrahim Yakubu Viva

Membership
The INMM ABU chapter currently has 34 active members. 16 out of these members are registered with INMM headquarters and 1 is presently in good standing with INMM membership.

Recent Chapter Activity: The most recent activity of the ABU Chapter is a workshop on “Future Nuclear Security Stakeholders: Roles and Responsibilities in Safety, Security and Safeguards”. The two-day event took place at conference hall, Centre for Energy Research and Training, Ahmadu Bello University Zaria, Kaduna State, Nigeria from 29th – 30th January, 2019. The event was anchored by a team of the INMM Ahmadu Bello University Student Chapter EC committee and four subject matter experts (SMEs) from Centre for Energy Research and Training (CERT), and Nigerian Nuclear Regulatory Authority (NNRA).

The event was fully supported and funded by the United States’ department of state’s partnership for Nuclear Threat Reduction (PNTR) through CRDF Global. About 31 participants were drawn from among new chapter members in Physics and seven other departments of ABU Zaria which included: Radiology, Radiotherapy, community medicine, Vet. Surgery and Radiology, Pharmaceutics, Vet. Pharmacology and toxicology, and computer engineering department.
The participants benefited from presentations delivered by the SMEs from CERT and NNRA on: overview of nuclear and radiological materials, credibility of nuclear threat, nuclear security, safety and safeguards, roles of Scientists, Technicians and Engineers, Nuclear regulatory framework, integrated approach to security and during the breakout small groups discussions. Participants for the first time received training on how to identify and distinguish between Nuclear and Radiological materials and the security implications associated with these materials. Participants were also exposed to the understanding of Nuclear Regulations, Nuclear threat and the integrated approach to security of nuclear materials vis-à-vis their roles and responsibilities as frontline stakeholders.

The key thing that made this event different from the previous ones was that participants were engaged in consideration different case studies to demonstrate the reality and credibility of Nuclear Threat as well as the responsibilities of various stakeholders in Nuclear Security. In addition to this, Participants were taken for a tour at the various sections of the Nigerian Research Reactor -1 to observe and identify the interplay of security, safety and safeguards as implemented at NIRR-1

Event Photos

The Chapter President: Mr John Simon, during his opening remark and objectives review (Courtesy: Chapter EC)
Participants at the registration point (Courtesy: Chapter EC)

National Chapter INMM President: Prof S.A. Jonah, during his goodwill message at opening of the event (Courtesy: Chapter EC)

Chapter Secretary/Program Anchor: Mr Abdulsamad Asuku (Courtesy: Chapter EC)
Prof. S. A Jonah: During the opening directed round table discussion (Courtesy: Chapter EC)

Participants, LOC and SMEs Group Photograph (Courtesy: Chapter EC)
Dr. Yakubu Viva Ibrahim during one of his presentations (Courtesy: Chapter EC)

Group representatives presenting the summary of their discussions during one of the case-study considered (Courtesy: Chapter EC)
Participants interacting during one of the lunch breaks (Courtesy: Chapter EC)

Participants during one of the round table activities (Courtesy: Chapter EC)
Prof S.A. Jonah during one of his Presentations (Courtesy: Chapter EC)
Treasurer’s Report

<table>
<thead>
<tr>
<th>Source</th>
<th>Income</th>
<th>Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening Account balance as of Jan., 2019</td>
<td>$400.00</td>
<td>–</td>
</tr>
<tr>
<td>Publications and Notices</td>
<td>-</td>
<td>$10</td>
</tr>
<tr>
<td>General meetings (Tea and Coffee refreshment)</td>
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<td>$80</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$310.00</strong></td>
<td><strong>$90</strong></td>
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</table>

Current Chapter Account balance: $310.00

Upcoming Events

1. National students’ Workshop on nuclear security culture (November, 2019).
2. School outreach visit and career talks (October, 2019).

Respectively Submitted by John Simon (Chapter President).
Amity Student Chapter

The main objective of our student chapter is to spread awareness among the masses about the importance of nuclear science and technology & in particularly about nuclear materials management with emphasis on their security and safety.

The AMITY UNIVERSITY STUDENT CHAPTER Executive Committee members are the following:

<table>
<thead>
<tr>
<th>Office</th>
<th>Name</th>
<th>Term Ending</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advisor</td>
<td>Ms. Archana Yadav</td>
<td></td>
</tr>
<tr>
<td>President</td>
<td>Ms. Diksha Sharma</td>
<td>09/30/2019</td>
</tr>
<tr>
<td>Vice President</td>
<td>Mr. Piyush Sikka</td>
<td>09/30/2019</td>
</tr>
<tr>
<td>Secretary</td>
<td>Ms. Sonakshi Singh Pundir</td>
<td>09/30/2019</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Mr. Abhyuday Sharma</td>
<td>09/30/2019</td>
</tr>
<tr>
<td>Public Relations Officer</td>
<td>Mr. Alok Kumar</td>
<td>09/30/2019</td>
</tr>
<tr>
<td>Webmaster</td>
<td>Mr. Yashpreet Sembhi</td>
<td>09/30/2019</td>
</tr>
</tbody>
</table>

The academic year 2018-19 has been a year of creating awareness about Nuclear Energy, Nuclear Materials and their Safety among the youth and the growing generation. These sessions included awareness programmes, competitions, debates which helped students develop a sense of importance of Nuclear Security and safety in form of interactive and creative discussions. This way they learn, enjoy and express their views regarding the topic under consideration.

The focus for the coming session would also be to expand the areas and also bring in new ways and ideas to bring people interested of working in nuclear closer on a single platform to share new ideas, explore research opportunities and organize workshops and conferences.
EVENT – I
Poster Competition

A poster competition was held in Amity Institute of Nuclear Science and Technology, Amity University, Noida, on 2nd August 2018, 2 p.m. onwards. Different topics like Nuclear Energy – Safe Energy, Applications of Radioisotopes, and Security of Radioactive Materials were available. A total of 7 teams participated in the competition. Our faculties judged the competition and a winner were decided by the presentation and discussion by the participants.
On 6 September 2018, a team of six students from the student chapter went to D.A.V Public School Sector -37 Faridabad, Haryana, India. PIN – 121003. The motive was to spread awareness about Nuclear Science and Technology amongst the students of class 11th and 12th (science discipline).

The emphasis on following topic was given in details:

1. **Nuclear Energy** – (Presented by Mr. Alok Kumar)
   
   The talk introduced the students to basics of Nuclear Energy; once the fundamentals were clear the session introduced the student’s which basics power generation.

2. **Non-Power Application** – Presented by Mr. Abhyuday Sharma
   
   This session included the applications of nuclear science and nuclear materials in different sectors, industries, healthcare and the threat to the materials which further explains why it is important to keep these materials safe and secure. As this session built in a curiosity amongst the students regarding how important it was to keep the material safe and how is it being accomplished.

3. **Nuclear Safety and security** – (Presented by Ms. Urvee Shrivastava )
   
   This session made them clear about the fundamentals of security, safety which was explained with help of videos and examples from past incidents.
During the session,

An Introduction about the subject, team and the sessions were given by the chapter President, Ms. Diksha Sharma, which was followed by an interactive session post the final presentation of the program. To make the Awareness programme more interesting videos were played for students for a better understanding which were compiled by Mr. Vaibhav Bhardwaj.

The concluding of the session was done by Ms. Archana Yadav, Faculty advisor and then a feedback form was distributed amongst everyone. The feedbacks were analysed for betterment of the program.

The Principal, the career counselor, Faculties of class 11th and 12th along with the students were present in the session. The response received was remarkable, a lot of students showed interest in visiting the college and different labs to understand the safety protocols, and they were also interested in various table top exercises to be conducted in future.

The Details of the session was also published in the City newspaper by the school authority as a successful and beneficial event for the school students.
A Quiz competition a.k.a. “Prashanottari” was held on 11\textsuperscript{th} October 2018 from 3 p.m. to 4 p.m. A total of 3 teams participated with 3 participants in each team respectively.

The quiz was divided into three rounds: -

- a. Know Your Choice
- b. Bazinga-Buzzer Round
- c. Rapid Fire
Our Professors Prof. Tejram, Prof. A.N. Garg, Prof. Dr. H.S. Sharma were the special invites and the event concluded with prize distribution to the winner.
EVENT – IV

Guest Lecture

A guest lecture was organized on “An Overview of Engineering Safety Issues of Pool Type Fast Breeder Reactors.” By Dr. Anil Kumar Sharma, Scientific officer from Indira Gandhi Centre for Atomic Research, a Department of Atomic Energy Institution, on 4th October 2018.

The Planned Chapter Activities for the term of 2019-20 are: -

1. NUCLEAR AWARENESS PROGRAMME
   We aim to make a series of Nuclear Awareness Programme to be conducted in different schools across Delhi NCR.

2. NUCLEAR SCIENCE EXPO –
   We plan on conducting a Nuclear Science Expo where we plan on inviting local school students to present their models, posters and ideas based upon Nuclear Security and Safety Culture. This will promote the Clean Nuclear Energy culture among the minds of the youth.

3. WEBINAR
   We plan to conduct webinar jointly with an International Student Chapter on any generic topic focused on the theme of Nuclear Security, Safety and Safeguards and broadcast it on Facebook Live as a means of creating awareness.
   Also explore the possibility of taking up a joint research program or supporting the research done at their university in areas of our expertise.
Respectfully Submitted:

**Diksha Sharma**

**{CHAPTER PRESIDENT}**

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**INMM UFRJ Annual Report**

Institute of Nuclear Materials Management (INMM) Federal University of Rio de Janeiro (UFRJ) Student Chapter

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**LEADERSHIP**

The INMM UFRJ Student Chapter Executive Committee members are the following:

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<thead>
<tr>
<th>Office</th>
<th>Name</th>
<th>Term Ending</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Beatriz M. dos Santos</td>
<td>December</td>
</tr>
<tr>
<td>2019 Vice President</td>
<td>Walthynay F. de Arruda</td>
<td>December 2019</td>
</tr>
<tr>
<td>Secretary</td>
<td>Ana C. P. de Oliveira</td>
<td>December 2019</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Valéria S. França</td>
<td>December</td>
</tr>
<tr>
<td>2019 Immediate past-president</td>
<td>Thiago F. Belo</td>
<td>December 2019</td>
</tr>
<tr>
<td>Member-at-large</td>
<td>Alice S. Albuquerque</td>
<td>December 2019</td>
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<tr>
<td>Member-at-large</td>
<td>Carolina S. B. Dutra</td>
<td>December</td>
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<tr>
<td>2019 Member-at-large</td>
<td>Ester S. Almeida</td>
<td>December</td>
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<tr>
<td>2019 Member-at-large</td>
<td>Larissa S. P. Silva</td>
<td>December 2019</td>
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<td>Gabriel C. G. R da Silva</td>
<td>December 2019</td>
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<tr>
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<td>Nathália N. Araújo</td>
<td>December 2019</td>
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<tr>
<td>Member-at-large</td>
<td>Pamela M. Dahl</td>
<td>December 2019</td>
</tr>
<tr>
<td>Member-at-large</td>
<td>Thayssa A. C. S. Lima</td>
<td>December 2019</td>
</tr>
</tbody>
</table>
Faculty Advisor  
Su Jian 

Advisor  
Débora M. Trombetta
ACTIVITIES
Chapter’s Meeting

At least three meetings for month were held to discuss the chapter’s progress, new projects and the production of papers.

Brookhaven National Laboratory (BNL) Delegation Visit

March 20, 2018

The Nuclear Engineering Program (PEN/COPPE) and the Institute of Nuclear Materials Management (INMM) UFRJ Student Chapter received the Brookhaven National Laboratory (BNL) in partnership with Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC).

The Brookhaven National Lab conducts research in the physical, biomedical, and environmental sciences, as well as energy technologies and national security, builds and operates large scientific facilities available to university, industry and government researchers. It is one of the ten national laboratories supervised and funded primarily by the Department of Energy's (DOE) Science Office.

Ms Susan Pepper, Mr Noel Blackburn and Ms. Katherine Bachner from the BNL delegation provided lectures to the audience, as well as Mr. Paulo Frutuoso, professor from the Nuclear Engineering Department and Mr. Thiago Belo, immediate past-president of the INMM UFRJ Student Chapter.

The audience was comprised of approximately 40 undergraduate and graduate students from the Nuclear Engineering Department of the Federal University of Rio de Janeiro.
INMM Student Research Initiative

The INMM UFRJ Student Chapter applied to the 2018-2019 INMM Student Research Initiative with the theme “Future Technical and Policy Challenges in International Safeguards”.

The paper discuss the challenges faced by nuclear safeguards in the context of Brazil, Argentina and the international community, regarding the model of the Brazilian-Argentine Agency for Accounting and Control (ABACC), unique in the world.

Project Nuclear Ambassadors

The INMM UFRJ Student Chapter is participating of the new Public Acceptance Program of the Brazilian Association of Nuclear Energy (ABEN), the Nuclear Ambassadors.

This is a national project, started in 2018, that aims to disseminate information on nuclear technology and its benefits in order to educate the public and increase the number of people who understand the benefits of developing the industry in the country.

The team was composed by the following members: Beatriz Machado dos Santos; Wallthynay Ferreira de Arruda; Ana Carolina Pereira de Oliveira.

The winners will present the project in the International Nuclear Atlantic Conference (INAC) 2019, which will be held in Santos, São Paulo.

We hope to contribute with Brazilian public acceptance of nuclear energy and technology and also disseminate the work of the chapter to students in Brazilian universities and the general population. We believe that this visibility brings opportunities to build partnerships for research development and projects.
FINANCIAL REPORT

INCOME
Sponsor  US$ 400,00*
Total Income (a):  US$ 400,00

EXPENDITURE
13 members registration  US$ 390,00

*We didn’t receive the money in our account, all the money was automatically converted into membership registration.

Total US$10,00

Respectfully submitted,

Beatriz M. dos Santos
President
INMM UFRJ Student Chapter
g.eng.beatrizmachado@gmail.com

Wallthynay Ferreira de Arruda
Vice-President
INMM UFRJ Student Chapter
wallthynayf@gmail.com
## Treasurer’s Report (Excel Spreadsheet or Word Table)

### FY 2018-19

Amity University Student Chapter Financial Statement – 10/01/2017 – 06/30/2019

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<tr>
<th>Chapter Balance: 10/01/2017</th>
<th>Income</th>
<th>Expenses</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NA</td>
<td></td>
<td></td>
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<table>
<thead>
<tr>
<th>Chapter Income 2017-2018</th>
<th>$400</th>
<th></th>
<th></th>
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<table>
<thead>
<tr>
<th>Member Registrations: 2017-2018</th>
<th>$255</th>
<th>6 Student Member Registrations and 1 Regular Member Registration</th>
</tr>
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</table>

<table>
<thead>
<tr>
<th>MELTDOWN: 03/10/2018</th>
<th>*$20.5</th>
<th>Refreshments: $13.5 Prize: $7</th>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Poster Competition: 08/02/2018</th>
<th>*$4.5</th>
<th>Miscellaneous: $2 Prize: $2.5</th>
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</table>

<table>
<thead>
<tr>
<th>Nuclear Awareness Program: 09/06/2018</th>
<th>*$22.5</th>
<th>Miscellaneous: $15 Travel Expenses: $7.5</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Chapter Income 2018-2019</th>
<th>$400</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Member Registrations: 2018-2019</th>
<th>$255</th>
<th>6 Student Member Registrations and 1 Regular Member Registration</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Guest Lecture: 10/04/2018</th>
<th>*$7.5</th>
<th>Travel Expenses: $7.5</th>
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<table>
<thead>
<tr>
<th>PRASHANOTTARI: 10/11/2018</th>
<th>*$2</th>
<th>Prizes: $2</th>
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</table>

<table>
<thead>
<tr>
<th>Total</th>
<th>$800</th>
<th>$537</th>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Chapter</th>
<th>$263</th>
<th>Balance: 10/30/2018</th>
</tr>
</thead>
</table>
This year has been an eventful year for the Idaho State University INMM student chapter. We planned many events including a cooperative event with the Idaho State University ANS student chapter. We have also passed the torch on to a new Executive Board, and we will aid them in whatever way we can to make a long-lasting impact on the students and community of Idaho State University.

**Events/Future Plans**

**59th Annual Meeting**

July 22-26, 2018 Baltimore Marriott Waterfront • Baltimore, Maryland USA

As a continued active participation, I have represented the 59th annual meeting. This meeting was beneficial as I got the opportunity to exchange the newest technical information related to the nuclear materials and management. I attended several sessions on safeguards and security, non-proliferation and arms control, spent fuels and information security. The newest measurement technology and training were worth mentioning. After coming back to Idaho State, I have shared most of the recent information in the research meeting and encouraged my peers to actively participate in such activities.

**August, 2018 1st Club Meeting**

During the meeting we had each officer explain their duties and responsibilities in detail to the new officer replacing him/her. We discussed funding with the new Board, where we keep it and how to obtain it. We also explained to them that we require that all of our officers have national INMM membership as a requirement.

**October 2018**

Our chapter will partner with the ISU chapters of the American Nuclear Society and Health Physics Society to hold our annual nuclear science expo. At this event we invited local high schools and community members to come and learn more about nuclear science in as it relates to all of us.

**Nov 2018**

Science Movie Night:
Like last year, a fun event for our membership to relax and get to know each other over movie night will be organized by the club.

**Jan 2019 - ISU Nuclear Science Expo**

Similar to previous years, our chapter will partner with the ISU chapters of the American Nuclear Society and Health Physics Society to hold our third annual nuclear science expo. At this event we will invite local high schools and community members to come and learn more about nuclear science in as it relates to all of us.

**August 2019**

We are set to the election and will hand over the responsibilities to the new board members. We will be just guiding the new member to run it smoothly in the days to come.

**Possible Speakers:**

Every semester, here in ISU, we invite guest speakers from Idaho National Laboratory to give talks about the current projects, future trends and so on. Some of the speakers come from across the countries as well, from different reputed institutes to share their experiences as a part of the Seminar class offered every semester. We will be coordinating with the seminar class so that most of the INMM members could attend and benefit from the talk. Moreover, this meeting would be helpful to the students to get internships or post-doc and full time job placements and it would be a great networking opportunities.

**Possible Field Trips/Lab Visits**

On upcoming year, we are planning to schedule tours /field trips to several labs. The first one is the Idaho National Laboratory (INL), 45 minutes away. In the past year, it was tough with the paperwork due to the fact that there were several international students who need clearance to visit the site. Now, we have decided to do the paperwork of the interested students so that everything will be clear to set up for the tour. We will be coordinating with the faculty and INL about financial help regarding the expenses and we are very positive on this matter and they have been very encouraging regarding it.

https://inl.gov/about-inl/general-information/

The other national lab we are looking to visit is the Pacific Northwest National Laboratory in Richland, Washington. We will be trying to organize one provided the time and assistance but this is on our list too. Overall, we are trying to make this club bigger and get most out of it.
Sincerely,
Harish Aryal

Korea Advanced Institute of Science and Technology (KAIST) CHAPTER

The KAIST Executive Committee members are the following:

<table>
<thead>
<tr>
<th>Office</th>
<th>Term Ending</th>
</tr>
</thead>
<tbody>
<tr>
<td>*President</td>
<td>Philseo Kim</td>
</tr>
<tr>
<td>*Not decided yet</td>
<td></td>
</tr>
<tr>
<td>Vice President</td>
<td>Jung Hwan Kim</td>
</tr>
<tr>
<td>Secretary</td>
<td>Young-Eun Jung</td>
</tr>
<tr>
<td>Member-at-Large</td>
<td>Chulmin Kim</td>
</tr>
<tr>
<td>Member-at-Large</td>
<td>WungJae Wang</td>
</tr>
<tr>
<td>Member-at-Large</td>
<td>SeongWoo Kang</td>
</tr>
<tr>
<td>Member-at-Large</td>
<td>Sana Ullah</td>
</tr>
<tr>
<td>Member-at-Large</td>
<td>Anhdika Yudha Prawira</td>
</tr>
<tr>
<td>Advisor</td>
<td>Man-Sung Yim</td>
</tr>
</tbody>
</table>
Introduction

KAIST student chapter was approved by INMM committee on February 2015 as new student chapter for the first time in Asia region. In this period (October 2015-July 2016), the number of our member is expanded. The KAIST Chapter meeting was held at the Faculty room in KAIST on the first day of every 3 month. 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.

Activities

1. *Transactions of the Korean Nuclear Society Spring Meeting 2019*
   - **Date**: 2019.05.22~2019.05.24
   - **Place**: Jeju
   - 2 INMM Student Chapter members submitted conference papers

<table>
<thead>
<tr>
<th>Paper</th>
<th>Writer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feasibility Study in using Bismuth-embedded SBA-15 for Gaseous</td>
<td>SW Kang, MS Yim</td>
</tr>
</tbody>
</table>
2. Spring Conference of the Ergonomics Society of Korea
   ✓ Date: 2019.5.15~2019.5.18
   ✓ 2 INMM Chapter members submitted conference papers

<table>
<thead>
<tr>
<th>Paper</th>
<th>Writer</th>
</tr>
</thead>
<tbody>
<tr>
<td>A worker’s status monitoring system based on bio-signals to prevent a potential insider threat</td>
<td>JH Kim, CM Kim, MS Yim</td>
</tr>
</tbody>
</table>

3. Spring Workshop of the Korea Institute of Nuclear Materials Management
   ✓ Date: 2019.05.14
   ✓ 3 INMM Chapter members participated in the spring workshop and discuss about the denuclearization of DPRK
   ✓ Contents
      Denuclearization of DPRK and Roles of ROK
{CURRENT CHAPTER’S BANK BALANCE}

None

{Future Student Chapter Activities}
Respectfully Submitted:
Philseo Kim
feelsokim@kaist.ac.kr

Middlebury Institute of International Studies at Monterey (MIIS) CHAPTER

Our chapter mainly raises funds through networking and social events, which are open to the entire MIIS campus and are hosted in partnership with a local restaurant. A portion of the restaurant’s profits from the evening are donated to our chapter. In the coming year, our main budgeting goals is to reserve the majority of funds for student memberships with INMM and partial funding to assist future club officers attend the annual conference. Our current goal is to fund membership for 7-10 students. Funding student INMM memberships will better serve the mission of our chapter, including connect MIIS students with the INMM’s professional network, database of research publications, and opportunities to attend conferences.

SUMMARY OF PLANNED CHAPTER ACTIVITIES

Our chapter is scheduled for another tour at the National Ignition Facility at Lawrence Livermore National Laboratory in the Fall semester.

We are actively encouraging students to sign up for INMM membership, particularly students interested in future club leadership, students who are completing a Master’s thesis in the Nonproliferation and Terrorism Studies MA program at MIIS, and students who are conducting nuclear materials-related research for a job, internship, or in anticipation of a conference. We wish to encourage more members to work on presenting at the annual conference after successful work on a paper this term.

Our chapter is currently exploring topics and speakers for a Fall 2019 lecture series. Interests expressed by students include potential trips to Vandenburg for an educational visit to see a launch, a trip to Diablo Canyon Power Plant, or a trip to the Berkeley TRIGA site.
An additional goal of the chapter is to continue encouraging greater student involvement in the INMM Annual Conference, including a greater number of students who submit and present research for the conference. This is particularly useful for students completing a Master’s Thesis.

We plan to announce leadership roles in the beginning of the Fall Semester (2019). Our goal is to recruit and elect candidates for multiple positions for the Spring to maintain consistent leadership and goals over the summer. In recent years our club has been operating with only two active executive members at any given time, but has recently maintained three executive members, which has better served our mission and increased opportunities and cooperation with other on campus groups.

Respectfully Submitted:

Autumn Redd

**FY2019 FINAL**
**MIIS Chapter Financial Statement – 08/26/2018 – 6/16/2019**

Chapter Balance: 11/02/2018

Income:

<table>
<thead>
<tr>
<th>Date</th>
<th>Income</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/20/2018</td>
<td>$ 80.00</td>
<td>Fundraiser and networking session</td>
</tr>
<tr>
<td>12/6/2018</td>
<td>$ 100.00</td>
<td>Fundraiser and networking session</td>
</tr>
<tr>
<td></td>
<td>$ 200.00</td>
<td>School student services funding for club membership</td>
</tr>
</tbody>
</table>

*Income Total: $380.00*

Expenses:

<table>
<thead>
<tr>
<th>Date</th>
<th>Expense</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$ (210.00)</td>
<td>7 Student Memberships Paid</td>
</tr>
<tr>
<td>9/19/2018</td>
<td>$ (40.00)</td>
<td>Student Chapter Meeting Refreshments</td>
</tr>
<tr>
<td>3/26/2019</td>
<td>$ (40.00)</td>
<td>Refreshments for annual conference paper planning team</td>
</tr>
</tbody>
</table>

*Expenses Total: $300.00*

Chapter Balance estimate since last memberships paid: $320
OREGON STATE UNIVERSITY CHAPTER

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

<table>
<thead>
<tr>
<th>Office</th>
<th>Term Ending</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Nathan Wiltbank</td>
</tr>
<tr>
<td>Vice President</td>
<td>Kyzer Gerez</td>
</tr>
<tr>
<td>Secretary</td>
<td>Lester Warby</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Zachary Hills</td>
</tr>
<tr>
<td>Advisor</td>
<td>Dr. Camille Palmer</td>
</tr>
<tr>
<td>Immediate Past President</td>
<td>Ari Foley</td>
</tr>
</tbody>
</table>

Incoming Officers:

<table>
<thead>
<tr>
<th>Office</th>
<th>Term Ending</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Kyzer Gerez</td>
</tr>
<tr>
<td>Vice President</td>
<td>Duncan Vince</td>
</tr>
<tr>
<td>Secretary</td>
<td>Anneli Brackbill</td>
</tr>
<tr>
<td>Treasurer</td>
<td>John Marchant-Daisley</td>
</tr>
<tr>
<td>Outreach</td>
<td>Nathan Wiltbank</td>
</tr>
<tr>
<td>Advisor</td>
<td>Dr. Camille Palmer</td>
</tr>
<tr>
<td>Immediate Past President</td>
<td>Nathan Wiltbank</td>
</tr>
</tbody>
</table>

Activities

At the start of the 2018-2019 academic year (September 2018) we held a general meeting for all INMM members at OSU. At the meeting we introduced the new leadership, as well as discussed what kind of events students would be interested for the upcoming year. There was around 15 members at that meeting who gave good feedback to the leadership.

Also this year during Fall Term we held a recruitment session with a representative from PNNL, Elizabeth Kautz. She came to talk specifically about the SULI (Science Undergraduate Laboratory Internships) program and how OSU students could get involved with this program. There was around 12 people at that activity interested in the internship.

During Winter Term, we held a movie night for any interested OSU students. We watched City 40, a documentary about a 'hidden city' in Russia, where a lot of Nuclear research and production happened.

During Spring Term, we held our biggest event of the year. PNNL hosted a Lab Day in May 2019. We sent 12 students (11 undergraduates and one graduate student) to Lab Day in Richland Washington at the PNNL HAMMER training facility. Students got hands on experience in nuclear border security and safeguards, as well as being able to network with current PNNL.
employees and learn about potential career paths. Also during the weekend trip, students visited the historic Hanford B reactor. All told, this event was well executed and was definitely a learning experience for all the students who attended.

![Photo of OSU students participating in PNNL Lab Days](image)

**Current Financial State of the Chapter**

The Oregon State University chapter of INMM maintains an account through the OSU Auxiliaries & Activities Business Center, as a requirement by the University for student activities. This simplifies the transfer of treasurer and better tracks the income and expenditures.

The current account balance is $493. This money is leftover from what was requested from the college in order to pay for the trip to PNNL.

**Planned Chapter Activities**

As the academic year wraps up, INMM does not have any more events planned. Going into next school year we hope to have similar events as we did this year, but with more frequency. We are hoping to participate in Lab Day again next year. Another idea we have is to hold informative meetings once a term, maybe more frequently, to discuss current events in the non-proliferation/materials world.

Respectfully Submitted:

Nathan Wiltbank
Treasurer’s Report

Pennsylvania State University Chapter (U.S.A)

Marc Wonders, President (18-19 academic year)
Matthew Durbin, President (19-20 academic year)

The following is a summary of the activities held by the Pennsylvania State INMM student chapter for the 2018-2019 academic year. Penn State INMM (hereafter referred to as PSU-INMM) has maintained its student membership numbers and continues to be a solid and substantial club moving into the new
academic year. Led by the year’s president, consistent meetings were held which gave members the opportunity to present on their research. A small scale but profitable fundraiser was held, in which members sold PSU-INMM mugs at the annual meeting and at PSU. Additionally, four members participated in the INMM led Student Research Initiative. Many members, and especially officers, currently are still early in their graduate careers so membership and activities look to expand this upcoming year and in the future.

Summary of Activities and Accomplishments:

July 20-26th, 2018: INMM Annual Meeting
Penn State INMM members traveled to the INMM Annual Meeting in Baltimore, MD, where they learned about current research in the nuclear materials management space and interacted with other INMM members, from fellow students to experts in a variety of fields. Penn State members attended the Northeast Chapter meeting, and Marc Wonders attended the Executive Committee meeting (July 20) as well as Working Group and Technical Division meetings (July 21). Sarah Sarnoski co-chaired the Nuclear Security & Physical Protection: Technologies for Enhancing Nuclear Security technical session. Marc presented two papers, “Evaluation of Frequency-based Multiplexing of Silicon Photomultipliers for Safeguards Applications” and “Wavelength Sensitivity Comparison and Nonlinearity Study of Modern Silicon Photomultipliers”, the former of which won best student paper in the Nuclear Security & Physical Protection division.

August 20th, 2018: Officer elections held for 2018-2019 school year

September 18th, 2018: General Body Meeting
We held our first INMM meeting of the academic year. Future events were discussed and an introduction to the organization provided.
October 11th, 2018: General Body Meeting
Marc Wonders, presented on some of his silicon photomultiplier research, “Evaluation of Frequency-Based Multilexing with Silicon Photomultipliers for Safeguards Applications.”

October 18th, 2018: General Body Meeting
After NucE Colloquium INMM had a meeting to prepare for the upcoming Haunted-U outreach event, setting up involvement and preparing demos to show.

October 20th, 2018: Outreach Event
INMM participated in the Haunted-U science outreach event, where we had a room to demonstrate Halloween themed nuclear concepts for the public (mostly families and children). Demonstrations included a “ghost hunt” with radioactive sources, a cloud chamber, and fluorescent vaseline glass marbles.

November 8th, 2018: General Body Meeting
INMM met to discuss updates, and especially the upcoming Student Research Initiative from the parent organization.

November 27th, 2018: General Body Meeting
Maksat Kuatbet presented to PSU-INMM on his research on applying neutron activation analysis to the composition of fracking materials.

December 6th, 2018: General Body Meeting
PSU-INMM held its last meeting of the semester. Alibek gave a brief presentation on some of his work and experiences in graduate school, and the chapter enjoyed dishes brought by different members (dumplings, pork, cake, etc.) to end the semester in relaxing fashion.
February 5th, 2019: General Body Meeting
PSU-INMM had its first meeting of the semester (the last two weeks’ planned meetings were canceled due to University closing) to welcome members back and go over the exciting events we have planned. Amendments to the bylaws were passed. Members were encouraged to begin thinking about running for officer positions in April.

February 13th, 2019: General Body Meeting
Bryan Eyers presented on “Oral Interviews, How Engineers Field Questions” which was specifically geared for the oral portion of the PhD Candidacy Exam but also applicable to many engineering situations. We also discussed the Candidacy Exam in general.

February 19th, 2019: General Body Meeting
PSU-INMM got together to watch Dr. Strangelove and then enjoyed casual conversation prompted by it.

February 21st, 2019: PSU-INMM Hosted Department Colloquium
PSU-INMM hosted INMM Fellow Steve Mladineo who gave an INMM-sponsored department colloquium. PSU-INMM organized his visit, and members joined Steve for lunch and discussion, and then gave laboratory tours and descriptions of members’ research. Steve presented to the department about both the NNSA Graduate Fellowship Program and work conducted in the Office of Global Material Security.

February 27th, 2019: General Body Meeting
Adam Rau presented on his research, titled “Validation of Fission Matrix Methods for Thermal-Hydraulic and Control Feedback in the Penn State Breazeale Reactor.”

March 19th, 2019: General Body Meeting
Matt Durbin presented on one of his research projects, “Machine learning applications in directional gamma ray direction.” Members were also encouraged to begin thinking about officer positions to run for.

March 26th, 2019: General Body Meeting
INMM Fellow, Joe Rivers spoke to the INMM chapter on risk informing nuclear security. Students were able to engage on this topic as well as asking questions about its application to new reactors and other subjects.

April 2nd, 2019: General Body Meeting
Chad Lani presented on his research utilizing Penn State’s Breazeale Reactor for high frame rate neutron imaging, the topic of his recently-submitted Master’s Thesis.

April 8th, 2019: Chapter Trip
PSU-INMM visited Brookhaven National Laboratory to learn about nuclear safeguards and national laboratories, interface with experts in the field, and see state-of-the-art facilities and research. Additionally, led by Brookhaven’s Radiological Assistance Program, members experienced a radiation source search field exercise.

April 16th, 2019: General Body Meeting
PSU-INMM held officer elections for the upcoming school year. Faruk Logoglu also presented on his research developing more efficient thermal neutron detectors using extensive modeling and micro fabrication capabilities.

April 23rd, 2019: General Body Meeting
PSU-INMM held the last meeting of the semester, discussed this year and the next, and enjoyed a potluck in a casual setting. Additionally, our honored guest and department chair Professor Motta played chess simultaneously against 10 of our members. He beat them all!

Roster and Officers:
The new officer positions and current roster for the 2019-2020 school year are listed below. Do to our increase in membership and scope, we have included an outreach/social chair as well as a webmaster/historian. Dues paying parent organization members are indicated with an Asterix.

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>President, Immediate Past Treasurer</td>
<td>Matthew Durbin*</td>
</tr>
<tr>
<td>Vice President</td>
<td>Chad Lani*</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Chris Bailber*</td>
</tr>
<tr>
<td>Secretary</td>
<td>Soren Cheng*</td>
</tr>
<tr>
<td>Outreach/Social Chair</td>
<td>Alibek Kenges*</td>
</tr>
<tr>
<td>Webmaster/Historian</td>
<td>Faruk Logoglu*</td>
</tr>
<tr>
<td>Faculty Advisor</td>
<td>Dr. Azaree Lintereur*</td>
</tr>
<tr>
<td>Member, Immediate Past President</td>
<td>Marc Wonders*</td>
</tr>
<tr>
<td>Member, Immediate Past Secretary</td>
<td>Josh Gallagher*</td>
</tr>
<tr>
<td>Member</td>
<td>Alvaro Pizarro*</td>
</tr>
<tr>
<td>Member</td>
<td>Maksat Kenges*</td>
</tr>
<tr>
<td>Member</td>
<td>Adam Rau*</td>
</tr>
<tr>
<td>Member</td>
<td>Victoria Hagopian*</td>
</tr>
<tr>
<td>Member</td>
<td>Sebastian Ritter*</td>
</tr>
</tbody>
</table>
Member Vince Cintron
Member Minsuk Seo
Member Gokhan Corak
Member Jordan Kruse
Member Gulnur Akhtanova
Member Will Searight
Member Sid Gupta

Budget Information for 18-19

| 18-19 Income | $1200 |
| 18-19 Expenses | $1017.06 |

Expenses are largely related to travel costs for the 2018 Annual Meeting and Brookhaven trip. Additional expenses include food and drinks for general body meetings. Income stems from the INMM national chapter, INMM NE chapter for travel funds, and a small amount from our Mug fundraiser.

**PURDUE CHAPTER**

The Purdue Student Chapter of INMM Executive Committee members are the following:

<table>
<thead>
<tr>
<th>Office</th>
<th>Term Ending</th>
</tr>
</thead>
<tbody>
<tr>
<td>*President</td>
<td>Peter Nowicke</td>
</tr>
<tr>
<td>Vice President</td>
<td>Jonathan Parker</td>
</tr>
<tr>
<td>Secretary</td>
<td>Erik Hoegberg</td>
</tr>
<tr>
<td>Treasurer</td>
<td>William Richards</td>
</tr>
<tr>
<td>Member-at-Large</td>
<td>Junghyun Bae</td>
</tr>
<tr>
<td>Member-at-Large</td>
<td>Rita Appiah</td>
</tr>
<tr>
<td>Member-at-Large</td>
<td>Timothy Wolfe</td>
</tr>
<tr>
<td>Member-at-Large</td>
<td>Christian Young</td>
</tr>
<tr>
<td>Immediate Past President</td>
<td>Luke Tyree</td>
</tr>
<tr>
<td>Advisor</td>
<td>Dr. Robert S. Bean</td>
</tr>
</tbody>
</table>
Activities

• Weekly meetings held in the evening to discuss and learn about nuclear nonproliferation (2018-2019).
• Attended a workshop at the University of Michigan in October 2019.
• Hosted a conference on Active Nonproliferation at Purdue University in March 2019.
• The chapter was also officially recognized by INMM nationals in November of 2018.
• At the end of the year, a pizza party was held, and we watched a movie about nonproliferation, Dr. Strangelove.

Treasurer’s Report

• Requested a stipend last year (went towards conference)
• $420 in book sales (income)
• Finances of conferences still being sorted out. Bills still need to be paid. Working with Purdue to sort this out. As far as the chapter knows, the conference made a profit.
• Received $1500 for this year to attend Annual Meeting.

PLANNED CHAPTER ACTIVITIES

• Planned activities include attendance and presentations at a workshop in ORNL in the Fall.
• Weekly meetings ran by our Vice President, Jonathan Parker.
• Conference to be held (tentatively) on 21/22 February 2020 on Active Nonproliferation. Date still needs to be confirmed with INMM CRC.
• Tour of the reactor facility at Purdue University.

Respectfully Submitted:
Peter R. Nowicke, President Purdue INMM
INMM
Texas A&M Chapter

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 this past 2018-2019 year, the INMM Student Chapter at Texas A&M University has hosted six general meetings, participated in one outreach event, five social events, and hosted a workshop on advanced reactor safeguards. The chapter has 29 dues-paying members of whom, 10+ are national INMM student members.

Events

September 6th, 2018 – 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 10th, 2018 – Dr. Alexis Trahan from the Safeguards Science and Technology group at Los Alamos National Laboratory gave a presentation at a general meeting regarding her work with NDA methods and what life is like as an engineer at the laboratory.

September 21st, 2018 – Mr. Curtis Conchevski from the Defense Intelligence Agency gave a presentation over the job opportunities for nuclear engineers at the DIA. He also talked extensively with students about life on and off the job.

October 5th, 2018 – Former Texas A&M student, Dr. Braden Goddard, who currently teaches at Virginia Commonwealth University gave a presentation over his current research work at VCU. He discussed about the potential of proliferation resistant fuel and life at VCU.

October 23rd, 2018 – Two researchers, Dr. Jesse Johns and Dr. Jonathan Cree, from PNNL gave a presentation on interdisciplinary collaboration for the purpose at solving national security issues. This was joint meeting with the American Nuclear Society student chapter. Opportunities for students at PNNL were also discussed during the meeting.

November 1st, 2018 – In collaboration with the American Nuclear Society, Women in Nuclear, and Health Physics Society student chapters, an organization fundraiser was held. Students at this event would receive food in exchange for an entry fee. Proceeds from the event were divided evenly between the four organizations.

November 15th, 2018 - In collaboration with the American Nuclear Society, Women in Nuclear, and Health Physics Society student chapters a profit share was held at Newks Eatery in College Station. Students and faculty were able to donate part of the cost of their meal towards the purchase of calculators for an underprivileged high school in Houston.

December 1st, 2018 – In collaboration with the American Nuclear Society, Women in Nuclear, and Health Physics Society student a chili cook-off was held at a professor’s house from the
Nuclear Engineering department. At this event, students and professors brought chili and dessert dishes to enter in a competition, and it served as a great way for students and professors to get to know each other outside of a classroom setting.

January 23rd, 2019 – As the new semester started, an ice cream social was held to welcome new students in the Nuclear Engineering department to the INMM student chapter. New students had the opportunity to pay their dues and socialize with current members in INMM at Texas A&M.

February 21st, 2019 – To continue with our goals for outreach, the INMM student chapter participated in the STEM 4 Innovation event hosted by the Texas A&M College of Engineering. In this event, teachers ranging from elementary school to middle school attended to learn more about STEM fields so that they can convey the information to their students. The INMM student chapter hosted 7 teachers and we presented on topics of radiation, as well as created fun activities that aide in the learning of nuclear concepts.

April 4th, 2019 – To foster a sense of community within the Nuclear Engineering department, the INMM student chapter held a “Nuclear Family Feud” night. Students divided into teams and answered questions related to the nuclear industry in a trivia competition. The winning team received free INMM t-shirts.

April 10th, 2019 – The final general meeting of the year was held for the INMM student chapter. During this meeting, the President went over a summary of all the events that happened in the 2018-2019 school year. Also, elections were held for the next academic year.

April 23rd-24th, 2019 – The INMM student chapter hosted a workshop on the topic of Advanced Reactor Safeguards. The goal of the workshop was to bring together various safeguards experts and foster discussion on how safeguards need to adapt for future reactor designs (Gen IV and beyond). Nearly 30 people attended the workshop representing a variety of organizations including national laboratories (Argonne, Brookhaven, Idaho, Los Alamos, Oak Ridge, Pacific Northwest, and Sandia National Laboratories), regulatory agencies (Japan Atomic Energy Agency and Brazilian–Argentine Agency for Accounting and Control of Nuclear Materials), reactor companies (NuScale Power), and nearby universities (Texas A&M University and University of Texas at Austin). The two-day event featured several speakers whose talks included topics like current reactor design methodologies, current safeguards methods, and current and emerging safeguards technologies. Additionally, attendees participated in a group exercise to develop an abstract safeguards regime for two different Gen IV reactors, and their results were presented to the rest of the attendees. At the conclusion of the workshop, a panel discussion was held to allow participants to ask questions that the talks had not answered and develop conclusions regarding advanced reactor safeguards. This discussion focused on the topics of infrastructure for designers and national laboratories and the gaps that exist in that relationship, new safeguards technologies and how they can be improved, and possible issues that could arise from future safeguards implementations. A more detailed description of the events of this workshop can be found in a paper titled “Advanced Reactor Safeguards Workshop at Texas A&M University,” which has been accepted to be part of the proceedings of the 2019 INMM Annual Meeting and will be presented during one of the meeting’s poster sessions.
May 16th, 2019 – The INMM student chapter participated in the INMM Southwest Chapter meeting with a talk on the chapter’s Advanced Reactors Safeguards Workshop, which (as mentioned above) will be presented as a poster at the INMM Annual Meeting.

Future Plans

1) **INMM Professional Mentor Program** – Student members are matched with a professional in the nuclear security and safeguards fields who can help answer questions and provide advice to the student. The program’s success the last two years has set a precedent for this coming academic year. Currently, the list of mentors is still in the process of being created.

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 semester and hope that any volunteers interested in the Professional Mentor Program will contact a TAMU INMM representative.

Sincerely,

Jackson N. Wagner

President, Texas A&M INMM Student Chapter

**Faculty Advisors**

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Advisor</td>
<td>Dr. Sunil Chirayath</td>
<td><a href="mailto:sunilsc@tamu.edu">sunilsc@tamu.edu</a></td>
</tr>
<tr>
<td>Secondary Advisor</td>
<td>Dr. Evans Kitcher</td>
<td><a href="mailto:vansii05@tamu.edu">vansii05@tamu.edu</a></td>
</tr>
</tbody>
</table>
Incoming Student Chapter Executive Committee (2019-2020):

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Jackson Wagner</td>
<td><a href="mailto:jackwags@tamu.edu">jackwags@tamu.edu</a></td>
</tr>
<tr>
<td>Vice-President</td>
<td>Athena Sagadevan</td>
<td><a href="mailto:athenaas92@tamu.edu">athenaas92@tamu.edu</a></td>
</tr>
<tr>
<td>Secretary</td>
<td>Mario Mendoza</td>
<td><a href="mailto:marmen13@tamu.edu">marmen13@tamu.edu</a></td>
</tr>
<tr>
<td>Treasurer</td>
<td>Valeria Garcia-Ramos</td>
<td><a href="mailto:valeriagr@tamu.edu">valeriagr@tamu.edu</a></td>
</tr>
<tr>
<td>Bush School Liaison</td>
<td>Ben Johnson</td>
<td></td>
</tr>
<tr>
<td>Undergraduate Liaison</td>
<td>Jedidiah Romo</td>
<td><a href="mailto:jrom6842@tamu.edu">jrom6842@tamu.edu</a></td>
</tr>
<tr>
<td>Community Outreach</td>
<td>Henry Rysz</td>
<td><a href="mailto:henry.rysz@tamu.edu">henry.rysz@tamu.edu</a></td>
</tr>
</tbody>
</table>

Outgoing Student Chapter Executive Committee (2018-2019):

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Mario Mendoza</td>
<td><a href="mailto:marmen13@tamu.edu">marmen13@tamu.edu</a></td>
</tr>
<tr>
<td>Vice-President</td>
<td>Athena Sagadevan</td>
<td><a href="mailto:athenaas92@tamu.edu">athenaas92@tamu.edu</a></td>
</tr>
<tr>
<td>Secretary</td>
<td>Alexis Maldonado</td>
<td><a href="mailto:alexismaldonado@tamu.edu">alexismaldonado@tamu.edu</a></td>
</tr>
<tr>
<td>Treasurer</td>
<td>Jackson Wagner</td>
<td><a href="mailto:jackwags@tamu.edu">jackwags@tamu.edu</a></td>
</tr>
<tr>
<td>Bush School Liaison</td>
<td>Audrey Hopkins</td>
<td><a href="mailto:audrey.hopkins@tamu.edu">audrey.hopkins@tamu.edu</a></td>
</tr>
<tr>
<td>Undergraduate Liaison</td>
<td>Alexander Perry</td>
<td><a href="mailto:aperry2016@tamu.edu">aperry2016@tamu.edu</a></td>
</tr>
<tr>
<td>Community Outreach</td>
<td>Nurasi Linda Anuar</td>
<td><a href="mailto:lynnianuar@tamu.edu">lynnianuar@tamu.edu</a></td>
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</table>

Financial Activity

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
<th>Income</th>
<th>Cost</th>
<th>Balance</th>
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</thead>
<tbody>
<tr>
<td>1-Aug-18</td>
<td>Beginning Balance</td>
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<td>$1,424.62</td>
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<td>4-Sep-18</td>
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<td>15-Nov-18</td>
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<tr>
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<tr>
<td>14-Dec-18</td>
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<tr>
<td>7-Feb-19</td>
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<tr>
<td>Date</td>
<td>Activity</td>
<td>Income</td>
<td>Cost</td>
<td>Balance</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
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<td>-------</td>
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</tr>
<tr>
<td>7-Feb-19</td>
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<td>18-Apr-19</td>
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<td>Workshop</td>
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<td>$890.38</td>
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</tbody>
</table>
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. In October, Bradley Loftin from SRNL visited the chapter to present the aspects of nuclear cylinder transportation. Other meetings featured activities such as covering upcoming events, board games, and planning for a tour to SRNL. At these meetings, food and drink were provided by UF student government and departmental funding obtained for the chapter.

In addition to the lectures, study sessions were held monthly to allow undergraduate and graduate students a common location to study together. A small library was reserved for this purpose and food was provided to the attendees. Additionally, the local chapter logo was designed and voted on. The chapter also hosted a tailgate for members for the homecoming football game at UF. Other events featured in the year included an organization sponsored barbecue, member recruitment at the UF student organization fair, and a meeting focused on the direction of the organization.

Upcoming Activities:

General Body Meetings – Monthly during semester, day of month TBD Guest Speaker Internal to University - TBD
Tour to Savannah River National Lab – Fall 2019 Study Sessions – Monthly, day of month TBD Programming Workshops - TBD
INMM Tailgate – October 5, 2019

Current Roster of Officers & Number of Active Members:

President - Noah McFerran
Vice President – Taylor Harvey
Treasurer – Jack Morrison
Secretary – Emma Cockram
Outreach Chair – Surafel Woldegiorgis
Number of Active Members: 10
Term of all officer positions ending May 2nd, 2020

Previous Officers from August 30, 2018 - May 3, 2019
President - Noah McFerran
Vice President – Kelsey Stadnikia
Treasurer – Shirly Spath
Secretary – Surafel Woldegiorgis
Outreach Chair – Thien An Nguyen

Respectfully submitted:
Noah McFerran

Treasurer’s Report

FY2018 FINAL
UF Student Chapter Financial Statement – 7/15/2018 – 7/15/2019

<table>
<thead>
<tr>
<th>Income</th>
<th>Expenses</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>$346</td>
<td>$346</td>
<td></td>
</tr>
</tbody>
</table>

Chapter Balance: 6/12/2019

Income: $330
- UF Student Gov’t funding 130
- UF Mat Sci & Eng Dep funding 276

Income Total: $346

Expenses: $406
- Food and drink for events 346
- Tailgate Supplies 60

100
Expenses Total: $406

Chapter Balance: $0 6/12/19

Logo Design

INMM Tailgate

Guest Speaker Bradley Loftin Covering
Packaging and Transportation of Radioactive Materials
Activities organized by UIT-INMM Student Chapter

UIT INMM Student Chapter
General Assembly
November 17, 2017

The University of Ibn Tofail Student Chapter hosted its fourth General Assembly in order to renew its executive committee on the 21th of December, 2018 at the University of Ibn Tofail. It was a great event and we had good discussions. This event has known the participation of members from INMM-UIT students, faculty members, medical physicists and researchers who joined this meeting.

Professor Oum Keltoum Hakam, Founder and Advisor of this Chapter, gave a very fruitful presentation on nuclear security and safeguards. It was also an opportunity for Mr. Mohamed AABID, as INMM-UIT representative, to share his experiences at the 59th Annual Meeting.

Mr. Youcef Sadadou gave another presentation about our last activities on Table Top Exercises on "Insider Threats" and on "Transport Security of Radioactive Material".
INMM-UIT STUDENT CHAPTER EXECUTIVE COMMITTEE

The election of the executive committee of UIT-INMM Student Chapter was conducted and the new members of the office are as follow:

Ms. Yousra SAALAoui
President,
PHD student, University of Ibn Tofail, Physics Department
yousra.saalaoui@gmail.com

Ms. Ibtissam ZIDOUH
Vice president,
PHD student, University of Ibn Tofail, Physics Department
ibtissamzidouh@gmail.com

Ms. Chaimaa EL MAZOURHI
Secretary,
MSc student, University of Ibn Tofail, Physics Department
chaimaaelmazourhi@gmail.com
Ms. Hafsa Ben Driss
Treasurer
MSc student, University of Ibn Tofail, Physics Department
hafsaelberki1@gmail.com

Mr. Mohammed AABID
PHD student, University of Ibn Tofail, Physics Department
aabid.mohamed92@gmail.com

Ms. Fatima Zakra COURDI
MSc student, University of Ibn Tofail, Physics Department
courdiFatimazahra@gmail.com

Mr. Oussama El OUACHAM
MSc student, University of Ibn Tofail, Physics Department
ouss.ouest@gmail.com
Prof. Omksitwan HAKAM
UIT-IMM Faculty Founder and Advisor
- Director, Nuclear Physics & Techniques Research Unit
  University of Ibn Tofail, Faculty of Sciences.
  okhakam@yahoo.com

Prof. Abdelmajid CHOUKRI
Deputy faculty advisor
Professor, University of Ibn Tofail, Faculty of sciences.
choukrimajid@yahoo.com
Celebrating the International Women's Day

On 8th March INMM-UIT Student Chapter celebrated the International Women's Day at University of Ibn ToFAIL. This event highlighted the contributions have been made by INMM-UIT women members. Professor Qam Kaltum Hakam, Founder and Adviser INNM-UIT student chapter, was guest of honor. Professor HAKAM shared some of her experiences with students and especially young women. It was also an opportunity to discuss the women contribution in the scientific field and especially in the nuclear field.
Skype-call with the executive committee of INMM Amity university student chapter
(India)

The 19th of March 2019, INMM-UIT student chapter had a Skype-call with Amity University INMM
Student Chapter executive committee from India. The call focused on the issues of collaboration and the exchange
of experiences between the two chapters. It was an opportunity to introduce each chapter and its main purpose and
to discuss some events that were organized during the year. The two chapters have agreed to exchange information
and collaborate in order to raise awareness about nuclear material management.
Personal Development Training: Teamwork-Oriented Project

On Tuesday, 19 March 2019, the University of [University Name] INMM Student Chapter organized a half day event under the theme "teamwork-oriented project" in order to develop competencies and qualifications of its members. The training was given by Mr. Salaheddine ElBadaoui, CEO Co-founder of T-land Space. This event brought UIT-INMM members together again. It was a great opportunity for students to learn more about various methods and skills for working on projects together and teamwork techniques.
INMM STUDENT CHAPTER AT THE UNIVERSITY OF UTAH

The Institute of Nuclear Materials Management (INMM) Student Chapter at the University of Utah (INMM@UofU) consists of 15 members including the following Executive Committee:

<table>
<thead>
<tr>
<th>Office</th>
<th>Term Ending</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Parker Okabe</td>
</tr>
<tr>
<td>Vice President</td>
<td>Andrew Strianese</td>
</tr>
<tr>
<td>Secretary</td>
<td>Matthew Newton</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Olivia Dale</td>
</tr>
<tr>
<td>Faculty Advisor</td>
<td>Dr. Luther McDonald</td>
</tr>
</tbody>
</table>

Past Chapter Activities
12/17/18 Christmas Bash
2/20/19 Closing the Nuclear Fuel Cycle Webinar
2/20/19 Science Experiment: Making Cloud Chambers
4/15/19 Energy Solutions Low Level Waste Site
5/16/19 End of Spring Semester Potluck

Planned Chapter Activities
6/28/19 White Mesa Camping Trip

YTD Activity Details
- In December of last year, a Christmas party was put together to celebrate the end of the semester. Members were invited to bowl and play Billiards at the Union while eating pizza.
- This month, members were invited to watch a webinar on closing the nuclear fuel cycle by Prof. Myung Seung Yang while enjoying pizza. After the webinar was over, members were brought to the lab to build a small cloud chamber and visualize radiation from uranium collected from Moab on a previous INMM trip.
- Energy Solutions gave us a tour of their LLW site near us in Utah last month. Vans picked us up and took us to the site where they taught us the process for disposing UN.
- A pot luck was setup at the University of Utah to celebrate the end of the semester.
- A trip to the White Mesa uranium milling site in Southern Utah is currently being scheduled for the end of June. This trip will be in conjunction with a camping trip.
Respectfully Submitted:
Parker Okabe, INMM @ U of U Chapter President
### FY2019 BUDGET
INMM Student Chapter at the University of Utah

<table>
<thead>
<tr>
<th>Income</th>
<th>Expenses</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter Balance: 10/01/2018</td>
<td>$217.56</td>
<td></td>
</tr>
<tr>
<td>Remaining balance from FY2018</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Income:

- **Reimbursement from ASUU for Plazafest**: $44.82 Approved
- **Reimbursement from ASUU for BBQ**: $255.93 Approved
- **Reimbursement from ASUU for Elections**: $147.83 Approved
- **T-shirts**: $300.00 Approved
- **Reimbursement from ASUU for Christmas Bash**: $122.08 Approved
- **Reimbursement from ASUU for Cloud Chamber/Webinar**: $261.75 Approved
- **Reimbursement from ASUU for White Mesa Trip**: $200.00 Projected
- **INMM Stipend**: $400.00 Projected

**Income Total**: $1,732.41

#### Expenses:

- **T-shirts**: $300.00
- **Refreshments for Plazafest**: $44.82
- **Refreshments for 2018 elections**: $147.83
- **Refreshments for Recruitment BBQ**: $255.93
- **Refreshments/Bowling for Christmas Bash**: $122.08
- **Refreshments/Cloud Chamber**: $310.52
- **Travel/Food for White Mesa Tour/Camping Trip**: $200.00 Projected
- **Other expenses for camping**: $100.00 Projected
- **Contingency on projected expenses (5%)**: $74.10

**Expenses Total**: $1,556.13

#### Chapter Balance: 5/29/2019

$484.96
Virginia Commonwealth University CHAPTER

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

<table>
<thead>
<tr>
<th>Office</th>
<th>Term Ending</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Michael Cartwright May 2020</td>
</tr>
<tr>
<td>Vice President</td>
<td>Sarah Morgan May 2020</td>
</tr>
<tr>
<td>Secretary</td>
<td>Cody Lloyd May 2020</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Justin Bresson May 2020</td>
</tr>
<tr>
<td>Physics Liaison</td>
<td>Raven Witherspoon May 2020</td>
</tr>
<tr>
<td>Past President</td>
<td>Hunter Andrews May 2020</td>
</tr>
</tbody>
</table>

Faculty advisor: Dr. Braden Goddard
Number of active members: ~15

Activities

Progress from 5/30/2018 to 5/30/2019 includes:

- Attending the INMM 59th Annual Meeting
  - 7 members
  - 4 papers presented
- Hosting four invited speaker presentations and two joint student professional society socials (INMM, ANS, ASME)
- Strong participation/organization at the 2019 ANS Student Conference
  - Added a Cyber-Physical Security paper track (financial support from NE Chapter)
  - Added an International Safeguards paper track (financial support from NE Chapter)
  - Organized a Nuclear Materials Security Workshop
- Conducting officer elections for the 2019-2020 academic year
- Holding an officer transition meeting

The invited speaker meetings are:

- Kristan Wessels (Y-12) “Criticality Safety,” 11/01/2018
- Mark Schanfein (INL) “IAEA Facility-Level Safeguards and Implementation,” 02/19/2019, attendance 16

116
• Kristian Myhre (ORNL) “Radiochemistry,” 03/21/2019, attendance 15  
• Adria Johnson (FBI) “FBI and WMDs,” 04/16/2019, attendance 40

Upcoming Activities  
• Send members to attend and present at the INMM 60th Annual Meeting  
• Host an event for nuclear science week  
• Increase participation in INMM from VCU students majoring in physics  
• Host invited speaker meetings for the next academic year  
• Send members to attend and present at the 2020 ANS Student Conference

Treasurer’s Report  
The Chapter’s finances, as of 05/30/2019, has a balance of $0 in the VCU Club Account and $850 in the Wells Fargo account.

<table>
<thead>
<tr>
<th></th>
<th>FY2018 FINAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>INMM at Virginia Commonwealth University Financial Statement – 10/1/2018 – 05/30/2019</td>
</tr>
<tr>
<td>Income</td>
<td>Expenses Notes</td>
</tr>
<tr>
<td>Chapter Balance: 10/1/2018</td>
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<tr>
<td>VCU Club Account</td>
<td>$1250 VCU donation for club activities</td>
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<tr>
<td>Wells Fargo Account</td>
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</tr>
<tr>
<td>Income Total:</td>
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<tr>
<td>Expenses:</td>
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<tr>
<td>VCU Club Account</td>
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<td>Wells Fargo Account</td>
<td>$32 Reimbursement to treasurer for paying dinner meeting expenses that are not VCU Club Account reimbursable (sales tax, etc.)</td>
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The Facility Operations Technical Division (FOTD) continues to undergo review and development under new leadership as Ben Watts replaced Morris Hassler in the position of FOTD Chair. During the March 2019 Executive Committee meeting, the division provided updates on the recent review and recommendations as how to move forward and address the continued low activity. The resulting decision was to keep the division as is but with specific actions to increase the value of FOTD to the INMM.

The planning of a workshop has been put on hold, as the division works on invigorating the FOTD technical meeting at the 2019 INMM Annual Meeting to be held in Palm Desert. While the focus will continue on activities and information related to the complete fuel cycle, the focus will shift to newer technologies that are being incorporated into the environment. This shift will incorporate more international and commercial involvement. In addition, the division has been recruiting more active members and plans to develop committees as it moves forward.

Respectfully submitted on behalf of FOTD by,

Ben Watts, Chair Ben.Watts@tetratech.com

Virginia Magoulas, Secretary virginia.magoulas@srnl.doe.gov
International Safeguards
Michael Whitaker, Chair

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.

The two ISD working groups are holding a joint meeting during the 2019 annual meeting.

- **Open Source / Geospatial Information (OSGI)**
  Chair: Zoe Gastelum and Yana Feldman

  The OSGI WG provides a dedicated forum for the open and free exchange of ideas and concepts in the domain of open source and geospatial information in support of international safeguards. Members of the working group have been involved in organizing relevant subject matter panels for the INMM annual meeting and will serve as co-chairs of those panels.

  Previously, the OSGI WG published a special issue of the JNMM, Vol XLVI, No. 3, which was released the first week of November 2018. The special issue was distributed to authors and stakeholders at the IAEA Safeguards Symposium and was mentioned in several safeguards sessions as well as a special event sponsored by the Stanley Foundation on geospatial data analytics.
• Safeguards Information Management (SIM)
  Chairs: Gary Hirsch and vacant

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. The WG is actively seeking candidates to serve as a co-chair.

The division is currently interested in creating a new working group to explore options for responding to the challenge issued by Will Tobey during the 2018 annual meeting:

By 2025, every person in this room, and every person worldwide who is employed professionally in the nuclear materials management, security, nuclear forensics and safeguards fields will have the opportunity to take certified professional development courses to help demonstrate their professional competence.

The effort will be kicked off during the 2019 ISD technical meeting in July; David Hanks has graciously agreed to lead an effort to start this initiative.

Events since July 2018:

Annual meeting of the Asia-Pacific Safeguards Network (APSN)

ISD Co-Chairs Whitaker & Niemeyer attended the annual meeting from November 1-2, 2018 to explore future opportunities for engagement and to advertise the joint INMM-ESARDA-INMM Japan chapter workshop to be held in Tokyo in October 2019.
IAEA Safeguards Symposium

The IAEA hosted a safeguards symposium with the theme of Building Future Safeguards Capabilities in Vienna from November 5-8, 2018. The symposium was designed to foster dialogue information exchange with member states, the nuclear industry, and members of the broader non-proliferation community and gives the Department of Safeguards the opportunity to describe and address its strategic priorities and key challenges.

ISD and Vienna professional chapter dinner

A no-host dinner was held at the Universitätsbrauhaus the evening if November 6 in conjunction with the IAEA symposium and was attended by ~70 participants. A consensus statement was produced reporting that everyone had a wonderful evening.

Just Trust Me Workshop

This workshop was organized by the Southwest Chapter and hosted at Sandia National Laboratories March 12-13. The workshop included over 70 participants from DOE/NNSA, DOE laboratories, academia, and industry. The workshop convened professionals across the policy and technology communities involved in safeguards, security, and arms control.
The format combined presentations in the mornings followed by scenario-based table top exercises facilitated by N Square. During the exercise, participants received a passport with a unique identity and country to learn about motivations and different perspectives when it comes to the complex issue of international nonproliferation.

The presentations and table top scenario themes were grouped into four categories: trusted people, trusted equipment/technology, trusted data/algorithms, and trusted methodologies. The evening activity included a special murder mystery dinner with a nonproliferation theme where our very own senior manager, Dianna Blair, was the murder victim. The evening was full of suspense and uncontainable laughter. The workshop facilitated networking opportunities and ideas for solutions to complex nonproliferation issues. Overall the workshop feedback was very positive from the participants! Sandia National Laboratories will plan to publish the results of the table top scenarios in JNMM and present at the INMM annual meeting next July.

**Conference on Active Non-proliferation (CAN)**

From March 22 - 23, the Purdue INMM Chapter in conjunction with Central Region Chapter and Purdue's Center for Radiological and Nuclear Security (CRANS) hosted a Conference on Active Nonproliferation (CAN) at Purdue University in West Lafayette, Indiana. The event was also affiliated with INMM's Nonproliferation and Arms Control (NAC) Technical Division.
Technical Sessions included "Radiation Measurements", "Nuclear Security/Terrorism", and "Nuclear Policy". There were approximately 67 attendees representing a diverse set of universities, organizations, and national labs to include University of Illinois at Urbana-Champaign, University of Michigan, Idaho National Laboratory, Oak Ridge National Laboratory, and the Defense Intelligence Agency. Also, talks and poster presentations were given by Cadets and Midshipmen from the Army, Navy, and Air Force Service Academies with both students and faculty members from those Academies in attendance. Other associated events included an analyst exercise sponsored by representatives from the CIA and a book signing event from one of the keynote speakers, Dr. Sara Kutchesfahani, for her new book, Global Nuclear Order."

**Workshop on Advanced Reactor Design Safeguards**

The Texas A&M (TAMU) student chapter hosted this event at TAMU, College Station April 23-25. The workshop included three topical sessions on: (1) Advanced nuclear technologies, (2) Safeguards technologies in development, and (3) Safeguards concepts, approaches and policies. The workshop was followed by a tour of TAMU’s nuclear science center. Gustavo (Gus) Reyes from the Idaho National Laboratory (Department of Nuclear Non-Proliferation and International Safeguards) contributed to the discussions by briefing the participants on the latest developments in IAEA’s State-level Concept and its evolution from Safeguards Criteria followed by Integrated Safeguards, and finally to a State-level approach. He also provided insights on Safeguards by Design considerations on four small modular reactor designs, to include: (1) NuScale (by NuScale Power), (2) Travelling Wave Reactor (by TerraPower), (3) eVinci Micro-reactor (by Westinghouse), and (4) Molten Salt Reactor IMSR-400 (by Terrestrial Energy). The importance of coupling Cyber Informed Engineering with SBD
was also introduced. Workshop participants included subject matter experts from Japan, Brazil, ANL, INL, LANL, ORNL, PNNL, NuScale, Texas A&M, the University of Texas (Austin).

**ESARDA Annual Meeting**

The International Safeguards Division held a meeting at the 2019 ESARDA Symposium in Stresa, Italy. The meeting was aimed at informing the ESARDA community about INMM-ISD activities and at strengthening the links between INMM and ESARDA. Various ISD representatives reported their recent activities, in particular in the OSGI and C/S WG, and gave a preview about forthcoming INMM events, including the Joint INMM/ESARDA Workshop in October (Tokyo) and the plans for Joint INMM/ESARDA Annual Meeting in summer 2021.

**Future Events**

Make arrangements now to attend the 9th Joint INMM/ESARDA workshop that will be held at the International Exchange Center Heisei in Tokyo, Japan from October 7-11. This joint workshop will address future challenges for the enhancement of international safeguards and nuclear security. This is the ninth joint workshop with INMM and ESARDA and the third joint workshop in Tokyo, Japan.

There will be 4 working groups meeting during the week:

- **WG-1**: International Safeguards
- **WG-2**: Nuclear Security
- **WG-3**: Nonproliferation and Arms Control
- **WG-4**: Nuclear Knowledge Retention
1. More information can be obtained at:

Finally, we are very pleased to announce the additional of Zoe Gastelum to the ISD management team.

Submitted respectfully.

*ISD Management Team:*

*Michael Whitaker, Chair; Irmgard Niemeyer, Vice-Chair;*

*Arden Dougan; Craig Everton, Zoe Gastelum, Shirley Johnson, Fausto Medici, and Mark Schanfein*

*(Carrie Matthews – JNMM)*
Materials Control and Accountability Technical Division  
Thomas Grice, Chair

The Materials Control and Accountability (MC&A) Technical Division promotes communication, professional development and the exchange of technology among professionals active in the control and accountability of nuclear materials. Within the MC&A Technical Division are groups and subcommittees related to Nondestructive Assay (NDA), Destructive Assay (DA), American National Standards Institute (ANSI) INMM N15 standards, MC&A related Policies and Best Practices, and Associate Editors of the Journal of Nuclear Materials Management (JNMM). Efforts have continued throughout the year to encourage greater participation by members from industry, national laboratories, and regulatory authorities in INMM related activities.

Special Sessions
The MC&A Technical Division has coordinated several special sessions for the INMM 60th Annual Meeting.

In coordination with the International Safeguards Technical Division (ISD), this year the International Atomic Energy Agency (IAEA) will be holding a special session with a panel discussion the upcoming revisions to the International Target Values (ITVs). The panel will have representatives from the IAEA, French Alternative Energies and Atomic Energy Commission (CEA), U.S. Department of Energy (CEA), Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC), URENCO, and Japan Nuclear Fuel Ltd. (JNFL). Additionally, we are working with the IAEA to schedule a workshop on ITV, coordinated around the 61st INMM meeting to be held in Baltimore, Maryland, USA, next year.

We are pleased to again sponsor, in conjunction with the Nonproliferation and Arms Control Technical Division, several sessions on Data Science for Nonproliferation. Following up on the success of last year’s special sessions, there are three special sessions this year: Data Science for Nonproliferation, Data Fusion and Monitoring for Nonproliferation, and Nuclear Data for Nonproliferation. There special sessions focus on our ability to collect data at a rate which far outpaces our ability to utilize it. The convergence of our existing expertise with modern data science
methods is expected to generate revolutionary capabilities that will provide more efficient and effective methods of detecting undeclared activities. During the next decade, these data science methodologies are projected to revolutionize how safeguards and arms control compliance activities are conducted.

This year staff from the Los Alamos National Laboratory, Lawrence Livermore National Laboratory, and the University of Michigan have teamed up to create a special session on Correlated Fission Physics, Transport, and Applications. The need for a predictive capability in the detection of special nuclear materials (SNM) has motivated a current collaborative research project investigating new developments in correlated fission multiplicity physics models, experiments and transport applications. Over the last several years through a multi-organization correlated fission physics research and development project, the CGMF and FREYA fission event generator codes have been implemented into the MCNP6.2 code and released to the public; a variety of dedicated differential experiments on correlated fission signatures have been performed to help validate the complex fission theory and physics implemented in these codes; and a multitude of efforts in modeling and transport simulation has been done to try and validate the theoretical models against dedicated experimental data. The objective of these special sessions is to review and demonstrate many of the recent Los Alamos National Laboratory (LANL), Lawrence Livermore National Laboratory (LLNL), and University of Michigan (UM) developments in fission physics theory, new code capabilities, and experimental work that can potentially impact the broader nuclear nonproliferation community.

This special session hosts papers on: Effect of the detector type on the performance of a simulated fast-neutron uranium collar for nondestructive assay of fresh fuel assemblies, Characterization of a Stilbene Detector Array for Safeguards, Simulation studies on a stilbene-based fast-neutron uranium collar for non-destructive assay of fresh fuel assemblies, Simulations of Measurement of Fresh Fuel with an Organic Glass Scintillator, and Root: Optimization and Simulation of the Fast Neutron Passive Collar for Fresh Uranium Fuel Verification
Journal of Nuclear Materials Management (JNMM) Support
Since January 2018, three manuscripts have undergone MC&A Division peer review. One of these papers has been published. The remaining two manuscripts are awaiting revisions from authors prior to final acceptance for publication.

The MC&A Technical Editors are working closely with Ben Cipiti, of Sandia National Laboratories, to develop a JNMM Special Issue expected to be published toward the end of next year covering the MPACT 2020 Milestone. The DOE NE MPACT program, which supports work related to Safeguards and Security, has a major 2020 milestone to demonstrate Advanced Safeguards and Security by Design for future nuclear facilities using electrochemical processing as the example. This milestone ties together modeling and simulation with experimental work from across the labs and universities to develop advanced accountancy and physical protection approaches for new facilities. The JNMM Special Issue is expected to have one overview paper on the Milestone itself, following by several supporting papers on the individual modeling, experimental capabilities, or measurement technologies that play a role.

Outreach Activities
The MC&A Technical Division is proud to have representatives from five different academic institutions serve as session chairs this year. There are representatives from the University of Florida, Texas A&M, University of Michigan, Penn State University, University of Illinois. We greatly appreciate the role these institutions play in conducting their research activities and developing the scientists and engineers necessary to secure our future and look forward to continued and increased patriotism in the upcoming years.

We are also working in concert with the International Safeguards and the Nuclear Security and Physical Protection Technical Divisions to work with the Third Way Resource Council for Advanced Reactor Developers. The Third Way Resource Council for Advanced Reactor Developers is committed to cultivating a network of experts to help identify and seize key opportunities to help successfully build in security- and safeguards-by-design. Representatives from the Third Way Resource Council
for Advanced Reactor Developers will be speaking at the MC&A Technical Division meeting on Sunday afternoon and the various technical divisions are supporting a special session no Tuesday afternoon.

Regularly Scheduled Meetings

INMM Accredited Standards Committee N15
The Accredited Standards Committee (ASC) N15 is sponsored by the INMM and accredited by the American National Standards Institute (ANSI) to develop and maintain voluntary consensus standards for protection, control, and accounting of special nuclear materials in all phases of the nuclear fuel cycle, including analytical procedures where necessary and special to this purpose, except for physical protection of special nuclear material within a nuclear power plant.

The Accredited Standards Committee (ASC) N15 is hosting two meetings during the INMM 60th Annual Meeting at the JW Marriott Desert Springs, Palm Desert, California, USA.

**ANSI INMM N15/5.1 Subcommittee Meeting (Analytical Chemistry Laboratory)**
Sunday, July 14, 2019
Noon – 2 PM
Light lunch provided*
Point of Contact: B. (Chino) Srinivasan, b.srinivasan@science.doe.gov

**ANSI N15 Technical Standards Meeting**
Tuesday, July 16, 2019
Noon – 2 PM
With call-in option
Light lunch provided*
Point of Contact: Melanie May, Melanie.May@hq.doe.gov

* Reminder: A deli-style lunch will be provided at the beginning of both meetings.
A RSVP is requested for the lunch, however, a RSVP is not necessary to attend and participate in the meetings.

All members of the INMM are strongly encouraged to support the INMM Accredited Standards Committee N15 with their time and expertise. ASC N15 has several standards under review or development and draws upon the knowledge and experience of members from industry, national laboratories, and regulatory authorities to ensure a sound scientific and regulatory basis. Interested individuals should contact the Committee Chair, Melanie May, melanie.may@hq.doe.gov, of Vice-Chair, Lynne Preston, lynne.preston@hq.doe.gov for further details. Note: The INMM Accredited Standards Committee N15 submits a separate report to the INMM Executive Committee detailing the committee’s activities.

**Joint meeting of the NDA and DA Users Group**
The joint meeting of the INMM Destructive Analysis (DA) Working Group and Nondestructive Assay (NDA) Working Group will again be held at the 2019 annual INMM meeting. This joint working group meeting is scheduled for 8:30 AM, Sunday July 14, 2019 and will allow DA and NDA users to further discuss areas of mutual interest. The current chairs of the DA and NDA Users Groups are continuing to work closely together to establish the agenda for the 2019 meeting.

**Non-Destructive Assay Users Group**
The Non-Destructive Assay (NDA) working group will meet on the Sunday proceeding the INMM annual meeting; Sunday, July 14th from 10am – noon. We will have presentations on the current status of ASTM and ANSI standards, an interesting measurement scenario from Sandia National Laboratories, and a new uranium lump correction method. Following those presentations, we will discuss NDA professional training needs and review a proposal put together by Jeff Chapman. Topics may be added if suggested by working group members.

**Destructive Assay Users Group**
The Destructive Assay (DA) working group will meet on the Sunday proceeding the INMM annual meeting; Sunday, July 14th from 10am – noon. The DA Working Group meeting focuses on serving as
a forum for the exchange of information, promoting best practices and sharing experiences related to analytical chemistry of nuclear materials and associated standards. Interested attendees are invited to give 10-15 minute talks on topics of interest, or to suggest topics of interest. Please contact Cole Hexel at hexelcr@ornl.gov or Thomas Grice at Thomas.grice@nrc.gov by June 30 with topics or suggestions.

MC&A Technical Division meeting

Preliminary agenda for the 2018 MC&A Technical Division meeting

1. Tom Grice, Welcome, Overview and General INMM Topics of Interest
2. Susan Smith, Summary of the Nondestructive Assay Working Group meeting
3. Cole Hexel, Summary of the Destructive Analysis Working Group meeting
4. Melanie May, Summary of the ANSI INMM N15/5.1 Subcommittee Meeting
5. Debarah Homer, U.S. Department of Energy
   a. Update on revision to DOE O 474.2 Admin Change 4, Nuclear Materials Control and Accountability
   b. Update on revision to DOE-STD-1194-YR, Nuclear Materials Control and Accountability
6. Tom Pham, U.S. Nuclear Regulatory Commission
   a. Update on the U.S. Nuclear Regulatory Commission’s 10 CFR Part 74 Rulemaking
   a. Helping Advanced Reactor Developers cultivate a network of experts to help identify and seize key opportunities to successfully build in security- and safeguards-by-design.
8. Michael Bridson, Australian Nuclear Science and Technology Organisation (ANSTO)
   a. ANSTO’s new Molybdenum-99 (Mo-99) Manufacturing Facility, which has recently received licencing authorisation to commence routine production and supply.
   b. Recent efforts at ANSTO using a custom built active neutron detector to undertake quantitative measurements of residual Low Enriched Uranium filtercups arising from Mo-99 production, for safeguards verification purposes.
9. Solicitation of input from attendees
a. Support for INMM committee
b. Development of training materials
c. Opportunities for student research initiatives
d. Policy issues that impact the technical divisions.
e. Problems to be solved outside the U.S.
f. Special session topics for the 2019 annual meeting.


Efforts are continuing to encourage greater non-U.S. specific participation through identification of additional topics and speakers. Interested speakers or suggestions for topics should be forwarded to Thomas Grice at thomas.gice@nrc.gov or Philip Gibbs at gibbspw@ornl.gov.

Current roster of MC&A Technical Division Officers and their contact information.

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<th>Roster of MC&amp;A Technical Division Officers</th>
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Respectfully Submitted by: Thomas Grice – Chair
Philip Gibbs – Vice Chair
Nonproliferation and Arms Control (NAC) Technical Division
Mona Dreicer, Chair

Technical Division Meeting 2018
July’s NAC Technical Division Meeting was well-attended and hosted presentations on:

- Nuclear Materials Science, Processing and Signature Discovery Workshop - Mark Engelmann (PNNL)
- From Left to Right of Launch: When and How Nuclear Arsenals Impact State Behavior - Andrew Reddie (LLNL CGSR and UC Berkeley)
- North Korea and Iran - two different approaches to deal with nuclear problems - Olli Heinonen (Foundation for Defense of Democracies)
- After the Ban Treaty--What? - Edward Ifft (Hoover Institution)

Arms Control, Treaty Verification, and Disarmament Subcommittee.
The newly formed Arms Control, Treaty Verification, and Disarmament (ACTVD) Subcommittee, co-chaired by Michele DeCroix (LANL) and Jacob Benz (PNNL) has been very active. They developed a charter, 2-year work plan and ideas for a mentorship program. Their goals for the next two years are to:

- Demonstrate leadership in the areas of arms control and treaty verification through engagement with INMM members and the broader interested community domestically and internationally.
- Develop and present materials relevant to a wide range of audiences to promote novel ideas and concepts in arms control and treaty verification.
- Develop and implement education and mentoring opportunities for new and experienced professionals to advance capability and capacity of current and future arms control and treaty verification experts.
- Create opportunities for technical exchanges within INMM and between organizations with overlapping interests.
The “charter” was finalized and two new initiatives were launched:

- develop and present arms control and treaty verification background materials relevant to a wide range of audiences to promote novel ideas and concepts, and
- implement an education and mentoring initiative for new and experienced professionals to advance capability and capacity of current and future arms control and treaty verification experts.

Flyers were created to spread awareness and recruit participants for both initiatives and Morag Smith (LLNL) and Peter Marleau (SNL) gave a short presentation on this initiative at the Just Trust Me Workshop, Albuquerque, March 12–13. Posters are being developed for the Primer and Mentor ACTVD activities. These will be presented at INMM.

The initial Mentorship Program telecon was held on February 13 with around 15 participants. Communication and activities are continuing for the initial mentor-mentee pairs selected. A social hour is being setup during INMM to provide an opportunity for mentors and mentees attending INMM, a chance to meet face to face.

A table of contents for an ACTVD Arms Control Primer is being developed, by Morag Smith and a conference call with interested parties regarding contributing. This was well attended, and there have been a number of requests to contribute sent to the ACTVD email address. A working lunch has been setup during INMM to gather parties contributing to the primer. Collaborations and continued writing efforts will be the focus of the working lunch.

*Export Controls Sub-Committee*

The Export Controls Sub-Committee, co-chaired by Meili Swanson (SNL) and Amanda Sayre (PNNL), held its first planning meeting on the margins of the Annual Meeting in July 2018. They will focus on how we can better share knowledge and research across the export control field.

The Export Controls Sub-committee co-chairs will present a paper to raise awareness of the planned activities and gain interest from the broader INMM community during the Export Control Session at the INMM Annual Meeting. They reached out to ESARDA’s Export Control Working Group to explore
opportunities for collaboration – particularly at the upcoming joint INMM-ESARDA-Japan INMM Chapter workshop in Tokyo this October. A draft Subcommittee charter will be sent out to a larger group for review in preparation for the NAC Technical Division Meeting on July 14. The Export Controls Sub-Committee, co-chaired by Meili Swanson (SNL) and Amanda Sayre (PNNL), are planning a technical session and will hold a sub-committee meeting on the margins of the Annual Meeting in July 2019.

**Containment/Surveillance Working Group**
Nathan Rowe, the Containment/Surveillance WG co-chair, has taken an assignment at the IAEA, and the new co-chair is Dan Krementz, SRNL. C/S Working Group will co-host two technical sessions with MC&A Technical Division titled: “Data Science for Nonproliferation” and “Nuclear Data for Nonproliferation.” This is a timely topic because world is at an inflection point where our ability to collect data now far outpaces our ability to make use of it. The convergence of our existing expertise with modern data science methods will generate revolutionary capabilities that will soon provide more efficient and effective methods of detecting undeclared activities. During the next decade, these data science methodologies will revolutionize how safeguards and arms control compliance is conducted; and INMM is hosting the first set of technical sessions on these methods at its 60th Annual Meeting in Palm Desert, CA.

**Other Activities**
A two-session Introduction to Plutonium is being planned for the July Annual Meeting. It is a reprisal of the special sessions held at the Pacific Northwest Chapter workshop on Nuclear Materials in May 2018. Participants will hear a high-level overview of Hanford’s legacy to modern-day applications of plutonium science, in a series of presentation on plutonium processing, post-reactor reprocessing, and chemistry & characterization.

As part of the INMM Student Research Initiative, Maggie Arno (LLNL), as the NAC POC, has been working with Middlebury Institute of International Studies at Monterey (MIIS) student chapter on a paper on the Intermediate-range Nuclear Forces (INF) Treaty. The students researched the dissolution of the INF Treaty, focusing on the future of bi- or multi-lateral arms control agreements.
involving Russia and US as well as the how to move forward and the challenges we now face. The paper was chosen to be presented at the 2019 Annual Meeting.

A workshop on Emerging Digital Technologies for Nonproliferation and Nuclear Security is being organized on April 22-24, 2020 at Lawrence Livermore National Lab by the INMM California, Southwest, and Pacific Northwest chapters, 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 is 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

The abstract deadline is February 1, 2020. For technical Program questions, please contact Zoe Gastelum (SNL).

Chair: Mona Dreicer (LLNL)
Deputy Chair: Nina Rosenberg (LANL)
Secretary: Teri Leffer (NNSA)
Arms Control, Treaty Verification, and Disarmament (ACTVD) Subcommittee:
    Michele DeCroix (LANL) and Jacob Benz (PNNL)
Export Control Sub-Committee: Meili Swanson (SNL) and Amanda Sayre (PNNL)
NAC POC for the INMM Student Research Initiative: Maggie Arnot (LLNL)
NAC Division Technical Editor for JNMM: Les Fishbone (Consultant)
Nuclear Security and Physical Protection Technical Division
Joe Rivers, Chair

The Leadership of the technical division is as follows:

- Joe Rivers, USNRC, Chairman
- KJ Maddux, IB3 Global, Deputy for Physical Protection
- Vacant, Deputy for Cyber Security
- Rob White, Xcel Energy, Deputy for Commercial
- Stephan Bayer, Australian Safeguards and Nonproliferation Office, International Liaison
- Sarah Sarnoski, Penn State University, Student Liaison
- Anthony Contri, Rhinocorps, Modelling and Simulation
- Jonathan Scott, UK National Nuclear Laboratory, Modelling and Simulation
- Mark Resner, USNRC, Insider Mitigation
- Becca Stone, USNRC, Emerging Issues

The Technical Division is working with the Joint Committee on Nuclear Risk Management (JCNRM) to develop guidance on how to use safety risk information to better risk inform physical and cyber security. JCNRM is a national consensus standards development body that is under the oversight of the American Nuclear Society (ANS) and the American Society of Mechanical Engineers (ASME). The initial draft guidance document will be ready this Fall for review.

The Technical Division is working with the Project on Managing the Atom at the Belfer Center at Harvard University to conduct a workshop on Emerging Issues in Security August 5-6, 2019. The workshop will include sessions on drones/UAVs, cyber security and modeling and simulation. Additional workshops are being considered for 2020 to include topics such as modeling and simulation, decommissioning, advanced reactors, and risk informing security.

During the coming year, the Division will focus on increasing involvement in INMM by professionals in the commercial nuclear sector and the international community. The Division will also seek ways to involve students in INMM and to keep them involved after they leave college. In addition, the Division will work to increase the number of activities involving emerging issues, to include Cyber
Security, Modelling and Simulation, Drones/UAVs, Security during Decommissioning, Security for Advanced Reactors and Small Modular Reactors and their associated fuel cycles, and Security for Independent Spent Fuel Storage Installations. In addition, the Division will work with the other technical divisions to increase the presence of cyber security papers and sessions at INMM Annual Meetings.

At the 2019 Annual Meeting the division held panel discussions on Insider Mitigation, Cyber Security, and Advanced Reactors.
Packaging, Transportation and Disposition Division
Jeff England, Chair

The 19th International Symposium on the Packaging and Transportation of Radioactive Materials (PATRAM 2019) will be August 4-9, 2019 at the New Orleans Marriott in New Orleans, Louisiana. The PATRAM 2019 management plan is being executed in conjunction with the Technical Program Chair and the other committees. A PATRAM paper review meeting was held on 11-14 Feb 2019 to select papers and develop agenda. Plenary speakers have been selected, notified and confirmed. Planning teleconferences are happening weekly. INMM, in conjunction with WNTI, are working with industry, DOE, DOT, NRC, JSME and IAEA for PATRAM 2019.

The 20th International Symposium on the Packaging and Transportation of Radioactive Materials (PATRAM 2022) will be held in France in 2022. WNTI, in conjunction with INMM, are working with the PATRAM stakeholders around the world for PATRAM 2022.

The INMM Packaging, Transportation and Disposition (PT&D) Division presented the INMM 34th Spent Fuel Management Seminar January 22-24, 2019, 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 on presenting the INMM 35th Spent Fuel Management Seminar in January 2020, at the Hilton Alexandria Old Town, 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　　　　　　　　　Robert Watkins
Chair, Packaging, Transportation and Disposition  Co-Chair, Packaging, Transportation and Disposition

Bradley Loftin
Spent Fuel Management Seminar Chair