INMM
INSTITUTE OF
NUCLEAR MATERIALS
MANAGEMENT

2018
Annual Report to the Membership
October 1, 2017 – September 30, 2018

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INSTITUTE OF NUCLEAR MATERIALS MANAGEMENT

ANNUAL BUSINESS MEETING
Baltimore Marriott Waterfront Hotel
Baltimore, Maryland USA
Tuesday, July 24, 2018
6:30 – 7:30 p.m.

AGENDA

1. Call to Order  Hinderstein
2. Approval of Minutes  Pickett
3. President’s Report  Hinderstein
5. Election Report  Pickett
6. Committee Reports  Hinderstein
7. Chapter Reports  Hinderstein
8. Technical Division Reports  Mladineo
9. New Business  Hinderstein
   a: Chapter Anniversary Awards
   b. Recognition of Sustaining Members
   c: Recognition of New Senior Members
   d: Resolutions of Respect
10. Drawings for Two Complimentary 2018 Memberships  HQ
11. Adjournment
Call to Order

The 58th Annual Business Meeting of the Institute of Nuclear Materials Management, an Ohio nonprofit corporation, convened on July 18, 2017 at the Renaissance Indian Wells, Indian Wells, California, after notification to all members. President Corey Hinderstein announced that a quorum was present and called the meeting to order at 6:30 p.m.

Approval of Minutes

The minutes from the 2016 Annual Business Meeting were presented. It was moved and seconded to approve the minutes. Motion passed.

President’s Report

President Corey Hinderstein was pleased to report that the Institute continues to grow and get better, noting INMM continues to have technical and policy relevance, continues to offer workshops that extend the information collaboration beyond the annual meeting, and continues to be active internationally through our chapters and partnerships. A three-year Strategic Plan for the Institute has been developed with the following broad goals:

1. Be recognized internationally as the leading professional society for the effective stewardship of nuclear materials and related technology.
2. Represent the breadth of the profession.
3. A strong relationship exists between the policy and technical communities.

Each goal will have specific objectives for achieving the goal. Details on the progress of the Strategic Plan development will be presented later during a Town Hall meeting.

The Institute has been successful due to its careful stewardship of finances and the many volunteers that serve it faithfully. Larry Satkowski thanked several leaders who stepped down from their positions this year: Jill Cooley began her term as an at-large member of the Executive Committee after Joyce Connery had to step down early due to her being confirmed by the U.S. Senate as chair of the Defense Nuclear Facilities Safety Board. Satkowski thanked outing EC members Brian Boyer and Joyce Connery for their service on the EC. Markku Koskela stepped in the role of JNMM Technical Editor. Denny Mangan became Editor Emeritus. Melissa Einwechter became the Education and Training Chair. Thomas Grice became Chair of the Material Controls and Accounting Technical Division when Mike Baker stepped down. Sean Morrell became the inaugural Chair of the Social Media and Apps Subcommittee.

Financial Report

Treasurer Robert Curl reported that the financials of the Institute continue to improve despite U.S. Government imposed travel restrictions which affected our meeting registration numbers in 2013 and 2015. The FY2016 budget was conservatively planned to have a slight deficit of $25,145. The Executive Committee approved an additional, unbudgeted expense of $35,000 to hire a consultant to facilitate Strategic Planning for the Institute. Despite the planned deficit, INMM continues to be financially healthy.

As of September 30, 2015, the Institute of Nuclear Materials Management’s total assets were $924,130. These assets included $165,834 in operating funds, $705,551 in reserves, and $52,745 in prepaid expenses/accounts receivable/other. The associated liabilities were $99,739 resulting in net assets of $824,391.

Secretary’s Report

Chris Pickett announced the results of the 2017 fiscal year election of Officers and Members at Large. Voting notification with instructions about how to access the online voting were sent, by email or post to each of the 734 eligible Institute members, of which 177 voted online or requested and returned paper ballots by the deadline.
As a result of the balloting, the Officers and Members at Large constituting the INMM Executive Committee beginning October 1, 2017 are:

- President: Corey Hinderstein
- Vice President: Cary Crawford
- Secretary: Chris Pickett
- Treasurer: Robert Curl
- Immediate Past President: Larry Satkowiak

Members at Large:
- Kerry Dunn: 9/30/18
- Willem Janssens: 9/30/18
- Michael Baker: 9/30/19
- Teri Leffer: 9/30/19

Also included in the election vote was a proposal to amend the INMM Bylaws to require that the offices of President and Vice President be defined as two-year terms, reflecting current expectations, rather than running these elections on an annual basis. The terms for the offices of Secretary and Treasurer will be defined as six-year terms to ensure, via staggered terms, that the Institute maintains continuity in leadership. Proposed amendments were offered in response to membership survey feedback and to bring the election process in line with actual practices. The INMM Membership voted to approve the proposed amendment to the INMM Bylaws.

**Committee Reports**

President Corey Hinderstein noted committee reports were included in the 2017 Annual Report to the Membership and encouraged members to read through the reports. She highlighted key activities. The reports submitted show dynamic growth within INMM and continuing efforts association wide. President Hinderstein encouraged participation in committee work and stepping up when calls for nominations are posted.

**Chapter Reports**

President Corey Hinderstein stated Chapter reports could be found in the 2017 Annual Report to the Membership. She encouraged participants to read the Chapter reports as there was a lot going on in the INMM Chapters. Because there are now so many chapters, beginning in 2018, printed copies of the annual report to the membership will not include the chapter reports. They will still be included in the electronic version of the report available on the Members only page.

**Technical Division Reports**

Past President Larry Satkowiak stated Technical Division reports were included in the 2017 Annual Report to the Membership. Sorenson highlighted key activities taking place in each Technical Division and encouraged members to become involved in Technical Divisions.

**New Business**

The floor was opened for new business.

**Chapter Anniversary Awards**

President Corey Hinderstein recognized the INMM Mercyhurst Student Chapter on its 10-year anniversary as a chapter of INMM. The California (10 years) and Japan Chapter (40 years) were also mentioned for achieving anniversary milestones. It was noted that the Japan Chapter was the first and oldest non-U.S. INMM Chapter.

**Recognition of Sustaining Members**

Vice President Cary Crawford recognized the Sustaining Members. Renewing Sustaining Members received a year plate to go on their Sustaining Member plaque.

**Recognition of New Senior Members**

Vice President Cary Crawford also recognized nine new Senior Members, and presented to each of them their Senior Member certificate.

**Resolutions of Respect**

Vice President Cary Crawford read and presented four Resolutions of Respect for INMM members: Edward Owings, Stanley John Luke, William McCarthy and Charles Vaughn, who passed away since the last meeting.

**Free 2018 Membership Drawings**

Both Claudio Gariazzo and Joe Rivers were the recipients of a free one-year regular INMM membership in the membership drawing.

There being no other business, the Annual Business Meeting adjourned at 7:20 p.m.
If you’re not first, you’re last
“If you’re not first, you’re last” may not be a good message of sportsmanship or capture the intangible benefits of competition, but it is the truth of INMM leadership: last year was my first time writing the president’s message, and this is my last. September 30 will mark the end of my two-year term and our transition to the Crawford Administration.

As always, the global nuclear materials management community has not been short on issues to address – from the potential for a denuclearization process on the Korean Peninsula to drones being flown over a nuclear facilities, and from the recent plutonium management policy decisions in Japan to the 50th anniversary of the NPT and the related examination of the regime that has built up around the treaty.

It has been a big year within the INMM family too. We launched our new website and rebranded with a new logo. Then, on October 1, 2017 we changed association management companies, which means we have a whole new HQ team led by INMM’s new executive director Lacy Lee Baker. There are always going to be challenges with transition, but we are grateful to work with this team of professionals, and I know they will help us meet and exceed our goals as we move forward together. To grow, we need to take risks and I am excited for what the future will bring. We are now deep into the implementation of our 2017-2020 INMM strategic plan, designed to build on the strong foundation of INMM and prepare us for that future.

Leadership Transitions

Here is an overview of 2017-2018 leadership transitions.

- Willem Janssens and Kerry Dunn have served as Members-at-Large on the Executive Committee and began their terms October 1, 2016. They will both be rolling off at the end of September 2018 and we thank them for their service.
- Irmgard Niemeyer and Therese Renis will join the Executive Committee as Members-at-Large. We congratulate them and look forward to their contributions.
- Congratulations to Nancy Jo Nicholas, confirmed as the Chair of the Fellows Committee and replacing long-time chair Obie Amacker.
- Thank you to Zoe Gastelum who has assumed the role of Communications Committee Chair.
- Welcome back to David Lambert, leading in a newly created position as chair of the ad hoc committee on Cyber/Physical Security Integration.

The Institute is fortunate to have such dedicated volunteers, people who believe in its mission and are willing to give their time and talents to support the Institute. There are many opportunities to volunteer with INMM, and I encourage all members to look for a way to get involved.

We would also like to recognize two new student chapters, formed since our last annual meeting. They are University of Sharjah in the United Arab Emirates and Virginia Commonwealth University in the United States. We welcome the new chapters and know they will make great contributions. Sadly, we were also notified of the dissolution of two chapters, South Africa and Triangle Area Universities/North Carolina State.
As of September 30, 2017, the Institute of Nuclear Materials Management’s total assets were $648,742. These assets included $174,689 in operating funds, $406,684 in reserves, and $67,405 in prepaid expenses/accounts receivable/other. The associated liabilities were $34,209 resulting in net assets of $614,533.

The FY 2017 gross income was $600,454 and the associated expenses were $812,309, resulting in a net loss of $211,855 for the fiscal year. Two key contributors to the loss were expenses related to the change of INMM’s management firm and the reduced revenue and hotel attrition charges associated with the significant under-attendance at the Indian Wells annual meeting.

The FY 2018 budget was established at a projected income of $718,800 and expense of $753,805, which results in a net loss of $35,005. The excess expense is mainly due to web site redevelopment depreciation expense.

A breakdown of FY 2018 income and expense projections, by major category, is presented below.

### Income:

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dues</td>
<td>$85,000</td>
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<tr>
<td>Memorial/Education Fund</td>
<td>$1,000</td>
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<tr>
<td>Journal</td>
<td>$9,500</td>
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<tr>
<td>Annual Meeting</td>
<td>$548,000</td>
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<tr>
<td>Proceedings</td>
<td>$400</td>
</tr>
<tr>
<td>Dividends and Interest</td>
<td>$200</td>
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<tr>
<td>Total Miscellaneous Revenue</td>
<td>$2,500</td>
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<tr>
<td>Workshops and Topical Meetings</td>
<td>$72,200</td>
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<tr>
<td><strong>Total Income</strong></td>
<td>$718,800</td>
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</tbody>
</table>

### Expenses:

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headquarters</td>
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<tr>
<td>Journal</td>
<td>$26,800</td>
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<tr>
<td>Annual Meeting</td>
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<td>Proceedings Archive Administration</td>
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<td>Technical Committee Support</td>
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<td>Standing Committee/Chapter Support</td>
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<td>Technical Division Support</td>
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<td>PATRAM Web Site</td>
<td>$1,200</td>
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<tr>
<td>Workshops and Topical Meetings</td>
<td>$47,285</td>
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<tr>
<td>Miscellaneous</td>
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<tr>
<td><strong>Total Expenses</strong></td>
<td>$753,805</td>
</tr>
</tbody>
</table>

Any INMM Member wishing to obtain a copy of the FY 2017 year-end financial statement may do so by contacting Robert Curl, INMM Treasurer, or Lacy Lee Baker, INMM Executive Director.
Election of Executive Committee

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 for Vice President and Members-at-Large of the INMM Executive Committee.

Vice President:
Willem Janssens
Susan Pepper

Members-at-Large:
Morris Hassler
Steve Mladineo
Irmgard Niemeyer
Therese Renis

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 3 to each of the 912 eligible Institute members of which 320 fully completed the ballot (35.09%). The number of members voting this year increased from last year, since only 24% of eligible members voted last year. As a result of the balloting, the Officers and Members-at-Large constituting the INMM Executive Committee beginning October 1, 2018, is as follows:

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

There were write-in votes for the following:

Vice President
Prof. Lawrence Anikwe Dim, Glenn Abramczyk

Members-at-Large
Chris Pickett

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)

2018 INMM Bylaw Revisions

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 whom the INMM maintains a formal relationship, rather than singling out one organization.

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

We urge all members to review the INMM structure and Chapter activities to find an activity in which they can become involved. Minutes of the 2017 Annual Business Meeting are included in this Annual Report.
INMM TECHNICAL STANDARDS COMMITTEE N14
Matt Feldman, Chair

Committee Activities
Revision of three existing standards is currently underway:
- N14.1-20XX - Uranium Hexafluoride – Packagings for Transport
- N14.7 – 20XX - Guidance for Packaging Type A Quantities of Radioactive Materials
- N14.36 – 20XX - Measurement of Radiation Level and Surface Contamination for Packages and Conveyances

Each of these standards is being revised to ensure they meet existing regulatory requirements. The annual meeting is being planned and will be announced when scheduled.

Standards Activities
N14.1-2012 - Uranium Hexafluoride – Packagings for Transport
Chair, Steve Hansen, VP Regulatory Compliance, TAM International
Email Address – Steve.hansen@tamintlusa.com
The ANSI N14.1 revision was to coincide with the changes to the international UF6 standard ISO 7195. Due to outstanding issues with the Competent Authorities, a resolution could not be reached on the comments before the deadline of the revision to ISO 7195. Now the ISO 7195 revision has been canceled and a new revision started.

Because of the issues with the international standard, the revision to N14.1 is on hold until the industry and Competent Authority issues are resolved. The draft international standard has been prepared and if no negative vote and no technical comment, it should then proceed directly to publication. This is expected by 3rd or 4th quarter of 2018. Once the international standard has been “approved”, the working group can continue with the revision to ANSI N14.1 and hope to have it completed by the end of the 1st quarter of 2019.

N14.5-2014, Leakage Tests on Packages for Shipment
Chair, Todd Sellmer, Manager Packaging and Information Systems
Email address - Todd.Sellmer@wipp.ws
This standard is currently not up for renewal. The renewal process for this standard will begin in August of 2018.

N14.6 – 1993, Special Lifting Devices for Shipping Containers Weighing 10,000 Pounds (4500 kg) or More
Chair – Vacant
The work on N14.6 has stalled because the entire working group has retired. The N14 chair, has been working for the past couple of years to get a new chair and establish a new working group for this standard. But so far no one has been available to chair or participate in revising this standard. There have been a number of requests to know when this will be revised, but as noted above until we can get a chair and working group the standard will remain withdrawn.

N14.7 – 2013 - Guidance for Packaging Type A Quantities of Radioactive Materials
Chair, Mark Hawk, Packaging Management Council Coordinator, DOE Consultant
Email address - hawkn14@gmail.com
Last year a request went out to the N14.7 Writing group informing them that the N14.7 standard was up for its five-year renewal and requested them to review and comment on the 2013 standard to see if they felt any changes needed to be made. So far, a number of Writing Group members have responded with their comments. Within the next month, the consolidated comments will be forwarded to Writing Group members for review and consideration. After that, a conference call will be held to determine if any changes are required.

N14.33-2005 - Characterizing Damaged Spent Nuclear Fuel for the Purpose of Storage and Transport
Chair, William (Bill) Lake – Acting, Consultant
Email Address - William.Lake393@gmail.com
This standard was officially withdrawn by ANSI September 30, 2015. The N14 Vice Chair, Bill Lake, has taken the role as acting chair to get this standard published. Since it has been officially withdrawn, in order to re-issue it N14 is required to treat this as a new standard. An ANSI PINS as officially issued March 31, 2017 and closed April 30, 2017. The subcommittee is moving forward and hopes to have a final draft completed by the end of 2018.

N14.36 – 2013 - Measurement of Radiation Level and Surface Contamination for Packages and Conveyances
Chair, Ashok Kapoor, Safety Engineer, STSM, DOE Office of Packaging and Transportation, EM-4.24
Email Address - ASHOK.KAPOOR@em.doe.gov
The M14.36 Chair sought comments on the current standard from the writing team members by email in the last quarter of 2017. To date the N14.36 Chair has received comments from the Department of Transportation, Nordion, and the Nuclear Regulatory Commission. As of this reporting they do not expect any other comments from the other members of the writing team. A conference call will be held in mid-February to finalize the changes to the standard. The working group plans on having a final draft by the end of August 2018 to initiate a full committee approval process.
N15.41-1994 – Measurement Control, General Principles (not active). A reinvigorated writing team under the leadership of Phillip Gibbs (new Chair) and Jackie Shipwash (N15 Writing Team Liaison), are working to review and complete the revision of N15.41 standard. Conference calls are being held to identify and discuss needed changes. Subsets of the writing team are currently revisiting multiple areas of the technical content. For example, the approach used to discuss systematic error in the measurement process is currently not sufficient. The Jaech text from 1973 and a Los Alamos National Laboratory (LANL) report by R.R. Picard 1989 address the subject much better. 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 has achieved agreement on and are working to expand/clarify the discussion on several key aspects of measurement control as it relates to nuclear security. Those areas are 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. Future conference calls/webinars are being planned. The group hopes to have the completed N15.41 revision draft ready for review by the summer of 2019.

N15.51-2017 – Measurement Control Program, Nuclear Materials Analytical Laboratory (active). An N15.51 writing team lead by B. Chino Srinivasan revised the N15.51-2007 standard in response to suggestions submitted by N15 members during the period 2012-2015. It was approved by the ASC N15
ballot roster on October 10, 2017 and completed public review on October 16. No negative votes were received. Comments received with affirmation votes during ASC N15 consensus body balloting were discussed via writing team webinars and conference calls. A BSR-9 form was submitted and ANSI granted approval of N15.51-2017 on October 27, 2017. It was edited and published by ANSI. It can be purchased at https://webstore.ansi.org/.

Outreach and Collaboration

• Tracking UF6 cylinders – There is an emerging and growing interest in developing a voluntary consensus standard for the identification, labeling, and tracking of UF6 cylinders. In 2017, a working group of the World Nuclear Transport Institute (WNTI), containing representatives of the UF6 handling industry, reached consensus on a global standard titled: WNTI Standard for UF6 Cylinder Identification (www.wnti.co.uk/media-centre/publications/wnti-standards.aspx). This standard was written “to provide a standardized format and application method for a global identifier of uranium hexafluoride (UF6) cylinders most commonly used across the nuclear industry”. 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 methods of conducting a physical inventory of UF6 cylinders using the new global standard. They are also working with INMM ASC N14 and the ANSI N14.1 – Packaging of Uranium Hexafluoride for Transport writing team for communication and 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, JAEA) are maintained by extending invitations to participate in the annual meetings of INMM ASC N15 and 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.

• N15 Board Officers participated in the ANSI Joint Member Forum and Annual Business Meeting on October 19, 2017; the ANSI Webinar “2018 ANSI Accredited Standards Developer Compliance Review” on February 15, 2018; and in ASTM C26.10 discussions on a proposed guide for determining Total Measurement Uncertainty (TMU) for NDA methods on January 22, 2018. The N15 Board participated in INMM Executive Committee meetings in December 2017, and March and July 2018. N15 Board of Officers plan to hold annual INMM ASC N15 and N15/INMM 5.1 Subcommittee meetings in July 2018 in conjunction with the INMM 59th Annual Meeting in Baltimore, Maryland, 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.

• N15 and N14 (Packaging and Transportation) were invited by the INMM Executive Committee (EC) to submit a joint article for the INMM Journal of Nuclear Materials Management. A first draft of the article has been prepared which is intended to highlight the importance, function, and benefit of the INMM as Secretariat for N15 and N14, two nationally accredited standards development organizations.

• ANSI audit (Regular 5-Year) - 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. ASC N15 was formally notified of the audit in December 2017, submitted required
paperwork in January and May 2018, and held pre-audit and post-audit conference calls with the ANSI Audit Director and auditor. The final audit report was received on May 18, and a corrective action plan to address audit findings has been submitted to ANSI. The N15 Board Officers are preparing revised N15 Operating Procedures to address the procedural audit findings. They will be submitted to the INMM EC and to ANSI for approval. The audit will remain open until such time as N15 submits revised procedures to ANSI and those procedures are subsequently reaccredited by ANSI.

Summary. The N15 Board would like to thank all who contribute to and participate in the development of 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
lynne.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 February 28, 2018, to establish the program for this year’s annual meeting. Numerous volunteers spent the day organizing more than 300 abstracts into 45 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

| Glenda Ackerman | KC Drypolcher | Corey Hinderstein | Tom Pham | Robert Watkins |
| Rian Bahran     | Stacey Eaton  | Russell Johns     | Chris Pickett | Ben Watts   |
| Mike Baker      | Paul Ebel    | Shirley Johnson   | Joe Rivers | Michael Whitaker |
| Steve Bellamy   | Melissa Einwechter | Teri Leffer | Nina Rosenberg | Jessica White-Horton |
| Tom Bonner      | Jeff England | Dennis Mangan    | Kenneth Sanders | Any Worall |
| Brian Boyer     | Marianne Fisher | Carrie Mathews | Larry Satkowski | Louise Worall |
| Joyce Connery   | Claudio Gariazzo | Melanie May | Amanda Sayre | Steve Wyrick |
| Jill Cooley     | Zoe Gastelum | Steve Mladieno   | Mark Schanfein | James Andre |
| Cary Crawford   | Phil Gibbs   | Bruce Moran      | Manit Shah | Karen Hogue |
| Ben Cross       | Thomas Grice | Sean Morrell     | Michelle Silva | Willem Janssens |
| Arden Dougan    | Charlie Harmon | Nancy Jo Nicholas | Heidi Smart | Karen Miller |
| Mona Dreicer    | Morris Hassler | Susan Pepper | Scott Vance | Bryceon Shulman |

AWARDS OVERSIGHT COMMITTEE

Susan Pepper, Chair

Arden Dougan serves as the Chair of the Subcommittee for Special Service Awards and Recognition, and Joseph Indusi serves as the Chair of the Subcommittee for Distinguished and Meritorious Service Awards.

The Special Service Awards and Recognition Subcommittee is responsible for drafting text for Resolutions of Respect and evaluating nominations for the Charles E. Pietri Special Service Award, to recognize noteworthy contributions to the industry or the Institute, and the Early Career Award, which recognizes outstanding achievements by an INMM member early in his or her career.

The Distinguished and Meritorious Awards Subcommittee members review nominations for both the Vincent J. DeVito Distinguished Service Award, which honors long-term noteworthy service to the nuclear materials management profession, and the Edway R. Johnson Meritorious Service Award, which honors long-term outstanding contribution to the INMM and the profession.

The 2018 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 23, 2017.

We regret to report the deaths of our colleagues Walter Kane, Mitsuho Hirata, and Andrei Sviridov. Resolutions of respect were prepared for presentation at the INMM Annual Membership meeting on July 24, 2018.

Respectfully submitted,
Susan Pepper, Chair
Awards Oversight Committee
Between March 2018 and July 2018, the Chapter Relations Committee (CRC) has supported existing and the creation of new INMM chapters around the world. In these months, one new chapter was established, and two have been dissolved as listed below. The current total is 16 professional chapters and 25 student chapters as of July 2018.

Notable activities/achievements during this period:

- The CRC and INMM HQ staff have been engaged with the University of Sharjah in the United Arab Emirates to submit a modified charter and application for forming a chapter. The final version has been approved by oversight and submitted to the EC for a decision by the EC during the July EC meeting.
- The VCU Student INMM Chapter had an integral collaboration with the VCU Student ANS Chapter in winning hosting duties of the 2019 Student ANS Conference in Spring 2019. The INMM student chapter is defining a specific presentation track on nuclear nonproliferation in efforts to bridge the gap between the INMM and ANS missions.
- Two chapters were dissolved by choice of those chapters: North Carolina State University Triangle-areas Universities (correspondence from John Mattingly) and the South African Chapter (correspondence from James Larkin).
- Students at Washington State University (WSU) have begun to engage with the Pacific Northwest Chapter (PNW) in establishing a new student chapter. Refer to PNW report for more details.
- Students and faculty at Purdue University have begun exchanging ideas with the INMM EC and CRC about officially establishing a Purdue University chapter.
- With the ISD Technical Division, the TAMU student chapter has planned and will execute a half-day workshop on policy and technical aspects of International Safeguards on the morning of Sunday, July 22nd preceding the Annual INMM meeting. TAMU will be providing continuing education units (CEUs) for completion of the workshop along with relevant online asynchronous educational modules through the TAMU-NSSPI’s website. Contact S. Chirayath at TAMU for more information (sunilsc@tamu.edu).

Potential Issues

- Some discussion is warranted in distinguishing individual memberships to regional/student INMM chapters and the INMM parent organization. To ease confusion for individuals, should an agreed-upon title be made for chapter-only members? This definition ties to the aforementioned chapter activity requirement.

Signed,
C. Gariazzo
M. Shah
This quarter, we have formalized several missing committee membership positions, including the approval of Meili Swanson as Communications Committee Deputy Chair, and Steven Horowitz as Social Media Chair.

The Committee has been actively involved in supporting preparation for the INMM 60th Anniversary and the 60th Annual Meeting events, as well as increasing activity in several areas where sub-committees had been struggling. As part of membership engagement activities and outreach, the Committee will host an INMM Story Core-type survey via Survey Monkey that will launch at the Annual Meeting in Baltimore and then be available throughout the year for members to share their INMM stories and memories in preparation for the 60th Annual Meeting.

The Committee has been developing and revising a mid-term planning document in order to understand our commitments by sub-committee under the INMM strategic plan, and also to document our own development and planning activities. The document is informal and intended to be revised annually, and will be presented for discussion at the Annual Meeting.

The Communications Committee led the authorship of an abstract which has been accepted to the IAEA Safeguards Symposium in Vienna in November 2018. A draft paper is being circulated to sub-committee chairs for comment.

An open meeting of the Communications Committee is planned for the 2018 Annual Meeting in Baltimore.

INMM Communicator (Jay Disser and Katherine Bachner, Co-chairs)
The Communicator team has prepared its newest issue, and is awaiting its publication on the website. This issue will be the last to be published as a newsletter, as the Communicator is moving to a blog format under the same website location. The new format will allow the Communicator team to add articles in a more timely fashion as they become available.

This new issue of the Communicator will include a new feature, “Member Highlights” in which the editorial team (or guest) interviews an INMM member. For this first Member Highlight, the Communications Chair interviewed the two Communicator editors, Jay Disser and Katherine Bachner, as a “get to know your editors” piece. We hope to conduct additional interviews at the INMM annual meeting and throughout the year.

Public Relations and Outreach (Sarah Frazar, Chair)
Sarah has developed a draft template for press releases about INMM awards, membership status changes, etc. This can be used to support the INMM News section of the website, which now hosts INMM information from the email blasts. The sub-committee has requested a blast email request for a sub-committee vice chair.

Website (Karl Horak, Chair)
The banners for the website have been updated to have more timely content, and the sub-committee began discussions on how to keep this content fresh, including a back-up for what content should normally be there, and how long new informational banners should stay up. The website committee has drafted a request to technical division chairs, chapter and student chapter presidents, and working group chairs to request information revisions and inputs for their INMM website pages.

HQ has made arrangements to live stream the opening plenary of the Annual Meeting via INMM’s You Tube channel (via the INMM website).

Social Media and Apps (Steven Horowitz, Chair)
We are pleased to announce that Steven Horowitz has volunteered to take the chair of the social media and apps sub-committee, upon Sean Morrell’s acceptance of a posting at the IAEA. Steven has already begun reaching out to interested members in boosting our social media links to relevant organizations and posting industry-relevant news and content on our social media channels.

In April we began a Twitter photo contest to drum up content and excitement for the INMM 60th anniversary. Participation has been limited.

The meeting app used at the 2017 Annual Meeting will be used again, based on its popularity in 2017.
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
Steve Horowitz, chair, Social Media and Apps Subcommittee
Amanda Rynes, deputy chair, Social Media and Apps Subcommittee
Lacy Lee Baker, INMM Headquarters Liaison

Management Oversight: Steve Wyrick
**Education & Training Committee**  
*Melissa Einwechter, Chair*

---

**Education and Training (E&T) Committee Deputy Chair**

This year, the E&T Committee was pleased to welcome Karen Hogue of Consolidated Nuclear Security, LLC into the role of Committee Deputy Chair. Of note, she was previously the founder and President of the Middlebury Institute of International Studies at Monterey INMM Student Chapter. Please join us in welcoming Karen as E&T Deputy Chair!

**Annual Meeting E&T Abstracts and Papers: 2017 recap and 2018 preview**

The 2017 Annual Meeting featured 5 dedicated E&T sessions. The themes which generated the most papers were training approaches and university and other institute curriculum development, with an increased emphasis on courses in nuclear safety.

Twenty abstracts were submitted under topics related to E&T for the 2018 Annual Meeting. Out of those abstracts, 18 were submitted as papers and 2 as posters. Of the 18 papers, 4 were withdrawn prior to the meeting. The 14 remaining papers will be presented during 4 scheduled E&T sessions focused on university initiatives, professional development, workforce planning and advocacy, and panel discussions on global material security training and nuclear smuggling detection and deterrence exercises.

**Student Paper Award**

The J.D. Williams Student Paper Award is in its 15th year.

Twenty-four papers and two posters met all criteria for the student paper award at the 2017 Annual Meeting. Qualifying papers are made available to the Technical Division chairs who distribute them to career professionals in the technical division for the technical review, which accounts for 80% of the total evaluation. Papers are rated in five categories of equal weight: relevance to INMM, research quality, argument quality, thesis and conclusion, and writing quality/publication readiness.

Scores from the technical review are provided to the Student Paper Competition leads for tallying and preparation for review of the verbal presentation at the Annual Meeting, which constitutes the remaining 20% of the total evaluation. A team of career professionals observe the verbal presentations (multiple observers per presentation) and report scores to the competition leads. Presentation scoring includes marks for speaking skills (delivery, knowledge, poise, eye contact, and questions) as well as visual aid quality (organization, graphics, text, spelling and grammar, and the conclusion). Prior to the Closing Plenary, all scores are tabulated, reviewed by the competition leads and other judges, winners determined, and the final results prepared for reporting at the Closing Plenary. In addition to recognizing the top two papers overall and the best poster, since 2014, division finalists (from each technical division not otherwise awarded) have also been recognized.

To support volunteer judges and provide additional standardization and guidance for the 2017 Annual Meeting, a detailed criteria rubric/matrix for volunteer judges that outlined characteristics of excellent (4 pts), good (3 pts), marginal (2 pts), and inadequate (1 pt) scores for each of the criteria outlined above was developed. This additional guidance was well-received by judges.

In total, there were 28 volunteer judges who reviewed written papers and/or oral presentations: 10 technical reviewers, 12 verbal presentation reviewers, and 6 reviewers of both.

The first and second place paper winners were:

- 1st place: Paper #255, “Identification of Mixed Sources with an Organic Scintillator-based Radiation Portal Monitor” by Marc Paff from the University of Michigan
- 2nd place: Paper #405, “Re-examining the State of Radiological Source Security in Russia” by Alex Bednarek from George Washington University

The best poster winner was Poster # 380 “Phonon Dispersion Relations of bcc U and Mo from MD Simulations” by Andrea Saltos from the University of Missouri.

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1The Student Award, instituted in 1979 and conferred eight times in the ensuing 23 years, was formally renamed as the J.D. Williams Student Paper Award in 2003 and has been awarded annually since then.
Forty abstracts with student paper award eligibility were submitted for the 2018 Annual Meeting. Out of those abstracts, 18 papers and 3 posters met all criteria for the student award. The majority of the 19 abstracts that did not meet eligibility requirements were due to papers either not submitted or submitted after the deadline and changes in presenter (usually to a faculty advisor instead of the student).

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

**Student Activities**

The Student Activities Subcommittee sponsored 11 student chapter representatives in Indian Wells. A luncheon was held on Saturday, July 15 for the Student Chapter Presidents as a networking event, both with each other and with participating INMM members active in education and training. At the 2018 Annual Meeting, the Student Activities Subcommittee is sponsoring 10 students. This is the first time that funding has been made available to non-U.S. based chapters; two non-U.S. chapters will send participants. Next year funding will be allocated to those universities participating in the Student Research Initiative (see below).

Also at the 2017 Annual Meeting, the Student Activities Subcommittee organized an invitation-only “fireside chat” with Sig Hecker and a group of 20 students and early career professionals. To select participants for this opportunity, the Executive Committee and Technical Division Chairs were asked to nominate students and professionals with five years’ work experience or less. The event was a success, and the E&T Committee will look for similar opportunities at future INMM meetings.

**Student Research Initiative**

The Education and Training Committee is endeavoring to strengthen INMM’s engagement with students. In this vein, the E&T Committee is pursuing a Student Research Initiative opportunity which will provide an INMM-directed research opportunity for students in a student chapter competition. Presenters from the chapters selected for papers will be provided travel and lodging coverage at the 2019 Annual Meeting.

The INMM Student Research Initiative is an opportunity for the Institute to:

a) increase engagement with student chapters (especially across all technical divisions)
b) increase the incentive for individual students to be engaged
c) provide chapters with a concrete opportunity to contribute to research of INMM interest
d) provide INMM with an avenue for INMM-directed, student-produced research

There is no additional cost to the Institute; this is covered by existing Student Activities Subcommittee funds.

The topical area for the pilot is 6 different papers: “Future Technical and Policy Challenges in (insert each Technical Division). This is by design very open ended, to give students room to run with this. E&T will accept applications from chapters through October and, in coordination with each associated Technical Division, select a student chapter(s) to pursue the topic. Final papers would be presented at the 2019 Annual Meeting, with progress noted at interim EC meetings.

**Closing Remarks**

As always, we welcome education and training ideas and comments from the INMM membership, and are open to volunteers wishing to serve on the Committee and/or to assist in judging the annual student paper award competition.

Respectfully submitted,

Melissa Einwechter, E&T Committee Chair
Karen Hogue, E&T Committee Deputy Chair
Amanda Sayre, Student Activities Subcommittee Chair
Jim Andre, Student Paper Competition Lead
Glenda Ackerman, Student Paper Competition Lead
**Exhibit and Sponsorship Committee**

*Glenn Abramczyk, Chair*

---

**2018 Committee Members:**

Steve Bellamy, Savannah River National Laboratory  
Thomas Bonner, Oak Ridge National Laboratory  
Cary Crawford, Oak Ridge National Laboratory  
John Smalling, Ortec  
Sean Stanfield, Canberra

The Exhibit and Sponsorship Committee was traditionally only responsible for the Annual meeting. At the November 2015 EC meeting it was recommended to the EC a re-alignment of the responsibilities. The EC consolidated the exhibit and sponsorship activities for all INMM sponsored and co-sponsored meetings, conferences and workshops under the Exhibit and Sponsorship Committee. The Public Relations and Outreach efforts remain under the Communications Committee. A review of the last five years of all the INMM Workshops the only one which has been held consistently (i.e. for more than 2 years) has been the annual Spent Fuel Workshop (SFW) held in conjunction with DOE EM. Discussions were held with Jeffery England, the Workshop Chair, and Bradley Loftin, who has been assisting Jeff in organizing and running the SFW. The primary sponsor of the SFW declared bankruptcy and provided no funding in 2017. The SFW has historically obtained their own sponsorships and funding. With the loss of their primary sponsor, SFW is willing and appreciative of any assistance that may be rendered in finding additional workshop sponsors. The change in the association management company (AMC) also raises the question and opportunity for improvements in the conduct of the workshop. The Exhibit and Sponsorship committee looks forward to working with the new ACM and the SFW soon on the 2018 workshop.

The Exhibitor and Sponsorship Committee will contact each of the Technical Committee Chairpersons and the area Chapter Presidents for two purposes. First, to establish a point of contact for workshops, INMM sponsored or co-sponsored meetings and conferences and for lists, if available and within privacy restrictions, a list of attendees and sponsors. This database will be used as a starting point for developing contact for future support/sponsorships. A sponsor of a workshop, meeting or conference in one technical area or location may be interested in similar support in a physically different area. Even if it is just for “man recognition” both at the local area and nationally. Secondly, the C&TSC will be used to develop a contacts industry list which the Exhibition and Sponsorship will work with AH to reach out to industry for sponsorships. The main effort will be done by AH Industrial Relations and Business Development for 10% of the funding received. I have been talking with Sabina Gargiulo, the Senior Director of AH IR&BD.

Glenn Abramczyk, worked with Lacy Lee Baker and Heidi Jetter of INMM Headquarters updated the exhibitor/sponsor prospectus and other outreach materials for the 2018 Annual Meeting and other 2018 INMM conferences and workshops. The updated materials were part of the package that was sent to all previous and prospective exhibitors and sponsors for the 2018 Annual Meeting. There were thirty four (34) exhibit spaces available with eighteen (18) being rented. With available floorspace in the exhibit hall it was decided to consolidate (relocate) some of the rented Booths (with the permission of the renting organizations) and keeping their relative locations, and to co-locate the Poster Exhibits to the available area of the Exhibits Hall. This will increase foot-traffic to both areas and not isolate either.

In the following, we present some graphs showing the exhibits and sponsorship activities. The decrease in exhibitors relative to the last few years has increased. 2017 had the fewest Exhibitors of the last ten Annual Meetings. Also, there was only one workshop last year and the loss of its major sponsor had an impact on the number of sponsors per workshop. This was discussed previously. The loss of Sponsorships both at the Annual Meeting and at workshops is an issue that needs to be addressed while working with the new AMC.
The E&S C proposed to give the 2018 Exhibitors a 10% discount on a 2019 Exhibit Booth if they commit by an “as-of-yet” unspecified date. The E&SC is concerned about Exhibitor participation with the return to Palm Desert in 2019. Six of the 2018 Exhibitors are DOE National Laboratories. Funding for activities such as the INMM typically does not get requested until November/December (based upon requested and approved Site budgets and/or Continuing Resolutions) and doesn’t get approved and dispersed until January/February. A “commitment” of funds to Exhibit 11 months in advance may be a stretch. The E&SC is proposing to just offer the discount as an incentive and contact the Exhibitors prior to the 2019 Prospectus being issued with a reminder of the personal incentive. The E&SC is considering investigating a “rolling” incentive program to incentivize long-term continuing exhibitors.

Respectfully submitted,

Glenn Abramczyk
Chair, Exhibit and Sponsorship Committee

Figure 1. Number of exhibitors at the INMM Annual Meeting for the last 8 years.
Figure 2. Number of INMM sponsored or co-sponsored meetings, conferences, or workshops, excluding the Annual Meeting for the last 6 years.

Figure 3. Amount of sponsorship revenue per event for the last 6 years.
At the end of the last fiscal year, the long-time INMM Fellows Committee chair Obie Amacker stepped down to more fully enjoy his retirement. I was honored and humbled to be approved this spring by the Executive Committee to follow in Obie’s footsteps as the new Fellows Committee chair. I greatly appreciate Obie’s dedicated leadership of the Fellows Committee over the years, and I also thank Ken Sanders for his faithful service as interim Fellows Committee 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 Executive Committee, perform assigned tasks, and promote the vision of the INMM. The Fellows serve as a strategic resource for the Executive Committee and, in particular, the INMM Officers. Many Fellows have both the time and ability to think through alternatives and present options to the EC. They should be tasked periodically with both short- and long-term assignments.

Last summer in Indian Wells at the 58th Annual Meeting Teressa McKinney and Markku Koskelo 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 Annual Meeting in Baltimore, and they will welcomed by all Fellows in attendance during our luncheon meeting.

Over the course of this past year, the Governance Documentation has been amended as follows:

- The INMM Bylaws were amended to reflect the adjusted Terms of Office for the elected Officers.
- The Operations Manual was amended to include the following:
  - INMM Chapter Anniversary Award
  - An Officer election matrix to implement the Bylaw revision to Terms of Office
  - A Policy for Respectful Behavior
  - A Policy on Advocating Public Statements
  - Amending the Roles of the Immediate Past President to expand Liaison to all organizations with an INMM MOU.

Specific Policies are now listed separately under INMM Policies, as well as having links to them in the Ops Manual.

The HTML version of the Ops Manual continues to evolve. We should be able to complete this transition before the end of this calendar year.

Respectfully submitted,
Charlie Harmon
Ken Sanders
Volume 46, No. 2, has been completed and released. It includes two review articles from workshops that were conducted in August, 2017 and January, 2018. As of this writing, the special issue the Open Source and Geospatial Information Working Group has been working on is just about ready to be submitted to the publishing process. It will become Volume 46, No. 3. Volume 46, No.4 is expected to include the material from the INMM Annual Meeting as usual, and we expect it to bring us back to the normal publishing schedule.

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 was held at PNNL in May. The workshop organizers are on track to prepare a special issue from the presentations made at that workshop to become Volume 47, No 1.

In addition to the special issues, the JNMM currently has 7 manuscripts in the review process. We will find a suitable issue to publish them in when the reviews and re-writes are complete.

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       Brian Boyer  
Technical Editor     Assistant Technical Editor
A few updates from the Membership Committee:

Since the last EC meeting in March, the Committee has recommended approval of 25 new regular member and 45 new student member applications. The majority of the new applications were those applying for membership to get the member rate for the annual meeting.

The Membership Committee recommended and the EC approved 8 new Senior Members this year. These individuals will be recognized at the Annual Meeting in Baltimore in July:

Sunil Chirayath
Jay Disser
Robert Floyd
Claudio Gariazzo
David Hanks
Harrison Kerschner
Ho-Dong Kim
James Russell

Members of the Committee:

Al Garrett
Leigh Gunn
James Miller
Mark Mount
John Oyer
Therese Renis
Michelle Romano
Mark Schanfein

Respectfully submitted, James Miller
Chair, Membership Committee

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

<table>
<thead>
<tr>
<th>Member Type</th>
<th>June-13</th>
<th>June-14</th>
<th>June-15</th>
<th>June-16</th>
<th>June-17</th>
<th>July (to date)-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular</td>
<td>924</td>
<td>924</td>
<td>818</td>
<td>749</td>
<td>815</td>
<td>717</td>
</tr>
<tr>
<td>Fellow</td>
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<td>25</td>
<td>26</td>
<td>24</td>
<td>25</td>
<td>26</td>
</tr>
<tr>
<td>Emeritus</td>
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<td>4</td>
<td>5</td>
<td>6</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Senior</td>
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<td>106</td>
<td>101</td>
<td>96</td>
<td>86</td>
<td>80</td>
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<tr>
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<td>8</td>
<td>7</td>
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<td>8</td>
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<tr>
<td>Sustaining</td>
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<td>28</td>
<td>30</td>
<td>25</td>
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<td>1</td>
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<td>160</td>
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## INMM MEMBERSHIP COMPARISON (October 31, 2016 – July, 2018)

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<tr>
<th>Type</th>
<th>29-Feb</th>
<th>31-Mar</th>
<th>30-Apr</th>
<th>31-May</th>
<th>30-Jun</th>
<th>31-Jan</th>
<th>30-Jun</th>
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<tbody>
<tr>
<td>Regular</td>
<td>787</td>
<td>617</td>
<td>634</td>
<td>720</td>
<td>811</td>
<td>787</td>
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<tr>
<td>Fellow</td>
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<tr>
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<td>15</td>
<td>15</td>
<td>15</td>
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<td>20</td>
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<td>20</td>
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<td>152</td>
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<td><strong>TOTAL CURRENT MEMBERS</strong></td>
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<td>942</td>
<td>1034</td>
<td>1131</td>
<td>1291</td>
<td>1038</td>
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<table>
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<tr>
<th>Type</th>
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<th>30-Apr</th>
<th>31-May</th>
<th>30-Jun</th>
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<tr>
<td>NEW Regular</td>
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<td>71</td>
<td>4</td>
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<tr>
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<td>0</td>
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<td>0</td>
</tr>
<tr>
<td><strong>TOTAL NEW MEMBERS</strong></td>
<td>24</td>
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<td>32</td>
<td>71</td>
<td>4</td>
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<tr>
<td><strong>2017 MEMBERSHIP TOTALS</strong></td>
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<td>923</td>
<td>974</td>
<td>1105</td>
<td>1135</td>
</tr>
</tbody>
</table>

### YTD Membership Mix

- **Regular**: 69%
- **Student**: 15%
- **Emeritus**: 1%
- **Senior Emeritus**: 1%
- **Senior**: 9%
- **Emeritus**: 1%
- **Fellow Emeritus**: 2%
- **Fellow**: 2%
- **Honorary**: 0%
- **Life Fellow**: 0%
- **Sustaining**: 1%
- **Fellow**: 2%

![YTD Membership Mix Chart](image-url)
Membership Committee (cont.)

YTD Membership By Region

North America 54%
Asia 24%
Europe 13%
Africa 6%
South America 1%
Australia 1%
Middle East 1%

North America 54%
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 Group</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>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>
<tr>
<td>David Lambert</td>
<td>Senior Security Specialist, Gregg Protection Services (Centerra)</td>
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<tr>
<td>Bill Knauf</td>
<td>President, Advanced Insights Group</td>
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<tr>
<td>Sean Morrell, Dep. Chair</td>
<td>Nuclear Engineer/Program Manager, Oak Ridge National Laboratory</td>
</tr>
<tr>
<td>Nick Quintero</td>
<td>Graduate Fellow supporting the Office of Nuclear Materials Integration, National Nuclear Security Administration</td>
</tr>
<tr>
<td>Therese Renis</td>
<td>Section Head, Concepts and Approaches IAEA</td>
</tr>
<tr>
<td>James W. (J.R.) Russell</td>
<td>Manager for International Nonproliferation, Nevada National Security Site</td>
</tr>
<tr>
<td>Grace Thompson</td>
<td>International and Special Programs for SNL (retired); Chair, INMM Operations Oversight</td>
</tr>
<tr>
<td>Susan Voss</td>
<td>President, Global Nuclear Network Analysis, Inc.</td>
</tr>
</tbody>
</table>

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 August 2017 – June 2018

1. Global Security Summit. There is a goal in our Strategic Plan for the SPC to assist in orchestrating a “Global Security Summit” that would help identify topical priorities for the Institute to work on. As these discussions have proceeded in a working group chaired by Willem Janssens, the closing Plenary of this year’s Annual Meeting has been designed to help identify these priorities by including a special panel that will address “Global Nuclear Materials Stewardship Challenges”. It is hoped that the rich discussions that will result from this special Closing Plenary will help to provide a basis for identifying the priorities for the Institute in the future.

2. 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. Dr. Sunil Chirayath, the President of the SW Chapter is working with Texas A&M and the International Safeguards Division to present a “Safeguards Fundamentals” course on the Sunday before the 2018 Annual Meeting in Baltimore. Continuing Education Units and a Professional certificate will be available for this offering, which requires pre-meeting on-line requirements to be met. This event will provide an excellent opportunity for adding value to the Annual Meeting for participants. Work continued during this period with the SW Chapter and the EC to further develop the concept and address issues. Another collaborative connection was made was with Dan Johnson of WINS. Dan is the new Senior Advisor for WINS in the U.S., and we have added him to our Strategic Planning Committee as a result of discussions held during and after last year’s Annual Meeting. WINS is in discussions with the Institute on possible collaboration with training opportunities, and is monitoring the Texas A&M effort to gather data.

3. 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 EC meeting for discussion. Subsequently, Claudio and Jack have been working on focusing that list specifically on research opportunities for students in the global nuclear materials community. This work in progress will continue during 2018. In other discussions within the SW Chapter, a suggestion was made that the Institute offer students an opportunity to post their resumes, particularly those who have already graduated, so that our membership can identify individuals who are already familiar with the broader community of nuclear materials management.

4. Taking the Long View Industry News Column. Two “Taking the Long View” columns were submitted to the Journal of Nuclear Materials Management (JNMM) during this period:

   – Vol. XLVI, No. 1 - “Taking the Long View in a Time of Great Uncertainty: Living in Interesting Times”, which explored the origins of the phrase “May you live in interesting times” in the context of changes within the Institute and the world.

   – Vol. XLVI, No. 2 – “Taking the Long View in a Time of Great Uncertainty: Perhaps Not in My Lifetime”, which puts the eight years of effort by the Obama Administration to reduce the emphasis of nuclear weapons in context with the modernization initiative of the Trump Administration, and the rhetoric that has surrounded the first year of the new Administration.

5. 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.

6. 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.
7. **Organizational Strategic Planning.** The SPC will continue to work with the EC and Headquarters staff to implement the new Strategic Plan.

8. **Nuclear Fuel Cycle Linkage.** During the Strategic Planning Committee meeting at the 2017 Annual Meeting, a suggestion was posed to create a promotional graphic that demonstrated how the INMM’s work aligns with the Nuclear Fuel Cycle. The concept was that if we could show this linkage, we may be able to attract non-traditional INMM organizations and members to the Institute, particularly in the nuclear facility/power plant industry. A discussion was held during the December EC meeting in Washington, D.C., and also during the March EC meeting in New Orleans, and several iterations of the chart have been generated and sent to the Technical Divisions for comment. The most current version is attached to this report.

9. **Historical Timeline of INMM.** During the March EC meeting there was a discussion of creating a timeline for the 60th Anniversary celebration of the Institute. Jack Jekowski volunteered to use materials available on the INMM website to create a straw man of this which is the second attachment to this report. Drawing upon three historical write-ups in the JNMM, as well as archived copies of the JNMM itself, a first pass was made at a draft timeline for review by members of the EC and is attached.

### Planned actions for 2017-2018

- Assist in the execution and follow up of the Closing Plenary Session during the 2018 Annual Meeting.
- 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.
- Create an informational matrix that identifies organizational entities that may be able to support student research.
- Work with the EC and the Student Activities Committee to engage students, including suggestions such as providing a C.V. posting opportunity on the INMM website for graduating students, or those seeking summer employment.

### Strategic current events impacting the Institute today:

As we enter an ever-more uncertain world half way through 2018, 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. Questions about the attempts by Russia to influence the Presidential elections continue to impact the relationship between the two countries, as the National Security Strategy, the National Defense Strategy, and the Nuclear Posture Review have changed the perspective of the U.S. Defense strategy from the previous Administration’s focus on Terrorism to an increased focus on major state adversaries, including Russia and China. Boasts by President Putin about new military capabilities to the Russian Federal Assembly in his annual State-of-the-Nation Address on March 1st, including a new “super-heavy” ICBM, nuclear-powered and hypersonic cruise missiles, a new unmanned nuclear-powered submarine capable of delivering large nuclear warheads to coastal cities, and
a modernized stockpile continued to increase tensions between Russia and the West. In recent months, the Trump Administration has begun to make overtures to Russia to hold talks despite these differences, with an initial meeting planned for mid-July in Helsinki.

- 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 to address this issue. With the additional uncertainties associated with Tariffs and the ensuing threat of a major trade war, even the creation of scenarios for how these issues will be resolved becomes difficult.

- Iran. The decision by President Trump to withdraw from the Joint Comprehensive Plan of Action (JCPOA - the “Iran Deal) on May 8th 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. The U.S. position is no longer “business as usual” as the disruptive approach to diplomacy by the new Administration is now fully engaged.

- North Korea (DPRK). The summit between President Trump and Kim Jung-un was also certainly not “business as usual”, but nonetheless continues to offer hope that a long-standing stalemate on the Korean Peninsula has been shattered with the official signing of an agreement on June 11th to move forward toward denuclearization. Many, however, are not optimistic about the eventual outcome because of previous behaviors by the rogue nation, as evidence mounts following the summit of increased activity at some of North Korea’s nuclear sites.

- Global Instability. The continued unrest in the Middle East, including expansion of the ground war across international borders presents unique challenges to the world as a general malaise has spread across the Middle East and the European continent with continuing incidents of terrorism. The extensive diversity of the Institute’s members in multiple disciplines could very well be a determining factor in how successful the world is in addressing this new confounding challenge.

- 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 scheduled to come on line in 2018. Saudi Arabia also has begun the process of seeking contracts to build two nuclear power plants. Technological struggles by Japan, however, to contain the spread 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. Presidential election. 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. More recently, DOE Secretary Perry has proposed a new initiative for FY2019 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
STRATEGIC PLANNING COMMITTEE (cont.)

security control compliance requirement is now in all DoD contracts and subcontracts.

- **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. 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 recently identified the planned 30-year modernization effort of the U.S. alone will be in excess of $1.2T. These plans have been confirmed with the release of the Nuclear Posture Review on February 3, 2018.

- **Brexit.** The 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 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.

**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 recent “Taking the Long View” columns. As the world anxiously awaits the “next surprise” or change in 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 exceeds $21T. 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, add a difficult unknown to the stability not only of the U.S. economy but the world. The partisan battles in the U.S. Congress have also created short term problems associated with the funding of the U.S. government, 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**

- **WIPP Radiation Incident.** As the WIPP site moves back to operational capability, four 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 efforts by the new Administration to restart the work associated with the re-opening of the Yucca Mountain project, and proposals for licensing of a Consolidated Interim Storage Facility (CISF) to hold spent fuel from nuclear plants across the U.S.

- **Future of the Enterprise.** The future of the Nuclear Security Enterprise is yet to be determined. Administrator Klotz resigned his position in late January, and Lisa Gordon-Hagerty was nominated by the President and confirmed by the Senate, and is now in a “data gathering” effort. Secretary of Energy, former Governor Rick Perry, has expressed support for the National Laboratories and the modernization of the stockpile, as well as for WIPP and other programs. 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, as the results of two Congressionally-mandated studies of the Enterprise and the DOE system of national laboratories have created a new wave of recommendations to resolve issues that have grown more significant in the past three decades. Major competitions for the Laboratory contracts, including Sandia and Los Alamos, Portsmouth and Paducah, and Savannah River also introduce new variables into this system as new contractor entities are selected.

**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 by some members and Chapters due to international tensions, and the changing demographics of its membership.
INMM Technical Divisions and other support Committees include disciplines that align with activities across the Nuclear Fuel Cycle.

**International Safeguards**
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.

J. Michael Whitaker, Chair

**Nuclear Security & Physical Protection**
Promotes the advancement and implementation of technology and systems for the physical protection of nuclear materials and facilities.

Joe Rivers, Chair

**Facility Operations**
Provides a forum for the exchange of knowledge, best practices and lessons learned in nuclear facilities’ operations in commercial and government sectors.

Morris Hassler, Chair

**Materials Control and Accountability**
Promotes communication, professional development and the exchange of technology among professionals active in the control and accountability of nuclear materials.

Thomas A. Grice, Chair

**Nonproliferation & Arms Control**
Promotes the advancement of research and development efforts in support of international arms control and nonproliferation through applying nuclear materials research and management to arms control, nonproliferation, and treaty verification, as well as to transparency measures aimed at furthering international stability.

Mona Dreicer, Chair

**Packaging, Transportation & Disposition**
Promotes the advancement of technology involved in the packaging, transportation and waste management of radioactive materials and its successful application to the solution of packaging, transportation and waste management problems around the world.

Jeff England, Chair

**ANSI N14 and N15 Standards**
The INMM is the secretariat for the American National Standards Institute’s ANSI-Packaging and Transportation of Radioactive and Non-nuclear Hazardous Materials and Methods. This includes standards for packaging and transportation of fissile and radioactive materials; and for protection, control and accounting of special nuclear materials in all phases of the nuclear-fuel cycle.

Matt Feldman, N14 Chair
Melanie May, N15 Chair

**INMM**
INSTITUTE OF NUCLEAR MATERIALS MANAGEMENT

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Figure Courtesy of: IAEA Introduction to the Nuclear Fuel Cycle
https://www.iaea.org/newscenter/multimedia/photoessays/iaeaintroduction-nuclear-fuel-cycle

April 16, 2018
jpjekowski@aol.com
Draft #3
The INMM California Chapter (INMM-CA) will have good representation at the upcoming 59th annual INMM meeting, held in Baltimore, MD, July 22-26, 2018.

Dan Johnson, senior advisor from the WINS (World Institute for Nuclear Security) followed up with the INMM CA Chapter Leadership team regarding newly packaged pertinent WINS training. This followed Dan’s presentation to LLNL (Lawrence Livermore National Laboratory) and the SNL-CA (Sandia National Laboratory California Campus) in February 2018.

The California Chapter still hopes to reschedule a workshop with the MIIS students (Middlebury Institute of International Studies) in Monterey, CA. The workshop will be policy focused, with the original planned main topic was on the “Five Nuclear Non-Proliferation Treaty (NPT) Nuclear-weapon States (commonly known as P5) and its impact.”

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

Due to a change of assignments and responsibilities, Stephen (Steve) J. Porter, current President of the California Chapter of the INMM will be stepping down. Elections will be scheduled and held to find new leadership for the CA Chapter.

On a personal note: I have very much enjoyed my role as President of the INMM California Chapter, and will miss the interactions with the INMM CA Chapter Leadership team, the CA chapter members, and the INMM corporate leadership. I am excited about the possibility of “cyber/physical security integration” into all aspects of the Institute’s technical divisions, and will miss not being part of it. All said, I will continue my membership in the INMM, and hope to rejoin the INMM leadership team in some capacity in the future.

The California Chapter of the INMM continued to add to its membership rolls throughout 2018, and has a current balance of $3526.

Stephen J. Porter
President of the California Chapter of the INMM
The Central Region Chapter Executive Committee members are the following:

<table>
<thead>
<tr>
<th>Office</th>
<th>Term Ending</th>
</tr>
</thead>
<tbody>
<tr>
<td>*President</td>
<td>Jessica White-Horton</td>
</tr>
<tr>
<td>Vice President</td>
<td>Jackie Shipwash</td>
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<tr>
<td>Secretary</td>
<td>Kate Buckley</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Hannah Hale-Salvo</td>
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<tr>
<td>Member-at-Large</td>
<td>Gary Hirsch</td>
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<td>Member-at-Large</td>
<td>Justin Reed</td>
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<td>Member-at-Large</td>
<td>Matthew Brummet</td>
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<td>Member-at-Large</td>
<td>KJ Maddux</td>
</tr>
<tr>
<td>Immediate Past President</td>
<td>Linda Paschal</td>
</tr>
</tbody>
</table>

Student Chapter Advisors:
- University of Missouri – Gayla Neumeyer
- University of Michigan – Sara Pozzi
- University of Tennessee – Jason Hayward
- Purdue University (new!) – Robert Bean

Activities

The CRC decided to forgo a spring workshop in order to focus on planning a fall workshop at the University of Michigan.

They are co-hosting a mixer with ORNL and Y-12 during the INMM Annual Meeting, and co-hosted with Canberra for the 2017 meeting. The following checks were sent:

- $500 – Canberra for the 2017 INMM mixer
- $2500 – ORNL for the 2018 INMM mixer

They sent out the following stipends:

- $1500 – Missouri student chapter

Account Balance as of 16 July 2018: 21,475.36

The CRC is putting together a workshop to be held in Ann Arbor, Michigan, on 15 October, 2018. The working title is “Emerging Information Analysis Concepts for Nuclear Nonproliferation and Safeguards” and will have several subtopic areas. The goal is for the workshop to be split between presentations and interactive exercises.

Respectfully Submitted:
Jessica White-Horton
## Treasurer’s Report

**FY2018 FINAL (As of July 19, 2018)**

**Central Region Chapter Financial Statement – 10/01/2017 – 07/19/2019**

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<td>$21,475.36</td>
<td>$19,975.36 after transaction clears</td>
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1. Officer and Executive Committee Member (as of June 2018)

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Masao Senzaki</td>
</tr>
<tr>
<td>Vice-President</td>
<td>Junichi Ishihara</td>
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<td>Immediate Past President</td>
<td>Takahiko Ito</td>
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<td>Tomonori Iwamoto</td>
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<td>Members-at-large</td>
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<td>Shoko Iso</td>
</tr>
<tr>
<td></td>
<td>Tomohiko Kita</td>
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2. Activities & Accomplishments Since the Last Report

1) Annual Meeting
Commemoration of 40th Anniversary of the Chapter’s 38th Annual Meeting was held at Tokyo Institute of Technology (TITEC) on November 21-22, 2017, under sponsored by TITEC.
Total of 97 were participated. Total of 32 papers were presented at the technical session and 7 papers were presented at poster session. The following special events were organized as the Commemoration of 40th Anniversary;
- Congratulatory video message by Ms. Hinderstein President of INMM, Dr. Verjoranta DDG-SG IAEA and Dr. Heinonen former DDG-SG IAEA.
- Special Session;

Evolution of Safeguards and Nuclear Security in Japan
- Panel discussion by next generation persons; Attraction on Non-proliferation and Future Anticipation.

2) Workshop/Seminar
Following workshop/Seminar were performed jointly with Atomic Energy Society of Japan.
- Theme: Domestic monitoring regime on Comprehensive Nuclear Test Ban Treaty Organization (CTBTO) and Monitoring Activities for Nuclear Weapon Test by North Korea – March 19, 2018.

3) Public Relations Activities
INNNJ are being deployed public relations activities focusing propagate the chapter’s roles and objectives to public. Following activities were conducted:
- INMMJ president interviewed article was published in Denkishinbun (newspaper) – April 25,
- INMMJ Executive Director interviewed article was published in Energy Forum May issue.

4) Strategic Committee
Strategic Committee is newly founded in order to make further advancement of the chapter’s activity. The committee consisting with the chapter’s executive committee members, planning committee chair, advisors and executive director of the secretariat.
The meeting will convene every 3 months interval to discuss various subjects in related to the chapter’s activities and operations.

3. Upcoming Activities
1) The 39th INMMJ Annual Meeting will be held on November 21, 22, 2018 at Tokyo University
2) Workshop/Seminar will be held around September for Cyber security measures of nuclear plants operating system.
3) Public Relations Activities
Non-Proliferation issues and INMMJ activities will be contributed in some of a newspaper continuously.
4) The 9th INMM/ESARDA Joint workshop will be held on October 8-11, 2019 at Tokyo. The meeting
will take place at Tokyo International Exchange Center Plaza HEISEI.  
Further materialization of the workshop will be discussed with relevant persons during the 59th Annual Meeting in Baltimore.

5. Membership Status (as of June 2018)  
Regular member : 135(including 1 Fellow Meritorious, 1 Fellow and 18 Senior members)  
Student member : 11  
*Sustaining member : 28  
(*: Relevant only to Japan Chapter)

4. Current Budget  
See Budget Plan as listed below.

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<td>Labour charge</td>
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<td>Travel and transportation</td>
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<td>Postage</td>
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<tr>
<td>Miscellaneous</td>
<td>61,500</td>
<td>559</td>
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<tr>
<td>Office equipment (including computer software)</td>
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<td>923</td>
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<tr>
<td>Information system (website development etc.)</td>
<td>183,500</td>
<td>1,668</td>
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<td>Haginoya fund</td>
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<td>909</td>
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<td><strong>Total expense</strong></td>
<td><strong>4,273,500</strong></td>
<td><strong>38,850</strong></td>
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<td>Income - Expense</td>
<td><strong>1,686,355</strong></td>
<td><strong>15,331</strong></td>
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<tr>
<td>Carry forwards to FY2019</td>
<td><strong>1,686,355</strong></td>
<td><strong>15,331</strong></td>
</tr>
</tbody>
</table>
The Northeast Chapter (U.S.A.)
Arden Dougan, President

Leadership
The NE Chapter Executive Committee members are the following:

<table>
<thead>
<tr>
<th>Office</th>
<th>Term Ending</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Arden Dougan</td>
</tr>
<tr>
<td>Vice President</td>
<td>Kate Bachner</td>
</tr>
<tr>
<td>Secretary</td>
<td>Charles D. Harmon</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Gerard Jackson</td>
</tr>
<tr>
<td>Member-at-Large</td>
<td>Steve Mladineo</td>
</tr>
<tr>
<td>Member-at-Large</td>
<td>Lisa Toler</td>
</tr>
<tr>
<td>Member-at-Large</td>
<td>Nick Roth</td>
</tr>
<tr>
<td>Member-at-Large</td>
<td>Jackie Kempfer</td>
</tr>
<tr>
<td>Immediate Past President</td>
<td>Joe Rivers</td>
</tr>
</tbody>
</table>

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.

The Chapter Treasury balance as of 01 October 2017 was $6370.95 The Treasurer’s Report is attached.

Chapter Activities
The NE Chapter held three events in the Spring of 2018:

- David Albright, President of Institute for Science and International Security, presented an overview of North Korea’s nuclear development program at a late afternoon meeting in March 2018 hosted by CRDF Global in their office in Arlington, VA.

- Continuing with the Nuclear Policy Talks, Corey Hinderstein and Ambassador Laura Holgate made a presentation on the Nuclear Security Summit, Progress and Prospects from Two Years On at a late afternoon meeting in May 2018 hosted by George Washington University’s Elliott School of International Affairs

- Kate Bachner hosted a Chapter Meeting at Brookhaven National Laboratory in April 2018.

Student Chapters
The NE Chapter will provide some financial support to the Student Chapters at Penn State, Mercyhurst and Virginia Commonwealth University for attending the Annual INMM Meeting in Baltimore in July 2018.

Future Activities
The NE Chapter plans to hold additional speaker events in the Washington DC area during the Fall of 2018.

Respectfully Submitted: Arden Dougan, President
FY 2018 FINANCIAL STATEMENT
INMM North-East Chapter Financial Statement – 01/30/2018 – 06/30/2018

Notes:

Chapter Balance: 02/01/2018 $ 7,590.95 February Opening Balance

Access America Account $ 7,537.71
Regular Share Account $ 53.23

Income:

INMM Annual Stipend (2018) $ 400.00
NE Chapter Workshop $ -
Interest (YTD) $ 0.01

Income Total: $ 400.01

Expenses:

Chapter Election $ -
Annual Mixer $ -
Defer cost for Bachner, K BNL $ 120.00 INMM NE Check # 103
NE Chapter Student Paper $ -
Student Chapter Support (Mercyhurst) $ - Pending
Student Chapter Support (VCU) $ 750.00 INMM NE Check # 105
Student Chapter Support (Penn State) $ 750.00 INMM NE Check # 104
Lunch time meetings $ -

Expenses Total: FY $ 1,620.00

Chapter Balance: 06/30/2018 $ 6,370.95

Anticipated/Estimated Expenses this year:

Student Chapter Support $ 750.00
Chapter Elections $ 250.00
This reports activities from March – June 2018.

Leadership
The Pacific Northwest (PNW) Chapter Executive Committee (EC) Members:

<table>
<thead>
<tr>
<th>Office</th>
<th>Name</th>
<th>Contact Information</th>
<th>Term Ending</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Harrison “Skip” Kerschner</td>
<td><a href="mailto:harrison.kerschner@pnnl.gov">harrison.kerschner@pnnl.gov</a></td>
<td>October 2018</td>
</tr>
<tr>
<td>Vice-President</td>
<td>Roberta Burbank</td>
<td><a href="mailto:roberta.burbank@pnnl.gov">roberta.burbank@pnnl.gov</a></td>
<td>October 2018</td>
</tr>
<tr>
<td>Secretary-Treasure</td>
<td>Glenda Ackerman</td>
<td><a href="mailto:glenda.ackerman@charter.net">glenda.ackerman@charter.net</a></td>
<td>October 2018</td>
</tr>
<tr>
<td>Member-at-Large</td>
<td>Jim Andre’</td>
<td><a href="mailto:jp.andre@pnnl.gov">jp.andre@pnnl.gov</a></td>
<td>October 2018</td>
</tr>
<tr>
<td>Member-at-Large</td>
<td>Valerie Finch</td>
<td><a href="mailto:Valerie.Finch@pnnl.gov">Valerie.Finch@pnnl.gov</a></td>
<td>October 2018</td>
</tr>
<tr>
<td>Member-at-Large</td>
<td>Amanda Sayre</td>
<td><a href="mailto:amanda.sayre@pnnl.gov">amanda.sayre@pnnl.gov</a></td>
<td>October 2018</td>
</tr>
<tr>
<td>Past-President</td>
<td>Sarah Frazer</td>
<td><a href="mailto:sarah.frazar@pnnl.gov">sarah.frazar@pnnl.gov</a></td>
<td>October 2018</td>
</tr>
</tbody>
</table>

The EC is supported by Jennifer Anderson, Associate Member (Membership); Ramon Castillo, Associate Member (Communications Development); and Mark Engelmann, INMM Member (Research & Development Advisor). The EC meets monthly.

Activities

Professional Workshop - The Chapter’s principle activity for this reporting period has been preparing for and holding the professional Workshop on Nuclear Material Science, Processing and Signature Discovery, held May 1-2, 2018, at the Pacific Northwest National Laboratory (PNNL). The workshop was hosted by INMM’s Nonproliferation and Arms Control technical division and PNNL.

Keynote speakers were:
- Former Ambassador Laura Holgate (Nuclear Threat Initiative)
- Michael Curry (US State Department)
- David Kenneth Smith (International Atomic Energy Agency, Forensics Nuclear Security Coordinator)
- Dr. Frank Wong, (Lawrence Livermore National Laboratory)
Members from the Oregon State University provided support for the workshop helping with time keeping and on-site registration. The Penn State Student Chapter members made arrangements to tour the Hanford B reactor and the Laser Interferometer Gravitational-Wave Observatory (LIGO) the day before the workshop with participation from local Chapter members.

Student posters were judged and monetary awards were provided by the chapter. The winners were:

- 1st place ($200), Matthew Athon, Washington State University, Monitoring Trace Element Fractionation During Actinide Metal Production
- 2nd place ($100), Christina Louie, Washington State University, A New Model to Determine the Intrinsic Kinetics of the Extraction Across Liquid-Liquid Interfaces
- 3rd place ($75), Tyler Oshiro, Oregon State University, Soft Robotics in Radiation Environments for Safeguards Applications

The workshop was an overall success. There were 37 presentations, 21 posters and 15 papers. A subset of papers will submitted for publication in a special edition of the *Journal of the Institute of Nuclear Materials Management*. There were 101 registrants with a total registration income of $30,951.
Developing and Strengthening Relationships with Local Technical Societies —
Professional interactions with the Eastern Washington Section of the American Nuclear Society (EWS-ANS) and the Columbia Chapter of the Health Physics Society (CCHPS) continues. Members attended a joint technical community bowling event on February 16, 2018. Jennifer Anderson continues to alert chapter members of upcoming events from EWS-ANS and CCHPS.

University/Student Outreach:
New student chapter. Preliminary communications is in progress with Washington State University (WSU) to discuss development of a new student chapter. There is some interest in alignment with the nuclear engineering program.

Pacific Northwest National Laboratory Lab Day, May 11, 2018. The Chapter provided $150 for lunch. Skip Kerschner gave a presentation on Nuclear Operations and his son, Major Logan Kerschner, US Army, provided thoughts on shaping one’s career and guiding its development.

Charter Revision Review — The PNW Charter and By-Laws were issued on November 09, 1978 and has not been revised since its issuance. The EC has started reviewing these to determine if updates and revisions are needed.

Communications Development —
Improvements in communications remains a focus. A Chapter website is in development, as well as, a social media platform. These are expected to roll out this year. Chapter lanyards were designed by Ramon Castillo and provided to workshop attendees. These will also be made available to Chapter membership.

Manhattan Project Documentary — The documentary, The Half-Life of Genius Physicist Raemer Scheiber was filmed at the Hanford B reactor. Preliminary discussions with several organizations are ongoing to schedule weekend showings at B reactor, with dinner and perhaps a special wine tasting event (working with wineries to produce special event labels). This is being planned for mid-August this year. The Chapter has elected to participate.

INMM Activities — PNW Chapter member activity with INMM are as follows:
• Steve Mladineo continues as the INMM Technical Division Oversight Chair
• Skip Kerschner, Chapter President, continues representing INMM as a voting member for the American National Standards Institute N13, Radiation Protection.
• Amanda Sayre, Chapter Member at Large, continues as the Chair for Student Activities
• Sarah Frazer continues participation in the Communications Subcommittee-Public Relations and Outreach
• Glenda Ackerman Chairs Education and Outreach
• Jim Andrec, Chapter Member at Large, will attended the INMM February 24th Technical Program Committee
Membership

Chapter membership remains no cost to members that have registered with the National INMM. The Chapter has 39 members and 5 associate members. It should be noted that our associate members provide significant support.

Treasurer's Report

The annual Fiscal Year 2018 stipend was requested and received.

Chapter Balance on June 30, 2018: $11,098.32

Income: INMM Stipend FY2018 400.00

Expenses:
- Lanyards for Workshop 363.82
- Coffee for Workshop 395.30
- Check 1002 Expenses for Workshop 55.38
- Check 1003 3rd Pl Poster Award 50.00
- Check 1004 2nd Pl Poster Award 100.00
- Check 1005 1st Pl Poster Award 200.00
- Lab Day Lunch 150.00

Chapter Balance May 22, 2018: $10,183.82

Key Upcoming Activities:

- Joint BBQ with the Eastern Washington Section of the American Nuclear Society (August)
- Manhattan Project Documentary event (August)
- PNW EC Elections (August-September 2018)
- Finalize actions to charter the Washington State University student chapter

- Submit final papers selected from the workshop for publication in a special edition of the *Journal of the Institute of Nuclear Materials Management* (November 2018)

Respectfully Submitted –

Harrison F. "Skip" Kerschner
Pacific Northwest Chapter President
The INMM Southeast Chapter Executive Committee members are the following:

<table>
<thead>
<tr>
<th>Office</th>
<th>Term Ending</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Glenn Abramczyk</td>
</tr>
<tr>
<td>Vice President</td>
<td>Bradley Loftin</td>
</tr>
<tr>
<td>Secretary</td>
<td>Lindsay Sexton</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Bill Swift</td>
</tr>
<tr>
<td>Member-at-Large</td>
<td>Sean Brannen</td>
</tr>
<tr>
<td>Member-at-Large</td>
<td>Paul Cloessner</td>
</tr>
<tr>
<td>Member-at-Large</td>
<td>Cathy Mussi</td>
</tr>
<tr>
<td>Member-at-Large</td>
<td>Franklin Dubose</td>
</tr>
<tr>
<td>Immediate Past President</td>
<td>Kerry Dunn</td>
</tr>
</tbody>
</table>

Other Members: Jeff Allender (website), John Dewes (Corporate Liaison), Paul Ebel (Educational Outreach Officer), Rich Koenig (Nominations and Elections Chair)

Activities
The INMM Southeast Chapter Executive Committee members listed above reflect the election of September 2016 for 2017-2018. The membership list above reflects the results. There was a concern raised at the November SE Chapter Meeting that the two years terms of office for Chapter Executive Officers is limiting for Chapter progress. The proposed Chapter Bylaws and Constitution have been revised to make the four main officers “shall be eligible for reelection to their respective offices for the 2nd term succeeding years.” And have been distributed to the Chapter for consent. This change will reconcile the Constitution and the Bylaws. Should the changes be approved, the Chapter will submit the revised Bylaws to the INMM for approval prior to implementation.

- USC Safeguards Workshop Savannah River Site Tour
  Monday, May 7 and 8, 2018
  - 20 Students/Faculty from Clemson University attended.
  - The Students/Faculty were given presentations on:
    - Nuclear Nonproliferation.
    - Joint Use Safeguards Applications.
    - Material Control & Accountancy.
    - Ceramic Seal (TID).
    - INMM
  - G. Abramczyk led the INMM presentation and explained the purpose and scope of the INMM and the benefits to membership and participation.

- Jeff England and Bradley Loftin held the 33rd annual Spent Fuel Conference, Washington, D.C. the week of January 23rd. The Conference is planned and executed by members of the SE Chapter with support from INMM headquarters. With the demise of the North Carolina Student Chapters there was no assistance from the Students this year. The SE Chapter is working to build a new Student Chapter at USC Columbia and was working for their assistance this year but the effort fell through.

- Student Chapters
  - The Chapter is working on developing 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.
  - Abramczyk is developing a Speakers and Topics list and is developing a proposal to the Chapter for subsidizing the travel to the Student Chapters.
  - The Chapter is attempting to reestablish contacts and commitments with the Faculty Advisors of and the Student Chapters. This is difficult to do at this time of year. The effort will resume in August when the Faculty and Students return for the Fall semester.

Reporting
- Proposed revision of Southeast Chapter Constitution and Bylaws – see above information in Activities

Respectfully Submitted: Glenn A Abramczyk
Southeast Chapter President
The FY18 Executive Committee of the Southwest Professional Chapter is as follows:

President: Sunil Chirayath, Texas A&M University  
Vice President: James Miller, Los Alamos National Laboratory  
Secretary: Markku Koskelo, Aquila Technologies  
Treasurer: Heidi Smartt, Sandia National Laboratories  
Members at Large: Jack Jekowski, Innovative Technology Partnerships, LLC ('18)  
John Matter, Independent Consultant ('18)  
Tina Hernandez, Sandia National Laboratories ('19)  
Bob Huelskamp, Aerospace Corporation ('19)  
Past President: Adam Hecht, University of New Mexico  
Communications: Scott Kraus, Aquila Technologies  
Student Liaison: Keith Tolk, Milagro Consulting

Activities this Fiscal Year:

1. The SW Professional Chapter held its first Executive Committee meeting of this FY on October 6th, 2017 at the offices of Aquila in Albuquerque. The Committee reviewed our activities from the past year and discussed plans for the coming year.

2. The SW Professional Chapter held its Annual Winter Dinner Meeting in Santa Fe, New Mexico (The Inn at Loretto) on January 5, 2018. This year’s event, with over 40 attendees, featured Mr. John Heaton, the Chair of the Carlsbad, New Mexico Nuclear Task Force, and a former State Representative, speaking about the current status and future plans of the Waste Isolation Pilot Plant (WIPP), as well as current activities associated with the development of consolidated interim nuclear waste storage options in Southeastern New Mexico.

3. The Southwest Chapter Executive Committee approved the creation of a “Dennis Mangan Student Award” in honor of the over 40 years of service that Dr. Mangan (“Denny”) has provided to the Institute, the nuclear community and the Southwest Chapter since its inception in 1998. The certificate is shown in Figure 3. Figure 2 shows John Matter (former president of the INMM) congratulating Denny and presenting him the framed Certificate at a special dinner held at Denny’s house on January 19, 2018, his 79th Birthday. The Award will be presented annually to a Student from the SW Chapter, recognizing that student’s achievements and providing payment of the INMM Annual Meeting Registration fee.
Figure 1. Mr. Heaton talking to the audience at the Inn at Loretto.

Figure 2. Between Denny (on the left) and John (on the right) is Denny’s wife, Diana, who prepared the dinner and birthday cake for over a dozen members of the SW Chapter, their spouses, and other friends.

Figure 3. Dennis Mangan Student Award Certificate.
4. The Chapter Executive Committee met again at Aerospace Corporation on March 2nd to plan for the SW Chapter Annual Spring Technical Meeting and again to discuss activities to be held in the coming months.

5. The SW Chapter held its 20th Annual Spring Technical Meeting at the Marriott Courtyard, Santa Fe, NM on May 18, 2018. The meeting consisted of 10 presentations from students and professionals. A total of 27 people attended the meeting.

The meeting included a presentation by Chapter President, Dr. Sunil Chirayath on Texas A&M’s Nuclear Security Education program, as well as presentations by Aerospace Corporation and MSTS, the operating contractor for the Nevada National Security Site.

At the meeting, the SW Chapter presented the first Dennis Mangan Student Award to Athena Sagadevan from Texas A&M, which included payment for registration at this year’s Annual Meeting in Baltimore plus a $500 award to cover expenses. Athena presented her work at the meeting entitled “Risk Informed Safeguards Approaches for Molten Salt Reactors.”
The SW Professional Chapter has organized an embedded joint workshop on “Policy and Technical Fundamentals of International Safeguards” that will be held in conjunction with the 59th INMM Annual meeting in Baltimore, on July 22 8AM to noon. Participants will earn 3 CEUs (Continuing Education Units) and professional certificate from Texas A&M.

7. The traditional annual meeting of the SW Chapter meeting will be held at the Annual Meeting on Monday night, July 23rd at 6PM.

8. The SW Professional Chapter has also begun planning for a workshop to build on the success of the workshop organized jointly by the SW Professional Chapter, Sandia National Laboratories, the INMM International Safeguards Division, and the INMM Nonproliferation and Arms Control Division on Novel Technologies for Safeguards and Arms Control Workshop, in Albuquerque last August. The tentative date for the workshop that has a working title of “Just Trust Me” is March 12-13, 2019. The workshop will bring together experts from policy and technology communities to share ongoing work related to the concept of trust for safeguards, security, and arms control.

9. The two student chapters within the SW Chapter region (UNM and Texas A&M) will submit their own reports.

Respectfully submitted,
Sunil Chirayath, INMM-SWC President
Markku Koskelo, INMM-SWC Secretary
Lunch Lectures and Mixers

On July 12th 2017 INMM members were invited to join a lunch lecture by Mr. David Hanks of the U.S. Nuclear Regulatory Commission, on NRC’s strategies for workforce development and inspector qualification.

On 26 June 2018, the Chapter, in cooperation with the United Nations – Nuclear Young Generation (UN-NYG), organized a mixer and pizza party so that the two groups could get acquainted. The UN-NYG described its mentorship programme and invited INMM members to consider participating as mentors, and the Chapter described the mission and activities of the INMM, encouraging the UN-YGN to get involved and consider membership in INMM. Everyone enjoyed the opportunity to meet one another and enjoy Domino’s pizza, recently opened in Vienna.

UN-YGN and INMM Vienna Chapter mixer

On 5 July 2018, in cooperation with the Vienna Centre for Disarmament and Non-Proliferation, the Chapter and the UN-YGN organized a lunch lecture on high temperature gas reactors, small reactors and safeguards challenges.

Annual Chapter Meeting

On September 14th 2017, the Vienna Chapter held its annual meeting for 2017, where the past year activities were reviewed, an update provided on elections, discussions were held on plans for the year ahead, and the new look and website of the INMM was presented. Visiting INMM leaders, Mr. Michael Whitaker and Ms. Jill Cooley, as well as former Chapter president Ms. Therese Renis, recapped the highlights of the 2017 INMM Annual Meeting, which they attended. A competition was held to select the theme/title of the 2018 Science and Engineering Fair, which is described in detail later in this report.
2017-2018 Vienna Chapter Elections and Sustaining Membership of IAEA
The election took place using an electronic ballot issued to all current members in good-standing of the Vienna Chapter. About half of the members voted. The results are reflected in the table at the end of this document. The IAEA renewed its sustaining membership of the INMM for the year 2017-2018.

2018 Vienna International Schools Science & Engineering Fair
The theme for the 2018 Fair was chosen via a competition organized as part of the Chapter’s annual general meeting described above. The winning title came from Ms. Michelle Romano, an inspector in the Department of Safeguards and former member of the Northeast Chapter of INMM, who received a prize from the Chapter.

The banner that hung on the front of the school is shown below, reflecting the many sponsors and exhibitors that, together with the volunteers and judges, made the Fair possible. The Chapter is grateful to INMM HQ for providing financial support to the Fair.

28 volunteer judges participated in the Fair this year, many of whom are INMM members and most of whom work at the IAEA. The judges learned about their responsibilities and the functioning of the Fair at the judges’ heuriger evening, held a few days before the start of the Fair. Judging has been coordinated by Mr. Bernard Weiss, long-time INMM member, for more than a decade (Thanks Bernie!).

The electronic registration system was used to facilitate the registration of the students from each of 10 schools, around Vienna and also from Czech Republic, Slovakia and Romania. The Fair took place on 21 April 2018 at the Vienna International School. Over 65 students from 8 international schools participated. Projects were submitted in a variety of categories for Junior and Senior levels (participants come from grades 6 through 12), including Human Behaviour; Health and Life Sciences; Machines and Technology; and Computer, Space and Environmental Sciences.

Each project is awarded a ribbon during the Fair by the judges, and a subset of projects are selected for specific monetary awards. The judges work very hard to identify and justify the selection, prior to the start of the Awards Reception, which takes place immediately following the Fair (starting at 5:00pm).
The Awards Reception was opened by Ms. Carrie Mathews, the Fair Coordinator, thanking the exhibitors and sponsors and providing each with a small gift (a glass stein engraved with the Fair title). Ms. Corey Hinderstein, the president of INMM, was in Vienna on business and kindly attended the Fair and made welcoming remarks. Ms. Mary Alice Hayward, the Deputy Director General of the IAEA’s Department of Management, and active in the INMM, delivered an inspirational speech.

Ms. Corey Hinderstein and Ms. Mary Alice Hayward at the awards reception

A local newspaper featured a comprehensive article on the Fair, with several photos and interviews with the students (in German). It can be viewed on the S&E Fair Facebook page, which can be accessed via the chapter website: www.inmmvienna.org. The date of the 2019 S&E Fair will be determined based on a survey to School Coordinators, to be issued early in the 2018-2019 school year.

Ms. Elisa Bonner, President of the INMM Vienna Chapter and Mr. Brian Boyer, the Vice President, announced the winners and handed out the prizes. Each participating school had a winning project/student, and all of the recipients were available to receive their award.

Students with their projects on the day of the Fair

Group photo of participating students in front of the Vienna International School
Students display their certificates; Attendees of the reception.

Reception fare for hungry young scientists and engineers

Preparations for 2018 Elections

A Nominating Committee has been established to support the elections process. Nominees are sought in particular for the Vice President, Secretary and Member at Large. Elections will be held by online survey, issued in late summer. The 2018 Annual Meeting will be held in the 4th quarter of the year to share the results.

Officers of the INMM Vienna Chapter

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Elisa Bonner</td>
<td>Secretary</td>
<td>Carrie Mathews</td>
</tr>
<tr>
<td>Vice-President</td>
<td>Brian Boyer</td>
<td>1st Member at Large</td>
<td>Claude Norman</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Fabian Rorif</td>
<td>2nd Member at Large</td>
<td>Igor Tsvetkov</td>
</tr>
</tbody>
</table>
STUDENT CHAPTER REPORTS
AHMADU BELLO UNIVERSITY STUDENT CHAPTER (Nigeria)

John Simon, President

Founded: March 12th, 2016.

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

1. Taiwo Austine Oluwasagun
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 28 active members. 16 out of these members are registered with INMM headquarters and 9 are presently in good standing within INMM membership.

Recent Chapter Event: Table-top Exercise on Nuclear Security Culture

The Ahmadu Bello University Student Chapter has gained remarkable recognition since its establishment through various public awareness activities. The chapter is determined to continue to navigate its way through innovative frameworks that ensures the visualisation of the mission and vision of INMM within and outside ABU community.

The most recent event of the Chapter was a table-top exercise on nuclear security culture vis-à-vis the Nigerian cultural perspectives. The two-day event took place at Zaria hotel, Hanwa, Zaria, Kaduna State, Nigeria from 19th – 20th September, 2017. 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), Nigerian Nuclear Regulatory Authority (NNRA) and Department of Physics ABU Zaria.

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 20 participants were drawn from those that attended the previous workshop on “Nuclear security Culture” including 2 onsite security personnel from (CERT).
The pros and cons of imbibing and adhering to professional work ethics in the nuclear industry regardless of ethnicity, socio-cultural affiliations or religion were taught by the SMEs while sharing global experiences and providing a review of the previous workshop. Participants for the first time acquired hands on experience on the effects of poor security culture in a nuclear facility which came up while playing out some of the scenarios during the table-top exercise.

The key thing that made this event different from the previous ones was that participants were assigned roles and actually acted out their roles in tandem with the scenarios. Injects of the actors at a certain time interval gave way for thorough analysis and brainstorm of what, why, how the events happened the way it did (from the scenarios) and suggestion of ways to halt them should they become real at both local and global scale.

The key accomplishment of this event was that it was able to reach a new audience particularly the onsite security officers from the CERT, ABU Zaria. The SMEs from distinguished institutions as mentioned above made the exercise rigorous, participatory, and multi-faceted and thus a huge success.

Event Photos

*Group photograph: Starting from the right of the front row, CERT Asst. chief security officer, Prof. S.A. Jonah, Mr. M.B. Gusau, Dr. N.N Garba and Mr. Simon John (Chapter president).*
Prof. S.A. Jonah: during his brief presentation on nuclear security culture (Courtesy: Chapter EC)

One of the participants acting a given role during the exercise (Courtesy: Chapter EC)
Participants playing out one of the scenarios as directed by Dr. Viva and Dr N.N. Garba (Courtesy: Chapter EC)

Participation in Other Events

The INMM ABU student chapter sponsored a delegate to participate in the WINS International Workshop on Preventing Home Grown Violent Extremism in the Nuclear Sector. The workshop held at Sheraton Hotel Abuja on 17th – 19th July, 2017. The workshop leveraged the means of curtailing radicalisation of individuals working in the nuclear industry. The chapter was also represented at a workshop on the strategies for the implementation of human reliability program at CERT, ABU Zaria. The two-day event was organized by PNTR, Oak Ridge National Laboratory (ORNL) and CERT. Several presentations were given by delegates from ORNL and United States Department of Energy (DOE) of which INMM ABU chapter benefited.
Ahmadu Bello University Student Chapter (Nigeria) (cont.)

Treasurer’s Report

Income | Expenses
------|------
$200.00 | –
$400.00 | –
- | $5
- | $10
- | $35
- | $150

Total $600.00 $200

Current Chapter Account balance: $400.00

Upcoming Events

1. Workshop on nuclear security stakeholders for the new chapter members and unreached ABU students from other disciplines (September, 2018).
2. School outreach visit and career talks (November, 2018).

Respectively Submitted by John Simon (Chapter President).
The main objective of our student chapter is to spread awareness among the masses about the importance of nuclear science and technology and in particular about nuclear material management with emphasis on security and safety.

The list of the Outgoing Executive committee members is as follows:

1. President : Uddeshay Pranjal (uddeshay93@gmail.com)
2. Vice President : Diksha Sharma (sdiksha375@gmail.com)
3. Secretary : Sonakshi Singh Pundir (sonakshipundir29@gmail.com)
4. Treasurer : Abhyuday Sharma (abhyudaysharma98@gmail.com)
5. Public Relations Officer : Piyush Sikka (piyushsikka12@gmail.com)
6. Webmaster : Yashpreet Sembhi (tesla.buckyball@gmail.com)

The upcoming elections for the selection of the new EC will be held in the month of July or August.

PAST CHAPTER EVENTS:

1. MELTDOWN (10th March, 2018)
As a part of the Amity Youth Fest, we had organized a technical event named “MELTDOWN”. The event was composed of three mini events. The first one was “Chalk Talks” in which, an interactive session was conducted to get to know the thoughts of the students when they hear the word “Nuclear”. The second one was “Breaking Bad” in which a table top exercise was conducted. The participants were divided in teams of four and they were asked to steal a Uranium pellet from the Fuel Fabrication Building of a hypothetical nuclear facility named SNRI (Shapash Nuclear Research Institute). At the end of the exercise the participants were told about the various Nuclear Security and Safety measures in the nuclear facilities which make theft; sabotage etc. an almost impossible task. The third one was “Bazinga” in which an interactive quiz session was conducted.

The event saw a participation of about 40 students about 10 of which were non-amitians. The event was a huge success among the participants which belonged to various engineering, arts background.

2. GUEST LECTURE (19th April, 2018)
A Guest Lecture by Dr. Sunil S. Chirayath (Director of NSSP, Texas A&M University) was organized on at Amity Institute of Nuclear Science & Technology. The lecture was dedicated towards describing the emphasis of INMM as an international organization and its role as a forum for nuclear security professionals. Dr. Sunil also explained the importance of Nuclear Security, Safety and Safeguards in a professional’s life. The lecture involved the participation of students and faculties from IIT Kanpur, Mody University Rajasthan, UPES Dehradun, IDSA Delhi, IIT Bombay, PDPU Gandhinagar and Delhi Technological University. At the end a concluding quiz was conducted among the participants based on Nuclear Security.
We started the chapter this year at January 2017. Firstly, we made a short one day industrial visit to Narora Atomic Power Station. This is a PHWR nuclear power plant under the Department of Atomic Energy (DAE) at Uttar Pradesh, India. The power plant made practical knowledge merge with the theoretical knowledge we study in our classes. We had visited the environmental survey facility, the turbine building and the waste management facility. Our supervisor for the trip was Prof Om Pal Singh.

Secondly, we arranged an awareness program for the students of 4th and 5th standard about radiation safety and nuclear power. We had given them brief of what radiation is and how we can protect ourselves from harmful radiation. We had also given a demo using mobile GM counters and NaI detectors how to identify radiation. The presentation also included awareness to the school teachers.

Future Chapter Events:

The following events have been proposed by the members of the student chapter.

1. Nuclear Science Expo

Following on the footsteps of the Idaho State University Chapter (USA), a proposal was made to conduct a nuclear science expo. The school students would be encouraged high school students to present posters and models based on the theme of ‘Nuclear Security and Safety Security in India’.

2. International Conference Simulating the IAEA

This event would be based on the framework of the Model United Nations Conferences held each year both nationally as well as internationally. In this event, members from other student chapters would be invited and each member would be asked to represent any one country of his/her choice at the simulation of the IAEA. All delegates would then be asked to deal with a crisis situation at a Nuclear power plant and will be asked to come up with solutions to deal with it.

3. Nuclear Security Awareness Program

Members of the student chapter would visit different schools with the motive of engaging students in meaningful conversations about their opinions on the future of Nuclear Power plants in India with emphasis on security and safety.

4. Membership Drive at Amity University

The EC plans to conduct a membership drive by collaborating with other student chapters like IEEE in order to increase the participation of student in the future events.

Financial Summary:

The annual stipend provided by INMM was used to cover the membership expenses of five executive committee members. The funding for the two events conducted was done by the university itself.
1. Activities held by JUST INMM students Chapter

1.1 Nuclear Day

We organized a nuclear day in the Jordanian capital, Amman, to talk about the nuclear engineering as well as safety and security of nuclear reactors. Also we talked about INMM, how to register at the institute, and what are the benefits a student can get by being an INMM member.

Charmin of the Jordan atomic Energy commission Dr. Khaled Touqan and the Jordanian information minister Dr. Mohammad Al-Momani attended the nuclear day, and listening from the members about the INMM and our chapter in Jordan.

A lot of Jordanian people also attend to this day, and we talked to them about Jordanian nuclear program, to increase their awareness regarding the nuclear energy in general and Jordan’s nuclear program in specific. This was so helpful which helped to remove any illusions and fears they had about nuclear energy.

This event took more than 10 hours in Amman, and there are some plans to redo this activity in JUST campus next semester. Fig.1 shows some moments from this event.
JORDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY STUDENT CHAPTER (cont.)

1.2 Presentation about Jordanian nuclear program

The Dr. Yusri Abu Shadi talked about the nuclear engineering in Jordan and the Jordanian nuclear energy program. In addition, he encouraged audience to believe in nuclear engineering. Dr. Yusri Abu Shadi - the former head of the nuclear engineering department at the University of Alexandria, Egypt-, visited JUST to get a lecture under title “Is nuclear energy the solution for the energy crisis in the Arabic world?”

At first, we gave a brief introduction about INMM, then conducted by Dr. Kalifah Abu-Saleem, the commissioner of the JRTR at Jordan Atomic Energy Commission, the presentation discussed the JRTR characteristics, plans, and percentage completion of the project. We have toured the JRTR’s construction site and took different pictures in the site which are shown in the following figures.

Fig.1: Selected moments from the nuclear day held by JUST INMM students’ chapter.

Fig.2: Selected moments from Dr. Yusri lecture about Jordanian Nuclear Energy Program.
1.3 Visit to JRTR
We have organized a student trip to Jordanian Research and Training Reactor (JRTR). 70 student participants were divided into two groups. The JRTR was built for training nuclear engineering students, producing isotopes to be used in medicine, and conducting nuclear-related research.

Fig. 3: Students of Nuclear engineering department along with faculty members after the tour in JRTR site.

Fig. 4: Selected moments from introductory lecture about JRTR
1.4 Nuclear Engineering Student Lunch

An opening lunch took place at the nuclear engineering department at JUST. This lunch was meant to be a starting point for our newly elected INMM chapter and to create a meeting for brainstorming ideas and plans for future activities.

Faculty and administrative staff members participated in this event as well as NE students from different years. Fig. 5 shows a group picture for some participants before starting the event.

Fig. 5: Group picture for NE department staff members and students during the lunch event.
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>Ari Foley</td>
</tr>
<tr>
<td>Vice President</td>
<td>Lester Warby</td>
</tr>
<tr>
<td>Secretary</td>
<td>Kyzer Gerez</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Max Morrow</td>
</tr>
<tr>
<td>Advisor</td>
<td>Dr. Camille Palmer</td>
</tr>
<tr>
<td>Immediate Past President</td>
<td>Nik Economy</td>
</tr>
</tbody>
</table>

The recently elected OSU Executive Committee members taking over in September are the following:

<table>
<thead>
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<th>Office</th>
<th>Term Ending</th>
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</thead>
<tbody>
<tr>
<td>President</td>
<td>Nathan Wiltbank</td>
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<tr>
<td>Vice President</td>
<td>Kyzer Gerez</td>
</tr>
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<td>Secretary</td>
<td>Lester Warby</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Zach Hills</td>
</tr>
</tbody>
</table>

Activities

Last year, we tried to send as many students to the INMM 58th Annual Meeting in Palm Springs as possible. Our chapter had four students in attendance, including last year’s president, vice-president, and the current president. This allowed for a more seamless executive committee transition as well as brainstorming with other student members in attendance at the meeting. This year we are aiming to match the same number at the INMM 59th Annual Meeting in Baltimore. Fundraising for the travel expenses to send student members to this event is the over-arching goal of the year for our INMM Chapter.

In November, our chapter hosted a general meeting as a “meet-and-greet” for new members and discussed what student members wanted from our chapter this year. We received ample feedback and aimed to increase hosted talks, panel discussions, and professional development events. This event allowed us to get an updated email list of active, enthusiastic members.

Oregon State University’s American Nuclear Society (ANS) student chapter hosts an annual Winter Conference in January. This year the conference was hosted on January 27, 2018. Our INMM Chapter had a booth alongside the industry sponsors. At this event we were able to sell our “Oregon State University Nuclear Science and Engineering” shirts for fundraising, advertise upcoming events, and encourage interested students to get involved with our chapter.

Our INMM Chapter also had a significant representation in attendance at the OSU ANS Winter Conference, with several of our members presenting research in the topic areas of interest to INMM. Student presentation participation and rank are to be used in determining the preference that INMM Chapter members may receive travel assistance for the INMM Annual Meeting and 1 future workshops. The objective of this event was to combine the efforts of our ANS chapter with the INMM Chapter to increase the impact of the conference on nuclear science and engineering hosted at OSU annually.

This Winter Term 2018, the OSU School of Nuclear Science and Engineering is offering a seminar course on “Safeguards and Arms Control Verification” which was coordinated through Jake Benz with PNNL’s NA-24. Our INMM chapter executive committee and active members have had the chance to host guest speakers for lunch. The INMM hosted lunches allow for the students to learn more about careers in nonproliferation and safeguards, as well as for the guest speakers to highlight the career opportunities at their respective institution.
On January 29th, 2018, our INMM Chapter helped advertise and increase awareness for a seminar talk presented in conjunction with the OSU School of Public Policy; OSU School of History, Philosophy & Religion; Center for the Humanities; the Citizenship and Crisis Initiative; and the OSU School of Nuclear Science and Engineering. The talk was a lecture by Ambassador Thomas Graham Jr. entitled “The Future of Nuclear Weapons: Can They Be Eliminated?”. This event had an overwhelmingly positive turnout, with almost double in attendance than the seating in the room could handle.

On April 26th, our INMM helped to host Amanda Rynes, Nonproliferation Policy Specialist from Idaho National Lab, to give a talk on “Evolution of the Global Nonproliferation Environment”. This was a talk on the history of nonproliferation treaties and how it relates to the technological needs in this area today.

Our chapter was able to have a significant representation—eight students in total—at the INMM PNW Chapter’s Workshop “Nuclear Materials Science, Processing, and Signature Discovery” on May 1-2, 2018. The PNW Chapter of INMM has extended the opportunity for students from our chapter to volunteer in exchange for a fee waiver and the Nuclear Science & Engineering Department as well as NuScale, LLC provided some funding for additional students’ registration and participation in the Student Symposium and Poster Session. One of our members, Tyler Oshiro, who presented on soft robotics in high-radiation environments, won third place in the Best Poster Competition. The topics of the other two student posters presented were photofission product yields for nuclear forensics isotope production and spent fuel verification using thermal conductivity methods.

In May, our chapter hosted an event for members to listen into the Arms Control Association’s national conference call on “The Iran Deal and the U.S.-North Korea Summit”. The Arms Control Association allowed our chapter to call in to this call that was originally members-only. An unexpectedly large number of students came to listen to this conference call, with 20-25 in attendance. Students were able to listen and follow up in discussion on this topic.

In June, our chapter hosted the Annual INMM Ice Cream Social. This was also the event where the new officers were elected for the upcoming year. This event was open to all students and staff at the OSU Radiation Center and allowed for more people to learn about INMM. This is also an event at the end of the OSU school year that allows for the department to get together and relax.

**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 set up of this account occurred in early December 2017, and since the establishment has accumulated a total of $235.00 from the sale of Nuclear Science and Engineering shirts.

In order to raise funds, the chapter has been selling shirts to students of the OSU School of Nuclear Science and Engineering. The first set of shirts has been sold, and we are planning on ordering a new shipment in order to continue our fundraising efforts. In Fall term 2018, our chapter plans to try out a new method for T-shirt sales with primarily online ordering directly from the company and the same company mailing directly to the customers. This will allow our chapter to have another fundraiser without requiring the funds to initially pay for these to be printed.

**Planned Chapter Activities**

Based on current events and interest in the surrounding community, our INMM Chapter is planning a panel discussion on the North Korean Weapons tests. This will require coordinating with proposed speakers, finding appropriate accommodations for hosting the event, and publicizing the event. Our chapter had previously hoped to host this event in April or May, but it did not work with everyone’s schedules. This is tentatively planned for Fall Winter 2018.

Respectfully Submitted:
Ari Foley
Treasurer’s Report

FY: 2018
Index: MUNR78 - MUN - Inst of Nuclear Material Mgmt
Fund: 929777 - MUN - Inst of Nuclear Material Mgmt
Organization: 160411 - MUN - Facilities and Prgms Adm Svcs
Program: 45611 - MEA - Educational Activities Gen
As of: 2/1/2018

Projected Balance: $235.00

Cash Balance

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MUNR78 Totals: Income $69.00 $235.00* $0.00 $69.00
Expense $0.00 $0.00 $0.00 $0.00

$69.00
PANDIT DEENDAYAL PETROLEUM UNIVERSITY CHAPTER (India)
Aditya Chincholkar, President

Activities and Meetings of the Chapter in 2017-18

August 1, 2017
Time: 14:30 Venue: LH-5

New batch of M.Tech Nuclear Science and Technology had just started a week back. The juniors had a get-to-know with the seniors and INMM members and the INMM Faculty Advisor. The then President Vyom Desai introduced the new batch to the INMM Chapter and gave details about the chapter and its activities. Exchange of various roles and responsibilities and thoughts took place. INMM Membership forms were given to the students and completely filled forms were submitted to the INMM Faculty Advisor for further processing.

September 15, 2017:
Time: 11:30 Venue: Conference Hall

This day is celebrated as the “Engineer’s Day” in India in the memory of the First Engineer Sir Mokshagundam Vishveswaraya (15 September 1861 – 12 April 1962). Since the seniors were very busy with their second year project work the meeting was possible only today. After celebrating Engineer’s Day with the faculty members of the Department of Nuclear Science and Technology, the INMM meeting commenced. General thoughts were shared, a question and answer session was in action. Plans were made, activities and events were discussed. The then President Vyom Desai announced that the elections would be held soon.

November 2, 2017:
Time: 12:00 noon Venue: LH-5

The elections were held and the positions were given as:
- President: Aditya Chincholkar
- Vice-President: Jeet Patel
- Secretary: Tanvi Menaria
- Vice-Secretary: Arjun Modi
- Treasurer: Amit Suthar

Everyone was told of their individual roles and responsibilities. There were discussions as to what new and exciting could be done in the chapter. And a Video call with Timothy Westmeyer was also planned.

December 26, 2017 – January 3, 2018:

We had a Industrial Visit to different DAE (Department of Atomic Energy) Institutions in India like IGCAR (Indira Gandhi Centre for Atomic Research), NFC (Nuclear Fuel Complex) and BARC (Bhabha Atomic Research Centre). We learnt the activities undertaken at each of these facilities and the safety and security at every facility. It was a great experience.

February 15, 2018:
Time: 13:30 Venue: Conference Hall

A meeting was held with the objective to revive INMM Chapter in Pandit Deenadayal Petroleum University (P.D.P.U). The best time was now, since all the other clubs and associations were having their events, we thought why not host an INMM event as well. Many ideas came forward like collaborating with the existing clubs and organizing a joint event. We even discussed the option with active clubs in P.D.P.U. Plans were made and approvals awaited.

April 19, 2018:

We had attended the Workshop on Vulnerability of Assessment of Nuclear Security System Design at the Amity University, Noida. There the INMM Chapter President Uddeshay Pranjal and his team had put up a exciting Quiz Round which we all enjoyed thoroughly. Later on INMM Amity Chapter and INMM PDPU Chapter discussed upon certain matters and agreed to host an event with joint effort from both the Chapters.

July 10, 2018:

INMM Chapter is preparing to welcome new members to the group.
The following is a summary of the activities held by the Pennsylvania State INMM student chapter for the 2017-2018 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. 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 events:

INMM General Body Meeting:
9/14/2017
PSU-INMM held its first meeting of the academic year where a brief overview of the organization was given to returning INMM members and potential new ones. Discussion of our typical activities and an overview of the events over the summer, namely the INMM Annual Meeting, was presented. Potential events and trips for the upcoming year were described.

New Officer Initiation:
11/01/2017
Unexpected changes required the initiation of new officers outside the normal election period. Officers for 2017-2018 as described later thus are for November 2017-August 2018.

INMM General Body Meeting:
1/25/2018
PSU-INMM held its first meeting of the new semester, where it discussed plans for the next semester. INMM Fellow, Paul Ebel, presented on the passion of his professional career, "The Science of Physical Protection" and why security is more than just guns, guards, and gates. To inform new students and motivate involvement in INMM, he also gave students an introduction to INMM and its benefits.

INMM General Body Meeting:
2/08/2018
PSU-INMM held a meeting to virtually join a panel sponsored by the Texas A&M INMM chapter. Texas A&M broadcasted a panel on interdisciplinary nuclear security as it relates to North Korea. The geopolitical situation of North Korea was discussed as well as potential conflict resolution strategies. Panelists included Dr. William Charlton (University of Texas at Austin) and Dr. Brandon Prins (University of Tennessee Knoxville).

INMM Lunch With Speaker:
2/22/2018
PSU-INMM members were joined for lunch by Dr. Eric Smith, a Laboratory Fellow and project manager at Pacific Northwest National Laboratory. Students were able to ask him about his life experience and especially his time with the IAEA. It was a great opportunity to informally speak with Dr. Smith and ask personal questions that pertain to possible career paths, especially more unique ones with which students rarely come into contact with.

INMM Event:
2/27/2018
PSU-INMM members sat down and had informal conversations with Ambassador Laura Holgate who was visiting Penn State. Students were able to ask her questions on a range of issues from her career path to opinions on current topics in the field and enjoyed the opportunity to hear from a person with first-hand experience influencing U.S. international policy.

INMM Event:
4/06/2018
PSU INMM members attended Penn StatJournal of Law and International Affairs’ 2018 symposium on Nuclear Weapons, International Security, and Disarmament where they heard presentations and discussions on many contemporary issues including North Korea, Iran, and the morality of nuclear weapons.
INMM Lunch With Speaker:
4/13/2018

PSU-INMM was joined for lunch by Dr. Richard Kouzes, a Laboratory Fellow at Pacific Northwest National Laboratory, where he works in neutrino physics and homeland security and was the principal investigator for the U.S. Customs and Border Protection’s Radiation Portal Monitor Project. Students were able to inquire about the variety of subjects he has worked in including the applied radiation detection most are familiar with and more fundamental physics with which the students experience less frequently.

INMM Discovery Workshop:
4/30/2018-5/02/2018

Penn State INMM members traveled to Pacific Northwest National Laboratory to participate in the INMM Nuclear Materials Science, Processing, and Signature Discovery Workshop. Students learned about a variety of nuclear forensics topics and interacted with other INMM members across the spectrum of professional experience. While there, students took a tour of B Reactor and visited the LIGO site. PSU-INMM would like to thank the Penn State Department of Mechanical and Nuclear Engineering for their contributions to support student travel to this workshop.

Annual Meeting:
7/20/2018-7/26/2018

PSU-INMM members will be attending the Annual Meeting in Baltimore, MD, where Marc Wonders has two oral presentations, and Sarah Sarnoski will be chairing a session. PSU-INMM would also like to thank both the INMM national organization and the Northeast chapter for their generous support in helping fund student participation in the Annual Meeting. Through these contributions all active PSU INMM members will be able to attend the conference.

Officers:
Our officers and our academic advisor for the current year (November 2017-August 2018) are listed below. Elections will take place at the first meeting of the year in August 2018.

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Marc Wonders</td>
</tr>
<tr>
<td>Vice President</td>
<td>Chad Lani</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Matthew Durbin</td>
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<tr>
<td>Secretary</td>
<td>Josh Gallagher</td>
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<tr>
<td>Faculty Advisor</td>
<td>Dr. Azaree Lintereur</td>
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<tr>
<td>Member</td>
<td>Sarah Sarnoski</td>
</tr>
<tr>
<td>Member</td>
<td>Soren Cheng</td>
</tr>
<tr>
<td>Member</td>
<td>Faruk Logoglu</td>
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Operating Budget*:

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*Budget for operational expenses such as meetings at Penn State. Does not include money received from other sources explicitly for travel or that has not been received as of 06/29/2018.
Texas A&M University Student Chapter (U.S.A.)

Maria Mendoza, President

Howdy! Greetings from Aggieland. In the course of this past 2017-2018 year, the INMM Student Chapter at Texas A&M University has hosted seven general meetings along with three panel discussions, participated in five outreach events, two social events, and ran two radiation detection exercises. The chapter has 59 due-paying members of whom, 10+ are national INMM student members.

Events

September 6th, 2017 – Recruiter Maren V. Disney from Pacific Northwest National Laboratory gave a presentation at a general meeting and round-table luncheon to students regarding the National Nuclear Security Administration Graduate Fellowship Program (NGFP). (Photo shown below.)

September 19th, 2017 – Ms. Margaret Harding held a student-round table session and presented at the department-wide seminar about the Nuclear Export Control (10CFR810) process improvement program. She is a nuclear export control consultant for 4 Factor Consulting, LLC, which is contracted by the NNSA.

September 28th, 2017 – Student officers from INMM represented the nuclear security and non-proliferation research groups at the department-wide, undergraduate research night that was hosted by the American Nuclear Society (ANS) Student Chapter at TAMU.

October 9th, 2017 – Student chapter officers who are engaged in research area of nuclear security and radiation detection ran a laboratory-search exercise. The exercise focused on the basic concepts of radiation detection and the practical application of the use of radioisotope identification devices (RIIDs). Participants were able to use a variety of RIIDs to locate and identify a number of radiation sources that were placed in one of the laboratories. (Photo shown below.)

October 20th, 2017 – The Student Chapter hosted a movie night on campus for student chapter members, showing the movie: Command and Control.

November 9th, 2017 - Professor James Olson gave a talk at a general meeting on his experience in the Central Intelligence Agency as well as role of science, technology, engineering, and mathematics (STEM) in the intelligence community. Professor James Olson is a Senior Lecturer at the Bush School of Government and Public Service at Texas A&M University. (Photo shown below.)

November 23rd, 2017 – Dr. Sunil Chirayath, the primary advisor of the Student Chapter, invited student members as well as faculty and staff to a cookout at his house.

November 28th, 2017 – The Women in Nuclear (WIN) Student Chapter and INMM Student Chapter hosted a joint meeting with Dr. Karen Kirkland from the TAMU nuclear engineering department and Ms. Karen Hogue from the Y-12 National Security Complex. They provided their personal anecdotes on their careers in academia and nuclear security/non-proliferation, respectively and the impact on their personal lives.

December 5th, 2017 – Dr. Jonathan Burns and his collaborators from Idaho National Laboratory presented their research concerning the separation processes and flowsheet development of the nuclear fuel cycle.
Dr. Jonathan Burns is an Associate Research Scientist at Texas A&M’s Center for Nuclear Security Science and Policy Initiatives (NSSPI).

January 26th, 2018 - Two members of Student Chapter Executive Committee, Barbara Fisher and Jonathan Chen, led a workshop on radiation detection and education as part of the STEM 4 Innovation Conference for K-12 Education.

February 8th, 2018 – The first Panel on Interdisciplinary Nuclear Security (PINS) was held with subject-matter experts from the University of Texas-Austin and the University of Tennessee-Knoxville to discuss the geopolitical situation surrounding North Korea. The Chapter has received a two-thousand-dollar grant from the Office of Graduate and Professional Studies (OGAPS) to fund the event.

February 15th, 2018 – The Student Chapter kicked off the Professional Mentorship Program after holding a workshop on electronic business correspondence in conjunction with the Texas A&M University Writing Center.

March 22nd, 2018 – Dr. Ian Darby from the International Atomic Energy Agency (IAEA) gave a presentation that covered the IAEA and its laboratories as well as the work that he does in mobile radiation detection. He runs the Nuclear Science and Instrumentation Laboratory at the IAEA's Seibersdorf laboratories.

March 28th, 2018 – Following the release of the 2018 Nuclear Posture Review, the Student Chapter co-sponsored a panel with Institute for National Security and Cyber-Security Education and Research (INSCER), the Center for Nuclear Security Science and Policy Initiatives (NSSPI), and the Bush School of Government and Public Service to discuss the challenges of deterrence in the 21st century, highlights of the 2018-NPR, and the nuclear security threats from adversaries. The panelists were Ms. Rebecca Hersman from the Center for Strategic and International Studies (PONI), Dr. Robert Webster from Los Alamos National Laboratory, Dr. Jasen Castillo from the Bush School of Government and Public Service, and Dr. Matthew Fuhrmann from Texas A&M University.

April 26th, 2018 – Ms. Stacey Eaton, Division Leader for the Nuclear Engineering and Nonproliferation Division at Los Alamos National Laboratory, gave a talk that reviewed the roles and capabilities of her division. The Student Chapter held elections after her talk.

July 22nd, 2018 – Texas A&M and UNM student chapter’s in coordination with Texas A&M Center for Nuclear Security Science and Policy Initiatives, INMM Southwest Professional Chapter and the INMM International Safeguards division will conduct a half-day workshop on the Policy and Technical Fundamentals of International Nuclear Safeguards. So, far (as on June 15, 2018) we have received 22 registration for this event.
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,
Mario Mendoza
President, Texas A&M INMM Student

Faculty Advisor

<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>
</tbody>
</table>

Incoming 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>Yanuar Ady Setiawan</td>
<td><a href="mailto:yanuar.ady.s@tamu.edu">yanuar.ady.s@tamu.edu</a></td>
</tr>
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</table>
### Outgoing Student Chapter Executive Committee (2017-2018):

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Jonathan Chen</td>
<td><a href="mailto:john.chen@tamu.edu">john.chen@tamu.edu</a></td>
</tr>
<tr>
<td>Vice-President</td>
<td>Barbara Fisher</td>
<td><a href="mailto:bdfisher@tamu.edu">bdfisher@tamu.edu</a></td>
</tr>
<tr>
<td>Secretary</td>
<td>Logan Scott</td>
<td><a href="mailto:loganmscott@tamu.edu">loganmscott@tamu.edu</a></td>
</tr>
<tr>
<td>Treasurer</td>
<td>Kathy Tran</td>
<td><a href="mailto:kathytran01@tamu.edu">kathytran01@tamu.edu</a></td>
</tr>
<tr>
<td>Bush School Liaison</td>
<td>David Hidinger</td>
<td><a href="mailto:david.hidinger@tamu.edu">david.hidinger@tamu.edu</a></td>
</tr>
<tr>
<td>Undergraduate Liaison</td>
<td>Javier Fernando Gutierrez</td>
<td><a href="mailto:jfgs13@tamu.edu">jfgs13@tamu.edu</a></td>
</tr>
<tr>
<td>Community Outreach</td>
<td>Rob Zedric</td>
<td><a href="mailto:rktsyntst@gmail.com">rktsyntst@gmail.com</a></td>
</tr>
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### Financial Activity

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</table>
UIT-INMM organized its 3rd annual general assembly, where students from nuclear science and techniques Master program were invited to know more about the INMM through a presentation shedding light on the INMM activities and its overall goal under the supervision of the founder Prof. Oum Keltoum Hakam who responded to the student’s questions, then we proceeded to the election of the new executive committee members and we had a talk about future activities.
In April 13th, the UIT INMM student chapter has organized a Personal Development Training (PDT) under the theme: “From dream to reality: A path to a peaceful warrior.” The PDT has been animated by M. Mohamed REFFADI, founder and manager of Me & You Consulting. During this event, there was much discussion about the difficulties in the nuclear and other fields. This type of event within our association could only be an added value.

Nuclear applications and Nuclear Security Workshop
UIT-INMM Student Chapter has organized on June 1st, 2017 a full-day workshop entitled nuclear applications and nuclear security in collaboration with the Faculty of Sciences Ibn Msik (FSB) - University Hassan II - Casablanca. The workshop was held in the framework of UIT-INMM student chapter objectives; dissemination of nuclear security culture at national universities. This workshop was a good opportunity for sharing knowledge and networking. The FSB students showed interest in nuclear security and to join our chapter.
UNIVERSITY of IBN TOFAIL STUDENT CHAPTER (Morocco) (cont.)

Ms. Jawaher Al-tuweity
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jaltuweity@gmail.com

Ms. Ibtissam ZIDOUH
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ibtissamzidouh@gmail.com

Mr. Mohamed ASRI
MSc student, University of Ibn Tofail, Physics Department
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Mr. Younes HMIMNAT
MSc student, University of Ibn Tofail, Physics Department
youneshmimnat@outlook.com
UNIVERSITY of IBN TOFAIL STUDENT CHAPTER (Morocco)  (cont.)

Ms. Chaimae EL MAZOURHI
MSc student, University of Ibn Tofail, physics Department
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Prof. Oum keltoum HAKAM
UIT-INMM Faculty Founder and Advisor
- Director, Nuclear Physics & Techniques Research Unit
  University of Ibn Tofail, Faculty of Sciences.
- Chairwomen of the International Nuclear Security Educational Network
okhakam@yahoo.com

Prof. Abdelmajid CHOUKRI
Deputy faculty advisor
Professor, University of Ibn Tofail, Faculty of sciences.
choukrimajid@yahoo.com
Event realized in collaboration with the faculty of sciences BEN M'SIK,

June 1st 2017

"Nuclear applications and nuclear security"

The Subatomic Research team greeted us under the supervision of Professor Jalal INCHAOUH, the event was interactive, us as INMM members, we have given them presentation about first of all the association and then different presentation about nuclear security, nuclear security culture and threats to nuclear security, from their part they’ve talked about nuclear applications and the projects they’re working on related to nuclear and finally we had a discussion as closure to the event.
Personal development training under theme: From dream to reality “the path of peaceful warrior”
April 13, 2017

Organized by INMM-UIT and Animated by M. Mohamed Reffadi, founder and director of You and Me consulting

The idea of this PDT is taken from a film called 'peaceful warrior' based on a real story of an athlete (Dan Millman) who fought to realize his dream which was to participate in a gymnastics competition and perform a movement never made by anyone, M. REFFADI divided the event contained in this film in stages by which this person passed before reaching his goal, the event was so interactive and participant students was so appreciative of it.
Participation of UIT-INMM members in different nuclear security events


Ms. Khadija MOUSSAID and Mr. Youness HMIMNAT participated at the Regional School on Nuclear Security organized by the University of Ibn Tofail and the International Atomic Energy Agency, Kenitra, 16-27 October 2017.

Congratulations to our members:

- Congratulations to Ms. Assia LASFAR and Mr. Youness ELFASSI for starting new jobs at the “Moroccan Agency for Nuclear and Radiological Safety and Security”.
- Mr. Taha LAGHOUAZI for benefiting from a six months’ internship at the International Atomic Energy Agency, Vienna, Austria.
During 2018 the INMM chapter at the University of Michigan focused on student involvement, roundtable events, policy lunches, and social activities. It was a busy year where we had a great deal of involvement from new members and developed a positive outlook for the future of the chapter. Not only was valuable information shared with chapter members, but they were also encouraged to network and familiarize themselves with the research of other students, faculty, and professionals.

**Seminars:**
The chapter held a seminar in September, jointly with the Consortium for Verification Technology, hosting Dr. Istvan Dioszegi of the Nonproliferation & Sciences Department of Brookhaven Lab. His talk centered on the high stakes of nuclear weapons and world powers. He discussed the implications of the New Strategic Arms Reduction Treaty (New START) of 2010, signed by former president Barack Obama and Russian President Dmitry Medvedev. Several of the key points of the talk were the current states of agreement between nations to continue reducing nuclear weapons and on-site inspections to verify quantities of nuclear warheads. Our chapter held a roundtable event in January, led by Dr. Patricia Schuster. The discussion centered on her work and travels with Prof. Sig Hecker aimed at engaging with Chinese nuclear scientists and policy experts. She presented information on the current North Korean crisis, and the ongoing threat of nuclear terrorism. She also discussed the goals and structure of the international workshop series she was a part of and debriefed us on those discussions. Members from the chapter were free to ask questions and discuss topics openly during the talk.

*Dr. Patricia Schuster presenting the efficacy of recent international workshops*
“MCNPX-PoliMi Simulation of Radioxenon Detection for Treaty Verification” - Ciara Sivels

We are also very proud that Marc Paff won the J.D. Williams Best Student Paper Award!

Policy Lunches:

Due to the high level of interest regarding nuclear policy expressed by our chapter’s members, we have held events over the past year called “Policy Lunches.” The idea behind these events is the chapter invites a graduate student or professor who has a high level of familiarity with current nuclear policy and in an informal setting, the presenter will provide a presentation and the attendees can discuss and ask questions, while receiving a free lunch. In March, the chapter invited a Nuclear Engineering graduate student, Tyler Cousins to present the topic of recent talks between North and South Korea. Tyler has an undergraduate degree in political science and has a broad level of nuclear policy understanding from policy fellowships, time in Washington D.C., and conversations with policy experts.
Several other policy lunches were held throughout the year each with great attendance. The others were casual events where the chapter members were either asked to bring their lunch and share in the discussion or the chapter provided food for the event. The members of the chapter Executive Committee asked questions of the participants and presented some recent news articles to spur discussions related to INMM topics.

**Outreach Events:**

A monthly newsletter has been published through the schoolyear, by editor-in-chief/ publicity chair Evan Leppink. These newsletters have been highlighting nuclear nonproliferation and materials control news, policy think-pieces, and upcoming INMM events. They have been well received by the department, and have helped to spread the word about our mission.

**Social Events:**

An important part of our chapter’s ideology is providing time and encouragement for members to network and share some food, conversation, and laughs. Two different barbecues were held, one at the beginning of the fall semester and one at the end of the winter semester for these purposes. The barbecues were jointly hosted and attended by the INMM chapter at the University of Michigan and the ANS chapter at the University of Michigan. This allowed both chapters to encourage new members to join both organizations and helped us with the cost of the food. Many students and faculty attended both barbecues.
Executive Committee Elections:
A well-attended ice cream social was held for the election of next year’s officers on April 12, 2018. Many new faces have joined the Executive Committee, where each position has a new officer except Valerie Nwadeyi as the publicity chair. It was great to see both graduate and undergraduate students expressing interest in contributing to INMM leadership. The chapter is excited to see what improvements can be made by the new leadership. Congratulations to all those elected!

2017-18 INMM Chapter at The University of Michigan Executive Committee

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Chris Meert</td>
</tr>
<tr>
<td>Vice-President</td>
<td>Lauren Finney</td>
</tr>
<tr>
<td>Secretary/Treasurer</td>
<td>Valerie Nwadeyi</td>
</tr>
<tr>
<td>Communications Chair</td>
<td>Nathan Giha</td>
</tr>
<tr>
<td>Publicity Chair</td>
<td>Michael Hua</td>
</tr>
<tr>
<td>Past President</td>
<td>William Steinberger</td>
</tr>
</tbody>
</table>

Future Goals:
We hope to continue our increased efforts in outreach events, in order to expand our visibility around campus and recruit new members interested in nuclear materials management. A wide range of events and presentations will increase the appeal of the chapter to more areas of the department and university. Our chapter has been communicating with the secretaries for Congress representatives Debbie Dingell and Tim Walberg. We anticipate hosting a seminar related to the role of subject matter experts in politics and their perspectives on the nuclear industry before the end of 2018. The chapter will be helping to host a CRC Workshop coming up this summer, which will take place at the University of Michigan. Our INMM chapter will be assisting students to attend and present their research.

Respectfully submitted,
Austin L. Carter
INMM Chapter at the University of Michigan Communications Chair
austinlc@umich.edu
Student Chapter Activities:

1. Members of the INMM Student Section supported MU’s Summer 2018 class, “NE7313: Nuclear Science and Engineering for Secondary Science Teachers” (June 11 – 15, 2018), assisting with facility tours and identifying content on nuclear safeguards and other topics. This event provided members with potential speakers from several organizations for Chapter activities in the coming academic year (e.g., Ameren’s Callaway Nuclear Plant, and the US Navy).

2. The Student Chapter co-sponsored a seminar at the MU Research Reactor (MURR) on September 19, 2017, by two scientists from Pacific Northwest National Laboratory: Mr. Stephen Mladineo (Senior Nonproliferation Advisor, and INMM Fellow), and Edward Norris (NNSA Graduate Fellow). The seminar presented information on nuclear safety and safeguards culture, and educational and career opportunities related to nuclear safeguards -- specifically, the NNSA’s Graduate Fellowship Program.

3. After officers for the 2018-19 academic year were chosen, information was submitted to the University of Missouri’s Student Organizations web site with the new slate of officers, as well as an updated Chapter Constitution. Officers for the 2018-19 year are:

   **President**: Dana Wegge (PhD Candidate, Chemistry)
   **Vice President**: Jack Bauers (BS Candidate, Mechanical Engineering)
   **Secretary**: Brad Jeffries (PhD Candidate, Nuclear Engineering)
   **Treasurer**: Jake Gallagher (BS Candidate, Chemical Engineering)
   **Faculty Advisor**: Dr. Kate Trauth (Civil and Environmental Engineering)
   **Staff Support/Co-Advisor**: Gayla Neumeyer (Manager of Education Programs, MU Research Reactor)

4. Members of the INMM Student Chapter helped staff a STEM education booth at the Columbia (MO) Art League’s annual “Art in the Park” event on June 2, 2018, the goal of which was to help engage young learners in analytic techniques and technology. Targeting elementary and middle school age students, the booth provided hands-on demonstrations of paper chromatography, and plant science. The paper chromatography involved various colored markers to illustrate separation of pigments (as an analogue for various molecules), while the plant physiology demonstration used colored water to illustrate plant uptake of nutrients.

5. Student Chapter President, Dana Wegge, will attend the national Student Chapter Executive Committee meeting to be held on Saturday, July 21, 2018, in Baltimore, MD.

6. An Executive Committee meeting will be held in mid-August to establish plans for Student Chapter activities for the 2018-19 academic year, which will include a discussion on strategies for member recruiting and activities to promote professional development.
President, 2017-2018: Nathan Gale
Vice President, 2017-2018: Brittany Gagne
Secretary, 2017-2018: Ramda Galos
Treasurer, 2017-2018: Matthew Gervasi
Communications Chair, 2017-2018: Brendon Jaramillo
Public Outreach Chair, 2017-2018: Phoenix Baldez
President, 2018-2019: Matthew Gervasi
Treasurer, 2018-2019: Eugene Dimalanta
Communications Chair, 2018-2019: Brendon Gray
Public Outreach Chair, 2018-2019: Phoenix Baldez
Faculty Advisor: Adam Hecht, Ph. D.

Introduction
This year has been filled with successes and landmarks for us at the UNM chapter of the Institute of Nuclear Materials Management! We took a leap into the unknown by instituting weekly, student-led meetings that allowed the majority of our active members to get public speaking and discussion coordinating experience. This format was very popular within our chapter and allowed us to learn and get to know each other better as future professionals. Another major landmark was the election of our first officer from outside the nuclear engineering department (Brendon Jaramillo from political science). We worked to diversify our chapter throughout the year and will now have two members of the executive committee from outside the nuclear engineering department (Eugene Dimalanta from math & statistics and Brendon Gray from political science).

We also had success both bringing professionals in to meet our chapter and reaching out to members of the community to help introduce people to the important issues that the INMM is concerned with. In total, we had five speakers come from national labs, eight outreach events in conjunction with the UNM chapter of the American Nuclear Society (ANS), one web panel in conjunction with the Texas A&M INMM chapter, a visit to the Trinity test site, and a tour of Los Alamos National Laboratory (LANL).

The major concern with our chapter is that we have an unreliable method to track membership. We do not charge dues, so we just take attendance at each meeting. We are considering several options to address this and others issues in the year to come.

Weekly Meetings
We noticed that our organization was dominated by technical discussions by professionals and had limited active participation from our student members. Also, our meetings were irregularly scheduled, so to address both of these issues we decided to experiment with weekly meetings; the usual monthly seminars with industry professionals were supplemented with meetings run and presented by student members. These student-led meetings were modeled somewhat after a Toastmaster agenda: one student would act as MC, one or two would give a 5- to 10-minute presentation, another student would lead a “table topics” discussion with all meeting attendees based on prompt of his or her choice, and finally, an assigned assessor would give specific positive and negative feedback on style and delivery to the student speakers. This allowed about 15-20 separate students an opportunity to practice presenting and catalyzed stimulating discussion and analysis of many important issues related to the nuclear industry and nuclear materials management in general.

Although weekly meetings seemed like it would be challenging to support throughout the year, we found that by encouraging participation from all members and fostering a friendly and critically open-minded environment, it was quite easy to schedule one or two speakers per week. Occasionally a speaker had to cancel, so would substitute a presentation with a 20-minute video related to nuclear questions, followed by discussion. We also found that the cost of weekly meetings was quite manageable in relation to our budget. Although all universities are different, we suggest that other chapters experiment with this strategy, especially considering the fact that most universities fund organizations based on their level of activity.
Monthly Seminars and Tours

**29-30 August, 2017**, Attendance at INMM Southwest Chapter Novel Technologies Workshop: Thanks to funding from the Southwest professional chapter of the INMM, we were able to send seven of our members to the two-day workshop that allowed them to learn and network with dozens of graduate students and professionals from around the country.

**1 September, 2017**, Seminar with Susan Pepper: Susan Pepper visited us while on a trip from Brookhaven National Laboratory. She gave a summary of her career and gave counsel to the students about how to have a successful career in the nuclear field, particularly to our members outside the nuclear engineering department. She also gave valuable information about the International Atomic Energy Agency and internship options for students who would be interested in working in Austria.

**6 October, 2017**, Seminar with Alexander Solodov: Dr. Solodov is a research and development engineer at Sandia National Laboratories. He gave a presentation about unmanned aerial vehicles and their potential for national security, specifically nuclear safeguards and controls.

**7 October, 2017**, Trinity Site Visit: Twice a year White Sands Missile Range opens the Trinity nuclear warhead test-site to the public. Seven of our members made the six-hour round trip to this historic site to learn more about the birth of the nuclear era.

**27 October, 2017**, Los Alamos National Lab Tour: Thanks to coordination with the INMM Southwest Chapter vice president, James Miller, we were able to organize a tour of the laboratory for nine of our members. During the all-day tour, we learned about the history and mission of the lab and saw several of the lab sites, including their particle accelerator and an aborted test reactor site.

**17 November, 2017**, Seminar with Carl Williams: Dr. Williams teaches the introductory 101 class in the nuclear engineering department at UNM and is an active amateur historian, especially related to the nuclear age. He gave a historical survey of nuclear science and showed us some of the items in his collection including a fuel brick from Enrico Fermi’s original Chicago Pile.

**8 February, 2018**, Live Stream with Texas A&M Chapter: Thanks to Texas A&M’s invitation and technical expertise, we were able to participate in their livestream of the Panel on Interdisciplinary Nuclear Security – North Korea.”

**16 February, 2018**, Seminar with Faraj Ghanbari: Dr. Ghanbari is an adjunct professor at UNM who teaches an interdisciplinary class on weapons of mass destruction and non-proliferation. He worked at Sandia National Laboratories for many years on many projects related to the nuclear enterprise. He gave us a presentation combining professional development counsel and an example of real-world engineering from his career when he helped develop a commercial, soil remediation system that was used in the clean-up in the Marshall Islands.

**23 March, 2018**, Seminar with Susan Caskey: Dr. Caskey is a Principle Member of the Technical Staff in the Global Security Systems Research and Analysis Program at Sandia National Laboratories. She analyzes threat prioritization models and risk assessment models, some of which are related to the nuclear enterprise. She gave us a presentation called “Exploring Risks Associated with the Global Expansion of Civilian Nuclear Power” which showed us a real-world example of how civil unrest and geopolitical conditions can affect the risk assessment of nuclear power plants and other sites with high potential.
disaster consequences. This was an especially eye-opening presentation for many of us who are engineering students and do not generally have the opportunity to take non-technical concerns into consideration when discussing nuclear concerns.

27 April, 2018, Seminar with Adam Williams: Dr. Williams is a Senior Systems Engineer at Sandia National Laboratories who works in nuclear safeguards. He gave us an introductory presentation on the subject with insightful comments about the challenges inherent in the safeguards enterprise and potential options to improve our strategies for nuclear security.

Outreach Activities

Note that our Public Outreach Chair, Phoenix Baldez, held the same position in the UNM chapter of ANS, so all outreach activities were done in association with ANS. When appropriate, Phoenix would explain some of the distinctions between ANS and INMM.

30 September, 2017, GIRL Extravaganza at Rotary Park in Bernalillo, NM: The GIRL Extravaganza was done in conjunction with the UNM Society of Women Engineers (SWE) and the local Girl Scouts pack. It was the first event at which the UNM ANS/INMM team offered the chance for Girl Scouts to earn their Get to Know Nuclear patch and over 100 patches were given out! Seven stations were setup and after the Girl Scouts obtained stamps from six of the seven stations they could then claim their patch. The first station dealt with half-lives and how, over time, the amount of radioactive material decreases by half. This was done by giving each Girl Scout a licorice rope and they would cut it in half then mark the height on some graph paper then, sometime later cut it in half again and mark the height. After this was done about 5-6 times the Scouts connected their points to see how half-life leaves an exponentially decreasing amount of material. Next fusion and fission were explained. Fusion was explained using balls while fission was explained by toppling dominoes. The third station looked at the history of women in nuclear science and their impact on the world including Marie Curie, Shirley Ann Jackson, Allison Maclfarlane, Kristine Svinicki and J’Tia Hart. The next two stations looked at radioactive material and some radiation detectors. Multiple radiation detectors were brought out and the Scouts got a brief introduction to how they detect radiation and what each detector is used for. Then they were able to grab their own detector and look at a variety of radioactive materials such as a piece of the Chicago Pile fuel, natural rocks rich in various radioactive isotopes, smoke detectors, fiestaware, some samples from Marie Curie’s lab, and a pieces of refined uranium. The station after those two conjoined stations was modeling the atom. Heavy stock paper and scissors were provided and the paper had cut-outs with electron orbits, protons, and neutrons with instructions on how to create a model of an atom. The final station was the nuclear technology station where nuclear power generation was explained as well as the nuclear fuel cycle. As said before, over 100 Girl Scouts were able to receive their Get to Know Nuclear patches and fun was had by everyone involved!

7 October, 2017, Engineering Open House at UNM: Every year the UNM School of Engineering holds an open house that is focused on recruiting high school seniors to attend college at UNM and specifically interest them in engineering. Every department has a booth to hand out information packages about their degree program. The UNM ANS/INMM outreach group volunteered to have a booth in conjunction with the Nuclear Engineering Department’s booth so that
they could show off some hands on activities. These activities included the detection of some low level radioactive material through Geiger counters, a demonstration of various gamma ray energies using a sodium iodide detection system and some historical artifacts from nuclear history. There were also samples from Marie Curie’s lab (which were still radioactive), a piece of the Chicago Pile (with fuel included), as well as some devices with radium paint and natural radioactive rocks. Approximately thirty high schoolers signed their name to show interest in not only nuclear engineering but specifically joining ANS once they attended UNM. It was also an excellent educational experience to be able to teach kids and their parents about radioactivity at the same time. It is safe to say that this was most of the parents’ first exposure to any sort of nuclear science, and with their kids showing interest in what was said, they learned a lot along the way!

2 November, 2017, 8th Grade Science Class Teaching at Jefferson Middle School: Phoenix Baldez was invited to teach classes at a local middle school in Albuquerque. Jefferson Middle School (JMS) is in close proximity to UNM and it is hoped that many JMS students will consider UNM for college. 8th grade students from Sherie Pennebaker’s five physical sciences classes had a test on the nuclear science the following day. Phoenix gave a guest lecture which covered all the fundamentals of nuclear science and answered any questions the students had in general and with concepts which they were not understanding for their test. After the class felt secure in their knowledge for the test, Phoenix polled the class on what they wanted to learn about and choose the three most popular topics out of: radiation detection, fission reactors, fusion reactors, nuclear weapons, nuclear medicine, high energy physics, and nuclear safeguards. After the three optional topics were covered Phoenix brought out six Geiger Counters, three radioactive sources, and three shielding materials. The three sources were Am-241 from a smoke alarm, a piece of fiestaware, and a gas mantle doped with thorium; the shields were paper, aluminum, and lead. All the proper precautions were taken with the radioactive sources and the lead was completely isolated from the students. The students then enjoyed experimenting with the various radioactive sources and shielding materials as Phoenix explained the physical concepts being demonstrated. The photos show a thank you card signed by some of the students in Sherie’s classes.

11 November, 2017, Math Moves U at UNM: Math Moves U was a Raytheon event to promote math and engineering disciplines. The ANS/INMM outreach team put on a lecture to approximately 200 students over the course of a day about the basic math used in nuclear engineering. The most basic mathematical concept covered was the idea of exponential decay and gamma ray attenuation in materials. Multiple instances of these two phenomena were discussed, and the math was analyzed at a very basic level. Then for an activity, the students cut in half licorice rope around 5 or 6 times and plotted the results to see how radioactive decay followed an exponential trend. Then they used Geiger counters, some low level radioactive sources, and shielding materials to explore attenuation. They saw the differences between the shielding provide by paper, aluminum and lead when exposed to alphas, betas and gammas. It was then explained how material thicknesses or material compositions could be calculated by using various radioactive sources and detectors.
2 December, 2017, The Art of Science at UNM: The Art of Science event was the second joint event done with the UNM SWE chapter and local Girl Scout troops. This event focused on the artistic side of science and how there are many visual effects of radiation and artistic takes on nuclear science. For this event there were five stations and the scouts had to go to each station to receive their Get to Know Nuclear patch. First a short lecture was given about the importance of nuclear energy both technically and culturally throughout the world and the positive and negative effects it has had through its relatively short history. Then, while the scouts completed the activities at each station, a slide show of nuclear art was shown which highlighted notable artists and archivists such as Patrick Nagatani, Jessie Boylan, and Igor Kostin. The first station that the scout visited was a microwave generator which was used to excite various gasses. Depending on the composition of the gases the excitation produced varying color and, in some cases, lightning-like effects like what is seen in a plasma globe. Next was a station that had what we called a lightning detector. Very high voltage was placed across an electrode and when exposed to alpha particles the air would breakdown and create a miniature lightning storm. Also at this table was a sample of plastic that was placed in an electron accelerator and when exposed to light the damage from the electrons was clearly visible in a branching pattern. The next station was where the scouts were able to showcase their own artistic abilities. Both fission and fusion were described and demonstrated to them and then they were given a set of water colors and paper and ask for their own artistic interpretation of the two events. This activity had some amazing results that were truly creative! Finally, a cloud chamber was set up and the scouts were able to watch as a piece of rock which naturally contained high levels of radon, emitted alpha particles. The tracks from these alpha particles (and even occasionally a cosmic ray!) were clearly visible. Overall, about 100 badges were given out at this event, and not only did the girl scouts enjoy our activities but many colleges who were putting on other events said that didn’t know about all the cool things we got to do as nuclear engineers!
26 January, 2018, Science Fair Judging at Jefferson Middle School: Jefferson Middle School has a large science fair every January and is always in need of additional judges for the student’s poster boards. A few ANS and INMM volunteers donated their time to judge approximately five students each. The students were with their projects, they were interviewed on their project, and then a grading sheet was filled out. This is always a rewarding experience to see the next generation of scientists and the ideas that they have. Unfortunately, there were no projects that dealt with radioactivity, but the students were always excited to hear that they were being interviewed by nuclear engineers!

29 January, 2018, Science Extravaganza at Jefferson Middle School: After the Jefferson Middle School has their science fair, they hold a science extravaganza in which the winners of their science fair are announced, and they invite science organizations from around the city to hold and outreach event. At this event ANS and INMM members were able to interact one-on-one with kids and parents who were interested in nuclear science. ANS promotional material was distributed to the parents as well as material for the UNM Nuclear Engineering department. There were also basic demos involving some radioactive sources, shields, Geiger counters, maps of the world’s nuclear reactors and models of atoms used to demonstrate fusion and fission. We also were able to help correct “Radio Activity” (see photo below) and explain that while radio waves are a part of the electromagnetic spectrum they are not considered radioactivity such as gamma rays.

28 April, 2018, Energy Day at UNM: At the UNM School of Engineering Energy Day the ANS/INMM outreach team was able to set up a booth to help explain radioactivity to students as they toured through the many facilities UNM has to offer. They were able to experiment with Geiger counters, radioactive sources and shielding materials. They were then encouraged to ask questions about radiation and how nuclear science could be used to generate energy. Promotional material about the need of nuclear energy in a clean energy future were also given out and even some lively debates were had!

Screenshot of email from JMS teacher Suzy Dunnum:

Hi Phoenix,

Thank you so much for participating in last night’s Science Extravaganza. You and your friends are receiving rave reviews and, even better, I have a student who announced that he now wants to enter the field of nuclear engineering. Very cool!

Take care,
Suzy
Challenges and Future Plans

There are two major challenges that have to do with our membership:

- There are very few professional members of the INMM
- Although the INMM has an inter-disciplinary mission, our chapter membership is still dominated by nuclear engineers

To address the first issue, we are considering several options to promote INMM professional membership. We did vote this year to fund membership for all chapter officers so that a minimum we will have four members each year. We could extend this to partial subsidize membership fees for all members, or at a minimum the more active ones. Alternatively, we are considering charging joint dues to our members, part of which would go to the chapter and the other part that would go to professional membership. One way to promote this option would be the design and sale of a T-shirt or water bottle associated with the membership fees.

To address the second issue, there is a lot of room for improvement. We would like to increase our visibility in the club fairs on campus and possibly make visits to classes and other clubs interested in related issues to recruit. We also need to make more promotional material (or receive such material if it exists from the professional organization). We have designed a flyer to announce meetings, but we would also like to develop brochures, pamphlets, and/or business cards. We started some social media pages this year, but over time the effort lost steam, so we should consider dedicating a member of the executive committee to our online presence.

Overall, our chapter is growing and healthy, but it needs a lot of work to capitalize on the momentum that we’ve developed over the past two years.

Finances

The organization falls under the GPSA section of the UNM student government. This means that we do not receive an annual budget from the UNM senate but are awarded an annual stipend in the form of PB funds. This stands for pro-rated benefits and are calculated by the total number of students in the department. From both fall and spring semesters, for these are awarded on a semester basis, UNM INMM received $437.00 and $399.00 respectively. Because of the organization receiving PB funds, we are unable to have money allocated to us from the UNM senate, but because of a clerical error we had received $171.00. Then we were graciously awarded a $400.00 stipend from the National Chapter. Finally, we as an organization carried over $1103.99 in self-generated funds. These are funds that are earned by the organization such as fundraising or is money carried over from previous semesters. This lead to a yearly budget total of $2510.99.

Expenses for this year had all been in the form of food for the weekly meetings that ranged from sub sandwiches, pizza, and on the last meeting of each semester, fried chicken and other sides from a local restaurant near to the campus. Using PB and self-generated funds for this the years expenses. The total for food from the self-generated came to $845.66 and from PB $234.77. The money allocated to us by ASUNM was broken down to $150.00 for food, $20.00 for office supplies, and a $1.00 surcharge. None of this was used by the Organization. This lead to total expenses of $1080.42 leaving a balance of $1430.57. See the chart below for a more detailed breakdown.

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<thead>
<tr>
<th>Type</th>
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<th>Expense</th>
<th>Balance</th>
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<tr>
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<td></td>
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<td>$1080.42</td>
<td>$1430.57</td>
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Member Feedback

On December 8th our “Table Topics” discussion was directed toward receiving feedback on how to improve our organization, Ramda Galos, our secretary, took the following notes in summary of the comments.

Things people liked:
- Weekly meetings
- Format of “Table Topics”
- Professor Williams historical seminar and brick from the Chicago Pile
- Trinity Site visit
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>Hunter Andrews</td>
</tr>
<tr>
<td>Vice President</td>
<td>Sarah Morgan</td>
</tr>
<tr>
<td>Secretary</td>
<td>Ivan Cano</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Harrison Stewart</td>
</tr>
<tr>
<td>Conference Coordinator</td>
<td>Michael Cartwright</td>
</tr>
<tr>
<td>HSEP Liaison</td>
<td>Colleen Arthur</td>
</tr>
</tbody>
</table>

Faculty advisor: Dr. Braden Goddard

Activities

Progress from the chapter’s creation (fall 2017) to 06/11/2018 includes:

- Opening a Wells Fargo account to allocate additional funds
- Holding a pre spring planning meeting
- Hosting four invited speakers presentations
- Hosting an invited speaker round table meeting
- Conducting officer elections for the 2018-2019 academic year
- Holding an officer transition meeting

The invited speaker meetings are:

- Todd Sechser (UVA) “Nuclear Weapons and Coercive Diplomacy applied to North Korea,” 3/12/2018, attendance 18
- Thomas Graham Jr. (Lightbridge) Roundtable lunch discussion, 4/16/2018, attendance 10

Upcoming Activities

- Host four invited speaker meetings for the fall semester
- Assist VCU ANS Student chapter is planning for the 2019 ANS Student Conference
- Plan and organize INMM relevant events for the 2019 ANS Student Conference
Treasurer’s Report
The Chapter’s finances, as of 6/11/2018, has a balance of $0 in the VCU club account and $500 in the Wells Fargo account. This $500 includes a $100 temporary loan from the faculty advisor due to minimum Wells Fargo checking account balance requirements. This loan is expected to be repaid before 12/31/2018.

### FY2017 FINAL

**INMM at Virginia Commonwealth Financial Statement – 1/1/2018 – 6/11/2018**

<table>
<thead>
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<th>Income</th>
<th>Expenses</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Chapter Balance: 1/1/2018</td>
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<tr>
<td>Income:</td>
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<tr>
<td>VCU Club Account</td>
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<td>VCU donation for club creation</td>
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<td>Wells Fargo Account</td>
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<td>INMM National student chapter support</td>
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<tr>
<td>Expenses:</td>
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<td>Dinner for 2/6/2018 speaker’s presentation</td>
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<td>Dinner for 3/12/2018 speaker’s presentation</td>
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<td>VCU Club Account</td>
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<td>Lunch for 4/16/2018 speaker’s roundtable</td>
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<tr>
<td>VCU Club Account</td>
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<td>Returned remaining VCU club account money back to VCU</td>
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<tr>
<td><strong>Expenses Total:</strong></td>
<td><strong>$1150</strong></td>
<td></td>
</tr>
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</table>

Chapter Balance: 6/11/2018 $500
The Facility Operations Technical Division has two sessions with a total of 15 papers being presented at the 2018 Annual Meeting in Baltimore. This smaller than usual number of papers and sessions is disappointing, especially since FOTD expanded/clarified its areas of interest for the call for abstracts. This number of sessions is 1/3rd of the sessions normally supported (6 in 2017). Unfortunately, one of our key NNSA paper sponsors for the annual meeting decided to scale back the number of papers sponsored at this year’s meeting and impacted at least one total session worth of papers. We are working to diversify more in the future to mitigate the impact. Also, we saw a drop of student papers in Facility Operations this year – especially from students outside of the USA. We continue to have a lack of paper submissions from the commercial nuclear industry even though we have increased our outreach to this community.

Activities continue on developing a proposal for a FOTD focused workshop or co-sponsoring a workshop. FOTD is hoping to develop an ongoing workshop that will be of stainable interest to the membership and attract others to become INMM FOTD members. However, the drop in paper submittals for the annual meeting have us concerned and we will be cautious. We will be working a proposal at the Annual Meeting for potential submittal in the next budget cycle.

As mentioned above, gaining commercial nuclear industry interest has been a challenge as we must present an appealing incentive for commercial entities to add the INMM to their list of professional organizations to be involved with. We will continue our outreach here.

For the upcoming year, a new focus will be getting interest from the Department of Energy operational nuclear facility personnel with a concentration on infrastructure challenges and improvements (potential workshop). This is an area that once was active in INMM but has dropped off in recent years so we will work to invigorate interest in that area.

Sincerely,
Morris Hassler, Chair
Ben Watts, Vice-Chair
Virginia Magoulas, Secretary
The International Safeguards Technical Division (ISD) has enjoyed an extremely active year following the conclusion of the 2017 annual meeting. Information on a few of the key collaborative events include:

- **2017 IAEA Novel Technology Workshop**
  
  A Novel Technologies, Techniques, and Methods for Safeguards and Arms Control Verification Workshop was organized jointly by INMM-ISD, the INMM- Nonproliferation and Arms Control Technical Division, Sandia National Laboratories, and the INMM Southwest Professional Chapter **August 29-30, 2017** at the Sandia National Laboratories Center for Global Security Cooperation Building (CGSC) in Albuquerque, New Mexico. A total of 98 people registered for the workshop. The final program had 22 oral presentations and 17 posters. In addition, each day included a table top exercise where the participants were divided into groups to discuss and make recommendations on two different safeguards scenarios on the first day and three different arms control scenarios on the second day. The two days were very interactive both during the presentations and during the desk top exercises. A comprehensive article describing the workshop was published in the latest Journal of Nuclear Material Management issue (Volume XLVI, Number 2).

- **Joint activities with the European Safeguards Research and Development Association (ESARDA)**
  
  - The five ESARDA Working Groups met **November 20-23, 2017** for their traditional meetings at JRC Ispra; one day was dedicated to a joint meeting on ‘Safeguarding Disposal of Spent Nuclear Fuel in Geological Repositories’. The five working groups are: Containment& Surveillance – C/S, Non-destructive Assay - NDA, Verification Methodologies and Technologies – VTM, Training and Knowledge Management – TKM, Implementation of Safeguards - IS.
  
  - The 40th ESARDA Annual Meeting took place **May 15-17, 2018** in Luxembourg. The meetings consisted of an Opening Plenary with keynote speakers and invited presentations, parallel WG meetings and a Closing Plenary. More information is available at ESARDA’s website at [http: esarda.jrc.ec.europa.eu](http://esarda.jrc.ec.europa.eu).

- **Joint workshop with Stimson Center:**
  
  - The Stimson Center, with support from INMM-ISD, hosted a seminar in Washington, D.C on **June 12 – 13, 2018**, entitled “Back-End to the Future: The Safeguards, Security and Society of Deep Geological Repositories (DGRs).” With long, multigenerational timelines, DGRs require new ways of implementing principles related to nuclear security and safeguards, as well as new approaches to societal (or stakeholder) engagement. Led by experts from regulatory authorities, industry, academia and NGOs, the panels and discussions examined how these principles shape the design and outcomes of nuclear technology, identifying key drivers and barriers for the successful establishment of DGRs, whether national or multinational. Information about the workshop can be accessed at: [https://www.stimson.org/content/back-end-future-safeguards-security-and-society-deep-geological-repositories](https://www.stimson.org/content/back-end-future-safeguards-security-and-society-deep-geological-repositories).

The two ISD working groups continue to engage its members and both will be holding meetings in conjunction with this year’s annual meeting.

- **Open Source / Geospatial Information (OSGI) Chairs: Yana Feldman and Zoe Gastelum**
  
  The OSGI Working Group is coordinating the preparation of a special issue of the JNMM focusing on R&D in the analysis and integration of multimedia data into open source and geospatial information analysis related to international
International Safeguards (cont.)

safeguards. The OSGI Special Issue Committee received 11 submissions in response to its call for abstracts and is in the process of editorial and peer review. The target date for issuance is October 2018. The OSGI Working Group will be holding a meeting for its members and other interested parties on the opening morning of the INMM Annual Meeting (Sunday).

- **Safeguards Information Management (SIM) Chairs:** Kim Gilligan and Gary Hirsch
  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 SIM WG held its first formal meeting of the SIM WG during the 2017 annual meeting. Communications this year have primarily been via email. Many members have submitted abstracts on relevant and timely subjects for presentation and discussion. The group is still pursuing opportunities to hold a topical workshop on nuclear material reporting in the coming year.

- The SIM WG will be holding a meeting for its members and other interested parties on the opening morning the INMM annual meeting (Sunday).

**Upcoming Events:**

- **Policy and Technical Fundaments of International Safeguards Workshop –July 2018**
  Texas A&M University is organizing a workshop that will provide a basic overview of nuclear safeguards, including: nuclear material control and accounting, the nuclear fuel cycle, safeguards treaties and legal issues, safeguards approaches and application of specific types of facilities. Approximately 50 participants are anticipated for the 4-hour workshop that will be offered Sunday morning July 22.

- **IAEA Safeguards Symposium –November 2018**
  The IAEA will be hosting a safeguards symposium with the theme of Building Future Safeguards Capabilities in Vienna from November 5-8, 2018. The symposium fosters 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. More information on the symposium can be accessed at: https://www.iaea.org/events/symposium-on-international-safeguards-2018.

- **Joint INMM/ESARDA workshop-October 2018**
  Initial arrangements continue to be discussed with Japan for the 9th Joint INMM/ESARDA workshop to be held in Japan. Tentative dates for the workshop are October 7-10, 2019 and the location will be Tokyo. More information regarding the planning of this workshop will be shared during the ISD meeting during the INMM.

The international safeguards technical division is very pleased to announce two new members to its management team:

- **Fausto Medici:**
  Deputy section head of the Safeguards section in the Swiss Federal Office of Energy. He also serves as the chair of the ESARDA Working Group on the Implementation of Safeguards.

- **Craig Everton:**
  Director of the IAEA Safeguards Section in the Australian Safeguards and Non-Proliferation Office. He will serve as an interface with the Asian-Pacific Safeguards Organization.

Submitted respectfully,

*ISD Management Team:*
*Michael Whitaker, Chair;*
*Irmgard Niemeyer, Vice-Chair;*
*Arden Dougan; Craig Everton, Shirley Johnson, Fausto Medici, Susan Pepper; and Mark Schanfein Carrie Matthews - JNMM*
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.

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 59th Annual Meeting at the Baltimore Marriott Waterfront in Baltimore, Maryland, USA.

**ANSI INMM N15/5.1 Subcommittee Meeting (Analytical Chemistry Laboratory)**
Sunday, July 22, 2018, Noon – 2 p.m
Light lunch provided*
Point of Contact: B. (Chino) Srinivasan, b.srinivasan@science.doe.gov

**ANSI N15 Technical Standards Meeting**
Tuesday, July 24, 2018, Noon – 2 p.m
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. An RSVP is requested for the lunch, however, an RSVP is not necessary to attend and participate.

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, or 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 2018 annual INMM meeting. This joint working group meeting is scheduled for 8:00 AM EDT, Sunday July 22, 2018 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 2018 meeting.

**MC&A Technical Division Meeting**
During the 2018 MC&A Technical Division meeting, Richard Meehan, Director of the NNSA Office of Nuclear Materials Integration, will give a presentation on DOE/NNSA’s efforts to establish a formal training program for nuclear materials managers. Additionally, there will be a presentation on recent issues involving material holdup at NRC licensed facilities. 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.

**Preliminary agenda for the 2018 MC&A Technical Division meeting**

1. Tom Grice, Welcome, Overview and General INMM Topics of Interest
2. Richard Meehan, Training program for nuclear materials managers (pending availability)
3. Susan Smith, Summary of the Nondestructive Assay Working Group meeting
4. Cole Hexel, Summary of the Destructive Analysis Working Group meeting
5. Melanie May, Summary of the ANSI INMM N15/5.1 Subcommittee Meeting
6. Tom Pham, Update on the U.S. Nuclear Regulatory Commission’s 10 CFR Part 74 Rulemaking
7. Solicitation of input from attendees
   a. Support for Communications committee
   b. Support for Communications committee
   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.
   g. Development of information/training materials for INMM website.
8. Tom Grice, Holdup at NRC licensed facilities

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

<table>
<thead>
<tr>
<th>Roster of MC&amp;A Technical Division Officers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair</td>
</tr>
<tr>
<td>Vice Chair</td>
</tr>
<tr>
<td>Secretary</td>
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<tr>
<td>NDA Users Group</td>
</tr>
<tr>
<td>DA Users Group</td>
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<tr>
<td>Standards</td>
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<td>Accounting Committee</td>
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<td>Policy and Best Practices Tom Pham (NRC)</td>
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<td>Policy and Best Practices Debarah Holmer (DOE)</td>
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<td>JNMM Associate Editor Rian Bahran</td>
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<td>JNMM Associate Editor Louise Worrall</td>
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Respectfully Submitted by: Thomas Grice – Chair
Philip Gibbs – Vice Chair
Last year’s NAC Technical Division Meeting hosted presentations on JCPOA implementation by Corey Hinderstein (NNSA), an overview of the University of Michigan-led Consortia on Verification Technologies (CVT) by Sara Pozzi (Univ. Michigan), an update and discussion on the Nuclear Weapons Ban Treaty lead by Joseph Pilat (LANL) and Alex Glaser (Princeton Univ.), and a rich discussion on ways that NAC could better serve the INMM membership as part of overall strategic planning for the Institute (Teri Leffer). Ten NAC technical sessions were organized during the Annual Meeting – one joint with International Safeguards Technical Division and a notable two-part session focusing on topical issues (Russia Cooperation and JCPOA).

During the last year, two well-attended workshops were held. The first, organized by the INMM Southwest Chapter at Sandia National Laboratories in Albuquerque, set out to explore Novel Technologies, Techniques and Methods for Safeguards and Arms Control Verification (29-30 August 2017). The participants were immersed in safeguards issues and an interactive Table Top exercise during the first day, followed by a similar format focused on arms control during the second day.

The second workshop on “Nuclear Materials Science, Processing and Signature Discovery” (1-2 May 2018), organized by the Pacific Northwest Chapter, was held at Pacific Northwest National Laboratory in Richland, Washington. Participants considered important scientific developments that could change the paradigm for nuclear materials processing and signature discovery, influencing the fields of nuclear forensics, nonproliferation, signature discovery and the assessment of nuclear security vulnerabilities. The workshop focused on emerging technologies, techniques and methods for nuclear materials science processing and its applications to nonproliferation and nuclear forensics.

Two new subcommittees are in the process of being formed. In hopes of encouraging greater participation their plans will be briefed during the 2018 NAC Technical Division Meeting.

- The Export Controls Sub-Committee will focus on how we can better share knowledge and research across the export control field. At their first meeting on July 26, 2018, the group will brainstorm ideas for transferring and retaining knowledge, especially from senior experts to the next generation of leaders.
- The Arms Control, Treaty Verification, and Disarmament (ACTVD) Subcommittee will provide a forum for the education and exchange of information on policy, approaches and technologies that support wide-ranging arms control and treaty verification objectives. Part of the group’s objectives are to develop and present outreach materials, create fora for technical exchanges, and advance relevant expertise and experience to the next generation of experts.

During the coming year, NAC will focus on developing informational materials to be available on the INMM website.

Respectfully submitted,

Mona Dreicer, Chair
Nina Rosenberg, Deputy Chair
Teri Leffer, Secretary
Containment/Surveillance Working Group, Heidi Smartt
Export Control Sub-Committee, Meili Swanson
Arms Control, Treaty Verification, and Disarmament (ACTVD) Sub-committee, Jake Benz
Nuclear Security and Physical Protection (NSPP) Technical Division
Joe Rivers, Chair

We continue the process of organizing and restructuring the technical division. 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 Division is taking advantage of the Baltimore location to have a number of panel discussions at the Annual Meeting. These include panels on modelling and simulation, cyber security, and Drones/Unmanned Aerial Vehicles (UAVs). It is anticipated that these panel discussions will spur an interest for a future workshop on emerging security issues, which we intend to offer in the Winter/Spring of 2019.

The Technical Division is working with the Joint Committee on Nuclear Risk Management (JCNRM) to conduct a technical workshop on physical and cyber security that will look for ways to take advantage of safety risk information to inform the security disciplines. 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). It is anticipated that the workshop will be held in conjunction with the ANS Winter Meetings in Orlando in November.

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.
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 meeting was held on 24 Jan 2018 to discuss the planning and execution of the event. Planning teleconferences have been established on a monthly basis. The next PATRAM meeting is planned for 22 Jul 18 in Baltimore. INMM, in conjunction with WNTI, are working with industry, DOE, DOT, NRC, 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 33rd Spent Fuel Management Seminar January 23-25, 2018, 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 34th Spent Fuel Management Seminar in January 22-24, 2019, 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
Chair, Packaging, Transportation and Disposition
Bradley Loftin
Spent Fuel Management Seminar Chair