



Happy Summer!

As the U.S. continues to deal with the effects of COVID-19, the University of Tennessee plans a fall semester unlike any before.

Everything from our academic calendar to methods of instruction have changed. We will probably teach and attend most of our classes in a hybrid mix of online and in-person. *IJNS* is well-prepared for this transition, though. Our work has always been entirely online, and we meet regularly through video conferences. We are still business as usual!

Special Issues Update


By Rachel Brooks

Davis Editorial Fellow, Editorial Liaison for the Special Issue on INSEN

While *IJNS* continues to publish regular submissions of our journal, we are excited to work on two special issues of *IJNS*: the Special Issue on INSEN and the Special Issue on Women in Nuclear Security.

The Special Issue on INSEN will soon be published. For the 10th anniversary of the IAEA's International Nuclear Security Education Network (INSEN), *IJNS* wanted to produce a special issue of our journal to celebrate the Network's impact on international nuclear security. Graciously, Dr. Matteo Gerlini volunteered as our guest editor, and INSEN members from around the world contributed academic articles centering on the Network. Former and current INSEN chairs also contributed short reflections on their experiences in these positions. Though INSEN will not hold its annual meeting in Vienna, we still hope to publish this special issue near the time when the meeting would have been held. Look for this special issue in early July!

We are still seeking submissions for the Special Issue on Women in Nuclear Security. We wish to spotlight work done by women in the nuclear security field as well as work aiming to increase the number of women in the field. Ashley Humphrey (ashleya.humphrey1@gmail.com) is our Editorial Liaison for this special issue.

 @nuclear_journal

Edited by Rachel Brooks, Ashley Humphrey, & Ethan Barlow

OVERVIEW:

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This newsletter is designed to keep students, staff, and journal supporters up-to-date on how the journal is impacting global efforts to encourage diversity in theoretical foundations, research methods, and approaches.

UPCOMING EVENTS

- Jul. 22: 2020 NTI Nuclear Security Index Launch; Webinar
- Aug. 2-6: The 28th International Conference on Nuclear Engineering (ICONE 28), organized in cooperation with the IAEA; Anaheim, CA, USA
- Sep. 29-Oct. 1: Workshop on Insider Threat Mitigation in the Nuclear Sector; Vienna, Austria

A Webinar on Nuclear Transport Security: 5 Key Takeaways

By Ethan Barlow
Assistant Editor

How do we keep nuclear transport safe and secure? On June 25th, the Centre for Science & Security Studies (CSSS) at King's College London hosted a Nuclear Security Culture Programme (NSCP) webinar on "Nuclear Security during Transport." Presenting on this topic was Ben Whittard, who is both Director of Safety, Security & Environment at the International Nuclear Services (INS) and Chair of the Transport Security Working Group at the World Nuclear Transport Institute (WNTI). Here are 5 key takeaways:

1) "The transport sector is the unsung hero."

According to the distinguished speaker, the transport sector is vital to the nuclear fuel sector. "The entire fuel cycle," says Whittard, "is predicated on [us] being able to move nuclear materials around." For example, uranium moves from mine to enrichment facility to fuel fabrication facility to nuclear reactor to finally, once spent, long-term storage or reprocessing. The transport sector works diligently "behind the scenes to ensure that [this] transport...continues to operate effectively."

2) Rail is the most popular mode of nuclear transport.

Among different modes of nuclear transport, which is most common? Interestingly, it's rail, says Whittard. This, of course, varies from country to country. But internationally, rail is

most popular, followed by road and then by sea. One advantage that makes rail transport appealing, the speaker suggests, is it's often economical and environmentally friendly. One downside, though: not much flexibility of movement.

3) IAEA promotes international cooperation for nuclear transport security.

Each country is responsible for its own regulations. However, as Whittard notes, countries can "feed" international guidelines and best practices into their domestic policies, strengthening them. The International Atomic Energy Agency (IAEA) supplies such frameworks for nuclear security. When IAEA's member countries adopted in 1980 the Convention on the Physical Protection of Nuclear Material (CPPNM), their goal was to ensure countries effectively manage their non-military nuclear materials during international transport. Its 2005 amendment now covers, among other things, domestic transport as well. What makes CPPNM unique, Whittard explains, is it's "the only legally binding international convention concerning the physical protection of nuclear materials."

4) Nuclear materials aren't more vulnerable during transport.

Midway through his talk, Whittard polled his audience, asking us whether nuclear materials are more vulnerable during transport. An astonishing 88%, I included, said they *are* more vulnerable. After all, isn't security weaker when these metals are on the

move? Apparently not. Whittard contends that, while a nuclear material in transit might seem like a more "attractive" terrorist target, "it's only as vulnerable as the security measures you apply to it." He also points to the transport sector's excellent record regarding nuclear safety and security. In part, it's due to precautions like "avoiding regular timings," "avoiding high-risk areas," "reducing total time in transport," "reducing number of transports required," and restricting knowledge of transports to those who "need to know." Of course, this point doesn't mean that threats to transport, such as theft or sabotage, aren't serious or real. But it does mean that current security measures, threat assessments, and IAEA's Design Basis Threat (DBT) are largely effective.

5) Lack of confidence in nuclear security is still a challenge.

Sadly, Whittard regrets, nuclear transport faces challenges such as an increase in "denial of shipments," where carriers are "unwilling to move nuclear and radioactive materials." To this he attributes "a lack of education on the safety and security of these materials." Whittard also acknowledges that some countries, like those "shutting down nuclear reactors," lack "political and public acceptance" of nuclear energy. However, the nuclear security expert sees this as an opportunity to give countries the confidence they need through a global acceptance program. "What we do," says Whittard, "we do it with the highest levels of safety and security."

Call for Submissions

By Rachel Brooks

Davis Editorial Fellow, Editorial Liaison for the Special Issue on INSEN

Though the world has changed in the past few months, *IJNS* is still seeking submissions for our regular issues. Now may be a great time to work on that paper you have pushed off for later. We would love to receive your piece and to consider publishing it in the journal! *IJNS* accepts papers related to any aspect of nuclear safety and security, including book reviews of nuclear security-related texts. Submissions are peer-reviewed in a double-blind system and edited by the *IJNS* editorial staff. The journal continuously publishes articles online to various databases. Please submit using the online system on our website (<https://trace.tennessee.edu/ijns/>). If you have any questions or are interested in being a peer reviewer for *IJNS*, please email ijns@tennessee.edu.