

## AGA 7: Proliferation Challenges

Time: Friday 13:00–14:50

Location: HSZ/0002

**Invited Talk** AGA 7.1 Fri 13:00 HSZ/0002  
**Fireworks or Threat? – Recent Missile Developments in North Korea** — ●MARKUS SCHILLER — ST Analytics GmbH, München, Germany

It seems that the North Korean missile program is now advancing at a pace unlike ever seen before. In the third quarter of 2022 alone, North Korea tested more missiles than it had in the first 30 years of its program under its previous leaders Kim Il Sung and Kim Jong Il. This presentation will try to shed some light on what is actually happening in the realm of Kim Jong Un in regard to missile developments and tests, and it will try to derive the underlying strategy by applying technical analyses of the observed activities.

**Invited Talk** AGA 7.2 Fri 13:45 HSZ/0002  
**The Challenge of Nuclear-Powered Submarines to IAEA Safeguards** — ●TARIQ RAUF — Vienna

The decisions by Australia to import eight nuclear-powered submarines (SSNs) fueled with 97.3% highly-enriched uranium (HEU) from either the US or the UK, and by Brazil to develop its own SSNs fueled with low-enriched uranium (LEU) with technical assistance from France and Germany, have exposed fundamental weaknesses in the nuclear Non-Proliferation Treaty (NPT) and its related IAEA safeguards (verification) system. The NPT only covers "peaceful nuclear activities" while the IAEA safeguards system for NPT non-nuclear-weapon States (NNWS) includes an exemption from verification of "non-proscribed military activities". The IAEA Secretariat and the IAEA Board of Governors seemingly are deeply confused and divided over the safe-

guards implications of these SSN-acquisition programmes. This presentation will describe the problems and suggest possible ways of dealing with them and preserving the 50-year old nuclear non-proliferation regime.

AGA 7.3 Fri 14:30 HSZ/0002  
**The current Pollution and Contamination of the Biosphere and Humans with radioactive Isotopes through the Proliferation of Uranium used in Modern Weapon Systems - A Summary of critical Research Results** — ●FRANK KLIMASCHEWSKI — Uranium Medical Research Institute (UMRI), UK, [www.umri.link](http://www.umri.link)

Uranium is a heavy metal with superior armour-penetrating properties. It can be found in bullets, tank rounds, precision-guided bombs and missiles, to name but a few. Thousands of metric tonnes of Uranium dust and shrapnel have been released by modern weapon systems during military conflicts in, for example, the following countries: Iraq and Kuwait during Gulf War I and II, Afghanistan during Operation Enduring Freedom, former Yugoslav states Serbia and Kosovo, and very likely Lebanon, Libya, Syria and the Gaza Strip among others. Mass spectrometric analysis of 24-hour urine samples of civilians and veterans returning from such areas shows that they were contaminated by uranic and transuranic isotopes suffering complex health issues and illnesses such as cancers, organ failures and premature deaths. Recent findings by UMRI also indicate health problems among clean-up workers from a military training site in Europe where uranium-containing weapons have been used. More thorough research at other training sites is urgently needed.