

NSSMIC2019

Manchester UK 28th Oct to 1st Nov 2019

Nuclear Science Symposium

Medical Imaging Conference

Room Temperature Semiconductor Detector Symposium

1500- 2000 attendees

Industry exhibition with 70 – 80 vendors

STFC sponsorship for students and young researcher attendance

www.nss-mic.org/2019

<https://nssmic.ieee.org/2019/>

All aspects of :

Detector and Instrumentation research and development

DAQ and software developments

Algorithms for imaging

...

Submissions invited for

15-20 min oral presentation

Poster presentations

Subjects include **Nuclear Physics plus a wide range of nuclear applications**

Contact Paul Nolan (p.j.nolan@liv.ac.uk) for further information

STFC Global Challenge Network in Nuclear Security Science “NuSec”

www.nusec.uk



The aims of the Network are to develop collaboration between the academic, industrial and defence sectors in the area of nuclear security.

This is done through the following:

Technology Workshops – encouraging translational R&D, focussed on specific technical themes, bringing together new research collaborations

Challenge Meetings – focussed smaller meetings to develop cross-disciplinary solutions to address end-user challenges

Student Pilot Projects – small student summer projects to encourage new collaborative research. Can be with either Universities or Industry.

Personal Development Grants – for researchers who are either already active in nuclear Security, or wanting to develop work in this area

Pilot Projects

2016

Project

Author and University

Thallium Bromide sensors

Nolan, Liverpool

Evidential Reasoning for Radiological Detection

Walkinshaw, Leicester

Colloid interaction with Muons

Claiden, Liverpool

Digital SiPMs for Spectroscopic Measurement

Paschalis, York

Passive radiation imaging

Holman, Manchester

Project

Author and University

Compact X-ray sources

Murphy, York

Enhancing source localisation for threat detection

Vacheret, IC

PSA for temperature dependent scintillator signals

Paschalis, York

A Study of Van Allen Belt Signatures of Nuclear Weapon Tests for Future CTBT Technologies

Velthuis, Bristol

Fluorescence spectra of alpha emitting isotopes

Gamage, Lancaster

2017

NuSec Personal Development grants provide up to £2k:

- *To support researchers across a range of personal development activities related to Nuclear Security Science*
- *To strengthen the research and innovation capacity of scientists in Nuclear Security Science, and to develop new collaborations between researchers and partner organisations*

The scope of the Personal Development Grant is flexible, eg:

- *Travel and subsistence costs for conferences, research collaborations, industrial visits, networking*
- *Conference/event registration fees*

Recipients will be expected to report on their activities, as appropriate.

NuSec is running a 2 day Nuclear Security Detection Workshop, to be held at the University of Surrey on 15-16th April 2019.

The event will focus on current and future technical challenges in nuclear security detection, and the program will include invited speakers, submitted talks and poster presentations.

Confirmed Invited Speakers:

- **David Peterson (US Defense Threat Reduction Agency)** “DTRA Basic Research Support for Radiation Detection”
- **John Mattingly (North Carolina State University)** “Consortium for Nonproliferation Enabling Capabilities (CNEC): Mission and Accomplishments”
- **Rob Buckingham (UKAEA, RACE Robotics Centre)** “Relying on robotics: towards remotely operated inspection and maintenance in high hazard scenarios”
- **Tom Scott (University of Bristol)** “Survey techniques for environmental and disaster monitoring”
- **Robert Speller (UCL)** “Imaging and locating radioactive isotopes for security”
- **Lee Thompson (University of Sheffield)** “Monitoring nuclear reactor neutrinos with WATCHMAN/AIT”

Call for Abstracts is now open

To submit your abstract please go to the Workshop webpage

<https://indico.cern.ch/e/nusec>.

We encourage submission of abstracts for either 20 minute oral presentations, or for posters.

The key topics for the conference are:

- Nuclear Security detection systems
- Algorithms and Autonomous Decision Making
- Particle Detection for core monitoring
- UAV Monitoring and Environmental Measurements
- He-3 mitigation for neutron detectors

The deadline for abstract submissions is **14th January 2019**.

Conference Registration is only £50 (before 31st January) including lunches and a conference dinner!

**For more information about the NuSec Workshop
or the network's program of events, please see:**

www.nusec.uk