

# NeXT Workshop Career Panel attendees Wednesday 17<sup>th</sup> of July

**Joe Keller, ISIS** - Joe joined ISIS in May 2009 and currently manages the ENGIN-X neutron diffractometer and its associated sample environments. His background concerns the measurement and modelling of residual stress in engineering components, how this stress can change in service and the mechanisms by which materials eventually fail.

Joe first became involved in the field from his industrially-sponsored PhD work examining residual stress in railway rails, then of recent interest in response to the Hatfield derailment in 2000. Since then, Joe undertook a postdoctoral position managing one side of a Manchester-Bristol collaborative project funded by the UK MoD, looking at the stress states involved in welds, surface peening treatments, fatigue and crack closure, and the deformation mechanics of polycrystals. Joe has an active interest in expanding the application of neutron diffraction to these problems, exploiting the inherent benefits of full spectrum time-of-flight diffraction and working to achieve higher spatial resolutions.

**Sonali Mohapatra, NQCC** - Dr Sonali Mohapatra is a Quantum Innovation Sector Lead at the NQCC leading the development and implementation of the NQCC's sectoral innovation strategy and sectoral engagement framework. She works with stakeholders across government, industry, academia and regulatory bodies & policy makers to drive quantum adoption across a portfolio of sectors such as Healthcare and Pharma, Financial Services, Energy, Transport, Space and Telecoms, etc. Sonali has an interdisciplinary research background and extensive industry experience leading both, the technical development and commercialisation of early-stage quantum, space and AI technologies.

Apart from that, Sonali has extensive experience in the EDI sector, consulting extensively over the last 10 years. She is the Director of the Prospero Space Fellowship – a national space fellowship designed to tackle the current skills and talent gap in the UK space sector and has founded and chaired non-profits such as New Voices in Space for Space Scotland, QIndia and MTSN in the past.

**Rosh Sellahewa, Deloitte** - Rosh initially completed a PhD in Theoretical Nuclear Physics, exploring the quantum mechanics of neutron stars, before making the decision to move away from academia and into industry. His first role was a short-lived stint at a small management consultancy firm before moving to KPMG, one of the "Big 4" professional services firms, where he specialised in trader surveillance and fraud detection. After 18 months Rosh moved to his current company, Deloitte – another of the "Big 4", into a department focussed on data analytics and modelling for audit and assurance. Initially joining as an Assistant Manager in Banking, Rosh quickly identified a gap in the market for Insurance and Investment Management analytics and so was given permission to start a small team. Over the past 6 years Rosh has grown that team from 3 people to 21 people and been promoted through the ranks to Associate Director.

**James Harris, AWE** - James joined AWE-NST in 1998 to work on modelling x-ray absorption in plasmas. After working on a code to model the spectra of laser-driven experiments James picked up responsibility for running a small team, who modelled high density plasma and experiments fielded on various lasers in the UK and USA. In addition to internal projects, the team worked with Imperial College London and the University of Oxford to understand the results of experiments on the Orion laser. Most recently, James became group leader for materials physics which consists of teams modelling and experimenting on materials at high temperatures, pressures and strain-rates. He has also recently worked on the recruitment of graduates and year-in-industry students for the Physics department at AWE-NST.

Michael Hodgson, Centronic [09/07/2024] : Dr. Michael Hodgson received his degree in Physics from the University of Surrey in 2005. During his degree, a placement at CERN led him to work on beam loss monitors for the Large Hadron Collider, work which forged a career into radiation detectors and instrumentation. Since then, he has worked in academia, research institutions and industry, giving him a well-rounded view for careers in physics. This broad experience has also made him an advocate for the professional development of scientists and engineers, working as mentor, career's advisor, and student placement coordinator during his working life.

Following his undergraduate degree, he worked at Thermo Fisher Scientific on their range of radiation detector instruments and dosimetry, during which he did a Masters in Radiation, Detection and Instrumentation, again at the University of Surrey. After leaving Thermo Fisher Scientific, he rejoined the University of Surrey to start a PhD into Semiconductor Neutron Detectors, which he completed in 2015, leaving with award winning publications. From there, Michael has worked at Centronic Ltd as a Senior Scientific Officer, lending his time between technical support and business development activities. His work there has led to over 15 new product developments, several major product qualifications, and installation of products into new nuclear fission reactors, nuclear fusion facilities and several major research experiments, to name but a few. His interest is in proportional counters, ionisation chambers, fission chambers, Geiger-Muller counters, coil wound sensors and silicon semiconductor detectors.