MuSR2020 Science Day

Monday December 13th – Tuesday December 14th, 2021

Venue: Zoom, Timing UK (GMT)

(Speakers should allow time for discussion within their allotted time)

Monday 13th December 2021

15:00 Welcome
Adrian Hillier/Roberto De Renzi (MuSR2020, conference chairs)

15:10 Understanding defects in SiC using low-energy muons
Judith Wörle, ETH Zurich, Switzerland


15:40 Understanding ancient manufacturing techniques and economic crisis through μXES analyses of Roman Gold Coins
George Green, Ashmolean Museum and Oxford University, UK


16:10 Break (15 mins)

16:25 Title: tbc
Martin Dehn, University of British Columbia, Canada


17:55 Title: tbc
Paul Percival, Simon Fraser University, Canada


18:25 Title: tbc
Vadim Grinenko, Dresden, Germany

Inspired from Unsplit superconducting and time reversal symmetry breaking transitions in Sr2RuO4 under hydrostatic pressure and disorder, Nature Communications 2021, https://www.nature.com/articles/s41467-021-24176-8
Tuesday 14th December 2021

7:55  Convene

8:00  Search for Time-Reversal Symmetry Breaking in Unconventional Superconductors
      Ravi Singh, IISER Bhopal, India

      Inspired from Unconventional superconductivity in Non-centrosymmetric superconductors
      https://journals.aps.org/prb/abstract/10.1103/PhysRevB.103.174502,
      https://journals.aps.org/prb/abstract/10.1103/PhysRevB.103.054501 and
      https://iopscience.iop.org/article/10.1088/1361-6668/abe4b7

8:30  Title: tbc
      Amba Pant, KEK, Japan

      Inspired from Muonium response to low oxygen levels in haemoglobin and other
      biological aqueous solutions and potential application towards monitoring hypoxia

9:00  Break (15 mins)

9:15  Title: tbc
      Izumi Umegaki, KEK, Japan

      Inspired from Nondestructive High-Sensitivity Detections of Metallic Lithium Deposited
      on a Battery Anode Using Muonic X-rays, Anal. Chem. 92 (2020) 8194-8200
      https://pubs.acs.org/doi/10.1021/acs.analchem.0c00370

9:45  Muon spectroscopy for operando measurements of lithium diffusion
      Innes McClelland, Sheffield/ISIS, UK

      Inspired from In Situ Diffusion Measurements of a NASICON-Structured All-Solid-State
      https://pubs.acs.org/doi/10.1021/acsaem.0c02722

10:15  Close