

Condensed Matter Physics in the City 2016  
7th Hubbard Theory Consortium London Summer Programme in Condensed Matter Physics  
Week 2 (July 11- July 14)

Topological order in real materials

Monday, July 11:

11 Bedford Square, Room G3, London, WC1B 3RF

09:30 - 10:00

Coffee/Tea

10:00 - 10:45

**Zahid Hasan** (Princeton University, USA), theoretical & Experimental Discovery of Weyl & Nodal-line Topology in Real Materials

10:45 - 11:15

Discussion

11:15 - 11:30

Coffee/Tea

11:30 - 12:00

**Janina Klier** (Karlsruhe Institute of Technology, Germany), Transport in Weyl semimetals

12:00 - 12:15

Discussion

14:00 - 14:30

**Zohar Ringel** (Oxford, UK), Simple models of classical topological paramagnetism

14:30 - 14:45

Discussion

14:45 - 15:15

Coffee/Tea

15:15 - 16:00

**Andrew Green** (UCL, UK), Feynman path integrals over entangled states

16:00 - 16:30

Discussion

16:30 - 17:00

**Bartholomew Andrews** (Cambridge, UK), Stability of Fractional Chern Insulator States

17:00 - 17:15

Discussion

Tuesday, July 12:

11 Bedford Square, Room G3, London, WC1B 3RF

09:30 - 10:00

Coffee/Tea

10:00 - 10:45

**Hide Takagi** (Max-Planck Institute for Solid State Research, Germany), Exploring the signature of Kitaev spin liquid in complex iridium oxides with honeycomb-related structure

10:45 - 11:15

Discussion

11:15 - 11:30

Coffee/Tea

11:30 - 12:00

**Marcin Wysokinski** (SISSA, Italy), Correlation driven failed topological Kondo insulators

12:00 - 12:15

Discussion

12:15 - 12:45

**Pier Paolo Baruselli** (SISSA, Italy), Samarium Hexaboride as a Topological Kondo Insulator

12:45 - 13:00

Discussion

14:30 - 15:15

**Gil Lonzarich** (Cambridge, UK), Towards an interpretation of the two-fluid description of Kondo lattices

15:15 - 15:30

Discussion

15:30 - 16:00

Coffee/Tea

16:00 - 16:30

**James Annett** (University of Bristol, UK), Triplet superconductivity in multiband superconductors

16:30 - 16:45

Discussion

Wednesday, July 13:

Rutherford Appleton Laboratory - Pickavance Lecture Theatre, R22

10:30 - 11:00

Coffee/Tea

11:00 - 11:40

**Zahid Hasan** (Princeton University, USA), New Forms of Matter: Weyl fermions, topological Fermi arcs and Majorana Platforms

11:40 - 11:50

Discussion

11:50 - 12:30

**Roser Valenti** (Institut für Theoretische Physik, Frankfurt, Germany), Challenges in designing Kitaev materials

12:30 - 12:40

Discussion

14:00 - 14:40

**Hide Takagi** (Max-Planck Institute for Solid State Research, Germany), Interplay of spin orbit coupling and electron correlations in heavy rd transition metal oxides

14:40 - 14:50

Discussion

14:50 - 15:30

**Peter Johnson** (Brookhaven National Laboratory, USA), Photoemission studies of Quantum Materials: From Unconventional Superconductors to Topological Insulators

15:30 - 15:40

Discussion

15:40 - 16:00

Coffee/Tea

16:00 - 16:40

**Stephen Hayden** (University of Bristol, UK), The control of charge density wave fluctuations by magnetic field in cuprate superconductors

16:40 - 16:50

Discussion

Thursday, July 14:

11 Bedford Square, Room G3, London, WC1B 3RF

09:30 - 10:00

Coffee/Tea

10:00 - 10:45

**Roser Valenti** (Institut für Theoretische Physik, Frankfurt, Germany), Prospects for non-trivial topological states in correlated kagome systems

10:45 - 11:15

Discussion

11:15 - 11:30

Coffee/Tea

11:30 - 12:00

**James Hamp** (Cambridge, UK), Emergent order in Kagome Ising Magnet Dy<sub>3</sub>Mg<sub>2</sub>Sb<sub>3</sub>O<sub>14</sub>

12:00 - 12:15

Discussion

12:15 - 12:45

**Tianan Liu** (Cambridge, UK), Triplet FFLO Superconductivity in the doped Kitaev-Heisenberg Honeycomb Model

12:45 - 13:00

Discussion

14:30 - 15:00

**Denis Golosov** (Bar-Ilan University, Israel), Stoner-like theory of Magnetism in Silicon MOSFETS

15:00 - 15:15

Discussion

15:15 - 15:45

Coffee/Tea

15:45 - 16:15

**Vincent Sacksteder** (RHUL, UK), Tuning Quantum Transport and Interference in Topological Nanowires

16:15 - 16:30

Discussion

