

Colloque CQM-2023

Correlated Quantum Materials

Thursday 23 March

14:00 **Pascale Foury (LPS)** Welcome

14:10 **Antoine Georges (Collège de France, Paris)** Latest News from the Pseudogap

14:40 **Philippe Mendels (LPS Orsay)** Kagome quantum spin liquids: the case of herbertsmithite and its defects

15:10 **Peter Hirschfeld (U-Florida, Gainesville, USA)** From Mott to not: Understanding anomalous properties of overdoped cuprates within the Landau-BCS paradigm

15:40 **Marc-Henri Julien (LNCMI, Grenoble)** Revisiting the spin susceptibility of YBa₂Cu₃O_y

*****Coffee Break*****

16:50 **Julien Bobroff (LPS Orsay)** Why condensed matter is not as popular as string theory, and how to fix it

17:20 **Kazushi Kanoda (Univ Tokyo, Japan)** Spin liquid, quantum criticality and superconductivity in organic triangular-lattice systems

17:50 **Hélène Bouchiat (LPS Orsay)** Revealing orbital currents in low dimensional quantum materials using magnetoresistive sensors or SQUID interferometry

Friday 24 March

9h – 10h30

9: 00 **Amit Keren (Technion, Haïfa, Israël)** Perpendicular Coherence-Length; measurements and implications for High-Tc Cuprates

9:30 **Yvan Sidis (LLB, CEA-Saclay)** Magnetic neutron scattering studies of High Tc Superconductors

10:00 **Catherine Pépin (IPhT, CEA Saclay)** Pseudo gap and charge order in cuprates superconductors

*****Coffee Break*****

11:00 **Seamus Davis (Oxford University, England)** Visualising The Surface Andreev Bound State Of A Bulk Topological Superconductor

11:30 **Stuart Brown (UCLA, Los Angeles, USA)** Superconductivity, magnetism, and van Hove physics in Sr₂RuO₄

12:00 **Matthieu Le Tacon (KIT, Karlsruhe, Germany)** Nematic liquid and unconventional charge-density-waves in BaNi₂As₂

*****Buffet & Posters*****

14:00 **Silke Biermann (Ecole Polytechnique, Palaiseau)** Correlated vanadium oxides : New twists to old problems

14:30 **Luis Balicas (NHMFL, Tallahassee, USA)** Topological transport in layered correlated ferromagnets

15:00 **Kamran Behnia (ESPCI, Paris)** A link between T-linear resistivity in cuprates and T-square thermal resistivity in normal liquid ³He

*****Break*****

15:45 **Massimo Capone (SISSA, Trieste, Italie)** Electron-phonon Interaction and electron correlations: lessons from the fullerenes

16:15 **Véronique Brouet (LPS Orsay)** Doping the spin-orbit Mott insulator Sr₂IrO₄ with transition metals

16: 45 **Henri Alloul** Conclusion

17:00 Free discussions

