Joan van der Waals colloquium

Fall semester 2023

15. Sept **Michael Fuhrer** Monash University (AU) (link)

Michael's lab investigates atomically thin materials from graphene to topological insulators using scanning probe and optical spectroscopies to unravel their electronic properties. *Host: Semonti Bhattacharyya*

29. Sept **Corentin Coulais** University of Amsterdam (link)

Corentin's lab investigates the physics of machine materials which combine microstructure and out-of-equilibrium processes to interact with the environment in a programmable fashion. *Host: Alexandre Morin*

13. Oct **Benoit Ladoux** Université Paris Diderot (link)

Benoit's research aims at understanding how cell adhesion-associated mechanotransduction and mechanosensing regulates cell behavior and tissue mechanics. *Hosts: Silke Henkes & Luca Giomi*

10. Nov **Gabriel Hétet** Ecole normale Paris (link)

Gabriel's lab explores diamond color centers and their use in experiments involving the coupling of spins with mechanical modes of levitating objects for macroscopic quantum superpositions. *Host: Bas Hensen*

24. Nov **Carsten Schuck** Münster University (link)

Carsten is investigating quantum technologies for single-photons on silicon chips such as interfaces between optical waveguides and single-photon sources or superconducting photon detectors. *Host: Michiel de Dood*

8. Dec **Beatriz Noheda** Groningen University (link)

Beatriz's lab studies the relationship between structure and functionality of ferroelectric, piezoelectric and multiferroic materials also for neuromorphic computing. *Hosts: Semonti Bhattacharyya & Jan Aarts*

Spring semester 2024

19. Jan **Alexander Khajetoorians** Radboud University (link)

Alexander's lab develops and uses advanced scanning probe techniques, focusing on the physics of spin glasses, and *in materia* computing. *Host: Martin van Hecke*

2. Feb **Mazhar Ali** Delft University (link)

Mazhar's lab explores quantum materials and devices with novel magnetic and electronic properties for both fundamental physics and next-generation technological applications. *Host: Jan Aarts*

16. Feb **Roberto Di Leonardo** Sapienza University Rome (link)

Roberto's lab investigates motion on the micro-scale from Brownian motion to the motility of cells, using novel microscopes where light is also used for fabrication and manipulation in 3D. *Host: Alexandre Morin*

Spring semester 2024

1. Mar **Thomas Juffmann** Vienna University (link)

Thomas' lab explores novel microscopy techniques including hybrid imaging techniques combining the high resolution of electron optics with the non-invasiveness of light. *Hosts: Sense Jan van der Molen & Guido Stam*

15. Mar **Gijsje Koenderink** Delft University (link)

Gijsje's lab combines concepts and methods from soft matter physics, biophysics, synthetic biology, and mechanobiology to understand the unique mechanical behavior of living matter. *Host: Louise Jawerth*

12. Apr **Ming Guo** MIT (link)

Ming's lab explores the mechanics of cells – from mechanical effects in single-cell molecular biology to collective sensing of the cell environment and shape. *Host: Louise Jawerth*

26. Apr **Floriana Lombardi** Chalmers University (link)

Floriana's lab studies superconducting and topological quantum materials using novel nanodevices that could become next-generation's quantum sensors. *Host: Jan Aarts*

24. May **Daniela Wilson** Radboud University (link)

Daniela's lab develops novel functional systems based on functional polymers, peptides and protein-based hybrid materials with biological activity inspired by natural materials and processes. *Host: Daniela Kraft*

7. June **Marc-Olivier Renou** Ecole Polytechnique (link)

Marc-Olivier's group works on foundational questions in quantum information – from how quantum our world needs to be to the necessity of complex numbers in quantum mechanics. *Host: Jordi Tura*

21. June **Liesbeth Janssen** Eindhoven University (link)

Liesbeth's lab investigates the behavior of materials that are inherently out of thermodynamic equilibrium, ranging from glasses and gels to active and living matter, also for medical applications. *Host: Alexandre Morin*

5. July **Tanja Mehlstäubler** Hannover University (link)

Tanja's lab investigates the quantum dynamics of Coulomb crystals of trapped ions to test fundamental physics including the equivalence principle, and for the development of next-generation clocks. *Host: Wolfgang Löffler*

The colloquium is at **16:15 in the Sitterzaal**, followed by a borrel (Beer! Snacks! Physics!). If you would like to talk to the guest, please contact the host, Alexandre, Wolfgang, or Yvonne (kerkhof@physics.leidenuniv.nl).