

# Joan van der Waals colloquium



## Fall semester 2025

12. Sept **Louk Rademaker** Geneva & Leiden (link)  
Louk studies strongly correlated 2D flat materials that are highly tunable by stacking, twisting and gating, for resolving long-standing “strange” condensed matter problems. *Host: Sense Jan van der Molen*
26. Sept **Sander Otte** Delft (link)  
Sander studies quantum matter at the smallest possible scale, the scale of individual atoms, using scanning tunneling microscopy to reveal the collective quantum behavior of atoms and spins. *Host: Sense Jan van der Molen*
7. Nov **Ilse Aben** SRON & Amsterdam (link)  
Ilse is one of the pioneers of satellite instruments like TROPOMI for detecting greenhouse gas emissions such as methane, and investigates the interaction between wildfires and climate change. *Host: Sense Jan van der Molen*
21. Nov **Peter Barker** London (link)  
Peter investigates levitating nanoparticles using optical and electrical fields, and is able to isolate them from the environment which enables the study of macroscopic quantum states and quantum sensors. *Host: Bas Hensen*
12. Dec **Charles Kane** UPenn (room CM.1.26) (link)  
Charles works on the theory of quantum electronic phenomena in solids. *Host: Carlo Beenakker*

## Spring semester 2026

16. Jan **Tim Taminiau** Delft (link)  
Tim uses electronic spins in diamond to control many nuclear spins to explore fundamental quantum decoherence but also to develop quantum sensors and quantum error correction techniques. *Host: Wolfgang Löffler*
30. Jan **Klaas-Jan Tielrooij** Barcelona & Eindhoven (link)  
Klaas-Jan’s lab studies physical phenomena at short time and length scales using ultrafast spectroscopy and coherent control techniques, with electrons and heat in two-dimensional materials. *Host: Wolfgang Löffler*

## Spring semester 2026

13. Feb **Jorinde van de Vis** CERN (link)  
Jorinde studies phase transitions in the early universe, and their consequences for gravitational wave generation and generation of the matter-antimatter asymmetry. *Host: Subodh Patil*
27. March **Sonia Conesa Boj** Delft (link)  
Sonia’s lab develops and uses novel electron microscopy techniques to study exciting phenomena arising in quantum materials such as two-dimensional van der Waals nanomaterials. *Host: Sense Jan van der Molen*
24. April **Imran Avci** Amsterdam (link)  
Imran develops experimental techniques based on optical coherence tomography and integrated optics for biosensing, large-bandwidth imaging, neuromorphic computation and neuroscience. *Host: Wolfgang Löffler*
8. May **Lucio Isa** Zurich (link)  
Lucio’s research research focuses on understanding the fundamental properties of colloidal particles and fluid interfaces to develop a broad range of new soft and active materials. *Host: Luca Giomi*
5. June **Marcos Guimarães** Groningen (link)  
Marcos studies the interplay between light, spins, and magnetism in atomically thin structures using ultra-fast lasers towards smaller and more energy-efficient devices. *Host: Semonti Bhattacharyya*
3. July **Wilfred van der Wiel** Twente (link)  
Wilfred investigates how the computational principles of the biological brain can be translated into hardware designs to achieve improved energy efficiency. *Host: Martin van Hecke*

The colloquium is at **16:15 in room BM.1.23** in the Gorlaeus building, followed by a borrel (Beer! Snacks! Physics!). If you would like to talk to the guest, please contact the host.