

Science Café & Quantum Worlds in 2D

Science Café Nijmegen



Maandag 8 december 2025 van 19:30 tot 22:00 uur

Over 10 dagen



Irish Pub The Shamrock ?? - Nijmegen

Smetiusstraat, Nijmegen, Nederland

How strange can nature become in two dimensions? And what happens when electrons lose their individuality and start moving in perfect quantum harmony? On December 8, the Science Café dives into the fascinating world of quantum many-body systems in two dimensions. In materials only atoms thick, electrons can interact so strongly that surprising collective phenomena emerge — from unconventional superconductivity to exotic topological phases that defy our classical intuition about matter. What can these systems teach us about the fundamental principles of nature, and how might they shape future technologies such as quantum computers or ultra-efficient electronics?

This evening brings together two leading researchers who will bring 2D quantum worlds to life through their complementary perspectives. Theoretical physicist Jasper van Wezel (University of Amsterdam) will explore what it means for a system to behave 'quantum' and guide us through the principles of collective behaviour and emergence, inviting us to reflect on the deep ideas they hint at. Experimental physicist Martin Lee (Eindhoven University of Technology) takes us into the lab, where his team stacks, twists, and strains 2D materials such as graphene with remarkable precision to coax electrons into exotic quantum states, allowing them to observe and manipulate new phenomena as they take shape.

Versatile artist Willem 't Hart will manipulate his machines to craft signature electronic harmonies, weaving them through the evening in a vibrant blend of soulful grooves and immersive textures. Where intuition fails, curiosity thrives!

> 8 pm | Jasper van Wezel (UvA) and Martin Lee (TU/e)

> 7.30 pm | Willem 't Hart - live

> moderator: Bob Stienen

> Monday December 8th 2025, 7.30/8 – 10 pm

> The Shamrock, Smetiusstraat 17 Nijmegen

> free admission (no reservation)

> in English

> <https://www.sciencecafenijmegen.nl/actueel/2025december8/>

Voor wie

Jongeren, Volwassenen, Senioren

Waarover

Kunst / cultuur, Onderwijs / educatie / voorlichting

Wat

Presentatie / lezing / onderzoek, Voorstelling / optreden

Waar

Alle wijken / nvt



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