

# Ultra Fast Nano

## UFN Workshop & Progress Meeting

September 5 - 6, 2024

National Physical Laboratory (NPL) - Teddington, UK  
Globe Room, Bushy House

### Wednesday, September 4<sup>th</sup> 2024

19:30 – Arrival and get together

### Thursday, September 5<sup>th</sup> 2024

9:15 – 9:30 Welcome with coffee

9:30 – 9:45 Welcome and introduction to UltraFastNano Project (C. Bäuerle)

9:45 – 10:30 **IS-1:** Annika Kurzmann, University of Cologne: *Electrostatically defined graphene quantum dots*

10:30 – 10:45 **Coffee Break**

10:45 – 11:30 **IS-2:** Slava Kashcheyevs, University of Latvia: *Multivariate cumulants for full counting statistics or how many stones make a pile*

11:30 – 11:45 Christian Glattli, CEA- SACLAY: *Probing the 2/3 fractional Quantum Hall edge channel using electronic Hong Ou Mandel shot noise correlation*

12:00 – 13:30 **Lunch**

13:30 – 14:00 Jashwanth Shaju, CNRS Grenoble : *Partitioning statistics of a correlated electron droplet*

14:00 – 14:30 Matteo Acciai, Chalmers & SISSA: *Fractional statistics in time-resolved anyonic collisions*

14:30 – 15:00 Masaya Kataoka, NPL: *Towards controlled single photon emission by hot-electron injection.*

15:00 – 15:30 Stefan Birner, nextnano GmbH: *nextnano software for modeling qubits: Progress on dissemination and exploitation activities*

15:30 – 16:00 **Coffee Break**

16:00 – 16:15 Frank Hohls, PTB Braunschweig: *Presentation of the Metrology project AQuanTEC*

16:15 – 16:45 Thomas Kloss, CEA-IRIG/CNRS-NEEL: *Propagation of ultrashort voltage pulses through a small quantum dot*

16:45 – 17:15 Janine Splettstösser, Chalmers: *Impact of potential and temperature fluctuations on charge and heat transport in quantum Hall edges in the heat Coulomb blockade regime*

17:15 – 17:45 Yannic Rath: *Navigating the control parameter landscape of multiplexed single-electron pumps with machine learning*

17:45 – 18:00 Slava Kashcheyevs, University of Latvia: *Presentation of QUANTERA project EIQuRes*

19:00 – 21:30 Dinner at **Kings Head, Teddington**

## Friday, September 6<sup>th</sup> 2026

- 9:30 – 10:15 **IS-3:** Anasua Chatterjee, QuTech, Delft: *Superconductor-semiconductor hybrid circuits on a planar germanium platform*
- 10:15 – 11:00 **IS-4:** Niels Ubbelohde, PTB, Braunschweig: *Universal scaling of adiabatic tunneling - speed limits in shallow quantum dots*
- 11:00 – 11:30 **Coffee Break**
- 11:30 – 12:00 Matteo Aluffi, CNRS-NEEL: *Electronic interferometry with ultrashort plasmonic pulses*
- 12:00 – 12:15 Closing and presentation of Pathfinder project ELEQUANT (C. Bäuerle)
- 12:30 – 14:00 Lunch

## UFN Network meeting (closed session)

Steering Committee meeting (UFN PIs only)

- 14:00 – 15:30 Discussion on: Progress of project & Remaining Deliverables
- 15:30 – 15:45 **Coffee Break**
- 15:45 – 17:00 Preparation of Final Project Meeting with EC (M62)
- 19:00 – **Get together for the people who leave on Saturday**

The meeting is organised by the Partners of the UltraFastNano Consortium:

