Program - Fysikermøtet 2025

Sted: Gamle Elektro, Gløshaugen NTNU

Monday June 16, 2025

12:00 - 13:00 Registration (Optionally baguettes and drinks)

13.00 - 13.15 Erik Wahlström: Opening address

13:15 - 14:45 Plenary session:

- Susanne Viefers: Quantum Science: From Fascinating Natural Phenomenon to Tomorrow's Technology
- Anton Frisk Kockum: Quantum technology and WACQT

14:45 - 15:15 Presentation of Outreach prize nominees (15 min per pers)

15:15 - 15:45 Coffee break

15:45 - 17:30 Parallel sessions:

A1: Subatomic physics
B1: Condensed matter and atomic physics

19:00 Eat and drink in “Drivhuset” at Bifrons (not covered by the conference fee)

Tuesday June 17, 2025

09:00 - 10:15 Plenary session:

- Florian Ströhl: A Decade in 4D Live Microscopy: Looking Under the Hood
- Alex Hansen: Porous media: A rapidly advancing basic research field with immediate applications

10:15 - 10:45 Coffee break

10:45 - 12:15 Parallel sessions

A2: Subatomic physics
B2: Biophysics and medical technology + Optics

12:15 - 13:15 Lunch at Kjelhuset - Map to Sit Kjelhuset

13:15 - 14:45 Parallel sessions

A3: Astrophysics
B3: Physics education

14:45 - 15:15 Coffee break

15:15 - 16:00 Plenary session

Vegard Gjerde: Physics learning based on how the brain works

16:00 – 17:00 Panel debate: Physics of the future- What is the role of physics in society?

- What kind of students are wanted by industry?
- How do we educate such students?
- How does AI affect this?

19:00 Conference dinner – with prize awards at Rockheim Panorama

Wednesday June 18, 2025

09:00 - 09:30 Plenary session:

Sol Jacobsen: Interacting with superconductors

09:30 - 10:15 Prize lecture - The Education Prize and Landrø

10:15 - 11:00 Coffee break and Poster session

11:00 – 12:00 Parallel sessions:

A4: Condensed matter and atomic physics

B4: Subatomic physics + Industry and energy physics

12:00 – 13:00 Lunch at Kjelhuset

13:00 – 13:45 Plenary session:

Per Barth Lilje: The Euclid space mission and the accelerating expansion of the Universe

13:45 – 14:00 Closing remarks

14:00 – 15:00 Norwegian Physical Society (NFS) Annual meeting

Parallell sessions

Monday June 16, 2025

Parallell 1, 15:45 – 17:30

	A1: Subatomic physics *Chair:*	**B1: Condensed matter and atomic physics** *Chair:*
15:45	Wanja Paulsen (UiO): A saga on the γ-decay branching ratio of the Hoyle State	Johanne B. Tjernshaugen (NTNU): Large tunable thermoelectric effects in superconducting spin valves
16:00	Giacomo Luani (NTNU): Investigation of pore scale phenomena in CCS applications using X-ray Micro Computed Tomography	Ilaria Beechey-Newman (NTNU): Confined colloidal droplets dry to form circular mazes
16:15	Hilde Nesse (UiB): Why is energetic particle precipitation important for climate research and seasonal forecasting?	Zhao Zhang (UiO): Discrete conformal symmetry and integrable spin chains
16:30	Njål Gulbrandsen (UiT): The Mesospheric Magnetometry project: Remotely measuring the magnetic field with a laser	Mukul Jaiswal (NTNU): Investigating Pore-scale air-water interfacial fluctuations in multiphase flow via time-resolved X-ray computed tomography
16:45	Elise M. Martinsen (UiO): Nuclear excitation functions for natZr(d,x) reactions with focus on the PET/theranostic candidate 86Y	Gunnar F. Lange (UiO): Geometrical and Topological Ideas in Condensed Matter Physics
17:00	Andreas U. Mikalsen (UiB): Charmonium production in heavy-ion collisions with ALICE	Mathias Myhre (NTNU): Role of Thickness in Magnon Propagation Across Antiferromagnetic Insulators

Tuesday June 17, 2025

Parallell 2, 10:45 – 12:15

	A2: Subatomic physics *Chair:*	**B2: Biophysics and medical technology + Optics** *Chair:*
10:45	Vetle W. Ingeberg (UiO): Databases of statistical nuclear properties	Pablo M. Blanco (NTNU): The effect of ultrasound irradiation in nanoparticle diffusion in hydrogels
11:00	Maria Markova (UiO): Evolution of the Pygmy Dipole Resonance in the Sn mass region studied with the Oslo method	Joe Stickland (NTNU): Coherent X-ray Diffraction Imaging to Investigate morphology of Calcium Carbonate Microparticles
11:15	Johannes S. Heines (UiO): Investigating shape transitions in neutron rich ruthenium	Hanne Rokstad (NTNU): Assessment of B_0 shimming routines for cervical spinal cord MRI at 7 Tesla
11:30	Lauren Bell (UiO): Extracting the nuclear level density and γ-ray strength function of ^{90}Zr	Kari M. G. Flatmark (NTNU): Script-based automatic Volumetric Modulated Arc-Therapy (VMAT) planning for Whole Brain RadioTherapy (WBRT) with and without hippocampal avoidance (HA)
11:45	Henrik Haug (UiO): Extracting isomeric yield ratios in fission fragments	Johanne H. Solheim (Justervesenet): Self-Calibrated Optical Power Measurements Using the PQED and Integrated Photonic Chips
12:00	Lise A. Granheim (UiO): Extraction of level density and gamma-ray strength function of 28Si using the Oslo method	Ethan Dias (NTNU): Reducing the lateral dose penumbra of therapeutic proton beams using magnetic fields

Tuesday June 17, 2025

Parallell 3, 13:15 – 14:45

	A3: Astro Physics *Chair:*	**B3: Physics Education** *Chair:*
13:15	Domenik Ehlert (NTNU): Ultra-high-energy cosmic rays from ultra-fast outflows of active galactic nuclei	Francesca Granone (UiS): Physics on Children's Terms - A Tool for Playful and Inclusive Exploration in Early Childhood Education
13:30	Devina Misra (NTNU): Investigating cannibalistic millisecond pulsar binaries using: New constraints from pulsar spin and mass	Torunn Smevik (NTNU): Micro:bit og programmering til datainnsamling i fysikk-undervisning
13:45	Bidisha Sen (NTNU): Modeling Optical Light Curves and Radial Velocity Curves from Compact Binary Millisecond Pulsar Systems	Magnus S. Kahrs (NTNU): Mestring, verdier og kostnader: Profiler av fysikkstudenter ved skandinaviske universiteter
14:00	Ingrid H. Sannæs (NTNU): Investigating the physical properties of tidal disruption events	Ronny Kjelsberg (NTNU): Engaging physics students in society throug a Bildung-oriented physics education
14:15	Maksat Satybaldiev (NTNU): Discovery of gamma-ray orbital modulation in three spider pulsars	Guillaume Dutilleux (NTNU): Potential 2-year master's programme in acoustics at NTNU
14:30	Jordan Simpson (NTNU): The power of the dark side: hunting spiders to find massive neutron stars	Astrid Johansen (NTNU): Eksamen som læringsarena

Wednesday June 18, 2025

Parallell 2, 10:45 – 12:15

	A4: Condensed matter *Chair:*	**B4: Subatomic physics +** **Industry and energy physics** *Chair:*
11:00	Sondre D. Lundemo (NTNU): Quantum criticality of altermagnetism	Kevin C. W. Li (UiO): Clustering in nuclei and its effects on the stellar nucleosynthesis
11:15	Kristoffer Leraand (NTNU): Phonon-mediated spin-polarized superconductivity in altermagnets	Gulla Torvund (UiO): Multi-MOX: Facilitating plutonium multi-recycling in the French PWR fleet
11:30	Christoph Brüne (NTNU): Antiferromagnetic thin films grown via MBE	Martin Hovde (Nexans Norway AS): The Role of Analytical Methods in Electrical Loss Calculations for High-Voltage Armored Three-Core Power Cables
11:45	Vemund Falch (NTNU): Magnon and photon blockade magnetic cavities	Jeppe Thingholm (UiO): Studying the astrophysically crucial 12C(α, γ)16O reaction at high temperatures