

# Nordic Lattice 2024

*Department of Physics, Lund University*

June 10–11, 2024

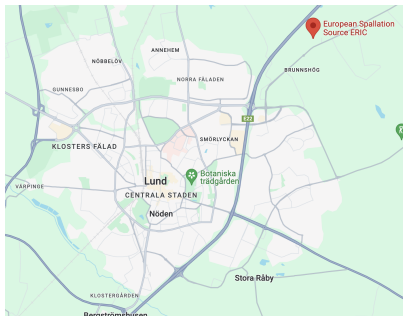
Organised by Johan Bijnens and Nils Hermansson-Truedsson



**LUNDS**  
UNIVERSITET

- Lattice already 80s-early 90s: Anders Irbäck, Leif Lönnblad, Carsten Peterson, Bo Söderberg
- Since second half of 90s: Hans Bijens
- Otherwise in Lund: Event generators Pythia, BSM
- Major facility built north of Lund and parts of university will follow
- European Spallation Source (ESS): Neutron physics
- Neutron-antineutron oscillations, neutron beta decays, ...

<https://arxiv.org/abs/2211.10396>



- Information on: <https://indico.lucas.lu.se/e/NOLA24Lund>
- 1.5 days of talks: 25+5 minutes (unless otherwise stated)
- Join zoom link and share screen, or, send slides to [nils.hermansson-truedsson@ed.ac.uk](mailto:nils.hermansson-truedsson@ed.ac.uk)
- Coffee breaks: served outside room
- Lunch: E.g. Stamstället (just across the street). **NB Pay yourselves**
- Many things to do: <https://visitlund.se/en/to-do-in-lund/activities-and-nature/lund-on-foot---a-walking-tour>
- For other specific questions/advice: Hans, Nils or Mattias<sup>1</sup>

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<sup>1</sup>Certainly the most local person

13:00

**Welcome Session** *Johan Bijnens, Nils Hermansson Truedsson*  
*HUB (364-366), Fysicum* 13:15 - 13:30

**Rindlisbacher: Entanglement entropy in SU(N) lattice gauge theory: an update**  
*HUB (364-366), Fysicum* 13:30 - 14:00

14:00

**Salami: The deconfinement interface tension in SU(N) gauge theories at large N**  
*HUB (364-366), Fysicum* 14:00 - 14:30

**Sjö: Three-meson systems in finite and infinite volume**  
*HUB (364-366), Fysicum* 14:30 - 15:00

15:00

**Coffee Break**  
*HUB (364-366), Fysicum* 15:00 - 15:30

**Jäger: Simulating Physics Beyond the Standard Model**  
*HUB (364-366), Fysicum* 15:30 - 16:00

16:00

**Pasechnik: Cosmology of composite dynamics: dark matter, phase transitions and gravitational waves**  
*HUB (364-366), Fysicum* 16:00 - 16:30

**Tsang: Massive non-perturbative renormalisation**  
*HUB (364-366), Fysicum* 16:30 - 17:00

17:00

09:00	<b>Ungersbäck: Quantum tachyonic preheating, revisited</b> <i>HUB (364-366), Fysicum</i>	09:00 - 09:30
	<b>Hermansson-Truedsson: QED<sub>r</sub>, an infrared-improved finite-volume prescription</b> <i>HUB (364-366), Fysicum</i>	09:30 - 10:00
10:00	<b>Martins: HiRep on GPUs</b> <i>HUB (364-366), Fysicum</i>	10:00 - 10:30
	<b>Coffee Break</b> <i>HUB (364-366), Fysicum</i>	10:30 - 11:00
11:00	<b>Knuthson: Using quantum annealing to design lattice proteins</b> <i>HUB (364-366), Fysicum</i>	11:00 - 12:00
12:00	<b>Lunch</b>	
13:00	<i>HUB (364-366), Fysicum</i>	12:00 - 13:30
	<b>Bijnens: High order ChPT and the lattice</b> <i>HUB (364-366), Fysicum</i>	Johan Bijnens 13:30 - 14:00
14:00	<b>Rothkopf: Space-time symmetry preserving discretizations for classical field theory</b> <i>HUB (364-366), Fysicum</i>	14:00 - 14:30
	<b>Coffee Break</b> <i>HUB (364-366), Fysicum</i>	14:30 - 15:00
15:00	<b>General discussion and closing remarks</b> <i>HUB (364-366), Fysicum</i>	15:00 - 16:00
16:00		

- Dinner tonight 19.00: <https://www.lundsolkallare.se/>  
Lundabryggeriets Ölkällare, Bredgatan 25, 222 21 Lund
- Walk together. **NB: Pay yourselves**
- Scandinavian food with local beer: Lundabryggeriet
- 7 signed up but booked some extra (can probably tag along)

