Preliminary Program

25 Years PI5

September 3 – 5, 2025 at Schloss Reisensburg

Wednesday, 3 September

12:00	Lunch
13:00	Welcome
13:05 – 13:30	**Blair Blakie** – University of Otago
13:30 – 13:55	**Peter Schmelcher** – Universität Hamburg
13:55 – 14:20	**Hossein Sadeghpour** – ITAMP Harvard
14:20 – 14:50	Coffee Break
14:50 – 15:15	**Juliette Billy** – Université Paul Sabatier, Toulouse
15:15 – 15:40	**Marco Fattori** – LENS, Sesto Fiorentino
15:40 – 16:05	**Ashok Mohapatra** – NISER, Bhubaneswar
16:05 – 16:35	Coffee Break
16:35 – 19:00	Poster Session
19:00	Dinner
20:30	Special Night – presented by the **PI5 Postdocs and PhD students**

Thursday, 4 September

09:00 – 09:25	**Hans Peter Büchler** – Universität Stuttgart
09:25 – 09:50	**Tim Langen** – TU Wien
09:50 – 10:15	**Mingyang Guo** – Southern University of Science and Technology, Shenzhen
10:15 – 10:45	Coffee Break
10:45 – 11:10	**Ferdinand Schmidt-Kaler** – Universität Mainz
11:10 – 11:35	**Tapio Simula** – Swinburne University
11:35 – 12:00	**(tbc) Martin Zwierlein –** MIT, Boston
12:15 – 13:15	Lunch
13:15 – 13:40	**Kazimierz Maria Rzążewski** – Polish Academy of Sciences, Warsaw
13:40 – 14:05	**Jürgen Stuhler** – Toptica
14:05 – 14:30	**Thierry Lahaye –** Institut d'Optique, Palaiseau
14:30 – 15:00	Coffee Break
15:00 – 15:25	**Chris Greene** – Purdue University
15:25 – 15:50	**Rukmani Bai** – Leibniz Universität Hannover
15:50 – 16:15	**Michael Schlagmüller** – Swabian Instruments
16:15 – 16:45	Coffee Break
16:45 – 17:10	**Stuart Adams** – Durham University
17:10 – 17:35	**James P. Shaffer** – Quantum Valley Ideas Lab, Waterloo
17:35 – 18:00	**Stefanie Reimann** – Lund University
19:00	Dinner
20:30	After Dinner Talk: **Harald Gießen** – Universität Stuttgart

Friday, 5 September

09:00 – 09:25	**Valentin Volchkov** – Max-Planck-Institut für Intelligente Systeme Tübingen
09:25 – 09:50	**Alban Urvoy** – Sorbonne Université, Paris
09:50 – 10:15	**Florian Meinert** – Universität Stuttgart
10:15 – 10:45	Coffee Break
10:45 – 11:10	**Robert Löw** – Universität Stuttgart
11:10 – 11:35	**Harald Kübler** – Universität Stuttgart
11:35 – 12:00	**Stephan Welte** – Universität Stuttgart
12:15 – 13:15	Lunch
13:15	Departure
	Lab tours in Stuttgart in the afternoon

Abstracts

Rukmani Bai – Leibniz Universität Hannover, Institut für Theoretische Physik

Quantum phases of bosonic mixture with dipolar interactions

Abstract: Ultracold dipoles in optical lattices, characterized by strong inter-site interactions, open new possibilities for ground-state phases as well as an intriguing dynamics. Recent experiments on dipolar mixtures of magnetic lanthanide atoms are especially interesting, not only due to the dipolar interaction, but also because these atoms are particularly suitable for realizing component-dependent lattices. Using cluster Gutzwiller mean-field method, we study the ground-state physics that may result when the two components experience mutually intertwined optical lattices, which resemble interacting bilayer geometries.

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Harald Gießen – Universität Stuttgart, 4. Physikalisches Institut

Zur Physik des Films "Oppenheimer"

The film "Oppenheimer" has attracted millions of viewers to the cinemas barely 80 years after the development of the atomic bomb. However, what role did dozens of high-class scientists in Los Alamos play in development over several years? The physics of nuclear fission processes is already partly tought in the upper grades at grammar school or in undergraduate physics courses at university. However, further details and what exact role physicists such as Richard Feynman, Hans Bethe, and others have played in Los Alamos have only been declassified and published in recent decades. The lecture will give an insight into these details.

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