

SCHEDULE

MONDAY

- 08:30–09:30 Registration at the desk of the building where your first lecture takes place
09:30–12:30 Morning lectures
12:30–14:00 Lunch break
14:00–17:00 Afternoon lectures
17:30–18:30 Additional lecture

TUESDAY

- 09:30–12:30 Morning lectures
12:30–14:00 Lunch break
14:00–17:00 Afternoon lectures
17:15– ... Student representatives' welcome and information for new students

WEDNESDAY

- 09:30–12:30 Morning lectures
12:30–13:30 Lunch break
14:00–17:00 Afternoon lectures

THURSDAY

- 09:30–12:30 Morning lectures
12:30–14:00 Lunch break
14:00–17:00 Afternoon lectures
17:30–18:30 Hans Jensen Invited Lecture

FRIDAY

- 09:30–12:30 Morning lectures
12:30–13:30 Lunch break
14:00–17:00 Afternoon lectures

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MAP



- 1 »Physikalisches Institut«, INF 226
2 »Kirchhoff-Institut für Physik«, INF 227
3 »Institut für Umweltphysik«, INF 229
4 »Hörsäle Physik«, INF 308
5 »Mensa«, INF 304

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UNIVERSITÄT
HEIDELBERG
ZUKUNFT
SEIT 1386

47th HEIDELBERG PHYSICS GRADUATE DAYS

October 4–8, 2021

AT THE DEPARTMENT OF PHYSICS AND ASTRONOMY

PROGRAMME

SUPPORTED BY:



STRUCTURES
CLUSTER OF
EXCELLENCE



Center for
Quantum Dynamics



MAX-PLANCK-INSTITUT
FÜR KERNPHYSIK

d fine



Baden-Württemberg

MINISTERIUM FÜR WISSENSCHAFT, FORSCHUNG UND KUNST

Finanziert vom Ministerium für Wissenschaft, Forschung und Kunst Baden-Württemberg
im Rahmen der Nachhaltigkeitsfinanzierung der Projekte der Exzellenzinitiative II

PROGRAMME

MORNING COURSES (9:30–12:30)

THE OCEANIC CARBON CYCLE IN THE CLIMATE SYSTEM

Leif Anderson, University of Gothenburg

INF 227 HS1

ULTRAFAST LIGHT-MATTER INTERACTION: MEASURING AND CONTROLLING QUANTUM DYNAMICS WITH ATTOSECOND AND FEMTOSECOND FLASHES OF LIGHT

Christian Ott, Max Planck Institute for Nuclear Physics

INF 227 SR 3.403/404

AN INTRODUCTION TO ANALOG NEUROMORPHIC COMPUTING BASED ON THE BRAINSCALES ARCHITECTURE

Johannes Schemmel, Heidelberg University

INF 227 HS2

PARTICLE PHYSICS AT LOW ENERGIES

Ulrich Schmidt, Heidelberg University

INF 226 K1/2/3

BAYESIAN INFERENCE ON MILKY WAY DATASETS

Gregory Green, Max Planck Institute for Astronomy

INF 227 SR 1.403/404

AND ONLINE

AFTERNOON COURSES (14:00–17:00)

A PEDAGOGICAL GUIDE TO COSMIC RAYS AND MAGNETIC FIELDS IN THE UNIVERSE

Christoph Pfrommer, Leibniz Institute for Astrophysics Potsdam (AIP)

Frank Rieger, Heidelberg University

MON: ONLINE ONLY, TUE–FRI: INF 227 HS2

GEOMETRIC DEEP LEARNING

Petar Veličković, DeepMind, London

ONLINE ONLY

THERMAL FIELD THEORY

Alexander Rothkopf, University of Stavanger *INF 227 SR 3.403/404*

AND ONLINE

NOVEL CORRELATED QUANTUM MATERIALS: PHENOMENA AND THEORY

Michael Scherer, University of Cologne

INF 227 SR 1.403/404

SUSTAINABILITY, DECARBONISATION AND FINANCING GREEN: CONSULTING THE TRANSFORMATION IN THE CORPORATE WORLD AND FINANCIAL INDUSTRY

Team d-fine, d-fine, Frankfurt am Main

INF 226 K1/2/3

ADDITIONAL LECTURE

(MONDAY, 17:30-18:30)

A JOURNEY FROM COSMOLOGY TO RAILWAYS: WHY PHYSICISTS ARE NEEDED TO DRIVE THE EVOLUTION TOWARDS SUSTAINABLE TRANSPORT FORWARD

Tim Tugendhat, DB Analytics, Frankfurt am Main

INF 308 HS1

STUDENT REPRESENTATIVES' WELCOME

(TUESDAY, 17:15–...)

INF 226 K1/2/3

HANS JENSEN INVITED LECTURE

(THURSDAY, 17:30–18:30)

PHYSICS OF SPREADING DYNAMICS: SELF-REGULATION, LEARNING AND INFORMATION TRANSFER IN NEURAL NETWORKS

Viola Priesemann, Max Planck Institute

for Dynamics and Self-Organization

INF 308 HS1

AND ONLINE

BREAKS

COFFEE BREAKS (AROUND 11:00 AND 15:30)

»MENSA AREA E«, INF 304

LUNCH BREAK (12:30–13:30)

»MENSA AREA E«, INF 304

LEGEND

INF 226 K1/2/3

»Konferenz 1/2/3«
Room 00.101–00.103
»Physikalisches Institut«
Ground floor

INF 227 SR 1.403/404

Seminar room
Kirchhoff Institute for Physics
1st floor

INF 227 SR 3.403/404

Seminar room
Kirchhoff Institute for Physics
3rd floor

INF 227 HS1

»Großer Hörsaal«
Kirchhoff Institute for Physics
Ground floor

INF 227 HS2

»Kleiner Hörsaal«
Kirchhoff Institute for Physics
Ground floor

INF 308 HS1

»Hörsaalgebäude Physik«
Ground floor

REGISTRATION

All participants are requested to register at the desk of the building where their first lecture takes place.

Bring proof of 3G (geimpft, genesen oder negativ getestet – vaccinated, recovered or tested negative) together with an ID document.

Please also bring a FFP2 or medical mask.

For general questions, please come to the desk at INF 226.

NOTE

All registered participants will be given more info in the week prior to the Grad Days, in particular the online details.