



34th HEIDELBERG PHYSICS GRADUATE DAYS

APRIL 7–10, 2015
AT THE DEPARTMENT OF PHYSICS AND ASTRONOMY



UNIVERSITÄT
HEIDELBERG
ZUKUNFT
SEIT 1386

Courses are conceived for advanced students in physics, in particular for doctoral, masters or diploma students. The goal of the lecture series is to expand the general knowledge of students and to deepen their understanding of special topics and methods. Each course runs every day for four days either in a morning or afternoon slot.

MORNING COURSES TUESDAY TO FRIDAY, 9:30–12:30

BARYOGENESIS IN THE EARLY UNIVERSE

Laura Covi, Göttingen University

GRAVITATION AND THERMODYNAMICS

Yves Gaspar, Catholic University of the Sacred Heart, Brescia

AN X-RAY VIEW OF ACTIVE GALACTIC NUCLEI AND THEIR
COSMOLOGICAL EVOLUTION

Andrea Merloni, Max Planck Institute for Extraterrestrial Physics,
Garching

PHYSICAL MODELLING OF NEURAL CIRCUITS

Paul Rhodes, Evolved Machines, Palo Alto, California

APPLICATIONS OF NMR IN BIOMEDICINE

Lothar Schad and Florian Lietzmann, Heidelberg University

TIMELY TOPICS OF ATOMIC AND MOLECULAR PHYSICS WITH
FEMTOSECOND X-RAY FREE-ELECTRON LASER SOURCES

Nina Rohringer, Center for Free-Electron Laser Science, Hamburg

AFTERNOON COURSES TUESDAY TO FRIDAY, 14:00–17:00

LIGHT ON THE DARK UNIVERSE:

COSMOLOGY AND THE COSMIC MICROWAVE BACKGROUND

Valeria Pettorino, Heidelberg University

SEMICONDUCTOR DEVICES FOR THE DETECTION OF
IONISING RADIATION

Jörn Grosse-Knetter, Göttingen University

FUNDAMENTAL PHYSICS AT LOW ENERGIES

Joerg Jaeckel, Heidelberg University

PHYSICS OF NEW MATERIALS: FROM CARBON NANOTUBES TO
TOPOLOGICAL INSULATORS

Andreas Komnik, Heidelberg University

USING ACCELERATOR LIBRARIES FOR SCIENCE

Robert Strzodka, Heidelberg University

ANALYZING PERSONAL POTENTIAL FOR YOUR CAREER

Ute Leidig, Heidelberg University

STUDENT REPRESENTATIVES' WELCOME

TUESDAY, APRIL 7, 2015, 17:15

Walter Hahn, Puneet Murthy

FOLLOWED BY A **GENERAL WELCOME PARTY**

HANS JENSEN INVITED LECTURE

THURSDAY, APRIL 9, 2015, 17:30

COSMOLOGICAL SIMULATIONS OF GALAXY FORMATION
AND EVOLUTION

Lars Hernquist, Harvard University

FOLLOWED BY THE **D-FINE BARBECUE**

For registration and further information, see <http://gsfp.physi.uni-heidelberg.de/graddays>

