



# 37th HEIDELBERG PHYSICS GRADUATE DAYS

OCTOBER 10–14, 2016

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 five days either in a morning or afternoon slot.

## MORNING COURSES MONDAY TO FRIDAY, 9:30–12:30

BRIDGING SCALES IN NEUROSCIENCE: FROM BIOPHYSICS TO POPULATIONS

**Eilif Muller**, EPFL – Blue Brain Project, Geneva

AN INTRODUCTION TO GRAVITATIONAL-WAVE ASTROPHYSICS

**Pau Amaro-Seoane**, Albert Einstein Institute, Potsdam

ANOMALIES IN QUANTUM FIELD THEORY

**Marco Serone**, SISSA, Trieste

FIELD COMPUTATION AND MAGNETIC MEASUREMENTS FOR SUPERCONDUCTING ACCELERATOR MAGNETS

**Stephan Russenschuck**, CERN, Geneva

STUDYING MANY-BODY SYSTEMS WITH ULTRACOLD MATTER – FROM AMO OVER SOLID STATE TO HIGH ENERGY PHYSICS

**Fred Jendrzejewski**, Heidelberg University

PRESENTING RESEARCH RESULTS

**Ute Leidig**, Heidelberg University

## AFTERNOON COURSES MONDAY TO FRIDAY, 14:00–17:00

PROBING THE DARK UNIVERSE: THE INTERFACE BETWEEN OBSERVATIONAL AND THEORETICAL COSMOLOGY

**David Bacon**, Institute of Cosmology and Gravitation, Portsmouth

e+e- PHYSICS AT THE ENERGY FRONTIER: GLORIOUS PAST, EXCITING FUTURE

**Felix Sefkow**, DESY, Hamburg

FOUNDATIONS OF NUMERICAL RELATIVITY

**Thomas Baumgarte**, Bowdoin College, Maine

LOW TEMPERATURE DETECTORS AND NEUTRINO PHYSICS

**Loredana Gastaldo**, Heidelberg University

INTRODUCTION TO PYTHON FOR PHYSICISTS

**Thomas Erben**, University of Bonn

FROM DATA AND DIGITALIZATION TO MODEL BUILDING AND VALUATION IN FINANCE

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

## ADDITIONAL LECTURE

MONDAY, OCTOBER 10, 2016, 17:30

ZEISS – PRODUCTS, PERFORMANCE SPECIFICATIONS AND THE PEOPLE WHO MAKE IT POSSIBLE

**Andreas Dorsel**, ZEISS Semiconductor Manufacturing Technology

FOLLOWED BY A

**GET-TOGETHER WITH BEER AND PRETZELS**

## STUDENT REPRESENTATIVES' WELCOME

TUESDAY, OCTOBER 11, 2016, 17:15

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

## HANS JENSEN INVITED LECTURE

THURSDAY, OCTOBER 13, 2016, 17:30

FROM EINSTEIN TO GRAVITATIONAL WAVES AND BEYOND

**Barry Barish**, California Institute of Technology

FOLLOWED BY THE **D-FINE BARBECUE**



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