

# 31st HEIDELBERG PHYSICS GRADUATE DAYS 7-11 OCTOBER, 2013

AT THE DEPARTMENT OF PHYSICS AND ASTRONOMY



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

INTRODUCTION TO THE THEORY OF GRAPHENE **Andrea Tomadin,** NEST, Istituto Nanoscienze-CNR and Scuola Normale Superiore, Pisa

INTRODUCTION TO BPS BLACK HOLES

Gabriel Lopes Cardoso, University of Lisboa

MAKING SENSE OF NON-HERMITIAN HAMILTONIANS

Carl Bender, Washington University, St. Louis

NON-EQUILIBRIUM QUANTUM DYNAMICS WITH BOSE-EINSTEIN CONDENSATES

Ofir Alon, Haifa University

PHENOMENOLOGY OF NEUTRINO OSCILLATIONS **Evgeny Akhmedov,** Max-Planck-Institut für Kernphysik

JOBS AND CAREERS IN ASTRONOMY **Eva Grebel**, Heidelberg University

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

EXPERIMENTAL STATUS OF QCD

Markus Wobisch, Louisiana Tech University

THE PHYSICS OF COMPACT OBJECTS AND THEIR BINARY INTERACTIONS

Thomas Tauris, Max Planck Institute for Radio Astronomy and Astronomical Institute, University of Bonn

CLIMATE ENGINEERING – THE PHYSICS OF INTENTIONAL CLIMATE MODIFICATIONS

Ulrich Platt, Heidelberg University

IMAGING OF ULTRAFAST ATOMIC PROCESSES **Robert Moshammer,** Max-Planck-Institut für Kernphysik

RADIATION AND MEDICINE: HOW TRUE IMAGES MAY BE CONSTRUCTED, CANCERS CURED AND UNSCIENTIFIC FEARS DISPELLED **Wade Allison,** University of Oxford

THE D-FINE JOURNEY: FROM PHYSICS TO FINANCE AND RISK MANAGEMENT **Team d-fine,** d-fine, Frankfurt am Main

## ADDITIONAL LECTURE MONDAY, 07. 10. 2013, 17:30

FROM DYNAMICS OF ULTRA-COLD ATOMS TO THE DYNAMICS OF FINANCIAL MARKETS **Ghazal Tayebirad,** HypoVereinsbank

FOLLOWED BY A GENERAL WELCOME PARTY

HGSFP ANNUAL GENERAL MEETING AND STUDENT REPRESENTATIVES' WELCOME

TUESDAY, 08. 10. 2013, 17:15

**Directorate, HGSFP** 

### HANS JENSEN INVITED LECTURE

THURSDAY, 10. 10. 2013, 17:30

THE BOUNDARY LINE BETWEEN QUANTUM MECHANICS AND CLASSICAL LOGIC

Gerard 't Hooft. Utrecht University

