# Helmholtz - DIAS International Summer School "Cosmology, Strings, New Physics"



Sunday, 28 August 2016 - Sunday, 10 September 2017 BLTP JINR

### **Scientific Programme**

The programme includes lecture courses, several review lectures, and talks of the students

#### Physics at the LHC

Eduard Boos(SINP, Moscow)

#### **Grand Unification and High-Scale Supersymmetry**

Wilfried Buchmuller (DESY)

#### **Advances in classical gravity**

Dmitry Gal'tsov (MSU, Moscow)

#### **Dark Matter models**

Dmitry Gorbunov (INR, Moscow)

#### **Searches for Dark Matter signals**

Sergei Demidov (INR, Moscow)

#### Introduction to superconformal mechanics

Sergei Fedoruk (BLTP JINR, Dubna)

## Dynamical equations describing early cosmologies and their inflationary solutions

Alexander Filippov (BLTP JINR, Dubna)

## Introduction to entanglement entropy and holography

Dmitry Fursaev (Dubna State University & BLTP JINR, Russia)

#### Particle physics: present and prospects

Dmitry Kazakov (BLTP JINR, Dubna, Russia)

#### **Quantum Universe**

Viacheslav Mukhanov (Ludwig Maximilians Universität, München)

#### From 10D to 4D: string compactifications

Edvard Musaev (MPI, Potsdam)

#### **Exotic models of the very early Universe**

Valery Rubakov (INR Moscow)

### Present status of the inflationary scenario and future prospects

Alexey Starobinsky (Landau Inst., Moscow)

#### Inflation and dS vacua in supergravity

Timm Wrase (ITP, TU Vienna)

#### Superconformal indices and Seiberg dualities

Vyacheslav P. Spiridonov (BLTP JINR)

#### Polarization effects and new physics searches

Oleg V. Teryaev (BLTP JINR)

#### **Introduction to AdS QCD**

Anastasia Golubtsova (BLTP JINR)