





# FACULTY OF PHYSICS

## UniverseNet

#### Staff

Zygmunt Lalak - scientist-in-charge Bohdan Grządkowski Krzysztof Meissner Stefan Pokorski Marek Demiański Krzysztof Turzyński

Postdocs Paul Hunt - ER (joined Oct. 2007) Oliver Eyton-Williams Students Ioannis Ntalianis - ESR (joined Oct. 2007) Michał Artymowski Anna Kamińska Łukasz Szulc



### Topics

- Multi-field inflation ZL, SP, KT, PH, MA
- Supersymmetric inflation ZL, SP, KT, IN, AK
- Inflation in Loop Quantum Cosmology MA, ŁS, ZL
- Supersymmetry breakdown and transmission ZL, SP, KT, IN, OE-W
- Cosmological Moduli Problem in gauge and gravity mediation ZL, IN, KT
- LSS with and without Dark Energy PH, MD
- Effective potential, conformal Higgs sector KM, BG
- Domain Walls, UnCosmology ZL, MD, BG

#### Lectures

- Introduction to Cosmology BG 1-semester course
- Particles and Gravity BG 1-semester Course
- Field Theory in Curved Backgrounds ZL (+ IN) 1-semester course
- Selected Topics in Cosmology SP 1-semester course

#### Seminars

• Weekly Seminar on Particle Physic and Cosmology ZL, SP, BG, MD

## Outreach

 Particle Physics in the Quest for Structure of the Universe ZL public talk at the Festival of Science, Warsaw, September 2008 and Symposium on Theoretical Physics, IFT UW 2007

## Workshops and Conferences

- Workshops on Particle Physics and Cosmology: The Interface Warsaw, February 2007, February 2008 ZL, SP, KM, PH, IN
  - PLANCK'07 From Weak Scale to Planck Scale Warsaw, June 2007 ZL, SP
    - so far 14 relevant publications, over 30 talks

## Ioannis Ntalianis - ESR

- Supersymmetry breaking and its transmission
- Cosmological Moduli Problem
- Polonyi problem, reheating

2 papers in preparation

## Paul Hunt - ER

- •LSS without DE
- Nongaussianities in multi-field inflation
- Primordial Power Spectrum
  - 1 paper published, 2 papers in preparation