



# Семинар

**Пятница, 8 сентября,  
15-00  
Конференц-зал ЛЯП**

**Raghavan Rangarajan  
Physical Research Laboratory,  
Ahmedabad, India.**

**" Gravitinos Reheating and the Matter-Antimatter  
Asymmetry of the Universe "**

Astrophysical observations indicate that the Universe is made up primarily of matter rather than both matter and antimatter. This matter-antimatter asymmetry of the Universe can be explained by the asymmetric decay of some heavy particles if the early Universe is sufficiently hot after a phase called reheating. But these high temperatures also lead to an over-abundance of particles called gravitinos whose presence has very adverse cosmological consequences, which is referred to as the 'gravitino problem'. We shall discuss the matter-antimatter asymmetry of the Universe and the gravitino problem, and then examine whether or not the gravitino abundance can be suppressed.

Dr. Raghavan Rangarajan has been on the faculty of the Theoretical Physics Division at the Physical Research Laboratory, Ahmedabad (PRL) since 1997. His areas of research are cosmology and particle physics. He has worked on different subjects in these fields such as the matter-antimatter asymmetry of the universe, inflation and the cosmic microwave background radiation.