

World Year of Physics 2005

Geometry and Physics after 100 Years of Einstein's Relativity



As part of the celebration of the World Year of Physics, the Conference “Geometry and Physics after 100 Years of Einstein’s Relativity” was held in Golm, near Potsdam, Germany, on April 5–8, 2005. The Conference was organized by the Max Planck Institute for Gravitational Physics (also known as the Albert Einstein Institute), which is celebrating its 10th anniversary in 2005. Conference participants discussed progress made in theoretical and experimental research during the 100 years since the publication of Einstein’s famous papers in 1905, the year which has gone down in history as

‘Albert Einstein’s *ANNUS MIRABILIS*’.

The conference program included 18 invited talks and the public lecture “New Horizons in Cosmology and Gravity” given by **Prof. Sir Martin Rees**.

The list of invited speakers and the titles of their talks are given below.

1. **Ashtekar A** (The Pennsylvania State University, State College, USA). *The Big-Bang and Black Holes: Geometry and Physics Beyond Einstein*.
2. **Barish B C** (California Institute of Technology, Pasadena, USA). *Probing for Gravitational Waves with LIGO*.
3. **Braginsky V B** (M V Lomonosov Moscow State University, Moscow, Russian Federation). *The Development of Methods of Quantum Measurements*.
4. **Brandenberger R** (Brown University, Providence, USA). *Conceptual Problems of Inflationary Cosmology and Challenges for a New Paradigm for the Very Early Universe*.
5. **Bourguignon J R** (Institut des Hautes Études Scientifiques, Bures-sur-Yvette, France). *The Many Facets of Curvature Recalling Several Moments where General Relativity Influenced Mathematics*.
6. **Damour T** (Institut des Hautes Études Scientifiques, Bures-sur-Yvette, France). *Symmetry and Chaos in Gravity and Supergravity*.
7. **Genzel R** (Max-Planck Institute for Extraterrestrial Physics, Garching, Germany). *Massive Black Holes in Galaxies*.
8. **Green M B** (University of Cambridge, Cambridge, Great Britain). *General Relativity, Quantum Mechanics and Strings*.
9. **Hartle J** (University of California, Santa Barbara, USA). *The Classical Behavior of Quantum Universes*.
10. **Prince T** (California Institute of Technology, Pasadena, USA). *The Laser Interferometer Space Antenna (LISA): Testing Einstein’s Theories using Gravitational Waves*.
11. **Rees M** (University of Cambridge, Cambridge, Great Britain). *The Formation of Black Holes and Cosmic Structures, in our Universe and Others*.
12. **Schoen R** (Stanford University, Stanford, USA). *The Yamabe Problem: An Interaction between Relativity and Geometry*.
13. **Staudacher M** (Max-Planck-Institut für Gravitationsphysik (Albert-Einstein-Institut), Golm, Germany). *Integrable Spin Chains and the AdS/CFT Correspondence*.
14. **Struwe M** (Eidgenössische Technische Hochschule, Zürich, Switzerland). *Recent Developments in Nonlinear Wave Equations*.
15. **Turner M S** (University of Chicago, Chicago, USA). *Beyond Einstein: The Origin and Destiny of the Universe*.
16. **Wetterich C** (Universität Heidelberg, Heidelberg, Germany). *Dark Energy: a Cosmic Mystery*.
17. **Will C** (Washington University, St. Louis, USA). *The Confrontation between General Relativity and Experiment*.
18. **Yau S-T** (Harvard University, Cambridge, USA). *Quasi-Local Mass*.