

13th Pacific Coast Gravity Meeting
Institute for Theoretical Physics
University of California, Santa Barbara
March 21-22, 1997

Schedule of Talks

Talks are 12 minutes, followed by 3 minutes for questions

FRIDAY

- 9:00: **Introductory greeting and announcements**

- **Session One: Jim Isenberg, Chair**
- 9:15: **Andrew Strominger**, UC Santa Barbara
"Statistical Mechanics of Black Holes"
- 9:30: **Maurice H.P.M. van Putten**, Department of Mathematics, MIT
"A search for global hyperbolicity by approximate black holes"
- 9:45: **Massimo Tinto**, Jet Propulsion Laboratory
"Spacecraft Doppler tracking as a Xylophone detector of Gravitational Waves"
- 10:00: **Teviet Creighton**, Caltech
"Search techniques for periodic gravitational waves"
- 10:15: **Scott Hughes**, Caltech
"Gravity Gradient Noise: The ultimate low-frequency noise source in interferometric detectors"

- 10:30: **Coffee Break**

- **Session Two: Joe Polchinski, Chair**
- 11:00: **Gary Horowitz**, UC Santa Barbara
"The Correspondence Between Black Holes and Strings"
- 11:15: **Harrison Sheinblatt**, UC Santa Barbara
- 11:30: **Haisong Yang**, UC Santa Barbara
"Black strings and classical hair"
- 11:45: **Warner A. Miller**, Los Alamos National Laboratory
"The Action in Regge Calculus is Exact"
- 12:00: **Adrian Gentle**, Monash University (Speaker) and Warner A. Miller, LANL
"Regge Geometrodynamics"
- 12:15: **John T. Whelan**, University of Utah
"Skeletonizations of Phase Space Paths"

- 12:30: **Lunch**

- Session Three: **David Salopek**, Chair
- 2:00: **Malcolm Perry**, DAMTP, Cambridge
"Supersymmetry on the Brane"
- 2:15: **Jolien Creighton**, Caltech
"Mass and Thermodynamics of Dilaton Black Holes"
- 2:30: **Simon Ross**, UC Santa Barbara
"Naked Black Holes"
- 2:45: **James T. Wheeler**, Utah State University
"String without strings"
- 3:00: **Sean Carroll**, ITP, Santa Barbara
"Dark Matter with Time-Dependent Mass"
- 3:15: **David Craig**, Theoretical Physics Institute, University of Alberta
"Generalized Quantum Theory of Bianchi IX Cosmologies"

- 3:30: **Coffee Break**

- Session Four: **Bill Hiscock**, Chair
- 4:00: **James Hartle**, ITP, Santa Barbara
"Generalized Quantum Mechanics and Black Hole Evaporation"
- 4:15: **Seth Rosenberg**, UC Santa Barbara
"Testing causality violations in spacetime with closed timelike curves"
- 4:30: **Homer Ellis**, University of Colorado at Boulder
"The warp drive and antigravity"
- 4:45: **Richard Trejos**, Hill AFB
"Gravity, Theory, and Mathematical Calculation Linking the Gravitational Constant with the Permeability Constant of Space and Matter"
- 5:00: **William Pezzaglia**, Santa Clara University
"Coupling of Spin and Momentum induced by curvature that does not preserve n-vector rank"
- 5:15: **Frank B. Estabrook**, Jet Propulsion Laboratory
"Hyperbolic Equations for Vacuum Gravity Using Special Orthogonal Frames"

SATURDAY

- Session Five: **Paul Anderson**, Chair
- 9:00: **Lee Lindblom**, Caltech
"Relativistic Stellar Pulsations with Near-Zone Boundary Conditions"
- 9:15: **Chris Vuille**, Embry-Riddle Aeronautical University
"Parameterizing the neutron star core equation of state"
- 9:30: **Alan Wiseman**, Caltech
"On the central density of neutron stars in close binaries"
- 9:45: **Jim Isenberg**, University of Oregon
"A New Family of Cosmological Spacetimes to be Used for Studying Long Time Behavior of Solutions of Einstein's Equations"
- 10:00: **Marsha Weaver**, University of Oregon
"Mixmaster Behavior in Inhomogeneous Spacetimes?"
- 10:15: **Janna Levin**, UC Berkeley
"Relativistic Chaos in the Early Universe"

- 10:30: **Coffee Break**
 - Session Six: **Carlo Rovelli**, Chair
 - 11:00: **Bill Hiscock**, Montana State University
"DeWitt-Schwinger approximation for the stress-energy of a quantized scalar field in an arbitrary curved spacetime"
 - 11:15: **Paul Anderson**, Wake Forest University
"Gauge Invariant Stress-Energy Tensors for Gravity Waves and Gravitons"
 - 11:30: **Charles Torre**, Utah State University
"Quantum Fields at Any Time"
 - 11:45: **Brett Taylor**, Montana State University
"Spinning Down a Black Hole with Scalar Fields"
 - 12:00: **Chris M. Chambers**, Montana State University
"Some Tails of Gravitational Collapse"
 - 12:15: **Patrick Brady**, Caltech
"Critical phenomena in gravitational collapse of perfect fluids"
 - 12:30: **Lunch**
 - Session Seven: **Lee Lindblom**, Chair
 - 2:30: **David Salopek**, University of British Columbia
"Nature of Cosmic Time"
 - 2:45: **Bahman Darian**, University of Alberta
"Solving the Hamilton-Jacobi equation for gravitationally interacting electromagnetic and scalar fields"
 - 3:00: **Joe Weber**, University of California, Irvine
"Correlations of Gamma-Ray Bursts with Gravitational Data"
 - 3:15: **Fintan D. Ryan**, Caltech
"Accuracy of estimating the multipole moments of a massive body from the gravitational waves of a binary inspiral"
 - 3:30: **Ben Owen**, Caltech
"Gravitational waves from spinning point masses"
 - 3:45: **Doug Eardley**, ITP, Santa Barbara
"Black Hole Coordinates for Numerical Relativity"
 - 4:00: **Coffee Break**
 - Session Eight: **Doug Eardley**, Chair
 - 4:30: **Carlo Rovelli**, University of Pittsburgh
"Loop Quantum Gravity as Sum over Surfaces"
 - 4:45: **Leonard S. Abrams**
"Farewell to black holes"
 - 5:00: **Steve Harris**, St. Louis University
"Naturality and Universality of the Future Causal Boundary"
 - 5:15: **Bruce Allen**, CalTech/UW-Milwaukee
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