15th Pacific Coast Gravity Meeting

Institute for Theoretical Physics
University of California, Santa Barbara
February 26-27, 1999

Schedule of Talks

Talks are 12 minutes, followed by 3 minutes for questions

FRIDAY

- 9:00: Opening remarks and announcements

- Session One: Chair: Beverly Berger
- 9:15: Daniel J Suson, Texas A&M, "Nonsimultaneous Big Bang and fractal density in a Tolman-Bondi model"
- 9:30: Richard Woodard, U. Florida, "A Quantum Gravitational Model Of Inflation"
- 9:45: David Salopek, UBC, "Cosmology of Strongly Coupled Gravitational Systems"
- 10:00: B. Kent Harrison, Brigham Young U., presenting "Inflationary Solutions for a Homogeneous Anisotropic Cosmological Model with a Scalar Field", by Edward F. Weagel
- 10:15: Warner A. Miller, Los Alamos National Laboratory, "K-Crunches"

- 10:30: Coffee Break

- Session Two: Chair: Don Marolf
- 11:00: Scott Hughes, U. Illinois, "Radiation Reaction without Radiation Reaction Forces"
- 11:15: John T. Whelan, Universitaet Bern, "Radiatiative Boundary Conditions: Standing Waves vs Radiation Balance"
- 11:30: Richard Price, University of Utah, "Colliding Rotating Black Holes: the Kerr Close Limit"
- 11:45: William Krivan, University of Utah, "Rotating Black Holes and the Tail Phenomenon"
- 12:00: Patricia Purde, Caltech, "The gauge invariance of general relativistic tidal heating"
- 12:15: Zeferino Andrade, University of Utah, "Excitation of the odd parity quasi-normal modes of compact objects"
• 12:30: Lunch

• Session Three: Chair: Patrick Brady
  • 2:00: Teviet Creighton, Caltech, 
    "Atmospheric gravity gradients: a low-frequency noise limit for LIGO"
  • 2:15: Lee Lindblom, Caltech, 
    "Recent Developments in the r-Mode Instability Problem"
  • 2:30: Massimo Tinto, JPL, 
    "Cancellation of Laser Noise in an Unequal-Arm Interferometer Detector of Gravitational Radiation"
  • 2:45: Jolien Creighton, Caltech, 
    "How to see black hole formation using two interferometers"
  • 3:00: Shane Larson, Montana State U., 
    "Bounding the Mass of the Graviton with Interacting Binary White Dwarf Observations"
  • 3:15: Carsten Gundlach, University of Chicago, 
    "Angular momentum in critical collapse"
  • 3:30: David Garfinkle, Oakland U., 
    "Scaling In Gravitational Collapse"

• 3:45: Coffee Break

• Session Four: Chair: Steve Carlip
  • 4:15: James Bardeen, U. Washington, 
    "Hyperbolic Systems for Numerical GR"
  • 4:30: James York, UNC, 
    "All hyperbolic systems with only physical characteristics: the future of GR"
  • 4:45: Luisa Buchman, University of Washington, 
    "Developing a Numerical General Relativity Code in Hyperbolic Form with flexibility to reset the slicing conditions"
  • 5:00: Frank Estabrook, JPL, 
    "Constraint-free Theories of Gravitation"
  • 5:15: Ioannis Kouletsis, University of Utah, 
    "Classical Histories in Geometrodynamics"
  • 5:30: Andre Wehner, Utah State University, 
    "Conformal Actions in Any Dimension"
  • 5:45: Leonard Abrams, 
    "Black holes-the blunder of the century"

SATURDAY

• Session Five: Chair: Ted Jacobson
  • 9:00: Herbert Hamber, UC Irvine, 
    "Lattice Quantum Gravity on a Custom-Built Supercomputer"
  • 9:15: Jorge Pullin, CGPG, Penn State, 
    "Consistent canonical quantizations of gravity"
  • 9:30: Bryce DeWitt, U. Texas, 
    "Quantum Gravity Without Ghosts"
9:45: Charles Torre, Utah State University, 
"Some remarks on Dirac's 'quantization on curved surfaces'

10:00: Lior Burko, Caltech, 
"Practical approaches for the calculation of the self force"

10:15: Bill Hiscock, Montana State U, 
"Chronology Protection and Misner Space--one more time"

10:30: Coffee Break

Session Six: Chair: Gary Horowitz
11:00: Sharmanthie Fernando, University of Cincinnati, 
"Supermultiplets of AdS Black Holes in 2+1 dimensions"

11:15: Kristin Schleich, UBC, 
"Topological Censorship and Black Hole Topologies in Asymptotically Anti-de Sitter Spacetimes"

11:30: Paul Anderson, Wake Forest University, 
"Zero Temperature Black Holes in Semiclassical Gravity: Do They Exist?"

11:45: Brett Taylor, Montana State U., 
"Semiclassical effect on nearly extremal charged black holes"

12:00: Michele Vallisneri, Caltech, 
"Classical Roots of the Unruh and Hawking Effects"

12:15: Ted Jacobson, U. Maryland, 
"Black hole lasers"

12:30: Lunch

Session Seven: Chair: Abhay Ashtekar
2:00: David Kastor, U. Mass., "
Gravitational Spin-Spin Interactions via Supersymmetric Probes"

2:15: Alcides Garat, University of Utah, 
"The nonexistence of a conformally flat slicing of the Kerr geometry"

2:30: Don Witt, UBC, 
"Static Spacetimes and new No-hair Theorems"

2:45: Robert Mann, U. of Waterloo, 
"Exact Solutions to the Gravitational 2-body Problem"

3:00: Jennie Traschen, U. Mass., 
"Probing 3-Branes with Strings"

3:15: Alejandro Corichi, UNAM, 
"Isolated Dilatonic Black Holes"

3:30: Homer Ellis, University of Colorado at Boulder, 
"Darkhole: Blackhole's Better Behaved, Well-Bred Cousin"

3:45: Coffee Break

Session Eight: Chair: Robert Mann
4:15: Beverly K. Berger, Oakland U., 
"Numerical Study of Spatially Inhomogeneous Cosmologies"

4:30: Jim Isenberg, U. of Oregon, 
"Oscillatory Behavior Near the Singularity in Inhomogeneous Vacuum Cosmological Spacetimes"
• 4:45: Kirill Krasnov, CGPG, Penn. State,  
"BF theory and Gravity"

• 5:00: Michael Martin, U. of Missouri-Columbia,  
"The Contracted Christoffel Symbol as Gauge Gravity Vector"

• 5:15: Tevian Dray, Oregon State University,  
"Octonions and Fermions"

• 5:30: Arthur E. Fischer, UC Santa Cruz,  
"The reduced Hamiltonian of General Relativity and the sigma Constant of Conformal Geometry"

• 5:45: William Pezzaglia, Santa Clara University,  
"New Classical Action Principle for Equations of Motion of Spinning Particles in Curved Space"