PCGM27 Scientific Program

Each speaker will be given a 12 minute time slot. This includes the time needed to set up your computer, present your talk, respond to any questions, and turn the projector over to the next speaker. Please respect the participants and other speakers by preparing your talk to fit into this very short time slot.

Most speakers have indicated their intention to use computer generated slides, and an lcd projector will be available for their use. Help minimize the time devoted to setting up and switching computers by checking --- during one of the breaks before your talk --- that your computer works properly with the projector. The time needed to switch computers can also be minimized by arranging with other speakers in your session to combine successive talks onto a single computer.

Friday, March 18, 2011

Session I (Chair: Yanbei Chen, Caltech)

Name	Organization	Talk	Begin	End	Student
		Breakfast and Registration	8:00	8:54	
Yanbei Chen	Caltech	Welcome and Announcements	8:54	9:00	
Kip Thorne	Caltech	Visualizing the Weyl Curvature Tensor: Frame-Drag Vortex Lines and Tidal Tendex Lines	9:00	9:12	
David Nichols	Caltech	Vortex and Tendex Lines in Post-Newtonian and Black-Hole Perturbation Spacetimes	9:12	9:24	•
Keith D. Matthews	Caltech	Computation of Vortex and Tendex Lines in Numerical Simulations, and Their Behaviors in a Head-on Collision of Spinning Black Holes	9:24	9:36	•
Mark Scheel	Caltech	Vortexes and Tendexes in Black Hole Collisions	9:36	9:48	
Fan Zhang	Caltech	The Meanings of Frame-Drag Vortex Lines and Tidal Tendex Lines	9:48	10:00	•
Aaron Zimmerman	Caltech	New Ringdown Frequency at the Birth of a Kerr Black Hole	10:00	10:12	•
		Coffee Break	10:12	10:48	

Session II (Chair: Christian Ott, Caltech)

Name	Organization	Talk	Begin	End	Student
Richard Price	University of Texas at Brownsville	Strong Antikicks in Binary Inspiral	10:48	11:00	
Charles R. Evans	University of North Carolina-Chapel Hill	Eccentric orbit EMRIs on Schwarzschild: High accuracy metric reconstruction I	11:00	11:12	
Seth Hopper	University of North Carolina-Chapel Hill	Eccentric orbit EMRIs on Schwarzschild: High accuracy metric reconstruction II	11:12	11:24	•
Sourabh Nampalliwar	University of Texas at Brownsville	Pulsar Beam Bending Near the Galactic Center	11:24	11:36	•

Recent PCGMs

PCGM 26 (UC San Diego)
PCGM 25 (U of Oregon)
PCGM 24 (UC Santa Barbara)
PCGM 23 (Caltech)

PCGM 27 Resources

PCGM 27 Website
Scientific Program
Registered Participants
Online Registration Form
Practical Information

Caltech Resources

California Institute of Technology
Cahill Center for Astronomy and Astrophysics
TAPIR (Caltech Theoretical Astrophysics Including Relativity)
Directions to Caltech
Caltech Area Map

Contact

URL:
www.tapir.caltech.edu/~pcgm27/
Email: pcgm27@tapir.caltech.edu

Local Organizers:
Rana Adhikari
Yanbei Chen
Lee Lindblom
Christian Ott
Alan Weinstein

Chin San Han	Stanford	Space-Time Asymmetry Research (STAR)	11:36	11:48	•
Franklin Felber	Starmark, Inc.	Dipole Gravity Waves from Gravitationally Unbound Quadrupoles	11:48	12:00	
Anil Zenginoglu	Caltech	Relativity for Engineering Applications	12:00	12:12	
Arthur Fischer	University of California, Santa Cruz	Einstein's Second Postulate of Special Relativity on the Universality of the Speed of Light is a Consequence of the First Postulate and is therefore Redundant	12:12	12:24	
		Lunch	12:24	2:00	

Session III (Chair: Richard Price, University of Texas at Brownsville)

Name	Organization	Talk	Begin	End	Student
Vladimir Dergachev	Caltech	Search for Continuous Gravitational Waves with LIGO	2:00	2:12	
Kari Hodge	Caltech	Multivariate Statistical Classification of Gravitational Wave Events	2:12	2:24	•
Roy Williams	Caltech	LIGO Open Data	2:24	2:36	
Huan Yang	Caltech	Coating Brownian Thermal Noise	2:36	2:48	•
Akira Villar	Caltech	Loss Angles From the Direct Measurement of Coating Thermal Noise	2:48	3:00	•
Zach Korth	Caltech	Absorption in iLIGO Core Optics	3:00	3:12	•
Jenne Driggers	Caltech	Newtonian Noise and Seismic FeedForward: Lessons Learned for aLIGO and Beyond	3:12	3:24	•
Ting Hong	Caltech	Effects of Mirror Perturbations on Laguerre-Gaussian Beams in Interferometric Gravitational-Wave Detectors	3:24	3:36	•
		Coffee Break	3:36	4:12	

Session IV (Chair: Mark Scheel, Caltech)

Name	Organization	Talk	Begin	End	Student
Joshua H. Cooperman	Univ. of Calif. Davis	Scales and Scaling in Causal Dynamical Triangulations	4:12	4:24	•
Colin Cunliff	Univ. of Calif. Davis	Topologically Massive Gravity from the Outside In	4:24	4:36	•
Yacine Ali-Haimoud	Caltech	Testing Dynamical Chern-Simons Gravity with Spinning Bodies	4:36	4:48	•
Douglas Singleton	California State University, Fresno	Hawking Radiation, Unruh Radiation and the Equivalence Principle	4:48	5:00	
Dinesh Singh	University of Regina	Local Space-Time Curvature Effects on Quantum Orbital Angular Momentum	5:00	5:12	

Party!!!

All participants are invited to an informal party, including a light dinner and refreshments, starting at 7pm on Friday March 18. Directions and a map will be made available at the meeting. Those interested in using the hot tub and/or swimming pool should bring swimming suits.

Saturday, March 19, 2011

Session V (Chair: Ben Owen, Penn State)

Name	Organization	Talk	Begin	End	Student
		Breakfast and Registration	8:00	9:00	
Peter Kalmus	Caltech	Search for Gravitational Waves from Core Collapse Supernovae	9:00	9:12	
Michael Kesden	NYU	Detecting Primordial Black Holes with Helioseismology	9:12	9:24	
Marc Favata	JPL/Caltech	The Gravitational-Wave Memory from Eccentric Binaries	9:24	9:36	
Tim Johannsen	University of Arizona	Testing the No-Hair Theorem with Observations of Black Holes in the Electromagnetic Spectrum	9:36	9:48	•
Sam Koshy	California State University, Long Beach	Tidal Locking of Neutron Star-Quark Star Binaries	9:48	10:00	•
Bijan	SLAC/Stanford/KIPAC	Search for Gravity-Only Large Extra Dimensions Based on	10:00	10:12	•

Berenji	SLAC/Stanford/KIPAC	Observations of Neutron Stars with Fermi-LAT	10:00	10:12	•
		Coffee Break	10:12	10:48	

Session VI (Chair: Rana Adhikari, Caltech)

Name	Organization	Talk	Begin	End	Student
Nick Taylor	Caltech	Second-order in Space Spectral Methods Applied to Binary Black Hole Simulations	10:48	11:00	
Tony Chu	Caltech	Towards Including Realistic Tidal Deformations in Binary Black Hole Initial Data	11:00	11:12	•
Evgeny Sorkin	UBC	Vacuum Critical Collapse in Axisymmetry	11:12	11:24	
Paul Gebhart	Caltech	Generalized GR Hydrodynamics in Spherical Symmetry	11:24	11:36	•
Christian Reisswig	Caltech	Gravitational Wave Extraction in Simulations of Rotating Stellar Core Collapse	11:36	11:48	
Eric Hirschmann	Brigham Young University	Equilibrium Models of Strongly Magnetized Neutron Stars	11:48	12:00	
		Lunch	12:00	2:00	

40m Interferometer Tours

Participants interested in a tour of the 40m interferometer should sign up on the list at the registration table. Tours will take place during the lunch break on Saturday March 19.

Session VII (Chair: Alan Weinstein, Caltech)

Name	Organization	Talk	Begin	End	Student
Anzhong Wang	Baylor University	Anisotropic Scalings and Non-Relativistic General Covariant Theory of Quantum Gravity	2:00	2:12	
V. H. Satheeshkumar	Baylor University	Black holes in Non-Relativistic General Covariant Theory of Quantum Gravity	2:12	2:24	•
Kai Lin	Baylor University	Stability of a Scalar Field in the Non-Relativistic General Covariant Theory of Gravity with Detailed Balance Condition Softly-Breaking	2:24	2:36	•
Yongqing Huang	Baylor University	Strong Coupling in Non-Relativistic General Covariant Theory With a Running Coupling Constant λ	2:36	2:48	•
Hui-Yiing Chang	Vanderbilt University	Phantom Cosmologies Ameliorating the Coincidence Problem	2:48	3:00	•
Michael Duncan	California State University, Fresno	Entropic Derivation of F=ma for Circular Motion	3:00	3:12	•
		Coffee Break	3:24	3:54	

Session VIII (Chair: James Isenberg, University of Oregon)

Name	Organization	Talk	Begin	End	Student
		GGR Student Talk Award	3:54	4:00	
Myrzakulov Ratbay	Eurasian National University, Kazakhstan	Cosmology of f-Essence and g-Essence	4:00	4:12	
David Rideout	Perimeter Institute	Dynamics of Causal Sets -- Classical and Quantum	4:12	4:24	
Parampreet Singh	Louisiana State University	Spacetime Beyond Singularities: A View From Loop Quantum Gravity	4:24	4:36	
Jonas Mureika	Loyola Marymount University	Gravitational Phenomenology of Vanishing Dimensions	4:36	4:48	

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