

# PCGM 26 Scientific Program (UCSD, March 26-27, 2010)

Friday, March 26, 2010

## Session I (Chair: Michael Holst, UC San Diego)

Name	Organization	Talk	Begin	End	Student
		Breakfast and Registration	8:00	9:00	
Michael Holst	UC San Diego	Welcome and Announcements	9:00	9:05	
Gary Horowitz	UC Santa Barbara	Holographic superconductors	9:05	9:20	
Tomas Andrade	UC Santa Barbara	Comments on Holography and Diffeomorphism Invariance	9:20	9:35	★
Ian A Morrison	UC Santa Barbara	The IR stability of de Sitter	9:35	9:50	★
Dinesh Singh	University of Regina	Effects of Space-Time Curvature on Spin-1/2 Particle Zitterbewegung	9:50	10:05	
		Coffee Break	10:05	10:45	

## Session II (Chair: Lee Lindblom, Caltech)

Name	Organization	Talk	Begin	End	Student
Joseph Betzwieser	Caltech	Searching for Continuous Gravitational Waves with coherent methods	10:45	11:00	
Vladimir Dergachev	Caltech	All-sky search for continuous gravitational waves with PowerFlux	11:00	11:15	
Pinkesh Patel	Caltech	Search for continuous gravitational waves from a nearby neutron star	11:15	11:30	★
Mark Bennett	University of Melbourne	Continuous-wave gravitational radiation from pulsar glitch recovery	11:30	11:45	★
Antony Searle	Caltech	Multi-messenger astronomy with transient gravitational wave sources	11:45	12:00	
Michael Cohen	Caltech	Searches for Cosmic String Gravitational-Wave Bursts in Mock LISA Data	12:00	12:15	★
		Lunch	12:15	2:15	

## Session III (Chair: Melvin Leok, UC San Diego)

Name	Organization	Talk	Begin	End	Student
Michael Holst	UC San Diego	Solution of the Einstein constraint equations on manifolds with boundary	2:15	2:30	
Jim Isenberg	University of Oregon	Gluing Initial Data Sets at Asymptopia	2:30	2:45	
Xianghui Luo	University of Oregon	Future Global Stability of Cosmological Models with Scalar and Electromagnetic Fields	2:45	3:00	★
Jeff Winicour	University of Pittsburgh	Disembodied Boundary Data for Einstein's Equations	3:00	3:15	
Hector H. Calderon	Idaho State University	Towards a new definition of singularity	3:15	3:30	
		Coffee Break	3:30	4:00	

## Session IV (Chair: Steve Carlip, UC Davis)

Name	Organization	Talk	Begin	End	Student
Michael Kesden	Caltech	Spin alignment during black hole inspirals	4:00	4:15	
David Nichols	Caltech	A Hybrid Approximation Technique for Head-on Black-Hole-Binary Mergers	4:15	4:30	★
Marc Favata	Caltech	Comparisons between post-Newtonian and self-force calculations	4:30	4:45	
Ned S. Rasor	Consultant	Quasi-Newtonian Dynamics and Universal Expansion	4:45	5:00	
Franklin Felber	Starmark, Inc.	New exact time-dependent solution of Einstein's equation	5:00	5:15	

**Saturday, March 27, 2010****Session V (Chair: Gary Horowitz, UC Santa Barbara)**

Name	Organization	Talk	Begin	End	Student
		Breakfast and Registration	8:00	9:00	
Steven Carlip	UC Davis	A nonextremal Kerr/CFT correspondence	9:00	9:15	
Marcus Afshar	UC Davis	Quasilocal Energy in FRW Cosmology	9:15	9:30	
Reiko Toriumi	UC Irvine	Quantum Gravity and Cosmological Density Perturbations	9:30	9:45	
Joseph Smidt	UC Irvine	New Constraints On The Primordial Non-Gaussianity Parameters $\tau_{NL}$ and $g_{NL}$	9:45	10:00	★
Krzysztof Bolejko	University of Arizona	Inhomogeneous cosmology: from dark energy to homogenization of the Universe	10:00	10:15	
		Coffee Break	10:15	11:00	

**Session VI (Chair: Rana Adhikari, Caltech)**

Name	Organization	Talk	Begin	End	Student
Douglas Singleton	CSU Fresno	Hawking-like radiation in a FRW Universe	11:00	11:15	
Paolo Bonifacio	University of Aberdeen	Spacetime conformal fluctuations and quantum dephasing	11:15	11:30	
Shau-Yu Lan	UC Berkeley	Atom Interferometry in Fundamental Physics	11:30	11:45	
Michael Hohensee	UC Berkeley	Matter Waves for Gravitational Wave Detection	11:45	12:00	
Cheong Chan	UC Berkeley	Atom Interferometric Measurement of Newton's Constant	12:00	12:15	★
		Lunch	12:15	2:15	

**Session VII (Chair: David Meyer, UC San Diego)**

Name	Organization	Talk	Begin	End	Student
Bela Szilagyi	Caltech	Spectral Numerical Simulations of High-spin Binary Black Hole Mergers	2:15	2:30	
Mark Scheel	Caltech	Spectral Numerical Simulations of Unequal-Mass Binary Black Hole Mergers	2:30	2:45	
Jeff Kaplan	Caltech	Simulations of Neutron-Star Binaries using SpEC	2:45	3:00	★
Tony Chu	Caltech	Estimating gauge errors in numerical waveforms	3:00	3:15	★
Fan Zhang	Caltech	Gauge Independent Tetrad for Numerical Waveform Extraction	3:15	3:30	★
Keith D. Matthews	Caltech	Quasi-Equilibrium Initial Data For Simulations of Generic Black-Hole Binaries in Harmonic Coordinates	3:30	3:45	★
		Coffee Break	3:45	4:15	

**Session VIII (Chair: Jim Isenberg, University of Oregon)**

Name	Organization	Talk	Begin	End	Student
		GGR Student Talk Award (Winners: Jeff Kaplan and Pinkesh Patel)	4:15	4:20	
Nicholas Taylor	Caltech	Second order in space spectral methods for numerical relativity	4:20	4:35	
Lee Lindblom	Caltech	A Spectral Approach to the Relativistic Inverse Stellar Structure Problem	4:35	4:50	
Rana Adhikari	Caltech	New directions for the GW Inteferometers	4:50	5:05	