Final Program
(All Talks are 15 min + 5 min discussion)

18th Midwest Relativity Meeting
University of Notre Dame, Jordan Hall of Science
October 24-25, 2008

Friday, October 24

8:30 AM – 9:00 AM Reception: Jordan Hall of Science
9:00 AM – 9:10 AM Introductory Remarks, David Garfinkle, Grant Mathews

Session I: Gravity Waves and Neutron Stars
Session Chair: Grant Mathews

9:10 – 9:30 Melissa Anholm, University of Wisconsin-Milwaukee
Optimal Strategies for Graviational Wave Stochastic Background Searches in Pulsar Timing Data

9:30 – 9:50 Ilya Mandel, Northwestern University
Can We Detect Intermediate-Mass-Ratio Inspirals?

9:50 – 10:10 Benjamin D. Lackey, University of Wisconsin-Milwaukee
Astrophysical constraints on the parameter space of the neutron-star equation of state

10:10 – 10:30 Gregory L. Comer, Saint Louis University
Compact Star Superfluid Turbulence

10:30 – 11:00 Coffee Break

Session II: Cosmology
Session Chair: Gregory Comer

11:00 – 11:20 David Garfinkle, Oakland University
Smoothing at the Big Crunch

11:20 – 11:40 Motohico Kusakabe, NAOJ/ Tokyo University
Big Bang Production of ^{6,7}Li via the SUSY NLSP

11:40 – 12:00 Matthew M. Glenz, University of Wisconsin-Milwaukee
Early Universe Evolution Characterizes Three Regimes of Spectral Perturbations

12:00 – 12:20 Grant Mathews, University of Notre Dame
Some Unifying Views on Dark Matter and Dark Energy?

12:20 – 1:40 – LUNCH

Session III: Field Theory - I
Session Chair: Chris Kolda

1:40 – 2:00 Dinesh Singh, University of Regina
Breakdown of Lorentz Invariance for Spin-1/2 Particle Motion in Curved Space-Time with Applications to Muon Decay

2:00 – 2:20 J. Brian Pitts, University of Notre Dame
Addressing Underdetermination between Massless and Massive Gravity Numerically in Spherical Symmetry?

2:20 – 2:40 Samuel Gralla, University of Chicago
A Rigorous Derivation of Electromagnetic Self-force

2:40 – 3:00 Abhay Gunvant Shah, Northwestern University
Gravitational self-force in radiation gauge for a particle orbiting a Schwarzschild black hole

3:00 – 3:20 – COFFEE

Session IV: Field Theory - II
Session Chair: Leonard Parker

3:20 – 3:40 Nikodem Poplawski, Indiana University
Purely affine formulation of F(R) gravity

3:40 – 4:00 Jay Tasson, Indiana University
Lorentz Violation in Matter-Gravity Couplings

4:00 – 4:20 Abraham Harte, University of Chicago
Self-forces and Generalized Symmetries

4:20 – 4:40 Steven Harris, Saint Louis University
Causal Boundary for Non-Product Static Spacetimes

4:40 – 5:00 COFFEE

Session V: Alternative Gravity
Session Chair: Samir Bose

5:00 – 5:20 Sean Stotyn, University of Waterloo
Supergravity on an Atiyah-Hitchin Base

5:20 – 5:40 Stephen Green, University of Chicago

Issues with dimensional reduction of higher dimensional theories

5:40 – 6:00 Michael Seifert, Indiana University
Lorentz symmetry breaking in TeVeS

6:00 – 6:20 Itai Seggev, Knox College
Posts in transitive percolation: First results from Dq/Dg

6:20 – 6:40 Bojan Tunguz, Wabash College
Effective field interactions and the non-local interaction term

Break For Dinner
8:00 – 8:30 Reception 101 Jordan Hall of Science
8:30 – 9:30 PM – 3D Presentation – G. Mathews & M. Meixner - Jordan Hall Digital Visualiz. Theater: **A Walk through the Universe/ *Infinity Express***

Saturday, October 25

Coffee – 8:30 AM

Session VI: Numerical Relativity/Formulation
Session Chair: David Garfinkle

9:00 – 9:20 Edward N. Glass, University of Michigan
Israel Layers

9:20 – 9:40 James P. Crawford, Penn State University
Self Coupled Gravity: A Toy Field Theoretic Model of Gravity

9:40 – 10:00 Vasileios Paschalidis, University of Illinois at Urbana Champaign
Parabolized-ADM (PADM) formulation of GR

10:00 – 10:20 Sarp Akcay, University of Texas at Austin
Kerr de Sitter Universe

10:20 – 11:00 COFFEE

Session VII: Numerical Relativity-II
Session Chair: X. Zhao

11:00 – 11:20 Yuk Tung Liu, University of Illinois at Urbana-Champaign
General Relativistic Simulations of Compact Binary Mergers: Overview

11:20 – 11:40 Zachariah B. Etienne, University of Illinois at Urbana-Champaign
Simulations of Black Hole-Neutron Star Binary Mergers: Effects of Black Hole

Spin, Mass Ratio, and Neutron Star Compaction

11:40 – 12:00 Brian Farris, University of Illinois at Urbana-Champaign
Relativistic Radiation Magnetohydrodynamics in Dynamical Spacetimes

12:00 – 12:20 Tsz Ka Li, University of Illinois at Urbana-Champaign
Radiation Magnetohydrodynamics in Dynamical Spacetimes: `Thermal' Oppenheimer-Snyder Collapse

12:20 – 1:20 – LUNCH

1:20-1:30 **Announcement of *Blue Apple Award* Winner**

Session VIII: New Ideas/ Novel Approaches
Session Chair: M. Meixner

1:30 – 1:50 John R. Laubenstein, IWPD Research Center, Inc.
Gravitational Insights from Less Than Ten Percent the Speed of Light

1:50 – 2:10 Kandi M. Cockream, IWPD Research Center, Inc.
Gravitational Modeling using IWPD Scale Metrics

2:10 – 2:30 David E. Pressler, Primary Nuclear Research
Our Static Universe: Einstein's Math Error

2:30 – 2:50 Douglas Sweetser
Analysis of vector current coupling

2:50 – 3:10 Charles Sven,
Big Bang Fuel Discovered & Demonstrated

3:10 – 3:30 James Donovan, Shimer College
Dark Energy and the Age of the Universe

3:30 – 3:40 PM Concluding Remarks

3:40 PM End of Meeting