

19TH ANNUAL MIDWEST RELATIVITY MEETING TALK SCHEDULE

FRIDAY, OCT. 2ND – SATURDAY, OCT. 3RD
340 WEST HALL

All speakers have been given 20 minutes
(15 minutes for the talk and 5 minutes for questions)
Speakers will be notified of changes in this schedule

* Indicates a graduate student speaker whose talk will be considered for the Blue Apple Award

Friday, October 2nd

Continental Breakfast: 8:30-9:00am (337 West Hall)

9:00-9:10am Welcoming Remarks

Professor Brad Orr (Department Chair, University of Michigan)

SESSION 1

9:10-10:30am - Tracking GR Objects

Session Chair: Philip Hughes (University of Michigan)

9:10-9:30 Fred C. Adams (University of Michigan)

Relativistic Planets

9:30-9:50 David Garfinkle (Oakland University)

The motion of galaxy clusters in inhomogeneous cosmologies

9:50-10:10 *Samuel E. Gralla (University of Chicago)

Electromagnetic Analog of Binary Black Hole Bobbing and Kicks

10:10-10:30 Eric Poisson (University of Guelph)

Tidal Interactions of black holes and Newtonian viscous bodies

10:30-10:50 Coffee Break

SESSION 2

10:50-12:10am - Field Theory 1

Session Chair: Eric Poisson (University of Guelph)

10:50-11:10 Abraham Harte (University of Chicago)

Self-force and effective mass distributions

11:10-11:30 *Adam Pound (University of Guelph)

A derivation of the self-consistent gravitational self-force

11:30-11:50 Theodore Drivas (University of Chicago)

Self-Force Differences

11:50-12:10 Michael Seifert (Indiana University)

Topological Lorentz Defects

12:10-1:10 CATERED LUNCH in hall outside lecture hall 340 West hall
Zingerman's delicatessen sandwiches, desserts, and beverages

SESSION 3

1:10-2:30 - Field Theory 2

Session Chair **Richard Hammond (University of North Carolina –Chapel Hill)**

1:10-1:30 Henriette Elvang (University of Michigan)

Perturbative Gravity

1:30-1:50 Dejan Stojkovic (SUNY at Buffalo)

Black Holes and Extra Dimensions

1:50-2:10 Stephen R. Green (University of Chicago)

Gravitational Consequences of sharply peaked confined scalar fields in braneworlds

2:10-2:30 Kunihiro Uzawa (Kinki University and Yukawa Institute for Theoretical Physics)

Dynamics of Intersecting Brane Systems

2:30-2:40 QUICK 10 MINUTE BREAK

SESSION 4

2:40-4:00 - Field Theory 3

Session Chair **Grant Mathews (University of Notre Dame)**

2:40-3:00 *Mohd Arif (University of Mississippi)

Asymptotically Anti-deSitter Spacetimes in 3 dimensions

3:00-3:20 *Saeed Mirshekari (Washington University)

Does the Bach-Weyl Solution have a Carter constant

3:20-3:40 *Eyo Ita (US Naval Academy)

Proposed solutions for the initial value constraints of 4D GR

3:40-4:00 *Jay D. Tasson (Indiana University)

Models of Lorentz Symmetry Breaking

4:00-4:20 Coffee Break

SESSION 5

4:20-6:00 - Experiment 1 Gravitational Waves

Session Chair **Clifford Will (Washington University)**

4:20-4:40 K. G. Arun (Washington University)

Cosmography with gravitational waves

4:40-5:00 *Evan Goetz (University of Michigan)

Searching for continuous gravitational waves from neutron stars in binary systems using the TwoSpect algorithm

5:00-5:20 *Peter Zimmerman (University of Guelph)

The Effect of Eccentricity in LIGO's Search for Gravitational Waves from Compact Binaries

5:20-5:40 John Friedman (University of Wisconsin-Milwaukee)

GW from binary inspiral and the neutron-star equation of state

5:40-6:00 *Benjamin D. Lackey (University of Wisconsin-Milwaukee)

Tidal deformability of neutron stars with realistic equations of state

6:00-7:30 Wine and Cheese Reception
337 West Hall

Saturday, October 3rd

Continental Breakfast: 8:30-9:00am (337 West Hall)

SESSION 6

9-10:20 - Experiment 2

Session Chair **Luca Bombelli (University of Mississippi)**

9:00-9:20 *Laleh Sadeghian (University of Washington)

Is the central object in our galaxy a black hole?

9:20-9:40 Richard Hammond (University of North Carolina-Chapel Hill)

How can Torsion be measured

9:40-10:00 A. R. Prasanna (Physical Research Laboratory/L. J. Institute for Computer Applications)

Constraints on background torsion from birefringence of CMB polarization

10:00-10:20 Katherine Freese (University of Michigan)

Dark Stars

10:20-10:40 QUICK 10 MINUTE BREAK

SESSION 7

10:40-12:20 - Numerical Relativity

Session Chair **David Garfinkle (Oakland University)**

10:40-11:00 Yuk Tung Liu (University of Illinois at Urbana-Champaign)

General Relativistic MHD Simulations of Compact Binary Mergers

11:00-11:20 Zachariah Etienne (University of Illinois at Urbana-Champaign)

General Relativistic Simulations of Black-Hole Neutron Star Mergers: Effects of Black Hole Spin

11:20-11:40 *Xinghai Zhao (University of Notre Dame)

Effects of structure formation on the expansion rate of the universe: a realistic estimate direct from N-body simulations

11:40-12:00 *Brian Farris (University of Illinois at Urbana Champaign)

Simulations of Binary Black Hole mergers in Gaseous Environments

12:00-12:20 Vasileios Paschalidis (University of Illinois at Urbana Champaign)

Merger of white dwarf neutron star binaries: Prelude to hydrodynamic simulations in general relativity

12:20 – 1:20 BOXED LUNCH available in hall outside of lecture hall

The Blue Apple Committee will meet

Blue Apple Award: 1:20-1:30

SESSION 8

1:30-3:10 - Field Theory 4

Session Chair **E. N. Glass (University of Windsor/University of Michigan)**

- 1:30-1:50 Rachel Maitra (Institute for Theoretical Physics-University of Utrecht)
Can Causal Dynamical Triangulation Probe Factor Ordering Issues
- 1:50-2:10 Brett Bolen (Grand Valley State University)
Effects of Minimal Length on Quantum Mechanical Tunneling
- 2:10-2:30 J. Brian Pitts (University of Notre Dame)
Gauge Invariant Localization of Infinitely Many Gravitational Energies from all Possible Auxiliary Structures of Why Pseudotensors are Okay
- 2:30-2:50 Jang Young Bang (Grand Valley State University)
General Uncertainty Principle

2:50-3:10 Coffee Break

SESSION 9

3:10-4:30 – Novel General Relativity

Session Chair Keith Riles

- 3:10-3:30 Charles Sven (author)
A Mathematical Analysis of the Atom's Power Requirements needed to Drive Light/Photon or a Chain Reaction
- 3:30-3:50 John R. Laubenstein (IWPD Research Center, Inc)
Scaling the momentum gap and discovering "X"
- 3:50-4:10 Wayne R. Lundburg
General Relativity as a Snapshot of Cyclic Cosmology

4:10 Meeting Concludes