

The INT @ 20
The Future of Nuclear Physics
and its Intersections
July 1 – 2, 2010

Program

Thursday, July 1:

8:00 – 8:45: **Registration (Kane Hall, Rom 210)**

8:45 – 9:00: **Opening remarks**

Mary Lidstrom, Vice Provost for Research, University of Washington
David Kaplan, INT Director

Session chair: David Kaplan

9:00 – 9:45: **Science & Society**

9:00 – 9:45
Steven Koonin, Undersecretary for Science, DOE
The future of DOE and its intersections

9:45 – 10:30: **Strong Interactions and Fundamental Symmetries**

9:45 – 10:30
Howard Georgi, Harvard University
QCD – From flavor SU(3) to effective field theory

10:30 – 11:00: Coffee Break

Session chair: Martin Savage

11:00 – 11:30
Silas Beane, University of New Hampshire
Lattice QCD for nuclear physics

11:30 – 12:00
Paulo Bedaque, University of Maryland
Effective field theories in nuclear physics

12:00 – 12:30
Michael Ramsey-Musolf, University of Wisconsin
Fundamental symmetries of nuclear physics: A window on the early Universe

12:30 – 2:00: Lunch (Mary Gates Hall)

Thursday, July 1

2:00 – 5:00: **From Partons to Extreme Matter**

Session chair: Gerald Miller

2:00 – 2:30

Matthias Burkardt, New Mexico State University

Transverse (spin) structure of hadrons

2:30 – 3:00

Barbara Jacak, SUNY Stony Brook

Quark-gluon plasma: from particles to fields?

3:00 – 3:45

Raju Venugopalan, Brookhaven National Lab

Wee gluons and their role in creating the hottest matter on Earth

3:45 – 4:15: Coffee Break

Session chair: Krishna Rajagopal

4:15 – 4:45

Jean-Paul Blaizot, Saclay

Is the quark-gluon plasma strongly or weakly coupled?

4:45 – 5:15

Dam Son, INT

Applications of holography

5:45 – 6:45: no host cocktail hour @ University Club

6:45 – 8:45: dinner @ University Club

After dinner speaker: Wick Haxton

Friday, July 2

Session chair: Dam Son

9:00 – 12:00: **Few- and Many-Body Physics**

9:00 – 9:30

Deborah Jin, JILA

Universal relations in an ultracold Fermi gas

9:30 – 10:00

Gordon Baym, University of Illinois

From ultracold atomic gases to the QGP

10:00 – 10:30: Coffee Break

Session chair: Richard Furnstahl

10:30 – 11:00

George Bertsch, INT

Nuclear structure: from model to theory

11:00 – 11:30

Thomas Papenbrock, University of Tennessee & ORNL

Model independent computations of atomic nuclei: status and perspectives

11:30 – 12:00

Christopher Jarzynski, University of Maryland

The second law of thermodynamics at the nanoscale: what do we know that Maxwell, Boltzmann and Gibbs did not already understand?

12:00 – 2:00: Lunch (Mary Gates Hall)

Session chair: Wick Haxton

2:00 – 5:00: **Neutrinos and Nuclear Astrophysics**

2:00 – 2:45

Hamish Robertson, University of Washington

The neutrino @ 80

2:45 – 3:15

Gail McLaughlin, North Carolina State University

Neutrinos and nucleosynthesis from black hole accretion disks

3:15 – 3:45

Cecilia Lunardini, Arizona State University

Supernova neutrinos at future detectors

3:45 – 4:15: Coffee Break

Friday, July 2

Session chair: Baha Balantekin

4:15 – 4:45

Yong-Zhonog Qian, University of Minnesota

Neutrinos and the origin of the elements

4:45 – 5:15

Sanjay Reddy, Los Alamos National Laboratory

A low energy theory of the neutron star crust and its observable implications

5:15 – 5:30: **Closing** – David Kaplan

