# MICHIGAN QUANTUM SUMMER SCHOOL PROGRAM

MCTP

JUNE 23-27, 2008

WEEK 2

340 WEST HALL

**REVISED 06/23/08** 

# MONDAY, JUNE 23RD

9:00 AM Full Breakfast (337 West hall)

9:30 AM David DiVincenzo (IBM Research)

"Superconducting Qubits"

10:30 AM Luis Orozco (University of Maryland)

"Cavity QED and its Applications for Quantum Information"

#### 11:30 AM LUNCH BREAK

1:00 PM Eric Adelberger (University of Washington)

"Test of Equivalence Principle"

2:00 PM Hans Peter Büchler (University of Stuttgart)

"Cold Polar Molecules and their Applications for Quantum Information"

3:00 PM Coffee Break (337 West hall)

3:30 PM Contributed 20 minute Talks

Xiaodong Xu (University of Michigan)

"Experiments on Spin Manipulation in Quantum Dots"

Kelly Younge (University of Michigan)

"Blockade Experiments with Rydberg Atoms"

Maxime Boissonneault (University of Sherbrooke)

"Circuit Quantum Electrodynamics: Beyond the Linear Dispersive Limit"

4:30 PM Poster Presentations and Discussions

5:30 PM Poster Session Concludes

## TUESDAY, JUNE 24<sup>TH</sup>

9:00 AM Full Breakfast (337 West hall)

| 9:30 AM   | David DiVincenzo "Superconducting Qubits"  |
|---|--|
| 10:30 AM  | Eric Cornell (University of Colorado) "EDM"  |
| 11:30 AM  | LUNCH BREAK  |
| 1:00 PM   | Eric Adelberger (University of Washington) "Sub-Minimeter Tests of the Gravitational Inverse-Square Law"   |
| 2:00 PM   | Hans Peter Büchler (University of Stuttgart) "Cold Polar Molecules and their Applications for Quantum Information"   |
| 3:00 PM   | Coffee Break (337 West hall)   |
| 3:30 PM   | Luis Orozco (University of Maryland) "Cavity QED and its Applications for Quantum Information"   |
| 4:30 PM<br><b>5:30 PM</b>                             | Poster Presentations and Discussions Poster Session Concludes  |
| WEDNESDAY, JUNE 25 <sup>TH</sup>                      |  |
|   |  |
| 9:00 AM   | Full Breakfast (337 West hall)   |
|   | Full Breakfast (337 West hall)  David DiVincenzo (IBM Research)  "Superconducting Qubits"  |
| 9:30 AM   | David DiVincenzo (IBM Research)  |
| 9:30 AM<br>10:30 AM                                   | David DiVincenzo (IBM Research) "Superconducting Qubits"  Eric Adelberger (University of Washington)   |
| 9:30 AM<br>10:30 AM                                   | David DiVincenzo (IBM Research) "Superconducting Qubits"  Eric Adelberger (University of Washington) "Planck Scale Test of Lorentz Invariance with a Spin Pendulum"  |
| 9:30 AM<br>10:30 AM<br>11:30 AM                       | David DiVincenzo (IBM Research) "Superconducting Qubits"  Eric Adelberger (University of Washington) "Planck Scale Test of Lorentz Invariance with a Spin Pendulum"  LUNCH BREAK  Luis Orozco (University of Maryland)   |
| 9:30 AM<br>10:30 AM<br><b>11:30 AM</b><br>1:00 PM     | David DiVincenzo (IBM Research) "Superconducting Qubits"  Eric Adelberger (University of Washington) "Planck Scale Test of Lorentz Invariance with a Spin Pendulum"  LUNCH BREAK  Luis Orozeo (University of Maryland) "Cavity QED and its Applications for Quantum Information"  Eric Cornell (University of Colorado)                          |
| 9:30 AM<br>10:30 AM<br>11:30 AM<br>1:00 PM<br>2:00 PM | David DiVincenzo (IBM Research) "Superconducting Qubits"  Eric Adelberger (University of Washington) "Planck Scale Test of Lorentz Invariance with a Spin Pendulum"  LUNCH BREAK  Luis Orozco (University of Maryland) "Cavity QED and its Applications for Quantum Information"  Eric Cornell (University of Colorado) "Precision Measurements" |

# THURSDAY, JUNE 26<sup>TH</sup>

## 9:00 AM Full Breakfast (337 West hall)

9:30 AM James Hartle (UCSB)

"Quantum Mechanics in the Light of Quantum Cosmology"

10:30 AM Chris Monroe (University of Maryland)

"Quantum Networking with Trapped Ions"

#### 11:30 AM LUNCH BREAK

1:00 PM Luis Orozco (University of Maryland)

"Parity Violation on Francium"

2:00 PM Zheng-Tian Lu (University of Chicago)

"Spectroscopy of Radioactive Atoms and its Applications"

#### 3:00 PM Coffee Break (337 West hall)

#### 3:30 PM Contributed 20 Minute Talks

Michael Bishof (University of Chicago, Argonne National Lab)

"Observation of Allowed but Highly Suppressed Transitions in HE-3"

Tobias Kampschulte (University of Bonn, Germany)

"Measuring the Coupling Strength of Single Atoms to the Field of a High-Finesse Optical Resonator"

4:30 PM Poster Presentations and Discussions

5:30 PM Poster Session Concludes

# FRIDAY, JUNE 27<sup>TH</sup>

### 9:00 AM Full Breakfast (337 West hall)

9:30 AM James Hartle (UCSB)

"Quantum Mechanics in the Light of Quantum Cosmology"

10:30 AM Luis Orozco (University of Maryland)

"Parity Violation on Francium"

#### 11:30 AM LUNCH BREAK

1:00 PM Zheng-Tian Lu (University of Chicago)

"Spectroscopy of Radioactive Atoms and its Applications"

2:00 PM Chris Monroe (University of Maryland) "Quantum Networking with Trapped Ions"

3:00 PM Coffee Break (337 West hall)

3:30 PM Summer School Concludes