

## **QIS Workshop Agenda**

Tysons Corner Marriott

Vienna, VA

April 23-25, 2009

### **Thursday Morning**

7:30 – 8:30 Registration and breakfast (provided)

8:30 – 8:45 **Carl Williams**, The NSTC, OSTP, and the SQIS

8:45 – 9:20 **Charles Bennett**, Quantum Information Theory

9:20 – 9:55 **Charles Marcus**, Solid-State Quantum Computing

9:55 – 10:30 **Umesh Vazirani**, Quantum Complexity and Algorithms

10:30 – 10:50 Break

10:50 – 11:25 **Robert Schoelkopf**, Quantum Computation with Superconducting Circuits: Current Status

11:25 – 12:00 **Michael Freedman**, Topological Quantum Computing

Lunch (provided)

### **Thursday Afternoon**

1:45 – 2:20 **John Preskill**, Fault-Tolerant Quantum Computing

2:20 – 2:55 **Mikhail Lukin**, Hybrid Systems for Quantum Information Processing

2:55 – 3:30 **Leonard Schulman**, Quantum Algorithms with Exponential Speedups

3:30 – 3:50 Break

3:50 – 4:25 **Mark Kasevich**, Atom Interferometry

4:25 – 5:00 **Scott Aaronson**, Quantum Complexity and Fundamental Physics

5:00 – 5:35 **Isaac Chuang**, Quantum Architecture

### **Thursday Evening**

7:30 – 9:00 Open Session

### **Friday Morning**

7:45 – 8:45 Breakfast (provided)

8:45 – 9:20 **Peter Zoller**, Quantum Simulation with Atoms and Molecules

9:20 – 9:55 **David Wineland**, Quantum Information Processing and Metrology with Ions

9:55 – 10:30 **Andris Ambainis**, Quantum algorithms with polynomial speedups

10:30 – 10:50 Break

10:50 – 11:25 **William Phillips**, Quantum Computing and Simulation with Cold Atoms

11:25 – 12:00 **Anthony Leggett**, Testing Quantum Mechanics Towards the Level of  
Everyday Life: Recent Results and Current Prospects

Lunch (provided)

### **Friday Afternoon**

1:45 – 2:20 **Dorit Aharonov**, Quantum Complexity of Hamiltonian Simulation

2:20 – 2:55 **Raymond Laflamme**, Quantum Information Processing using NMR

2:55 – 3:30 **Barbara Terhal**, Complexity of Simulating Quantum Systems on  
Classical Computers

3:30 – 3:50 Break

3:50 – 4:25 **Paul Kwiat**, Optical Quantum Information Processing

4:25 – 5:00 **Alán Aspuru-Guzik**, Quantum Computation and Chemistry

5:00 – 5:35 **Anne Broadbent**, Universal Blind Quantum Computation

### **Friday Evening**

7:30 – 9:00 Open Session

### **Saturday Morning**

7:45 – 8:45 Breakfast (provided)

8:45 – 9:20 **Norbert Lütkenhaus**, Quantum Key Distribution

9:20 – 9:55 **Jeff Kimble**, Quantum Networks

9:55 – 10:30 **John Watrous**, Quantum Games

10:30 – 10:50 Break

10:50 – 11:25 **Keith Schwab**, Quantum Aspects of Mechanical Motion

11:25 – 12:00 **Birgitta Whaley**, Quantum Control

Lunch (provided)

### **Adjourn**