

A SINGLE MULTIFUNCTIONAL CHIP FOR RECONFIGURABLE INFORMATION PROCESSING

An Office of Naval Research Multi-disciplinary University Research Initiative

Program Review Meeting Agenda

NOVEMBER 6, 2008

Elings Hall, Room 1601

University of California, Santa Barbara

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| 8:45am-9:15am | Light Breakfast |
| 9:15am-9:20am | Welcoming Remarks
Chagaan Baatar, Office of Naval Research |
| 9:20am-9:40am | MURI Overview: Memory, Logic & Communication in a Multifunctional Semiconductor Chip
David Awschalom, University of California, Santa Barbara |

Session I: FUNDAMENTAL PHENOMENA AND DEVICES

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| 9:40am-10:10am | Electrical and photonic control of spins in semiconductor devices: logic and storage
David Awschalom, University of California, Santa Barbara |
| 10:10am-10:40am | Electrical detection of spin transport in semiconductor devices
Paul Crowell, University of Minnesota |
| 10:40am-11:00am | Morning Break |
| 11:00am-11:30am | Multifunctional control in semiconductor devices
Michael Flatté, University of Iowa |
| 11:30am-12:00pm | Magneto-electronic control of spins transport in ferromagnetic semiconductor devices
Nitin Samarth, Pennsylvania State University |
| 12:00pm-1:15pm | Lunch (Elings Hall Main Foyer) |

Session II: DEVELOPMENT AND APPLICATION OF MATERIALS

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| 1:15pm-1:45pm | Design and control of ferromagnetic semiconductors
Art Gossard, University of California, Santa Barbara |
| 1:45pm-2:15pm | Ferromagnetic metal/semiconductor heterostructures |

Chris Palmstrom, University of Minnesota/UCSB

2:15pm-2:45pm **Advanced materials and junctions for devices**
Stu Wolf, University of Virginia

2:45pm-3:00pm **Afternoon Break**

Session III: CHIP INTEGRATION WITH METALLIC DEVICES

3:00pm-3:40pm **Hybrid spin torque devices: bridging the metal-semiconductor divide**
Dan Ralph, Cornell University

3:40pm-4:00pm **Summary and Future Plans**
David Awschalom, University of California, Santa Barbara

4:00pm-5:00pm **Poster Session**

5:00pm-5:30pm **Program Manager Meeting (Closed Session)**

6:00pm-7:30pm **Dinner**
The Mosher Alumni House, UC Santa Barbara