

**Final Report for Period:** 06/2001 - 05/2002**Submitted on:** 07/23/2002**Principal Investigator:** Freericks, James K.**Award ID:** 0108908**Organization:** Georgetown University**Title:**

Spintronics 2001; Washington, DC; August 9-11, 2001

**Project Participants****Senior Personnel****Name:** Freericks, James**Worked for more than 160 Hours:** Yes**Contribution to Project:****Name:** Barbara, Paola**Worked for more than 160 Hours:** Yes**Contribution to Project:****Name:** Zutic, Igor**Worked for more than 160 Hours:** Yes**Contribution to Project:****Post-doc****Graduate Student****Undergraduate Student****Technician, Programmer****Other Participant****Research Experience for Undergraduates****Organizational Partners****Other Collaborators or Contacts**

Invited speakers had their conference fee and local housing costs covered. In addition, some younger (student) researchers had their conference fee covered.

Leon Balents UCSB \$485

Ravin Bhatt Princeton \$485

Chien Chia-Ling Johns Hopkins \$225

Paul Crowell Minnesota \$485

Alan Goldman Minnesota \$230

Nicola Hill UCSB \$485

Vincent LaBella Arkansas \$485

Alan MacDonald Texas \$485

Boris Nadgorny Wayne State \$485

Eric Gansen Iowa \$225

Marty Stevens Iowa \$225

## Activities and Findings

### **Research and Education Activities:**

The spintronics 2001 conference was held on August 9-11, 2001. Over 150 participants from over 13 countries were in attendance (approximately 120 from the US). Conference proceedings for some invited talks were published in a special volume (February, 2002) of the Journal of Superconductivity. A summary of the conference and the field of spintronics appeared in the NY Times one week after the conference.

#### Countries represented:

United States  
Germany  
Uzbekhistan  
Canada  
Korea  
France  
United Kingdom  
Israel  
Russia  
Netherlands  
Japan  
Poland  
Switzerland  
Brazil

### **Findings:**

#### **Training and Development:**

#### **Outreach Activities:**

The press was invited to the conference, which resulted in an article in the NY Times.

## Journal Publications

Igor Zutic, "Novel aspects of spin-polarized transport and spin dynamics", Journal of Superconductivity, p. 5, vol. 15, (2002). Published

E. I. Rashba, "Spintronics: sources and challenge. Personal perspective", Journal of Superconductivity, p. 13, vol. 15, (2002). Published

J.M. Slaughter, R.W. Dave, M. DeHerrera, M. Durlam, B.N. Engel, J. Janesky, N.D. Rizzo, and S. Tehrani, "Fundamentals of MRAM technology", Journal of Superconductivity, p. 19, vol. 15, (2002). Published

F. J. Jedema, M.S. Nijboer, A.T. Filip, and B.J. van Wees, "Spin injection and spin accumulation in permalloy-copper mesoscopic spin valves", Journal of Superconductivity, p. 27, vol. 15, (2002). Published

D.W. Bullock, V. P. LaBella, Z. Ding, and P.M. Thibado, "Mapping the spin-injection probability on the atomic scale", Journal of Superconductivity, p. 37, vol. 15, (2002). Published

G. Deutscher, "Crossed Andreev reflection", Journal of Superconductivity, p. 43, vol. 15, (2002). Published

P. Recher and D. Loss, "Creation of nonlocal spin-entangled electrons via Andreev tunneling, Coulomb blockade, and resonant transport", Journal of Superconductivity, p. 49, vol. 15, (2002). Published

J. Y. T. Wei, "Spin-injection quasiparticle nonequilibrium in cuprate-manganite heterostructures", Journal of Superconductivity, p. 67, vol. 15, (2002). Published

R. N. Bhatt, M. Berciu, M.P. Kennett, and X. Wan, "Diluted magnetic semiconductors in the low carrier density regime", Journal of Superconductivity, p. 71, vol. 15, (2002). Published

S. Sanvito, G. Theurich, and N.A. Hill, "Density functional calculations for III-V diluted ferromagnetic semiconductors: A review", Journal of Superconductivity, p. 85, vol. 5, (2002). Published

**Books or Other One-time Publications**

**Web/Internet Site**

**Other Specific Products**

**Contributions**

**Contributions within Discipline:**

**Contributions to Other Disciplines:**

**Contributions to Human Resource Development:**

**Contributions to Resources for Research and Education:**

**Contributions Beyond Science and Engineering:**

**Categories for which nothing is reported:**

Organizational Partners

Activities and Findings: Any Findings

Activities and Findings: Any Training and Development

Any Book

Any Web/Internet Site

Any Product

Contributions: To Any within Discipline

Contributions: To Any Other Disciplines

Contributions: To Any Human Resource Development

Contributions: To Any Resources for Research and Education

Contributions: To Any Beyond Science and Engineering