

BRIEF CV  
**SASHI SATPATHY**

**Personal Data**

Address: Department of Physics, University of Missouri, Columbia, Missouri 65211, USA  
Country of Birth: India, Citizenship: USA, Sex: Male  
Tel: (573) 882-4838 (work) E-mail: satpathys@missouri.edu  
Home page: <http://www.missouri.edu/~satpathys>

**Education**

1982 Ph.D. (Physics), University of Illinois, Urbana, Illinois, USA  
1977 M.Sc. (Physics), Indian Institute of Technology, Kanpur, India  
1975 B.Sc., Utkal University, India, (Best Graduate and Gold Medal, Rank = 1/ ca. 5000)

**Employment**

Jan 2008 - Curators' Professor of Physics, University of Missouri, Columbia  
1987 - 2007 Assistant Professor, Associate Professor, and Professor of Physics, University of Missouri  
1986 - 1987 Research Associate, Xerox Palo Alto Research Center, Palo Alto, California  
1982- 1986 Post-Doctoral Associate and Scientific Staff Member, Max-Planck Institute, Stuttgart, Germany

**Other Significant Appointments**

Visiting Faculty, Department of Physics, University of Illinois, Urbana, Illinois (Fall 2007)  
Universities of Promising Excellence Visiting Professor, University of Hyderabad, India (12/06)  
Mercator Visiting Professor, University of Saarland, Germany (6/06-8/06, 5/08-8/08)  
Adjunct Professor, Institute of Materials Science, Bhubaneswar, India (2007 - )  
Visiting Scientist, Bose Center of Basic Research, Kolkata, India (12/04-1/05, 12/03-1/04, 12/02-1/03)  
Summer Faculty Fellow, Wright-Patterson Air Force Base, Dayton, Ohio (6/04-8/04, 6/03-8/03, 6/02-8/02)  
Visiting Faculty, Institute of Theoretical Physics, University of California, Santa Barbara (9/02-11/02, 10/98-12/98)  
Research Leave at Max-Planck Institute, Stuttgart, Germany (8/95-8/96)

**Awards and Honors**

National Science Talent Award, India (1972)  
University Gold Medal and Best Graduate, Utkal University, India (1975)  
Fellow, American Physical Society  
Fellow, American Association for the Advancement of Science  
Mercator Professorship Award of the German Science Foundation (DFG), Germany  
Curators' Professorship, University of Missouri

**Research Grants** (Currently Active)

Department of Energy, Physics of Oxides, \$330 K (2006-2009)  
Air Force Office of Scientific Research, Spintronics, \$250 K (2005-2008)  
University of Missouri Research Board, Photonic Molecules, \$30 K (2007-2008)  
Total of about \$1.5 million in the past ten years (all are single PI grants)

**Students and Post-Doc Supervised:** Seven Ph. D. Students and one M. S. student graduated; Five Post-Docs supervised

**Current Research Group:** (1) Zoran Popovic (Visiting Professor) (2) Ranjit Nanda (Post-Doc) (3) Paul Larson (Post-Doc) (4) Akshay Swain (Graduate Student) (5) Mohammad Sherafati (Graduate Student)

### **Membership of Professional Societies**

Patron, Orissa Physical Society, India  
Life Member, American Physical Society  
Life Member, American Association for the Advancement of Science  
Life Member, American Chapter of the Indian Physics Association  
Member, Materials Research Society

### **Current Research Interest**

Theoretical Solid State Physics: Materials Theory, Computational Physics, Density-Functional Theory

### **Citations to Research Publications**

Total citations received: > 2500, Number of papers receiving in excess of 100 citations: 9, Hirsch index: 24

### **Publications (86 total); Invited Talks (75)**

Publications for the last three years:

1. H. Meskine and S. Satpathy, Self-trapped magnetic polaron in the electron-doped CaMnO<sub>3</sub>, J. Phys.: Condens. Matter, 17, 1889-1906 (2005)
2. H. Meskine and S. Satpathy, Ferrodistorive orbital ordering in the layered nickelate NaNiO<sub>2</sub>: A density-functional study, J. Appl. Phys., 97, 10A314 (2005)
3. Z. S. Popovic and S. Satpathy, Wedge-shaped potential and Airy-function electron localization in the oxide superlattices, Phys. Rev. Lett. 94, 176805 (2005)
4. T. Saha-Dasgupta, Z. Popovic, and S. Satpathy, Study of the insulating ground state in CaFeO<sub>3</sub> and La<sub>1/2</sub>Sr<sub>2/3</sub>FeO<sub>3</sub>, Phys. Rev. B 72, 045143 (2005)
5. S. Mishra, S. Thulasi, and S. Satpathy, Spin Polarization via Electron Tunneling through an Indirect-Gap Semiconductor Barrier, Phys. Rev. B 72, 195 347 (2005).
6. H. Meskine and S. Satpathy, Electronic Structure and Magnetic Interactions in the Sodium Nickelate NaNiO<sub>2</sub>, Phys. Rev. B 72, 224423 (2005)
7. S. Thulasi and S. Satpathy, Density-Functional Study of the Two-Dimensional Airy Electron Gas at the Perovskite Titanate Interfaces, Phys. Rev. B 73, 125307 (2006)
8. Z. S. Popovic and S. Satpathy, Density-functional study of molybdenum purple bronze: A paradigm Luttinger liquid system, Phys. Rev. B 74, 045117 (2006)
9. Jun Chen, Paul Rulis, Lizhi Ouyang, S. Satpathy, and W. Y. Ching, Vacancy-enhanced ferromagnetism in Fe-doped rutile TiO<sub>2</sub>, Phys. Rev. B 74, 235 207 (2007)
10. B. R. K. Nanda, S. Satpathy, and M. Springborg, Electron leakage and double-exchange ferromagnetism at the interface between a metal and an antiferromagnetic insulator: CaRuO<sub>3</sub>/CaMnO<sub>3</sub>, Phys. Rev. Lett. 98, 216804 (2007)
11. P. Larson and S. Satpathy, "Effect of vacancies on ferromagnetism in GaN:Mn dilute magnetic semiconductors," Phys. Rev. B 76, 245 205 (2007)

### **Service to the Community (Selected)**

- 1) Co-organizer of focussed session on "Magnetoresistive Oxides," APS March meeting, Minneapolis. 125 contributions, organized into nine sessions. Coorganizers: M. Salamon and S. Satpathy (2000)
- 2) Member, Steering Committee of the 49th Annual Conference on Magnetism and Magnetic Materials, Jacksonville, Florida (2004)
- 3) Co-Organizer, Telluride Workshop on the "Physics of the Magnetic Oxides," Telluride, Colorado. Coorganizers: D. J. Singh and S. Satpathy (August 2005)
- 4) Department of Energy Program Review Committee, Condensed Matter Physics Program, Oak Ridge National Laboratory (December 2006)
- 5) Member, International Review Panel, Excellence Initiative of the German Science Foundation (DFG), Bonn (June 2007)