

PRASHANT SHARMA

EDUCATION

BOSTON UNIVERSITY, USA—PHD PHYSICS, 2003

BANARAS HINDU UNIVERSITY, INDIA—M.Sc. PHYSICS, 1994

BANARAS HINDU UNIVERSITY, INDIA—B.Sc. HONORS IN PHYSICS, 1992

PROFESSIONAL EXPERIENCE

- ASSOCIATE PROFESSOR, SUFFOLK UNIVERSITY, MA, 2012-PRESENT
- ADJUNCT ASSOCIATE PROFESSOR, BOSTON UNIVERSITY, MA, 2013-PRESENT
- ASSISTANT PROFESSOR, SUFFOLK UNIVERSITY, MA, 2006-2012
- VISITING PROFESSOR, HARISH CHANDRA RESEARCH INSTITUTE, INDIA, 2008
- POSTDOCTORAL ASSOCIATE, ARGONNE NATIONAL LABORATORY, IL, 2004-2006
- POSTDOCTORAL ASSOCIATE, CORNELL UNIVERSITY, NY, 2002-2004
- PHD STUDENT AT BOSTON UNIVERSITY, MA, 1995-2002
- RESEARCH FELLOW OF COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH, INDIAN INSTITUTE OF TECHNOLOGY, INDIA, 1994-1995
- K. S. KRISHNAN RESEARCH FELLOW IN PHYSICS, BHABHA ATOMIC RESEARCH CENTRE, INDIA, 1994

RESEARCH EXPERIENCE

- Physics of low-dimensional systems.
- Spintronics and Nanotechnology.

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- Physics of strongly correlated condensed matter systems.
- Non-equilibrium physics
- Planetary Science

PROFESSIONAL ACTIVITIES & HONORS

Reviewer/Referee for

- American Physical Society Journals: Physical Review Letters and Physical Review B; Journal of Physical Society Japan
- National Science Foundation: Research Grants in Condensed Matter Physics
- Textbooks on Nanotechnology for Cambridge University Press; and Elsevier

Synergistic activities

- 2018 Organizer of the American Physical Society section meeting (New England section) on Planetary Science and Astrobiology, at Suffolk University, Boston, March 2018.
- 2014-2017 Editorial Board member *Journal of Nanomaterials*, Hindawi Publications
- Elected Zone Councilor for the Northeast zone of the Society of Physics Students (from 2011-2014).
- Elected Zone Councilor for the Northeast zone of the Society of Physics Students (from 2014-2017).

Honors

- 2016 Member of the Sigma Pi Sigma Physics Honor Society
- 2012 American Institute of Physics Sigma Pi Sigma Award for undergraduate research
- 2008 American Institute of Physics Sigma Pi Sigma Award for undergraduate research
- Invited to participate in the 55th meeting of Nobel Laureates at Lindau, Germany, June 2005
- Invited to write a review article in the journal Science, 2005.
- Invited to present a paper at the American Physical Society Meeting, March 2004

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INVITED TALKS & CONFERENCES

- Presented a paper at the American Physical Society Meeting, Boston, March 2019
- Poster presentation at the Gordon Research Conference, Bryant University, RI, June 2019
- Poster presentation at the Gordon Research Conference at Mount Holyoke College, 2014
- Poster presentation at the AAAS Annual Meeting in Boston, February 2013
- Contributed talk at American Physical Society Meeting, Boston, March 2012
- Presented a poster at the American Geophysical Union Meeting, San Diego, December 2011
- Presented a poster and contributed a paper at the Nanotech Conference, Boston, June 2011
- Poster presentation at Pittcon Conference and Expo, March 2010
- Molecular Biology Summer Workshop organized by New England Biolabs, June 2009
- Workshop for New Physics Faculty, Organized by American Association of Physics Teachers and National Science Foundation, Washington D.C., November 2008
- Presented a paper at the Annual Meeting of the American Association for Advancement of Science, Waimea, June 2008
- Presented a paper at the American Physical Society Meeting, Baltimore, March 2006
- Invited to attend the 55th meeting of Nobel laureates at Lindau, Germany, June 2005
- Selected to attend the National Science Foundation sponsored Boulder Summer School, *Atomic and Condensed Matter Physics*, July 2004
- Invited to deliver Condensed Matter Seminar at the University of British Columbia, Vancouver, March 2004
- Presented a poster at the Gordon Research Conference, *Strongly Correlated Electrons*, June 2004
- Invited talk at the American Physical Society meeting March 2004

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RECENT COLLABORATIONS

- Alfred P. Sloan Foundation's Deep Carbon Observatory at the Carnegie Institution for Science on the topic of "Nanoscale investigations of viable microbial life and organic reactions at deep planetary conditions" with Anurag Sharma, Dartmouth College (2013-15).
- Kamran Lashkari, Schepens Eye Institute, Boston (ongoing)
- Sameer R. Sonkusale, Department of Electrical Engineering, Tufts University (2010-cont.)
- Claudio Chamon, Department of Physics, Boston University (2001-cont.)
- Christopher Henley, Department of Physics, Cornell University (2003-2005).
- Didem Vardar-Ulu, Department of Chemistry, Wellesley College (2014-15).

PUBLICATIONS

- Anurag Sharma, and Prashant Sharma, *Pressure-induced Microbial Survival at Extreme Conditions*, submitted to *Nature Communications*
- Prashant Sharma, *Scanning microscopy study of filamentous virus M13 dispersed on graphite by controlled evaporation of a droplet*, submitted to *PLoS*.
- Prashant Sharma, *Spin current as a response to external stress*, *Arxiv.org:cond-mat/0511270*
- U. Hizi, Prashant Sharma, and C. L. Henley, *Semiclassical ordering in the large-n pyrochlore antiferromagnet*, *Physical Review Letters*, **95**: 167203 (2005).
- Prashant Sharma, *How to Create a Spin Current*, *Science*, **307**, 531 (2005).
- S. Adam, Piet W. Brouwer, and Prashant Sharma, *Scaling approach to electron-electron interactions in a chaotic quantum dot*, *Physical Review B, Rapid Communications*, **68**, 241311 (2003).
- Prashant Sharma and Piet W. Brouwer, *Mesoscopic effects in adiabatic spin pumping*, *Physical Review Letters*, **91**: 166801 (2003).

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- Prashant Sharma and Claudio Chamon, *Adiabatic charge and spin transport in interacting quantum wires*, *Physical Review B*, **68**: 035321 (2003).
- Prashant Sharma and Claudio Chamon, *Quantum pump for spin and charge transport in a Luttinger liquid*, *Physical Review Letters*, **87**: 096401 (2001).
- Joel E. Moore, Prashant Sharma, and Claudio Chamon, *Nonequilibrium tunneling into general quantum Hall edge states*, *Physical Review B*, **62**: 7298 (2000).