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Pankaj Mishra

Current Position

- Senior lecturer, Department of Applied physics, ISMU, Dhanbad, India.,

Post-Doctoral Positions

- Post-Doc fellow: October'2006-October'2007, JNCASR (Bangalore)(working at Department of Physics, BHU) associated with Prof. T. V. Ramakrishnan and Prof. Yashwant Singh.
- Post-Doc Fellow: October'2007-November'2008, Institute for theoretical physics: Soft Matter, Heinrich-Heine-University, Düsseldorf, Germany, associated with Prof. H. Löwen and Prof. C. N. Likos.

Research Interest

Soft condensed matter physics: Theory of Colloidal Suspensions, Nucleation and Complex fluid.

International Publications

1. **Pankaj Mishra**, Jokhan Ram and Yashwant Singh,
Freezing transitions in a fluid of long elongated molecules,
J. Phys. Condens. Matter **16**, 1695 (2004).
2. **Pankaj Mishra** and Jokhan Ram
Effect of shape anisotropy on the phase diagram of the Gay-Berne fluid
Eur. Phys. J. E. **17**, 345 (2005).
3. **Pankaj Mishra** and Yashwant Singh,
Pair correlation functions in nematic: free energy functional and isotropic nematic transition,
Phys. Rev. Lett. **97**, 177801 (2006).
4. **Pankaj Mishra**, Swarn L Singh, Jokhan Ram and Yashwant Singh,
Pair correlation functions and a free-energy functional for the nematic phase,
J. Chem. Phys. **127**, 044905 (2007).

Research Experience

Theoretical Techniques

Have fair understanding and experience of application of density functional theory of freezing, integral equation theories and other relevant techniques of statistical mechanics.

Computer Skills

- Proficient in programming languages “Fortran” and “C”.
- Experienced to work with Mathematica and Matlab.
- Fair understanding of operating systems like Linux, UNIX and Windows.

Education

1. **Ph.D.**, 2006; Department of Physics, Banaras Hindu University, Varanasi, India.
Thesis title: *Molecular theory of Structure and Properties of Liquid Crystals*,
2. **M.Sc.** (Physics esp. Solid State), Banaras Hindu University, Varanasi, India, in 1999
Division I.
3. **B.Sc.** (Physics, Maths), Purvanchal University, Jaunpur, India, in 1996
Division I.
4. **10+2** from U. P. Board, India, in 1993
Division I.
5. **High School** from U. P. Board, India, in 1991
Division I.

CSIR-UGC NET

- Qualified CSIR-UGC NET examination in 2001 and 2002.

Academic Distinctions

1. Senior Research Fellow (2005-2006), Council of Scientific and Industrial Research, India.
2. Senior Research Fellow (2003-2005), Department of Science and Technology(DST), New Delhi, India.
3. Senior Research Fellow (2002-2003), Banaras Hindu University, India.
4. Junior Research Fellow (2000-2002), Banaras Hindu University, India.
5. In TPSC category “A” speaker during Aug 2004 to Aug 2005.

Additional professional activities

1. Worked as Student Secretary of Indian Physics Association, Local Chapter Varanasi.
2. Life Member of Indian Physics Association(IPA).
3. Member of the Organizing Committee of “VISION 2001”, a conference organized by Ph.D. students, at B.H.U. on May 1, 2001.
4. Actively involved in organizing three days meet of Schools to celebrate ”International Physics Year, 2005” in Department of Physics, BHU, Varanasi

Participation in Schools/Workshops/Conferences

1. International *Conference on Mesogenic and Ferroic material*, held at BHU Varanasi, India ;January 9-11, 2009, organized by Department of Physics, Banaras Hindu University.
2. International Conference on *Disorder, Complexity and Biology II*, held at BHU Varanasi, India ;January 5-8, 2009, organized by Department of Physics, Banaras Hindu University.
3. 7th Liquid Matter Conference, organised by The Liquid Section of The Condensed Matter Division of the European Physical Society and Lund University at Lund, Sweden, 27 June to 1st July 2008.
4. International Conference on *Colloidal Dispersions in External Fields: CODEF II*, Gustav-Stresemann-Institute e.V., Bonn, Germany, March-April’2008.
5. International Conference on *Assembly, Organization and Propulsions in Complex Systems*, held at IIT Chennai, India from 22-24 February 2007.
6. International Conference on *Disorder, Complexity and Biology*, held at BHU Varanasi, India ;July 12-15, 2004. (Organized jointly by Department of Physics, Banaras Hindu University and S.N. Bose National Centre for Basic Sciences, Kolkata).
7. SERC School on *Statistical Physics* held at Tata Institute of Fundamental Research, Mumbai, India; February 16-28, 2004.
8. Conference of liquid crystals and other soft materials, Organized by Raman Research Institute, Bangalore (India); December 2002.
9. One Day National Conference on Science, Engineering and Technology, *VISION-2001*, held at Varanasi, India; May 1, 2001. (Organized by Research Students at Banaras Hindu University, Varanasi, India).

Invited Lectures:

1. **Invited talk:** *Pair correlation functions in nematic*, Indian Institute of Technology Roorkee, India as TPSC category A speaker; December 2006.
2. **Invited Talk:** *A new free energy functional and integral equation theory of inhomogeneous fluids*, Institute of Theoretical Physics, Heinrich-Heine-University Düsseldorf, Germany; July 2008.

Languages Known

Hindi, English

References

- **Professor Yashwant Singh** Department of Physics, Banaras Hindu University, Varanasi - 221 005, India Email: ysingh@bhu.ac.in Phone: +91-542-2307308 (Off.)
- **Prof. H. Löwen** Institute for Theoretical Physics, University of Düsseldorf, 40225-Düsseldorf, Germany. Email: hlowen@thphy.uni-duesseldorf.de Phone: +49-211-81-11377 (Off.)
- **Professor T.V. Ramakrishnan** Department of Physics, Banaras Hindu University, Varanasi - 221 005, India Email: tvrama@bhu.ac.in
- **Professor Jokhan Ram** Department of Physics, Banaras Hindu University, Varanasi - 221 005, India Email: jram@bhu.ac.in

Personal Information

Father's Name Shri Prabhakar Mishra
Mother's Name Smt. Gayatri Mishra
Date of Birth November 04, 1976
Nationality India
Martial Status Married
Home Address H. No. 10/x/B, Tulsi Sagar(Tanda), Ghazipur-233001, India.
Home Phone +91-548-2222471
Alt. Email mpankajg@yahoo.com

Extracurricular activities

- Qualified "Diploma Course in Yoga" conducted by Banaras Hindu University, 2002.
- Participated in cricket and football matches at school level as a captain and team member.

(Pankaj Mishra)