

Karthika S.

Curriculum Vitae

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Research Interests

Theoretical Physics: Non-equilibrium statistical mechanics, Driven-diffusive systems, Totally asymmetric simple exclusion process, Phase transition, Mean field theory, Monte-Carlo simulation, Resetting, Zero range process, Quantum mechanics, Non-Hermitian quantum mechanics, etc.

Education

- 2013-2019 **Ph. D. in Physics (ongoing)**, *Indian Institute of Space Science and Technology (IIST)*, Thiruvananthapuram, India.
- December 2012 **NET in Physics**, *Reg. No. 508221*, Joint CSIR-UGC (Council of Scientific and Industrial Research-University Grants Commission) test for Junior Research Fellowship (JRF) and eligibility for Lecturership (NET) held on December 23, 2012..
- 2010–2012 **M. Sc. Physics**, *University of Hyderabad*, Hyderabad, Andhra Pradesh, India.
Grade: CGPA: 8.56 (Percentage of marks obtained: 84.5%)
- 2007–2010 **B. Sc. Physics**, *Government College Chittur (affiliated to the University of Calicut)*, Chittur, Palakkad, India.
Grade: **First Class** (Percentage of marks obtained: 88.0%),
- 2005–2007 **Plus Two (Science)**, *Higher Secondary Examination- Government Victoria Girls Higher Secondary School*, Chittur, Palakkad, India.
Grade: **Distinction** (Percentage of marks obtained: 84.0%)
- March 2005 **SSLC**, *Secondary School Leaving Certificate- Government Victoria Girls Higher Secondary School*, Chittur, Palakkad, India.
Grade: **Distinction** (Percentage of marks obtained: 89.5%)

Doctoral Thesis

Title *An investigation of steady state properties of one-dimensional exclusion processes*
Month, Year -, -
Department Department of Physics, Indian Institute of Space Science and Technology (IIST), Thiruvananthapuram, 695 547.
Supervisor Dr. Apoorva Nagar, Associate Professor, Department of Physics, IIST, Thiruvananthapuram.
Description The thesis is under preparation

Experience

- 1 **Higher Secondary School Teacher**, Sree Narayana Public School (CBSE), Mecherippadam, Elappully, Palakkad-678 622, India. (May 22, 2012-March 31, 2013)

- 2 **Senior Research Fellow (Ph. D.)**, Department of Physics, Indian Institute of Space Science and Technology (IIST), Thiruvananthapuram-695 547, India. (July 18, 2015-till date)
- 3 **Junior Research Fellow (Ph. D.)**, Department of Physics, Indian Institute of Space Science and Technology (IIST), Thiruvananthapuram-695 547, India. (July 18, 2013-July 17, 2015)

Publications in International Journals

- 1 S. Karthika and A. Nagar, *The effect of boundaries and impurity on a system with non-local hop dynamics*, J. Phys. A: Math. Theor. **52** (2019) 085003 (26pp).
- 2 S. Karthika and A. Nagar, *Totally asymmetric simple exclusion process with power law resetting*, (Manuscript under revision).

Computer Skills

L^AT_EX, OpenOffice, Linux, Microsoft Windows, Xfig.
FORTRAN, PYTHON, Mathematica, Gnuplot, etc.

Personal Informations

Name Karthika S.
Father's Name Sivadasan V.
Mother's Name Indira M. G.
Sex Female
Date of Birth 18-04-1990
Status Married
Spouse Name Rohith M.
Nationality Indian
Permanent Address Kozhiparambil House, V. K. Road, Nilambur (P. O.), Malappuram, Kerala, India- 679329.

References

- 1 Dr. Apoorva Nagar, Associate Professor, Department of Physics, Indian Institute of Space Science and Technology (IIST), Thiruvananthapuram-695 547, India.
Email: apoorva.nagar@iist.ac.in
Phone: +91 471 256 8545 (Office), +91 9495 082 555 (Mob)
- 2 Dr. Sreedhar B. Dutta, Assistant Professor, School of Physics, Indian Institute of Science Education and Research (IISER) Thiruvananthapuram, Thiruvananthapuram-695 551, India.
Email: sbdutta@iisertvm.ac.in, Phone: +91 471 277 8131 (Office)

Declaration

I hereby declare that the above entries are true to the best of my knowledge and belief.

Karthika S.