Anshul Choudhary

Contact Information	W15-1-110, ICBM University of Oldenburg 26129, Germany	anshul.choudhary@uol.de https://anshu957.github.io

Research Interests
Complex Networks, Chaos and nonlinear dynamics, Theoretical ecology, Synchronization, Nano-materials

Education

Indian Institute of Science Education and Research, Mohali, India

Ph.D., Physics, *Awarded:* March 2016

- Thesis Topic: *Dynamics on Complex Networks*
- Advisor: Sudeshna Sinha, Ph.D

Netaji Subhas Institute of Technology, Delhi, India

B.E., Manufacturing Processes and Automation Engineering , May 2009

- Thesis Topic: *Synthesis and characterization of ZnO- Graphene Nano-composites*
- Advisors: Rajesh Purohit, Ph.D and Renu Pasricha, Ph.D

Skills
Programming and Scripting Languages
- C,C++, SQL, LaTeX, Python, MATLAB

Research Experience

Postdoctoral Researcher — July 2016 to Present
Department of Physics of Complex Systems,
ICBM, University of Oldenburg
Supervisor: Ulrike Feudel, Ph.D

Senior Research Fellow — Aug 2013 to Feb 2016
Department of Physical Sciences,
IISER Mohali
Supervisor: Sudeshna Sinha, Ph.D

Junior Research Fellow — Aug 2011 to July 2013
Department of Physical Sciences,
IISER Mohali
Supervisor: Sudeshna Sinha, Ph.D

Research Intern — Jan 2009 to Aug 2009
Division of Material Characterization,
National Physical Laboratory, Delhi
Supervisor: Renu Pasricha, Ph.D.

Refereed Journal Publications

1. Singh, G., **Choudhary, A.**, Haranath, D., Joshi, A. G., Singh, N., Singh, S. and Pasricha, R. . "ZnO decorated luminescent graphene as a potential gas sensor at room temperature." *Carbon*, 50:385-394, 2012.
2. Kohar, V., **Choudhary, A.**, Singh, K. P. and Sinha, S. . "Verification of scalable ultra-sensitive detection of heterogeneity in an electronic circuit." *EPJ-ST*, 222:721-728, 2013.
3. **Choudhary, A.**, Kohar, V. and Sinha, S. . "Taming Explosive Growth through Dynamic Random Links." *Scientific Reports*, 4:4308, 2014.
4. **Choudhary, A.**, Kohar, V. and Sinha, S. . "Noise enhanced activity in a complex network." *EPJ-B*, 87:1-8, 2014.

5. Kohar, V., Ji, P., **Choudhary, A.**, Sinha, S. and Kurths, J. . "Synchronization in time-varying networks." *Phys.Rev.E*, 90:022812, 2014.

6. **Choudhary, A.**, Kohar, V. and Sinha, S. . "Preventing catastrophes in spatially extended systems through dynamic switching of random interactions." *Pramana*, 84:217-228, 2015.

7. **Choudhary, A.** and Sinha, S. . "Balance of interactions determines optimal survival in multi-species communities." *PLoS One*, 10.1371 (2015).

8. Mitra, C., **Choudhary, A.**, Sinha, S., Kurths, J., Donner, R.V. . "Multiple-node basin stability in complex dynamical networks". *Phys.Rev.E*, 95: 032317, 2017.

9. Rungta, P.D., **Choudhary, A.**, Meena, C., Sinha, S., "Are network properties consistent indicators of synchronization?" *EPL*, 117:20003(2017).

10. Chaurasia, S.S., **Choudhary, A.**, Shrimali, M. and Sinha, S. "Suppression and Revival of Oscillations through Time-varying Interaction". Submitted(2017)

Awards

Travel Awards

- School on Hands-on Research in Complex Systems by ICTP, Trieste, Italy — June 2014.
- Visiting Research fellow at Potsdam Institute for Climate Impact and Research, Potsdam, Germany — July-Sept 2014

Academic Awards

- Cleared National level exams(GATE, CSIR-UGC-NET, JEST, TIFR) for various fellowships for pursuing graduate studies — Aug 2011
- Best Poster Presentation, Conference on Nonlinear Systems and Dynamics, IISER Mohali — 13-15 March 2015

Presentations

Oral Presentation

- Institute of Electronics and Telecommunications Engineers, Delhi, India — June 2006
- Perspectives in Nonlinear Dynamics, Hyderabad, India — July 2013
- Conference on Nonlinear Systems and Dynamics, IIT Indore, India — Dec 2013
- Inter IISER Physics Meet, IISER Pune, India — Mar 2014
- Dynamics Days, CURAJ, Rajasthan, India — Dec 2014

Poster Presentation

- Conference on Condensed Matter and Biological Systems, BHU, Varanasi, India — Jan 2013
- Hands-on Research on Complex Systems, ICTP, Trieste, Italy — June 2014
- Conference on Nonlinear Systems and Dynamics, IISER Mohali — Mar 2015

Schools Attended

- DST SERC School on Nonlinear Dynamics, IISER Pune, India — Dec 2011
- RRI School on Statistical Physics, Bangalore, India — April 2013
- Hands-on Research in Complex Systems, Trieste, Italy — June 2014

Teaching Experience

Instructor — 2017, Summer Semester
Structure and Dynamics of Networks
Department of "Theoretical Physics of Complex Systems"
ICBM, University of Oldenburg.

Teaching Assistant — 2016-2017, Winter Semester

Praktikum Modellierung(Computational Modeling using MATLAB)
Instructor: Ulrike Feudel, PhD
Department of "Theoretical Physics of Complex Systems"
ICBM, University of Oldenburg.

Teaching Assistant 2012-2013

PHY212 - Modern Physics Lab
Instructor: Arvind, Ph.D and H.K. Jassal, Ph.D
Department of Physical Sciences,
IISER Mohali.

PHY101 - Classical Mechanics 1
Instructor: Sudeshna Sinha, Ph.D
Department of Physical Sciences,
IISER Mohali.

Industrial Experience

Associate Consultant, HCL-AXON Dec 2009 – July 2011

- Implemented SAP modules for clients database according to their business requirements using ABAP language.

References

Sudeshna Sinha E-mail: sudeshna@iisermohali.ac.in
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Department of Physical Sciences
IISER Mohali

Renu Pasricha E-mail: renup@ncbs.res.in
Head, Transmission Electron Microscopy
Central Imaging and Flow Cytometry Facility
National Center for Biological Sciences

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Associate Professor, Head of Department
Department of Physical Sciences
Central University of Rajasthan