NIRAJ KUSHWAHA

CONTACT INFO

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Twitter https://twitter.com/nirajkkushwaha

CURRENT POSITION

RESIDENT SCIENTIST / PHD CANDIDATE 2021-

Complexity Science Hub Vienna | *Josefstädter Str. 39, 1080 Vienna*

(Supervisor: Dr. Edward D. Lee, Prof. Stefan Thurner)

- Discovering mesoscale for chains fo armed conflicts
- Building dynamical models to explain population-level scaling in sessile organisms
- Joint affiliation with the Department of Physics, University of Vienna (Supervisor: Prof. Christoph Dellago)

EXPERIENCE

MASTER THESIS INTERN 2019-2020

Complex Systems Lab, IIT Indore | *Khandwa Rd, Simrol, Madhya Pradesh 453552*

(Supervisor: Prof. Sarika Jalan)

- Worked on my master thesis for a year

WINTER INTERN 2018

Astrophysical Sciences Division, Bhabha Atomic Research Station | *Anushaktinagar, Mumbai - 400 094*

(Supervisor: Mr. Bitan Ghosal)

- Main project topic: "Synchrotron emission by charged particles in a non-uniform magnetic field"
- Minor project on data analysis of radiation data from "Major Atmospheric Cerenkov Experiment Telescope"

EDUCATION

MSc. in PHYSICS **2018-2020**
Indian Institute of Technology (IIT) Indore | *Khandwa Rd, Simrol, Madhya Pradesh 453552*

- Thesis topic: "Engineering chimera and novel technique based on machine learning"
- Minor project on, "Crop classification using satellite imagery"
- Minor project on, "Credit card fraud detection"

BSc. in PHYSICS (HONS.) **2015-2018**
Institute of Science- BHU | *Ajagara, Varanasi, Uttar Pradesh 221005*

High school diploma **2014**
Atomic Energy Central School | *Tarapur, India*

ACHIEVEMENTS

National level exams

- Top 1% national level toppers (All India Rank=66) in National Graduate Physics Examination-2018
- All India Rank=432 in the national entrance exam for the Indian Institute of Technology in 2018

Awards

- Gold medal in National Science Olympiad conducted by All India Science Teacher's Association

PUBLICATIONS

Articles

Kushwaha, Niraj and Edward D Lee (2022). "Discovering the mesoscale for chains of conflict". In: *arXiv preprint arXiv:2212.02652*.

Kushwaha, Niraj, Naveen Kumar Mendola, Saptarshi Ghosh, Ajay Deep Kachhvah, and Sarika Jalan (2021). "Machine learning assisted chimera and solitary states in networks". In: *Frontiers in Physics* 9, p. 513969.

CONFERENCES

CONFERENCE ON COMPLEX SYSTEMS **2022**
Palma de Mallorca, Spain

- Gave a talk on "Multiscale causal structure in armed conflicts"
- Presented a poster

THE GERMAN PHYSICS SOCIETY MEETING **2022**
Regensburg, Germany

- Gave a talk on "Multiscale causal structure in armed conflicts"

CONFERENCE ON COMPLEX SYSTEMS **2020**
Online

- Gave a talk on "Machine Learning assisted Chimera states in Networks"

HARVARD COLLEGE US-INDIA INITIATIVE **2017**
Mumbai, India

- Delegate

SCHOOLS AND WORKSHOPS

LIPARI SCHOOL ON COMPUTATIONAL COMPLEX AND SOCIAL SYSTEMS **2022**
Lipari, Italy

BIGSSS SUMMER SCHOOL **2022**
Groningen, Netherlands

- Project topic: "Dynamical reciprocity in office spaces"

THE GREAT RESIGNATION WORKSHOP **2022**
Vienna, Austria

GIAN WORKSHOP **2018**
Indore, India

- Topic of workshop: "Network Science- from structure to dynamic"

OTHER ACTIVITIES

Volunteering work

- Started an NGO with college friends at BHU to educate underprivileged kids in Varanasi
- Worked as a climate counsellor for the International Centre for Culture and Education
- Volunteer at the Buddy Project, Vielmehr für Alle! in Vienna

Online Courses

- "Network Dynamics of Social Behaviour" by University of Pennsylvania
- "From big bang to dark energy by Prof. Hitoshi Murayama" by University of Tokyo
- "Social Norms, Social change" by UNICEF
- "Digital media marketing" by Internshala