

N I R A J

KUSHWAHA

CONTACT INFO

E-mail kushwaha@csh.ac.at / nirajkkushwaha1@gmail.com
LinkedIn <https://www.linkedin.com/in/niraj-kushwaha-8a2766114/>
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 of 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

THE GERMAN PHYSICS SOCIETY MEETING

2023

Dresden, Germany

- Gave a talk on "Population waves in sessile organisms"

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"

SCHOOLS AND WORKSHOPS	HARVARD COLLEGE US-INDIA INITIATIVE		2017
	Mumbai, India		
	<ul style="list-style-type: none"> • Delegate 		
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	LIPARI SCHOOL ON COMPUTATIONAL COMPLEX AND SOCIAL SYSTEMS		2022
	Lipari, Italy		
	BIGSSS SUMMER SCHOOL IN COMPUTATIONAL SOCIAL SCIENCE		2022
	Groningen, Netherlands		
	<ul style="list-style-type: none"> • Project topic: "Dynamical reciprocity in office spaces" 		
	THE GREAT RESIGNATION WORKSHOP		2022
	Vienna, Austria		
	GLOBAL INITIATIVE OF ACADEMIC NETWORKS (GIAN) WORKSHOP		2018
	Indore, India		
	<ul style="list-style-type: none"> • Topic of workshop: "Network Science- from structure to dynamic" 		
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OTHER ACTIVITIES			
	Volunteering work	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • "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 	