

NIRAJ

KUSHWAHA

CONTACT INFO

E-mail	kushwaha@csh.ac.at / nirajkushwaha1@gmail.com
Website	https://nirajkushwaha.github.io/
LinkedIn	https://www.linkedin.com/in/niraj-kushwaha-8a2766114/
Twitter	https://twitter.com/nirajkushwaha

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 (Aug. 2023). "Discovering the mesoscale for chains of conflict". In: *PNAS Nexus* 2.7, pgad228. issn: 2752-6542. doi: 10.1093/pnasnexus/pgad228.

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

WILHELM EXNER LECTURES **2023**
Vienna, Austria

- Won the "Significant Milestone Award of the 2023 Exner Lectures in the category of PhD"

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

	<p>THE GERMAN PHYSICS SOCIETY MEETING 2022 <i>Regensburg, Germany</i></p> <ul style="list-style-type: none"> • Gave a talk on "Multiscale causal structure in armed conflicts"
	<p>CONFERENCE ON COMPLEX SYSTEMS 2020 <i>Online</i></p> <ul style="list-style-type: none"> • Gave a talk on "Machine Learning assisted Chimera states in Networks"
	<p>HARVARD COLLEGE US-INDIA INITIATIVE 2017 <i>Mumbai, India</i></p> <ul style="list-style-type: none"> • Delegate
SCHOOLS AND WORKSHOPS	<hr/> <p>LIPARI SCHOOL ON COMPUTATIONAL COMPLEX AND SOCIAL SYSTEMS 2023 <i>Lipari, Italy</i></p>
	<p>LIPARI SCHOOL ON COMPUTATIONAL COMPLEX AND SOCIAL SYSTEMS 2022 <i>Lipari, Italy</i></p>
	<p>BIGSSS SUMMER SCHOOL IN COMPUTATIONAL SOCIAL SCIENCE 2022 <i>Groningen, Netherlands</i></p> <ul style="list-style-type: none"> • Project topic: "Dynamical reciprocity in office spaces"
	<p>THE GREAT RESIGNATION WORKSHOP 2022 <i>Vienna, Austria</i></p>
	<p>GLOBAL INITIATIVE OF ACADEMIC NETWORKS (GIAN) WORKSHOP 2018 <i>Indore, India</i></p> <ul style="list-style-type: none"> • Topic of workshop: "Network Science- from structure to dynamic"
OTHER ACTIVITIES	<hr/> <p>Volunteering work</p> <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
	<p>Online Courses</p> <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