Manish Kumar **Dhasmana**

Research Scholar · Climate thinker

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"Make the change that you want to see in the world."

Education

Indian Institute of Technology, Bombay — *Maharashtra, India*

Pursuing Ph.D in interdisciplinary programme (IDP) in Climate Studies — *July. 2019 - Present*

- Specialization: Flood risk, Extreme event attribution, Climate Change, Hydrology, Statistical modelling

Indian Institute of Remote Sensing, Indian Space Research Organisation — *Uttarakhand, India*

PG. Diploma in Remote Sensing and GIS with specialization in Water resource — *Aug. 2017 - Aug. 2018*

- Awarded golden jubilee fellowship

Uttarakhand Technical University — *Uttarakhand, India*

B.Tech. in Civil Engineering — *Aug. 2012 - Aug. 2016*

- TFW Scholarship with fully funded tuition fees

Skills

Programming	Python, C/C++, Matlab, LaTeX
Web	Django with Python, Dash, Plotly, HTML5
Languages	Hindi, English, Garhwali
Software	QGIS, ArcGIS, ERDAS Imagine, ENVI, SNAP

Experience

Indian Institute of Technology, Gandhinagar — *Gandhinagar, India*

Research fellow — *Dec. 2018 - June 2019*

- Nature of work: Research project "Climate change and climate variability on Sabarmati River basin".

Indian Institute of Remote Sensing, ISRO — *Dehradun, Uttarakhand*

Research fellow — *July. 2018 - Dec 2018*

- Nature of Work: Research on project "Ensemble hydrological modelling approach for integrated water balance studies for dynamic water resource assessment in geospatial environment for Indian river basin".

EMAAR MGF LAND LIM — *Gurugram, India*

Engineering trainee — *Aug. 2016 - Nov. 2016*

- Nature of Work: Execution of plan and quality control

Training

Artificial Intelligence for Detection and Attribution of Climate Extremes — *Trieste, Italy*

International Centre for Theoretical Physics (ICTP) — *July. 2022*

- The aim of the workshop was to define techniques to tackle the problem of attributing meteorological extreme events to climate change by mean of machine learning technologies..

Emerging Space Technology Applications for Compound Extremes 2022 (STAC-X 2022) — *IIT Roorkee, India*

Indian Institute of Technology Roorkee and Indian Space Research Organization(ISRO) — *April. 2022*

- High resolution climate modeling and regional downscaling focusing on the High Mountains of Asia.

Hydro-meteorological and Extreme Events Disaster Risk Management

Indore, India

Indian Institute of Technology Indore and National Institute of Disaster Management

Jul. 2020

- Extreme value theory and Natural hazard.

Science and Training Workshop on Climate Change over the High Mountains of Asia

Pune, India

CCCR-IITM Pune and Divecha Centre for Climate Change (DCCC), Indian Institute of Science, Bengaluru

Oct. 2018

- High resolution climate modeling and regional downscaling focusing on the High Mountains of Asia.

Publication

Journal

- **Dhasmana M. K.**, Mondal A, Zachariah M (2023).On the role of climate change in the 2018 flooding event in Kerala, Environmental Research Letters (https://iopscience.iop.org/article/10.1088/1748-9326/ace6c0/meta)
- Mariam Zachariah1, Arulalan T, Krishna AchutaRao , Fahad Saeed, Roshan Jha, **Dhasmana M. K.** el al, (2023).Attribution of 2022 early-spring heatwave in India and Pakistan to climate change: Lessons in assessing vulnerability and preparedness in reducing impacts, Environmental Research Climate (https://iopscience.iop.org/article/10.1088/2752-5295/acf4b6)
- **Dhasmana M. K.**, Mondal A, Bhatia U, Dave R (2024). Changes in the resilience of the Indian Rail Network (IRN) due to increased flood risk in changing climate, Nature Communications (under preparation)
- **Dhasmana M. K.**, Mondal A (2024). Flood risk in India under future climate change and socioeconomic scenarios, Environmental Research Letters (under preparation)

Conference

- **Dhasmana M. K.**, Mondal A, Bhatia U (2023). Changes in the resilience of the Indian Rail Network (IRN) due to increased flood risk in changing climate ((AGU 2023). Fall Meeting 2023.
- **Dhasmana M. K.**, Mondal A, Zachariah M (2022). Multi-method attribution of the extreme precipitation and flood of 2018 in Kerala, India (No. EGU22-1270). Copernicus Meetings.
- **Dhasmana M. K.**, Mondal A (2022). Evaluation of CMIP6 Models for Extreme Precipitation over India (AGU 2022). Fall Meeting 2022.
- **Dhasmana M. K.**, Mondal A (2022). Flood Risk in India Under Future Climate Change and Socioeconomic Scenarios (AGU 2022). Fall Meeting 2022.
- Sachinanand Singh ,**Dhasmana M. K.**, Estimation of revised capacity in gobind sagar reservoir using google earth engine and GIS. DOI: 10.5194/isprs-archives-XLII-5-589-2018

Teaching Assistantship

CE235: Artificial Intelligence and Data Science

Autumn, 2022

IIT Bombay

CM612: Climate systems and Climate Modeling

Autumn, 2022

IIT Bombay

CE764: Hydroinformatics

Autumn, 2020

IIT Bombay

CE228: Applied Hydraulic Engineering

Spring, 2020, 2021 and 2022

IIT Bombay

CE233: Fluid Mechanics Lab

Autumn, 2020 and 2021

IIT Bombay

Reference

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Dr. Subhankar Karmakar
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