DEBASISH MISHRA

Doctoral Research Student @ Department of Biological and Agricultural Engineering,

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CORE COMPETENCIES

- Soil Science
- Hydrology
- Multi-scale data fusion
- Remote Sensing
- Bayesian Statistics
- Inferential Statistics
- Multivariate Analysis
- Food Water Nexus

ONLINE COURSE CERTIFICATIONS (2020)

ESRI's Training Program: Spatial Data Science- The New Frontier in Analytics

UN's Office for Outer Space Affairs Training Program: Geospatial Applications for Disaster Risk Management

NASA's Applied Remote Sensing Training Program: Understanding Phenology with Remote Sensing

IBM Cognitive Classes: Machine Learning with R

EDUCATION

Aug 2021 – Present

TEXAS A&M UNIVERSITY | COLLEGE STATION | TEXAS
Degree: Doctrine of Philisophy (PhD). Major: Biological and Agricultural Engineering

Jul 2019 – May 2021

INDIAN INSTITUTE OF TECHNOLOGY | KHARAGPUR | WEST BENGAL
Degree: Master of Technology (M.Tech). Major: Agricultural System and Management
CGPA: 9.78 on a 10-point scale (*Leading Department Scorer*)

Jul 2015 – June 2019

ODISHA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY | BHUBANESWAR | ODISHA
Degree: Bachelor of Technology. Major: Agricultural Engineering
CGPA: 8.66 on a 10-point scale

RESEARCH EXPERIENCE

Current Project (Pursuing)

NASA: SMAP Science using Data Fusion: Forecasting Flash Drought to Flash Flood | 2021 - 2024
Surface soil moisture (SSM) is a critical land-surface variable influencing the intensification of floods and droughts. We are trying to build a novel and computationally-efficient multi-scale multi-platform spatial data fusion framework, for predicting these extreme events as a function of soil moisture.

International Conference

VIRTUAL PICO PRESENTATION | EGU GENERAL ASSEMBLY | 2021
Presented my abstract on Living with Arsenic in Environment, in the session – "*Key issues to face polluted soils: Spatial variability assessment of soil contamination, aimed to site characterization/remediation, and circular economy towards site recovery*", held virtually on 26th April, 2021. (DOI)

Submitted Manuscript (Under review)

MASTER'S PROJECT | INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR | 2020
Soils contribution to Drought Resilience in Tropical Rain - Dominated catchments in Peninsular India
A study carried out to declutter the effect of coupling between soil-climate-and-terrain attributes on drought stages starting from initiation to recovery. Contributed in the work by running feature selection for quantifying the contribution of different soil, climate and terrain attributes on drought stages; and in writing the corresponding findings of the manuscript.

Published Work (Accepted in Env. Int.)

MASTER'S THESIS | INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR | 2020
Living with arsenic in environment: An examination of current awareness of farmers in the Bengal basin using hybrid feature selection and machine learning. Worked as the leading author of the manuscript and developed a new comprehensive arsenic awareness index and derived key

awareness drivers using a novel hybrid feature selection methodology. This work forms of part of international collaborative project - ARRNet.

Un-published Dissertation	**BACHELOR'S THESIS | ODISHA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY, BHUBANESWAR | 2019** *Water resource planning of a Watershed using Geographic Information System (GIS) & Remote Sensing (RS).* Involved preparation of maps for developing water resource action plan for Khuntapingu micro-watershed in Odisha, India.
National Level Presentation	**NATIONAL LEVEL STUDENTS' RESEARCH CONVENTION | CHITKARA UNIVERSITY, PUNJAB | 2018** Conducted by Association Of Indian Universities (AIU), New Delhi. Presented my research idea on *"Utilization of Animal Energy for Post-harvest operations in Rotary Mode"* at national level. (*Zonal Level Awardee*)

SCHOLARSHIPS & ACADEMIC ACHIEVEMENTS

BAEN Departmental Scholarship	**GRADUATE STUDENT SCHOLARSHIP | ENTRANCE EXAMINATION | 2019** Receipient of a BAEN Graduate Student Scholarship ($1,000) for the 2021-2022 academic year.
National Rank Holder	**GRADUATE APTITUDE TEST IN ENGINEERING (GATE) | ENTRANCE EXAMINATION | 2019** Secured an All India Rank of 100 in 2019 GATE Entrance Examination in the Agriculture Engineering paper.
Post-graduate Stipend	**INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR | 2019-2021** Recipient of an annual stipend of US $2,011 for the two year master's program at Indian Institute of Technology, Kharagpur.
National Course Topper	**NATIONAL PROGRAMME ON TECHNOLOGY ENHANCED LEARNING | 2019** Conducted by Ministry of Human Resource Development (Govt. of India). Course- *"Organic Farming For Sustainable Agricultural Production"*.
English Proficiency Test	**TEST OF ENGLISH AS A FOREIGN LANGUAGE (TOEFL) | 2021** Overall score of 111 out of 120-point scale (Reading -27, Listening - 30, Speaking – 29, Writing - 25). Score valid till 15th Jan, 2023.
OUAT Merit Scholarship	**ODISHA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY | 2017** Merit Scholarship for excellent academic performance in 2016-2017.

PROFESSIONAL & TRAINING EXPERIENCE

Research Assistant	Texas A&M University | College Station, Texas | 2021 - Present
GIS Trainee	River Rejuvenation Project | The Art Of Living (Ngo) | Jan 2020 – Feb 2020
Industrial Training	Northern Region Farm Machinery Training & Testing Institute (Govt. Of India Undertaking) | Hisar | July 2018 – Aug 2018
Lab and Field Training	Experiential Learning Program | Odisha University Of Agriculture And Technology | May 2017 – June 2017

Github   Google Scholar   Linkedin