

Debayan Mandal

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EDUCATION

2019 -Ongoing

Texas A & M University, College Station

• **Master of Science** in *CIVIL ENGINEERING*

Dissertation (Major Project): “**Flash Flood Screening Tool**”

Advisor: Dr. Francisco Olivera

CGPA: 3.714/4

2013 -2017

Vellore Institute of Technology, Vellore

• **Bachelor of Technology** in *CIVIL ENGINEERING*

Dissertation (Major Project): “**Quantifying Predictive Uncertainty in Stream Flow Using SWAT**”

Advisor: Dr. Roshan Karan Srivastav

CGPA: 8.87/10

2011 -2013

Don Bosco School, Bandel

• 10+2 (*Indian School Certificate Examinations*)

- **Council for the Indian School Certificate Examinations**
- Percentage: - 85%

• 10 (*Indian Certificate for Secondary Education*)

- **Council for the Indian School Certificate Examinations**
- Percentage: - 90.4%

APPOINTMENTS

• Student Intern, Department of Barrage and Canal Design (North West and South), **Central Water Commission**, Ministry of Water resources, Government of India, June-July 2015.

• Student Technician, Department of Civil Engineering, Texas Engineering Experiment Station.(April-September, 2019)

RESEARCH EXPERTISE: Civil Engineer (Water Resources Engineering)

Skills and Qualifications

- Public speaking, and speechwriting
- Good written and oral communications
- Conflict resolution
- Research and analysis
- Large-scale event design and execution
- Team building and Leadership
- Good organization and prioritization skills

Computing Skills: ArcGIS software, STAADPro software, AutoCAD software, Ecotect software, C++ language, MATLAB software, Java language, Python language, ENVImet software.

Languages: Bengali (native fluency), Hindi (near-native fluency), English (advanced proficiency), German (beginner level proficiency).

RESEARCH EXPERIENCE: Undergraduate Student

- *Quantifying Predictive Uncertainty in Stream Flow Using SWAT (Major Project)*
- 2017 iSMART Research Lab, VIT University, Vellore

- Designed watershed models to calculate outflow and measure uncertainties in a comparative format
- 2015
 - ***Calculation of return period of rainfall and subsequent floods in Burhi Gandak river, Bihar (Minor Project)***
VIT University, Vellore
 - Calculated the return period of rainfall and predicted floods due to it using last 10 years data.
- 2014-2016
 - ***Vernacular Architecture as an Idiom for Promoting Cultural Continuity in South Asia***
VIT University, Vellore
 - Comparative study of ancient city structure of different topographical locations and application of their architecture in modern day cities.
- 2019-2020
 - ***Flash Flood Screening Tool***
Texas A and M University, Texas, USA
 - Developing screening GIS Tool for outlet points which would be more prone to flash flood.

AWARDS

- **Undergraduate Mentoring Program 2016 mentee, American Geophysical Union, Dec 2016.** (*Fifty Undergraduate Students, among those who attended the meeting, were given the opportunity to be mentored by the senior presenters from a similar field.*)
- **Second Position for Quiz during Water Conservation Week, VIT University, 2017.**
- **Featured in a book for inspiring story for budding engineers, Shape-IT (Dr. Subramani R, Ms Vijayanthi S), 2017 (ISBN: - 978-1-946869-16-6)**
- **Departmental Fellowship for Civil Engineering, in Texas A&M University, for the year 2019.**
- **Texas Public Education Grant, 2019-2020 academic year term.**

SERVICE

- Student Member, **Asia Oceania Geosciences Society**, 2017– 2019.
- Undergraduate Researcher, **iSMART Research Lab**, VIT University, 2016– 2018.
- Student Member, **American Geophysical Union**, 2016 – 17.
- Student Member, **American Society of Civil Engineers**, VIT University branch, 2014 – 2017.
- Organizer/ Coordinator, Organizing Committee, **Odessey'15 and '16**, VIT University, Vellore.
- Senior Editor, **Hindu Education Plus Club (Newspaper)**, School of Social Sciences and Languages, VIT University, 2015 – 16.
- Committee Member, **Academy for Future Faculty**, Texas A and M University, 2019-2020.
- Representative for Water Resources Engineering, **Civil and Environmental Engineering Graduate Students Association**, Civil Engineering Department, Texas A and M University, 2019-2020.

OUTEACH

- Student Volunteer, **Juvenile Care**, VIT University branch, 2015 – 2016.
- Student Volunteer, **Asia Oceania Geosciences Society**, Singapore, Annual Meeting 2017.
- Student Volunteer, **Student Research Week 2019**, Texas A&M University, Texas.

PUBLICATIONS

S.Ghosh, A.Goenka, M.Deo, **D Mandal** (2017), Vernacular Architecture as an Idiom for Promoting Cultural Continuity in South Asia, AI & Society Journal. (DOI 10.1007/s00146-017-0754-z)

BOOK CHAPTER N.Joseph, **D Mandal** (2018), Comparative Study of Predictive Models In Microbial Induced Corrosion, **Machine Learning and IoT: A Biological Perspective**. (ISBN:- 9781138492691; Publication Date: 19th July, 2018, Publisher: **Routledge, Taylor and Francis Group**)

PRESENTATIONS

- **Debayan Mandal**, Nikhil Bhatia, Roshan Srivastav., “Quantifying the Uncertainty in streamflow predictions using SWAT for Brazos–Colorado coastal watershed, Texas”, **AGU Fall Meeting’16**, San Francisco, 15 December 2016.
- **Debayan Mandal**, Venkatesh B, Roshan Srivastav., “Impact of Climate Variability and Land-use changes on river flow characteristics – A case study of the San Jacinto River Basin”, **AOGS Annual Meeting’16**, Singapore, 11 August 2017.