

## Profile

- Name: Dr. Triptimoni Borah
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- Current Research Interest:
  - Surface and Groundwater Quality Assessment,
  - Water Resources System,
  - Artificial Neural Network and Optimization
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### EDUCATION

**PHD.: Civil Engineering (Water Resources Engineering),** [Indian Institute of Technology Guwahati](#), India, 2015.

***Thesis:*** Development of Efficient Pollution Source Identification Model Using ANN-GMS-GA Based Simulation-Optimization Approach.

**M.E.: Civil Engineering (Water Resources and Environmental Engineering ),** [Indian Institute of Technology Guwahati](#), India, 2006

***Dissertation:*** Modeling Approach to Sediment Concentration and Key Parameters in a Part of the Brahmaputra River, Assam, India

**B.E.: Civil Engineering,** [Jorhat Engineering College](#), Jorhat, Assam, India, 1992.

### EXPERIENCE

- **2017 (March) to present:** Associate Professor, [Department of Civil Engineering](#), Assam Engineering College, Assam, India.
- **2014 to 2017 (Feb):** Assistant Professor, [Department of Civil Engineering](#), Assam Engineering College, Assam, India.
- **2006 to 2014:** Assistant Professor, [Department of Civil Engineering](#), Jorhat Engineering College, Jorhat, Assam, India.
- **2003 to 2006:** Lecturer (Sr. Scale), Department of Civil Engineering, [Jorhat Engineering College](#), Jorhat, Assam, India.
- **1994 to 2003:** Lecturer, Department of Civil Engineering, [Jorhat Engineering College](#), Jorhat, Assam, India.

### *THESIS GUIDANCE (PG Course)*

1. Mamata Das (2015), Virus Transport In One Dimensional Unsaturated Zone In A Layered Soil Profile Using Hydrus 1-D And Matlab
2. Gyanashree Bora (2015), Solution of Aquifer Simulation Process Problem by Using Gms and Potential Sources of Groundwater Contamination and its Remediation
3. Susheta Chanda (2015), Development of Rainfall-Runoff Model Using Arcswat and Artificial Neural Network in The Subansiri Basin, Assam
4. Karishma Chetia (2016), Simulation of Flow & Transport processes of Groundwater aquifer using FEMWATER
5. Rubia Sultana (2017), Water Quality and Flow Analysis of River Brahmaputra in Urban Stretch of Guwahati Using HEC-RAS”
6. Pranami Borah (2017), Comparison of Linear Regression and Non Linear Regression for Prediction Of Rainfall-Runoff Model At Brahmaputra River Basin At Pandu Location, Assam, India"
7. Banakshi Borah (2017), Analysis of Soil-Hydraulic Properties in Unsaturated Soil.

### *List of publications*

#### *Journals Referred Publications*

1. Karishma Chetia and Triptimoni Borah (2018), “Simulation of Flow & Transport processes of Groundwater aquifer using FEMWATER” International Research Journal of Engineering and Technology (IRJET) Volume 5, Issue 5, May 2018 S.NO:300
2. Gyanashree Bora and Triptimoni Borah (2017), “Simulation of Degradation Processes of Volatile Organic Compounds by Using GMS” Water Research and Management, Vol. 7, No. 1 (2017) 25-30.
3. Borah Triptimoni, and BhattacharjyaRajib Kumar (2016), "Development of an Improved Pollution

- Source Identification Model Using Numerical and ANN Based Simulation-Optimization Model", Water Resources Management, (DOI:10.1007/s11269-016-1476-6).
4. Susheta Chanda and Triptimoni Borah (2016), " Development of Rainfall-Runoff Modelling using ArcSWAT in the Subansiri Basin", J. of Transactions on Engineering and Sciences, Vol.4, Issue 2, pp. 77-80, 2016.
  5. Gyanashree Bora and Triptimoni Borah (2016), "Simulation of Flow and Transport Processes of a non-uniform aquifer by GMS", J. of Civil Engineering and Environmental Technology, Vol.3, Issue 3, pp. 237-240,2016.
  6. Gyanashree Bora and Triptimoni Borah (2016), " Simulation of Pollutant distribution of Groundwater Aquifer in Deeporbill Area, Guwahati, Assam, using GMS", J. of Transactions on Engineering and Sciences, Vol.4, Issue 2, pp. 77-80, 2016.
  7. Das, M. and Borah, T. (2016). "One Dimensional Flow through Variably Saturated Soil Profile of Guwahati City, Assam, India." Journal of Civil Engineering and Environmental Technology p- ISSN: 2349-8404; e-ISSN: 2349-879X; Volume 3, Issue 3; January-March, 2016, pp. 218-222
  8. Borah Triptimoni, and Bhattacharjya Rajib Kumar (2014), "Development of Unknown Pollution Source Identification Models Using GMS ANN Based Simulation-Optimization Methodology." *Journal of Hazardous, Toxic, and Radioactive Waste, ASCE*, (DOI: 10.1061/(ASCE)HZ.2153-5515.0000242).
  9. Borah Triptimoni, and Bhattacharjya Rajib Kumar (2013), "Solution of Source Identification Problem By Using GMS And MATLAB", *ISH Journal of Hydraulic Engineering*, 19(3), 297-304.
  10. Borah Triptimoni, and MahantaChandan (2011), "Study of Key Parameters and Monitoring of Sediment Concentration by ANN Model in Brahmaputra River, Assam, Journal on Civil Engineering, i-manager Publication, In the Mar-May'11.

### **Conference Publications:**

1. Banakshi Bora and Dr. Triptimoni Borah, (2018). " Soil Water Characteristics Study in Unsaturated Soil" National Coonference on Advances in Civil Infrasturcture Engineeringn (ACIE-2018), held in Tezpur University, Tezpur, India from 16-17 February 2018.

2. Rubia Sultana and Dr. Triptimoni Borah, (2018). “ Study of Effect of Dam Construction at Tibet on Brahmaputra Near Dibrugarh” National Conference on Advances in Civil Infrastructure Engineeringn (ACIE-2018), held in Tezpur University, Tezpur, India from 16-17 February 2018.
3. Pranami Borah and Dr. Triptimoni Borah, (2018). “ Development of Rainfall Runoff Model Using Regression Analysis for Subansiri River Basin” National Conference on Advances in Civil Infrastructure Engineeringn (ACIE-2018), held in Tezpur University, Tezpur, India from 16-17 February 2018.
4. Karishma Chetia and Dr. Triptimoni Borah, (2018). Pollution Distribution in Groundwater Aquifer in Deepor Beel Area, Guwahati, using FEMWATER” National Conference on Advances in Civil Infrastructure Engineeringn (ACIE-2018), held in Tezpur University, Tezpur, India from 16-17 February 2018.
5. Angshuman Bhattacharyya, Sanjibul Islam, Habib Ahmed Mazumder and Dr. Triptimoni Borah, (2018). An Approach to Design and Analysis of Wastewater Treatment Plant in Guwahati City” National Conference on Advances in Civil Infrastructure Engineeringn (ACIE-2018), held in Tezpur University, Tezpur, India from 16-17 February 2018.
6. Susheta Chanda and Triptimoni Borah (2016), “ Development of Rainfall-Runoff Modelling using ArcSWAT and artificial neural network in the Subansiri Basin”, 1st International Conference on Civil Engineering for Sustainable Development-Opportunities and Challenges (CESDOC 2016), from 19-21 December, 2016.
7. Gyanashree Bora and Triptimoni Borah (2016), “ Simulation of aerobic degradation of BTEX compounds by using GMS and RT3D”, 1st International Conference on Civil Engineering for Sustainable Development-Opportunities and Challenges (CESDOC 2016), from 19-21 December, 2016.
8. Borah, T. and Das, M. (2016), "Evaluation of the Sediment Concentration in Part of Bhogdoi River in Assam, India, by ANN and MLR Geo-Chicago 2016: pp. 439-448. doi: 10.1061/9780784480168.044
9. Das, M. and Borah, T. (2016), “Study of Mineralogical composition of sediment in Brahmaputra River in Urban stretch of Guwahati city, Assam, India.” International Conference on Water, Environment, Energy and Society (ICWEES-2016) to be held in Bhopal, India from March 15 – 18, 2016.

10. Borah, T., and Bhattacharjya, R. K. (2015), Development of an improved methodology for Pollution source identification by using ANN-GMS-GA model with sorting data.” 9th world Congress, EWRA. June 10-13, 2015, Grand Cevahir Hotel-Istanbul Turkey.
11. Borah Triptimoni, and Bhattacharjya Rajib Kumar (2014), “Identification of Unknown Pollution Sources in Groundwater Aquifer using ANN-GA based Simulation-Optimization Model”. HYDRO-2014, ISH, NIT Bhopal, Dec 18-20, India.
12. Borah Triptimoni, and Bhattacharjya Rajib Kumar (2013), "Solution of Source Identification Problem By Using GMS And MATLAB", HYDRO-2012, ISH, IIT Bombay, Dec 7-8, India.
13. Borah Triptimoni, and Bhattacharjya, Rajib Kumar, (2013), "Matlab-WMS based pollution source identification model for groundwater aquifer", IAH 2013, held at Perth Convention Centre, Western Australia from 15-20 September, 2013.
14. Borah Triptimoni, and Bhattacharjya, Rajib Kumar, (2012), "Coastal aquifer management models: A comprehensive review on model development", International conference on Environmentally Sustainable Urban Ecosystem (ENSURE 2012), held in IIT Guwhati, Guwahati, India from 24-26 February 2012.
15. Borah Triptimoni, and Bhattacharjya, Rajib Kumar (2011), "Simple simulation procedure of transient groundwater flow process using spreadsheet solver", 4th International Perspective on Water Resources and Environment: IPWE 2011, held at National University of Singapore, Singapore from 4-6 of January, 2011.
16. B. Tripti, M. Chandan (2010), “Testing and Monitoring of Sediment Concentration and Key Parameters in a part of Brahmaputra River, Assam.” Proceedings of the 6th International Congress on Environmental Geotechnics (8th to 12th Nov, 2010) New Delhi, India pp 1534-1539.
17. Mahanta, C., Bora, T., and Pathak, N. (2007), “Evaluation of Sediment Flux in a Part of the Brahmaputra River and Application of ANN and Linear Regression Models.” World Environmental and Water Resources Congress 2007: pp. 1-13. doi: 10.1061/40927(243)397.
18. B. Tripti, M. Chandan (2010), “DEVELOPMENT OF ENVIRONMENTAL MANAGEMENT MODEL AND STUDY OF KEY PARAMETERS IN BRAHMAPUTRA RIVER, ASSAM.” 3rd International Postgraduate Conference on Infrastructure and Environment 11-12 July 2011 (Monday-Tuesday) pp-445-451.

## **Books Published: BOOKS AND LECTURE NOTES**

**Bhattacharjya, Rajib Kumar and Borah, Triptimoni (2016).** Coastal Aquifer Management Models: A Comprehensive Review on Model Development, In [Urban Hydrology, Watershed Management and Socio-Economic Aspects](#). (pp. 95-106) Springer.

**Das, Mamata and Borah, Triptimoni (2018).** Virus Transport Through Unsaturated Zone in Guwahati City Under Transient State Condition, In Geotechnical Characterisation and Geoenvironmental Engineering (pp. 227-234) Springer. [Link https://link-springer.com/chapter/10.1007/978-981-13-0899-4\\_28](https://link-springer.com/chapter/10.1007/978-981-13-0899-4_28)