

Curriculum Vitae

DR. PULENDRA DUTTA, PhD



My fields of interest are: **a) Water resources engineering**
 b) Hydrologic modelling
 c) Watershed management

Personal data:

Name: **DR. PULENDRA DUTTA**

Born: at Nalbari

Present residence: Guwahati

Professional affiliation: Dept. of Civil Engg., Assam Engg. College, Jalukbari, Guwahati

Nationality: Indian

Email: pulendutta@gmail.com

Education:

PhD : IIT Guwahati
 Topic: *Hydrological modelling of the transboundary Brahmaputra river for strategic water management under climate change.*

MTech : Gauhati University
 Topic: *Water balance study of Gurufella area, Goalpara district, Assam.*

BE (Civil) : Assam Engineering College, (under Gauhati University)

Employment Records:

- 4th Feb'2021 till date : Assistant Professor, Civil Engineering, Assam Engineering College, Jalukbari, Guwahati, Assam
- 11th Mar'2011 to 3rd Feb'2021 : Assistant Professor, Civil Engineering, Jorhat Engineering College, Garamur, Jorhat, Assam.
- 25th Jan'1999 to 8th Mar'2011 : Lecturer, Civil Engineering, Silchar Polytechnic, Meherpur, Silchar, Assam.
- 1st Mar'1997 to 23rd Jan'1999 : Assistant Manager, Lahkar Associate, Guwahati

Experience:

<i>Experience</i>	<i>Name of the Organization</i>	<i>Duration</i>	<i>Nature of Work</i>
Teaching	Assam Engineering College	Present	----Taking classes and its related works like question paper setting & answer script evaluation, Guiding Student's projects, exam duties etc.. ----Other official activities of the institutions including consultancy works.
	Jorhat Engineering College	10 yrs.	
	Silchar Polytechnic	12 yrs.	
Research	IIT Guwahati	4 yrs.	-----Hydrological modelling
Industry	Lahkar Associates	2 yrs.	-----Planning, design and supervision of civil engineering works

Awards and achievements:

1. Received "Gold Medal" award for securing first class first position with honours in the BE final examination (1994).
 2. Received "Jindal scholarship" for academic excellence in Engineering education.
 3. Received "Engineering merit scholarship" for academic performance throughout the BE course (1991-1994).
 4. Received "College Honors" award for excellent academic performance in the 7th Semester BE examination (1994).
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Details of Publications:

(A) Referred Journal:

1. Dutta P., Sarma A.K. (2021) “Hydrological modelling as a tool for water resources management of data-scarce Brahmaputra basin.” *Journal of water and climate change*, Vol. 12, issue 1; ISSN: 2040-2244. DOI: 10.2166/wcc.2020.186/670198/jwc2020186.pdf.
2. Dutta P., Sarma A.K. (2020) “Modelling based approach of analyzing diversion impacts: A case study of the Brahmaputra basin.” *Journal of Current Science*, Vol. 119 No. 6, ISSN:0011-3891.
3. Dutta P, Hinge G, Marak JDK, Sarma A.K. (2020) ”Future climate and its impact on streamflow: A case study of the Brahmaputra river.“ *Journal of Modeling earth science and environment*, ISSN (print): 2363-6203. DOI: 10.1007/s40808-020-01022-2.
4. Sarma N., Dutta P. (2016) “Stability analysis of Brahmaputra river bank at Neulgaon”. *International journal of advanced engineering research and science (IJAER)*, Vol.5, issue 3, ISSN:2349-6495.
5. Deka D. and Dutta P. (2016) "Water Balance Study of a Watershed of Rengma River in Golaghat District". *International Journal of Advanced Engineering Research and Science (IJAER)*, vol. 3, no. 5, ISSN:2349-6495.

(B) International conference:

6. Gayari S.B. and Dutta P. (2022) “Real time Monitoring for Water Quality in Urban Water Supply System.” 27th International Conference on Hydraulics, water resources and coastal engineering (HYDRO-2022) held at Punjab Engineering College, Chandigarh, India, during 22-24 Dec’ 2022.
7. Dutta P., Hinge G., Sarma A.K. (2019) “Deriving Flow scenarios for a tributary from a large watershed model in SWAT.” 16th Annual meeting of the Asia Oceania Geosciences Society (AOGS) held at SUNTEC, Singapore.
8. Hinge G., Dutta P., Sarma A.K. (2019) “Soil-organic carbon and soil aggregation enhancement from vermicompost management enriched with bio-fertilizers.” 16th Annual meeting of the Asia Oceania Geosciences Society (AOGS) held at SUNTEC, Singapore.

9. Dutta P. Sarma A.K. (2018) “Hydrological assessment of the transboundary Brahmaputra river using SWAT.” International conference on Infrastructure development (ICID2018) held at JEC, Jorhat, India.
10. Dutta P., Devi D., Sarma A.K. (2018) “Comparing global high resolution precipitation data with rain gauge data in Assam, India.” International conference on Hydraulics, water resources and coastal engineering (HYDRO-2018) held at NIT Patna, India.

(c) Book Chapter:

11. Dutta, P., Sarma, A.K. (2022). Impact of Climate Change on Daily Maximum Temperature of the Brahmaputra River Basin. In: Bhattacharjya, R.K., Talukdar, B., Katsifarakis, K.L. (eds) Sustainable Water Resources Management (SWRM). Advances in Sustainability Science and Technology. Springer, Singapore. https://doi.org/10.1007/978-981-16-7535-5_2.
12. Dutta, M., Dutta, P., Dutta, M.K. (2022). Parameter Sensitivity by Watershed Model of Bhogdoi, a Tributary of the Brahmaputra River. In: Bhattacharjya, R.K., Talukdar, B., Katsifarakis, K.L. (eds) Sustainable Water Resources Management(SWRM). Advances in Sustainability Science and Technology. Springer, Singapore. https://doi.org/10.1007/978-981-16-7535-5_9.
13. Dutta P., Devi D., Sarma A.K. (2021) Comparing Global High-Resolution Precipitation Data with Rain Gauge Data in Assam, India. In: Jha R., Singh V.P., Singh V., Roy L.B., Thendiyath R. (eds) Climate Change Impacts on Water Resources. Water Science and Technology Library, vol 98. Publisher: Springer international publishing, ISBN: 978-3-030-64201-3 (print).

Organized FDP /Workshop/Training/Conferences etc.:

1. Conducted an Interactive Session with Er. Girindra Kr Bordoloi, an alumnus of AEC, with the students, faculties, and staff of the Department of Civil Engineering Dept., AEC, Guwahati, Assam. [[16th November'2023](#)].
2. Conducted an Expert talk on “Career Guidance” for the BTech 5th & 7th Semester (Civil) students of Assam Engineering College, Guwahati, Assam [[7th October'2023](#)].
3. Conducted a workshop on “Mock Interview” for the BTech 7th Semester (Civil) students of Assam Engineering College, Guwahati, Assam [[4th October'2023](#)].

4. Organized a Training Programme on “Occupational Hazards and Safety at Project Sites” at Assam Engineering College, Guwahati, Assam [[24th May’2023](#)].
 5. Conducted a Workshop on “Primavera P6: Construction Management Tool” at Assam Engineering College, Guwahati, Assam [[18th May’2023](#)].
 6. Coordinated an invited lecture on “Project Management Practices at Construction Sites” at Assam Engineering College, Guwahati, Assam [[6th April’2023](#)].
 7. Organized Two Weeks Refresher Course on “Laboratory Testing of Construction Materials as per BIS Codes”, at Assam Engineering College, Guwahati [[14th to 25th February’2022](#)].
 8. Organized Expert talk on the topic “Project Management & Finance in Civil Engineering”, at Assam Engineering College, Guwahati [[5th March’2022](#)].
 9. Organized Expert talk on the topic “Professional Ethics & Social Responsibilities of Civil Engineers”, at Assam Engineering College, Guwahati [[12th March’2022](#)].
 10. Organized One week FDP on "Recent development in Civil Engineering", under Civil Engineering Dept, Jorhat Engineering College, Jorhat [[13th to 17th July’2020](#)].
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Attended STP/ FDP /Workshop etc.:

- ❖ Short Term Course on “Recent Advances in Civil Infrastructure, Design & Construction”, Organized by NIT Meghalaya. [[7-11 Aug’2023](#)]
- ❖ Workshop on “Seismic design of reinforced concrete structures”; Organized by IIT Bombay & IIT Madras. [[16 Feb’2023](#)]
- ❖ Workshop on “An approach to rural development through localizing sustainable development goals” ; Organized by SIPRD, Khanapara, Guwahati. [[19-20 Dec’2023](#)]
- ❖ AICTE sponsored Two weeks FDP on “Bioengineering: A New perspective towards Multidisciplinary Research”; organized by Assam Don Bosco University, Azara, Guwahati, India [[4th to 16th July’2022](#)]
- ❖ Participated in the NPTEL E_Awareness Workshop on 21 June’2022.
- ❖ Two days Training Programme on “Flood Management and Erosion Control”; organized by NERIWALM, Tezpur, India in collaboration with NIH, Center for Flood Management, Patna, India [[27th to 28th January’2022](#)]
- ❖ Five days Faculty Development Program on “Application of Smart Materials and AI in Water and Wastewater treatment”; organized by NIT Manipur, Langol, Manipur, India [[17th to 21st January’ 2022](#)]

- ❖ One week Short Term Training Programme (STTP) on “Laboratory Testing of Soils”; organized by NITTTR Kolkata, India [20th to 24th Dec’2021].
 - ❖ Two weeks Online Training on “Patent Course by Turnip Innovations”; organized by: “Turnip” [14th to 28th Oct’2021]
 - ❖ International Faculty development programme on "Climate Change Challenges and Disaster Risk Reduction" organized by Faculty of Engineering and Technology, Assam Down Town University, Guwahati, Assam. [20th to 26th July'2021].
 - ❖ Five days FDP on "Geo-spatial technology and its application", organized by National Institute of technology, Manipur, India [14th to 18th Dec'2020].
 - ❖ TEQIP sponsored workshop cum FDP on "Recent trends of research in civil engineering structures", organized by National Institute of Technology, Rourkela, India [22nd to 26th Sept'2020].
 - ❖ One week FDP on "Recent development in Civil Engineering", organized by Civil Engineering Dept, Jorhat Engineering College, Jorhat [13th to 17th July'2020].
 - ❖ One week FDP on "Sustainable smart cities", organized by Chennai Institute of technology, Chennai, India [15th to 19th June'2020].
 - ❖ One week STTP on "Green building, energy efficiency and energy policy for sustainable future, organized by ASTU, Guwahati and GIMT, Guwahati, India [8th to 13th June'2020].
 - ❖ TEQIP sponsored national workshop on "Advances in integrated water resource management", organized by IIT Guwahati, India [16th to 18th Dec'2019].
 - ❖ Workshop on " River research to evolve sustainable projects for people with eco-friendly climate resilient technology", organized by IIT Guwahati, India [15th to 16th Nov'2019].
 - ❖ TEQIP sponsored Short term course on "Flood risk and river basin management", organized by IIT Guwahati, India [29th Oct to 2nd Nov'2018].
 - ❖ Workshop on "Research Methodology", organized by IIT Guwahati, India [17th to 18th Aug'2018].
 - ❖ Participated in AICTE-NEQIP sponsored short term course on 'Recent Advances in Civil Engineering", organized by CE Department, Jorhat Engineering College, Jorhat, India [8th to 12th Dec'2015].
 - ❖ NEQIP sponsored workshop on "Faculty development for effective teaching", organized by Jorhat Engineering College, Jorhat, India [30th to 31st Oct'2015].
 - ❖ AICTE-NEQIP sponsored short term course on ``Disaster management", organized by CE Department, Jorhat Engineering College, Jorhat, India [9th to 13th Feb'2015].
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Research & Development Projects:

Sl	Year	Project Details	Project agencies	Status
1	2023	<p>Research Title: “Hydro- Ecological and Climate Risks Assessment of Deepor Beel, Assam” – A Research project under NERAQ [Protection and Sustainable management of Aquatic Resources in the North Eastern Himalayan Region of India].</p> <p>Project Duration: Project Cost:</p>	<p>Undertaken by: MOEFCC (Ministry of Environment, Forest and Climate Change) and GIZ (Deutsche Gesellschaft for International Zusammenarbeit).</p> <p>Funded by: 1. German Federal Ministry for Environment. 2. German Federal Ministry of Economic affairs and climate actions</p>	Ongoing

MTech students guided:

Year	Name of student	Title
2023-24	Dinkumani Deka	Ongoing
2022-24	Rimpi Sarma	Ongoing
2022-23	Nekibur Zaman	Flood Mapping of Pagladiya River at Nalbari, Assam
2021-22	Shibraj B Gayari	IOT based Real time monitoring for water quality in water supply department.
2021-22	Mridul Kalita	ongoing

2020-21	Hillul Saikia	Development of Flood mapping in Numaligarh area of Golaghat district, Assam
2020-21	Rumana Akhtar	Sediment analysis of Dhansiri river in Numaligarh region, Golaghat
2019-20	Manisha Dutta	Hydrologic assessment of Bhogdoi river using SWAT hydrological models.
2016-17	Durlov Deka	Water balance study for design of irrigation structures.
2016-17	Nabajyoti Sarma	A study on river bank erosion and embankment design at Neulgaon, Jorhat
2015-16	Ratul Goswami	A study on design mix for high performance concrete of M-60 grade using fly ash.

Interactions with the outside world:

Visited various organizations as an expert in the relevant field and/or to provide invited lectures. These organizations include:

- Resource Person for “Workshop on Swachhata Hi Seva”, organized by University of Science & Technology Meghalaya in Collaboration with Brahmaputra Board at USTM, Baridua, Meghalaya. [19 Oct 2023]
- Stakeholder meeting of NERAQ [Protection & Sustainable management of Aquatic resources in the North Eastern Himalayan Range of India], at IIT Guwahati. [22 Mar’2023]
- Expert presentation on the Symposium organized by Brahmaputra Board, Guwahati. The topic of the presentation is “Conservation and rejuvenation of water bodies with special emphasis on Deepor Beel” [22 Mar’2023]
- Expert Committee Member, Brahmaputra Board, Ministry of Water resources.
- Expert member, Dam Safety Organization, APDCL, Assam.
- Co-chairing in ICRAACE conference 2021 at NIT Silchar.

- Expert committee member for monitoring of construction activities at KV, AFS, Borjhar, Guwahati.
 - Subject Expert, Assam Pradesh Public Service Commission.
 - Subject Expert, Arunachal Pradesh Public Service Commission.
 - Hydrological Expert, Rain forest research institute, Jorhat.
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Subjects taught:

Standard	Subjects taught
Undergraduate	❖ Solid Mechanics
	❖ Surveying I/II
	❖ Building Materials and Construction
	❖ Hydraulics-I/II
	❖ Fluid Mechanics
	❖ Structural Design (RCC)
	❖ Environmental Engineering-I/II
	❖ Irrigation and Hydrology
	❖ River engineering
	❖ Construction Engineering & Management
	❖ Lab classes (Hydraulics, Survey, Environmental)
	➤ Optimization techniques

Post-graduate	➤ Water Power Engineering
	➤ River Engineering
	➤ Research Methodology & Intellectual Property Rights

Laboratory Experiences:

Acted as:

- ❖ In-charge of Hydraulic Laboratory of JEC, Jorhat
 - ❖ In-charge of Environmental Engg Laboratory, JEC, Jorhat
 - ❖ In-charge of Survey Laboratory, SILPO, Silchar
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Departmental/Institutional Governances:

- Exam Supdt., BTech 2nd & 4th Sem & MTech 2nd Sem Exam 2023 under ASTU
- Member, R&D (2022-23; 23-24), CE Dept., AEC
- Coordinator, MTE (2022-23), CE Dept., AEC
- Member, Continuing Education (2022-23; 23-24), CE Dept., AEC
- Member, Hostel Management Committee, AEC
- Program Officer, NSS, AEC unit

- Involved in various activities (academic and non-academic) of the institutions
 - In-charge of Departmental Library, JEC
 - Assistant Exam Controller, JEC
 - Exam Superintendent at SILPO
 - Faculty in-charge, Students union, SILPO
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Experience in Setting up of Teaching and Research Laboratory:

- ✓ Involved in setting up experimental set-ups in the Hydraulics laboratory, Assam Engineering college, Guwahati.
 - ✓ Involved in setting up experimental set-ups in the Strength of Materials laboratory, Assam Engineering college, Guwahati.
 - ✓ Setting-up the Library, Dept. of Civil Engg., JEC, Jorhat.
 - ✓ Setting up of various experimental set-ups in the Hydraulic and Water Resources laboratory of JEC, Jorhat.
 - ✓ Involved in updating the Engineering Survey laboratory, Silchar Polytechnic, Silchar.
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Consultancy works:

- Evaluation of drainage system of Jorhat town
 - Evaluation of R.C.C. Structures under NRHM
 - Testing of construction materials like cement, brick, steel etc
 - Concrete Mix design for various industrial projects like ONGC, GAIL, PowerGrid etc.
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