

Dr. Rajib Maity

Associate Professor

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1. Research Interests:

- **Broad Research Areas:** Hydroclimatology, Water Resources Engineering, Watershed development.
- **Specific Research Interests:**
 - 1) Hydroclimatology and Hydroclimatic Teleconnection: Large Scale Coupled Circulation Patterns, Hydroclimatic teleconnection, Modeling of Indian Summer Monsoon Rainfall (ISMR) at different spatio-temporal scales, General Circulation Model data analysis – Bias correction and Downscaling
 - 2) Climate Change Impact on Water Resources: Hydroclimatic analysis, Effect of climate change on hydrology and water resources
 - 3) Hydrologic Time Series Analysis and Forecasting: Stochastic analysis of hydrologic variables, Copula theory in hydroclimatic dependence, Probabilistic Prediction and uncertainty quantification
 - 4) Soft Computing Methods in Hydrology: Application of Support Vector Machines (SVM), Artificial Neural Network (ANN), Genetic Algorithm (GA), Evolutionary Optimizer etc. in water resources engineering and management
 - 5) Analysis of Hydrologic Extremes: Droughts and Floods, Assessment of hydroclimatic association, Modeling of drought and flood using hydroclimatic inputs
 - 6) Remote Sensing Applications in Hydrology: Application of remote sensing for soil moisture assessment

2. Academic Background:

- **Doctor of Philosophy (Ph D):**

Department of Civil Engineering, Indian Institute of Science, Bangalore, India, 2007, Submitted PhD Thesis in a record time (then) of 2 years 5 months and 16 days in the group of Water Resources and Environmental Engineering, Department of Civil Engineering, Indian Institute of Science, Bangalore.

Title of PhD Thesis: Impact of large-scale coupled Atmospheric-Oceanic circulation on hydrologic variability and uncertainty through hydroclimatic teleconnection.

- **Master of Engineering (M E):**

In ‘Hydromechanics and Water Resources Engineering’ from Department of Civil Engineering, Indian Institute of Science, Bangalore, India in 2004. Topper in Civil Engineering Department, Gold Medalist (CGPA 7.7 out of 8).

Title of M E Dissertation: Hydrologic Time Series Analysis and Forecasting with Climatic Inputs.

- **Bachelor of Engineering (B E):**

In ‘Civil Engineering’ from Department Civil Engineering, Bengal Engineering College (Deemed University), currently known as Indian Institute of Engineering Science and Technology (IEST), Howrah, West Bengal, India in 1999. 1st Class (82.16 %). Overall 3rd out of 92 students in the department, Topper in the department in 2nd and 7th semester.

3. Academic Awards/ Recognitions/Achievements (in reverse chronology):

1. **Humboldt Fellow (Experienced Researchers):** Awarded Humboldt Research fellowship for Experienced Researchers by Alexander von Humboldt Foundation, Germany, in 2015.
2. **Top Teaching Feedback Responses:** Recognition from IIT Kharagpur for Receiving Top Teaching Feedback for the Academic Session 2014-15. (Web Link: <http://www.iitkgp.ac.in/shownews.php?newsid=126>)
3. **Associate Editor:** Invited to join as an Associate Editor for the Journal of Earth System Science (JESS), Published by Springer.
4. **Associate Editor:** Invited to join as an Associate Editor for the ISH Journal of Hydraulic Engineering, published by Taylor and Francis, United Kingdom.
5. **Prof. R. J. Garde Research Award:** Selected by the Executive Council of Indian Society for Hydraulics for the year 2012. The award contains a trophy, citation and cash prize of INR 5000/-.
6. **ASCE 2011 Outstanding Reviewer:** Selected by the Editor of Journal of Hydrologic Engineering, American Society of Civil Engineers (ASCE) in 2012.
7. **Emerging Leaders Fellowship:** Awarded by Australia India Institute at the University of Melbourne, Australia for the year 2011-2012.
8. **BOYSCAST Fellowship:** Awarded BOYSCAST Fellowship by the Department of Science and Technology (DST), Govt. of India for the year 2010-11, in April 2011.
9. **IEI Young Engineers Award:** Awarded by the Institution of Engineers (India) in February 2011.
10. **DAAD fellowship for IIT faculty:** Awarded by German Academic Exchange Service (DAAD) through the program called ‘Exchange of IIT faculty’ under

- memorandum of understanding between the DAAD and IITs for research visit to RWTH Aachen, Germany in May 2010.
11. **Associate Editor:** Selected as Associated Editor for ‘Journal of Civil, Environmental, and Architectural Engineering’ published by ‘Scientific Journals International (SJI)’. (URL: <http://www.scientificjournals.org/>)
 12. **International ICE WaRM Fellowship:** Awarded by the ‘International Centre of Excellence in Water Resources Management (ICE WaRM)’, an Australia Government Initiative, in 2008.
 13. **Fast Track Project Grant for Young Scientists:** Received from Science and Engineering Research Council (SERC), Department of Science and Technology (DST), Govt. of India in 2007. Grade awarded ‘**Excellent**’ (Ref. No. SR/FTP/ETA-26/2007 dated 9th May 2014)
 14. **National Doctoral Fellowship:** Awarded by All India Council for Technical Education (AICTE) in 2004.
 15. **Prof. N. S. Govinda Rao Memorial Gold Medal and cash prize of INR 2000/-:** Awarded by the council of Indian Institute of Science (IISc) in the year 2003-2004 for being adjudged as the best ME student among all specializations in the Department of Civil Engineering, IISc, Bangalore.
 16. Obtained GATE Percentile **99.33** and secured **46th All India Rank** in 2002.
 17. **Merit Scholarship:** Awarded by Government of India in 1993 for the performance in board examination at 10th standard.
 18. **National Scholarships:** Awarded for talented children from rural areas at secondary school study during 1990 – 1991 at 8th standard.

4. Projects

Total Value of Projects – > 285.2 L + foreign component, honorarium, if applicable

- Projects are grouped into three categories –
 - 1) Sponsor Projects – Completed: 5, Ongoing: 5
 - 2) Projects related to Web Course Development – Completed: 3, Ongoing: 1
 - 3) Consultancy Projects – Completed: 4, Ongoing: 1

Please refer to Annexure – A for details of all the projects

5. Research Students:

Summary:

PhD Students – Completed: 4 (Single – 02; Joint – 01)
Ongoing: 5 (Single – 04; Joint – 01)
MTech Students – Completed: 13 (Single – 11; Joint – 02)
Ongoing: 02 (Single – 01; Joint – 0)
Other Students on Temporary Research Assignment – 04

Details of Research Students:

PhD:

Completed

- 1) **Dr. Kashid Satishkumar Shahajirao** (Completed in 2010; Shared)
Thesis Title: Basic-scale streamflow forecasting using hydrometeorological and hydroclimatological inputs
- 2) **Dr. Parag P Bhagwat** (Completed in 2013; Co-Guide - Nil)
Thesis Title: Streamflow Response of a Watershed to Meteorological Variables: Development of Hydroclimatic Conceptual Model
- 3) **Dr. Sarit Kumar Das** (Completed in 2015; Co-Guide - Nil)
Thesis Title: Hydrometeorological Approach for Probabilistic Soil Moisture Simulation using Climate Inputs
- 4) **Dr. Kironmala Chanda** (Completed in 2016, Co-Guide - Nil)
Thesis Title: Characterization and Hydroclimatic Prediction of Droughts in the Context of Changing Climate

Ongoing

- 5) **Ms. Manali Pal** (Ongoing; Joined in 2013; Co-Guide - Nil)
Broad Research Area: Role of Soil Moisture in Seasonal to Interannual Climate Variability
- 6) **Mr. Subba Rao Pichuka** (Ongoing; Joined in 2014; Co-Guide - Nil)
Broad Research Area: Hydroclimatic response modeling for river basins
- 7) **Ms. Anindita Patra** (Ongoing; Joined in 2014; Shared with Prof. P K Bhaskaran)
Broad Research Area: Coastal impacts of sea level rise
- 8) **Mr. A Naren** (Ongoing; Joined in 2014; Co-Guide - Nil)
Broad Research Area: Past and future of sea level rise in the context of climate change
- 9) **Mr. Mayank Suman** (Ongoing; Joined in 2015; Co-Guide - Nil)
Broad Research Area: Analysis of Hydrological Extremes in a Changing Climate

MTech and MS:

Completed

1. **Mr. Ashish Bhatnagar** (Completed in 2009; shared with another faculty)
Dissertation Title: Hydrologic time series analysis using support vector regression
2. **Mr. Mahesh D Sawant** (Completed in 2010; Co-Guide - Nil)
Dissertation Title: Uncertainty Quantification for Predicted Streamflow through a Semiparametric Approach
3. **Mr. Dhanesh Prashad** (Completed in 2010; Co-Guide - Nil)
Dissertation Title: Probabilistic Rainfall Prediction by Split Markov Process (SMP)
4. **Ms. Kironmala Chanda** (Completed in 2011; Co-Guide - Nil)
Dissertation Title: Assessment of probabilistic dependence of rainfall and streamflow on Outgoing Longwave Radiation using Plackett Copula
5. **Ms. Haritha V P** (Completed in 2011; Co-Guide - Nil)
Dissertation Title: Hydroclimatic approach for streamflow forecasting using Bayesian dynamic linear models
6. **Mr. Selva Balaji M** (Completed in 2012; Co-Guide – Prof. S Dey)
Dissertation Title: Graphical Model on Reynolds Shear Stress in Flow About a Cylinder
7. **Mr. Chandan Roy** (Completed in 2012; Co-Guide - Nil)
Dissertation Title: IHACRES model for distributed watershed modeling
8. **Ms. Debshri Swargiary** (Completed in 2013; Co-Guide - Nil)
Dissertation Title: Spatio-temporal variation of annual daily extreme rainfall across India using both observed and CMIP5 data
9. **Mr. SVB Patel** (Completed in 2013; Co-Guide - Nil)
Dissertation Title: Gradual Change in Monthwise Extreme Daily Streamflow of Mahanadi River
10. **Mr. Nitesh Kumar Verma** (Completed in 2014; Co-Guide - Nil)
Dissertation Title: Characterization of Different Types of droughts and Their temporal Correspondence at a River basin Scale
11. **Ms. Manasa S M** (Completed in 2014; Co-Guide - Nil)
Dissertation Title: Modelling of Regional sea Level Rise using Semi-Empirical Hydroclimatic Approach
12. **Mr. Akash Kopa** (Completed in 2014; Co-Guide – Prof. Kuntsman)
Dissertation Title: A Coupled Atmospheric-Hydrologic Model of the Mahanadi River Basin

13. Mr. Mayank Suman (Completed in 2015; Co-Guide - Nil)

Dissertation Title: Hybrid Wavelet-Auto-Regressive Model with Exogeneous Inputs (WAVELET-ARX) for Modelling Hydro-Meteorological Associations at River Basin Scale

14. Mr. Rajendra Prasad R (Completed in 2016; Co-Guide - Nil)

Dissertation Title: Impact of Climate Change on The Pattern of Daily Extremes in the Inflow to Bhadra Reservoir

Ongoing

15. Ms. Riya Dutta (Joined as MS Student in 2015; Co-Guide - Nil)

Other Students on Temporary Research Assignment:

1. **Mr. Sarit Kumar Das** – Senior Research Fellow from January 07, 2010 to August 6, 2010.
2. **Mr. Sayan Dey** – Temporary Project Staff from August 01, 2013 to October 31, 2013.
3. **Mr. Sayan Dey** – Junior Research Fellow from November 01, 2013 – June 30, 2014.
4. **Ms. Riya Dutta** – Senior Research Fellow from March 03, 2015 to July 10, 2015.

6. Research Publications:

Summary

Book– 01,

Book Chapters – 04

Patent/Copyright - 01

Refereed Journals – 37 (Under Review – 6)

Conferences and Symposia – 29

Technical Reports – 04

Please refer to Annexure – B for complete list of Publications

7. Personal Details:

- **Date of Birth:** November 05, 1977.
- **Place of Birth:** West Bengal, India
- **Nationality:** Indian
- **Category:** General
- **Marital Status:** Married

8. Professional Experience:

- **Academic Experience (in reverse chronological order):**

- 1) Associate Professor, Department of Civil Engineering, Indian Institute of Technology, Kharagpur, West Bengal, from December 30, 2014 to till date.
- 2) **Assistant Professor**, Department of Civil Engineering, Indian Institute of Technology, Kharagpur, West Bengal, from December 15, 2008 to December 29, 2014.
- 3) **Assistant Professor**, Department of Civil Engineering, Indian Institute of Technology Bombay, Mumbai, from June 7, 2007 to December 12, 2008.

- **Other Academic Experience as a short-term visitor to foreign Universities:**

- 1) **Emerging Leaders Fellow:** Australia India Institute (AII), University of Melbourne, Victoria, Australia, from May 10, 2012 – June 29, 2012.
- 2) **Visiting Researcher as BOYSCAST Fellow:** School of Civil Engineering, Purdue University, West Lafayette, Indiana, USA, from August 12, 2011 – December 29, 2011.
- 3) **Visiting Faculty through DAAD Fellowship:** Academic and Research Department Engineering Hydrology, Faculty of Civil Engineering, RWTH Aachen University, Germany, from May 18, 2010 – July 12.
- 4) **Honorary Visiting Scholar through ICE-WaRM Fellowship:** Department of Earth Science, Flinders University, Adelaide, Australia, from May 26, 2008 – June 25, 2008.

- **Industrial Experience (3 years):**

- 1) Trainee Engineer (6 months) and Assistant Engineer (2 yrs 6 months), Consulting Engineering Services (I) Pvt. Ltd., Kolkata, from July 17, 1999 to July 20, 2002.

9. Teaching Responsibilities:

Under Graduates:

At IIT Kharagpur

1. **Water Resources Engineering:** For 2nd year BTech Students
2. **Hydraulics:** For 2nd year BTech Students
3. **Statistical Methods in Hydrology:** For 3rd year BTech and MTech Students
4. **Engineering Drawing and Computer Graphics:** For 1st year BTech Students, shared with another faculty.

Earlier at IIT Bombay

5. **Fluid Mechanics-I:** For 2nd year BTech Students
6. **Fluid Mechanics-I lab:** For 2nd year BTech Students, shared with another faculty.
7. **Fluid Mechanics-II lab:** For 2nd year BTech Students, shared with another faculty.

Post Graduates:

At IIT Kharagpur

1. **Applied Hydrology:** For MTech and PhD Students.
2. **Integrated Water Resources Management:** For MTech and PhD Students, shared with another faculty.
3. **Stochastic Hydrology:** Proposed for MTech and PhD Students.

Earlier at IIT Bombay

4. **Advanced Stochastic Hydrology:** (proposed and approved) For MTech and PhD Students.

10. Administrative Responsibilities:

- 1) **Vice-Chairman:** Students' Brotherhood Fund Committee (SBFC) with effect from 01 January 2016.
- 2) **Assistant Warden:** LLR Hall of Residence, IIT Kharagpur, from 01 March 1, 2013 till date
- 3) **Section-In-Charge:** Hydraulic and Water Resources Engineering (HWRE), Department of Civil Engineering, IIT Kharagpur
- 4) Selected as a member of meetings committee of American Geophysical Union (AGU) for 2008-2010 term
- 5) Member of Doctoral Scrutiny Committee (DSC) for
 - a) Shantanu Kumar Pani (09CL9404) - completed
 - b) Siddhartha Biswas (09AG9404)
 - c) Thakkar Ameer Kunjibihari (10CE90R13)
 - d) Dezy Sahu (10WM90R02)
 - e) Vasava Hiteshkumar Bhogilal (12AG91P12)
 - f) Komal Kumari (12CE91P02)
 - g) Poulamee Chakraborty (13AG90J03)
 - h) Madhumita Sahoo (13WM91R03)
 - i) Swagatam Das (13WM91R06)
 - j) Subhasri Dutta (13WM92P02)
 - k) Aurobrata Das (14WM91R02)
- 6) Faculty advisor for the BTech/Dual Degree students for 2009-2013 batch (Civil Engineering)
- 7) Departmental ERP representative for 2009- 2012
- 8) General secretary of Department Faculty Members – July 2012 to June 2015
- 9) Departmental T&P in-charge – July 2013 to June 2014

- 10) Departmental Professor-In-Charge, Career Development Centre, IIT Kharagpur – from July 2014 to June 2015
- 11) Member of Department Post Graduate Committee (DPGC), Department of civil Engineering, IIT Bombay (August 2007 - December 12, 2008)
- 12) Time table coordinator for the Department of Civil Engineering, IIT Bombay (August, 2008 - December 12, 2008)

11. QIP/CEP Courses, Workshops etc.:

1. Conducted a CEP course on ‘Hydrologic Impacts of Climate Change and Sustainable Development’ during July 4-5, 2008 at IIT Bombay.
2. Delivered a lecture on ‘Incorporation of Climate Change Effect for Indian Hydroclimatology’ for QIP/CEP short term course on ‘Soft Computing Techniques in Water Resources Management’ at IIT Bombay.
3. Coordinator of a CEP course on ‘Inservice Training Program on Hydrology and Water Resources Engineering’ targeting to working engineers of govt. of Chhattisgarh, India, during April 25-27, 2013.
4. Workshop Co-coordinator: “Extending the value of data: a national workshop on novel analysis for soil and water resources” – a collaboration with the University of Sydney going to be held during January 04 - 07, 2015.
5. Course coordinator of a short course on ‘Hydrologic Design in a Changing Climate’ during May 30-31, 2015.

12. Invited Talks

International:

1. Delivered a lecture on ‘Probabilistic Prediction of hydroclimatic time series with nonparametric quantification of uncertainty’ at Department of Earth Science, Flinders University, Adelaide, Australia.
2. Delivered a lecture on ‘Incorporation of Climate Change Effect on Indian Hydroclimatology’ at the Australia Asia Water Centre, Adelaide, Australia, as a part of ICE WaRM Seminar Series on ‘Water resources in India: problems and approaches’.
3. Delivered a lecture on ‘Probabilistic Prediction and nonparametric quantification of uncertainty using copula’ at the School of Civil and Environmental Engineering, University of New South Wales (UNSW), Sydney, Australia.

4. Delivered a lecture on ‘Bayesian Dynamic Linear Modelling for ISMR using ENSO and EQUINOO’ at School of Civil Engineering, Purdue University, West Lafayette, Indiana, USA.
5. Delivered a lecture on ‘Climate Change: A Burning Issue – Hydroclimatic Teleconnection in the Context of Climate Forcing on Hydrologic Variables: An Indian Perspective’ at Australia India Institute, Melbourne University, Melbourne, Australia. Web link: <http://www.ii.unimelb.edu.au/events/climate-change-burning-issue>

National:

6. Delivered a lecture on ‘Hydroclimatic Analysis of Drought in a River Basin’ at Two Days National Workshop on Impact of Climate Change on River Basin Management (ICCORIBAM-2013), held at Government College of Engineering, Aurangabad, August 16-17, 2013.
7. Delivered a lecture on ‘Probabilistic Estimation of Soil Moisture from RISAT1 Data along with Uncertainty Quantification’ in User Interface Meet 2015, National Remote Sensing Centre (NRSC), Hyderabad, India during January 21-22, 2015.
8. Delivered a lecture on ‘Characterization of Droughts in the context of Indian Hydroclimatology and Identification of Drought Triggers for a River Basin’ in the 1st brain storming session on “River Engineering Solutions and their implementation” held during July 9-10, 2015 in Centre for Water Resources Studies (CWRS), Department of Civil Engineering, NIT, Patna.
9. Invited talk on “Hydroclimatic Analysis and Modeling to Incorporate the Influence of Climate Variables on Hydrology and Water Resources” at NIT Meghalaya on November 19, 2015.

13. Other Academic Work:

- Associate Editor for ‘ISH Journal of Hydraulic Engineering, published by Taylor and Francis, United Kingdom. (URL: <http://www.tandf.co.uk/journals/tish>).
- Associate Editor for ‘Journal of Civil, Environmental, and Architectural Engineering’ published by ‘Scientific Journals International (SJI)’. (URL: <http://www.scientificjournals.org/>).
- Panelist and co-chair of a session in the national conference on ‘Sustainable Water Resources Management and Impact of Climate Change’, March 5 – 6, 2010 at BITS-Pilani, Hyderabad campus.

- Member of the organizing committee for National Conference on Hydraulics, Water Resources, Coastal and Environment Engineering (HYDRO – 2009), December 17-18, 2009 at CWPRS, Pune.
- Member of the organizing committee for National Conference on Hydraulics, Water Resources, Coastal and Environment Engineering (HYDRO – 2012), December 7-8, 2012 at IIT Bombay, Mumbai.
- Coordinator, Scientific Committee for 5th International Congress of Environmental Research (ICER-12), November 22-24, 2012 at UMT, Terengganu (Malaysia).
- Member of the technical committee of the National Conference on “Sustainable Water Resources Planning, Management and Impact of Climate Change” during April 5-6, 2013 at BITS-Pilani, Hyderabad campus.
- Member of the advisory committee of National Conference on “Sustainable Water Resources Development and Management”, SWARDAM-2016 during 4-5 July, 2016.
- Reviewer of
 1. Water Resources Research, AGU,
 2. Journal of Hydrology, Elsevier,
 3. Geophysical Research Letters, AGU,
 4. International Journal of Climatology, Wiley
 5. Journal of Climate, AMS
 6. Theoretical and Applied Climatology, Springer
 7. Journal of Hydrologic Engineering, ASCE
 8. Stochastic Environmental Research and Risk Assessment, Springer
 9. Journal of the American Water Resources Association, Wiley
 10. Journal of Earth System Science, Springer
 11. Sadhana, Indian Academy of Science (IAS)
 12. Current Science, IAS
 13. ISH Journal of Hydraulics, Taylor and Francis
 14. KSCE Journal of Civil Engineering, Springer.

14. Professional Memberships:

International

- Member of American Geophysical Union (AGU), USA
- Member of International Association of Hydrological Sciences (IAHS), UK
- Member of European Geosciences Union (EGU), Germany
- Member of International Water Resources Association (IWRA), France

- Member of the International Association for Hydro-Environment Engineering and Research (IAHR)
- Member of Asian Council of Science Editors (ACSE)

National

- Life Member of Indian Science Congress Association (ISCA), India
- Life Member of Indian Society for Hydraulics (ISH), India

Annexure – A**Details of Projects**

Projects are grouped into three categories – 1) Sponsor Projects,

2) Projects related to Online Course Development

3) Consultancy Projects

Total amount – > 285.2 lakhs + foreign component, honorarium etc., if applicable

Total amount as PI – > 244.2 lakhs + foreign component, honorarium etc., if applicable

1) Sponsor Projects

Sl. No.	Title of the Project	Sponsor	Ref. No. and other details	PI/co-PI	Project Value (INR)	Status
1	Hydroclimatological characteristics of spatio-temporal rainfall distribution over India	Indian Institute of Technology Bombay, Mumbai, India	07IR020	PI: Dr. Rajib Maity Co-PI: Nil	5,00,000	Completed
2	Assessment of hydroclimatic teleconnection for basin-scale, real-time streamflow and its use in real-time streamflow forecasting	Fast Track Project for Young Scientists Scheme, Science and Engineering Research Council (SERC), Department of Science and Technology (DST), Govt. of India	SR/FTP/ETA-26/07 (IITKgp project code – RTS)	PI: Dr. Rajib Maity Co-PI: Nil	4,20,000	Completed The project was graded as ‘ Excellent ’ by SERC, DST (Ref. No. SR/FTP/ ETA-26/2007 dated 9 th May 2014)
3	River basin stream flow simulation using remote sensing data	Space Application Centre (SAC), Indian Space Research Organization (ISRO), Ahmedabad	IIT/SRIC/CE/RSD/200 9-2010 (IITKgp project code – RSD)	PI: Dr. Rajib Maity Co-PI: Nil	16,50,000	Completed

4	Managing change in Soil Moisture and Agricultural Productivity under a Global Warming scenario using a Catchment Scale Climate Change Assessment Framework	Australia-India Strategic Research Funds (AISRF)		DST/INT/AUS/P-27/2009 (IITKgp project code – CAF)	India PI: Prof. D Nagesh Kumar Co-PI: Prof. V V Srinivas, IISc Co-PI: Dr. Rajib Maity, IIT Kgp Australia PI: Prof. Ashish Sharma, UNSW, Sydney Co-PI: Dr. Raj Mehotra, UNSW, Sydney	INR 16,07,760/- + AUS \$208,500	Completed
5	Smarter water resources management, Disaster Mitigation & Diabetic Retinopathy (WDD)	IBM India Private Limited		IIT/SRIC/WDD/2011-20112/165 (IITKgp project code – WDD)	PI: Prof. Dhrubajyoti Sen PI: Prof. Chandan Chakraborty Co-PI: Dr. Rajib Maity Co-PI: Prof. Mukunda Dev Behera Co-PI: Prof. Anirban Dhar Co-PI: Prof. Manabottam Mandal Co-PI: Prof. Pabitra Mitra Co-PI: Prof. Soumya Kanti Ghosh	24,00,000	Completed
6	Probabilistic simulation and future estimation of soil moisture distribution over India using Hydroclimatic data	ISIRD, SRIC, IIT Kharagpur		IIT/SRIC/ISIRD/2012-2013 (IITkgp project code – FSH)	PI: Dr. Rajib Maity Co-PI: Nil	5,00,000	Ongoing

7	Probabilistic estimation of soil moisture from RISAT1 data along with uncertainty quantification	Space Application Centre (SAC), Indian Space Research Organization (ISRO), Ahmedabad.	IIT/SRIC/CE/PMA/2013-14/5 (IITkgp project code – PMA)	PI: Dr. Rajib Maity Co-PI: Nil	21,76,000	Ongoing
8	Effect of Climate Change on local sea level rise and its Impact on Coastal Areas: Kolkata Region as a Pilot Study	Ministry of Human Resource Development (MHRD), Government of India.	F.No. 4-22/2014-TS.I, Dt 23-01-2014 (IITkgp Project code – ILC)	PI: Dr. Rajib Maity Co-PI: Dr. P K Bhaskaran, Dept. of Ocean Engg. Naval Architecture, IIT Kharagpur	35,74,000/-	Ongoing
9	Modelling of Soil Moisture in a Changing Climate using the Potential of Probabilistic Hydrometeorological Approach	Ministry of Earth Science (MoES), DST	MoES/PAMC/H&C/30/2013-PC-II (IITkgp project code – MHA)	PI: Dr. Rajib Maity Co-PI: Nil	43,82,400	Ongoing
10	Exploration of vertical soil moisture profile by assimilating the surface soil moisture data retrieved from remotely sensed SAR data	Space Application Centre (SAC), Indian Space Research Organization (ISRO), Ahmedabad.	Yet to receive	PI: Dr. Rajib Maity Co-PI: Nil	30,09,600	Approved. Yet to receive fund.

2) Projects related to Web Course Development

Sl. No.	Title of the Project	Sponsor	Ref. No. and other details	Course Honorarium (INR)	Status
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1	National Mission Project on Pedagogy Development for the course ‘Water Resources Engineering’	Ministry of Human Resource Development (MHRD), Government of India	Project coordinated by Centre for Education Technology (CET), IIT Kharagpur (Worked as Principle Developer with another Co-Developer)	5,60,000	Completed
2	Development of a video course on ‘Probability Methods in Civil Engineering’ through National Programme on Technology Enhanced Learning (NPTEL-II)	Ministry of Human Resource Development (MHRD), Government of India	Project coordinated by Centre for Education Technology (CET), IIT Kharagpur (Worked as an Subject Matter Expert (SME); No co-SME)	2,50,000	Completed
3	Development of a web course on ‘Probability Methods in Civil Engineering’ through National Programme on Technology Enhanced Learning (NPTEL-II)	Ministry of Human Resource Development (MHRD), Government of India	Project coordinated by Centre for Education Technology (CET), IIT Kharagpur (Working as an Subject Matter Expert (SME); No co-SME)	2,50,000	Completed
4	NPTEL Online Certification (NOC) Course on “Probability Methods in Civil Engineering”	Ministry of Human Resource Development (MHRD), Government of India	Project coordinated by Centre for Education Technology (CET), IIT Kharagpur (Working as an Subject Matter Expert (SME); No co-SME)	4,50,000	On going

3) Consultancy Projects

Sl. No.	Title of the Project	Client	Ref. No. and other details	PI/co-PI	Amount* (INR)	Status
1	Expert’s Opinion on open channel ultrasonic flow meter.	City & Industrial Development Corporation (CIDCO) of Maharashtra Ltd., Mumbai	DRD/CE/TIE-2/07-08	PI: Prof. T.I Eldho Co-PI: Dr. Rajib Maity	96,000	Completed

2	Performance Evaluation Study on Flood Control Scheme for “Kapaleswari-Keliaghai-Baghai” Drainage Basin for Phase-I, 2010-2011	Superintending Engineer, Western Circle-II, I&W Directorate, Dist. Paschim Mednipur, Govt. of West Bengal	IIT/SRIC/CE/2010-2011/105 (IITKgp project code – KKBD)	PI: Dr. Rajib Maity Co-PI: Dr. A Dhar	8,00,000	Completed
3	Vetting the design of DNMC canal and associated hydraulic structures	Scott Wilson India Private Limited (SWIPL), A-26/4, Mohan Cooperative Industrial Estate, Mathura Road, New Delhi-110044	IIT/SRIC/CE/2011-2012/28 (IITKgp project code – CSTI)	PI: Dr. Rajib Maity Co-PI: Dr. K Deb Co-PI: Dr. N Mitra	24,00,000	Ongoing
4	Performance Evaluation Study on Flood Control Scheme for “Kapaleswari-Keliaghai-Baghai” Drainage Basin for Phase-II, 2012-2013	Superintending Engineer, Western Circle-II, I&W Directorate, Dist. Paschim Mednipur, Govt. of West Bengal	IIT/SRIC/CE/REDS/2012-2013/44 (IITKgp project code – REDS)	PI: Dr. Rajib Maity Co-PI: Dr. A Dhar	20,00,000	Completed
5	Evaluation of Flood Management Scheme for Keliaghai-Kapaleswari-Baghai River Basin	Superintending Engineer, Western Circle-II, I&W Directorate, Dist. Paschim Mednipur, Govt. of West Bengal	IIT/SRIC/CE/FMKR/2015-15/04 (IITKgp project code – FMKR)	PI: Dr. Rajib Maity Co-PI: Dr. A Dhar	15,00,000	Ongoing

* Excluding the service tax as applicable

Annexure – B**Complete List of Publications****Summary:**

Book– 01

Book Chapters – 04

Patent/Copyright - 01

Refereed Journals – 37

Conferences and Symposia – 29

Technical Reports – 04

Book:

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