

Name : **Er Dipak Basumatari**
Designation : **Principal Scientist**

Qualification	Year	University/Institute	Remarks
M.E. (Geotechnical Engineering)	2002	MNNIT(MNREC), Allahabad, UP	First Class (72.40%) (GATE-2000)
B.E. (Civil Engineering)	1998	JEC, Jorhat (Dibrugarh University), Assam	First Class (67.66%) (12 th Rank)

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Research Interest : Geotechnical Engineering, Sustainable Construction Materials (Roads & Buildings) & Geo-Environmental Engineering

Employment/Experience :

- Scientist 'B', CSIR-NEIST Jorhat, December 2005 to December 2008
- Scientist 'C', CSIR-NEIST Jorhat, December 2008 to December 2013
- Senior Scientist, CSIR-NEIST Jorhat, December 2013 to December 2019
- Principal Scientist, CSIR-NEIST Jorhat, December 2019 to till date

Major Projects completed:

A. R & D Projects:

1. Seismic Vulnerability Assessment of Major Cities in North-Eastern India, sponsored by NEC, Shillong, Govt. of India.
2. Study and Development of Soil Modification or Stabilization Techniques for Various Types of Soil Used in Construction Activities in and around Jorhat and in some Selected Areas of Assam, CSIR-12th Five Year Plan In-House Project.
3. Post Disaster Management-Design and Development of Transitory Houses for Disaster Vulnerable Rural Sectors in the North Eastern Region, CSIR- 12th Five Year Plan (Network Project).
4. Performance Evaluation of River Brahmaputra Bed Materials for Use in Construction of Road Embankment, Subgrade and Subbase, sponsored by Department of Science & Technology (DST), New Delhi, Govt. of India.
5. Development of Methodology for Manufacturing Modular Bricks from River Brahmaputra Bed Material, sponsored by Department of Science & Technology (DST), New Delhi, Govt. of India.
6. Modular Brick from Brahmaputra River Bed Sand, (Fast Track Translational Project), funded by CSIR, New Delhi.
7. Planned Protocol for Utilisation of the Tide land for Brick Manufacture after Analysis of Geo-Consequences of Mining, sponsored by Department of Science & Technology (DST), New Delhi, Govt. of India.
8. Council of Science & Technology for Rural India (CSTRI) Centre of CSIR-NEIST, funded by DSIR, New Delhi, Govt. of India.

B. Technical Consultancy Projects:

1. Geotechnical Investigation for Diesel Hydrotreater (DHDT) Project of Bongaigaon Refinery & Petrochemical Ltd., (BRPL), sponsored by BRPL, Dhaligaon- 783385, BTAD, Assam (2006).
2. Geotechnical Investigation for New Gas Turbine Foundations at Duliajan Power Station, sponsored by Oil India Ltd., Duliajan-786602, Assam (2006).
3. Testing of Soil Resistivity at Refinery & NRMT of NRL, sponsored by Numaligarh Refinery Limited, Golaghat-785669, Assam (2006).
4. Soil Investigation for MS Quality Improvement Project at Digboi Refinery, sponsored by Indian Oil Corporation Ltd., (IOCL), (AOD), Digboi-786171, Assam (2008).
5. Soil Investigation for New Tank Truck Terminal Tank Wagon Loading Site at Golai, Digboi (AOD), sponsored by Indian Oil Corporation Ltd., (IOCL), (AOD), Digboi-786171, Assam (2008).
6. Soil Investigation in Connection with Construction of Swimming Pool at Welfare Centre at Digboi, sponsored by Indian Oil Corporation Ltd., (IOCL), Digboi-786171, Assam (2008).
7. Soil Investigation for Additional Tankages Area at NRMT for Naptha Splitter Unit (NSU) at NRL, Golaghat, Assam, sponsored by Numaligarh Refinery Limited, Golaghat-785669, Assam (2011).
8. Soil Investigation for NCTS, NOBS and WPS at IOCL, Digboi Refinery (AOD), Assam, sponsored by Indian Oil Corporation Ltd., (IOCL), (AOD), Digboi-786171, Assam (2011).
9. Soil Investigation at Township (Phase III) and Refinery (Wax Plant) of NRL, Numaligarh, sponsored by Numaligarh Refinery Limited, Golaghat-785669, Assam (2011).
10. Modulus of Soil Subgrade Reaction K-Value Test and Dry Density Tests at Runway Extension for Air Force Station, Jorhat, Assam (2012).
11. Soil Investigation for Recycling Treatment Plant of NRL, Numaligarh, sponsored by Numaligarh Refinery Limited, Golaghat-785669, Assam (2013).
12. Performance Evaluation Report on Rural Roads Constructed Using BitChem Cold Mix in Different Districts of Assam, sponsored by M/s BitChem Asphalt Technologies Limited, Guwahati (2013).
13. Soil Investigation for LPG Mounded Bullets Plant at NRL, Numaligarh, sponsored by Numaligarh Refinery Limited, Golaghat-785669, Assam (2016).
14. Soil Investigation for Bio Refinery Plant and Township at NRL, Numaligarh, sponsored by Numaligarh Refinery Limited, Golaghat-785669, Assam (2017).
15. Design Work for Secant Piling Works at KSEBL, Munar, Kerala, sponsored by M/s MF Bumi Geotech Pvt. Limited, New Delhi (2018).
16. Design of Police Station Using 3D Sandwich Panels at Vishakhapatnam, Andhra Pradesh, India, sponsored by M/s Beardsell Limited, Hyderabad, Andhra Pradesh (2019).

List of Publications:

1. S Baruah, GK Boruah, S. Sharmah, W.A. Hoque, T Chetia, C. Dey, D Gogoi, PK Das, S. Baruah, **Dipak Basumatari**, Jayanta Pathak, A.G. Barua & S Choudhury, "Seismic Vulnerability Assessment of Earthquake Prone Mega-City Shillong, India Using Geophysical Mapping and Remote Sensing", 2019, Georisk, Taylor & Francis, ISSN-17499518.2019.1598560
2. **Dipak Basumatari**, Sanjay Deori & Nibir Pran Borah, "Establishing Correlation Between CBR Values and Geotechnical Properties of Alluvial Cohesive Soils of Brahmaputra Valley", International Conference on Engineering Sciences & Technologies for

- Environmental Care (ESTEC-2020), organised by CSIR-NEIST Jorhat, February, 20-22, 2020
3. Sanjay Deori, **Dipak Basumatari**, Anku Medhi, Nibir Pran Borah & Rajib Das, “Modular Bricks from Brahmaputra River Bed Sand”, International Conference on Engineering Sciences & Technologies for Environmental Care (ESTEC-2020), organised by CSIR-NEIST Jorhat, February, 20-22, 2020.
 4. **Dipak Basumatari**, Dr. Sanjay Deori, Khirod Buragohain, Nibir Pran Borah and Rajib Das, “Energy Efficient Buildings: An overview”, International Conference on Infrastructure Development (ICID-2018), 1st International Conference on Infrastructure Development ICID-2018 organised by Jorhat Engineering College, Jorhat, December 21-22, 2018.
 5. Dr. Sanjay Deori, **Dipak Basumatari**, Nibir Pran Borah, Rajib Das, “Construction and Maintenance of Roads using Cold Mix in High Rainfall Area- A Case Study”, 1st International Conference on Infrastructure Development ICID-2018 organised by Jorhat Engineering College, Jorhat, December 21-22, 2018.
 6. Sanjay Deori, Leon Raj, **Dipak Basumatari**, Nibir Pran Borah and Rajib Das, “Mechanical Properties of Cement Based, Press-Formed, Non-Fired and Sustainable Composite Bricks”, Two-day National Conference on Advances in Civil Engineering & Infrastructure Engineering-2018 organised by Department of Civil Engineering, Tezpur university, Tezpur, Assam, 16- 17 February, 2018.
 7. **Dipak Basumatari**, Sanjay Deori & Nibir Pran Borah, “Sustainable Construction Materials for Buildings”, International Conference on Recent Trends and Challenges in Civil Engineering (RTCCE-2014), ISBN:978-93-80635-16-3 organised by MNNIT (MNREC), Allahabad, UP, 12-14 December, 2014.
 8. **Dipak Basumatari**, Sanjay Deori, Nibir Pran Borah, Anjumoni Bharali and Pranab Barkakati, “Testing and Evaluation of Construction Materials for Quality Control with Special Reference to North Eastern Region”, National Conference on New Material & Processes for Improving Quality of Infrastructure (NEMPIQI-2012) organised by School of Engineering Sciences & Technology, University of Hyderabad, Hyderabad, 19-20 October, 2012.
 9. **Dipak Basumatari**, Sanjay Deori, Pranab Barkakati and P. G. Rao, “Green Building”, National Seminar on Model Concepts for Improved Habitat in North-East organised by Military Engineering Services (Air Force), Shillong Zone, Shillong, Meghalaya, September 24, 2011.
 10. Sanjay Deori, **Dipak Basumatari**, “Indian Experiences on the use of Modified Binders in Flexible Pavement Construction”, National Seminar on Model Concepts for Improved Habitat in North-East organised by Military Engineering Services (Air Force), Shillong Zone, Shillong, Meghalaya, September 24, 2011.
 11. **Dipak Basumatari**, Dipankar Neog, JJ Bora, SC Kalita and Pranab Barkakati, “Importance of Quality Control for Construction Materials with Reference to North Eastern Region”, National Conference on Infrastructure Development in the North-East Overcoming Technical and Project Management Problems, organised by Military Engineering Services (Air Force), Shillong Zone, Meghalaya, 2010.

Major Events Organized:

- Organized “International Conference on Engineering Sciences and Technologies for Environmental Care (ESTEC-2020)” from 20th to 22nd February, 2020 at CSIR-NEIST, Jorhat.
- Organized one-day national workshop on “Sustainable Technologies for Road Construction in North East” jointly with CSIR-CRRI, New Delhi and Public Works Department (PWD), Assam, September 19, 2011, CSIR-NEIST, Jorhat.

- Organized two-day workshop on “Development of Civil Infrastructure Technologies for North Eastern Region” sponsored by Department of Science and Technology (DST), New Delhi February 28 – 29, 2012, CSIR-NEIST, Jorhat.
- Organized three-day national conference “Conference on Road and Transportation Technologies for North-East Region (CORTNE2013)” jointly with CSIR-CRRI, New Delhi; Public Works Department, Assam; and M/s Bitchem Asphalt Technologist Limited, Guwahati, February 22-24, 2013, Maniram Dewan Trade Centre, Guwahati, Assam.
- Organized one day national workshop on “Recent Developments in Civil and Earthquake Engineering (RDCEE-18)”, April 9, 2018, CSIR-NEIST, Jorhat.

Recognitions/Awards/Fellowship:

- Received the “*Certificate of Appreciation*” as an inventor of the technology developed “Modular Bricks from Brahmaputra river Bed Sand” for the year 2017-2018 on the occasion of 58th CSIR-NEIST Foundation Day (18 March, 2018).
- Received the “*Certificate of Appreciation*” for exemplary contribution in technology transfer for the technology developed “Modular Bricks from Brahmaputra river Bed Sand” for the year 2018-2019 on the occasion of 59th CSIR-NEIST Foundation Day (17 March, 2019).
- Awarded Inspiring Citizen Award-2019 (ICA) for exemplary contribution in the area of Geo-Environmental Engineering by Institute of Self Reliance (ISR), Bhubaneswar, Odisha, a trust based national organization of intellectual group (14 December, 2019).
- GATE Fellowship, 2000.

Professional Membership:

- Assam Science Society – Life Member