

## **A Report on Short Term Training Program on “RECENT ADVANCES IN CIVIL ENGINEERING”**

The main focus of the said short term training programme is to highlight the recent research activities in the field of Civil Engineering. The program mainly highlights the research activities in the field of geotechnical engineering, water resource management, optimization, structural engineering and earthquake hazard analysis. The following are the highlights of the short term training programme:

- The application of open source software in the field of Civil Engineering research
- The introduction and research areas of dynamic soil structure interaction
- The development of sustainable approach to rainwater management and its application to tea industries
- Fundamentals of genetic algorithm and its application
- Different optimization techniques
- Different approaches of Liquefaction studies and suitability of its approaches.
- Analysis of piles subjected to torsion
- Application of stone columns in transport infrastructure
- New concept in RC slab-beam design using yield line theory
- Application of new technology in low cost housing using Glass fibre reinforced gypsum
- Hazard analysis of a city in an earthquake prone zone.





**Schedule of the Short Term Course on “RECENT ADVANCES IN CIVIL ENGINEERING” from 27<sup>th</sup> to 31<sup>st</sup> August 2018 at Department of Civil Engineering, Jorhat Engineering College**

Date	Day	9.30AM-11.00AM	11.00 AM-11.30 AM	11.30AM – 1.00PM	1.00PM-2.30PM	2.30PM-4.00PM
27.08.2018	Monday	Registration & Inauguration	TEA BREAK	Viable Open Source Software for Civil Engineering Practical Research (SB)	LUNCH BREAK	Advances in Civil Engineering and Sustainable Approach of Rainwater Management and Application(SARMA) for Mitigating Climate Change Impact on Tea Agriculture in Northeast India (AKS)
28.08.2018	Tuesday	Introduction to Genetic Algorithm and its Application (AKS)		Dynamic Soil structure interaction (SB)		Optimization methods for engineering planning and design (RKB)
29.08.2018	Wednesday	Metaheuristic optimization methods and their applications in Civil Engineering (RKB)		Analysis of Piles subjected to Torsion (S.Basack)		GIS based maps for preliminary estimate of subsoil of Guwahati City (BS)
30.08.2018	Thursday	Deterministic and Probabilistic liquefaction of Guwahati city with and without ground response analysis (BS)		Ground Improvement by Stone Columns for Transport Infrastructure: A State of the Art Review (S.Basack)		Optimal design of RC beam-slab systems by yield line theory (DM)
31.08.2018	Friday	A new technology for rapid affordable mass housing — using GFRG panels (DM)		Seismic Hazard Analysis (RD)		Valedictory

SB – Dr. Sukumar Baishya, Associate Professor, Dept. of Civil Engineering, NERIST AKS-

Prof. Arup Kr. Sarma, Professor, Dept. of Civil Engineering, IIT Guwahati

RKB- Prof. Rajib Kr. Bhattacharjya, Professor, Dept. of Civil Engineering, IIT Guwahati S.Basack –

Prof. Sudip Basack, Professor, Dept. of Civil Engineering, Kaziranga University BS- Prof. Binu

Sarma, Professor, Dept. of Civil Engineering, Assam Engineering College DM- Prof. Devdas  
Menon, Professor, Dept of Civil Engineering, IIT Madras  
RD – Dr. Ranju Duara, Retd. Sr. Scientist, CSIR-NEIST, Jorhat