

## Faculty Name: Dr. Utpal Kumar Nath

Designation : **Associate Professor**  
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Assam Engineering College  
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## Qualification & Experience :

- B.E. (Civil, GU) [*First Class First under Gauhati University*] in 1993
- M. Tech (CAD, IITR, Roorkee) in 2006
- PhD (Engg., GU) in 2012
- 22 Years Teaching Experience in State Engineering College of Assam

## Fellowship :

Inaugural **OIL-IEI ASC H P Barua Fellowship 2014** of Rs. 5,00,000.00 (Rupees Five Lakhs) for carrying out the research projects entitled "**Full Scale Experimental Study of the Pile Cap Lateral Resistance**".

## Research Interest:

- (1) Foundation Engineering
- (2) Soil-Dynamics
- (3) Concrete Technology
- (4) Optimization
- (5) Artificial Neural Network (ANN)

## Publications :

### 2016:

- (1) **Nath U.K.** "**Pile Cap Lateral Resistance- A Statistical Approach**", 1st International Conference on Civil Engineering for Sustainable Development-Opportunities and Challenges, Assam Engineering College, Guwahati, Assam, India.

- (2) **Nath U.K.** & Das. B. "**Prediction of Pile Load Capacity Using Artificial Neural Network**", 1st International Conference on Civil Engineering for Sustainable Development-Opportunities and Challenges, Assam Engineering College, Guwahati, Assam, India.

## **2015:**

- (1) **Nath U.K.**, and Hazarika P.J. "**Finite Element Analysis of Pile Cap Lateral Resistance**", *Paper No. 81*, 50<sup>th</sup> Indian Geotechnical Conference, December 2015, Pune, Maharashtra, India.
- (2) **Nath U.K.**, and Patowary B. N. "**Parametric Study of Piled Raft Foundation**", *Paper No. 127*, 50<sup>th</sup> Indian Geotechnical Conference, December 2015, Pune, Maharashtra, India.

## **2014:**

- (1) Bharadwaj N., Kashyap T. and **Nath U. K.** "**Study of Variation of Property of Concrete Due to Reduction of Water after Adding Admixture**" Conference on Recent Advancements and Innovations in Civil Engineering (RAICE-2014), TIT (Excellence), Bhopal, 10-12.

## **2013:**

- (1) **Nath U.K.**, and Hazarika P.J. "**Lateral resistance of pile cap – an experimental investigation**", International journal of Geotechnical Engineering, Vol. 7, No. 3, 266-272.
- (2) **Nath U.K.**, and Hazarika P.J. "**Parametric study of pile cap lateral resistance : finite element analysis**", International journal of Geotechnical Engineering, Vol. 7, No. 3, 273-281.

## **2011:**

- (1) **Nath U.K.**, Hazarika P.J. ,Giri. G., Tesfaye, A. M. "**Study of Lateral Resistance of Pile Cap using Finite Element Analysis**", International journal of emerging trends in engineering and development (ijeted), Vol. 1, 15-31.
- (2) **Nath U.K.**, Goyal, M.K. and P.J. Hazarika "**Prediction of Compressive Strength of Concrete using Neural Network**", International journal of emerging trends in engineering and development (ijeted), Vol. 1, 32-43.
- (3) **Nath U.K.**, and Hazarika P.J., "**Study of Pile Cap Lateral Resistance using Artificial Neural Networks**", International Journal of Computer Applications (0975 – 8887), Volume 21– No.1, ISBN: 978-93-80749-22-7, pp. 20-25.
- (4) **Nath U.K.**, and Hazarika P.J. "**Prediction of pile cap lateral resistance using neural networks**", Indian Geotechnical Conference, Kochi, Kerala, pp. 815-818.

## **2010:**

- (1) **Nath U.K.**, and Hazarika P.J. , "**Behaviour of Pile in Liquefiable Soils**" , 26<sup>th</sup> National convention of Civil Engineers, The Insititute of Engineerrs (India) , Assam State Centre, Guwahati, pp. 64-74.
- (2) Hazarika P.J. and **Nath U.K.** "**Finite Element Analysis of Pile-Soil-Cap Interaction Under Lateral Load**" , Indian Geotechnical Conference – 2010, GEOTrendz, IGS Mumbai Chapter & IIT Bombay, pp-809-812.
- (3) Hazarika P.J. and **Nath U.K.** "**Pile Cap Resistance under Lateral Load- An Overview**" , 26<sup>th</sup> National convention of Civil Engineers, The Insititute of Engineerrs (India) , Assam State Centre, Guwahati, pp. 230-240.
- (4) Talukdar B. and **Nath U.K.** "**Concrete Mix Design-Issues and Challenges**" , 26<sup>th</sup> National convention of Civil Engineers, The Insititute of Engineerrs (India) , Assam State Centre, Guwahati, pp. 241-245.

- (5) **Nath U.K.**, and Talukdar B. " **Concrete With Coconut Fiber\_An Alternative Construction Material**" , 26<sup>th</sup> National convention of Civil Engineers, The Insititute of Engineerrs (India) , Assam State Centre, Guwahati, pp. 311-314.
- (6) **Nath U.K.**, Talukdar B., Nath R., Sarma M, Shyam B., Machahary P. " **A New Approach to Concrete Mix Design**" , National conferences on Disaster Mitigation in Housing in India: an Agenda for Future, IITR, Roorkee, pp. 231-238

## 2009:

- (1) **Nath, U.K.** and Hazarika, P.J "Pile-soil-Pile Interaction due to Lateral Load", *Indian Geotechnical conferences*, Guntur, India , PP. 123-126.
- (2) **Nath, U.K.**, and Hazarika, P.J. "Modeling of Effects of Spacing on Pile Group due to Lateral Load." *National Conferences on Current Challenges in Civil Engineering, Chennai. Paper No. 6*
- (3) **Nath, U.K.**, and Talukdar, B. (2009) "Influence of Coconut Fiber on Compressive Strength of Concrete" *National Conferences on Current Challenges in Civil Engineering, Chennai. Paper No. 7.*

## 2008:

- (1) Maheshwari, B. K., **Nath, U. K.**, and Ramasamy, G. "Influences of Liquefaction on Pile-Soil Interaction in Vertical Vibration." *ASET Journal of Earthquake Technology*. 45 (1-2), PP. 1-12.
- (2) **Nath, U.K.** "Liquefaction Potential and Its Effects on Foundation of High Rise Buildings." *National Conferences on Advances in Civil Engineering*, Department of Civil Engineering, Pune PP. 178-181.
- (3) **Nath, U.K.**, Goyal, M.K. and Barua, P.B. "Computerized Optimization of Concrete Mix Design Using Taguchi's Method." *National Conferences on Advances in Civil Engineering*, Department of Civil Engineering, Pune PP. 174-177.
- (4) **Nath,U.K.** and Talukdar, B. " Influences of Workability in Concrete Mix-Design" *14<sup>th</sup> Annual Convention and National Seminar* on "Recent Trends in High Rise Buildings", Indian Building Congress, New Delhi, paper No. 9(i).

## 2006:

- (1) Maheshwari, B. K., **Nath, U. K.**, and Ramasamy, G. "Soil-Pile Interaction in Liquefied Soil." *2<sup>nd</sup> International Congress on COMPUTATIONAL MECHANICS AND SIMULATION*, IIITG, vol. 2, pp.1912-1916
- (2) **Nath, U. K.**, Maheshwari, B. K., and Ramasamy, G. "Pile-Soil Modeling Considering Liquefaction -An Overview." *National Conference on Advances in Bridge Engineering* ,IITR, Roorkee, India, pp.445-457.
- (3) **Nath, U. K.**, Maheshwari, B. K., and Ramasamy, G. "Pile-Soil Interaction due to Seismic Excitation." *International Conference on Earthquake Engineering*, February 25-26, 2006, Tamilnadu, India, pp. 483-489.

## 2004:

- (1) **Nath, U.K.**, and Barua, P.B."Optimization of Concrete mixture proportioning using Taguchi's method", *The Indian Concrete Journal*, Vol 78, No 9, pp 52-56.

## Scholarship & Other Academic Achievements:

- (1) Received **State Merit Scholarship** throughout the School level Career.
- (2) Received **National Merit Scholarship** throughout the College level Career.
- (3) Received **Technical Merit Scholarship** in B.E. Course.
- (4) Received **College Honour Award** in B.E. Course at Assam Engineering College
- (5) Received **Late H.K.Das Memorial Scholarship** Award for securing highest marks in 6th Semester, Civil Engineering B.E. Course in Assam Engineering College.
- (6) Received **Late Abhijit Choudhury Memorial Scholarship** Award for securing highest marks in overall 6th Semester of B.E. Course in Assam Engineering College.
- (7) Qualified **GATE-94** (Graduate Aptitude Test in Engineering)

## Memberships:

**Life Member**, Indian Society of Earthquake Technology (LM 1272), Roorkee, Uttaranchal.

**Executive Member**, Guwahati Local Chapter, Indian Society of Earthquake Technology