

Curriculum Vitae

1. NAME : **Dr. UTPAL KUMAR NATH**
2. FATHER'S NAME : Late Bongshi Dhar Nath
3. DATE OF BIRTH : 1st July 1971
4. ADDRESS :
 (1) Permanent & Mailing : Rosemary 01, 4th Floor, Syndicate Arena
 New Chachal, Guwahati-781 022, Assam, India

 (2) Present : Professor
 Civil Engineering Department
 Assam Engineering College
 Guwahati, Assam – 781 013, India

 (3) Phone Number : 7002354195, 9613851462

 (4) Email : ukn.ce@aec.ac.in; nathutpal@rediffmail.com
5. CASTE : OBC

6. EDUCATIONAL PROFILE:

Examination	Inst/ Board/ Univ	Year	% of Marks		Div/ Class	Remarks	
HSLC Examination	Charaibahi H.S. School/ Board of Secondary Education, Assam	1987	78.80		1 st Division	Secured State Highest Marks in Advanced Mathematics & Letter Marks in General Mathematics	
HSSLC(Sc) Examination	Cotton College/ Gauhati University	1989	76.00		1 st Division	Letter Marks in General Mathematics & Advanced Mathematics	
B.E. (Civil Engg)	Assam Engineering College/ Gauhati University	1993	1 st Semester	55.25	Overall % = 77.37	1 st Class	Secured First Class First position under Gauhati University
			2 nd Semester	63.08			
			3 rd Semester	69.91			
			4 th Semester	73.91			
			5 th Semester	72.83			
			6 th Semester	80.42			
			7 th Semester	78.80			
			8 th Semester	79.91			
M. Tech. (CAD)	Indian Institute of Technology Roorkee, Roorkee	2006	1 st Semester	7.50	CGPA= 8.64	No System of Awarding Class or Division	
			2 nd Semester	8.00			
			3 rd Semester	8.50			
			4 th Semester	10.00			
Ph.D. (Engg)	Gauhati University	2012					

7. EXPERIENCE

Sl. No	Position Held	Organization	Period	
			From	To
1	Professor	Assam Engineering College	27/08/2019	Till date
2	Associate Professor	Assam Engineering College	27/08/2016	26/08/2019
3	Assistant Professor/Sr. Lecturer	Assam Engineering College	27/08/2008	16/03/2017
4	Lecturer	Assam Engineering College	12/05/2008	26/08/2008
5	Lecturer	Jorhat Engineering College	10/11/1994	09/05/2008

8. DETAILS OF PUBLICATIONS/ CONFERENCE PAPERS/SEMINAR PAPERS:

A. Published:

- 1) M. Mandal, A. Deka, U. K. Nath (2021) **“Performance of SCC with Partial Replacement of Ingredients of Conventional Concrete by Slag”**, International Journal of Emerging Trends in Engineering and Development Issue 11, Vol.3, ISSN 2249-6149
- 2) A. Deka, U. K. Nath (2021) **“Experimental Investigation of Dynamic Behaviour of Retaining Wall”**, International Journal of Emerging Trends in Engineering and Development Issue 11, Vol.3, ISSN 2249-6149
- 3) M Kalita, **U K Nath**, and P J Hazarika (2020) **“Effect of Pile Spacing and Raft Thickness on the Behaviour of Piled-Raft Foundation—A Parametric Study Using FEM”**, Book Chapter in Advances in Structural Technologies, Springer Select Proceedings of CoAST 2019, PP 111-122, Volume 81, ISBN 978-981-15-5235-9 (eBook).
- 4) P Saha, **U K Nath**, J Bhardawaj, S Paul, and G Nath (2020) **“Building Image Classification using CNN”**, **2nd International Conference on Cybernetics, Cognition and Machine Learning Applications**, Goa (India).
- 5) P Saha, **U K Nath**, J Bhardawaj, and S Paul (2020) **“Prediction of Dimension of a Building from its Visual Data using Machine Learning: A Case Study”** 2nd International Conference on Cybernetics, Cognition and Machine Learning Applications, Goa (India).
- 6) M. Mandal & **U. K. Nath** (2020) **“Performance of Self-Compacting Concrete with Partial Replacement of ingredients of conventional concrete by Slag”**, 2nd International Conferences on Future Aspects of Sustainable Technologies (Virtual Platform), Central Institute of Technology Kokajhar, BTR, Assam, India, FAST 2.0/PP/48.
- 7) A. Kakoty, **U. K. Nath** and G. Deka (2018), **“An experimental study on the effects of river sand and rock quarry dust on quality of concrete”**, CESDOC 2018 Assam Engineering College, Guwahati, Assam
- 8) Patowary B. N. and **Nath U.K. (2018)**, **“Study of Piled Raft Foundation on Layered Soil”**, CESDOC 2018 Assam Engineering College, Guwahati, Assam.
- 9) A. Kakoty, **U. K. Nath** and G. Deka (2018), **“Effects of river borne fine aggregates and quarry dust on quality of concrete”**, International Conference on Advances in Construction Materials and Structures (ACMS-2018), IIT Roorkee, Roorkee, Uttarakhand, India, March 7-8, 2018, Abstract No A 46.
- 10) Mukul Kalita, **U. K. Nath**, P. J. Hazarika (2018), **“Effect of pile spacing and raft thickness on behaviour of piled-raft foundation – a parametric study using fem”**, International Conference on Advances in Construction Materials and Structures (ACMS-2018), IIT Roorkee, Roorkee, Uttarakhand, India, March 7-8, 2018, Abstract No A 58.
- 11) Mukul Kalita & **U.K. Nath (2017)**, **“Behaviour of piled-raft foundation under nonuniform vertical loading”**, International Journal of Advanced in Management, Technology and Engineering Sciences, Volume 7 Issue 11 2017, ISSN NO : 2249-7455, PP 95-103
- 12) Mukul Kalita, **U.K. Nath**, A. Bhuyan & K. Bora (2017), **“A study on Land Use Land cover Mapping of Subansiri River in Assam”**, International Journal of Engineering Technology Science and Research, pp 854-859
- 13) Mukul Kalita, **U.K. Nath**, A. Bhuyan & K. Bora (2017), **“Buffer Analysis of Fire Stations in Guwahati City and Adjoining Areas”**, International Journal of Engineering Technology Science and Research, pp 1172-1178

- 14) Noorjahan Begum & **U.K. Nath (2017)**, “**Effect of Climate Parameters on Slope Stability**”, Indian Geotechnical Conference 2017 GeoNEst 14-16 December 2017, IIT Guwahati, India, Paper theme 03, Paper No. 207
- 15) Pranita Kalita, Dikshita Dutta **U.K. Nath (2017)**, “**Influence of soil quality of agricultural soil on Crop water requirements**”, Indian Geotechnical Conference 2017 GeoNEst 14-16 December 2017, IIT Guwahati, India, Paper theme 05, Paper No. 461
- 16) U. K. Nath (2016) “**Pile cap lateral resistance-statistical analysis**”, 1st Int. Conf. on Civil Engg for Sustainable Development –Opportunities and Challenges, Assam Engineering College, Guwahati, Assam
- 17) U. K. Nath & B J Das (2016) “**Prediction of pile load capacity using artificial neural network**”, 1st Int. Conf. on Civil Engg for Sustainable Development –Opportunities and Challenges, Assam Engineering College, Guwahati, Assam.
- 18) Mrinal Roy, Sarbajit Bhattacharyya, Pinak Paul, Ratul Ghosh, Smitom Swapna Borah, **U. K. Nath (2016)**, “**Waste Glass Powder as a Partial Replacement of Cement in Concrete-an Attempt to Bring a Paradigm Shift in Concrete Technology Through Recycling**”, International Conference on Waste Management, Recycle 2016, Indian Institute of Technology Guwahati, 1st and 2nd Apr 2016, 73 ICWM-ASWM-02
- 19) **Nath U.K.**, and Hazarika P.J. (2015) “**Finite Element Analysis of Pile Cap Lateral Resistance**”, Paper No. 81, 50th Indian Geotechnical Conference, December 2015, Pune, Maharashtra, India.
- 20) **Nath U.K.**, and Patowary B. N. (2015) “**Parametric Study of Piled Raft Foundation**”, Paper No. 127, 50th Indian Geotechnical Conference, December 2015, Pune, Maharashtra, India.
- 21) Bharadwaj N., Kashyap T. and **Nath U. K.** (2014) “**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.
- 22) Patowary B, N, and **Nath U. K.** (2014) “**Parametric Study of Piled Raft Foundation**” Conference on Recent Advancements and Innovations in Civil Engineering (RAICE-2014), TIT (Excellence), Bhopal, 39-42.
- 23) **Nath U.K.**, and Hazarika P.J. (2013) “**Lateral resistance of pile cap – an experimental investigation**”, International journal of Geotechnical Engineering, Vol. 7, No. 3, 266-272.
- 24) **Nath U.K.**, and Hazarika P.J. (2013) “**Parametric study of pile cap lateral resistance: finite element analysis**”, International journal of Geotechnical Engineering, Vol. 7, No. 3, 273-281.
- 25) **Nath U.K.**, Hazarika P.J. Giri. G., Tesfaye, A. M. (2011) “**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.
- 26) **Nath U.K.**, Goyal, M.K. and P.J. Hazarika (2011) “**Prediction of Compressive Strength of Concrete using Neural Network**”, International journal of emerging trends in engineering and development (IJETED), Vol. 1, 32-43.
- 27) **Nath U.K.**, and Hazarika P.J., (2011) “**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.
- 28) **Nath U.K.**, and Hazarika P.J. (2011), “**Prediction of pile cap lateral resistance using neural networks**”, Indian Geotechnical Conference, Kochi, Kerala, pp. 815-818.
- 29) **Nath U.K.**, and Hazarika P.J. (2010) “**Behaviour of Pile in Liquefiable Soils**”, 26th National convention of Civil Engineers, The Institute of Engineers (India) , Assam State Centre, Guwahati, Oct 9-10, pp. 64-74.
- 30) Hazarika P.J. and **Nath U. K.**(2010) “ **Finite Element Analysis of Pile-Soil-Cap Interaction Under Lateral Load**” , Indian Geotechnical Conference – 2010, GEOTrendz, IGS Mumbai Chapter & IIT Bombay, pp-809-812
- 31) Hazarika P.J. and **Nath U.K.**,(2010) “ **Pile Cap Resistance under Lateral Load- An Overview**” , 26th National convention of Civil Engineers, The Institute of Engineers (India) , Assam State Centre, Guwahati, Oct 9-10, pp. 230-240.
- 32) Talukdar B. and **Nath U.K.**,(2010) “ **Concrete Mix Design-Issues and Challenges**” , 26th National convention of Civil Engineers, The Institute of Engineers (India) , Assam State Centre, Guwahati, Oct 9-10, pp. 241-245.

- 33) **Nath U.K.**, and Talukdar B.,(2010) “ **Concrete With Coconut Fiber-An Alternative Construction Material**” , 26th National convention of Civil Engineers, The Institute of Engineers (India) , Assam State Centre, Guwahati, Oct 9-10, pp. 311-314.
- 34) **Nath U.K.**, Talukdar B., Nath R., Sarma M, Shyam B., Machahary P. (2010) “**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
- 35) **Nath, U.K.** and Hazarika, P.J (2009) “**Pile-soil-Pile Interaction due to Lateral Load**”, Indian Geotechnical conferences, Guntur, India, PP. 123-126.
- 36) **Nath, U.K.**, and Hazarika, P.J. (2009) “**Modeling of Effects of Spacing on Pile Group due to Lateral Load.**” National Conferences on Current Challenges in Civil Engineering, Chennai.Paper No. 6
- 37) **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
- 38) Maheshwari, B. K., **Nath, U. K.**, and Ramasamy, G. (2008) “**Influences of Liquefaction on Pile-Soil Interaction in Vertical Vibration.**” ISET Journal of Earthquake Technology. 45 (1-2), PP. 1-12.
- 39) **Nath, U.K.** (2008) “**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.
- 40) **Nath, U.K.**, Goyal, M.K. and Barua, P.B. (2008) “**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.
- 41) **Nath,U.K.** and Talukdar, B. (2008) “ **Influences of Workability in Concrete Mix-Design**” 14th Annual Convention and National Seminar on “Recent Trends in High Rise Buildings”, Indian Building Congress, New Delhi, paper No. 9(i).
- 42) Maheshwari, B. K., **Nath, U. K.**, and Ramasamy, G. (2006) “**Soil-Pile Interaction in Liquefied Soil.**” 2nd International Congress on COMPUTATIONAL MECHANICS AND SIMULATION, IITG, vol. 2, pp.1912-1916
- 43) **Nath, U. K.**, Maheshwari, B. K., and Ramasamy, G. (2006) “**Pile-Soil Modeling Considering Liquefaction -An Overview.**” National Conference on Advances in Bridge Engineering, IITR, Roorkee, India, pp.445-457.
- 44) Nath, U. K., Maheshwari, B. K., and Ramasamy, G. (2006) “**Pile-Soil Interaction due to Seismic Excitation.**” International Conference on Earthquake Engineering, February 25-26, 2006, Tamilnadu, India, pp. 483-489.
- 45) **Nath, U.K.**, and Barua, P. B.(2004) “ **Optimization of Concrete mixture proportioning using Taguchi’s method**”, The Indian Concrete Journal, Vol 78, No 9, pp 52-56.

9. SHORT TERM COURSES ATTENDED:

- (1) “**Machine Learning & Python Programming**” 22-07-2019 to 01-08-2019 (two weeks), Computer Science & Engineering Department, AEC & PSG College of Technology , Coimbotore.
- (2) “**Recent Advancement in Concrete Technology**” 15-07-2019 to 19-07-2019 (one week), Civil Engineering Department, Assam Engineering College & ASTU
- (3) “**Machine Learning & Python Programming**”, 22-07-2019 to 01-08-2019 (two weeks), CSE, Assam Engineering College, & PSG College of Technology, Coimbotore
- (4) “**Recent Advancement in Welding and Allied Processes**”, Mechanical Engineering Department, Assam Engineering College & PSG College of Technology, Coimbatore
- (5) “**Cross-Cultural Analysis and Capacity Building in Construction Management Practices on Housing and Infrastructure in Assam and Australia**”, Assam Engineering College, Guwahati, 25-04-2016 to 29-04-2016 University of Melbourne, Australia and AEC (Govt of Assam).
- (6) “**Advance Materials for Engineering Applications**”, Chemical Engg, AEC sponsored by AICTE, 25.04.2016 to 29.04.2016 (one week)
- (7) “**Seismic Vulnerability Assessment of RC Buildings using software SAP 2000 Non- linear static based procedure**” Assam Engineering College, Guwahati, 02-06-2014 to 07-06-2014, Civil Engg. Dept, AEC and NORSAR, Kjeller, Norway

- (8) **“Hydrology and Hydraulic Engineering”**, Faculty Development Programme on CAD/CAM/CAE & Product Development” organized by Central Institute of Plastics Engineering & Technology, Chennai from 01/10/2007 to 12/10/2007, Sponsored by Ministry of Development of North Eastern Region, Government of India.
- (9) **“Geotechnical- Earthquake Engineering”** organized by Department of Earthquake Engineering, Indian Institute of Technology Roorkee, Roorkee from 29/08/2005 to 03/09/2005, Sponsored by National Disaster Management Division, Ministry of Home Affairs, Government of India.
- (10) **“GIS and Remote Sensing Application in Water Resources”** organized by Department of Civil Engineering, Indian Institute of Technology Guwahati, Guwahati from 01/12/2003 to 05/12/2003 Under the Scheme of Quality Improvement Programme.
- (11) **“Quality, Quality Management- Recent Trends”** organized by Department of Mechanical Engineering, Jorhat Engineering College, Jorhat, from 17/07/2000 to 28/07/2000 Sponsored by ISTE/AICTE
- (12) **“Random Vibration and Applications to Earthquake Engineering”** organized by Department of Civil Engineering, Indian Institute of Technology Kharagpur, Kharagpur during December, 1999 (Two Weeks).
- (13) **“UNIX & C”** organized by Department of Computer Science & Technolgy, Bengal Engineering College (D.U.), Howrah from 13/12/1999 to 24/12/1999 sponsored by AICTE.
- (14) **“Ductility Based Earthquake Resistant Design of Buildings”** organized by Department of Civil Engineering, Regional Engineering College, Silchar, Assam from 16/03/1999 to 26/03/1999 sponsored by AICTE/ ISTE.
- (15) **“Geotechnical aspects in Design of Foundation Structures- Modern Trends”** organized by Department of Civil Engineering, Assam Engineering College, Guwahati, Assam from 20/03/1998 to 02/04/1998 sponsored by ISTE.
- (16) **“Understanding Earthquake Disasters”** organized by Department of Earthquake Engineering, University of Roorkee, Roorkee from 19/06/1997 to 03/07/1997, Under the Scheme of Quality Improvement Programme.

10. RESEARCH PROJECT:

Sl. No	Title	Proposed Cost	Sponsoring Authority	Remarks
1	Rapid Identification of Anomalous Piles using Pile Integrity Tester	5,00,000.00	DST	Sanctioned Year: 2009
2	Study of the behavior of foundation during the earthquake using shake table	24,20,000.00	AICTE: RPS-NER	Sanctioned Year: 2019
3	Size Effect of SCC with Partial Replacement of Ingredients of Conventional Concrete by Slag	3,00,000.00	TEQIP III	Sanctioned Year: 2019
4	Structural Design using Machine Learning (AI)	3,00,000.00	TEQIP III	Sanctioned Year: 2019

11. SCHOLARSHIPS AND 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)

12. AWARDS/ RECOGNISATION:

Inaugural “OIL-IEI, ASC H P Barua Fellowship-2014” of Rupees Five Lakhs only for the research work on “Full Scale Experimental Study of Pile cap Lateral Resistance”

13. MEMBERSHIPS:

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

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

14. CONSULTANCY WORKS

SI No	Description of the Consultancy Work	Organization	Year
1.	Proof checking of structural design of Proposed 'Lower Basement + upper Basement + G + M + 8- R.C.C. Commercial Building at G.S. Road, Dispur Super Market, Guwahati 781 006.	M/5 Narayani Builders & M/S Paramount Taj G.S. Road, Dispur, Guwahati 781 006	2022
2.	Proof checking of structural design of Proposed R.C.C. Commercial cum Residential Apartment Building (LGG+UGF+7) at VIP Road, Near Borbari Tiniali, Guwahati	M/s BRAHMAPUTRA BUSINESS PVT LTD, R. G. Baruah Road, Guwahati-781 024	2021
3.	Proof checking of Structural design of B+G+8 storied residential apartment building at Kandura Mikir Path, Lalmati, Barsajai, Guwahati-781 029	M/s ANCON DEVELOPERS, Panbazar, Guwahati-781 001	2020
4.	Third party quality assurance for the construction Phase-A Work of Jawahar Navodaya Vidyalaya, Dhubri, Assam	Managing Director, AIIDC, Bamunimaidam, Guwahati-21	2019
5.	Third Party Quality Audit for the work:- Construction of 154 Nos. Residential Quarters for SHQ, BSF at Mawpat, Shillong (SH:- C/O Type- II 15 Block-8 each, Type-III-4 Block-8 each and Type-V-2 Nos. Quarters including internal water supply, sanitary installations and internal electrical installations	Executive Engineer, MgCD, CPWD, Shillong	2018
6.	Third party quality assurance for the construction of the b - type school building at Kendriya Vidyalaya, Rangia (Assam)	Executive Engineer, Capital Division-A, AP PWD Camp, Guwahati	2018
7.	Third party quality assurance for the construction of 154 nos. Residential quarters for shq, BSF at Mawpat, Shillong	Executive Engineer, MgCD, CPWD, Shillong	2018
8.	Proof checking of Structural design of G+8 storied residential apartment building at Tripura Road, Guwahati	M/s Sun Syndicate Builders (P) Ltd, Dispur, Guwahati	2018
9.	Proof checking of B+G+8 Residential/ Commercial building at Glass Factory, Fatashil, Guwahati, Assam	M/S NOWRANGROY METALS, Guwahati	2018
10.	Vetting of Re-revised Estimate for Construction of JNV, Anini, Dist. Dibang Valley, AP. [Phase-A] & Construction of JNV, Anjaw Dist. Hawaii [Phase-A]	Department of Urban Development, Arunachal Pradesh	2017
11.	Proof checking of structural design of Block B-BF+GF+7 storied building at Durlav Sarmah Road, Uttar Jalukbari, Guwahati	M/s A. D. Construction, Jalukbari, Guwahati	2017
12.	Proof checking of structural design of the structures at New Campus of TISS at Jalukbari, Guwahati	aakriti, 12/1a, Bosepukur Road, Kolkata-700 042	2017
13.	Proof checking of structural design of G+10 Storied residential apartment building, Beltola, Guwahati.	M/s Aashiyana Infracon Pvt. Ltd. Housefed Complex, Guwahati	2017
14.	Proof checking of structural design of Proposed Resi-	M/S Tenements, Anil Plaza,	2017

	Commercial Building (G+8) , Bhetapara, Guwahati	G.S. Road, Guwahati-5	
15.	Structural Soundness checking of the structures of JNV at Distt. Williamangar, Meghalaya	HIMALAYA CONSTRUCTION, Tawang, AP- 790 104	2017
16.	Feasibility study for Structural Stability for various blocks of Referral Hospital Campus at Falkawn, Mizoram	HSCC India Limited	2016
17.	Structural Stability checking of Dr. Ambedkar Auditorium at ONGCL, Nazira Campus	ONGC, Nazira, Assam	2016
18.	Structural stability checking of Overhead water tank at OIL campus, Duliajan, Assam	OIL, Duliajan, Assam	2015
19.	Structural stability checking of the buildings and foundations at Lakwa	GAIL (India) Limited	2014

15. NO. OF ACADEMIC PROJECT/ THESIS/ DISSERTATION ETC.

SI No	Level of course/ students	No. of group of students
1.	B.E. 7 th Semester, Civil Engineering	25
2.	B.E. 8 th Semester, Civil Engineering	78
3.	M.E. Geotechnical Engineering	07
4.	PhD	06

16. MEMBERSHIPS:

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

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

I hereby declare that all the above information is true to the best of my knowledge and belief

(Utpal Kumar Nath)

Dated: Guwahati, the 24th January 2022