

Curriculum vitae

Jayanta Pathak *PhD*



Personal data

Name: **Jayanta Pathak**
Born: March 1, 1967 in Guwahati, Assam , India
Nationality: Indian
Address: Mandakini Apartment, Survey, Beltola, Guwahati 781028
Professional affiliation: Department of Civil Engineering, Assam Engineering College
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Education

School, college and/or University Attended	Degree/certificate or other specialized education obtained	Date Obtained
Assam Engineering College	BE (Civil Engineering)	1989
University of Roorkee	ME (Computer Aided Design)	1991
IIT Roorkee	PhD (Structural & Earthquake Engg.)	2002

Employment record

Since Jan/2011 **Professor**, Department of Civil Engineering, **Assam Engineering College**
2006 – 2011 **Assoc. Professor**, Department of Civil Engineering, **Assam Engineering College**
1998 – 2001 **On deputation as Research Scholar , sponsored by MHRD to IIT Roorkee**
1997 – 1998 **Assoc. Professor**, Department of Civil Engineering, **Jorhat Engineering College**
1992 – 1997 **Asstt. Professor**, Department of Civil Engineering, **Assam Engineering College**
1991 – 1992 **Lecturer**, Department of Civil Engineering , Regional Engineering College, Silchar (now **NIT, Silchar**)

Consultancy / Research and Industry-related activities in Mission Mode projects

2021	Principal Investigator Structural Audit For Renovation , Retrofitting, Extension of Existing Buildings In B. Barooah Cancer, Institute - A Unit Of Tata Memorial Cancer Hospital at Guwahati , Assam, India
Since April 2021	Advisor for Expert Inputs and consulting services for Numaligarh Refinery Expansion project (NREP) as Civil, Structural / Earthquake Engineering Expert - for Equinox Software and Services Pvt. Ltd. (coordinated by McKinsey India)
2021	Co-Principal Investigator safety Audit of the work " Construction of 2-Lane Flyover at the Super Market Intersection on G.S. Road , Guwahati City , Assam under SOPD". Assam PWD, Govt. of Assam
Since September 2021	Advisor for the project on design for Climate Resilience Village and Flood shelter arrangement as part of first phase of Assam Integrated River Basin Management (AIRBMP) for SEEDS Technical Services, funded by the World Bank
Since 2019	Co-Investigator "Compendium of Traditional Earthquake Resilient Construction for Knowledge Sharing and Disaster Risk Reduction: Promotion of Traditional Building Practices" jointly with IIT Ropar, IIT Roorkee and Assam Engineering College, funded by NDMA
2016-2019	Structural and Earthquake Engineering Expert for Inputs in Design and Retrofitting; Location : Meghalaya : Package No. DoF/SHCDM/DSC/03 : Supporting Human Capital Development in Meghalaya state, India , project No. 46166-001, supported by ADB (Asian Development Bank)
since 2016 till date	Principal Investigator of Govt .of Assam (ASDMA) funded project - "Earthquake Damage and Loss Estimation of Guwahati City for Scenario Earthquakes – a step towards Real-Time Earthquake Damage and Loss Information System" (short ELIAS)" in collaboration with NORSAR (Earthquake Hazard and Risk, Stiftelsen NORSAR, Norway) and supported by IIT Roorkee .
2011-13	Principal Investigator of Status Survey of Schools and Hospitals In Guwahati City for Multi-hazard In collaboration with Assam State Disaster Management Authority (ASDMA)
Since 2014	Principal Investigator of Technical Safety Audit of Water Supply System and Network In Guwahati City for Earthquake In collaboration with Guwahati Municipal Corporation (GMC)

since 2012	Coordinator (North east India) of EQRisk - A Large Research Project on Earthquake Hazard and Risk Reduction In India, In Collaboration With NORSAR and NGI, Norway
2010-2011	Principal Investigator of Technology development for seismic Vulnerability Reduction of Traditional & Conventional housing of Rural areas - RPS project funded By AICTE, Govt. of India

Professional Certification or Membership in Professional Associations

- Life Member – Indian Society for Earthquake Technology (ISET)
- Life Member – Indian Society for Technical Education (ISTE)
- Life member – Indian Road Congress (IRC)
- Life Member – Indian Concrete Institute (ICI)
- Member – International Association of Bridge and Structural Engineers (IABSE)

Countries of Work Experience:

India, Norway (*as Project Collaborator*) & **Australia** (*as academic Visitor*)

Countries Visited

UK, Australia, Canada, Switzerland, Malaysia, Thailand, Singapore, Bhutan, Hongkong, Netherland, Norway, Turkey, UAE

<u>Language</u>	<u>Speaking</u>	<u>Reading</u>	<u>Writing</u>
English	Good	Good	Good
Hindi	Good	Fair	Poor
Assamese	Mother tongue	Mother tongue	Mother tongue
Bengali	Fair	Fair	Poor

Other Professional Training

- **Fourth SERC School on Seismology and Earthquake Processes** , Department of Earthquake Engineering, Indian Institute of Technology (IIT), Roorkee, April, 1999
- **Earthquake Resistant Design and Construction**, IIT Guwahati under National Capacity Building Program, funded by MHA, Govt. of India, From **22-02-2005 to 12-03-2005**.
- **Geotechnical Earthquake Engineering**, Department of Earthquake Engineering, Indian Institute of Technology (IIT), Roorkee, May to June 2006
- **IS 800-2007 Indian Standard General Construction in Steel** – Code of Practice (Third Revision), Bureau of Indian Standards & Institute of Steel Development & Growth , Kolkata, December 2008

- **Trained as State Resource Person in Earthquake Engineering**, Trained in STAAD.PRO, SAP & ETABS for Structural / Fem Analysis
- Trained in Earthquake Vulnerability and Risk Assessment for last 10 years.

Administrative / Professional Engagement

1. Nominated as **Member of the Court, the Assam Science and Technology University** by the Chancellor of the University, his Excellency the Governor of Assam.
2. Appointed as **member of the Technical Committee by ASDMA, Govt of Assam to review National Seismic Risk Mitigation Programme (NSRMP)** for the state of Assam.
3. Appointed as a **member of the advisory committee by the Assam State Disaster Management Authority(ASDMA), Govt of Assam for study on Legal and Regulatory framework** under various Govt. Departments for Disaster Management.
4. **Member of the Structural Design Review Panel** at Assam Engineering College **for proof checking of High-rise buildings in Guwahati**, as constituted under the provision of the Guwahati Building Bye-laws.
5. Appointed **member of the Project Review Committee of Software Technology Park of India**, Northeast Region for various projects during 2016-22, STPI, Guwahati for setting up the IT Park at , Guwahati, Imphal, Agartala - advising on structures, design, project management and approval of works.
6. **Nominated as Chairman of the Building Committee of Northeast**, National Council of science Museum, NCSM, Ministry of Culture, Govt. of India for 2021-22

Major work as Empanelled Structural Design Review Consultant

Sl no.	Project Title
1	Review of the DPR - Brahmaputra Riverfront Development under Smart City project Phase -I & II
2	Principal Investigator Structural Audit For Renovation , Retrofitting, Extension of Existing Buildings In B. Barooah Cancer, Institute
3	Co-Principal Investigator safety Audit of the work " Construction of 2-Lane Flyover at the Super Market Intersection on G.S. Road , Guwahati City , Assam under SOPD". Assam PWD, Govt. of Assam
4	Structural, Earthquake Engineering Expert input consultant for the Numaligarh Refinery Expansion Project (NREP)
5	As expert for review and inputs on flood shelter designs and arrangements for working on project design for Climate Resilience Village and Flood shelter arrangement as part of first phase of
6	Design Consultancy services for Construction of Power System Control Centre at Guwahati.

Major work as Empanelled Structural Design Review Consultant

- Till date **more than 100 multistoried building** and other infrastructure projects **proof checked** including the following major buildings and other important structures in the Northeast. Have reviewed and proof checked the structural design and checking compliance of design with earthquake code of India.

Some Major Design Review as listed below

- **Structural design Review and proof check** of **ONGC Housing Colony** at Cinamara, Jorhat ONGC Basin.
 - **Structural design Review and proof check** of **Radisson Blue Hotel at Guwahati**
 - **G+22 Shangrila Tower by Simplex Infrastructure** - a PPP realty project by GMDA
 - **G+10 - 7 Blocks apartment** Housing project by Subham Planners at Lokhra Guwahati - under GMDA
 - **G+8 and G+9 - 6 Blocks 250+ apartment** housing project by Subham Planners at Silpukhri , Guwahati - under GMDA
 - **G+8 - 5 Blocks 150+** apartment housing project by Trans India Developers at Guwahati.
 - **Deaerator facility expansion structure at IOCL , BRPL Refinery** at Dhaligaon, Assam.
 - **Two ROB of 40 meter span for NF Railways** over NH at location near Pathsala, Assam.
 - **G+10- 3 Blocks 50+ apartment** Housing Towers by **Infinity**, Kolkata at Guwahati.
 - **School of Science and Technology** Buildings of **Gauhati University** at Guwahati, Assam
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Member of Project Advisory Group

1. Member of the **Project Review Committee of River Front Development projects** under **Guwahati Smart City projects**, GSC, Guwahati.
2. Member of the **Project Review Committee of Guwahati Metro rail Projects** - constituted by **GMDA**.
3. Member of the **Project Review Committee of Software Technology Park of India, Northeast Region** for various projects during 2016-19, STPI, Guwahati for setting up the IT Park at , Guwahati, Imphal, Agartala - advising on structures, design, project management and approval of works.
4. Nominated as Chairman of the Building Committee of Northeast, **National Council of science Museum, Ministry of Culture**, Govt. of India.
5. Invited to participate in **World Bank sponsored Round Table** on April 08, 2019 at **IIT Gandhinagar** to make to make recommendations and propose modifications in the codal provisions of earthquake codes to BIS committee, CED 39
6. Appointed as Member, Technical Evaluation Committee, for Selection of Architectural Consultants for Design, Drawing & Supervision of the **BPO Tower at Tech City, Bongora, Kamrup, Assam, Assam Electronics Development Corporation Limited (AMTRON)**.
7. Member of the Technical Committee advising on Civil Infra. Works for **Bamboo Technology Park** - PPP project by Department of industrial policy and promotion (DIPP), **Ministry of Commerce & Industry, Govt of India** at Chaygaon, Kamrup (Rural), Assam under Industrial Infrastructure Up gradation Scheme.

Author of recent Technical Reports / Publications

Book Chapters:

1. Meslem. A., **Pathak, J.**, Lindholm.C., Lang.D., Singh.Y., Mazumdar, K. (2020). - "**Earthquake Loss Information System for the City of Guwahati, Assam, India**" -**Book Chapter** accepted in the "Theory and Practice in Earthquake Engineering and Technology" in Springer Transactions in Civil Engineering Series, to be brought up by Indian Society for earthquake Technology (ISET)
2. Borah, S., **Pathak, J.**, Goswami, D (2020). "**Comparative Analysis of SSR And HVSR Method for Site Response Analysis**"- **Book Chapter** accepted in the "Theory and Practice in Earthquake Engineering and Technology" in Springer Transactions in Civil Engineering Series, to be brought up by Indian Society for earthquake Technology (ISET).
3. **Pathak, J.**, Sarma B., Patwari, NN (2020). "**A Comparative Prognostic Damage Scenario Of Non-Engineered Masonry And Traditional Assam Type Housing In Guwahati Urban Centre**" - ISET Journal of Earthquake Technology, Paper No. 551, Vol. 57, No. 1, March 2020, pp. 43-59

4. Sarma, N., Goswami, D., Pathak, J., (2020). **"Behaviour of pile foundation of G+5 buildings on various soil types of Guwahati at regional scale"** - Arabian Journal of Geosciences, (2020) 13:1020, <https://doi.org/10.1007/s12517-020-06027-w>
5. Sarma, N., Goswami, D., Pathak, J., **"Spatially Distributed Sub-Soil Information Model of Guwahati City on Regional Scale"**- International Journal for Research in Applied Science & Engineering Technology , Volume 8, Issue VI, June 2020; DOI-DOI : 10.22214
6. Pathak, J., Meslem. A., Lang.D., Bora.A., Lindholm.C., Singh.Y., Mazumdar, K. (2020). **" Towards Real-Time Earthquake Loss Information System for Guwahati City, Assam, India"**- **accepted**, 17th World Conference on Earthquake Engineering (17WCEE) September 14-18, 2020, Sendai, Japan, International Association for Earthquake Engineering.
7. **"Seismic Vulnerability Assessment of Earthquake-Prone Mega-City Shillong, India Using Geophysical Mapping and Remote Sensing"**- Published on 09 April 2019 - Journal Georisk: Assessment and Management of Risk for Engineered Systems and Geohazards, DOI: 10.1080/17499518.2019.1598560 ISSN: 1749-9518 (Print) 1749-9526 (Online)
8. Pathak, J., Doloi, H., Bora, A. (2019). **"Flood and Erosion Induced Displacements: Deployment of Flood Resilient Housing in Assam"** - **COSVARD 2019** – 2nd International Conference on Smart Villages and Rural Development, Guwahati, 02-04 December 2019.
9. Pathak, J., Meslem, A., Lang, D., Bora, A. (2019). **"Earthquake Damage and Loss Model for the City of Guwahati, Assam, India"** - **SECED 2019** Conference on Earthquake and Civil Engineering 9-10 September 2019, University of Greenwich, **Greenwich, London**.
10. Baruah,S., Boruah, G.K.,Sharma, S., Hoque,W.,Chetia, T., Dey, T., Gogoi,D., Das, P.K., Baruah, S., Basumatari,D., Pathak,J., Barua, A.G., Choudhury, S. (2019). **"Seismic Vulnerability Assessment of Earthquake-Prone Mega-City Shillong, India Using Geophysical Mapping and Remote Sensing"**- Published on 09 April 2019 - **Journal Georisk: Assessment and Management of Risk for Engineered Systems and Geohazards**, DOI: 10.1080/17499518.2019.1598560 ISSN: 1749-9518
11. Pathak, J., Meslem, A., Lang, D., Bora, A. (2018). **"Earthquake Damage and Loss Model for the City of Guwahati, Assam, India"**- 16th European Conference on Earthquake Engineering, 18-21 June 2018, Thessaloniki, Greece.
12. **Model Building Types (MBT) Scheme and Inventory Database for Guwahati, State of Assam Report no. EQHR-10092-2017-M1 Guwahati (India) - Kjeller (Norway), March 2018** This report was prepared under the project "Earthquake Damage and Loss Estimation of Guwahati City for Scenario Earthquakes (ELIAS)" funded by Assam State Disaster Management Authority (ASDMA), Guwahati, Assam.
13. **Seismic Performance Evaluation for Existing High-Priority Buildings in Guwahati, State of Assam Report no. EQHR-10092-2017-M2 Guwahati (India) - Kjeller (Norway) March 2018** This report was prepared under the project "Earthquake Damage and Loss Estimation of Guwahati City for Scenario Earthquakes (ELIAS)" funded by Assam State Disaster Management Authority (ASDMA), Guwahati, Assam.
14. **Seismic Hazard Assessment and Identification of Potential Earthquake Scenarios within the Region of Guwahati, State of Assam, Report no. EQHR-10092-2017-M3, Guwahati (India) - Kjeller (Norway), March 2018**, This report was prepared under the project "Earthquake Damage and Loss Estimation of Guwahati City for Scenario Earthquakes

- (ELIAS)" funded by Assam State Disaster Management Authority (ASDMA), Guwahati, Assam.
15. **Earthquake scenario-based risk evaluation for the City of Guwahati, State of Assam, Report no. EQHR-10092-2017-M4, Guwahati (India) - Kjeller (Norway), March 2018**, This report was prepared under the project "Earthquake Damage and Loss Estimation of Guwahati City for Scenario Earthquakes (ELIAS)" funded by Assam State Disaster Management Authority (ASDMA), Guwahati, Assam.
 16. **"Retrofitting Open Ground Storey Building With Masonry Walls In Guwahati City"** -15th Symposium On Earthquake Engineering, December 11-13, 2014, IIT Roorkee
 17. **"Analytical Study of Seismic Response of Traditional Assam-Type Housing In North-East India"** -15th Symposium On Earthquake Engineering, December 11-13, 2014, IIT Roorkee
 18. **"Seismic Response of Steel Braced Pipe Racks and Technological platforms in Oil Refineries"**-15th Symposium On Earthquake Engineering, December 11-13, 2014, IIT Roorkee
 19. **"Developing interactive, computer based learning tools for civil engineering Scholars," in Proc. the International Conference on Civil Engineering Education (ICCEE2012), Manila, Philippines, 2012.**
 20. **"Earthquake Vulnerability Assessment Of Guwahati Urban Centre"**- accepted in the 14th World Conference on Earthquake Engineering, 12-17 Oct., 2008 in Beijing, China
 21. **"Site Amplification, Qs, and Source, Parameterization in Guwahati Region from Seismic and Geotechnical Analysis "** –Seismological Research Letters, Volume 79, Number 4 July/August 2008
 22. **"Seismic Vulnerability Assessment Of Lifeline Structure For Ne India Urban Development Projects Lifeline Systems"** - 14th World Conference on Earthquake Engineering, 12-17 Oct. 2008 in Beijing, China
 23. **" ANN based Attenuation Relation for PGA using Indian Ground Motion Data "** –1st European Conference in Earthquake Engineering and Seismology ,held in Geneva , Switzerland 3-8 Sept, 2006
 24. **"Earthquake Vulnerability Risk Mapping of Guwahati City, India "**1st Asian Space Conference , Chiangmai, Thailand. 22-26th November, 2004
 25. **"Simulation of Design Earthquake In The Himalayan Region Using Artificial Neural Network"**, presented in the 13th World Conference on Earthquake Engineering (1-6 August) 2004 in Vancouver, Canada

Ph.D guided

1. Scholar : N N Patwari
Topic : **"Seismic Vulnerability Assessment and Prognostic Damage Scenario of Conventional and Traditional Housing around Urban Centres of Assam" - completed & awarded 2017**
2. Scholar : Sasanka Borah
Topic : **"Site Response Analysis and Soil Structure Interaction In High Seismic Region"-completed & awarded 2017**

3. Scholar : Nabanita Sharma
Topic : "**A study of deep foundations under dynamic load for mid-rise buildings**",
ongoing
4. Scholar : Jyotisman Saikia
Topic : "**Earthquake vulnerability study of Guwahati urban centre based on site response**", *ongoing*
5. Scholar : Debraj Bailung Sonowal
Topic : "**Seismic Fragility Analysis of Existing Bridges in Assam**",
6. Scholar : Karabi Bharadwaj, *ongoing*
Topic : "**Cost effective retrofitting solutions for open ground storey buildings in Guwahati**", Joined 2016 : final Registration 2019, due submission
7. Scholar : Mriganka Borkotoky, *ongoing*
Topic : "**Seismic Vulnerability Assessment of Life Line System**", Joined 2019 , on going , *ongoing*