Romanbabu Oinam, Ph.D. Engineering

Assistant Professor Department of Civil Engineering Indian Institute of Technology (IIT) Guwahati Guwahati- 781039, Assam, India Phone: 0361-258-3233 Mobile: 0880-204-6327 E-mail: <u>romanbabu@iitg.ac.in</u>

EDUCATION

• Ph.D. (2017), Civil Engineering (Structural Engineering), Indian Institute of Technology (IIT) Delhi, New Delhi, India

Thesis: Metallic energy dissipation devices for seismic strengthening of reinforced concrete frames with soft-story

Supervisor: Prof. Dipti Ranjan Sahoo

• **M.Tech.** (2012), Civil Engineering (Earthquake Engineering), National Institute of Technology (NIT) Silchar, Assam, India

Thesis: Experimental study on beam-column joints with various fibre under cyclic loading, *Supervisor:* Dr. Abdul Munim Choudhury and Prof. Aminul Islam Laskar

• **B.Tech.** (2010), Civil Engineering, Manipur Institute of Technology (MIT) Takyelpat, Imphal, Manipur, India

CURRENT RESEARCH ACTIVITIES

- Performance-based seismic design
- Seismic retrofitting & strengthening
- Passive structural control
- Steel and reinforced concrete structures
- Steel-concrete composite structures
- Fiber-reinforced Concrete
- Unreinforced masonry structure
- Hybrid testing and simulation

AWARDS AND RECOGNITIONS

• Young Author Best Paper Award Structural Engineering Convention (SEC), New Delhi, India (2014)

PROFESSIONAL EXPERIENCE

2021, December – Present Indian Institute of Technology (IIT) Guwahati, Assam, India Assistant Professor 2018, June – 2021, December Indian Institute of Technology (IIT) Tirupati, Andhra Pradesh, India Assistant Professor

2018, April – 2018, June National Institute of Technology (NIT) Warangal, Telangana, India Assistant Professor

2017, Oct – 2018, March Indian Institute of Technology (IIT) Delhi, Hauz Khas, New Delhi, India Senior Project Scientist

2017, July – 2017, Sept Indian Institute of Technology (IIT) Delhi, Hauz Khas, New Delhi, India Project Scientist

2017, Jan – 2017, June **The NorthCap University,** Gurgaon, Haryana, India **Assistant Professor (Guest)**

2012 June - 2012 December Sharda University, Knowledge Park III, Greater Noida, India Assistant Professor

SPONSORED RESEARCH PROJECTS

- 1. **Technology Innovation and Development Foundation (TIDF)**: "Development and Parametric Study of a Novel Hybrid Yielding Damping Device" ₹. 10,00,000.0/- , 28/09/2022-28/09/2025, Principal Investigator.
- 2. Start up Grant(SuG): "Development and Parametric Study of a Novel Hybrid Yielding Damping Device" ₹. 5,00,000.0/- , 06/05/2022-06/05/2024, Principal Investigator.
- 3. New Faculty Initiative Grant (NFIG): "Seismic Strengthening of Open Ground Storey Building using RC Shear Wall" ₹. 5,00,000.0/- , 22/11/2019-21/11/2022, Principal Investigator.
- Scheme for Promotion of Academic and Research Collaboration (SPARC): "Smart Hybrid Fiber Reinforced Polymer Composite Strengthening System for Civil Infrastructure" ₹. 70,27,785.0/-, 15/03/2019-14/03/2021, Co-Principal Investigator.

MAJOR CONSULTANCY PROJECTS

•	Vetting of structural design and drawings of Saheed nagar residential apartment	2022-2023
	building, Khorda, Odisha.	
•	Technical vetting of NDT test reports and Strengthening methodology of	2022-2023
	Baghajatin ROB (Old and New), Kolkata.	
•	Vetting of structural load test findings at IIT Bhubaneshwar.	2022-2023
•	Vetting of structural design and drawings of DRDO building infrastructure for	2021-2022

	site 'Delta, Charlie and Echo'.	
•	Vetting of structural design and drawings of Advanced Centre for Energetic Materials (ACEM) DRDO process building at Nashik, Maharashtra.	2021-2022
•	Vetting of structural design and drawings of Indian oil refinery station house at Numaligarh, Assam.	2020-2021
•	Vetting of structural design and drawings of Tirupati smart city parking building at Tirupati, Andhra Pradesh.	2020-2021
•	Wind load certification and Vetting of structural design and drawing of Pre Engineered Buildings for M/S. Tidal Trading Pvt.Ltd. at Paradip, Odisha.	
•	Proof checking of the proposed stool base and the method of statement for lowering the bridge girder span at Garuda Varathi Smart corridor project, Tirupati, Andhra Pradesh.	2020-2021
•	Approval of proposed retrofitting strategy in bridge pier at Garuda Varathi Smart corridor project, Tirupati, Andhra Pradesh.	2020-2021
•	Vetting of structural design and drawings of five training facilities at site 'BM' for DRDO, RDA Civil Engineering Systems Pvt. Ltd.	2020-2021
•	Site investigation to ascertain the appropriateness of the adopted structural arrangements in the M/s Berger Paints India Ltd Factory, Hindupur, Andhra Pradesh.	2020-2021
•	Vetting of structural design and drawings of PEB building for Indian oil building at Palwal	2020-2021
•	Visual inspection for assessment of the condition of the Shozukhu-Zukihe Bridge at Dimapur, Nagaland.	2019-2020
•	Independent vetting of structural design for construction of Jakhalu International Prayer Center at Surumi, Nagaland.	2019-2020
•	Visual inspection for assessment of the condition of the Employees' State Insurance Corporation hospital and branch office at Rajahmundry, Andhra Pradesh.	2019-2020
•	Vetting of structural design and drawings of Delhi High Court Complex, Block-S at Dr. Zakir Hussein Marg, New Delhi	2016-2017
•	Vetting of structural design and drawings of NIT Delhi Administrative Building (6 Story Building + 1 Basement)	2016-2017
•	Vetting of structural design and drawings of Twin-tower married accommodation at Delhi Cantonment (<i>12 Story + 1 Basement</i>)	2017-2018

TEACHING EXPERIENCE

Undergraduate Courses

- Engineering Mechanics
- Strength of Materials
- Structural analysis
- Basic surveying
- Design of steel structure

Postgraduate Courses

- Earthquake and Wind engineering
- Advanced Mechanics of Solids
- Advanced Structural Engineering Lab.

- Design of concrete structure
- Civil engineering materials & Construction
- Steel structure lab.
- Concrete lab

STUDENTS SUPERVISION

- Ph. D. Thesis (Ongoing-2)
- M.S. Research Thesis (Ongoing-1)
- M. Tech. Theses (Completed-4; Ongoing-2)
- B.Tech Final Year Project (Completed-7; Ongoing-2)
- B.Tech Term Project (Completed-4; Ongoing-2)
- Summer Internship (Completed-6, Ongoing-2)

LABORATORY DEVELOPMENT

- Setting up a permanent seismological observatory center in IIT Tirupati campus in collaboration with National Center for Seismology, Ministry of Earth Sciences, Government of India
- Procured family of displacement control CTMs, 5000 kN cube test frame, 500 kN & 15 kN mortar test frame and 350 kN bending test frame
- Procured elastic modulus determination extensometer
- Procured CMOD displacement transducer for measurement of crack opening
- Procured computational software's SAP2000, ETBAS, SAFE 2016, PERFORM-3D
- Development of lateral load resisting system at IIT Delhi
- Development of pseudo-dynamic test (PsD) facility at IIT Delhi

ADMINISTRATIVE

Department Level

- 2021 (April)- Till date: Departmental meeting coordinator
- 2021 (Feb)- Till date: Lab in charge Building Materials (Concrete)
- 2020 (July)- Till date: Coordinator for the development of the Dual degree curriculum
- Faculty advisor for the M. Tech Structure
 - ✓ 2020-Batch
 - ✓ 2019-Batch
- 2019 (July)- Till date: Program coordinator for M.Tech

Institute Level

2021 (May)- Till date: Campus Sustainability Committees
✓ Waste Management

OUTREACH ACTIVITIES

- 2019- Organized one day workshop on *Computational Mechanics*
- 2019- Organized two days workshop on *Non-linear Modelling Techniques*

INVITED LECTURES

- 2022: Invited Speaker at one-week AICTE Sponsered Induction/Refresher Program on "Repair, Rehabilitation and Retrofitting of RCC Structures" *Annasaheb Dange College of Engineering and Technology (ADCET), Ashta, Maharashtra, India.*
- 2021: Invited Speaker at one-week AICTE Sponsered ATAL Faculty Development Program on "Earthquake Resistant Design and Construction Practices" *Rajiv Gandhi Proudyogiki Vishwavidyalaya (RGPV), Bhopal, Madhya Pradesh, India.*
- 2021: Invited Speaker at one-day consulting engineers meet organized by Association of Consulting Civil Engineers (India) "Evolution of Design and Role of Construction Materials & Practice" Annamacharya Institute of Technology & Sciences, *Tirupati, Andhra Pradesh, India.*
- 2021: Invited Speaker at one-week AICTE Sponsered Short Term Training Programme (STTP) on "Repair, Rehabilitation and Retrofitting Techniques of Reinforced Concrete Structures" *Srinivasa Ramanujan Institute of Technology (SRIT), Ananthapuramu, Andhra Pradesh, India.*
- 2021: Invited Speaker at one-day consulting engineers meet organized by UltraTech Cement Limited "Cement: Supplementary cementitious materials and It's performance" *Hotel Bliss, Tirupati, Andhra Pradesh, India.*
- 2021: Invited Speaker at one-week TEQIP-III Sponsered Workshop on "Recent Advances in Infrastructure Technology (RAIT-2021)" National Institute of Technology Sikkim, Ravangla, Sikkim, India.
- 2020: Invited Speaker at one-week AICTE Sponsered Short Term Training Programme (STTP) on "Advance Construction Technics in Low-Cost Civil Structures for Modern Living" KKR & Ksrinstitute of Technology & Sciences, Guntur, Andhra Pradesh, India.
- 2020: Invited Speaker at one-week TEQIP-III Sponsered FDP Programme on "Recent Advances and Innovations in Design of Structures-2020" *Govind Ballabh Pant Institute of Engineering & Technology (GBPIET), Pauri Garhwal, Uttarakhand, India.*
- 2020: Invited Speaker at one-week AICTE Sponsered Short Term Training Programme (STTP) on "Seismic Analysis of Multi-Storey Buildings as per IS Codes" *Srinivasa Ramanujan Institute of Technology (SRIT), Ananthapuramu, Andhra Pradesh, India.*
- 2020: Special lecture at 4 Days "Refreshers Training Course for Andhra Pradesh Housing Engineers" *Government of Andhra Pradesh, India.*
- 2020: Invited Speaker at three-day webinar series on "Seismic Hazards and Mitigation" *ITM University, Gwalior, Madhya Pradesh, India.*
- 2020: Invited Speaker at five-day FDP on "Novel Research Developments in Civil Engineering (NRDCE)" KKR & Ksrinstitute of Technology & Sciences, Guntur, Andhra Pradesh, India.
- 2020: Invited Speaker at three-day national-level online FDP on "Rehabilitation and Retrofitting of Structures (R²S)" *Sree Vidyanikethan Engineering College (SVEC), Tirupati, Andhra Pradesh, India.*
- 2019: Invited Speaker at the GAIN course "Design of Anchorages in Concrete Construction and their Role in Structural Strengthening" *IIT Hyderabad, Kandi, Telangana, India.*

- 2018: Invited Speaker at the GAIN course "Seismic Performance Assessment of Structures through Numerical and Hybrid Simulations" *IIT Hyderabad, Kandi, Telangana, India.*
- 2017: Invited Speaker at the Frontier for Civil Engineering Research and Industry *Sharda University, Knowledge Park III, Greater Noida, India.*
- 2017: Invited Speaker at One-day workshop on Massive Open Online Courses *MVN University, Palwal, Haryana, India.*
- 2014: Keynote Speaker at the 9th Structural Engineering Convention Department of Civil Engineering, IIT Delhi (2014), Delhi, India.

CONTINUING EDUCATION PROGRAMS

Short Courses/Workshops

- Program coordinator: A 4 Days "Refreshers Training Course for Andhra Pradesh Housing Engineers" *Government of Andhra Pradesh, India*
- Program coordinator: An International Workshop on Emerging Trends in Dynamics and Earthquake Engineering *held at Department of Civil Engineering, IIT Delhi during 20-21 December 2014*

Conference

- Program coordinator: Structural Engineering Convention (SEC) 2014, *IIT Delhi, Hauz Khas, New Delhi, India*
- Conference organizer: Socio-Technological Aspects of Seismic Disaster and Mitigation (STASDM) 2022, *IIT Guwahati, Assam, India*

Training

• Technical expert: 4 Days Refreshers Training Course for Andhra Pradesh Housing Engineers, *Government of Andhra Pradesh, India*

PROFESSIONAL SERVICES

Peer Journal Editor

- Indian Concrete Journal, *ICJ*: Guest Editor for December 2022 Edition
- Indian Concrete Journal, *ICJ*: Guest Editor for October 2021 Edition

Peer Journal Reviewer (11 Nos.)

- Journal of Bridge Engineering, ASCE
- ACI Structural and Materials Journals, American Concrete Institute
- Engineering Structures, *Elsevier*
- Journal of Building Engineering, *Elsevier*
- Case Studies in Construction Materials, *Elsevier*
- Sadhana, *Springer Nature*
- Steel and Composite Structures: An International Journal, *Techno-Press*
- Advances in Concrete Construction: An International Journal, Techno-Press
- Shock and Vibration, Hindawi

- Indian Concrete Journal, ACC
- Journal of Structural Engineering, *Madras*

Memberships of Professional Societies

- Associate Member of the Institution of Engineers India (2016-)
- Member of the National Information Centre of Earthquake Engineering (2017-)
- Lifetime Member of the Indian Society of Earthquake Technology (2018)
- Member of the American Society of Civil Engineers (2016-)
- Member of the Earthquake Engineering Research Institute (2016-)
- Member of the **American Concrete Institute** (2016-)

National Advisory Committee

- International Conference on Condition Assessment, Rehabilitation & Retrofitting of Structures (CARRS 2020), *IIT Hyderabad, Kandi, Telangana, India*
- 2nd International Virtual Conference on Sustainable Construction Technologies & Advancements n Civil Engineering (ScTACE 2021), *Shri Vishnu Engineering College for Women, Bhimavaram, Andhra Pradesh, India*

PUBLICATION

Patent

P1. Combined Metallic Yielding Device, **Status**: *Filed*

Journal Publications

- J1. Bhartiya, R., Oinam, R. M., and Sahoo, D. R., (2023), "Cyclic axial stress-strain model for circular CFST columns under compression loading." *Soil Dynamics and Earthquake Engineering*, 164, 107588.
- J2. Bhartiya, R., Oinam, R. M., Sahoo, D. R., and Kumar U., (2021), "Modified confinement model for monotonic axial behavior of concrete-filled steel tubular columns." *Journal of Constructional Steel Research*, 180, 106570.
- J3. Karaiya, B. K., Oinam, R. M., Sahoo, D. R., and Gupta, A., (2020), "Lateral cyclic performance of a CFRP retrofitted two-story RC frame with open ground story." *Bulletin of Earthquake Engineering*, 18(13), 5919–5939.
- J4. Karki, P., Oinam, R. M., and Sahoo, D. R. (2020), "Evaluation of seismic strengthening techniques for non-ductile soft-story RC frame." *Advances in Concrete Construction (ACC)*, 9(4), 423-435.
- J5. Oinam, R. M., Kumar, P. C. A., and Sahoo, D. R. (2019), "Cyclic performance of steel fiberreinforced concrete exterior beam-column joints." *Earthquakes and Structures*, 16(5), 533-546.
- J6. Oinam, R. M., and Sahoo, D. R. (2019), "Using metallic dampers to improve seismic performance of soft-story RC frames: Experimental and numerical study." *Journal of Performance of Constructed Facilities (ASCE)*, 33(1), 04018108-18.
- J7. Oinam, R. M., and Sahoo, D. R. (2018), "Numerical evaluation of seismic response of soft-story RC frames retrofitted with passive devices." *Bulletin of Earthquake Engineering*, 16(2), 983–1006.
- J8. Oinam, R. M., and Sahoo, D. R. (2017), "Seismic rehabilitation of damaged reinforced concrete frames using combined metallic yielding passive devices." *Structure and Infrastructure Engineering*, 13(6), 816-830.
- J9. Oinam, R. M., Sahoo, D. R., and Sindhu, R. (2014), "Cyclic response of non-ductile RC frame with

steel fibers at beam-column joints and plastic hinge regions." *Journal of Earthquake Engineering*, 18(6), 908–928.

- J10. Oinam, R. M., Sugumar, R., and Sahoo, D. R. (2017), "A comparative study of seismic performance of RC frames with masonry infills", *Procedia Engineering*, 173, 1784–1791.
- J11. Oinam, R. M., and Sahoo, D. R. (2015), "Enhancement of lateral capacity of damaged non-ductile RC frame using combined-yielding metallic damper." *The Indian Concrete Journal*, 89(1), 80–86.
- J12. Oinam, R. M., and Sahoo, D. R. (2015), "Retrofitting of damaged RC frame using metallic yielding damper." *The Bridge and Structural Engineer, Indian National Group of International Association of Bridge and Structural Engineering (ING-IABSE)*, 45(1), 85–93.
- J13. Sowmiya M. and Oinam, R. M. (0000), "Seismic performance evaluation of concentrically braced frame with zipper columns." *Engineering Structures.* **(Under Review)**
- J14. Sharma M. and Oinam, R. M. (0000), "Seismic performance evaluation of short core BRB: Experimental and Numerical." *Computers & Structures.* (*Under Review*)
- J15. Saranya R., Oinam, R. M. and Ganguli A. (0000), "Seismic assessment and rehabilitation of corroded RC structures: Experimental case study," *Journal of Earthquake Engineering.* (Under Review)
- J16. Taraithia S. S., Sahoo, D. R., Kumar, P. C. A., and Oinam, R. M., (0000), "Study on the Cyclic Behavior of Shear and Flexural Yielding Metallic Dampers." *Journal of Constructional Steel Research.* (Under Review)
- J17. Oinam, R. M., Kumar, P. C. A., and Sahoo, D. R. (0000), "Cyclic Behavior of Concrete Coupling Beams with Double Layer Reinforcement Layouts." *ACI Structural Journal.* (*Under Review*)

Book Chapter

- B1. Oinam, R. M., Kumar, P. C. A., Sahoo, D. R., and Maran, K., (2018), "Cyclic behavior of reinforced concrete coupling beams" *Recent Advances in Structural Engineering*, Volume: I, pp 1063-1072, Springer.
- B2. Oinam, R. M., and Sahoo, D. R., (2018), "Numerical evaluation of cyclic performance of damaged RC frames using passive devices" *Recent Advances in Structural Engineering*, Volume: II, pp 687-697, Springer.
- B3. Oinam, R. M., and Sahoo, D. R. (2015), "Enhancement of lateral capacity of damaged non-ductile RC frame using combined-yielding metallic damper" *Advances in Structural Engineering: Materials,* Volume: III, pp 2157-2167, Springer.

Conference Proceedings

- C1. Lolla, S., and Oinam, R.M., (2022), "Evaluation and prediction of tensile strength of steel fiber concrete" *Proceedings of the 17th Symposium on Earthquake Engineering (17SEE)*, Roorkee, India.
- C2. Abhilash M., Bhartiya, R., Oinam, R.M., and Sahoo, D. R. (2022), "Comparative study on mitigation of soft storey effects by FRP wrapping and addition of shear-walls" *Proceedings of the Socio-Technological Aspects of Seismic Disaster and its Mitigation (STASDM)*, Guwahati, India.
- C3. Nongthombam, M.S., Oinam, R.M., and Rahman, T. (2022), "Probabilistic Seismic Hazard Assessment of Imphal City" *Proceedings of the Socio-Technological Aspects of Seismic Disaster and its Mitigation (STASDM)*, Guwahati, India.
- C4. Oinam, R.M., and Nongthombam, M.S. (2022), "Performance-based design of buckling-restrained braced frames" *Proceedings of the Socio-Technological Aspects of Seismic Disaster and its Mitigation (STASDM)*, Guwahati, India.

- C5. Pandikkadavath, M. S., and Oinam, R.M. (2022), "Influence of response reduction factor on seismic drift response of buckling restrained braced frames" *Proceedings of the Socio-Technological Aspects of Seismic Disaster and its Mitigation (STASDM)*, Guwahati, India.
- C6. Oinam, R.M., Nadimpally, M. K., and Kunaparaju, P. V. (2020), "Performance-based plastic designed for buckling-restrained braced frames" *Proceedings of the 17th World Conference on Earthquake Engineering (17WCEE)*, Sendai, Japan.
- C7. Rahul, B., Sahoo, D. R., and Oinam, R. M. (2020), "Influence of length-to-depth ratio on monotonic compression behavior concrete-filled tubular columns" *Proceedings of the international federation for structural concrete (FIB) symposium*, Shanghai, China.
- C8. Pandikkadavath, M. S., Mangalathu, S., Oinam, R. M., Kumar, P. C. A., Sahoo D. R. and Krishnan N. M. A. (2020), "Drift response evaluation of buckling-restrained braced frames (BRBFs) under sequential seismic disturbances" *Proceedings of the international conference on Materials, Mechanics and Structures (ICMMS)*, Calicut, India.
- C9. Pandikkadavath, M. S., Mangalathu, S., Oinam, R. M., Kumar, P. C. A., Sahoo D. R. and Krishnan N. M. A. (2020), "Effect of response modification factor on main shock-after shock (MS-AS) seismic response of buckling restrained braced frames (BRBFS)" *Proceedings of the Indian Structural Steel Conference (ISSC)*, Hyderabad, India.
- C10.Pandikkadavath, M. S., and Oinam, R. M. (2019), "Effect of response reduction factor *R* on seismic drift response of buckling restrained braced frames" *Proceedings of the Innovative Trends in Civil Engineering for Sustainable Development (ITCSD)*, Warangal, India.
- C11.Oinam, R. M., Kumar, P. C. A., and Sahoo, D. R. (2018), "Effectiveness of steel fiber in external beam column joints under cyclic loading" *Proceedings of the 16th Symposium on Earthquake Engineering (16SEE)*, Roorkee, India.
- C12.Oinam, R. M., and Sahoo, D. R. (2018), "Pseudo-dynamic testing of RC frame with soft-story strengthened using metallic dampers" *Proceedings of the 11th National Conference on Earthquake Engineering (11NCEE)*, Los Angeles, CA USA.
- C13.Oinam, R. M., Karaiya, B. K., Sahoo, D. R., Gupta, A., and Sahoo V. (2018), "Seismic rehabilitation of damaged shear-critical columns of RC frame using CFRP jacketing" *Proceedings of the 16th European Conference on Earthquake Engineering (16ECEE)*, Thessaloniki, Greece.
- C14.Oinam, R. M., and Sahoo, D. R. (2016), "Numerical evaluation of cyclic performance of damaged RC frames usings passive devices." *Proceedings of the 10th Structural Engineering Convention (SEC 2016)*, Chennai, India.
- C15. Oinam, R. M., Kumar, P. C. A, Sahoo, D. R., and Maran, K. (2016), "Cyclic behavior of retrofitted reinforced concrete coupling beams" *Proceedings of the 10th Structural Engineering Convention (SEC 2016)*, Chennai, India.
- C16. Oinam, R. M., and Sahoo, D. R. (2017), "Pseudo-dynamic testing of large-scale reinforced concrete frame with open ground storey." *Proceedings of the Sixteenth World Conference on Earthquake Engineering (16WCEE)*, Santiago, Chile.
- C17. Oinam, R. M., and Sahoo, D. R. (2016), "A comparative study of seismic performance of RC frames with masonry infills." *Proceedings of the Eleventh International Symposium on Plasticity and Impact Mechanics (IMPLAST 2016)*, Delhi, India.
- C18. Oinam, R. M., and Sahoo, D. R. (2015), "Analytical prediction of cyclic performance of RC frame structures." *Proceedings of the Tenth Pacific Conference on Earthquake Engineering (10PCEE)*, Sydney, Australia.
- C19. Oinam, R. M., and Sahoo, D. R. (2014), "Enhancement of lateral capacity of damaged non-ductile

RC frame using combined-yielding metallic damper." *Proceedings of the 9th Structural Engineering Convention (SEC 2014)*, Delhi, India.

C20. Oinam, R. M., and Sahoo, D. R. (2014), "Cyclic response of damaged non-Ductile SFRC frame fitted with metallic damper." *Proceedings of the 15th Symposium on Earthquake Engineering (15SEE)*, Roorkee, India.

PERSONAL INFORMATION

- Date of Birth: March 23, 1989
- Gender: Male
- Nationality: Indian

-DR. ROMANBABU OINAM January 03, 2023

RESUME

SIGNIFICANT CONTRIBUTION IN THE FIELD OF EARTHQUAKE ENGINEERING



Ph.D Work

8	Roof Drift (%) 9.82 0.46 0.46 0.92 1500

M.Tech Work

RC Beam-Column	Steel Fiber Beam-	Polypropylene Fiber	Results
Joint	Column Joint	Beam-Column Joint	
	STE BIS	PF BC RODET 3 ILLS	

Post Ph.D. Work



RESUME

5	Concentric brace frame with Zipper column		O 1 dowy
6	Evaluation of short core BRB	3.60m 3.86 + 2.m	Provide the second seco
7	Rehabilitation of corroded RC structures		PRACLITY CARVES
