

Tamizharasi G.

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EDUCATION

Course	Institute/ University	Year
Ph.D.	Indian Institute of Technology Madras	2018
M.Tech. (Structural Engineering)	National Institute of Technology Karnataka, Surathkal	2012
B.Tech. (Civil Engineering)	Pondicherry Engineering College, Puducherry	2010

AREAS OF INTEREST

- (1) Earthquake Engineering
- (2) Structural Dynamics
- (3) Design of Reinforced Concrete Structures

RESEARCH WORK

Course	Title	Description
Ph.D.	Mitigation of Seismic Lateral-Torsional Response in Plan Unsymmetric Buildings	Torsion in buildings is attributed to poor structural configuration in plan; it arises from both <i>torsional eccentricity</i> and <i>torsional flexibility</i> . Usually, building code provisions focus on torsional effects on buildings only due to <i>torsional eccentricity</i> . This study examined torsional effects arising from <i>both</i> of these. Buildings with <i>torsional eccentricity</i> (especially buildings with large eccentricity) and <i>torsional flexibility</i> (whose fundamental mode is a torsional mode) demand large deformations in vertical elements resisting lateral loads along the periphery of the building, and cause brittle failure owing to lack of sufficient energy dissipation capacity in the structural elements. The present study provided limits on plan eccentricity to mitigate negative inelastic effects of torsion, rather than seeking to design for them.
M.Tech	Development and Testing of Magnetorheological fluid for making Seismic Dampers	An experimental study was conducted with a newly constructed Capillary Tube Viscometer to test Magnetorheological (MR) fluid in presence and absence of magnetic field; the sedimentation property of the fluid was studied. Such fluids may be used for making semi-active control devices that can control seismic demand in buildings under earthquake shaking.
B.Tech	Self-Compacting Concrete incorporating High Volume Fly ash	Self-compacting concrete can be made more affordable for the construction market by replacing high volumes of Ordinary Portland cement by fly ash.

PUBLICATIONS

Journal Publications

- (1) Tamizharasi,G., and Murty,C.V.R., (2022), "Identifying Torsional Eccentricity in Buildings Without Performing Detailed Structural Analysis", *Earthquakes and Structures*, Techno Press 23(3), pp 283-295, September 2022. DOI: <https://doi.org/10.12989/eas.2022.23.3.283>
- (2) Tamizharasi,G., Prasad,A.M., and Murty,C.V.R., (2021), "Lateral-Torsional Seismic Behaviour of Plan Unsymmetric Buildings", *Earthquakes and Structures*, Techno Press 20(3), pp 239-260, March 2021. DOI: <https://doi.org/10.12989/eas.2021.20.3.239>
- (3) Tamizharasi,G., Prasad,A.M., and Murty,C.V.R., (2017), "Limiting Twisting During Earthquakes in Buildings with Unsymmetrical Stiffness in plan - Elastic Study", *Indian Concrete Institute Journal*, 18(1), pp 20-26, April-June 2017
Awarded the **Best Paper Published in ICI Journal**, at the 35th Annual General Body Meeting of the Indian Concrete Institute and 2018 Awards Function, NIMHANS Convention Center, Lakkasandra, Bengaluru, 22 September 2018
- (4) Tamizharasi,G, Manohar,A.K, Sengupta,K., Venkataramana,K. and Umesh,G., (2012), "Magnetorheological Dampers - An Overview," *International Journal of Earth Sciences and Engineering*, 05(4), pp 1068-1072, August 2012
- (5) Manohar,A.K., Sengupta,K., Tamizharasi,G. and Gogoi,I., (2012), "Earthquake Vulnerability Assessment of Buildings in Guwahati," *International Journal of Earth Sciences and Engineering*, 05(4), pp 618-623, June 2012

Conference Proceedings

- (1) Tamizharasi,G., Mandala,A., Gashikanti,D., and Suthar,P., (2022), "Effect of H-shaped Plan Geometry on Lateral-Torsional Response of Buildings under Earthquake Shaking - An Elastic Study", in the proceedings of the 4th *Structural Integrity Conference and Exhibition, SICE 2022 (An International Conference)*, 14-16 December 2022, IIT Hyderabad, Kandi, India.
- (2) Tamizharasi,G., and Harshit,M.S., (2022), "Code Provisions to Contain Floor Flexibility in RC Buildings under Earthquake Shaking - An Elastic Study", in the proceedings of the 4th *Structural Integrity Conference and Exhibition, SICE 2022 (An International Conference)*, 14-16 December 2022, IIT Hyderabad, Kandi, India.
- (3) Sahim,A., Kumar,R.S., and Tamizharasi,G., (2022), "Seismic Performance of Dual System (Reinforced Concrete Frame with Shear walls) Buildings", in the proceedings of the 3rd *European Conference on Earthquake Engineering and Seismology*, 04-09 September 2022, Bucharest, Romania
- (4) Shubham,T., Kumar,R.S., and Tamizharasi,G., (2022), "Seismic Performance of SMRF Building with Open Ground Storey", in the proceedings of the 3rd *European Conference on Earthquake Engineering and Seismology*, 04-09 September 2022, Bucharest, Romania
- (5) Tamizharasi,G., Prasad,A.M., and Murty,C.V.R., (2020), "A Simple Method to Identify Torsional Flexibility in Buildings without performing Detailed Structural Analysis", *17th World Conference on Earthquake Engineering (17 WCEE)*, Paper No: C003403, 13-18 September 2020, Sendai, Japan
- (6) Tamizharasi,G., Prasad,A.M., and Murty,C.V.R., (2017), "Criticality of Controlling Seismic Torsional Response in Plan Unsymmetric Buildings", *16th World Conference on Earthquake Engineering (16 WCEE)*, Paper No: 916, CDROM, 9-13 January 2017, Santiago, Chile
- (7) Tamizharasi,G., Manohar,A.K., Sengupta,K., Venkataramana,K., and Umesh,G., (2012), "Development Of Magnetorheological Fluid For Making Seismic Dampers," *National Conference on Contemporary Civil Engineering Research & Practices (CCERP-2012)*, 20-21 April 2012, Manipal Institute of Technology, Manipal
Won the **Best Presenter Award** in *Structural Engineering* theme at the *National Conference on Contemporary Civil Engineering Research & Practices (CCERP-2012)*, Manipal Institute of Technology, Manipal
- (8) Gogoi,I., Manohar,A.K., Sengupta,K., and Tamizharasi,G., (2011), "A Comparison of Earthquake Vulnerability Assessment of Buildings in Guwahati, Kolkata and Mumbai," *National Conference on Advances in Materials and Structures, AMAS 2011*, 03-04 February 2011, Pondicherry Engineering College, Puducherry

Research Bulletin

- (1) Tamizharasi,G., Manohar,A.K., Sengupta,K., Venkataramana,K., and Umesh,G., (2012), "Testing of Fluids for Making Magnetorheological (MR) Dampers - An Experimental Study," *NITK Research Bulletin*, National Institute of Technology Karnataka, Surathkal, 21(1), pp 19-25, July 2012.

SOFT SKILLS

Commercial Technical Software: STAAD Pro, ETABS, SAP 2000, Perform 3D

- (1) Linear static and dynamic analysis
- (2) Nonlinear static and dynamic analysis

AWARDS & RECOGNITIONS

- (1) Granted *International Travel Support* (Financial Assistance) from Science & Engineering Research Board (SERB) for participating in "3rd European Conference on Earthquake Engineering and Seismology, Romania (04 September to 09 September, 2022)", New Delhi, 27 July 2022
- (2) *Gold Medal* for securing highest Cumulative Grade Point Average in M.Tech. (Structural Engineering) Program, National Institute of Technology Karnataka, Surathkal, 2012
- (3) *Chirag. K. Doshi Memorial Prize* for being poor and meritorious among all branches of final year B.Tech. Program during 2009-10, Pondicherry Engineering College, 2010
- (4) *Government of Puducherry Prize* for securing *Second Rank* in the University Examination held during 2006-10, Pondicherry University, 2011
- (5) Stood *Second* in Kannagi Government Girls Higher Secondary School, Puducherry, in Class 10 Examinations, in 2004

EMPLOYMENT HISTORY

- (1) *Assistant Professor*, Department of Civil Engineering, Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat, 04 November 2019 to till date
- (2) *Senior Scientist*, Department of Civil Engineering, Indian Institute of Technology Madras, Chennai, 28 February 2019 to 31 October 2019
- (3) *Project Officer*, Department of Civil Engineering, Indian Institute of Technology Madras, Chennai, 01 August 2017 to 27 February 2019

OTHER ACADEMIC ACTIVITIES

Organization of Courses/Faculty Development Program/STTP/Workshop/Seminar

- (1) *Organizer*, Five days Online Faculty Development Program on "Recent Trends and Future Aspects of Steel Structures, RTFAS 2021", under Center for Continuing Education, National Institute of Technology Warangal, Organized by the Department of Civil Engineering, National Institute of Technology Warangal in Collaboration with the Department of Civil Engineering, Sardar Vallabhbhai National Institute of Technology, Surat from 25 to 29 October 2021
- (2) *Organizer*, Five days Online Short Term Training Program on "Deterioration, Damage Assessment and Strengthening of Structures, DDASS 2021", under Center for Continuing Education, Sardar Vallabhbhai National Institute of Technology in association with Indian Concrete Institute, Surat Center, Organized by the Department of Civil Engineering, Sardar Vallabhbhai National Institute of Technology, Surat from 27 to 31 December 2021
- (3) Conducted an Expert Lecture by Dr. Najeed Sharrif, Visiting Assistant Professor, Department of Civil Engineering, NIT Warangal, on "Modelling, Analysis and Design of Water Tanks", dated from 21 to 22 February 2022 at 4 to 6 pm.
To apply the knowledge gained in the course named Theory of Plates and Shells (AM718), for solving the group assignment given as a part of tutorial evaluation.

- (4) *Organizer*, Five days Online Program for Faculty Member Development on “Earthquake Resistant Design of RC Buildings, ERDB 2022”, Organized by the Department of Civil Engineering, Sardar Vallabhbhai National Institute of Technology in association with the Center for Continuing Education, SVNIT Surat, from 04 to 08 April 2022

Expert Lectures Delivered in Faculty Development Program/STTP/Workshop/Seminar

- (1) Delivered lecture in Anna University Sponsored Six days Online Faculty Development Program on “CE8502 – Structural Analysis I” in the title *Unit 3 - Moment Distribution Method* on 16 June 2021, Organized by the Department of Civil Engineering, Sri Venkateswara College of Engineering, Pennalur from 14 to 19 June 2021
- (2) Delivered lecture in AICTE Training and Learning (ATAL) Academy Sponsored Five Days Online Faculty Development Program on “Advances in Earthquake Engineering” in the title *Behaviour of Floor Diaphragms under Earthquake Shaking* on 28 July 2021, Organized by the Department of Civil Engineering, LBS College of Engineering, Kasargod from 26 to 30 July 2021
- (3) Delivered lecture in AICTE Training and Learning (ATAL) Academy Sponsored Five Days Online Faculty Development Program on “Earthquake Analysis and Design using Latest Civil Engineering Software’s” in the title *Performance Assessment of RC Buildings using SAP 2000 and Perform 3D* on 22 October 2021, Organized by the Department of Civil Engineering, Coimbatore Institute of Technology, Coimbatore from 18 to 22 October 2021
- (4) Delivered lecture in a Five days Online Faculty Development Program on “Recent Trends and Future Aspects of Steel Structures”, under Center for Continuing Education, National Institute of Technology Warangal, in the title *Earthquake Resistant Design* on 28 October 2021, Organized by the Department of Civil Engineering, National Institute of Technology Warangal in Collaboration with the Department of Civil Engineering, Sardar Vallabhbhai National Institute of Technology, Surat from 25 to 29 October 2021
- (5) Delivered lecture in a Five days Online Short Term Training Program (STTP) on “Deterioration, Damage Assessment and Strengthening of Structures (DDASS)”, in the title *Performance Assessment of Buildings* on 28 December 2021, Organized by the Department of Civil Engineering, Sardar Vallabhbhai National Institute of Technology, in association with Center for Continuing Education, SVNIT Surat and ICI Surat Center, Surat from 27 to 31 December 2021
- (6) Delivered lecture in a Ten days Online Faculty Development Program on “Modelling and Seismic Analysis of Reinforced Concrete Buildings”, in the title *Earthquake Behaviour of RC Buildings* on 22 March 2022, Organized by the Department of Civil Engineering, National Institute of Technology Warangal in association with Electronics and ICT Academy, National Institute of Technology, Warangal from 21 to 31 March 2022
- (7) Delivered **four different lectures** in a Five days Online Program for Faculty Member Development on “Earthquake Resistant Design of RC Buildings, ERDB 2022”, in the titles: (i) *Earthquake Hazard*, (ii) *Design Earthquake Lateral Force on RC Buildings*, (iii) *Earthquake Resistant Design of Beam-Column Joints* and (iv) *Earthquake Resistant Design of RC Buildings*, Organized by the Department of Civil Engineering, Sardar Vallabhbhai National Institute of Technology in association with the Center for Continuing Education, SVNIT Surat, from 04 to 08 April 2022
- (8) Delivered two lectures in Anna University Sponsored Six days Online Faculty Development Program on “CE8301 – Strength of Materials I” in the title *Unit 3 – Deflection of beams: (a) Area Moment Method and (b) Conjugate Beam Method for computation of slope and deflection of determinate beams* on 14 July 2022, Organized by the Department of Civil Engineering, Sri Venkateswara College of Engineering, Pennalur from 11 to 16 July 2022

Proposed New Courses

- (1) Proposed the course named, “CEST210: Nonlinear Analysis of Frame Buildings”, for M.Tech. Curriculum in Structural Engineering Section, Department of Civil Engineering, Sardar Vallabhbhai National Institute of Technology (Academic Year 2022-2023).

Participation in Courses

- (1) Participated in one-week course on *Seismic Damage Mitigation of Structures (SDMS-2020)* conducted by the *CSIR-Structural Engineering Research Centre, Chennai*, 02-04 December 2020
- (2) Participated in the *TEQIP-III Sponsored one-week Short Term Training Program on Pedagogy & Research Methodology (PRM 2019)* conducted by the *Sardar Vallabhbhai National Institute of Technology, Surat*, 18-22 November 2019
- (3) Attended an expert lecture delivered under "*Condition Survey and NDT for RCC Structures*" in the title *Materials and Methodology for repair/rehabilitation/retrofitting of Structures* by Er. Sharma, Organized by UltraTech and ICI, 25 September 2021
- (4) Attended a webinar on "*How to Publish Scholarly Books in Science and Technology*", Organized by Taylor and Francis Group, 22 September 2021
- (5) Attended a webinar on "*Sustainability of Heritage Structures, Issues and Challenges – Case Study of Some Important Monuments of Odisha*", Organized by UltraTech Cement Ltd., 25 June 2022
- (6) Attended a webinar on "*The Critical Foundations of Signature Bridge, Delhi*", Organized by UltraTech Cement Ltd., 20 August 2022
- (7) Attended a webinar on "*Monitoring the Lifecycle of Concrete Structures using Piezo Sensors*", Organized by UltraTech Cement Ltd., 27 August 2022

Membership of Professional Bodies

- (1) ICI Life Member, Indian Concrete Institute, Chennai, from September 2021 to till date

Contribution as External Examiner, Reviewer, Member of National Panel

- (1) External Examiner for M.Tech. Project Viva-voce examination (Phase I) at NIT Trichy (22 December 2020) of 11 M.Tech. Thesis
- (2) External Examiner for M.Tech. Project Viva-voce examination (Phase II) at NIT Trichy (01 June 2021) of 11 M.Tech. Thesis
- (3) Member of *National Advisory Committee* and Reviewer of two papers for the conference *International Conference on Advancements and Recent Trends in Civil Engineering (ICART-2021)*, Organized by the Department of Civil Engineering, Mangalam College of Engineering, Ettumanoor, 27-28 May 2021
- (4) Reviewer in the Scopus indexed *Lecture Notes in Civil Engineering (LNCE)* of Springer Nature for 8 papers received from conference *ICSBMC 2021*, Organised by Sardar Vallabhbhai National Institute of Technology, Surat, 4-6 February 2021
- (5) Reviewer for two technical papers in the *International Conference on Sustainable Technology and Advanced Computing in Electrical Engineering*, Organised by Sardar Vallabhbhai National Institute of Technology, Surat, 11-12 November 2021
- (5) Session Chair for five technical paper presentation in the *International Conference on Sustainable Technology and Advanced Computing in Electrical Engineering*, Organised by Sardar Vallabhbhai National Institute of Technology, Surat, 11-12 November 2021
- (6) Appointed as Referee to Evaluate the M Tech (Research) Thesis titled "Sequential Search Strategy for Satisfaction of Serviceability Limit States" submitted by Shreekiran (183ST001) to the Department of Civil Engineering, NITK Surathkal on 01 March 2022
- (7) Session Chair for five technical papers presentation of structural engineering theme (on 25 March 2022) in the *International Virtual Conference on "Smart and Sustainable Development of Urban Green Infrastructure in India and Canada" (SSDUGI-2022)* on 25 and 26 March 2022, conducted by Department of Civil Engineering, National Institute of Technology, Tiruchirappalli (NITT) along with Shastri Indo-Canadian Institute (SICI)
- (8) Reviewer for the Technical Research Paper entitled "Comparison of Rapid Visual Screening Methods for Assessing their suitability in Indian Conditions" submitted by Indian Concrete Journal, 02 June 2022
- (9) Reviewer for the Technical Research Paper (SCENG-1216) entitled "Evaluation of Low Strength Concrete Properties in the Assessment of Existing Old Concrete Buildings using Nondestructive and Core Test Results" submitted by Practice Periodical on Structural Design and Construction, 02 July 2022

- (10) Reviewer for the Technical Research Paper entitled "Interaction Diagrams for Rectangular Columns with High Strength Concrete" submitted by Indian Concrete Journal, 26 September 2022

IN-PLANT TRAINING

Underwent industrial in-plant training:

- (1) *ISRO*, Bengaluru, for 61 days (9 May to 8 July 2012)
- (2) *Chennai Port Trust*, Chennai, for 10 days (20 to 29 December 2008)
- (3) *JENO Maran Builders*, Puducherry, for 48 days (15 days during June 2008, and 33 days from 26 May to 27 June 2009)
- (4) *J.M.M. Builders*, Puducherry, for 15 days (26 May to 09 June 2008)

EXTRA-CURRICULAR ACTIVITIES

- (1) Coordinator, *Structural Research Forum*, Structural Engineering Laboratory, IIT Madras 2014-2015
- (2) Attended the *Earthquake Engineering Literature Survey Workshop* for the Postgraduate Students conducted by *National Information Centre of Earthquake Engineering*, Indian Institute of Technology Kanpur, Kanpur, 05-14 June 2014
- (3) Participated in the Tutorial Program on *Seismic Design and Testing* conducted by the *Central Power Research Institute*, Bengaluru, 01 March 2013
- (4) Participated in the *Winter IISc National Training for Entry to Research (Winter) 2009* organised by the Indian Institute of Science, Bengaluru, 28 December 2009 to 02 January 2010
- (5) Participated in model making contest *GEOFEST 2009* in *Government College of Technology*, Coimbatore, 15 & 16 March 2009
- (6) Presented a paper on "Long Term Energy Needs-A Perspective" at the *National Level Students Technical Symposium* organised by the Annamalai University, Chidambaram, 29 February and 1 March 2008

Tamizharasi G.