

# PARTHIBAN KATHIRVEL

Senior Assistant Professor  
School of Civil Engineering  
SASTRA Deemed University  
Thanjavur - 613 401, India.

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+91 70103 12016 (M)

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## CAREER OBJECTIVE

To establish a meaningful and successful career as a faculty to students and help them embark the glorious career path in civil engineering stream.

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## EDUCATIONAL PROFILE

**Doctorate of Philosophy (Ph.D.) - 2017**

**Strength and Durability Characteristics of Geopolymer Concrete and the Influence of Recycled Aggregates**

SASTRA University, Thanjavur, Tamil Nadu.

**Master of Business Administration (M.B.A.) - 2011**

**Technology Management**

Anna University, Chennai, Tamil Nadu.

**Master of Engineering (M.E.) - 2008**

**Computer Methods & Applications in Structural Engineering**

Coimbatore Institute of Technology, Coimbatore, Tamil Nadu.

**Bachelor of Technology (B.Tech.) - 2006 Civil Engineering**

SASTRA University, Thanjavur, Tamil Nadu.

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## PROFESSIONAL EXPERIENCE

Working as "*Senior Assistant Professor*" in School of Civil Engineering, SASTRA Deemed University, Thanjavur from 2021 to Till Date.

Working as "*Assistant Professor*" in School of Civil Engineering, SASTRA Deemed University, Thanjavur from 2009 to 2021.

Worked as “**Structural Engineer**” in the Precast Engineering Division of TRC Worldwide Engineering, Chennai from July 2008 to June 2009.

#### MEMBERSHIP IN PROFESSIONAL BODIES

The Institution of Engineers (India)	–	M1693667
Indian Society of Systems for Science & Engineering (ISSE)	–	LM05513
Indian Geotechnical Society (IGS) – Thanjavur Chapter	–	IGSTJM0009
Indian Concrete Institute (ICI)	–	12283
Institute of Scholars (InSc)	–	InSC20203472

#### AWARDS/HONOURS/RECOGNITIONS RECEIVED

- Received the “**Young Researcher Award**” for the Year 2020 from *Institute of Scholars* for the Publication “**Sustainable Development of Geopolymer Binder using Sodium Silicate Synthesized from Agricultural Waste**” in *Journal of Cleaner Production* with an **Impact Factor of 9.297**.
- Selected as an “**Academic Committee Member**” for the **2<sup>nd</sup> International Expert Forum on the New Progress in Petroleum Geology and Exploration & Development Conference (NPPGED 2021)** to be held on November 12-14, 2021 in Xi’an, China.
- **Guest Editor for Volume 80 of IOP Conference Series: Earth and Environmental Science.**
- **Serving as “Academic Editor” in the Editorial Board of PLOS ONE journals.**

#### NATIONAL/INTERNATIONAL CONFERENCE PRESENTATION DETAILS

1. Brungi Sri Vibhav, Nalluru Swaroop, Chereddy Yeswanth Reddy, **Parthiban Kathirvel**. “Evaluation of damage index and seismic vulnerability of an existing high-rise building”, International Conference on Advances in Construction Materials and Structures (ICCMS-2021), 15 – 17 December, 2021.
2. Sathya Bhaarathi C R, **Parthiban Kathirvel**. “Development of Ternary Blended Rubberized Cement Mortar”, International Conference on Advanced Materials Behavior & Characterization (ICAMBC\_2020), 18 – 23 July, 2020.
3. Ram Prasad K, Murali G, **Parthiban Kathirvel**, Haridharan M K, Karthikeyan K. “Experimental Study on Functionally Graded Steel Fibre Reinforced Preplaced Aggregate Concrete”, 3<sup>rd</sup> International Conference on Civil Engineering and Infrastructural Issues in Emerging Economies (ICCIEE 2018), 16 – 17 March

2018.

4. Gayathri. R, Murali. G, **Parthiban Kathirvel**, Haridharan M K, Karthikeyan K. A “Four Novel Energy Pattern Factor Method for Computation of Weibull Parameter in Impact Strength Reliability of Fibre-Reinforced Concrete”, 3<sup>rd</sup> International Conference on Civil Engineering and Infrastructural Issues in Emerging Economies (ICCIEE 2018), 16 – 17 March 2018.
5. Bharathi Murugan R, Gayke A, Natarajan C, Haridharan M.K, Murali G, **Parthiban K**, “Influence of treated natural jute fiber on flexural properties of reinforced concrete beams”, 3<sup>rd</sup> International Conference on Civil Engineering and Infrastructural Issues in Emerging Economies (ICCIEE 2018), 16 – 17 March 2018.
6. George Amal Anik S, **Parthiban Kathirvel**, Murali G, “Effect of Utilizing Prosopis Juliflora Ash as Cementitious Material”, 3<sup>rd</sup> International Conference on Civil Engineering and Infrastructural Issues in Emerging Economies (ICCIEE 2018), 16 – 17 March 2018.
7. Naveen Kumar N, **Parthiban Kathirvel**, Murali G, Haridharan M.K., “Effect of Treatment Methods on the Strength Properties of Recycled Aggregate Concrete” 3<sup>rd</sup> International Conference on Civil Engineering and Infrastructural Issues in Emerging Economies (ICCIEE 2018), 16 – 17 March 2018.
8. Rashmi Gopalan, **Parthiban Kathirvel**, Manju Thangavelu and Saravana Raja Mohan Kaliyaperumal, "Bond characteristics of reinforcing steel embedded in geopolymer concrete", International Conference on Civil Engineering and Infrastructural Issues in Emerging Economies (ICCIEE 2017), 17 – 18 March 2017.
9. Ambily PS, Vignesh S, **Parthiban K** and Prabhu S, “Mechanical Properties of High Strength Geopolymer Concrete”, International Conference on Sustainable Civil Infrastructure 2014 (ICSCI 2014) © ASCE India Section, 17-18 October 2014.
10. **Parthiban K** and Saravanaramohan K, “Mechanical Behaviour of Slag Induced Flyash Based Geopolymer Concrete - A Greener Substitute for Cement Concrete”, International Conference on Green Technology (ICGeT-2013), 26-27 July 2013.
11. **Parthiban K**, Saravanaramohan K and Kavimukilan G, “Flexural Behaviour of Slurry Infiltrated Fibrous Concrete (SIFCON) Composite Beams”, International Conference on Civil Engineering and Infrastructural Issues in Emerging Economies (ICCIEE-2013), 27-28 February 2013.
12. **Parthiban K**, Jayaguru C and Subramanian K, “Shear Upgradation of Captive Columns in Partially Infilled RC Frames using GFRP Composites”, International Conference on Innovations in Building Materials, Structural Designs and Construction Practices (IBMSDCP-2008), 15-17 May 2008.

## INVITED LECTURES

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1. Delivered a lecture on topics “**Evaluation of Earthquake Forces as per IS1893**” and “**Lessons Learnt from Past Earthquakes**” in Anna University Sponsored FDTP on “**Structural Dynamics and Earthquake Engineering**” from 18.11.2019 to 23.11.2019 held at Sona College of Technology, Salem, Tamil Nadu.
2. Delivered a lecture on topic “**Recycled Aggregate Concrete – A Way towards Sustainable Construction Techniques**” in One Week AICTE & ISTE Sponsored Online STTP on “**Latest Innovations and Technological Advancements in Concrete Technology (Phase – II)**” from 23.11.2020 to 28.11.2020 held at Kalasalingam Academy of Research and Education, Anand Nagar, Krishnankoil – 626 126.
3. Delivered a lecture on topic “**Geopolymers – A Sustainable Alternative to Cement-Based Materials**” in One Week AICTE & ISTE Sponsored Online STTP on “**Latest Innovations and Technological Advancements in Concrete Technology (Phase – III)**” from 07.12.2020 to 12.12.2020 held at Kalasalingam Academy of Research and Education, Anand Nagar, Krishnankoil – 626 126.

## WORKSHOP / CONFERENCE / FDP ATTENDED

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1. Attended an **International Conference on Advances in Construction Materials and Structures (ICCMS-2021)** during **15<sup>th</sup> – 17<sup>th</sup> December, 2021** held through online organized by National Institute of Technology, Calicut, India.
2. Attended a **One week Online Faculty Development Programme on IoT Applications in Civil Engineering** during **29<sup>th</sup> June – 3<sup>rd</sup> July 2020** held at Sri Ramakrishna Institute of Technology, Coimbatore.
3. Attended an **E-Workshop on Earthquakes – Effects on Structures and Futuristic Mitigation Techniques** on **27<sup>th</sup> June 2020** organised by Futuristic Technologies of India.
4. Attended a **Webinar on Seismic Analysis Methods - ESA and RSA** on **25<sup>th</sup> June 2020** held at St. Joseph’s Institute of Technology, Chennai.
5. Attended an **Online Two week International Short Term Training Programme on Advances in Technology and Management for Civil Engineering** during **23<sup>rd</sup> June-3<sup>rd</sup> July 2020** held at K.D.K. College of Engineering, Nagpur.
6. Attended a **One week Online Faculty Development Programme on Recent Advancements in Concrete Technology** during **22-26<sup>th</sup> June 2020** held at BMS College of Engineering, Bengaluru.
7. Attended a **One week Online Faculty Development Programme on Recent**

- Trends in Civil Engineering (RTCE-2K20)** during **16-20<sup>th</sup> June 2020** held at Kongunadu College of Engineering and Technology, Thottiam.
8. Attended a **One week Online Faculty Development Programme on Structural Health Monitoring and its Implications** during **15-19<sup>th</sup> June 2020** held at BMS College of Engineering, Bengaluru.
  9. Attended **Webinar on Advanced Techniques in Civil Engineering** during **15-19<sup>th</sup> June 2020** held at PSG Institute of Technology and Applied Research, Coimbatore.
  10. Participated in a **One Day Workshop on Python Programming** on 22<sup>nd</sup> June 2019 held at SASTRA University, Thanjavur organized by Teaching Learning Centre (ICT) at IIT Bombay.
  11. Participated in a **One Day Workshop on Lessons Learnt from Failures and Sustainability of Structures** on **24<sup>th</sup> February, 2016** held at Vels University, Chennai.
  12. Participated in a **One week Faculty Development Programme on Reliability and Systems Approach in Civil Engineering (RSACE-2015)** during **14-18 December, 2015** held at SASTRA.
  13. Participated in a **One Day Workshop on Microstructural Characterization of Structural Concrete** on **28<sup>th</sup> February, 2015** held at PSG College of technology, Coimbatore.
  14. Participated in a **Two-Week ISTE Workshop on Engineering Mechanics** conducted by Indian Institute of technology Bombay from **26<sup>th</sup> November to 6<sup>th</sup> December, 2013** held at SASTRA.

## BOOKS / CHAPTERS

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1. Parthiban Kathirvel, "**Trends in Modern Technology and Engineering: Volume 3**", *High Rise Publishers*. March 2022. ISBN No.: 979-8440792548
2. Parthiban Kathirvel, "**Development of alkali activated binders from sodium silicate powder produced from industrial wastes**", *New Materials in Civil Engineering*, Elsevier, 2020, 591-612.
3. Parthiban Kathirvel, "**Safety Risks in Underground Operations: Management and Assessment Techniques**", "*Risk, Reliability and Sustainability*", Elsevier, Accepted.
4. Sreenath Sreekumaran, Aparna Ganapathy Vilasam Sreekala, Vinod Kumar Nathan and Parthiban Kathirvel, "**Role of calcites from microbial induced biomineralization for heavy metal bioremediation of industrial effluents**", *Bioremediation of Industrial Effluents*, SPRINGER, Accepted.

## PATENTS PUBLISHED

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1. Published an Indian Patent titled “**Eco-efficient concretes with incorporation of biomass ash**” with Application No. 202241000885.
2. Published an Indian Patent titled “**A method for determining the fatigue-damaged state of a prestressed reinforced concrete beam**” with Application No. 202241021331.

## RESEARCH OUTPUT

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No. of Publications	:	29
Cumulative Impact Factor of Publications	:	60.224 (JCR2020)
h-index	:	6 (SCOPUS)
ORCID ID	:	<a href="https://orcid.org/0000-0003-4646-9827">orcid.org/0000-0003-4646-9827</a>

## REVIEWER IN JOURNALS

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1. Construction and Building Materials [ELSEVIER]
2. Journal of Materials in Civil Engineering [ASCE]
3. Environmental Earth Sciences [SPRINGER]
4. International Journal of Concrete Structures and Materials [SPRINGER]
5. Case Studies in Construction Materials [ELSEVIER]
6. Resources, Conservation and Ecology [ELSEVIER]
7. Structural Concrete [WILEY]
8. Materials Today: Proceedings [ELSEVIER]
9. European Journal of Environmental and Civil Engineering [TAYLOR & FRANCIS]
10. Structural Engineering & Mechanics [TECHNOPRESS]
11. Materials/ Construction Materials/ Sustainability [MDPI]

PUBLONS ID: [publons.com/a/1105774/](https://publons.com/a/1105774/)

## LIST OF PUBLICATIONS

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1. Arivoli Masilamani, Malathy Ramalingam, **Parthiban Kathirvel**, Murali Gunasekaran and Nikolai Ivanovich Vatin “Mechanical, Physico-Chemical and Morphological Characterization of Energy Optimised Furnace (EOF) Steel Slag as Coarse Aggregate in Concrete”, Materials 15(9) (2022) 1 – 20. **Indexed in SCIE/SCOPUS (IF: 3.623)**

2. Arathi Krishna, Saravana Raja Mohan Kaliyaperumal and **Parthiban Kathivel**. Compressive strength and impact resistance of hybrid fiber reinforced concrete exposed to elevated temperatures, *Structural Concrete* (2022), Online First. **Indexed in SCIE/SCOPUS (IF: 3.131)**
3. **Parthiban Kathirvel**, Gunasekaran Murali, Nikolai Ivanovich Vatin and Sallal R Abid. Experimental Study on Effect of Silica Fume in Self Compacting Fibrous Concrete Comprising Treated Recycled Aggregates, *Materials* 15(340) (2022) 1 – 17. **Indexed in SCIE/SCOPUS (IF: 3.623)**
4. **Parthiban Kathirvel** and Sreenath Sreekumaran. Sustainable development of ultra high performance concrete using geopolymer technology, *Journal of Building Engineering* 39 (2021) 102267. **Indexed in SCI/SCOPUS. (IF: 5.318)**
5. Hosanna Solomon Rajan and **Parthiban Kathirvel**. Sustainable Development of Geopolymer Binder using Sodium Silicate Synthesized from Agricultural Waste, *Journal of Cleaner Production*. 286 (2021) 124959. **Indexed in SCI/SCOPUS. (IF: 9.297).**
6. Sathya Bhaarathi C R, **Parthiban Kathirvel**. Development of Ternary Blended Rubberized Cement Mortar, *Materials Today: Proceedings*. 43(2) (2021) 1241 – 1245. **Indexed in SCOPUS.**
7. **Parthiban Kathirvel**, Murali Gunasekaran, Sreenath Sreekumaran, Arathi Krishna. Effect of Partial Replacement of Ground Granulated Blast Furnace Slag with Sugarcane Bagasse Ash as Source Material in the Production of Geopolymer Concrete, *Materials Science (Medziagotyra)* 26(4) (2020) 485 – 489. **Indexed in SCIE/SCOPUS. (IF: 0.617)**
8. **Parthiban Kathirvel**, George Amal Anik, Saravana Raja Mohan Kaliyaperumal. Effect of partial replacement of cement with *Prosopis Juliflora* Ash on the strength and microstructural characteristics of cement concrete, *Construction and Building Materials* 225 (2019) 273–282. **Indexed in SCIE/SCOPUS. (IF: 6.141)**
9. Asrani N P, Murali G, Abdelgader H S, **Parthiban K**, Haridharan M K, Karthikeyan K. Investigation on Mode I Fracture Behavior of Hybrid Fiber-Reinforced Geopolymer Composites, *Arabian Journal for Science and Engineering* 44 (2019) 8545-8555. **Indexed in SCIE (IF: 2.334)**
10. Murali G, Laxminadh Poka, **Parthiban K**, Haridharan M K, Siva A. Impact response of Novel Fibre-Reinforced grouted aggregate rubberized concrete, *Arabian Journal for Science and Engineering* 44 (2019) 8451-8463. **Indexed in SCIE (IF: 2.334)**
11. Neha P Asrani, Murali G, **Parthiban K**, Surya K, Prakash A, Rathika K, Uma Chandru. A feasibility of enhancing the impact resistance of hybrid fibrous geopolymer composites: Experiments and modeling, *Construction and Building Materials* 203 (2019) 56–68. **Indexed in SCIE/SCOPUS. (IF: 6.141)**

12. Ram Prasad K, Murali G, **Parthiban Kathirvel**, Haridharan M K, Karthikeyan K. Experimental Study on Functionally Graded Steel Fibre Reinforced Preplaced Aggregate Concrete, *International Journal of Engineering and Technology (UAE)*, 7(3.12) (2018), 456-458. **Indexed in SCOPUS.**
13. Naveen Kumar N, **Parthiban Kathirvel**, Murali G, Saravana Raja Mohan Kaliyaperumal. Strength Properties of Recycled Aggregate Concrete Treated with Low Concentration Acetic Acid, *International Journal of Engineering and Technology (UAE)*, 7(3.12) (2018), 403-406. **Indexed in SCOPUS.**
14. George Amal Anik S, **Parthiban Kathirvel**, Murali G. Effect of Utilizing Prosopis Juliflora Ash as Cementitious Material, *International Journal of Engineering and Technology (UAE)*, 7(3.12) (2018), 281-284. **Indexed in SCOPUS.**
15. Gayathri. R, Murali. G, **Parthiban Kathirvel**, Haridharan M K, Karthikeyan K. A Four Novel Energy Pattern Factor Method for Computation of Weibull Parameter in Impact Strength Reliability of Fibre-Reinforced Concrete, *International Journal of Engineering and Technology (UAE)*, 7(3.12) (2018), 272-280. **Indexed in SCOPUS.**
16. Bharathi Murugan R, Gayke A, Natarajan C, Haridharan M.K, Murali G, **Parthiban K.** Influence of treated natural jute fiber on flexural properties of reinforced concrete beams. *International Journal of Engineering and Technology (UAE)* 2018; 7(3): 148-52. **Indexed in SCOPUS.**
17. **Parthiban Kathirvel**, Manju Thangavelu, Rashmi Gopalan and Saravana Raja Mohan Kaliyaperumal. Bond characteristics of reinforcing steel embedded in geopolymer concrete. *IOP Conference Series: Earth and Environmental Science* 2017; 80: 012001. **Indexed in SCOPUS.**
18. Rashmi Gopalan and **Parthiban Kathirvel**. Effect of Tensile and Shear Reinforcement on the Flexural Behaviour of Reinforced Geopolymer Concrete Beams. *International Journal of Civil Engineering and Technology (IJCIET)* 2017; 8(5): 1025-33. **Indexed in SCOPUS.**
19. **Parthiban Kathirvel** and Saravana Raja Mohan Kaliyaperumal. Performance of alkali activated slag concrete under aggressive environment. *Scientia Iranica* 2018; 25(5): 2451-60. **Indexed in SCIE/SCOPUS (IF: 1.435)**
20. **Parthiban Kathirvel** and Saravana Raja Mohan Kaliyaperumal. Probabilistic modeling of geopolymer concrete using response surface methodology. *Computers and Concrete* 2017; 19(6): 743-50. **Indexed in SCIE/SCOPUS (IF: 3.948)**
21. **Kathirvel Parthiban** and Kaliyaperumal Saravana Raja Mohan. Influence of recycled concrete aggregates on the engineering and durability properties of alkali activated slag concrete. *Construction and Building Materials* 2017; 133: 65-72. **Indexed in SCI/SCOPUS. (IF: 6.141)**
22. **Parthiban Kathirvel** and Saravana Raja Mohan Kaliyaperumal. Influence of



- recycled concrete aggregates on the flexural properties of reinforced alkali activated slag concrete. *Construction and Building Materials* 2016; 102: 51-8. **Indexed in SCI/SCOPUS. (IF: 6.141)**
23. **Parthiban K** and Sruthi KS. Effect of Slag Content and Alkaline Concentration on the Moisture Absorption Characteristics of Geopolymer Concrete. *International Journal of ChemTech Research* 2015; 8(4): 1735-41. **Indexed in SCOPUS.**
24. **Parthiban K** and Vaithianathan S, Effect of kaolin content and alkaline concentration on the strength development of geopolymer concrete. *International Journal of ChemTech Research* 2015; 8(4): 1730-4. **Indexed in SCOPUS.**
25. **Parthiban K**, Saravanaramohan K and Kavimukilan G. Flexural behaviour of slurry infiltrated fibrous concrete (SIFCON) composite beams. *Asian Journal of Applied Sciences* 2014; 7(4): 232-9. **Indexed in SCOPUS.**
26. Krishnakumar K, Bhaskar S and **Parthiban K**. Evaluation of chloride penetration in OPC concrete by silver nitrate solution spray method. *International Journal of ChemTech Research* 2014; 6(5): 2676-82. **Indexed in SCOPUS.**
27. **Parthiban K** and Saravana Raja Mohan K. Effect of Sodium Hydroxide Concentration and Alkaline Ratio on the Compressive Strength of Slag Based Geopolymer Concrete. *International Journal of ChemTech Research* 2014; 6(4): 2446-50. **Indexed in SCOPUS.**
28. **Parthiban K**, Saravanaramohan K, Shobana S and Anchal Bhaskar A. Effect of Replacement of Slag on the Mechanical Properties of Flyash Based Geopolymer Concrete. *International Journal of Engineering and Technology* 2013; 5(3): 2555-9. **Indexed in SCOPUS.**
29. Saravana Raja Mohan K and **Parthiban K**. Strength and Behaviour of Fly Ash based Steel Fibre Reinforced Concrete Composite. *International Journal of Civil and Structural Engineering* 2011; 2(1): 318-28.

## COURSES HANDLED

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- Concrete Structures
- Advanced Structural Analysis
- Earthquake Resistant Structures
- Seismic Design of Structures
- Pavement Design
- Ground Improvement Techniques
- Advanced Mechanics of Solids
- Mechanics of Solids

## PERSONAL PROFILE

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Father's Name	D. KATHIRVEL
Mother's Name	K. BANUMATHI
Spouse Name	P. ABIRAMI
Date of Birth	07/03/1985
Gender	Male
Mother Tongue	Tamil
Languages Known	Tamil and English
Permanent Address	New No.: 24, Old No.: 8A, Rajarethinam Pillai Street, Woraiyur, Trichy - 620 003, Tamil Nadu, India.

## DECLARATION

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I, hereby declare that all the information furnished above is true to the best of my knowledge.

Place: Thanjavur

Date:

**(Parthiban Kathirvel)**