

P. Chandru, Ph.D.

National Postdoctoral Fellow (N-PDF),
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EDUCATION:

- **Ph.D.** at National Institute of Technology, Tiruchirappalli. (From July-2017 to July-2022) (Guided by - Dr. J. Karthikeyan)
- **M.E. Structural Engineering** at Oxford Engineering College, Tiruchirappalli, with CGPA - 8.37 (Year of passing: 2016)
- **B.E. Civil Engineering** at Parisutham Institute of Technology and Science, Thanjavur, with CGPA - 7.64 (Year of passing: 2014)
- **HSC (State board)** at Maharishi vidya mandir matriculation & higher secondary school, Thanjavur, with 70% (Year of passing: 2010)
- **SSLC (Matriculation)** at Maharishi vidya mandir matriculation & higher secondary school, Thanjavur, with 84.2% (Year of passing: 2008)

POSTDOCTORAL RESEARCH EXPERIENCE:

- **National Postdoctoral Fellow** working with Dr. Radhakrishna G. Pillai at Indian Institute of Technology Madras, Chennai. (From 02.01.2022 to till date).
- **Postdoctoral Researcher** at Indian Institute of Technology Madras, Chennai. (From 01.02.2022 to 31.12.2022).

TEACHING EXPERIENCE:

- **Assistant Professor** at P.R. Engineering College, Vallam, Thanjavur. (From 01.07.2016 to 19.04.2017).

ACHEIVEMENTS AND AWARDS:

- Awarded as a **Budding Researcher** by NIT-Trichy for the outstanding research performance in the year 2020 – 2021.
- Secured **42nd Rank** in M.E. Structural Engineering - Anna University.

PUBLICATIONS (SCI and SCOPUS index Journals):

- 1) P. Chandru, and J. Karthikeyan (2021) Models to predict the mechanical properties of blended SCC containing recycled steel slag and crushed granite stone as coarse aggregate. **Construction and Building Materials, 302** (2021). (SCIE - Q1) (Elsevier) <https://doi.org/10.1016/j.conbuildmat.2021.124342>
- 2) P. Chandru, J. Karthikeyan, Amit Kumar Sahu, Ketan Sharma, and C. Natarajan (2021) Some durability characteristics of ternary blended SCC containing crushed stone and induction furnace slag as coarse aggregate. **Construction and Building Materials, 270** (SCIE - Q1) (Elsevier) <https://doi.org/10.1016/j.conbuildmat.2020.121483>
- 3) P. Chandru, J. Karthikeyan, Amit Kumar Sahu, Ketan Sharma, and C. Natarajan (2021) Performance evaluation between ternary blended SCC mixes containing induction furnace slag and crushed stone as coarse aggregate. **Construction and Building Materials, 267** (SCIE - Q1) (Elsevier) <https://doi.org/10.1016/j.conbuildmat.2020.120953>
- 4) P. Chandru, J. Karthikeyan, and C. Natarajan (2021) Correlations between the Hardened Properties of Combination Type SCC Containing UFGGBFS. **Advances in Civil Engineering Materials, 10**, 34-55 (ESCI - Q2) (ASTM International) <https://doi.org/10.1520/ACEM20190233>
- 5) P. Chandru, C. Natarajan and J. Karthikeyan (2018) Influence of sustainable materials in strength and durability of self-compacting concrete: a review. **Journal of Building Pathology and Rehabilitation, 3**, 1-16 (SCOPUS) (Springer) <https://doi.org/10.1007/s41024-018-0037-1>

PUBLICATIONS (Editor invited book chapters):

- 1) P. Chandru, J. Karthikeyan, and C. Natarajan (2021) Influence of Mineral Additions in Improving the Chloride Binding Capacity of the Concrete. *In: Building Pathologies and Acoustic Performance*. (Springer publication) https://doi.org/10.1007/978-3-030-71233-4_4
- 2) P. Chandru, J. Karthikeyan, and C. Natarajan (2021) Techniques to Assess the Corrosion Resistance and Corrosion Rate of the Steel Embedded in Concrete. *In: Building Pathologies and Acoustic Performance*. (Springer publication) https://doi.org/10.1007/978-3-030-71233-4_3
- 3) P. Chandru, J. Karthikeyan, P. Parthiban and C. Natarajan (2020) Methodology for Proportioning SCC Containing High Powder Content Derived from Crushed Stone Sand. *In: Sustainable Materials in Building Construction*. (Springer publication) https://doi.org/10.1007/978-3-030-46800-2_3

- 4) P. Chandru, J. Karthikeyan, and C. Natarajan (2020) Steel Slag - A Strong and Sustainable Substitute for Conventional Concreting Materials. *In: Sustainable Materials in Building Construction*. (Springer publication) https://doi.org/10.1007/978-3-030-46800-2_2
- 5) P. Chandru, J. Karthikeyan, and C. Natarajan (2020) Effect of Sustainable Materials in Fresh Properties of Self-compacting Concrete. *In: Sustainable Materials in Building Construction*. (Springer publication) https://doi.org/10.1007/978-3-030-46800-2_1

FUNDED RESEARCH PROJECTS:

- 1) "Carbonation-induced corrosion and service life of steel-concrete systems with limestone calcined clay cement (LC3) and corrosion inhibitors". Funded by the **Science and Engineering Research Board (SERB)**, DST, Government of India. Total Amount Sanctioned: 22,36,800/-

CONTRIBUTION IN CONSULTANCY RESEARCH PROJECTS:

During my tenure as a Postdoctoral Researcher at Indian Institute of Technology-Madras, I have worked on the following consultancy & research projects:

- 1) High performance concretes for nuclear power plants in coastal regions – corrosion & service life assessments. (In collaboration with **Indira Gandhi Centre for Atomic Research**)
- 2) Assessing the service life of steel-cementitious systems with corrosion inhibitors. (In collaboration with **ConChem Labs, Maharashtra, India**)
- 3) Condition Assessment and Repair recommendations for IDBI Staff Quarters at Besant Nagar, Chennai. (Consultancy project done for **IDBI Bank**)
- 4) Development of Pre-packaged, High-Performance Grout (HPG) using Locally Available Cementitious Materials for the Indian Post-Tensioned (PT) Concrete Industry. (In collaboration with **UltraTech Cement Limited India**)

AREA OF RESEARCH INTEREST:

My research interests include, but not limited to the following areas:

- Corrosion of steel in RCC and PSC structures.
- Durability of concrete.
- Sustainable concreting materials and waste valorization.
- Volume stability of the concrete made with steel slag aggregates.

COURSES AND WORKSHOP ATTENDED:

- Three days advanced course on “Microstructural Characterization Techniques and Mix Design of Special Concretes” at CSIR-SERC Chennai during 09th and 11th September 2020.
- Four days workshop on “Geotextile Reinforced Sustainable Pavements” at NIT-Trichy during 8th to 12th July 2019.
- Two weeks Gian Course on “Forensic Engineering and Failure Analysis” at NIT-Trichy during 10th to 21st June 2019.
- Two days advanced course on “Corrosion of Reinforcement and its Control” at CSIR-SERC Chennai during 29th and 30th November 2018.

IMPORTANT LINKS:

- ORCID ID: <https://orcid.org/0000-0002-9461-0058>
- Scopus Author ID: 57219331226
- Web of Science Researcher ID: AAL-9086-2021
- ResearchGate ID: <https://www.researchgate.net/profile/Chandru-Pichaimuthu>

OTHER ACTIVITIES:

- Peer reviewer in ***Journal of materials in civil engineering*** (ASCE publication).
- Peer reviewer in ***International Journal of civil engineering*** (Springer).
- Member in ***National Association of Corrosion Engineers*** (NACE).

DECLARATION:

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

PLACE: Chennai

DATE: 16.04.2023



Yours faithfully,
(P. Chandru)