

V.S. Raju Chair Professorship Review

- *Ravindra Gettu*



July 16, 2020



Few milestones since July 2018



- Fellow of the Indian National Academy of Engineering, 2018.
- Elected Foreign Member of the Russian Academy of Engineering, 2019.
- President, RILEM, The International Union of Laboratories and Experts in Construction Materials, Systems and Structures (Paris, France), 2018-21
- Co-honoree at the Gettu-Kodur Symposium on Advances in Science & Technology of Concrete, organized by the India Chapter of the American Concrete Institute, Mumbai, 2018
- Patent on Flowable, pre-blended cementitious grout with resistance to bleeding and the formation of softgrout for structural and geotechnical applications, IITM IDF 1845, licensed to UltraTech Cement.



New projects since July 2018 ^(1/2)



- Modular Lightweight Wastewater Treatment Units made with TRC for Rural and Periurban Dwellings (CleanWater), Funded by the Indo-German Science and Technology Centre, 2020-23.
- Study of the Deterioration Mechanisms in Glass Textile Reinforced Concrete and Improvement of its Durability, Funded by the Science and Engineering Research Board, 2020-23.
- A New Framework of High Value Added Zero-waste Recycling of Concrete from Construction and Demolition Waste, in collaboration with Brunel University London, Indo-UK joint project, 2019-21.



New projects since July 2018 (2/2)



- Towards Durability Specifications with Recycled Aggregate Concrete, in collaboration with the University of Cape Town and the University of the Witwatersrand (South Africa), Funded by the Ministry of Human Resource Development, 2019-21.
- Sustainability of Novel Cementitious Binders Derived from Industrial By-Products, in collaboration with the Massachusetts Institute of Technology (USA), Funded by Ministry of Human Resource Development, 2019-21.
- 3D Printing and Construction Automation for Affordable Housing, Funded by the Science and Engineering Research Board, Govt. of India, under the scheme for Impacting Research Innovation and Technology (IMPRINT-2), Sustainable Habitat, 2019-22.



Keynote/Invited lectures in International Conferences since July 2018 ^(1/2)



- "Sustainability Assessment Framework Based on Durability and Life Cycle Assessment", Gordon Research Conference, Advanced Materials for Sustainable Infrastructure Development: Cutting-Edge Developments and Characterization of Cement-Based Materials, Ventura, CA, USA, 2020.
- "Life Cycle Assessment of LC3: Parameters and Prognoses", 3rd International Conference on Calcined Clays for Sustainable Concrete, Delhi, 2019
- "Blended cements for sustainable concrete", XV Congreso Latino-americano de Patología de Construcción & XVII Congreso de Control de Calidad en la Construcción (CONPAT 2019), Tuxtla Gutiérrez, Chiapas, Mexico, 2019



Keynote/Invited lectures in International Conferences since July 2018 (2/2)



- "Fatigue Response of Cracked Fibre Reinforced Concrete", International Conference on Innovative Materials for Sustainable Civil Engineering, Nanjing, China, 2019
- "Revisiting the Benefits and Limitations of Supplementary Cementitious Materials in Concrete", 3rd RN Raikar Memorial International Conference on Advances in Science & Technology of Concrete, Mumbai, 2018
- "Service Life and Life-Cycle Assessment of Reinforced Concrete with Fly ash and Limestone Calcined Clay Cement", Sixth International Conference on Durability of Concrete Structures, Leeds, United Kingdom, 2018



Scholarly output since 2018



- Two online workshops held in May 2020 through Zoom and streamed live on YouTube – with total registrations exceeding 15,000
- 5 Book Chapters
- 20 Refereed Journal papers
- 15 Conference papers
- 2 PhD and 3 MS scholars graduated

- Indian Standard on Testing of Fibre Reinforced Concrete, IS 17161 : 2020



GIST OF RELEVANT WORK DONE



- Research on Sustainability, Durability, Fibre and Textile reinforced concrete, and Recycling of concrete
- Maintaining focus on technology implementation and technology transfer
- Endeavouring to put systems in place at IC&SR for more effective engagement with industry and funding agencies
- Promotion of IIT Madras, especially the Construction Materials work, on the international stage



PLANS FOR FUTURE WORK



- Engagement with the **Global Cement and Concrete Association**
- Technology transfer of Textile reinforced concrete knowhow
- Promotion of Concrete recycling
- Dissemination through online conferences and workshops
- Consolidation of automation of reporting and processes at IC&SR



THANK YOU