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SKCET R@CE is a Half yearly Civil Engineering Department Research Bulletin of Sri Krishna College of Engineering and Technology, Coimbatore. The main objective of this bulletin is to share innovative achievements and practical experiences of Civil Engineering Faculty from diverse domains which will motivate the students as well as the Faculty members to contribute more to the Society in terms of meaningful solutions to the prevailing problems in the field of Civil Engineering..

This issue of SKCET R@CE - Research Bulletin emphasizes the various research activities and achievements carried out by the Civil Engineering faculty and students in the proceeding half year January 2019 – June 2019.

VISION AND MISSION OF THE DEPARTMENT

VISION

To be a Center of Excellence in Civil Engineering Education through full-fledged learning experience along with research.

MISSION

- To offer world class graduate education for entry level positions in Civil Engineering profession
- To provide high quality technical education and research
- To impart social ethics and leadership qualities.

Publications International Journals

- Maruthachalam D, Boobalan SC, Muthukrishnan V, “Experimental Investigation on Hybrid Fibre Reinforced Concrete with Polyethylene Terephthalate and Steel Fibre”, Indian Journal of Science and Technology (Accepted for Publication).
- Yogeshwaran V and Priya A.K, “Removal of heavy metals using nano-particles - A review”, Indian Journal of Environmental Protection, 2019, 39(1), pp. 17-21.
- Sadheesh S and Kumar M, “Ambient Air Quality monitoring and Modelling in Coimbatore City” Indian Journal of Environmental Protection, 2019, 39(6), pp. 524-530.
- Boobalan S C, Nikeath D and Pragadesh M, “Experimental study on concrete by using Manufactured sand - A General Review”, International Journal of Engineering and Advanced Technology (IJEAT), 2019 – 8 (3), pp. 91 -93.
- Sathasivam M, Shanmugapriya S, V.Yogeshwaran and A.K. Priya “Industrial Waste Water Treatment Using Advanced Oxidation Process – A Review”, International Journal of Engineering and Advanced Technology (IJEAT), 2019 –8(3) pp. 485-488.
- Yogeshwaran V and Priya A.K, “Treatment of fish Processing Industrial Waste Water Using Immobilized Jacketed Column Reactor”, International Journal of Engineering and Advanced Technology (IJEAT). (*Accepted for Publication*)
- Vighnesh R, Prabhath Ranjan Kumar S, Dhinesh Kumar P, Kishore Kumar S, Anand Kumar P K, “Serviceability of Gandhipuram Flyover – Coimbatore”, International Journal of Engineering and Advanced Technology (IJEAT). 2019 – 8 (5), pp. 30 -32.
- Thaarrini G, “Computation of optimum proportions of cotton textile effluent in the development of Geopolymer concrete”, International Journal of Engineering and Advanced Technology (IJEAT), 2019 – 8 (5), pp. 602 -607.
- Mr.A.Jesudass, R.N.Kavya, M.Janani, M.Muthupriya, “Development of an Integrated and Sustainable Model for Solid waste management in an Urban Environment”, International Journal of Engineering and Advanced Technology (IJEAT), 2019 – 8 (5), pp. 796 -802.
- Saravanakumar P, Preethi G, Sivakami M., Archana E.S, “Domestic Wastewater Treatment using Flyash as Adsorbent”, International Journal of Engineering and Advanced Technology (IJEAT), 2019 – 8 (5), pp. 1465 -1468.
- Preethi G, Ramaguru R. “Block Chain Based Waste Management”, International Journal

of Engineering and Advanced Technology 2019 – 8 (5), pp. 2632 -2635.

Project Proposals Submitted / Approved

- Ms. M. Sugunadevi, Assistant Professor received a fund of Rs.7500 from **TNSCST-Students Project Proposal scheme** on the topic “Stabilization of Clayey soil using waste plastic material as an additive”.
- Dr. R. Elangovan and Dr. D. Maruthachalam Submitted Consortia Project along with Industries and Academic Institution on “Utilization of Caustic soda slurry in the development of Eco-friendly cost effective Geopolymer Blocks and Bricks” to DST under Waste Management Technologies Scheme. [DST File Number DST/TDT/WMT-3/6B/007].
- Yogeshwaran V and Sugunadevi M, Submitted their proposal on “Onsite treatment of contaminated ground water for sustainable reuse using Membrane adsorption system coated with Graphene” to Technology Missions Division and WTI call Water Energy Food Health Nexus. [DST/TMD-EWO/WTI/2k19/EWFH/2019/51]

Certification courses

NPTEL Certification

Ms. M.Sugunadevi

- Foundation Engineering *Elite+ Silver*

- Effective Engineering *Elite* Teaching in Practice

Dr.P.Saravanakumar

- Advanced Topics in the Science and Technology of Concrete

Mr. S. Sadheesh

- Natural Hazards

Coursera Certification

Mr. R.Vighnesh

- Introduction to GIS Mapping – University of Toronto.

Mr. V.Yogeshwaran

- Municipal Solid waste management for developing countries – University of Illinois.

Ms. G. Preethi

- Municipal Solid waste management for developing countries – University of Illinois
- Introduction to Indoor Air Quality – The Hong Kong University of Science and Technology.

UDEMY Certification

Mr. S.C. Boobalan

- Basic Hydrology.

EDX Certification

Mr. R.Vighnesh

- Zero Energy Building: an approach to make your building sustainable – Delft University.
- Waste Management & critical raw materials – Delft University.

- Managing Building Adaptation: A Sustainable Approach – Delft University.

Students Research Outcome

Civil Engineering students were participated and won prizes in various research competitions held in various Universities and Colleges all over the India.

- Civil Engineering Final Year students Mr. MounKarthik, Mr. Karuppusamy and Mr. Selvadurai, mentored by Dr. R. Elangovan, Associate Professor, won Third place with cash award of Rs. 20,000/- in National level student Competition 2017-2018, conducted by INSDAG, Ministry of Steel, Government of India on 15.02.2019.
- Civil Engineering Final Year Students team Mr. M. Sathasivam, Ms. V. Yogeshwari and Ms. S. Shanmugapriya, mentored by Ms. G. Preethi, Assistant Professor, won First place with cash award of Rs. 10,000/- in VISAI Competition under the theme of “Clean Water” held at VelTech University, Chennai on 24.02.2019.
- Civil Engineering Final Year Students team Mr. M. Sathasivam, Mr. C. Mukesh, Ms. V. Yogeshwari, Ms. S. Shanmugapriya got selected for the grand finale of Smart India Hackathon Hardware Edition 2019 at IIT, Kanpur - mentored by Ms. G. Preethi, Assistant Professor, for the

problem statement proposed by MSME during 8th - 12th July 2019.

Conference / Seminar / Workshop Organized

- Mr. S. C. Boobalan organized one week NITTTTR Short term course on “Green Buildings and Techniques through ICT” at Sri Krishna College of Engineering and Technology, Coimbatore during 04.02.2019 to 08.02.2019.
- Civil Engineering Department conducted Two days ***Train the Trainer (TTT) program*** for ***Steel Structures*** and ***Construction Management*** Courses on 11.06.2019 and 12.06.2019. All Civil Engineering Department faculty were attended the program. The following topics were presented on the program.
- “*Design of Steel Roof Trusses*” by Dr. R. Elangovan
- “*Design Philosophy, Bolted and Welded Joints*” by Dr. P. Saravanakumar
- “*Design of Tension/Compression Members*” by Dr. R. Elangovan
- “*Risk Management*” by Dr. J. Thaarrini
- “*Construction Safety Managemen*” by Ms. S. Vaishnavi Devi
- “*Project Cost Control and Monitoring*” by Mr. S. Prabhath Ranjan Kumar

- “Work Breakdown Structures” by Mr. R. Vighnesh

**Conference / Seminar /
Workshop Participated /
Presented**

Papers presented in 2nd International Conference on Recent Advances in Engineering and Technology (ICRAET 2019), Sri Krishna College of Engineering and Technology, Coimbatore, February 2019.

- Elangovan R, Rukmangathan R M, Santhosh Vk And Vimalanaathan S “High Strength Self Compacting Concrete With Waste Foundry Sand”
- P Saravanakumar, G Kowshika, D Gitanjali, K Meena And G Gowsalyadevi, “Concrete with Sustainable Materials – A Literature Review”.
- Arutson Kar A, Nikeath D, Pragadesh M and Boobalan S C., “Experimental Study on Concrete by using Eco Sand and Crushed Rock Fines – A General Review”.
- G.Preethi, M.Annadurai, S.Aravindhan, “Assessment of ground water quality in Tiruppur industrial region”
- Sathasivam M Shanmuga Priya S Yogeshwaran V and Priya AK, “Treatment Of Fish Processing Industrial Wastewater Using Immobilized Jacketed Column Reactor”.

- Anirudh Karunakaran, Shiva Prakash M, Mohammed Ayub Khan And Jesudass Ambrose, “Development Of An Integrated And Sustainable Model For Coimbatore City – A Case Study On Avinashi Road”.

- K. Jayashree Natchiyar J. Dhivya, A. S. Arshavardhini, M.Sugunadevi, “A Study On The Behavior Of Concrete Contains Waste Plastic Granules As An Aggregate Replacement”.

- Dhinesh Kumar P Kishore Kumar S, Anand Kumar P K, Vighnesh R And Sadheesh S, “Serviceability Of The Gandhipuram Flyover – Coimbatore”.

The following Faculty of Civil Engineering Department attended *one week NITTTR Short term course on “Optimization Techniques”* at Sri Krishna College of Engineering and Technology, Coimbatore during 21.01.2019 to 25.01.2019

- Dr. P. Saravanakumar
- Dr. J. Thaarrini
- Mr. S. C. Boobalan

The following Faculty of Civil Engineering attended *one week NITTTR Short term course on “Green Buildings and Techniques through ICT”* at Sri Krishna College of Engineering and Technology, Coimbatore during 04.02.2019 to 08.02.2019

- Dr. P. Saravanakumar
- Dr. J. Thaarrini

- Mr. R. Vighnesh
- Mr. S. Prabhath Ranjan Kumar
- Mr. V. Yogeshwaran
- Mr. S. Sadheesh
- Ms. S. Vaishnavi Devi
- Ms. G. Preethi
- Dr. D. Maruthachalam attended one day workshop on “The Future of Higher Education – Leadership Conclave” at Kumaraguru College of Technology, Coimbatore on 14.02.2019.
- Mr. V. Yogeshwaran attended two days National Seminar on “Graphene nanotechnology in Civil Engineering” at VelTech, Chennai during 29.03.2019 and 30.03.2019.
- Mr. R. Vighnesh participated a Summer Research Fellowship organized by Indian Academy of Sciences from 15th April to 10th June 2019 (56 days) at Indian Institute of Technology, Delhi. The topic was “Use of insulated refractory castable furnace for making joint less bangles”.
- Mr. S. Prabhath Ranjan Kumar attended a one week Faculty Development Programme on “Structural Dynamics and Earthquake Engineering” at Kumaraguru College of Technology, Coimbatore during 13.05.2019 to 018.05.2019.
- Mr. A.Jesudass attended a Four Days Workshop on “Vaasthu Shastra – Design Applications” at Rithambara Ashram, Kothagiri during 16.05.2019 to 19.05.2019.

- Dr. P. Saravanakumar participated a one day workshop on “Examination Reforms” at PSG College of Technology, Coimbatore on 07.05.2019.
- Mr. Ezhil Kumar attended a Webinar on “High Resolution NO₂ Monitoring From Space with TROPOMI” organized by NASA’s applied Remote Sensing Training Program (ARSET) on May 28 - June 3, 2019.
- Dr. J.Tharrini attended a one week TEQIP Short Term Course on “Clean Energy Technologies” at IIT (Guwahati), during 10.06.2019 to 14.06.2019.
- Ms. M. Sugunadevi attended a one week Faculty Development Programme on “Sustainable Construction Materials and Characterization” at PSG College of Technology, Coimbatore during 10.06.2019 to 16.06.2019.

Consultancy Works

The Department is actively engaged in undertaking Consultancy works in the areas of Water quality testing, Construction materials testing, Soil testing Surveying and Design works. Apart from above consultancy activities the department also rendered consultancy in social related activities.

Research Supervisor

- **Dr.D.Maruthachalam** – Anna University

- **Dr.P.Saravanakumar** – Anna University
- **Dr.J.Tharrini** – Anna University

Faculty Pursuing Ph.D.

- Mr. V.Yogeshwaran
- Mr. Ezhil Kumar
- Mr. A. Jesudass
- Mr. R. Vighnesh
- Mr. S. Prabhath Ranjan Kumar
- Mr. S. C. Boobalan
- Mr. S. Sadheesh
- Ms. G. Preethi

Honors Awards & Recognition

- Dr. D, Maruthachalam was elected as ***Executive Committee Member (Academic)*** in ***Indian Concrete Institute (ICI) Coimbatore Center*** for the period March 2019 to March 2021.
- ***SWAYAM – NPTEL Mentor Certification*** was awarded Mr. S.Prabhath Ranjan Kumar for mentoring students in Leadership NPTEL course.

Professional Body Members

Dr. D.Maruthachalam

- Institution of Engineers
- Indian Society for Technical Education
- Association of Consulting Civil Engineers (I)
- Indian Concrete Institute

Dr. R. Elangovan

- The Institution of Engineers

- Institution of Valuers
- Indian Concrete Institute
- Indian Society for Technical Education

Dr. P.Saravanakumar

- American Concrete Institute
- Indian Geotechnical Society
- International Association of Engineers
- National Information Centre of Earthquake Engineering (NICEE), IIT (K).

Dr. J.Tharrini

- National Information Centre of Earthquake Engineering (NICEE), IIT (K).
- International Association of Engineers
- Indian Society for Technical Education
- Universal Association of Civil, Structural and Environmental Engineers

Mr. S.C.Boobalan

- American Concrete Institute
- International Association of Engineers
- International Society of Research and Development
- Institute of Research Engineers and Doctor
- National Information Centre of Earthquake Engineering (NICEE), IIT (K).
- Institute for Engineering Research and Publication (IFERP)

Ms. K.Divya Dharshini

- Indian Geotechnical Society
- International Association of Engineers

- International Society of Research and Development

Ms. K.S. Priyanga

- International Association of Engineers
- International Society of Research and Development

Mr.Ezhil Kumar

- International Association of Engineers
- National Information Centre of Earthquake Engineering
- Associate of the International Safety Quality Environment Management Association
- Asia-Pacific Chemical, Biological & Environmental Engineering Society
- Institute For Engineering Research and Publication

Mr. A.Jesudass

- American Concrete Institute
- International Association of Engineers
- International Society of Research and Development

Mr. R.Vighnesh

- American Concrete Institute
- The Institution of Engineers
- Institute of Research Engineers and Doctors
- National Information Centre of Earthquake Engineering (NICEE), IIT (K).

Mr. S.Prabhath Ranjan Kumar

- American Concrete Institute

- The Institution of Engineers

Ms. G.Preethi

- International Association of Engineers
- International Research for Doctors and Engineers
- International Society of Research and Development
- Institute of Research Engineers and Doctors
- National Information Centre of Earthquake Engineering (NICEE), IIT (K).
- Institute for Engineering Research and Publication (IFERP)

Ms. S.Vaishnavi Devi

- International Association of Engineers
- International Research for Doctors and Engineers
- Indian Value Engineering Society
- Engineering Council of India
- International Association of Educators and Researchers
- Institute for Engineering Research and Publication (IFERP)

Mr. V.Yogeshwaran

- American Concrete Institute
- International Society of Research and Development
- International Association of Engineers
- Institute of Research Engineers and Doctors
- Institute for Engineering Research and Publication

Mr. S. Sadheesh

- American Concrete Institute
- International Association of Engineers
- International Society of Research and Development
- Institute of Research Engineers and Doctors

Ms. M. Sugunadevi

- Indian Geotechnical Society
- International Society of Research and Development
- Institute of Research Engineers and Doctors
- International Association of Engineers
- Institute for Engineering Research and Publications

Editors /Reviewers to Journals**Dr. D. Maruthachalam**

- Journal of Earth and Environmental Sciences
- Case Studies in Construction Materials
- International Journal of Civil Engineering

Dr. R. Elangovan

- International Journal of Applied Engineering Research (IJAER)

Dr. P. Saravanakumar

- ACI Structural and Materials Journals
- Construction & Building Materials
- Case Studies in Construction Materials
- Materials and Design
- Computers and Concrete, An International Journal – Techno-Press
- Heliyon – Elsevier Journal
- Resources, Conservation & Recycling
- Open Access Library Journal
- International Journal of Concrete Structures
- International Journal of Civil Engineering

Dr. J. Thaarrini

- KSCE Journal of Civil Engineering
- Construction & Building Materials



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