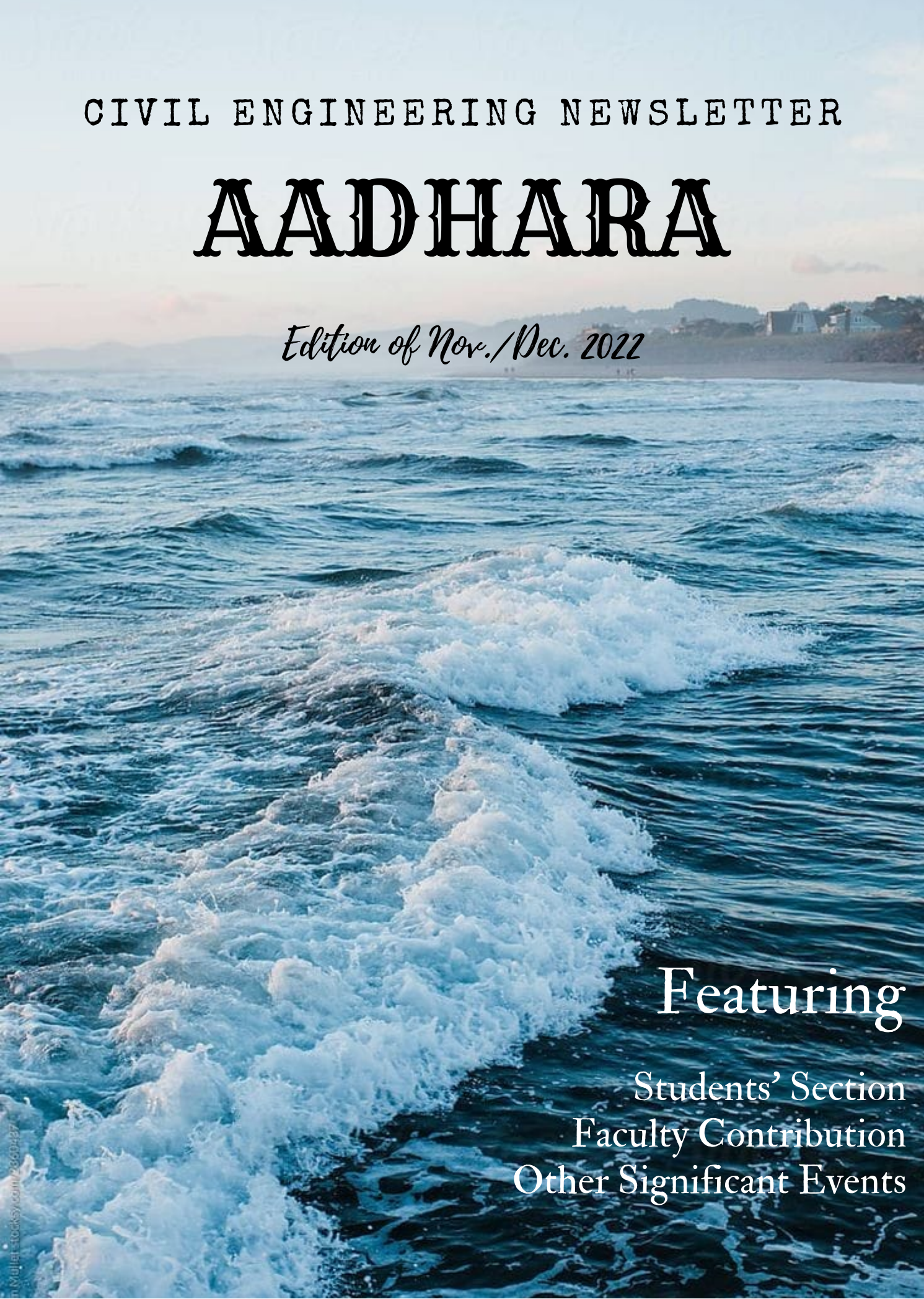
CIVIL ENGINEERING NEWSLETTER

AADHARA

Edition of Nov./Dec. 2022



Featuring

Students' Section
Faculty Contribution
Other Significant Events

VISION AND MISSION OF THE DEPARTMENT

VISION

To be a centre of excellence in Civil Engineering Education through full-fledged Learning experience along with research.

MISION

To accomplish our vision, we are committed to excel in Civil Engineering Education by providing,

- Faculty experts from all specialization of Civil engineering to facilitate teaching learning process.
- Excellent infrastructure facilities to apply Civil engineering knowledge and perform societal based research .
- Exposure to latest technologies in Civil engineering through industry-institute interaction and professional bodies.
- Environs to develop their innovative thoughts, ethics, communication, inter- and intra-personal skills.
- Enthusiasm towards self-learning, social responsibility and entrepreneurship

PROGRAMME EDUCATIONAL OBJECTIVES

- To apply knowledge of mathematics, science and engineering to solve existing problems in the area of Structural, Geotechnical, Water resources, Environmental, Transportation, Urban Planning, Construction Materials and management in Civil Engineering.
- To analyze, design, construct Civil Engineering traditional and modern structures
- To perform investigation on any complicated Civil Engineering problems by conducting research using modern equipments and software tools
- To communicate and develop strong inter- and intra- personal skills to prepare them forplacement and
  higher studies
- To be self-motivated towards lifelong learning and entrepreneurship

STUDENTS' ACHIEVEMENT

National workshop participation

Civil Engineering Students attended a National workshop on "Low-Carbon Construction Materials and Green Building Architecture" at the Indian Institute of Science, Challakere campus, Karnataka from 22nd to 24th November 2022.

STUDENTS' ACHIEVEMENT

Anna university zonal

Second Year student Mr. M. Dheenadhayalan participated and secured 3rd place in Anna University Zonal Football Tournament held at Karpagam College from 17th to 19th November 2022 as a part of the SKCET football team.

Dheena Dayalan also participated in Anna University Zonal Athletic Meet and won the Silver medal in the 4 x 100 Relay race and Bronze Medal in the 4 x 400 Relay race held at SKCT from 28th to 29th November 2022

STUDENTS' ACHIEVEMENT

Walkaro marathon

Third year Civil Engineering students G. Ugesh, M. Sanjay, Srikaran, S. Suthir along with faculties Mr. S. C. Boobalan and A. Jesudass completed Half Marathon category (21.1 Km) in 3 on 11th December 2022. It was organised by Coimbatore Cancer Foundation and corresponding funds will be used to operate cancer affected kids.

STUDENTS' PARTICIPATION

Demonstration of SPT

Department of Civil Engineering in SKCET has demonstrated the "Standard Penetration Test" for the third year Civil Engineering students for Subsurface exploration near C4 Block on 14.12.2022. The students witnessed the soil sample collection at 1.5 m, and 3 m depth. In addition, a core rock is explored at 3.5 m depth. This demonstration helps the students to observe the real time application of Standard Penetration Test in Subsurface Exploration, within SKCET campus.

FACULTY CONTRIBUTION

R & D Publication

IJEP 42 (10) : 1186- (2022) (ISSN : 0253-7141)

Onsite Wastewater Treatment using Artificially Constructed Wetland Planted with *Canna indica*

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Wastewater treatment in semi-natural systems is a technique that can be applied to natural wetlands such as swamps, medicinal plants and paddy fields, ponds, man-made lagoons, etc. Constructed wetlands especially the marsh areas are equipped for wastewater treatment. Man-made wetlands have various basic shapes with different flow characteristics. The positive response zone of artificial wetlands is the root zone (rhizosphere). This is where physio-chemical and biological processes take place due to the interaction of plants, microorganisms, soil and pollutants. In this study, chemical parameters of the sewage wastewater were analyzed and found contaminants are present in that wastewater. For reducing the contaminants of the sewage wastewater, a wetland was constructed using the plant *Canna indica*. Treatment efficiency varied according to changes in the hydraulic loading rate and temperature applied in the wetland. The plant species results show that the removal efficiency of the *Canna indica* for BOD, COD, SO_4 and Cl^- were 59.9%, 61.2%, 49.5% and 48.2%, respectively. The wastewater obtained through wetland construction is within the standard limit so wetland construction using *Canna indica* reduced the risks to the water bodies as well as to the environment.

Mr. S. Sadheesh, Assistant Professor, Department of Civil Engineering has published a research article titled “Onsite Wastewater Treatment using Artificially Constructed Wetland Planted with Canna indica” in the Indian Journal of Environmental Protection. It is indexed in SCOPUS.

FACULTY CONTRIBUTION

R & D Publication

Desalination and Water Treatment
www.deswater.com
doi: 10.5004/dwt.2022.28942

276 (2022) 175–184
November

Green iron particles in textile and dyebath wastewater decolorization

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ABSTRACT

The world is fronting water quality crisis and industrialization has augmented the illegal discharge of wastewater to the environment. Textile is one of such industry, generates large amount of colored wastewater and discharges untreated wastewater into nearby environment, poses major threats to the environment worldwide. The textile wastewater consists of the spent water from pretreatment, dyeing and post treatment process of the textiles. However the dyebath wastewater is highly concentrated and consists of mixture of unfixed dyes. The effective and eco-friendly treatment of textile wastewater is challenging. It is essential to remediate the dyebath wastewater in order to maintain environmental sustainability. In this paper, the feasibility of green iron particles on real textile and dyebath wastewater decolorization was investigated. Green iron particles were synthesized using green tea leaves extracts and grape leaves extracts. The synthesized particles were characterized for size, morphology, crystal structure, elemental analysis, functional groups attached and specific surface area. 2–6 g/L of green iron was utilized to decolorize 63%–89% of highly concentrated dyebath wastewater and 80%–92% of textile wastewater. The pH 10.1–10.8 of wastewater was reduced to 8.1–8.9. Green iron removed nearly 50%–54% of chemical oxygen demand from the wastewater and concluded that partial mineralization was possible. The reusability of green iron particles was achieved for 3 cycles. Thus the present investigation confirmed the feasibility of green iron particles in textile and dyebath wastewater decolorization.

Keywords: Green iron particles; Green tea leaves; Grape leaves; Dyebath wastewater; Textile wastewater

Mrs. R. Chandra Devi, Associate Professor, Department of Civil Engineering, published a paper, “Green iron particles in textile and dyebath wastewater decolorization”, in the journal Desalination and Water Treatment. This is a WoS and Annexure 1 journal.

FACULTY CONTRIBUTION

Faculty participation

Dr. S. Ramakrishnan and Mr. S. C. Boobalan, Associate and Assistant Professor, Department of Civil Engineering, participated in the inauguration of the BAI academy for learning and skill training "BLAST". BLAST is offering a six-month course to enhance the theoretical and field exposure of fresh graduate civil engineers.

FACULTY CONTRIBUTION

Faculty certification

Dr. V. Yogeshwaran and Mr. S. C. Boobalan, Assistant Professors, Department of Civil Engineering have participated in the “Youth Leadership Summit 2022 – Coimbatore” organized by ICT Academy held on 12th October 2022.

FACULTY CONTRIBUTION

Faculty progression

Dr. R. Chandra Devi, Associate Professor, Department of Civil Engineering, was awarded the Young Researcher Award (Female) Category – Engineering/Technology. This was awarded by Science Technology Engineering Management Research Society in association with University Institute of Technology, Himachal Pradesh University, Shimla on December 17, 2022.

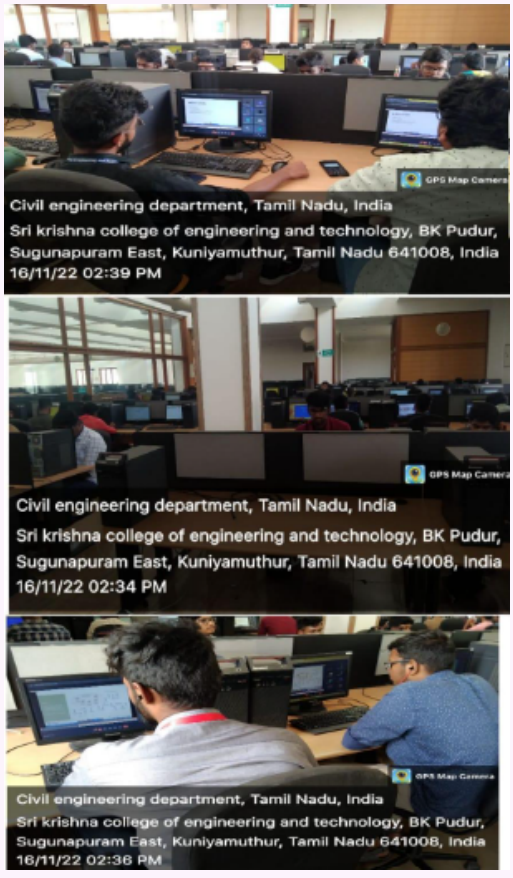
OTHER SIGNIFICANT EVENTS

Guest lecture emerging application of AI & ML in GIS

The Institution of Engineers (India), Students Chapter, Department of Civil Engineering, SKCET organized a guest lecture on “Emerging application of AI & ML in GIS” for second-year students on 18th November 2022. The resource person was Mr. S. Puneeth, GIS Analyst, EDS Technologies Pvt Ltd. The event was organized by Dr. Ezhil Kumar, Assistant Professor, Civil Engineering Department.

OTHER SIGNIFICANT EVENTS

Online session on Road to IndiaSkills 2023



The Indian Concrete Institute student chapter of the Civil Engineering department organized an online session on “Road to IndiaSkills 2023” for second-year students on 16th November 2023. The students were provided valuable pointers by the resource persons from BIM LABS Global.

OTHER SIGNIFICANT EVENTS

Guest lecture on Future of Civil engineer

The Civil Engineering Department of Sri Krishna College of Engineering and Technology organized a Guest Lecture on "Future of Civil Engineer" for first-year students on 1st November 2022. The speakers were Mr. Anandharaj, Deputy Manager, GMS Builders, Erode and Mr. S. Natarajan, Head - Corporate Tenders, GMS Builders, Erode.

OTHER SIGNIFICANT EVENTS

Guest lecture on Career oppurtunities in Civil Engineering

The Civil Engineering Department of Sri Krishna College of Engineering and Technology organized a Guest Lecture on "Career Opportunities in Civil Engineering" for first-year students on 1st November 2022. The speaker was Mr. A. K. Anbarasan, Project Engineer - (QA/QC), Srinivasan Associated Pvt Ltd, Coimbatore.

OTHER SIGNIFICANT EVENTS

Board of studies meeting

Department of Civil Engineering conducted its 13th Board of Studies Meeting for approval of R2022 (Upto 4th semester) syllabus on 23rd December 2022. The meeting was convened by Dr. D. Maruthachalam, Professor and Head, Department of Civil Engineering, along with external experts Dr. J. Jegan, Professor, University College of Engineering, Ramanathapuram, Er. S. Sivalingam, Senior Technocrat, PWD. The comments from all the expert members were recorded.

OTHER SIGNIFICANT EVENTS

Guest lecture on Soil and Foundations in Civil Engineering

Indian Geotechnical Society Students Chapter, Department of Civil Engineering in association with SKCET National Service Scheme, celebrated World Soil Day and organized a Guest Lecture on "Soil and Foundations in Civil Engineering" for the students of the Department of Civil Engineering on 21st December 2022. The resource person for the Guest lecture was Ms. D. Ranjini, Chief Geotechnical Engineer from Geodesign India Private Limited, Coimbatore. The session focused on enhancing the students knowledge in the significance of Soil and Foundations in Civil Engineering Structures.

OTHER SIGNIFICANT EVENTS

Guest lecture on Employability in Digital Construction

The ICI student chpater of Civil Engineering Department in association with BIM Centre of Excellence is organized an Industry Expert talk on "Employability in Digital Construction" for the 1st year students on 20.12.2022. The resource person for the program was Er. Krishna Raj from BIM LABS.

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PONGAL CELEBRATION 2023

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