

**Department
of
Civil
Engineering
NEWSLETTER
2023-24**

**Vision of the
Department**

Committed to carve proficient civil engineers for providing substantial input to cater basic needs of different stratum of society.

**Mission of the
Department**

M1: To provide an excellent teaching learning environment through well designed curricular and co-curricular activities.

M2: To develop highly skillful civil engineering professionals to serve up industry and society through valuable resources.

M3: To enhance self-learning ability, team spirit and life skills by extracurricular activities.

M4: To create research oriented atmosphere amongst students and faculty with the help of project based learning and consultancy.

SKN Sinhgad College of Engineering, Pandharpur.

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Guest Lecture on "AI: Future of Construction"

The future of construction with AI holds the promise of transforming the industry in various ways. AI can analyze vast amounts of data to optimize building designs for efficiency, cost-effectiveness, and sustainability. This includes the use of generative design algorithms to explore numerous design possibilities.

We at department of civil engineering & Indian Geotechnical Society (IGS) Student Chapter had organized guest lecture of Dr. Sachin Jain, who is working as consultant at Jain Associates. This function was presided by Dr. S. S. Kadam (Head, Dept. of civil engineering). The purpose of this lecture was to give idea about AI: Future of Construction to the students. They would get benefited to understand the benefits from expert's personal experiences. The function was started with felicitation of Speaker and Guest Dr. Sachin Jain by Dr. S. S. Kadam (Head, Dept. of civil engineering). After this Prof. Y.P. Pawar introduced guest speaker. Followed by this Dr. Sachin Jain sir shared his views on "AI: Future of Construction".

He also appreciated the organizing committee for their keen involvement in such a most excellent program. He also emphasized on benefits of student's participation in such events. The function was concluded with vote of thanks by Prof. M. V. Tondase.

No. of Students Attended: 60



Felicitation of Chief guest Dr. Sachin Jain by Hon Principal Dr. Kailash Karande.

Guest Lecture on “Explore a Dynamic Career in BIM Technology”

Department of Civil Engineering of SKN Sinhgad College of Engineering Korti, Pandharpur (SKNSCOE) and Civil Engineering Students Association (CESA) in association with CAD DESK, Pune has organized an Expert Lecture on “Explore a Dynamic Career in BIM Technology” on 26th February 2024 at 03:00 PM onwards. The Expert Prof. P. N. Sangale was welcomed and felicitated by Prof. G. D. Lakade with a bouquet. The expert guides students about various Softwares used in Civil Engineering Domain and their applications and advantages in Planning, Analysis and Design of various structures. She also guides about BIM Technology and opportunities for skilled aspirants in construction industry. The program was moderated by Ms. Sumitra Sangolkar and the vote of thanks was delivered by Ms. Prapti Velapurkar.



Guest Lecture on “Recent Trends in Civil Engineering”

A lecture by lecturer Venkat Patil was organized in association with Civil Engineering Students Association and Department of Civil Engineering. Meanwhile, Venkat Patil was welcomed with a bouquet on behalf of the college. Meanwhile, Venkat Patil said, what skills are needed by the students of civil engineering department while working in various fields. Guided about this. He also guided about future opportunities in civil engineering, skills required while working on new technology projects in construction sector. In the meantime, he asserted that basic knowledge in various branches of civil engineering is essential. He gave detailed information about the important concepts under the subject of Structural Analysis Design Engineering Estimation and Costing. Most of the students in Civil Engineering were present this time. All the teaching and non-teaching staff of the Civil Engineering Department worked hard to make this program a success.



IIRS Outreach Program

One Day Workshop on Soil Health : Measurement & Modelling

A one-day workshop was organized on Thursday 28 March 2024 in the Civil Engineering Department of S K N Sinhgad College of Engineering Korti, Pandharpur. This workshop was organized by IIRS/ISRO. Sinhgad College of Engineering Pandharpur is the nodal center of IRS/ISRO.

The workshop was organized by this nodal centre. Teachers from Civil Engineering Department participated in this workshop. The workshop was organized on the topic of Soil Health: Measurement and Modelling. The workshop is expected to provide a detailed overview and introduction to the concept of soil health, measurement of soil health indicators, application of remote sensing as well other geospatial technologies for mapping and modelling of soil health.

Knowledge regarding Soil Health/Quality, the ability of soil resources to perform its various functions under natural as well as managed ecosystems is vital for devising various soil and land management policies / strategies aimed towards sustainable production and maintaining environmental quality. Measurement of various health indicators using traditional / advanced techniques as well as soil quality assessment (including mapping and modelling) by integrating field observations with remote sensing techniques play a crucial role in effective soil resource management aimed towards developing smart agriculture systems

For successful completion of this workshop, Head of Department Dr. Shriganesh Kadam, Dr. Chetan Pise (Dean Research and Development), Head of Nodal Centre Dr. Ganesh Birajdar, Prof. Milind Tondase (Coordinator) as well as all the teachers and non-teaching staff put in special efforts.

Applications of Geospatial Technology in Paleo Channel Studies

A workshop was organized by the Department of Civil Engineering at SKN Sinhgad College of Engineering, Korti, Pandharpur, from May 20 to May 24, 2024. The Principal, Dr.Kailash Karande, informed that the workshop was conducted with great enthusiasm.

This workshop was organized through IIRS ISRO. Sinhgad College of Engineering, Pandharpur, is a nodal center for IIRS ISRO, and the workshop was arranged through this nodal center. Faculty members from the Department of Civil Engineering participated in the workshop, which was focused on the "Application of Geospatial Technology in Paleo Channel Studies. To successfully conduct this workshop, Vice Principal Dr. Swanand Kulkarni, Head of Department Dr. Shriganesh Kadam, Dr. Chetan Pise (Dean of Research and Development), Nodal Center Head Dr. Ganesh Birajdar, Prof. Milind Tondse (Coordinator), as well as all the faculty and non-teaching staff, put in special efforts.

Revolutionizing Construction: The Role of Artificial Intelligence

The construction industry, long known for its traditional methods, is undergoing a significant transformation driven by artificial intelligence (AI). AI, with its ability to analyse vast amounts of data and automate tasks, offers a plethora of benefits that can improve efficiency, safety, and overall project outcomes. This article explores how AI is reshaping the construction landscape.

Enhancing Project Planning and Management

AI algorithms excel at crunching data from past projects, material costs, and labour requirements. This data is used to generate highly accurate forecasts for project timelines, budgets, and potential risks. AI-powered tools can also optimize resource allocation, ensuring the right equipment and personnel are deployed at the right time. This proactive approach minimizes delays and cost overruns, leading to smoother project execution.

Boosting Safety on Construction Sites

Construction sites are inherently risky environments. AI can play a crucial role in mitigating these risks. AI-powered cameras and sensors can monitor worker activity and identify unsafe situations like slips, trips, and falls. Real-time alerts can be triggered, prompting corrective actions and preventing accidents. Additionally, AI can analyze worker fatigue patterns and recommend breaks, fostering a safer work environment.

Revolutionizing Quality Control

Maintaining consistent quality throughout the construction process is paramount. AI-powered visual recognition systems can be used to inspect welds, concrete pours, and other critical elements. These systems can identify defects with high accuracy, allowing for timely rectification and ensuring the project adheres to strict quality standards.

Optimizing Building Performance

AI can extend its influence beyond construction itself. AI-powered simulations can be used to analyze building designs and predict their energy efficiency. This allows architects and engineers to identify areas for improvement, such as optimizing insulation placement or HVAC systems. As a result, buildings constructed with AI-aided design can be more sustainable and cost-effective in the long run.

The Road Ahead

The integration of AI in construction is still in its early stages, but its potential is undeniable. As AI technology continues to evolve, we can expect even more transformative applications. Construction robots capable of performing complex tasks, 3D printing for on-site fabrication, and AI-powered progress



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