

फरवरी-मार्च-अप्रैल, 2023
February – March – April, 2023



ई- समाचार पत्रिका E- News Letter



Contents

CSIR-CBRI Foundation Day

Foundation Day Awards

AcSIR Activities

National Science Day 2023

Expert Lectures Series

Student Scientist Interaction

Scientist Teacher Connect

Global Climate Clock Assembly

Technology Transfer

MoU Signed

New Project Undertaken

Publications

Keynote Lectures Delivered

Transfer/ Joining

“CSIR-CBRI Foundation Day”

(10th February, 2023)

CSIR-Central Building Research Institute celebrated its foundation day on 10th February, 2023. The event was organized in Rabindranath Tagore Auditorium of the Institute. Shri Rajendra Singh, Member, National Disaster Management Authority graced the event with his presence as Chief Guest. In his address he praised the work done by CBRI in Joshimath and appreciated the “One Week One Lab” program organized by CBRI. He deliberated that due to technological advancements now it is easier to get the solution for majority of the problems in every field of life. The event began with a National Song and lighting of the lamp. Dr. S.K. Negi, chief scientist and chairman of the organizing committee presented the welcome address and briefed about the program.

Prof. R. Pradeep Kumar, director of the CSIR-Central Building Research Institute Roorkee, gave his presidential address and congratulated CSIR- CBRI Family on this great occasion. He appealed to all the staff to give their best in solving the problems related to building sector.



Dr. S.R. Karade presented a brief report on the “One Week One lab” program organized by CBRI Roorkee. The work of CBRI at Joshimath was highlighted by Dr. D.P. Kanungo and Dr. Ajay Chaurasia with the help of short presentation.



On this Occasion Director's Award for Best Research Paper and Best Technology were given to the scientist of the institute by Shri Rajendra Singh, Chief Guest of the function. He also released the book "Fire safe Building" by Dr. Saurabh Jain. He also released the monthly e-Newsletter of the Institute. The program was conducted by Dr. P.K.S Chauhan, he also introduced the chief guest Shri Rajendra Singh. Dr. R. Dharmraju presented the vote of thanks. The function ended with National Anthem.



To celebrate our foundation day sports activities were organized for entire CSIR-CBRI staff. The whole CSIR-CBRI family was grouped in four houses i.e. Kalam House, Visvesvaraya House, Bhabha House and Sarabhai House. This year Table Tennis, Badminton, Carrom and Cricket events were organized. The Sarabhai House emerged as winner and Bhabha House was runner up of the sports events. The prizes were given during the Foundation Day Program.



A cultural evening was organized in the evening on 10th February, 2023 on the occasion of Foundation Day. The CBRI Staff, Students, Children of CBRI Family, participated in the event with joy and enriched the evening with their cultural performances. In the last director Prof. R. Pradeep Kumar gave mementos to the participants. The anchors for the show were Dr. P.K.S Chauhan and Ms. Akriti. The cultural evening was followed by dinner to the entire CBRI Family.



समस्याओं और चुनौतियों से डरने की जरूरत नहीं : राजेंद्र

■ सहाय म्यूज एजेंसी

राजेंद्र। सीबीआरआई के 76 वर्ष पूरे होने पर स्थापना दिवस समारोह का मुख्य अतिथि रहेंगे राजेंद्र सिंह ने संस्थान की ओर से संबोधन दिया। संस्थान के 76 वर्ष पूरे होने पर कार्यक्रम आयोजित किए गए। संस्थान की उत्कृष्ट कार्य करने वाले वैज्ञानिकों-कर्मचारियों खासतौर पर ज्योतिष आदि के कार्य करने के लिए संस्थान के वैज्ञानिकों और रिसर्च स्कॉलरों को विशेष रूप से सम्मानित किया गया। इस मौके पर आयोजित होने वाले कार्यक्रमों में जयभारती पर जल दिया गया।

राष्ट्रीय अणु प्रबंधन प्रणालियों के सदस्य राजेंद्र सिंह ने अणुओं के प्रति जागरूकता देने का आह्वान किया। अणु से बचने में विभिन्न संस्थानों सहित

सीबीआरआई के विशेष प्रयासों पर संस्थान की बधाई दी। इस दौरान उन्होंने कहा कि अब हम चुनौतियों को टुटने से डरने मतबूत हैं कि हमें समस्या और चुनौतियों से डरने की जरूरत नहीं है। संस्थान के निदेशक प्रो. अर. प्रदीप कुमार ने ज्योतिष आदि के कार्य करने के लिए संस्थान का उत्प्रेषण करते हुए संस्थान के वैज्ञानिकों और कर्मचारियों को सहयोग के लिए प्रोत्साहित किया।

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कार्यक्रम का शुभारंभ करते अतिथिगण।

एसआर कट्टरे, डा. अर. परम राजू, डा. एमके. मेरी, डा. प्रदीप चौहान, डा. अमल, एसके. सिंह, कुमुद सिंह, प्रमोद चंद, अमली कुमर, अमल शर्मा, अमली, हरिश आदि मौजूद रहे।

केंद्रीय भवन अनुसंधान संस्थान ने धूमधाम से मनाया स्थापना दिवस

राजेंद्र, 11 फरवरी (अनिल) : केंद्रीय भवन अनुसंधान संस्थान (सीबीआरआई) ने स्थापना दिवस समारोह में कार्यक्रम के शुभारंभ में राष्ट्रीय अणु प्रबंधन प्रणालियों के सदस्य राजेंद्र सिंह मुख्य अतिथि रहे। कार्यक्रम की अध्यक्षता संस्थान के निदेशक प्रो. अर. प्रदीप कुमार ने की।

इस अवसर पर मुख्य अतिथि ने सीबीआरआई द्वारा मंगल रूप, 'नमो भगवते वासुदेवाय' का प्रारंभ किया और सीबीआरआई द्वारा ज्योतिष में किए गए कार्य की प्रशंसा करते हुए कहा कि अब हम प्रौद्योगिकी की दृष्टि से डरने मतबूत हैं कि हमें समस्या और चुनौतियों से डरने की जरूरत नहीं है।



सीबीआरआई के स्थापना दिवस पर आयोजित कार्यक्रम में मंच पर मौजूद अतिथि।

मुख्य अतिथि एवं राष्ट्रीय अणु प्रबंधन प्रणालियों के सदस्य राजेंद्र सिंह ने संस्थान की ओर से संबोधन दिया। संस्थान के 76 वर्ष पूरे होने पर कार्यक्रम आयोजित किए गए। संस्थान की उत्कृष्ट कार्य करने वाले वैज्ञानिकों-कर्मचारियों खासतौर पर ज्योतिष आदि के कार्य करने के लिए संस्थान के वैज्ञानिकों और रिसर्च स्कॉलरों को विशेष रूप से सम्मानित किया गया। इस मौके पर आयोजित होने वाले कार्यक्रमों में जयभारती पर जल दिया गया।

हमारी प्रौद्योगिकी मजबूत, चुनौती से डरने की नहीं जरूरत : राजेंद्र

सीबीआरआई ने धूमधाम से मनाया 76वां स्थापना दिवस समारोह

■ सहाय म्यूज एजेंसी

राजेंद्र। सीबीआरआई के 76 वर्ष पूरे होने पर स्थापना दिवस का मुख्य अतिथि रहेंगे राजेंद्र सिंह ने संस्थान की ओर से संबोधन दिया। संस्थान के 76 वर्ष पूरे होने पर कार्यक्रम आयोजित किए गए। संस्थान की उत्कृष्ट कार्य करने वाले वैज्ञानिकों-कर्मचारियों खासतौर पर ज्योतिष आदि के कार्य करने के लिए संस्थान के वैज्ञानिकों और रिसर्च स्कॉलरों को विशेष रूप से सम्मानित किया गया।

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कार्यक्रम के दौरान मुख्य अतिथिगण।

एसआर कट्टरे, डा. अर. परम राजू, डा. एमके. मेरी, डा. प्रदीप चौहान, डा. अमल, एसके. सिंह, कुमुद सिंह, प्रमोद चंद, अमली कुमर, अमल शर्मा, अमली, हरिश आदि मौजूद रहे।

ज्योतिष में पुनर्वास करने पर प्रस्तुति दी। संस्थान के वैज्ञानिकों को सम्मानित करने के लिए राजेंद्र सिंह ने संस्थान के 76 वर्ष पूरे होने पर कार्यक्रम आयोजित किए गए। संस्थान की उत्कृष्ट कार्य करने वाले वैज्ञानिकों-कर्मचारियों खासतौर पर ज्योतिष आदि के कार्य करने के लिए संस्थान के वैज्ञानिकों और रिसर्च स्कॉलरों को विशेष रूप से सम्मानित किया गया। इस मौके पर आयोजित होने वाले कार्यक्रमों में जयभारती पर जल दिया गया।

सीबीआरआई में स्थापना दिवस पर हुए कार्यक्रम आपदाओं से निपटने में जनभागीदारी जरूरी

■ कार्यक्रम

राजेंद्र, 11 फरवरी (अनिल) : केंद्रीय भवन अनुसंधान संस्थान (सीबीआरआई) ने स्थापना दिवस समारोह में कार्यक्रम के शुभारंभ में राष्ट्रीय अणु प्रबंधन प्रणालियों के सदस्य राजेंद्र सिंह मुख्य अतिथि रहे। कार्यक्रम की अध्यक्षता संस्थान के निदेशक प्रो. अर. प्रदीप कुमार ने की।



सीबीआरआई के स्थापना दिवस पर आयोजित कार्यक्रम में मंच पर मौजूद अतिथि।

मुख्य अतिथि एवं राष्ट्रीय अणु प्रबंधन प्रणालियों के सदस्य राजेंद्र सिंह ने संस्थान की ओर से संबोधन दिया। संस्थान के 76 वर्ष पूरे होने पर कार्यक्रम आयोजित किए गए। संस्थान की उत्कृष्ट कार्य करने वाले वैज्ञानिकों-कर्मचारियों खासतौर पर ज्योतिष आदि के कार्य करने के लिए संस्थान के वैज्ञानिकों और रिसर्च स्कॉलरों को विशेष रूप से सम्मानित किया गया। इस मौके पर आयोजित होने वाले कार्यक्रमों में जयभारती पर जल दिया गया।

Foundation Day Awards

During the occasion of CSIR-CBRI Diamond Jubilee, two Awards viz. Diamond Jubilee Best Research Paper & Diamond Jubilee Best Technology Award are instituted for publication of Best Research Paper and Development of Best Technology which had maximum societal impact.

For the Year (2022), the High-Power Committee selected the Best Research Papers published and these are:

1. "Mineralogy of Tricalcium Aluminate Hydration with Silica Nanoparticles" Ms. Aarti Solanki, Dr. L.P. Singh, Dr.S.R. Karade & Dr. U. Sharma
2. "Evaluation of Embedded Dual-Piezoelectric-Based Transducer with Miniature Impedance Analyzer for Monitoring the Curing of Cement Mortar" Shri Soju J Alexander, Ms. P. Sumathi, Dr. S.K. Panigrahi, Ms. Gopalakrishnan. C. Bharathi Priya & Dr. N.Gopalakrishnan

Best technologies:

1. "Light Weight Cellular panels for Building Construction" Dr. Ajay Chourasia, Dr. Soraj Kumar Panigrahi & Shri Jalaj Parashar.
2. "Development of Expansive Mortar for Silent Cracking of Stones" Dr. L.P. Singh, Shri Srinivasaroa Naik B. & Shri Dilshad Ali



AcSIR Activities

Fellowships:

1. **Mr Shubham Chaudhary** received SERB Overseas Visiting Doctoral Fellowship 2023 (University of Alberta, Canada) for 2023-2024.
2. **Mr. Amith** got selected for RMIT International Tuition Fee Scholarship (RRITFS) for performing joint research between CSIR CBRI and RMIT, Australia

Foreign Visit:

- **Mr. Sai.Teja Kuchipudi** Visit to Fraunhofer Institute for Nondestructive Testing, Saarbrücken, Germany (Nov 2022 – Apr 2023) through IGSTC fellowship



National Science Day 2023

National Science Day was celebrated in the institute on March 3, 2023 with the theme “Global Science for Global Well Being”. The Chief Guest was Prof R.N. Iyengar, Distinguished Professor, Jain University, Bangalore & Former Director, CSIR-CBRI, Roorkee. He delivered an online lecture on this occasion.



कार्यक्रम | सीबीआरआई में राष्ट्रीय विज्ञान पर ऑनलाइन व्याख्यान आयोजित, रमन के शोध की उपयोगिता बताई

संस्कृत भाषा केवल ग्रंथों तक सीमित नहीं

रुड़की, संवाददाता। सीबीआरआई में राष्ट्रीय विज्ञान दिवस पर वैश्विक विज्ञान पर आनलाइन व्याख्यान आयोजित किया गया। मुख्य अतिथि सीबीआरआई के पूर्व निदेशक प्रो. आरएन आरएन ने महान वैज्ञानिक सीबी रमन के ध्वनि तरंगों पर शोध और उसकी वाद्य-यंत्रों में उपयोगिता का उल्लेख किया।

उन्होंने बताया कि संस्कृत भाषा केवल धार्मिक ग्रंथों तक सीमित नहीं हैं बल्कि उसमें विज्ञान से जुड़े अनेक गूढ़ रहस्यों का भी धर्पण किया गया है। समारोह की अध्यक्षता संस्थान के

संयोजक डा. एसआर कराड़े ने किया। डॉ. प्रदीप चौहान ने खीर प्रधान वैज्ञानिक डॉ. एलपी सिंह, मुख्य अतिथि, वैज्ञानिकों, अधिकारियों और छात्र-छात्राओं आदि का धन्यवाद किया।

इस अवसर पर डॉ. डीपी कानूनगो, डॉ. हरपाल सिंह, डॉ. एसके सिंह, डॉ. एलपी सिंह, डॉ. पीसी थपलियाल, डॉ. एसके सेनापति, डॉ. हरीश अरोड़ा, मेहर सिंह, हिमांशु शर्मा, समीर, हरीश कुमार आदि लोग उपस्थित रहे।

रुड़की के सीबीआरआई में मुख्यार को राष्ट्रीय विज्ञान दिवस के उपलक्ष्य में आयोजित कार्यक्रम में उपस्थित लोग।

निदेशक प्रो. प्रदीप कुमार रमनचाली ने की। प्रो. प्रदीप कुमार ने कहा कि हमें अपने दैनिक जीवन में विज्ञान के महत्व को समझना चाहिए। नियम, न्याय, धर्म और सत्य को विज्ञान से जोड़ कर जीवन में आगे बढ़ने के लिए प्रेरित किया। मुख्य वैज्ञानिक और विज्ञान दिवस कार्यक्रम के

विश्व के कल्याण का बहुत बड़ा माध्यम बन सकता है विज्ञान

जगमग संवाददाता, रुड़की : केंद्रीय भवन अनुसंधान संस्थान (सीबीआरआई) रुड़की में राष्ट्रीय विज्ञान दिवस मनाया गया। इस अवसर पर वैश्विक कल्याण के लिए वैश्विक विज्ञान विषय पर आनलाइन व्याख्यान का आयोजन किया गया।

समारोह में मुख्य अतिथि के रूप में डॉ. बेंगलुरु के जैन विश्वविद्यालय के विशिष्ट प्रोफेसर और सीबीआरआई के पूर्व निदेशक प्रोफेसर आरएन आरएन वर्युअल शामिल हुए। इस मौके पर प्रोफेसर आरएन आरएन ने महान विज्ञानिक सीबी रमन द्वारा ध्वनि तरंगों पर शोध व उसकी वाद्य-यंत्रों में उपयोगिता का उल्लेख किया। उन्होंने बताया कि संस्कृत भाषा केवल धार्मिक ग्रंथों तक सीमित नहीं हैं बल्कि उसमें विज्ञान से जुड़े अनेक गूढ़ रहस्यों का भी विस्तार से वर्णन है। उन्होंने अपने व्याख्यान में प्राचीन मंदिरों में स्थित इंजीनियरिंग व वास्तुकला की बारीकियों के बारे में चर्चा की। उन्होंने कहा कि विज्ञान विश्व के कल्याण का बहुत बड़ा माध्यम बन सकता है।

कार्यक्रम की अध्यक्षता करते हुए सीबीआरआई रुड़की के निदेशक प्रोफेसर प्रदीप कुमार रमनचाली ने कहा कि हमें अपने दैनिक जीवन में विज्ञान के महत्व को समझना चाहिए। उन्होंने नियम, न्याय, धर्म और सत्य

केंद्रीय भवन अनुसंधान संस्थान रुड़की में राष्ट्रीय विज्ञान दिवस के मौके पर आयोजित कार्यक्रम में विचार रखते निदेशक प्रोफेसर प्रदीप कुमार रमनचाली

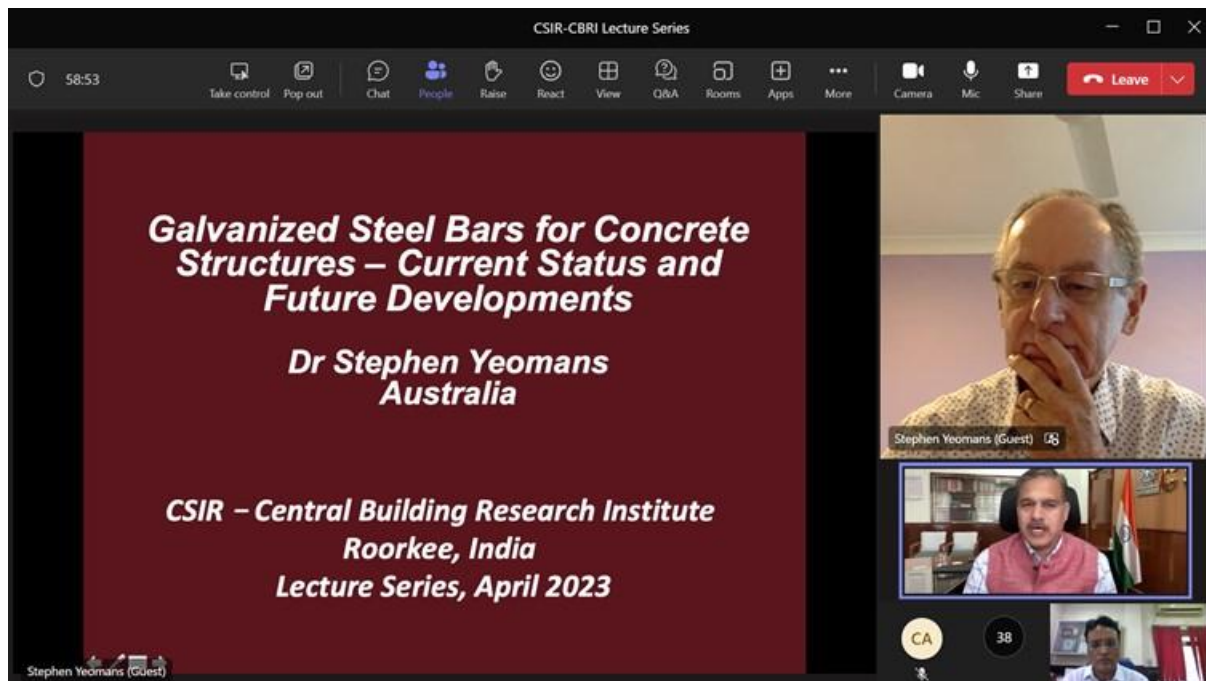
● समारोह-संस्थान

को विज्ञान से जोड़ कर जीवन में आगे बढ़ने के लिए प्रेरित किया। इस मौके पर विज्ञान दिवस कार्यक्रम के संयोजक मुख्य विज्ञानिक डा. एसआर कराड़े, डा. प्रदीप चौहान, डा. एलपी सिंह, डा. डीपी कानूनगो, डा. हरपाल सिंह, प्रो. एसके सिंह, डा. लीना चौधरी, परवेश चन्द, डा. पीसी थपलियाल, डा. एसके सेनापति, डा. हरीश अरोड़ा, मेहर सिंह, हरीश कुमार आदि उपस्थित रहे।

हरिद्वार की ओर भी हमारे पढ़ें www.jugran.com

Expert Lecture

Prof Stephen Yeomans, Former Professor, University of New South Wales, Canberra (Australia) delivered the inaugural online lecture of this series on “Galvanised Steel Bars for Concrete Structures - Current Status and Future Developments” on April 11, 2023. Prof Stephen Yeomans is a recognized expert on the characteristics and use of galvanized reinforcement.



एक दिवसीय प्रशिक्षण कार्यक्रम- भवन निर्माण के संबंध में
गांव की समस्याओं के लिए - एक समाधान यात्रा
ग्राम- मतलबपुर, रुड़की
One Day Training Program on Building Construction
For Village problems - A Solution journey
at Matlabpur Village, Roorkee
25th March, 2023

CSIR-CBRI, Roorkee organised one Day Training Program on Building Construction for “गांव की समस्याओं के लिए - एक समाधान यात्रा/ Village problems - A Solution journey” at Matlabpur Village, Roorkee on 25th March, 2023 for the residents of Matlabpur, students, public representative, contractors, workers, etc. at Govt. Primary School, Matlabpur.

In all, 150 people attended the training program and in his inaugural speech Prof. R. Pradeep Kumar, Director CSIR-CBRI, informed all the participants about the aim of such type of training program and offers an opportunity to showcase the activities of the Institute to the society/stakeholders. It provides the opportunity to the public as well as the scientist for interaction and posing their problems to scientists to get appropriate solutions. He assured to continue this solution journey and emphasized on taking research out of laboratories for the benefiting to the society.

Apart from this Sh. Manoj, ward members Matlabpur, Roorkee also addressed the audience. He praised the work of CSIR-CBRI and informed about Matlabpur area problems.



Ar. SK Negi, Chief Scientist gave a presentation on the works of CSIR- Central Building Research Institute Roorkee from inception and informed the audience about the Institute's contribution in serving Nation for the last 76 years and the technology developed by the institute and also important projects executed by Institute.

Dr. B.S. Rawat, Senior Principal Scientist gave his presentation on the topic “Prevention of Termites in buildings” and also given the solutions to audiences. Engineer Itrat Amin Siddiqui expressed his views on the subject “How to make your dream home” and informed the audience about the cost of construction keeping in mind the special things used in building construction and various applications to remove the problem of dampness.



An exhibition was also organised by the institute on CSIR-CBRI technologies and Er. Ashish Pippal elaborated these technologies to participants during exhibition. Participants showed keen interest and appreciated various technologies in the program.



वैज्ञानिकों ने ग्रामीणों को दी भवन निर्माण संबंधी जानकारी

रुड़की। सीबीआरआई ने भवन निर्माण के संबंध में गांव की समस्याओं के लिए एक समाधान यात्रा कार्यक्रमों के अंतर्गत एक दिवसीय प्रशिक्षण कार्यक्रम का आयोजन किया।

राजकीय प्राथमिक विद्यालय, मतलबपुर में आयोजित कार्यक्रम का शुभारंभ निदेशक प्रो. आर प्रदीप कुमार ने किया। इस दौरान उन्होंने अनुसंधान की प्रयोगशालाओं से निकालकर दैनिक जीवन को लाभाण्वित करने की आवश्यकता पर जोर दिया। सीबीआरआई के मुख्य वैज्ञानिक एसके नेगी ने संस्थान की ओर से विकसित तकनीकियों की जानकारी दी। वैज्ञानिक डा. बीएस रावत ने भवनों में दीमक नियंत्रण पर जानकारी दी। इंजीनियर इतरत अमीन सिद्दीकी ने भी विचार रखे। कार्यक्रम का संयोजन संस्थान के वरिष्ठ प्रधान वैज्ञानिक नदीम अहमद द्वारा किया गया। इस दौरान मतलबपुर से करीब 150 ग्रामीण उपस्थित हुए। संवाद

भवनों में दीमक नियंत्रण के बारे में बताया

रुड़की। सीबीआरआई ने समाधान यात्रा कार्यक्रम के तहत मतलबपुर प्राइमरी स्कूल में प्रशिक्षण कार्यक्रम में दीमक नियंत्रण की जानकारी दी। संस्थान के निदेशक प्रोफेसर आर प्रदीप कुमार ने समाधान यात्रा को लगातार जारी रखने का आश्वासन दिया। इस दौरान मुख्य वैज्ञानिक एसके नेगी, डॉ. बीएस रावत, इंजीनियर इतरत अमीन सिद्दीकी, नदीम अहमद, विनीत सेनी आदि मौजूद रहे।

There was an open interactive session where people discussed about the problems of cracks in building, plastering, drainage, dampness, settlement of house, etc. and concerned scientists provided the appropriate solutions to the general public. The program concluded with vote of thanks by Mr. Vineet Saini, Principal Scientist.

The program was successfully accomplished with a huge participation & discussion. Program was coordinated by Sh. Nadeem Ahmad, Senior Principal Scientist, CSIR-CBRI, Roorkee.

Online Webinar on Urban Underground Space

Webinar on Urban Underground Space

March 13-14, 2023

Organised Under the aegis of CSIR Integrated Skill Initiative

Timing	Technical Sessions	PATRON	EMINENT SPEAKERS
March 13, 2023			
10:30 am	Geotechnical Engineering Activities in Project Sites	 Dr. R. Pradeep Kumar Director, CSIR-CBRI	 Dr. R. Pradeep Kumar Head, Geotechnical Division L&T-Consult
11:30 am	Deep Excavation in Construction		 Dr. V. Venkatesh Aravamudan Head, Design & Engineering Baser Eng. India Pvt Ltd
02:30 pm	Failure and Rectification of Retaining Structure for Deep Excavation - Case Studies		 Dr. V. Jayapalan Manager L&T-Construction
03:30 pm	Ground Improvement under Railway Embankments		
March 14, 2023			
10:00 am	Challenges in Underground Metro Construction	 Dr. Eswara Prasad FIE General Manager Tata Projects Limited	 Dr. N. Kumar Pitchumani Regional Director AECOM
11:00 am	Creating Large Scale Sustainable Underground Infrastructure		 Dr. Sudhakar MD & CEO NEMIS
02:30 pm	Design & Construction of Underground Metros		 Dr. Makrand Khare Director Terranova Consultants
03:30 pm	Embedded Retaining Structures for Urban Infrastructure		 Dr. M. Kumaran Head, E & T L&T Construction

Organized by:
Skill Development Group
CSIR Central Building Research Institute
Roorkee-247667, Uttarakhand
Email : vinoth@cbri.res.in ; Mob: 9486112108

Coordinators:
Er. M. Vinoth Scientist
Er. M.S. Aswathy Scientist

Mentors:
Dr. R. Dharmaraju Chief Scientist
Dr. D. P. Kanungo Chief Scientist

सीएसआईआर - केन्द्रीय भवन अनुसंधान संस्थान, रुड़की
CSIR - Central Building Research Institute, Roorkee

OPEN TO ALL - E-Certificate will be given to participants who will attend all the sessions

A two day online webinar on Urban Underground Space was conducted during March 13-14 2023. This was an exclusive two-days webinar featuring industry experts who are at the forefront of creating new underground infrastructure. We all understand the importance of underground space (especially in urban areas) to our daily lives and how it is transforming the world (in the form of basement parking space, utilities, metros etc.). So in order to cope up with these rapid changes happening around us in urban underground infrastructure. Eminent industry experts were invited to engage in knowledge sharing and the latest developments in the field of urban underground infrastructure. In this context, this webinar covered two broader areas, one on tunnels and another on urban underground infrastructure. Webinar started with the discussion on the geotechnical activities in project sites, deep excavation in construction, embedded retaining structure, ground improvement, failure and rectification of deep excavation, challenges in underground metro constructions, sustainable underground infrastructure and design & construction of underground metros. Over 100 participants attended the webinar, including students, practitioners and academicians.

Skill Development Training Programme on 'General Pest Management - Technician' for the Pest Management Professionals held during April 17-21, 2023

Five days NIRD & PR approved National qualification training cum Accreditation Programme on 'General Pest Management - Technician' was conducted under the aegis of CSIR Integrated Skill Initiative for the Pest Management Professionals during April 17-21, 2023 at CSIR-CBRI, Roorkee.

This training programme was aimed to provide the latest knowledge & skills to the working professionals using different tools & techniques in the area of structural pest management covering Termites, Mosquitoes, Cockroaches, Bed bugs, Flies, Rodents, Minor Pests, Weed, Birds & other Vertebrate etc. This programme was attended by 23 participants covering different parts of the country.

This programme was inaugurated by Prof. R Pradeep Kumar, Director CSIR-CBRI, while addressing to the participants, he expressed the need for the development of the skilled & trained professionals working throughout the country in the diverse field of structural pest management. He also highlighted the importance of providing the technological support to the field functionaries for minimizing the routine problems specially on structural pests. Initially, event coordinator Dr. R. Dharmaraju, Chief Scientist & Skill Nodal, CSIR-ISI & Dr. B. S. Rawat, Sr. Pr. Scientist welcomed the guest/participants and briefed about the training programme and elaborated on the requirement of skill training and its applicability in the ongoing pest management practices. At the end, Mr. Nadeem Ahmad proposed the vote of thanks. During the event Ar. S.K. Negi, Dr. Achal Mittal, Dr. L.P. Singh, Dr. PKS Chauhan, Dr. P.K. Thapliyal, Dr. Chandan S Meena, Dr. Hemlata, Er. Ashish Pippal, Er. Saksham Bhardwaj, Er. Abhinav Tyagi & Er. Manish Jkhmola etc. were also present.

During the technical sessions, participants have been made to understand the latest tools & techniques on different aspects of structural pest management and also field instrument demonstration and termite laboratory visits were also shown to the participants for demonstrating the practical/field aspects of the pest treatment. A total of 20 technical presentations were made by external experts and CSIR-CBRI scientists. Later, assessment of the participants was done through written examination and viva by the NIRD&PR appointed examiner. At the end, participants have also given their feedback and expressed the usefulness of the present skill training to their professional career. The training was thus concluded with the distribution of reading materials, group photographs & list of resource persons to the participants.



Four Days Training Programme on Simulia ABAQUS Software

Four-Days Training Programme on Simulia ABAQUS Software has been organized at CSIR-CBRI, Roorkee from 6th-10th February 2023. There were 40 participants in the training programme, including scientists, research scholars, and trainee students. The session was facilitated by Mr. Varun Sharma of EDS Technologies Pvt. Ltd. (EDST), Gurugram. The session covered the ABAQUS GUI, ISIGHT TOSCA GUI, and FE SAFE software modules. The training included the pre- and post-processing of the models, DoE, Taguchi, approximation, fundamentals of optimisation, shape, size beads, topology, high and low cycle, strain, and stress algorithms. The training session was found to be highly advantageous for the participants as they were able to imply these lessons to their work.



Student Scientist Interaction (22nd Feb, 2023)

On 22nd February, 2023 a “Scientist student Interaction” was organized at CJ D.A.V Public School Meerut under “Jigyasa 2.0” in which around 160 students and 12 teachers participated from the school. The motive of this interaction was to trigger a scientific approach in the student’s mind. The event was inaugurated by school Principal Dr. Alpna Sharma. She welcomed the team of CBRI scientists with the mementoes. Later Dr. P.K.S. Chauhan delivered a lecture on the ancient science and attracted students towards the ancient science of India.



Student Scientist Interaction (22nd Feb, 2023)

On 22nd Feb, 2023 scientists from CSIR-CBRI (Dr. P.K S Chauhan, Senior Principal Scientist, Dr. Chandan Swaroop Meena, Senior Scientist, Dr. Veena Chaudhary, Scientist and Shreya Negi, Project Associate) visited G.D. Goenka School Muzaffarnagar for interacting with the students and teachers of the school. School Principal Smt. Surekha Singh welcomed the CBRI team and had a general discussion regarding the ATL Labs. After that the ATL incharge Sh. Satendra Prajapati guided the CBRI team to the Atal Tinkering Lab where the Scientists interacted with the students and encouraged them about the importance of science. Scientist also had a talk with the science faculty of the school. (Anu Malik, Nikunj Kumar, Ayush, Paijol, Niitn Rathi, Sachin Garg, Abdul Kadri, Sachin Garg, Harshita Singhal).



Student Scientist Interaction (23rd Feb, 2023)

On 23rd Feb, 2023 Jigyasa team (Dr. P.K.S. Chauhan, Dr. Chandan Swaroop Meena, Dr. Veena Chaudhary, Shreya Negi) from CSIR- CBRI visited D.P.S. Ghaziabad for interacting with students and teachers of the schools. In the interactive session Dr. Veena Chaudhary discussed about role of women's in science and Dr. P.K.S Chauhan talked about Ancient Science lastly Dr. Chandan Swaroop Meena presented lecture on the Heat Pump, Refrigeration and AC's. After interacting with students, scientist had a general discussion with school Principal Smt. Sangeeta Mukherjee Roy.



Student Scientist Interaction (21st March, 2023)

Saraswati Vihar Girls's School Sharanpur organised a Mandal Level Science Model Competition with a theme "Global Science for Global Well Being" on 21st March, 2023. Where CSIR-CBRI Scientists Dr. P.K.S. Chauhan, Senior Principal Scientist, Dr. Chandan Swaroop Meena, Senior Scientist, visited as a jury member. The competition started at 11:00 am, and all the judges started analyzing the models that students from various institutions presented. 45 models brought by students from three districts were examined. (Shararanpur, Muzaffarnagar, Shamli). Ten models were chosen for the state level science model competition. The event concluded with a prize distribution ceremony and photo session.



Scientist Teacher Connect (24th March, 2023)

On 24th March, 2023 a “Scientist Teacher Connect” workshop was organized at CSIR-Central Building Research Institute under “Jigyasa 2.0” in which around 35 teachers from 8 schools i.e., D.A.V. Meerut, D.P.S. Haridwar, Cantt. Board Roorkee, Anand Swaroop Arya Inter College, Scholars Academy Roorkee, Army Public School No.1, Kendriya Vidyalaya No.1, Bal Vidya Mandir CBRI Roorkee participated. The workshop was inaugurated by CSIR-CBRI director Dr. R. Pradeep Kumar and Shri. S.K. Negi, Chief Scientist CSIR-CBRI shared the dice and talked about the CBRI technologies.

Suvir Singh, Ex Chief Scientist CSIR-CBRI, Dr. S.R. Karade, Chief Scientist CSIR-CBRI, Dr. L.P. Singh, Sr. Pr. Scientist CSIR-CBRI and Dr. P.K.S Chauhan, Sr. Pr. Scientist CSIR-CBRI enlightened teachers about the importance of fire safety, the corrosion in buildings, Climate change and Earthquakes. Program was successfully completed by certificates and mementos distribution to the teachers.



Global Climate Clock Assembly (22nd April, 2023)

A Global Climate Clock Assembly Event was organized at CSIR- CBRI Roorkee, on 22nd April, 2023 on the occasion of Earth Day. 150 students from different schools (Scholars Academy Roorkee, Mont Ford Roorkee, DPS Haridwar, Bal Vidya Mandir CBRI, and Anand Swaroop Inter-college) along with 10 teachers participated in this global event. Prof. R. Pradeep Kumar Director CSIR-CBRI Roorkee inaugurated the event. Dr. L.P. Singh Sr. Pr. Scientist CSIR-CBRI presented a lecture on Climate Change. Dr. Chandan Swaroop Meena Sr. Scientist demonstrated the Climate Clock Assembly in which he explained the various components of Climate clock and how to assemble these components. The event was coordinated by Dr. P.K.S Chauhan Jigyasa Nodal CSIR-CBRI.



Technology Transfer

Name of Technology	Name of Client	Date of Technology Transfer
Gypsum-Vermiculite-Fly Ash Light Weight Plaster	M/s Sakarni Plaster India Pvt. Ltd., D-Mall, 405, Netaji Subhash Place, Pitampura, New Delhi-110 034	03.02.2023
High Volume Fly Ash-Gypsum Composite Plaster	M/s Sakarni Plaster India Pvt. Ltd., D-Mall, 405, Netaji Subhash Place, Pitampura, New Delhi-110 034	03.02.2023
Manufacturing of Internal Fuels based Eco-friendly and Energy Efficient Burnt Clay Bricks with Criss-Cross bricks setting	M/s Omparakash and Sons Auto Fire Bricks Jalalabad, Ganaur Distt. Sonipat, Haryana	14.03.2023
IPN Coating for the protection of Reinforced Concrete Structures	M/s Kansai Nerolac Paints Pvt. Ltd., Mumbai	16.03.2023
IPN Coating for the protection of Reinforced Concrete Structures	M/s Krishna Conchem Products Pvt. Ltd., Mumbai	29.03.2023

MoU Signed

S.No.	Name of Agency	Purpose of MoU	Date of Signing
1.	Tata Steel Ltd., Mumbai	Providing scientific inputs on the following: <ul style="list-style-type: none"> Affordable and sustainable housing technologies for relocation & rehabilitation of families in the mining area etc. Technical suggestions/know-how for creation of dispensary and other related structures Suggestions of slope stability and control measures Reduction of crack development in existing houses due to blasting Conducting technical training and workshops etc. 	15.02.2023
2.	Research & Development Centre for Iron & Steel, Steel Authority of India Limited, Durgapur & Burnpur	R&D collaboration in various areas of mutual interest VIZ. Design procedures, its optimization and recommendations of parallel flange sections (narrow and wide) produced by SAIL in different grades and varieties of steel, Assessment of CO ₂ mineralization in products using steel making slags. Design of green steel intensive utility structure/ building using SAIL structural, Life-cycle costing and assessment.	15.04.2023

New Projects undertaken

Title of Project	Name of Sponsoring Agency
Condition Assessment and Conservation / Restoration / Retrofitting of Old Heritage Building Dhenkanal House (DAG Office), Puri, Odisha	Central Public Works Department (CPWD), Nayapally, Bhuvaneshwar
Fire Performance Assessment of Fire Door	Airport Authority of India, Jolly Grant Airport, Dehradun
Bio-efficacy and Persistence Evaluation of Isocycloseram 400 SC for Subterranean Termite Management in Buildings	Syngenta India Pvt. Ltd., Pune
Fire Performance Assessment of Fire Door	KEC International Ltd., RRTS Project - NCRTC, Village Bhikkanpur, Duhai, Ghaziabad,
Fire Performance Assessment of Protected I-Beam	PWD (GNCTD), New Delhi
Structural Audit of residential Towers (D, E, F, G & H) of Phase-I of Group Housing Project, Chintels Paradiso, Sector-109, Gurugram, Haryana	Chintels India Pvt. Ltd., Gurgaon
Fire Performance Assessment of Fire Door	Doorwin Technologies Pvt. Ltd., Balanagar, Hyderabad
Performance Evaluation of Pre-applied HDPE waterproofing membrane and post applied self-adhesive modified bitumen membrane	NCC Limited, AIIMS Project, Awantipora, Pulwama
Ignitability and Flammability Evaluation of Ameetuff Class O Coating on Steel Metal GI Duct	Ameetuff Technical Paint Industries, Faridabad
Performance Evaluation of Geo-spray (Geopolymer Mortar) in Bond Test with Brick against the ASTM C1583 standard	Deogourdi Engg. & Infra Solution Pvt. Ltd., New Delhi
Performance Evaluation of Crystalline Waterproofing Admixture for the Work-Improvement to Rengali Dam under DRIP Phase-II & III	Balaji Drillers and Engineers Khetraipur, Sambalpur
Fire Performance Assessment of Fire Door	CPWD, Thirumangalam, Chennai
Fire Performance Assessment of Protected I-Beam	Ameetuff Technical Paint Industries, Faridabad
Technical Advice & TPQA of Construction of 100 Bedded ESIC Hospital & 32 Nos. of Staff Quarters with Boundary Walls including Horticulture & all other related services at Bahadurgarh, Haryana	CPWD, NDRI Campus, Near SBI, Karnal
Fire Performance Assessment of Fire Door	Vardhaman Corp., Chinchwad, Pune
Fire Performance Assessment of Fire Door	Robust Enterprises, Pune
Performance Evaluation of IPNet paints to be used in painting of PSC girder and slab between Elimala and Payyannur Stations for Southern Railways	Perumalil Granite Constructions, Kottayam

Design and Demonstration of Mechanism for the Surya Tilak of Shri Ram Mandir at Ayodhya	Sri Ram Janmbhoomi Teerth Kshetra Trust, Ayodhya
Fire Performance Assessment of Fire Door	Sehgal Doors, New Delhi
Fire Performance Assessment of Fire Doors	Shakti Horman Pvt. Ltd., Maisamma Mandal, Medchal District, Hyderabad
Health Assessment of Samadhi Temple of Baba Neeb Karori Ashram at Vrindavan, District Mathura, Uttar Pradesh	Sh. Thakur Hanuman Ji Trust, Mathura
Technical Advice and Vetting of Str. DWG's of Chintal Sthals and Shiv Udhyan at Kedarnath	NSCD, New Delhi
Structural Audit of Administrative Building and Residential Quarters of Colony at ONGC	ONGC, Hazira, Surat
Fire Retardant Performance Evaluation on GI Duct Sheet	Ameetuff Technical Paint Industries, Faridabad
Fire Performance Assessment of Fire Door	Trues Steels Pvt. Ltd., Derabassi, Mohali
Fire Performance Assessment of Fire Door	Innovators Cleantech Pvt. Ltd., Thane
Fire Performance Assessment of Fire Door	Sam India Builtwell Pvt. Ltd., Bhogal
Fire Performance Assessment of Fire Door	SKS Steel Industries, Jhajjar
Fire Performance Assessment of Fire Door	Bhawani Fire Protection Pvt. Ltd., Loni, Ghaziabad
Fire Performance Assessment of Fire Door	Tata Steel Ltd., Kolkata
Fire Performance Assessment of Fire Door	Shapoorji Pallonji and Co. Pvt. Ltd., Hyderabad
Fire Performance Assessment of Fire Door	GMP Technical Solutions Pvt. Ltd., Solan
Investigation of Seepage Issues in Antara Buildings and Recommendations for Appropriate Remedial Measures	Community Operations, Sinola, Dehradun

Publications - Journals:

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2. Yumnam, Mahesh, Debdutta Ghosh, and Hina Gupta. "Empirical mode decomposition-based techniques for imaging of shallow delamination in concrete using impact echo." *Mechanical Systems and Signal Processing* 184 (2023): 109668. (Impact Factor: 8.934)
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- Intelligence-Based Structural Health Monitoring of Corroded and Eccentrically Loaded Reinforced Concrete Columns. *Shock and Vibration*, 2023, Article ID 9715120. (IF = 1.616)
12. Kumar, Aman, Harish Chandra Arora, Nishant Raj Kapoor, Krishna Kumar, Marijana Hadzima-Nyarko, Dorin Radu. Machine learning intelligence to assess the shear capacity of corroded reinforced concrete beams. *Scientific Reports*, 2023, 13(1), 2857. (IF = 4.996)
 13. Vaibhav Mittal, Manojit Samanta, Rajesh Kumar Dash, Philips Omuwumi Falae, D.P. Kanungo (2023), "Surface Explorations and Investigation of Foundation Performance for Distress Assessment of the Building." *Journal of Performance of Constructed Facilities* (ASCE), <https://ascelibrary.org/doi/abs/10.1061/JPCFEV.CFENG-4187>.
 14. Goyal, A., & Karade, S. R. (2023). Effect of fly ash and red mud on strength and electrochemical properties of seawater mixed concrete. *European Journal of Environmental and Civil Engineering* (<https://doi.org/10.1080/19648189.2023.2194956>)
 15. Solanki A., Singh L. P., Karade S. R., and Sharma U. (2023) "A Review of C3A Hydration with Admixtures and Its Role in Sulfate Attack," *Advances in Civil Engineering Materials* 12, no. 1 : 58–77. <https://doi.org/10.1520/ACEM20210158>

Publications – Conferences/ Book Chapters:

1. Karade, S. R., Rawat, A., and Thapliyal, P. C. (2023), "Corrosion Control for Sustainable Infrastructure" – Key-note lecture in Workshop Workshop on 'Innovative and Sustainable Construction Materials & Technologies (ISCMT-2023)' January 6, 2023 at New Delhi
2. Lal M., Chidambaram R.S., Karade S. R., (2023), Bond and Cracking Behaviour of Textile Reinforced Concrete (TRC) Under Uniaxial Tensile Loading, *Proc. National Conference on Recent Advances in Construction Materials and Structures (RCMS'2023)*, 2nd – 3rd February Coimbatore, India.
3. Rawat, A., Karade S. R., and Thapliyal P. C. (2023), Mechanism of Inhibitors in control of corrosion of steel in concrete, *Proc: National Conference on Recent Advances in Construction Materials and Structures (RCMS'2023)*, 2nd – 3rd February 2023, Coimbatore, India.
4. Kumar, Rajesh * (2023). Recent progress in newer cementitious binders as an alternative to Portland cement: Need for the 21st century. *Recent Advances in Structural Engineering & Construction Management, Lecture Notes in Civil Engineering*, vol 277. Springer. https://doi.org/10.1007/978-981-19-4040-8_63
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6. Shubham Semwal, Abhilasha Prajapati, Rajesh Kumar*, Sachin Kashyap, R. Siva Chidambaram, Gunjan Joshi, Rajni Lakhani (2023). "Thermo-mechanical behaviour of lightweight precast sandwich panel incorporated with solid waste – An Experimental Investigation", *International Conference on Sustainable*

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7. N. Kumar & P. C. Thapliyal, 'Chapter 7 - Graphene and Carbon Nanotube based Sensors' in 'Sensors for Next-Generation Electronic Systems and Technologies', Taylor & Francis Group, 23 pages, 2023.
8. Siddhant Jindal, Mool Chand, Harish Chandra Arora and Aman Kumar. Seismic Evaluation and Retrofitting of RC Corroded Structures Using SAP 2000 Software in Accordance with Different Indian Guidelines. International Conference on Sustainable Solutions for Infrastructure Development, At: Kozhikode, India, 9-11 April 2023.
9. Yogesh Kumar, Harish Chandra Arora, Aman Kumar, Krishna Kumar and Hardeep Singh Rai. Neural Network Based Algorithm to Estimate the Axial Capacity of Corroded RC Columns. 5th International Conference on Information Systems and Management Science (ISMS 2022), Lecture Notes in Networks and Systems, November 24-27, 2022.
10. Sarvanshdeep Singh Sahota, Harish Chandra Arora, Aman Kumar, Krishna Kumar, and Hardeep Singh Rai. ML-Based Computational Model to Estimate the Compressive Strength of Sustainable Concrete Integrating Silica fume and Steel Fibers. 5th International Conference on Information Systems and Management Science (ISMS 2022), Lecture Notes in Networks and Systems, November 24-27, 2022.
11. M V Tarun Kumar and R. Siva Chidambaram "Precast Connections and its Influence on Structural Integrity" CECR Magazine, April 2023.
12. Mohan Lal, R. Siva Chidambaram and S.R. Karade (2023) "Bond and Cracking Behaviour of Textile Reinforced Concrete (TRC) Under Uniaxial Tensile Loading" National Conference on Recent Advances in Construction Materials and Structures (RCMS'2023), Coimbatore, India (Paper ID: RCMS23000045)
13. Moka Vijay Tarun Kumar, R. Siva Chidambaram (2023) "Influence of Slip and Cyclic Loading on the Tensile Behavior of Rebar Couplers", National Conference on Recent Advances in Construction Materials and Structures (RCMS'2023), Coimbatore, India (Paper ID: RCMS23000050)
14. Ashokh Raj, R. Siva Chidambaram and Shanmuga Priya T (2023) "Influence of Old and New Concrete Interface Treatment on the Flexural Behavior Under Bending", National Conference on Recent Advances in Construction Materials and Structures (RCMS'2023), Coimbatore, India (Paper ID: RCMS23000048)
15. Moka Vijay Tarun Kumar, R. Siva Chidambaram (2022) "Experimental Investigation on Flexural Behavior of Precast Beam-beam Connections Using Mechanical Connectors", 17th Symposium on Earthquake Engineering (17SEE), Department of Earthquake Engineering, IIT Roorkee & Indian Society of earthquake Technology (ISET), Roorkee, India (Paper ID: 497)
16. Kushal Chauhan, Amit Goyal, R. Siva Chidambaram (2022), "Mechanical Properties of Friction Damper Using Different Layer of Interface, 17th Symposium on Earthquake Engineering (17SEE), Department of Earthquake Engineering, IIT Roorkee & Indian Society of earthquake Technology (ISET), Roorkee, India (Paper ID: 516)
17. Abdul Nashith, Amit Goyal, R. Siva Chidambaram, (2022) "Mechanical Properties of Hybrid Friction-viscoelastic Damping, 17th Symposium on

Earthquake Engineering (17SEE), Department of Earthquake Engineering, IIT Roorkee & Indian Society of earthquake Technology (ISET), Roorkee, India (Paper ID: 521)

18. Mohan Lal, R. Siva Chidambaram, Sukhdeo Karade, (2022) "Critical Review of the Rehabilitation Techniques of Corrosion-Damaged Reinforced Concrete (RC) Beams using Composites, 28th International Conference & Expo on Corrosion, CORCON2022, Udaipur AMPP NACE @ Udaipur, India (Paper No. RCC27)
19. Piyush Verma, Rajesh Kumar*, Snigdhaajit Mukherjee, Mahesh Sharma (2023). "Rheological and Mechanical Properties of Self-Compacting Concrete under Partial Replacement of Marble Slurry and Fly Ash", International Conference on Sustainable Infrastructure: Innovation, Opportunities and Challenges-2023 (SIIOC-2023). (Abstract ID: SIIOC-306). National Institute of Technology Karnataka (NITK), Surathkal, Mangalore – 575 025, INDIA. April 20th & 21st, 2023 (Will be published in Scopus with doi)
20. Shubham Semwal, Abhilasha Prajapati, Rajesh Kumar*, Sachin Kashyap, R. Siva Chidambaram, Gunjan Joshi (2023). "Thermo-mechanical behaviour of lightweight precast sandwich panel incorporated with solid waste – An Experimental Investigation", International Conference on Sustainable Infrastructure: Innovation, Opportunities and Challenges-2023 (SIIOC-2023). (Abstract ID: SIIOC-242). National Institute of Technology Karnataka (NITK), Surathkal, Mangalore – 575 025, INDIA. April 20th & 21st, 2023 (Will be published in Scopus with doi)
21. Anurag, Rajesh Kumar*, Shweta Goyal, Sumedha (2023). "Supplementary cementitious materials in low carbon cementitious binders and concrete composites: Fresh and Hardened Properties", Indian Journal of Environmental Protection (ISSN 0253–7141).
22. Bibhakar Kumar Singh & Rajesh Kumar* (2023). "Novel lightweight Portland Pozzolana Cement (PPC) stabilized mud composites using crumb rubber & agricultural waste: Physico-mechanical and thermal performance", Materials Today Proceedings, Elsevier. <https://doi.org/10.1016/j.matpr.2023.03.132>
23. Suvam Das, Shubham Chaudhary, Shantanu Sarkar, D.P. Kanungo (2023). "Fuzzy-Based Meta-Heuristic and Bi-Variate Geo-Statistical Modelling for Spatial Prediction of Landslides". Advances in Scalable and Intelligent Geospatial Analytics

Keynote Lectures Delivered:

- **Dr SR Karade** delivered a key-note lectures on “Alternative Building Materials for Sustainable Construction”- Key-note Lecture in a National Conference on "Recent Advances in Construction Materials and Structures (RCMS 2023)" Organised by Department of Civil Engineering, PSG College of Technology, Coimbatore, February 2, 2023. Dr SR Karade was the ‘Guest of Honour’ during the Inaugural Session of National Conference on "Recent Advances in Construction Materials and Structures (RCMS 2023)" organised by PSG College of Technology Coimbatore, February 2-3, 2023.
- **Dr Debdutta Ghosh** delivered a Key-Note Lecture on "Safe Demolition of Supertech Twin Towers at Noida" at the International Conference “Asian Scenario on Infrastructural Development- ASID2023” Nagpur on 10-11 March, 2023.
- **Dr. R. Siva Chidambaram** delivered a Key Note Lecture on “Strain Hardening Fiber Reinforced Composites Materials and its Structural Applications” in National Conference on "Recent Advances in Construction Materials and Structures" scheduled during Feb 02-03, 2023.
- **Dr SR Karade** delivered a key-note/invited lectures on “Corrosion of Steel in Concrete Structures and Its Prevention” In: Scientist-Teacher Interactive Event under Jigyasa Programme on March 24, 2023 at CSIR-CBRI, Roorkee
- **Dr. R. Siva Chidambaram** delivered an Expert Lecture on “Low Cost Housing Techniques and Practices” ICT Course organized by NITTTR Chandigarh, March 2023

Transfer / Joining



Constan Kujur, Section Officer (G) has been transferred from C.S.I.R - Institute of Himalayan Bioresource Technology (IHBT), Palampur to CSIR-CBRI, Roorkee and joined on 06.04.2023 as section officer.