



ISSN 0409-7467



CSIR News

NEWSLETTER OF THE COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH

Volume 67 No. 23 & 24

website: <http://www.csir.res.in>

December 2017

In The News

CSIR-CCMB Releases Rice With Low Glycaemic Index



A new variety of rice that resists pests and is also beneficial for those with diabetes has been released by researchers from the CSIR-Centre for Cellular & Molecular Biology (CSIR-CCMB), Hyderabad in collaboration with the researchers of the Indian Institute of Rice Research at Hyderabad.

The researchers have come up with a new Improved Samba Masuri (ISM) rice variety that is resistant to Bacterial Blight (BB) and at the same time has the lowest Glycaemic Index (GI) at 50.9 among

all major rice varieties, which is an improvement over the 52.9 GI of the earlier Samba Masuri variety. Consumption of food with low GI results in slow release of glucose into the bloodstream reducing the ill-effects of diabetes.

At present, almost 40 per cent of the normal Samba Masuri rice crop is being lost due to Bacterial Blight. The new ISM variety of rice is, therefore, expected to significantly reduce this crop loss, which eventually would lead to reduced prices of rice and



increased profit margins for farmers and traders.

The traditional Samba Masuri rice is commonly called Sona Masuri and Kurnool Masuri and has very low

resistance to BB, a pest disease for which there is no chemical solution yet. It is estimated to be cultivated over four million hectares across the country, annually.

‘SME Corner’, to Help Small-scale Food Businesses, Launched by CSIR-CFTRI



platform aims to help Small and Medium Entrepreneurs (SMEs) to set up food businesses.

The platform will guide the SMEs on how to set up a food industry. The SMEs can register themselves on the platform and post their queries under different categories and the concerned expert and scientists would answer them.

To further help in establishing the food businesses, CSIR-CFTRI has also launched a Food Business Accelerator (FBA) initiative to provide business support and technology in the area of food science and technology.

The CSIR-Central Food Technological Research Institute (CSIR-CFTRI), Mysuru recently launched an online platform called ‘SME Corner’ that connects SMEs with CFTRI. The

The main aim of the accelerator is to produce successful firms and make them financially viable and independent through science and technology interventions.

Dr. Girish Sahni, Director General, CSIR visits CSIR-CEERI



Dr. Girish Sahni, DG-CSIR, Planting a sapling

As part of the CSIR Platinum Jubilee celebrations, Dr. Girish Sahni, DG-CSIR visited CSIR-CEERI on 22 September 2017. An open meet was arranged in the institute's main auditorium. Dr. Chandra Shekhar (Former Director, CSIR-CEERI), scientists and members of the CSIR-CEERI family, heads of local educational institutes and persons from media were present on the occasion.

After the Welcome Address of Prof. Santanu Chaudhury, Director, CSIR-CEERI, Dr. Girish Sahni, in his introductory remarks, said that CSIR-CEERI has been a very committed and socially useful laboratory of CSIR and had made huge contributions towards the development of the country despite not being located at a central place.

He stated that CSIR was not only maintaining its position since its inception but also progressing. Very few institutions in the country had managed to sustain and maintain their status even

after 75 years of their existence. CSIR could find a place among the 70 iconic institutions listed by *India Today*. He said that everyone should be proud of being part of such an organisation and must enthusiastically contribute to its growth.

He further added that CSIR-CEERI



Prof. Santanu Chaudhury, Director CSIR-CEERI, presenting the R&D plans of the Institute

had a very good potential being a multi-disciplinary institute. Many new applied fields were emerging in electronics such as bioelectronics, plastic electronics, and so on. The combination of electronics hardware and software was a key ingredient to address several issues in our day-to-day life. Ksheer scanner and Ksheer tester developed by CSIR-CEERI were the best examples of this kind.

Prof. Santanu Chaudhury, Director CSIR-CEERI presented a detailed roadmap of R&D plans of the institute during the next five years.

After elaborative discussions on the institute's plans, Dr. Girish Sahni released a document entitled "CSIR-CEERI: A Roadmap (2017-2022)": In the backdrop, he also mentioned about the Dr. Vijay Kelkar Committee Report on R&D outcomes. Dr. Kelkar defined four basic outcomes (outputs), which could be strategic goods, public goods, social goods and private goods. Every scientist

must link his/her R&D outcomes with those parameters and emphasised that it should form the criteria for assessment of awards and promotions. He commented that it was not CSIR-CEERI, but many other CSIR laboratories that find solace and shelter under an outcome i.e. publications or patents, which are of no value.

After the event, Dr. Girish Sahni inaugurated the technology exhibition at Gandhi Hall and attended a press meet. He enlightened the media personnel about the CSIR mission and its future R&D programmes. He said that CSIR-CEERI has been contributing tremendously to the nation. He also said that most of the present day technologies and systems use electronics in them.

He informed the press personnel that CSIR had been doing very good basic research and according to SCIMAGO world ratings, CSIR was placed at the 9th position among the government funded institutes. It was a remarkable achievement, he added. During the press meet, Prof. Santanu Chaudhury, Director CSIR-CEERI and Dr. Chandra Shekhar, Former Director CSIR-CEERI, were also present.

Dr. Sahni also looked around the technology exhibits at the museum and appreciated the research endeavours of the institute. Later, he met participants from industry and two agreements towards collaborative programmes were also signed in his presence.

The afternoon session was chaired by Dr. Chandra Shekhar, Former Director CSIR-CEERI. During the session, DG-CSIR, delivered two talks: (i) "Knowledge, Creativity, Innovation and Outcomes: Some Personal Experiences and Learning"; (ii) "CSIR's role in the National Development: Past, Present and Future".

Towards the end of his talks,



Dr. Girish Sahni, Director General CSIR, addressing the participants



DG, CSIR interacting with the media personnel



Dr. Girish Sahni, DG CSIR, addressing and interacting with participants from industry

he described his meeting with the Honourable Prime Minister, Shri Narendra Modi along with well-known scientists and industrialists. The Prime Minister wanted to know what the Indian scientific community was contributing towards the poor farmers, common men and women, and the way he expressed his concern about those issues was highly touching. The Prime Minister desired that the scientific community should do science and at the same time it should also address the problems faced by the common people.

Prof. Santanu Chaudhury and Dr. Chandra Shekhar presented a citation, memento and shawl to Dr. Girish Sahni, DG CSIR.



Prof. Santanu Chaudhury, Director CSIR-CEERI and Prof. Chandra Shekhar, Former Director, CSIR-CEERI honouring Dr. Girish Sahni, DG CSIR

New Products from CSIR-CEERI

Low-temperature Co-fired Ceramics (LTCC)/thick-film based hotplates are highly rugged, reliable and consume low power. The hotplates can be customised and tailored to meet heating requirements in domestic and strategic sectors.

(1) LTCC/Thick-film Hotplate-based Warming of Micro-farming Unit:

Micro-farming is a technique to grow tiny plants. Such plants are essential in providing the required nutrients and water content to the soldiers of the Indian Army posted in the extremely low-temperature and high-altitude regions. The germination and growth of the plants do not take place in the

extreme cold climatic conditions. To solve this problem and grow the plants on a regular basis, hotplates play an important role in maintaining the required temperature inside the micro-farming unit.



Microfarming unit



Germinated seeds at DRDO-DIHAR, Leh

The thick-film hot-plates operate at 12 V DC (using portable power supplies) and get heated up in a temperature range of 80-100°C (consume low-power) and help in heating the entire micro-farming unit. The required temperature inside the micro-farming unit would be maintained at about 15-20°C for germination and growth of the seeds.

The integration of hotplates inside micro-farming unit makes it portable and easily transportable to the high-altitude regions for the cultivation of various crops in a single unit

The hotplate integrated micro-farming unit has been successfully demonstrated at DRDO-DIHAR, Leh, Ladakh and seeds of crops viz. Fenugreek, Chinese Radish, Moong and Cabbage were germinated.

(2) LTCC/Thick-film Hotplate Integrated Warm-Insoles for Shoes: A special type of hotplate with unique interconnection technology has been designed and developed



LTCC/ thick-film hotplate integrated warm-insole

using LTCC/thick-film technology for the purpose. The hotplates are highly rugged, reliable and provide mechanically and thermally strong interconnections. They can be battery operated with a charging time of 3-4 hours and battery runtime of 6-7 hours. The fabrication process is environmentally friendly. The insoles integrated with LTCC/thick-film hotplates are capable of keeping the feet warm near to body temperature (insole temperature around 37°C). These warm-insoles are useful for people living in extreme cold climatic regions, high-altitude cold deserts and army soldiers serving at high-altitude posts. These warm insoles are reliable and have a long battery life.

(3) Instant Water-warming Unit using LTCC/ Thick-film Hot-plates:

The hotplate-based instant water-warming unit warms the running-water flowing through a pipe with less waiting time (~1 min.) and with low-power consumption as compared to the conventional water heating systems. The water at the outlet is heated 15-20°C more than the inlet water and flows with a flow-rate of about 250 ml/min. The instant water-warming unit does not require a storage tank and thus it



Instant water-warming unit

requires less installation space. The product will be used in domestic applications such as kitchen, wash-room, etc. and it has been supported by one of the MSMEs.

Events

CSIR-CBRI Organizes Teachers' Workshop



The CSIR-Central Building Research Institute (CSIR-CBRI), Roorkee, organized a two-day Teachers' Workshop during November 2-3, 2017 under the "JIGYASA-Quest for Curiosity" programme with the aim of inspiring teachers to aid in connecting science with the society. A total of 45 teachers from all 45 Kendriya Vidyalayas of Uttarakhand state participated in the workshop.

To compliment students' classroom learning with that of a very well-planned research laboratory based learning, the Council of Scientific & Industrial Research (CSIR) and Kendriya Vidyalaya Sangathan (KVS) have launched the student-scientist connect programme, "JIGYASA – Quest for Curiosity", connecting 1,151 KVs with 38 CSIR laboratories and benefitting one lakh students and nearly 1,000 teachers annually.

On 2 November 2017, the students of Kendriya Vidyalaya No. 1, Roorkee welcomed the teachers with a science exhibition displaying live models and a welcome song.



Dr. N. Gopalakrishnan, Director, CSIR-CBRI going around a science exhibition

Mr. Somit Shrivastav, Deputy Commissioner, Kendriya Vidyalaya Sangathan, Dehradun, Uttarakhand, graced the occasion as the Chief Guest and Dr. Kulwant Singh, Scientist H, Department of Materials Sciences, Bhabha Atomic Research Centre, Mumbai graced the occasion as the Guest of Honour. Dr. N. Gopalakrishnan, Director, CSIR-CBRI, Roorkee presided

over the function and Dr. Atul Kumar Agarwal, Senior Principal Scientist and Jigyasa Programme Coordinator, CSIR-CBRI, Roorkee conducted the function.

Addressing the gathering, Mr. Somit Shrivastav, presented detailed information about the Kendriya Vidyalaya Sangathan, its values and principles. He requested the teachers to take inspiration from the life of the Aadikavi Valmiki and bring about a positive change in the lives of their students.

Dr. Kulwant Singh inspired the teachers with various life incidents depicting the simple life and high thinking of great teachers and educationalists including Dr. S. Radhakrishnan and Shri Madan Mohan Malviya and discussed the importance of education and a motivated teacher in life.

In his Presidential Address, Dr. N. Gopalakrishnan, Director, CSIR-CBRI said that in our country

teachers are not mere people, they are Gurus and hold the honour of being higher than God. He therefore requested the teachers to respect the dignity of this honour through their conduct and always carry out their duties with dedication.

Dr. Atul Kumar Agarwal apprised the audience about the JIGYASA programme, its objectives and the various activities to be covered during the period. He presented the formal introduction of the Chief Guest.

The workshop continued with



Mr. Somit Shrivastav addressing the gathering



Dr. Kulwant Singh gave an inspirational speech



Dr. N. Gopalakrishnan, Director, CSIR-CBRI addressing the gathering



Dr. Atul Kumar Agarwal apprised the audience about the JIGYASA programme

notable presentations by various eminent scientists and experts. Dr. A.C. Dwivedi, CSIR, New Delhi presented a lecture on “Reinventing Yourself through Motivated Mindsets” and said that the quality of any nation depends on its citizens, the quality of citizens on the quality of education, the quality of



Dr. A.C. Dwivedi addressing the gathering

education on the quality of teaching, the quality of teaching on the quality of teacher and the quality of a teacher on his level of motivation. Thus, a motivated teacher is the pivot of building a strong and inspired the nation.

B.K. Bhagwan Bhai from Mount Abu, Rajasthan presented a lecture on “Ethical Values from Positive Thoughts”, and said that the teacher shapes the character of a student and the nation. He said that an ideal teacher should improve his conduct through humility and endurance to create a strong and positive character for the students.

Dr. Atul Agarwal, presented a lecture on “CSIR & CBRI: An Overview” and informed how starting with the indelible ink, the hallmark of the nation’s fabric, CSIR has left an indelible mark on every sphere of life. He informed that as a pioneer in the building sector, CSIR-CBRI, Roorkee is dedicated to Research, Development, and Innovation (RD&I) in finding timely, appropriate, and economical solutions to the problems of building materials, health monitoring and rehabilitation of structures, disaster mitigation, fire safety, energy efficient rural and urban housing.

Dr. Arvind C. Ranade, Senior Scientist, Vigyan Prasar, Delhi presented a lecture on “The Sun and India’s Aditya Mission” and explained the various scientific phenomena related to the Sun.



Dr. Arvind C. Ranade talked about India’s Aditya Mission

He discussed the various stars in the universe and their hidden secrets.

Dr. Abha Mittal, Senior Principal Scientist, CSIR-CBRI, Roorkee conducted the technical sessions.

In the evening, under the guidance of the Vigyan Prasar team, participants observed planets like Mars, Saturn, under a “Night Sky Watch” programme and received astronomical information about them.

The participants also visited the laboratories of the Institute and interacted with the Institute’s scientists.



Ms. Abha Mittal conducting the sessions



On the second day of the two-day teachers' workshop, Dr. Kulwant Singh presented a lecture on "Material for Fusion Reactor Experimental Reactor" and said that there is a huge shortfall in the expected production of electricity in India. A clean, eco-friendly, renewable resource is needed and this can be achieved by nuclear fusion.

Dr. Suvir Singh, Chief Scientist, CSIR-CBRI, Roorkee presented a lecture on "Fire Safety and Challenges in Buildings", and informed about the building structure elements responsible for the spread of fire, how to minimize loss and the latest structure element technologies such as fire-resistant glasses

and thermal shock protected column, etc. developed for the prevention, protection and confinement of the fire.

Dr. L.P. Singh presented a lecture on "Applications of Nanotechnology in Buildings" and Dr. R.K. Goel gave a lecture on "Tunnel Engineering".

In the Panel Session, under the chairmanship of Dr. N. Gopalakrishnan, Director, CSIR-CBRI, Roorkee, the panellists Dr. A.C. Dwivedi, Dr. Kulwant Singh, Dr. Arvind C. Ranade, Dr. L.P. Singh and Dr. Atul Kumar Agarwal interacted with the participants and answered their queries. The participants shared their thoughts and experiences with experts in a mutual panel discussion.

CSIR Platinum Jubilee Technofest at CSIR-CEERI



Prof. Santanu Chaudhury, Director CSIR-CEERI, inaugurating the CSIR Technofest

A three-day (August 16-17, 2017) CSIR Platinum Jubilee Technofest was inaugurated by Prof. Santanu Chaudhury, Director, CSIR-CEERI, Pilani on 16 August 2017.

Prof. Souvik Bhattacharyya, Vice Chancellor BITS, Pilani; Prof. A.K. Sarkar, Director, BITS Pilani; Dr. P.S. Bhatnagar, Director, BKBIET, Pilani; Dr. (Mrs.) M. Kasturi, Principal, Birla Balika Vidyapeeth, Pilani, dignitaries from other institutions and scientists from CSIR-CEERI were present during the inauguration. The guests and other dignitaries visited the display stalls on CSIR technologies. Fourteen (14) subject themes were covered as part of the exhibition.

While interacting with the media personnel, Prof. Santanu Chaudhury, Director, CSIR-CEERI, said that the aim of the CSIR Technofest was to bring awareness to the students, researchers



Prof. Souvik Bhattacharyya, VC BITS and Prof. A.K. Sarkar, Director, BITS Pilani and other dignitaries watching a video on CSIR technologies

and the common people about the research programmes being carried out and the technologies developed across CSIR research laboratories. The Technofest was significant as this was CSIR's Platinum Jubilee year with the completion of 75 years of existence on 26 September 2017. The contributions of various CSIR laboratories to support government programmes like Swachh Bharat, Swasth Bharat, Skill Development, etc were also showcased. A number of such exhibitions would be held throughout the country to mark the CSIR platinum anniversary.

Prof. Souvik Bhattacharyya, VC, BITS (Pilani) appreciated the R&D efforts done by CSIR. He said that this exhibition would highly benefit the people of Pilani and Rajasthan at large.

Prof. A.K. Sarkar, Director, BITS (Pilani) lauded the efforts of CSIR laboratories in developing the technologies for various applications. He opined that it is an honour to have a prestigious institute like CSIR-CEERI at Pilani. He congratulated Prof. Santanu Chaudhury for organising the CSIR Technofest at Pilani.

Dr. (Mrs.) M. Kasturi, Principal, Birla



Students interacting with a scientist

Balika Vidyapeeth, while expressing her views about the exhibition said that this kind of event provides a platform to acquaint students with state-of-the-art technologies of various fields and also benefit them in choosing their careers.

On the second day, Prof. Raj Singh, Chief Scientist communicated with Doordarshan and media personnel and gave details of the event and CSIR's achievements.

More than 1400 students and about 250 local citizens visited the three-day CSIR technofest exhibition.

National Workshop on “Application of Information Sciences in Technology Development and Marketing” Organised by CSIR-NISTADS and CSIR-NISCAIR



With the onset of the Fourth Industrial Revolution, Information Sciences are poised to play ever increasing roles in the entire cycle of technology development and commercialization. This surge in Information Sciences provides both an opportunity and a challenge for CSIR.

The Workshop on “Application of Information Sciences in Technology Development and Marketing” organised by the CSIR-National Institute of Science, Technology and Development Studies (CSIR-NISTADS) and co-organised by the CSIR-National Institute of Science Communication And Information Resources (CSIR-NISCAIR) was held during 21-22 November 2017 to map the

strengths and the gaps in Information Sciences at CSIR so as to create a comprehensive Information Sciences Ecosystem at CSIR. The participants included Directors/Heads of the five Information Sciences laboratories/ Units and representatives from CSIR Headquarter.

Dr. P. Goswami, Director, CSIR-NISTADS, in his inaugural address highlighted the critical to enabling roles Information Sciences can play in the entire cycle of technology development: from product planning to market entry. He proposed a two-pronged approach: one focused on enabling CSIR through Information Sciences and the other involving core Information Sciences

issues like data optimality, social dynamics, and decision support system. He emphasized the need to develop an Action Plan for applications of Information Sciences at CSIR.

Dr. Manoj K. Patariya, Director, CSIR-NISCAIR, emphasized the importance of proper communication strategies for science dissemination as well as technology commercialization. Dr. V. Mudkavi, Head, CSIR 4PI, highlighted the advent of the fourth paradigm and the need for development of critical human resource base in data analytics. The on-going patent informatics at CSIR-URDIP and the

status of the Traditional Knowledge Data base (TKDL) were also highlighted.

During the seven sessions, 45 participants from 20 CSIR laboratories highlighted strengths and challenges in applications of Information Sciences at CSIR, and identified priority areas. The thematic sessions were followed by a plenary session involving all the participants. It was decided that a collective roadmap for applications of Information Sciences at CSIR should be pursued.

The workshop was coordinated by Dr. Mohd. Rais, Sr. Principal Scientist, CSIR-NISTADS.



CSIR-CEERI Celebrates its Foundation Day

The 65th CSIR-CEERI Foundation Day was celebrated on 21 September 2017. Prof. P.J. Narayanan, Director, IIT Hyderabad, was the chief guest and Prof. Souvik Bhattacharyya, Vice Chancellor, BITS Pilani, was the guest of honour on the occasion. The celebrations were inaugurated by the guests with the lighting of the lamp.

Prof. Santanu Chaudhury, Director CSIR-CEERI welcomed the guests, participants, media personnel and introduced the guests to the audience. He gave a brief overview of the progress made by the institute during the past one year. He said that CSIR-CEERI has been re-orienting towards



Prof. Santanu Chaudhury, Director CSIR-CEERI, highlighting the achievements

the industry-facing and people-centric research programmes.

CSIR-CEERI charted out a definite path in this changed context, he added. The path agenda was to develop socially relevant/market-oriented technologies and products with appropriate scientific innovations. CSIR-CEERI activities have been re-organised into three distinctive vertical technologies namely, (i) Smart Sensors, (ii) Cyber-Physical Systems, and (iii) Microwave Devices. A roadmap has been planned for guiding the activities of the Institute over the next five years.

He informed that the institute had successfully completed CSIR network projects during the 12th five-year-plan period. Those projects generated significant future leads to technologies for commercial and strategic exploitation. As a consequence, CSIR-CEERI had entered into an MoU with ISRO-SAC and initiated a joint project (with the support of CSIR) for the development of Ku-band and Ka-band travelling wave tubes that would be used in the Indian satellite programmes. Other

network project leads led to significant projects with DRDO, DAE and ISRO. A technology on mercury-free plasma UV lamp was also transferred to industry and a commercial product would be launched soon. In terms of smart sensors, CSIR-CEERI would be partnering with ISRO in delivering two sensors (accelerometer and gyroscope) for their space programmes, he added.

CSIR-CEERI transferred a MEMS-based gas sensor technology (IoT-enabled) to M/s Macwin India Limited. The technology was expected to be used in railways and other establishments for maintaining cleanliness of toilets as well as for other industrial applications. It would be a worthy contribution to Swachh Bharat Mission of the government. CSIR-CEERI developed a technology on an IoT-enabled solar tree. It would have applications to use on national highways and monitoring the environment.

Prof. Santanu Chaudhury also mentioned that CSIR-CEERI would initiate mission mode projects (supported by CSIR and other stakeholders)



Chief Guest, Prof. P.J. Narayanan, Director IIIT-Hyderabad, addressing the participants



Guest of Honour, Prof. Souvik Bhattacharyya, VC BITS, speaking on the occasion

such as water technologies, safety and security of vital installations, nano-biosensors for medical diagnostics, point-of-care IoT-enabled diagnostic devices, coordination of intelligent systems, and food security systems (milk, oil adulteration, etc.).

He also informed that CSIR-CEERI had set up a centre at Jaipur to support research and development endeavours of MSMEs. An incubation centre would also be started at Jaipur to encourage start-ups in propagating technologies (developed at CSIR-CEERI) and build organisations to deliver those technologies to the industry. A centre would also be set up at Delhi soon and it would also function on similar lines. All the four centres (Pilani, Chennai, Jaipur and Delhi) would coordinate in scaling up interactions with industry and in product delivery.

The guest of honour, Prof Souvik Bhattacharyya, VC BITS said that BITS Pilani faced certain challenges compared to the centrally funded government institutions. He gave some of the performance indicators about BITS. He appealed that it should be recognised, appreciated and supported by the regulatory bodies and controlling agencies.

He told that CSIR-CEERI and BITS did not take enough leverage on complementary abilities and skills and he desired that to happen. There were several research areas where both institutes could collaborate. BITS has been greatly benefitted by the scientists from CSIR-CEERI,

in the form of teaching and guiding of its students for over the decades.

The chief guest and the guest of honour released the annual report (April 2016-August 2017) of CSIR-CEERI. They presented service awards to the employees who had completed 10, 20, 25 and 30 years of service.

The chief guest, Prof P.J. Narayanan while delivering the foundation day address expressed his gratitude for inviting him to the CSIR-CEERI



Hon'ble guests releasing CSIR-CEERI Annual Report



Prof. Raj Singh, Chief Scientist, proposing the vote of thanks

foundation day celebrations. He said that it was time for any institution to look back at the activities that were carried out in the past. This year was the 75th year for CSIR and the 70th year for our country. There were several such institutions reaching important milestones. In the Indian scientific establishment, there were multiple tiers of institutions apart from universities. He opined that as the countries and institutions mature, they become lethargic. There would be a resistance for trying out new things. The fast-changing areas such as computer hardware, software, computing and communications saw a maximum impact during the last 50 years. In this context, he expressed that it would be better for the scientists to learn programming skills than to teach all the subjects to programmers in meeting their programming requirements as they became essential for very many areas.

He felt glad to know the achievements during the past few years of CSIR-CEERI. If we look positively at the contributions from the institutions such as CSIR, DRDO, etc. they have served the nation very well. Similarly, our academic institutions, by and large, served the nation very

well. He added that Prof. Souvik Bhattacharyya informed us about the contributions from BITS. It was a 50 plus years old institution helping our country. BITSians became professors elsewhere and produced similar kind of new people. The IIT system kept producing wonderful people, who helped in creating more people, more technologies and more institutions. There were very many other institutions in the country, contributing to the overall development. He remarked that despite all such sort of contributions, we should adopt and stay dynamic in the fast-changing world.

Earlier, Prof. P.J. Narayanan and Prof. Souvik Bhattacharyya planted saplings in the main lawn of the institute.

Prof Santanu Chaudhury, Director CSIR-CEERI presented mementoes to Prof. Souvik Bhattacharyya and Prof. P.J. Narayanan.

Mr Rajendra Verma and Ms Somsukla Maiti, Scientists, CSIR-CEERI coordinated the programme.

Prof. Raj Singh, Chief Scientist proposed the vote of thanks.

After the inaugural function, the guests visited various laboratories and exhibition hall (museum) of the institute. They appreciated the research activities being pursued at the institute.

A cultural programme was organised in the evening. Artists from 'Alankar Group', Jaipur performed Rajasthani folk dances. Major Gen (Retired) S.S. Nair, Director, Birla Education Trust, Pilani graced the programme as the chief guest. He lauded the performances of the artists and said that it was the first time that he could watch such wonderful performances. At the end of the programme, he presented mementoes to the artists.



Hon'ble Guests visiting the institute museum

CSIR-CEERI Celebrates CSIR Platinum Jubilee Celebrations

As part of the 65th CSIR-CEERI Foundation Day and CSIR Platinum Jubilee Celebrations, a special function was organised on 24 September 2017. Prof. Partha Pratim Chakraborty, Director, IIT Kharagpur was the chief guest, Dr. Manisha G. Singh, Project Director, NCAS (Gurugram) was the guest of honour and Prof. Souvik Bhattacharyya, Vice Chancellor, BITS (Pilani) was the special invited guest on the occasion.

Prof. A.K. Sarkar, Director, BITS Pilani; Dr. Lipika Dey, Principal Scientist, TCS Innovation Laboratories, New Delhi; Mr. Deepak Chaturvedi, Head Administration & Programmes, Rajasthan ILD Skill University, Jaipur; Prof. Santanu Chaudhury, Director CSIR-CEERI; Prof. Chandra Shekhar, Emeritus Professor, BITS Pilani; dignitaries from BITS and local educational institutions; and employees from CSIR-CEERI were present during the function.

Prof. Santanu Chaudhury, Director CSIR-CEERI, in his welcome address, gave a brief introduction about the chief guest, Prof. Chakraborty, guest of honour, Dr. Manisha Singh and special invited guest, Prof. Bhattacharyya. He also gave an outline of the programme.

The chief guest, Prof. Chakraborty acknowledged Prof. Santanu Chaudhury, Director and members of CSIR-CEERI family for giving him an opportunity and to be part of the celebrations. He delivered a foundation day lecture on “Scalable Platforms for Change: Towards Engineering Excellence for Nation-building.” He congratulated the director and employees of CSIR-CEERI



Prof. Partha Pratim Chakraborty, IIT Kharagpur, addressing the audience

on the 65th CSIR-CEERI Foundation Day and CSIR Platinum Jubilee.

The guest of honour, Dr. Manisha Singh delivered an invited talk on

“Benefits and Challenges of Economic Impact Assessment: Technology Interventions.” She congratulated all the employees on CSIR-CEERI foundation day and on CSIR platinum jubilee celebrations.

Earlier, special invited guest Prof. Souvik Bhattacharyya elaborated in detail on the relations of BITS, CSIR-



Prof. Souvik Bhattacharyya, VC BITS, speaking on the occasion





Prof. Santanu Chaudhury (left) Director CSIR-CEERI and Prof. Partha Pratim Chakraborty, Director IIT Kharagpur, exchanging MoU documents



Prof. Santanu Chaudhury, Director CSIR-CEERI and Prof. Souvik Bhattacharyya, VC BITS, Pilani, exchanging MoU documents



Prof. Santanu Chaudhury, Director CSIR-CEERI and Mr. Deepak Chaturvedi, Head Administration & Programmes, Rajasthan ILD Skill University, Jaipur, exchanging MoU documents

CEERI and IIT Kharagpur, and hoped for further deep relations in the future.

Prof. Santanu Chaudhury, Director CSIR-CEERI, honoured the guests with shawls and presented citations and mementoes.

Mr. Rajendra Verma and Ms. Somsukla Maiti, Scientists, CSIR-CEERI coordinated the programme. Dr. S.C. Bose, Chief Scientist, proposed the vote of thanks.

After the function, all the guests visited the exhibition hall (Gandhi Hall), where CEERI developed technologies were exhibited. They also visited the institute museum, various research facilities and laboratories, and praised the research activities being pursued at the institute.

In the afternoon session, a workshop entitled “R&D collaboration between CSIR-CEERI and IIT Kharagpur” was organised. Scientists from CSIR-CEERI and Professors from IIT Kharagpur participated in the workshop and delivered talks on possible collaborations. Prof. Santanu Chaudhury, Director CSIR-CEERI and Prof. Partha Pratim Chakraborty,

Director IIT-Kharagpur, were present during the workshop. During the workshop, the following talks were delivered:

1. Computer vision and image processing: Research collaboration with CEERI - Prof. Jayant Mukhopadhyay, IIT Kharagpur.
2. Vision image analysis and applications - Dr. Sanjay Singh, Scientist, CSIR-CEERI, Pilani.
3. Sensor network for civil structural health monitoring with emphasis on railway bridges - Prof. Prabhir Kumar Biswas, IIT Kharagpur.
4. IoT at CSIR-CEERI - Dr. S.C. Bose, Chief Scientist, CSIR-CEERI, Pilani.
5. MEMS-based sensors and actuators for biomedical applications - Dr. Tarun Kanti Bhattacharya, IIT Kharagpur.
6. Sensors and actuators at CSIR-CEERI - Dr. Ajay Agarwal, Sr. Principal Scientist, CSIR-CEERI, Pilani.

Dr. Ravindra Mukhiya, Scientist coordinated the workshop and Dr. Kamaljit Rangra, Chief Scientist, proposed the vote of thanks.



The visiting guests at the technology exhibition

COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH

HUMAN RESOURCE DEVELOPMENT GROUP

CSIR Complex, Library Avenue
Pusa, New Delhi 110 012

CSIR Young Scientist Awards 2018

The Council of Scientific & Industrial Research (CSIR) invites nominations for CSIR Young Scientist (YS) Awards for the year 2018. The awards are to be given for research contributions made primarily in India. The nominee should be a regular Scientist (as per CSRAP Rules) of CSIR system and should have joined the CSIR laboratory on or prior to 26th September 2017. The age of the nominee should not be more than 35 years as on 26th September 2017.

The YS Awards are given annually in the following disciplines: (1) Biological Sciences, (2) Chemical Sciences, (3) Earth, Atmosphere, Ocean and Planetary Sciences, (4) Engineering Sciences, and (5) Physical Sciences (including instrumentation). The YS Award comprises a citation, a cash award of Rs 50,000 (Rupees fifty thousand only), and a plaque.

Nominations addressed to Scientist Incharge, SSB YSA Unit, Human Resource Development (HRD) Group, CSIR Complex, Library Avenue, Pusa, New Delhi 110 012 should be sent as per the prescribed proforma (original + one copy) latest by 31st January 2018. A CD/DVD/USB flash drive is also required containing photograph (in JPEG format), duly filled proforma and significant publications (in PDF format) of the nominee.

The details of the YS Award and the prescribed proforma for nomination may be obtained from above address or may also be downloaded from **website: www.csirhrdg.res.in**

Printed and Published by

Dr. Manoj Kumar Patariya on behalf of CSIR-National Institute of Science Communication And Information Resources

Dr. K.S. Krishnan Marg, New Delhi -110 012 and printed at NISCAIR Press

Dr. K.S. Krishnan Marg, New Delhi -110 012

Editor : Hasan Jawaid Khan; **Assistant Editor :** Sonali Nagar

Design: Neeru Sharma & Sarla Dutta; **Production:** Pankaj Gupta

Phone: 25848702; Fax: 25847062; E-mail: csirnews@niscair.res.in; hjk@niscair.res.in

Website: <http://www.niscair.res.in>

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Annual Subscription: Rs 500; Single Copy: Rs 50.00

RN 4512/57