3rd International Conference on Emergent Converging Technologies and Biomedical Systems

(ETBS – 2023) May 15-17, 2023

3rd Emergent Converging Technologies and Biomedical Systems (ETBS 2023) was organized by the Department of Electronics & Communication Engineering and Department of Computer Sciences and Engineering & Information Technology, Jaypee University of Information Technology (JUIT) in collaboration with DST iHub-AWaDH and Indian Institute of Technology Ropar at JUIT from May 15-17, 2023. The conference was sponsored by the *Council of Scientific & Industrial Research (CSIR) and the Biomedical Engineering Society of India (BMESI)*. Jaypee Education System always supports such types of events where academicians, researchers, and industry professionals meet together to discuss the quality and productive research because JUIT Solan has been known for excellence in academics, research, and distinguished faculty since its inception.

We would like to express our special gratitude to our **Chief Patron Hon'ble** Shri Jay Prakash Gaur ji (Founder Chairman, Jaypee Group) and **Hon'ble Pro-chancellor of JUIT** Shri Manoj Gaur ji, who

gave their blessings to organizing this conference. We extend our sincere gratitude to our **Patrons** Hon'ble VC JUIT Solan Prof. Rajendra Kumar Sharma ji, Hon'ble Director IIT Ropar Prof. Rajeev Ahuja ji who encouraged us to organize this conference, **Conference advisors:** Prof Dinesh Kumar ji (RMIT University, Australia), Prof, C.C. Tripathi ji (Director NITTR Bhopal), and Prof. Ashok Kumar Gupta ji (Dean R&D, JUIT Solan), who gave their valuable suggestions to organize this conference, **Principal General Chair**: Prof. Pushpendra P. Singh Director Awadh Innovation Hub, IIT Ropar, Prof. Vivek Kumar Sehgal, HoD CSE, and Prof. Rajiv Kumar HoD ECE for their continuous support to organize this conference ETBS-23, **General Chair**: Prof, Sudarshan Iyenger(IIT Ropar), Prof. Sunil Kumar Khah (JUIT Solan), and Prof. Shruti Jain (JUIT Solan) for their continuous and blind support at ground level for conducting the conference ETBS-23, **Conference Chair:** Dr. Nitin Auluck(CSE IIT Ropar), Dr. Vikas Baghel (ECE JUIT Solan), and Dr. Himanshu Jindal (CSE,JUIT Solan) for their effort with honesty and hard work to organize ETBS-23, and **Finance chair**Major Gen, Rakesh Bassi for managing the financial permissions related to the ETBS-23. **Conference secretary:** Dr. Nikhil Marriwala, ECE, UIET, Kurukshetra University, Kurukshetra, Dr. Sunil Datt Sharma, ECE, Dr. Pardeep Garg, ECE, and Dr. Nishant Sharma, CSE of Jaypee University of Information Technology, India for their sincere efforts to successful completion of the conference.

The aim of the ETBS is to serve researchers, developers, and educators working in the area of signal processing, computing, control, and their applications to present and future work as well as to exchange

research ideas. 2023 ETBS invites authors to submit their original and unpublished work that demonstrates current research in all areas of emergent converging technologies, signal/ image processing, computing, and their applications. ETBS 2023 solicits full length original and unpublished papers, based on theoretical and experimental contributions, related, but not limited to the following tracks, are solicited for presentation and publication in the conference: Engineering in Medicine and Biology, Signal Processing and Communication, Emerging Smart Computing Technologies, Internet of Things for emerging Engineering Applications, Next Generation Computational Technologies This conference is one of the premier venues for fostering international scientific and technical exchange across research communities working in multiple domains. The 3rd ETBS 2023 technical program committee put together a program, consisting of 13 technical sessions and 8 invited talks.

We have received over 310 research papers, including **international research papers from the countries** (Australia, United Kingdom, Jordan, Malaysia, Denmark, South Korea, Bangladesh, Saudi Arabia, Malaysia), **National research papers from the states** (Tamil Nadu, Telangana, Andhra Pradesh, Bangalore, Karnataka, nearby states, etc.), and also **Research papers from top institutes** (IITs, NITs, IIITs, Central Universities, & others). Out of 310 received research papers, 57 papers have been accepted and registered for the presentation with an acceptance ratio 18.3%. All accepted and presented research papers will be published in proceedings with Springer in their prestigious book series "Lecture Notes in Electrical Engineering"

The conference started with the inauguration ceremony with lamp-lighting and vandana of Goddess Sarawati. We are thankful to our Chief Guest **Prof. Rajeev Ahuja**, *Director IIT Ropar* and Guest of Honors: **Mr. Bharat Kumar Sharma,** *Director and GPU advocate NVIDIA AI Tech Centre India, and* **Dr Narayan Panigrahi,** *Scientist-'G', Group Head GIS Centre for Artificial Intelligence & Robotics Bangalore* for

gracing the inaugural session of ETBS 2023. During the ceremony, our Hon'ble VC Prof Rajendra Kumar Sharma focused on the interdisciplinary research and academic collaborations. Chief Guest Prof. Rajeev Ahuja concentrated on academic and industrial collaborations. Guest of honor Mr. Bharat Kumar Sharma focused to reduce the gap between industry and academia. Another Guest of Honor Dr. Narayan Panigrahi focused on collaborations between academic institute and research laboratories. Dean Academics & Research Prof. Ashok Kumar Gupta also emphasized on interdisciplinary research collaborations.

We are also thankful to the speakers **Professor Sharath Sriram,** *Coordinator, Functional Materials and Microsystems Research Group, RMIT University, Melbourne, Australia,* **Dr. Vishal Sharma,** *School of Electronics, Electrical Engineering and Computer Science, Queen's University, Belfast, UNITED KINGDOM,* **Mr. Bharat Kumar Sharma,** *Director and GPU advocate NVIDIA AI Tech Centre India,* **Dr Narayan Panigrahi,** *Scientist-'G', Group Head GIS Centre for Artificial Intelligence & Robotics Bangalore,* **Prof. Sanjeev Narayan Sharma,** *Dean Academics, IIITDM, Jabalpur, Madhya Pradesh, India,* **Prof. Ram Bilas Pachauri,** *Electrical Engineering Department, IIT Indore, Madhya Pradesh, India,* **Mr. Ashish P. Kuvelkar,** *Senior Director (HPC-Tech) C-DAC, Pune,* **Ms. Kamiya Khatter,** *Editor - Applied Sciences & Engineering* who spared time to share their knowledge, expertise and experience spite of their busy schedules.

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY
(JUIT), WAKNAGHAT, INDIA

3RD INTERNATIONAL CONFERENCE ON EMERGENT
CONVERGING TECHNOLOGIES AND BIOMEDICAL SYSTEMS
(ETBS-2023)

DEPARTMENT OF ECE AND DEPARTMENT OF CSE&IT,
IN COLLABORATION WITH DST IHUB - AWADH & INDIAN
INSTITUTE OF TECHNOLOGY (IIT) ROPAR, INDIA

KEYNOTE SPEAKER

Mr. Ashish P. Kuvelkar
Senior Director (HPC-Tech)
C-DAC, Pune

Date: May 16, 2023, Time: 12:00 PM - 01:00 PM
Venue: CL-10 (http://meet.google.com/drv-qkpb-kvy)
Topic: Next generation Computational Technologies

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INSTITUTE OF TECHNOLOGY (IIT) ROPAR, INDIA

KEYNOTE SPEAKER

Mr. Bharat Kumar Sharma
Director and GPU advocate
NVIDIA AI Tech Centre India
Date: May 15, 2023, Time: 10:45 AM - 11:45 AM
Venue: LT-2
Topic: Software 2.0 and Future of Computing

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INSTITUTE OF TECHNOLOGY (IIT) ROPAR, INDIA

KEYNOTE SPEAKER

Ms. Kamiya Khatter
SEditor - Applied Sciences & Engineering
Springer - a part of Springer Nature
Date: May 16, 2023, Time: 02:30 PM - 03:30 PM
Venue: CL-10 (http://meet.google.com/drv-qkpb-kvy)
Topic: Scientific writing

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DEPARTMENT OF ECE AND DEPARTMENT OF CSE&IT,
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INSTITUTE OF TECHNOLOGY (IIT) ROPAR, INDIA

KEYNOTE SPEAKER

Dr. Narayan Panigrahi
Scientist 'G', Group Head GIS
Center for Artificial Intelligence & Robotics DRDO Bangalore
Date: May 15, 2023, Time: 11:45 AM - 12:30 PM
Venue: LT-2
Topic: Brain-Computer Interface through interpretation of EEG data

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DEPARTMENT OF ECE AND DEPARTMENT OF CSE&IT,
IN COLLABORATION WITH DST IHUB - AWADH & INDIAN
INSTITUTE OF TECHNOLOGY (IIT) ROPAR, INDIA

KEYNOTE SPEAKER

Prof. Ram Bilas Pachauri
Electrical Engineering Department,
IIT Indore, Madhya Pradesh, India.
Date: May 17, 2023, Time: 10:30 AM - 11:30 AM
Venue: CL-10 (http://meet.google.com/drv-qkpb-kvy)
Topic: Multivariate signal processing and machine learning for computer-aided medical diagnosis

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DEPARTMENT OF ECE AND DEPARTMENT OF CSE&IT,
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INSTITUTE OF TECHNOLOGY (IIT) ROPAR, INDIA

KEYNOTE SPEAKER

Prof. Sanjeev Narayan Sharma
Dean Academics,
IIITDM, Jabalpur, Madhya Pradesh, India
Date: May 17, 2023, Time: 09:30 AM - 10:30 AM
Venue: LT-2
Topic: From Bio to Genomic Signal Processing

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DEPARTMENT OF ECE AND DEPARTMENT OF CSE&IT,
IN COLLABORATION WITH DST IHUB - AWADH & INDIAN
INSTITUTE OF TECHNOLOGY (IIT) ROPAR, INDIA

KEYNOTE SPEAKER

Prof. Sharath Sriram
Coordinator, Functional Materials and Microsystems Research Group,
RMIT University, Melbourne, Australia.
Date: May 16, 2023, Time: 09:30 AM - 10:15 AM
Venue: CL-10 (http://meet.google.com/drv-qkpb-kvy)
Topic: Convergence of materials, medicine and design to transform electronics into products

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DEPARTMENT OF ECE AND DEPARTMENT OF CSE&IT,
IN COLLABORATION WITH DST IHUB - AWADH & INDIAN
INSTITUTE OF TECHNOLOGY (IIT) ROPAR, INDIA

KEYNOTE SPEAKER

Dr. Vishal Sharma
School of Electronics, Electrical Engineering and Computer Science,
Queen's University, Belfast, UNITED KINGDOM
Date: May 15, 2023, Time: 02:30 PM - 03:30 PM
Venue: CL-10
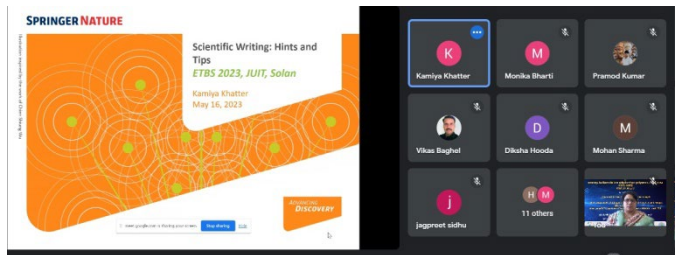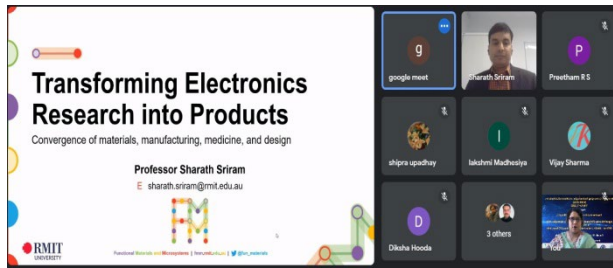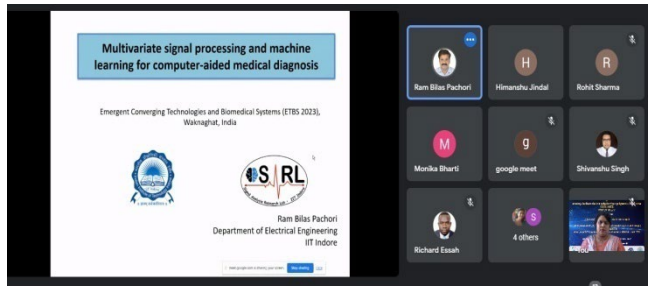Topic: Security of smart computing devices

We had received overwhelming response from **countries** like Australia, United Kingdom, Jordan, Malaysia, Denmark, South Korea, Bangladesh, Saudi Arabia, and Malaysia. We received papers pan-India from Tamil Nadu, Telangana, Andhra Pradesh, Bangalore, Karnataka, Punjab, Uttar Pradesh, Dehradun, Chandigarh, Haryana, New Delhi, West Bengal, Rajasthan, Uttarakhand, Madhya Pradesh, and not to mention our neighboring states. The authors are from premium institutes IITs, NITs, Central Universities, PU and many other reputed institutes.
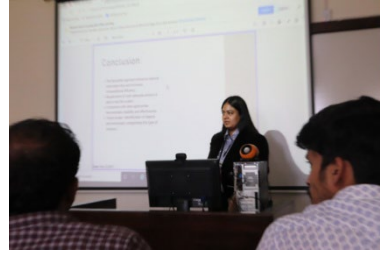
The paper presentation session has been divided into 13 sessions and in these sessions, 57 research papers have been presented and their evaluation was done by the session chairs by asking queries about the proposed idea of the presenters. Each author was given 10 minutes for the paper presentation, which was followed by a question and answer session for 5 minutes. The conference was structured to foster discussion between participants. Each theme started with a keynote lecture by an eminent personality in the domain. The glimpses of the sessions are as follows:

The three-day Conference ended with a valedictory session. In the valedictory session, the certificates have been distributed to the participants and volunteers by Prof. Sunil Kumar Khah, Prof. Shruti Jain, and Prof. Rajiv Kumar. The session ended with a vote of thanks to the participants and session chairs for their technical contribution. A vote of thanks also extends to the conference organizing team and student volunteers for their contribution to making this conference successful.
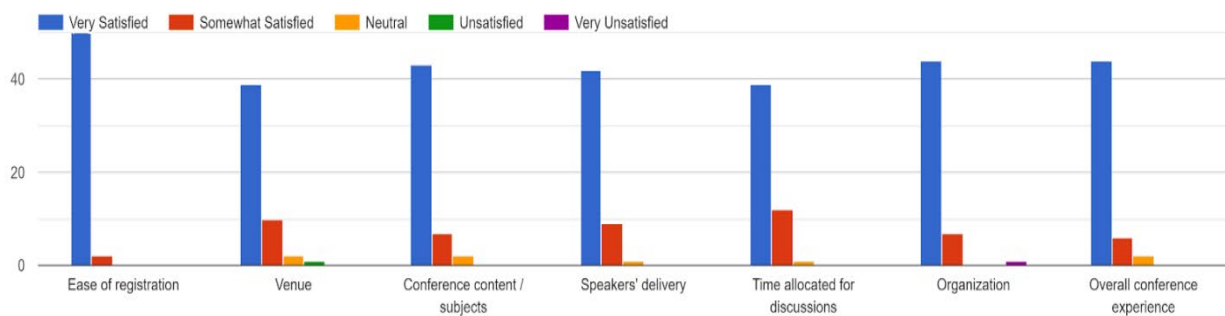
We truly believe the participation of researchers from different universities and institutes, working on applications of thematic areas of the conference across the domains in this conference and deliberating their research issues and outcomes resulted in fruitful and productive recommendations.

Report on Feedback Collected from Attendees:

Feedback forms were shared which consisted of both quantitative and qualitative questions, allowing the attendees to rate their overall experience and provide specific comments or suggestions.

Please rate us for the overall organization of this conference:

Based on feedback from attendees, the ETBS 2023 conference was generally well received, with the majority of attendees reporting positive experiences.

NEWSPAPER REPORTS

सफलता का श्रेय अपने माता-पिता और गुरुजनों को दिया है।

जेपी यूनिवर्सिटी में अंतरराष्ट्रीय सम्मेलन शुरू

सोलन। इमर्जिंग टेक्नोलॉजी एंड बायो मेडिकल सिस्टम्स पर 3 दिवसीय अंतरराष्ट्रीय सम्मेलन मंगलवार को जेपी यूनिवर्सिटी ऑफ इंफॉर्मेशन टेक्नोलॉजी, वाकनाघाट, सोलन में शुरू हुआ। इसका आयोजन इलेक्ट्रॉनिक्स एंड कम्युनिकेशन इंजीनियरिंग विभाग द्वारा किया जाता है। विवि में डीएसटी इन हब और भारतीय प्रौद्योगिकी संस्थान रोपड़ के सहयोग से सम्मेलन वैज्ञानिक और औद्योगिक अनुसंधान परिषद (सीएसआईआर) और बायोमेडिकल इंजीनियरिंग सोसाइटी ऑफ इंडिया (बीएमईएसआई द्वारा प्रायोजित है। कुलपति प्रो. (डॉ.) राजेंद्र कुमार शर्मा ने मुख्यअतिथि प्रो. (डॉ.) राजीव आहूजा, निदेशक, आईआईटी रुड़की, भरत कुमार, निदेशक और एनवीडिया एआई में जीपीयू एडवोकेट के साथ दीप प्रज्वलन समारोह के साथ सम्मेलन का उद्घाटन किया।

बायो-मैडकील सिस्टम्स पर
JUIT में सम्मेलन का आयोजन

सवेरा न्यूज/ कास.

नई दिल्ली , 16 मई : इमर्जिंग टैक्नोलॉजी एंड बायो-मैडीकल सिस्टम्स पर 3 दिवसीय अंतरराष्ट्रीय सम्मेलन जेपी यूनिविर्सटी ऑफ इंफॉर्मेशन टैक्नोलॉजी(जेयूआईटी), वाकनाघाट, सोलन, हिमाचल प्रदेश में शुरू हुआ। सम्मेलन का आयोजन इलैक्ट्रॉनिक्स एंड कम्युनिकेशन इंजीनियरिंग विभाग द्वारा किया जाता है।

जेयूआईटी और भारतीय प्रौद्योगिकी संस्थान रोपड़ के सहयोग से कम्प्यूटर विज्ञान और इंजीनियरिंग और जेयूआईटी सम्मेलन वैज्ञानिक और औद्योगिक अनुसंधान परिषद (सीएसआईआर) और बायोमैडीकल इंजीनियरिंग सोसायटी ऑफ इंडिया (बीएमईएसआई) द्वारा प्रायोजित है। कुलपति प्रो. (डा.) राजेंद्र कुमार शर्मा ने मुख्यातिथि प्रो. (डा.) राजीव आहूजा, निदेशक, आईआईटी रुड़की, भरत कुमार, निदेशक और एनवीडिया एआई में जीपीयू एडवोकेट के साथ दीप प्रज्वलन समारोह के साथ सम्मेलन का उद्घाटन किया।

JUIT organises 3-day international conference on Emerging Technology and Bio-medical Systems

crazynewsindia · 7 hours ago

Last updated: 2023/05/16 at 9:26 AM

A 3-day international conference on Emerging Technology and Bio-medical Systems (ETBS 2023) started today on 15th May at Jaypee University of Information Technology, Waknaghat, Solan, Himachal Pradesh).ETBS 2023 is organized by the Department of Electronics & Communication Engineering and Department of Computer Sciences and Engineering & Information Technology, Jaypee University of Information Technology (JUIT) in collaboration with DST iHub-AWaDH and Indian Institute of Technology Ropar at JUIT. The conference is sponsored by Council of Scientific and Industrial Research (CSIR) and Biomedical Engineering Society of India (BMESI).

Vice-chancellor Prof. (Dr.) Rajender Kumar Sharma inaugrated the conference with a lamp lighting ceremony along with chief guest Prof. (Dr.) Rajeev Ahuja, Director, IIT Roorkee, Mr. Bharat Kumar, Director and GPU advocate at NVIDIA AI Tech Centre India, Dr Narayan Panigarhi, Scientist G, GIS, Centre of Excellence of Artificial Intelligence and Robotics, DRDO, Banglore and Prof Ashok Gupta, Dean (A&R) JUIT.

Aim of organizing such conferences is to bring together researchers, developers and educators together and provide them a platform to exhange research idea. A total of 57 research articles are to be presented in this conference by researchers from india as well as abroad. In addition to research papers, keynote speeches from distinguished speakers are also being organized at the conference. A total of 8 keynote speakers will share their knowledge in different research areas such as smart Internet of Things devices, Next generation computational technologies, Security of smart computing devices, scientific reporting among others.

HIMACHAL   EDUCATION   MISCELLANEOUS   NATIONAL

जेपी यूनिवर्सिटी ऑफ इंफॉर्मेशन टेक्नोलॉजी, वाकनाघाट, सोलन, हिमाचल प्रदेश (ETBS 2023 Conference)

By Shikhar News

MAY 16, 2023

इमर्जिंग टेक्नोलॉजी एंड बायो-मेडिकल सिस्टम्स (ETBS 2023) पर 3 दिवसीय अंतर्राष्ट्रीय सम्मेलन आज 15 मई को जेपी यूनिवर्सिटी ऑफ इंफॉर्मेशन टेक्नोलॉजी, वाकनाघाट, सोलन, हिमाचल प्रदेश में शुरू हुआ। ETBS 2023 का आयोजन इलेक्ट्रॉनिक्स एंड कम्युनिकेशन इंजीनियरिंग विभाग द्वारा किया जाता है। और JUIT में DST iHub-AWaDH और भारतीय प्रौद्योगिकी संस्थान रोपड़ के सहयोग से कंप्यूटर विज्ञान और इंजीनियरिंग और सूचना प्रौद्योगिकी विभाग, जेपी विश्वविद्यालय सूचना प्रौद्योगिकी (JUIT)। सम्मेलन वैज्ञानिक और औद्योगिक अनुसंधान परिषद (सीएसआईआर) और बायोमेडिकल इंजीनियरिंग सोसाइटी ऑफ इंडिया (बीएमईएसआई) द्वारा प्रायोजित है।

कुलपति प्रो. (डॉ.) राजेंद्र कुमार शर्मा ने मुख्य अतिथि प्रो. (डॉ.) राजीव आहूजा, निदेशक, आईआईटी रुड़की, श्री भरत कुमार, निदेशक और एनवीडिया एआई में जीपीयू एडवोकेट के साथ दीप प्रज्ज्वलन समारोह के साथ सम्मेलन का उद्घाटन किया। टेक सेंटर इंडिया, डॉ नारायण पाणिगढ़ी, वैज्ञानिक जी, जीआईएस, सेंटर ऑफ एक्सीलेंस

ऑफ आर्टिफिशियल इंटेलिजेंस एंड रोबोटिक्स, डीआरडीओ, बंगलौर और प्रोफेसर अशोक गुप्ता, डीन (ए एंड आर) जेयूआईटी शामिल थे।

इस तरह के सम्मेलनों के आयोजन का उद्देश्य शोधकर्ताओं, विकासकर्ताओं और शिक्षकों को एक साथ लाना और उन्हें अनुसंधान के विचारों का आदान-प्रदान करने के लिए एक मंच प्रदान करना है। इस सम्मेलन में भारत के साथ-साथ विदेशों के शोधकर्ताओं द्वारा कुल 57 शोध लेख प्रस्तुत किए जाने हैं। सम्मेलन में शोध पत्रों के अलावा प्रतिष्ठित वक्ताओं के मुख्य भाषण भी आयोजित किए जा रहे हैं। कुल 8 मुख्य वक्ता विभिन्न अनुसंधान क्षेत्रों जैसे स्मार्ट इंटरनेट ऑफ थिंग्स डिवाइस, नेक्स्ट जनरेशन कम्प्यूटेशनल टेक्नोलॉजी, स्मार्ट कंप्यूटिंग डिवाइस की सुरक्षा, वैज्ञानिक रिपोर्टिंग आदि में अपना ज्ञान साझा करेंगे।

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