

Semester - I notes 2018-19

# bitscan

K K Birla Goa Campus



**BITS Pilani**  
K K Birla Goa Campus

innovate

achieve

lead

# from the editor

We are pleased to present to you the 18th Issue of BITSCAN which includes events and achievements of our Campus community during the first semester of academic year 2018-19. This year we welcomed 15th batch of students into BITS fold. We hosted several exciting events including conferences, seminars, workshops, expert lectures, annual festival, etc., which immensely contributed in enriching the experience of our BITS community.

The academic year started with the mega event of the year - CONVOCATION 2018. This year, 810 students received their degrees, of which 30 were PhDs. Three students from the Bachelor's degree programs - Mr. Amit Agarwal, Ms. Quadros Karen Aditi and Mr. Advait Prasad Koparkar were awarded Gold, Silver and Bronze medals respectively.

Nine research projects worth around Rs. 1.54 crores were sanctioned for various departments by government and non-government agencies during this semester. In addition to fulfilling teaching and research assignments, many faculty members were engaged in various initiatives including delivering invited lectures and conducting workshops at other institutions, presenting papers on their latest research at national and international events, and visits to renowned Indian and foreign institutions to establish and further the collaboration. Our Faculty members continue to be part of editorial board and reviewers of reputed international and national journals.

Around 23 lectures were delivered by distinguished speakers from India and abroad at our campus during this semester. We also organized four International and four national level workshops / conferences which included XLII (42nd) All India Cell Biology Conference – first time hosted by BITS Pilani in Goa. In the buildup to inaugurate the BITS BIRAC BioNEST, Center for Innovation, Incubation and Entrepreneurship (CIIE) organized specialized workshops and training programmes which benefitted our

students as well as the entrepreneur community in Goa.

This year's student organized two-day annual event COALESCENCE had a grand line-up of speakers including the Flag Officer Commanding Goa Naval Area (FOGA) Rear Admiral Philipose G. This year's WAVES was also organized and celebrated with great splendor. Numerous competitions including on-stage and off-stage events gripped the participants representing reputed institutions from across India during the week-end. Highlight of WAVES, of course was the live and enthralling performance by megastar Farhan Akhtar with his band.

Our students continue to win accolades in India as well as abroad and make us proud. BITS Goa team won the regional round (West Zone) of RBI Policy Challenge under the guidance of Dr. Arfat Ahmad Sofi. Several students have made remarkable performance in presenting papers, participating in reputed competitions across India and abroad and winning international travel grants to participate in international conferences. Notable amongst them are Mr. Arijit Chakraborty won IICHe Award for the year 2018, Ms. Muskan Taneja won the Student Innovator award for 2018, and Ms. Mansi Baveja won poster presentation at AIIMS Rishikesh.

In addition to their academic accomplishments, our students are very proactive in serving the community around our campus through NIRMAAN – a student lead volunteer organisation. This semester Nirmaan hosted Joy of Giving Week, #DoItForKerala, Soch, Street Play, Teach for a Day, Eye Check-up Camps and Diwali sale.

BITSian Day was celebrated with a high degree of pomp where large number of students participated in various activities including the early morning BITS RUN. Alumni Relations Cell continues to organize several interactions and activities for our students with alumni.

We thank the entire BITS community for their contributions and support in bringing out this issue of BITSCAN.

# Convocation 2018

BITS Pilani, K K Birla Goa Campus' Convocation 2018 was held in its magnificent auditorium on 5th August, 2018. Prof. Souvik Bhattacharyya, the Vice-Chancellor, BITS Pilani; Prof. Raghurama G., the Director of BITS Pilani, Goa Campus; Prof. S C Sivasubramanian, the Acting Registrar, BITS Pilani; members of the Senate, and faculty members of Goa campus, along with the graduating students and their family members were present on this joyous occasion.

This year, 810 students received their degrees, of which 30 were PhDs. Three students from the Bachelor's degree programs were awarded Medals: Gold medal - Mr. Amit Agarwal, Silver medal - Ms. Quadros Karen Aditi and Bronze medal - Mr. Advait Prasad Koparkar.

Distinguished Alumnus Award for 2018 was received by Prof. Reena Aggarwal (Vice-Provost, Georgetown University), Prof. Prabhu L. Pingali (Founding Director, Tata – Cornell Institute), Prof. Arun S. Somani (Associate Dean, Iowa State University), Mr. Ajoyendra Mukherjee (Executive Vice-President, TCS), Mr. Prasanna Gopalakrishnan (Chief Information officer, Bank of America), Dr. Anand S. Rao (Global Innovation Lead, Princewater House Coopers), Mr. Anupendra Sharma (Global VP, Siemens) and Mr. Tushar Jain (Director, Automat Irrigation Ltd).

Prof. Souvik Bhattacharyya, the Vice-Chancellor of BITS Pilani, presented an overview of the University's accomplishments, and in particular, highlighted its pioneering role in fostering innovation and entrepreneurship in higher education. He concluded by stressing upon the need for students to be humane and contribute to the betterment of the society with the knowledge and skills that they have gained at BITS. The Director, Prof Raghurama G. gave a detailed report of BITS Pilani, Goa Campus, offering a comprehensive overview of the advances in research, new initiatives and collaborations of the Institute. The Dean of Administration, Prof. D M Kulkarni, concluded the ceremony with the Vote of Thanks.

# a confluence of ideas academia

## memorandum of understandings with foriegn universities

### **BITS Pilani signed MoU with University of Illinois System**

A delegation comprising of senior officials of University of Illinois System, USA representing its three campuses: Urbana–Champaign, Chicago and Springfield visited BITS Pilani K K Birla Goa Campus on 8th December 2018 to sign a Memorandum of Understanding (MoU) and discuss possible collaboration between the two organizations.

The delegation from University of Illinois System was led by its President Prof. Timothy L Killen, accompanied by its Vice President and other senior professors. BITS Pilani team was led by its Vice Chancellor Prof. Souvik Bhattacharyya along with the Directors of all four campuses, Deans, Associate Deans and senior professors. Both teams discussed possible areas of research collaboration including submission of joint research proposals to various funding agencies, joint research supervision, and faculty and student mobility. BITS Pilani signed the MoU with University of Illinois System and agreed to look at specific proposals to follow-up in near future.

### **University of Tartu, Estonia (Europe) partners with BITS Goa for an Erasmus+ programme**

Department of Chemistry, through a MoU, became an Associate Partner of the prestigious 17th Century University of Tartu, Estonia for an international two-year joint master degree programme 'Excellence in Analytical Chemistry (EACH)'. EACH programme is taught in four universities: University of Tartu (co-ordinator), Estonia; Uppsala University (Sweden); University Claude Bernard Lyon (France); and Åbo Akademi University (Finland).

Apart from BITS Pilani, K K Birla Goa Campus,











other Associate Partners of this programme are University of Shanghai for Science and Technology, and Tongji University (China), Nebraska Wesleyan University, and Rochester Institute of Technology (USA), University of Urbino “Carlo Bo” (Italy), University of Zagreb (Croatia), Universitat de les Illes Balears (Spain), University of Regensburg (Germany), Saint-Petersburg State University (Russia), Dublin City University and National Centre for Sensor Research (Ireland), University of Oulu (Finland), Vienna University of Technology (Austria).

This EACH programme is funded by the Education, Audiovisual & Culture Executive Agency (EACEA) of the Commission of the European Communities (the European Commission) under the Erasmus+ Framework programme. This programme educates specialists in analytical chemistry well qualified to work in the industry (such as food, pharmaceutical, materials, energy, etc.) and chemical analysis laboratories worldwide. EACH programme provides knowledge and skills in both fundamental and applied aspects of modern analytical chemistry.

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[seminars/conferences/workshops/  
training programs](#)

### **International Workshop on Data sharing for open innovation in community-based rehabilitation**



The Cognitive Neuroscience Lab, Department of Biological Sciences and School of Biomedical Sciences at Leeds University jointly organized a 2-day international workshop on ***‘Data sharing for open innovation in community-based rehabilitation’***. This workshop, held on 28th – 29th September 2018, centered on creating a forum for an open discussion of opportunities and avenues for the sharing of data

documenting unmet rehabilitation needs and best practices in community-based rehabilitation (CBR) in resource-poor areas. The workshop also focused on creating network and developing a joint research agenda, collecting and sharing CBR data by partner organizations, and managing the associated ethical issues and challenges. The prominent participants of the workshop included Dr. Shashikala Gopalaswamy, Founder of the Indian Association of Cerebral Palsy (IACP), Prof. Meenakshi Girish, Associate Professor and Head at the NKP Salve Institute of Medical Sciences, Nagpur, Dr. Ranjana Pandey Panigrahi, Research Head, Siddha Development Research and Consultancy Pvt. Ltd. and many more. The workshop was conducted by Dr. Lena Jaspersen and Dr. Samit Chakrabarty from University of Leeds. Prof. Veeky Baths, Associate Professor, Department of Biological Sciences was the convener of the workshop.

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### **Academic-Industry - Government Partnerships Symposium**

Goa University in association with BITS Pilani, K K Birla Goa Campus organized a two-day international symposium on ***‘Academic-Industry-Government Partnerships to Accelerate Radiation Research and Clinical Translation’*** on 8th – 9th October, 2018. The symposium was held at The International Centre Goa in coordination with International Conference on Radiation Biology, with the support of Indian Society for Radiation Biology (ISRB) of K S Hegde Medical Academy, Nitte (Deemed to be University), Mangalore.

The symposium was one-of-a-kind for both educationists and students in radiation sciences viz. radiation oncology, radiation biology, medical physics, biotechnology, information technology, healthcare and ethnopharmacology. It has created a common platform for the interaction among faculties, clinical experts, researchers and entrepreneurs. Poster presentation for young researchers and a permanent documentation of a two-minute elevator pitch for scientist-entrepreneurs were included in the program. This two day symposium covered critical areas of Tumor Biology (Sensitizers, Biomarkers and Immune modulators), Artificial Intelligence & Machine Learning in Cancer Therapy. Prof. Vijayshree Nayak and Prof. Anasuya Ganguly both faculty members of the De-

partment of Biological Sciences, were part of the organizing committee of the symposium.

### **International Symposium on Bilingualism and Cognition (ISBC-2018)**

The Cognitive Neuroscience Lab, Department of Biological Sciences and Centre for Neural and Cognitive Sciences (CNCS) of the University of Hyderabad jointly organized a 3-day international symposium on '*Bilingualism and Cognition*' at BITS Pilani, K K Birla Goa Campus from 1st to 3rd November 2018.

Prof. Jubin Abutalebi, Cognitive Neurologist and Associate Professor of Neuropsychology at the University Vita Salute San Raffaele in Milan, Italy was the chief guest for the inauguration. Prof. G. Raghurama, Director; Prof. Veeky Baths, In-charge of the Cognitive Neuroscience Lab; and Prof. Ramesh Mishra, Co-Convener and Dean, Centre for Neural and Cognitive Sciences (University of Hyderabad) addressed the gathering during the inaugural function. Dr. Suvarna Alladi from NIMHANS, Bangalore and Prof. Bhoomika Kar from the Centre for Behavioral and Cognitive Sciences at the University of Allahabad, were among the distinguished speakers. Oral and Poster presentations were also organized as part of the conference.



The core themes of the symposium were as follows: bilingualism on cognitive functions (speech, for example), rehabilitation through speech therapy, memory, the science of bilingualism, effects on neurodegeneration, the cortical structures involved in language processing, cognitive aspects of communication disorders, treatments of communication

impairments, cognitive control focus on language switching, psychology of language and communication (with a focus on syntax and semantics) and many more. Prof. Veeky Baths, Associate Professor, Department of Biological Sciences was the convener of the Symposium.

### **4th Asia Pacific - International Society of Microbial Electrochemistry and Technology (AP-ISMET) Meeting on Bio-electrochemical and electrochemical approaches for decentralized sanitation**

'4th Asia Pacific - International Society of Microbial Electrochemistry and Technology (AP-ISMET) Meeting' was held from 13th to 16th November 2018. The meeting included presentations, panel discussions and interactive dialogues on the latest advances in the field of Bio-electrochemical and electrochemical approaches for decentralized sanitation. The meeting was attended by 55 participants representing around 22 different institutes from around 13 countries. The meeting included 27 Oral presentations and 12 Poster presentations. Visit to the single household electrochemical and 100 people equivalent electrochemical system treating black water from the campus by the participants, was also conducted.



The inauguration was graced by Prof. Raghurama G., Director, BITS Pilani, K K Birla Goa Campus. Professor Willy Verstraete, head of the Laboratory of Microbial Ecology and Technology (LabMET - Faculty of Bioscience Engineering and emeritus professor) delivered the keynote address titled "Which microbial technologies show major potential for the needs of the next decades?" He focused on the gen-

eral aspect of current situation in the field and also gave an insight for the future aspects and development required. The meeting was focused on four different aspects – microbiology, technology, components aspects, and sanitation. Dr. Sarah Glaven, Prof. Korneel Rabaey, Prof. Makarand Gangrekar, Prof. Korneel Rabaey, Dr. Sarah Glaven and Prof. S Venkata Mohan were among the distinguished speakers. Prof. Srikanth Mutnuri, Head, Department of Biological Sciences was the convenor of this meeting.

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### **One Day Conclave on Catalyzing Startup Ecosystem through Academia-Industry Collaborations**

Department of Electrical and Electronics Engineering organized a one day conclave titled '*Catalyzing Startup Ecosystem through Academia-Industry Collaborations*' on 18th August, 2018.

About 25 startups and industries participated in the conclave. Lt. Gen PJS Pannu, PVSM, AVSM, VSM - Deputy Chief, Integrated Defense Staff HQs, New Delhi was the Chief Guest and Rear Admiral V M Doss, VSM - Assistant Chief of Naval Staff, Naval HQs, New Delhi was the guest of honor for the inaugural function. Prof. Souvik Bhattacharyya, Vice-Chancellor, BITS Pilani and Prof. Raghurama G., Director, BITS Pilani K K Birla Goa Campus presided the inaugural function.

Padma Shri Dr. R. Prahlada (former Distinguished Scientist, DRDO HQs) and Mr. R. Ramanan (Mission Director, Atal Innovation Mission, NITI AAYOG) and several renowned dignitaries graced the occasion. The conclave focused on synergy between Industry and Academia in fostering startup in niche area of electronic system design and manufacturing. The event consisted of sessions on Innovative Startups, Opportunities in Development of Electronics System Design & Manufacturing and Angel Investor Fund & Venture Capital Fund for Startups & MSMEs.

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### **School on Advanced Oxidation Processes (S-AOP)**

BITS Pilani, K K Birla Goa Campus in association with Society of Environmental Chemistry and

Allied Sciences (SECAS), organized a '*School on Advanced Oxidation Processes (S-AOP)*' on 16th - 17th November 2018.



Advanced Oxidation Processes (AOPs) are chemical based emerging technologies for removal of organic pollutants, including CECs (Contaminants of Emerging Concerns) in water, soil and air. These processes primarily involve generation of highly reactive hydroxyl radical for treatment of contaminants.

Several young investigators working in the area of AOPs from IIT-Madras and Hyderabad, IISc Bengaluru, NIT Raipur, ICT Mumbai, Mahatma Gandhi University-Kerala and BITS Pilani, presented their latest research findings. Also, representatives from industries such as Aditya Birla Group- Mumbai; Deccan Chemical-Goa; Goa State Infrastructure Development Corporation (GSIDC) etc. participated in S-AOP. Prof. Halan Prakash from the Department of Chemistry was the Convener of S-AOP-2018.

Among the other dignitaries, Prof. Ch. Subrahmanyam, IIT-Hyderabad, delivered lectures on fundamentals and application of plasma methods for AOPs developed at IITH. Prof. Ligy Philip, IIT-Mumbai conducted a session on pulsed power technologies in water treatment and on some of the AOP modules developed at IITM. Prof. Parag Gogate, ICT-Mumbai, delivered lectures on application of Ultrasonic AOP technologies to address the complex wastewater problems. In the young investigators sessions, Ms. Bhanupriya, IISc Bengaluru, Ms. Jeeva Philip, M.G. University, Kerala, and Mr. Aswath A K, Aditya Birla Science and Technology Company Ltd, Mumbai won the best presentation awards for their work on screening and removal of pollutants in complex water matrices.



S-AOP-2018 deliberation was programmed to be highly interdisciplinary. S-AOP was participated by Chemists, Physicists, Biologists, Environmental Scientists and Engineers, to discuss potential avenues in chemical and biological oxidative decomposition pathways of organic and inorganic contaminants in water. S-AOP also coordinated discussion on efficiency of various AOPs in the degradation of pollutants, and in fundamental understanding of degradation mechanisms.

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## XLII (42nd) All India Cell Biology Conference

The XLII (42nd) All India Cell Biology Conference (ISCB) on the theme of '***Trends in Cell and Molecular Biology***' was conducted from 21st to 23rd December, 2018. The conference was attended by around 300 scientists and researchers from across the country. Around 50 lectures by prominent scientists and 200 posters from various fields of biological sciences on latest research were presented.



Padma Bhushan Prof. Padmanabhan Balaram, former Director of the Indian Institute of Science, Bangalore, inaugurated the conference. Prof. Jagat Roy, Professor at Department of Zoology, BHU, Varanasi and President of Indian Society of Cell Biology; Prof. Raghurama G, Director of BITS Pilani K K Birla Goa Campus; Prof. Angshuman Sarkar, Faculty at Department of Biological Sciences and Convenor of the Conference; and Prof. Vijayashree Nayak, Acting Head, Department of Biological Sciences addressed the audience during the inaugural function.

Renowned scientists from across the country including Prof. S. C. Lakhota (BHU, Varanasi), Dr.

Samit Chattopadhyay (Director, IICB, Kolkata), Dr. Kishore Paknikar (Director, ARI, Pune), Dr. Debashis Mitra (Director, CDFD, Hyderabad), Dr. Gopal Kundu (Director, NCCS, Pune), Dr. Saumitra Das (Director, National Institute of Biomedical Genomics, Kalyani, WB), Dr. J. K. Pal (Director, D.Y. Patil Biotechnology & Bioinformatics Institute, Pune) delivered distinguished lectures in the conference.

This conference aimed to bring together acclaimed Cell Biologists, Biochemists, Molecular Biologists and Computational Biologists to a common platform to present their exciting and new findings; also to find global partners for future collaboration.

'Cancer' is still one of the most challenging diseases across the world and in this conference a special session was contributed to understand the upcoming development in this field, nationally and internationally. 'Nanotechnology' has also gained much importance in today's treatment of some important diseases. In this conference the discussion was not only related to how this technology is beneficial but also to understand its drawbacks. 'Toxicity', which is one of the major health concerns, whether due to environmental stresses or due to unknowing exposure to some toxic substances was also re-looked in depth. This conference provided an opportunity for researchers across the globe to understand and showcase their data related to 'Toxicity'. Immunology and computational systems biology the other major areas which are evolving and need to be integrated with modern cell biology as a whole to understand and predict the things much better was also deliberated.

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## Workshop on Applied Time Series & Panel Data Econometrics

Department of Economics organized a three-day Workshop on '***Applied Time series & Panel Data Econometrics***' from 19th to 21st October, 2018. Dr. T. Mohanasundaram from School of Management Studies, Kongu Engineering College was the resource person. The workshop was well attended by students, PhD scholars and Faculty members who had hands on experience on Time Series Econometrics.

**IBI-India Business Insight Workshop** was also or-

ganized by the Department of Economics on 22nd November, 2018. The Resource Person for the workshop was Mr. Mayank L. Dedhia.

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## 2nd Basic Life Support Training Session

Dr. Jorson Fernandes, Chairman, St Johns Ambulance Association & certified trainer for Basic Life Support (BLS) in Goa conducted second BLS training on 24th November 2018. 24 participants from various departments and divisions participated in this training session. BITS Pilani, Goa Campus now has 50 certified BLS trained staff. The session was organized under the leadership of campus Director, Prof. Raghurama G. and campus Chief Medical Officer, Dr. Raghavendra K. M. Mr. Ernest Samuel Ratnakumar J, Registrar of BITS Pilani University, who was on his maiden visit to Goa Campus, interacted with the training team and appreciated the efforts.

Basic Life Support course is conducted to enhance the skilled life support provider while dealing with the emergencies in our workplace/community before the arrival of ambulance/medical team.

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## Center for Innovation, Incubation and Entrepreneurship (CIIE) programmes

### **Faculty Development Programme on Start-ups, Innovation and Creativity (24th & 25th August 2018)**

Goa State Innovation Council (GSIC) along with the Center for Innovation, Incubation and Entrepreneurship (CIIE; <https://www.bits-pilani.ac.in/goa/CIIE/CIIE>)-BITS BIRAC BioNEST, organized a '**Faculty Development Programme**' on '**Start-ups, Innovation and Creativity**' for the teachers of Science and Technology Institutes of Goa.

Mr. Anish Sousa, Founder of SUN360 shared his views on how to convert an idea to an enterprise. He gave insights on his Start-up that helps the clients to reduce their operating costs and carbon footprint by designing, installing and maintaining solar and other energy efficient technologies. Professor K. D. Bhatt, member of advisory committee of Goa Institute of

Management stressed on thinking out of the box. Mr. Tushar Sawant, Incubator Manager of CIBA threw light on various policies and schemes of the Government of India and the state government that are present to support the funding of Start-ups. Mr. Rayan Vaz, Founder of 3D Infinity Technology conducted an interactive and hands on session. He explained the concept of 3D Printing and the software like Google SketchUp for concept to sketch modelling. Ms. Shalini Menezes, Founder of Sim Sim Legal advisory services explained the processes for patent filing.

The programme aimed at training the teachers to be well equipped with skills to develop innovative and creative thinking approach among students. Prof. Mridula Goel, Incharge - BITS BIRAC BioNEST, interacted with the participants to understand the existing entrepreneurship curriculum in their colleges. She guided the teachers on how to develop an eco-system to support entrepreneurship development in academic institutions.

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## Achievements of Start-ups

One of our virtual incubate, Sattva MedTech is a medical device start-up working in the space of child and maternal healthcare. The team, led by Mr. Vibhav Joshi and Mr. Sumedh Kaulgud, started in 2014 with the vision of developing medical devices which are designed, engineered and priced for Indian healthcare. They have won Grand Challenges Exploration India Grant Award 2018 (Bill & Melinda Gates Foundation).

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## Hands on training on applications of Real Time PCR (qPCR) and Spray Dryer

BITS BIRAC BioNEST organised a one day training workshop on installation, sample demonstration and applications of Real Time PCR in association with Life Sciences Solutions on 4th December 2018 in the Bio – Innovation Lab. Ms. Amanda Gomes from Life Science Solutions who is the Field Application Scientist was the instructor for the workshop. The training brushed upon working on qPCR, PCR assays, gene expression studies, C gene study, gene quantification and was attended by our research scholars.

BITS BIRAC BioNEST with TechnoSearch Instru-



ments organised first workshop on applications of Spray Dryer on 21st December 2018 in the Bio-Innovation Lab. Training was conducted on uses of Spray Dryer equipment in Pharma, Food, Agro, Material Science and Biotechnology. Samples like egg mixture, milk and solvents were spray dried and were further analyzed for their enzymatic activity. Participants included pharma companies, faculty from science and technology colleges and research scholars.

### Talk cum interactive session on 'Stop Worrying Start Living'

author, motivational speaker, lifestyle coach, storyteller - Shubh Vilas Das delivered a talk cum interactive session on 'Stop Worrying Start Living' on 6th September 2018. The talk was attended by students, faculty and staff. The talk delivered six practical

solutions through inspiring stories, thought provoking quotes and engaging presentation based on ancient Vedic wisdom to stop worrying and start living.



### Invited Talks

CIIE Student Chapter - Center for Entrepreneurial Leadership (CEL) organized the following talks as part of New Venture Creation course:

Date	Speaker	Talk on
9-Sep	<b>Mr. Vijay Kumar Khatore</b> (BITS Alumni, Chairman & Managing Director) and <b>Mr. Shankar Agarwal</b> (MS-Stanford MBA-IN-SEAD)	Digital Marketing
3-Oct	<b>Mr. Renuka Aradhya</b> (Managing Director of Pravasi Cabs Private Limited)	Pravasi Cabs
12-Nov	<b>Mr. Bryan Lee</b> (Founder of Krishi Star, Alumni from Cornell and Kellogg School of Management)	Cash Flow Management
21-Nov	<b>Mr. Sanjiv Lall</b> (Entrepreneur, Heritage property restorer)	How to succeed in Life in 90 min

## distinguished lectures

S.No	Date	Title of the Talk	Speaker's Name, Designation/Affiliation	Organised by Department of
1	8th Aug. 2018	F-Domination in Graphs and Applications	Prof. Kiran R. Bhutani - Department of Mathematics, The Catholic University of America, Washington DC	Mathematics
2	6th Sept. 2018	Climate resilience planning in the forest sector in Meghalaya	Dr. Rajiv Kumar Chaturvedi - Assistant Professor, Dept. of HSS, BITS Goa	Humanities & Social Sciences

S.No	Date	Title of the Talk	Speaker's Name, Designation/Affiliation	Organised by Department of
3	7th Sept. 2018	Emerging Regional Maritime Security Volatility: Challenges & Options for India	Prof. Lawrence Prabhakar Williams - Professor, International Relations & Strategic Studies, Madras University, Chennai	Humanities & Social Sciences
4	11th Sept. 2018	Dharma and Adharma: an emerging contradiction in Indian Democracy	Prof. Peter R. deSouza - CSDS, Delhi and former Director, IAS Shimla	Humanities & Social Sciences
5	19th Sept. 2018	The Serre-Swan Theorem	Dr. Archana Morye - Assistant Professor, School of Mathematics and Statistics, Hyderabad Central University	Mathematics
6	20th Sept. 2018	Science education : An art or a science	Prof. Vijay Singh - Adjunct Professor, Center for Education in Basic Sciences	Teaching Learning Centre
7	20th Sept. 2018	Flourishing among Public Bank Employees in India: A Positive Organizational Behavior Approach	Dr. Anindita Ghosh - Assistant Professor, Dept. of HSS, BITS Goa	Humanities & Social Sciences
8	21st Sept. 2018	Following fish: Insights into diversity, seasonality and sustainability of seafood in India	Dr. Divya Karnad - Rutgers University, NJ, USA	Humanities & Social Sciences
9	21st Sept. 2018	The center of mass and the golden ratio in physics and aesthetics	Prof. Vijay A. Singh, University of Mumbai	Physics
10	27th Sept. 2018	A Comparative study of Perceived Discrimination, Islamic Worldview and Religious personality among Hijabi and Non Hijabi Muslim women in India	Hajara Abdul Hameed - Research Scholar, Dept of HSS, BITS Pilani Goa	Humanities & Social Sciences



S.No	Date	Title of the Talk	Speaker's Name, Designation/Affiliation	Organised by Department of
11	29th Sept. 2018	An Optimal Error Estimate of an IMEX Finite Element Method for Some Partial Integro-differential Equations Arising in Finance	Prof. Mohan K Kadalbajoo - FNASc, FWIF, FIAMMS, Distinguished Professor, Department of Mathematics, LNMIIT Jaipur (Formerly: Professor, Department of Mathematics & Statistics, I.I.T. Kanpur)	Mathematics
12	1st Oct. 2018	Teaching at BITS - experience sharing	Prof. K.E.Raman - Ex Professor Emeritus / BITS Pilani	Teaching Learning Centre
13	3rd, 4th, 5th Oct. 2018	1) When Theory is at a Dead End, 2) Interrelatedness in tiNai, 3) Ecocriticism and Envirocriticism, From Ontic Disrelatedness of the Anthropocene to Ontic Interrelatedness of the Neo-tiNaicene	Prof. Nirmal Selvamony - Department of English, Central University of Tamil Nadu	Humanities & Social Sciences
14	4th Oct. 2018	Ontological Realism: A Case of Species-Ontology in Biology	Dr. Hareesh AG - Visiting Assistant Professor, Dept. of HSS, BITS Goa	Humanities & Social Sciences
15	16th Oct. 2018	The Curious Case of Bengal Cattle: Bovines and the Making of Colonial Bengal 1800-1930	Aritri Chakrabarti - PhD Scholar, Dept. of History, Ashoka University	Humanities & Social Sciences
16	25th Oct. 2018	Manifestations of Perceived Stigma among Family Members in Psychiatric Context in West Bengal: Insights from a Narrative Inquiry	Dr. Bidisha Banerjee - Assistant Professor, Dept. of HSS, BITS Goa	Humanities & Social Sciences
17	30th Oct. 2018	A Case-Study of a Growing Synergy between Teaching & Research	Prof. Deshdeep Sahdev - Ex-Professor at IIT Kanpur, Founder Quazar Technologies	Teaching Learning Centre

S.No	Date	Title of the Talk	Speaker's Name, Designation/Affiliation	Organised by Department of
18	14th Nov. 2018	How to Address the Elephant in the Room : Pedagogy and Student Motivation in College-Level Teaching Through Ken Bain's What the Best College Teachers Do (2004)	Dr. Nilak Datta - Assistant Professor , BITS Pilani Goa Campus	Teaching Learning Centre
19	30th Oct. 2018	A Hands-on Approach to Strengthening our Scientific Ecosystem	Prof. Deshdeep Sahdev, Quazar Tech and ex faculty from IIT Kanpur	Physics
20	2nd Nov. 2018	Optical field enhancement in 1d-photonic crystals	Prof. Narayan Rao , University of Hyderabad	Physics
21	3rd Nov. 2018	Experimental studies in elastic hydrodynamic interactions	Dr. Aryesh Mukherjee , PhD Harvard University, Boston MA	Physics
22	3rd Nov. 2018	Supermassive black holes from Bose-Einstein condensates of dark matter	Prof. Patrick Das Gupta , Department of Physics and Astrophysics, University of Delhi	Physics
23	8th Nov. 2018	Hydrogen storage materials for mobile application	Prof. Rajeev Ahuja, Department of Physics-Uppsala University, Sweden	Physics

## alumni affairs

***BITSians Day*** was celebrated on 3rd August, 2018. A BITS – RUN (Marathon) was organized on the same day to celebrate the spirit of “Once a BITSian, Always a BITSian”.



### Metanoia



Keeping in mind its resolute mission to keep the alumni of BITS connected to their Alma mater and to maintain the integrity and strength of the vast alum-



ni community, Alumni Relations Cell conducted the fourth edition of the annual BITS Alumni Summit Metanoia: The journey of Change on 25th August, 2018. The speakers reminisced about their life back at BITS campuses and their journey thereafter. The speakers were:

- **Chintan Zalani**, renowned writer, blogger and content marketer
- **Jatin Adlakha**, Founder and Director of Wander Gupt
- **Mani Shankar**, Bollywood director, holographic technology expert, writer and speaker
- **Prithviraj Chavan**, An Indian politician who was the 17th Chief Minister of Maharashtra
- **Sameer Qayoom**, BITSAA 30 under 30 award winner and founder of a Football start-up in Kashmir
- **Shruthi Vishwanath**, a musician, educator and composer
- **Surabhi Dewara**, Founder and CEO of career-guide.com

### Summer Internship Assistance

This assistance is offered to encourage students to conduct summer research at educational / research institutions across India (including BITS campuses). The following are the winners of the first edition of this assistance:

Name & ID Number	Internship at	Award Amount
Vivek Khanna (2015A1PS0670G)	IIT Bombay	Rs. 17,000
Sachita Nishal (2016A7PS0719G)	IIT Madras	Rs. 17,000
M Vaishnav (2015A1PS0548G)	IISc Bengaluru	Rs. 8,500
Aditya Sinha (2015B3A70352G)	IISc Bengaluru	Rs. 8,500

### Embryo & On-campus Lectures

Alumni Relations Cell of BITS Pilani, K K Birla Goa Campus organized the following Embryo & On-campus talks from August – December, 2018:

S. No	Date	Title of Talk	Speaker's Name
1	13th Aug, 2018	Talk on UPSC and his experiences	Mr. Ayush Sinha
2	27th Sept, 2018	BITS2MSPHD	Mr. Abhishek Manikonda
3	17th Oct, 2018	GRE Champs	Mr. Sharangdhan Bhawe Ms. Veena Vijai Mr. Atharva Joshi

### Research Scholarship

One of our alumni Mr. Satish Sankaralingam initiated a research scholarship for BE students. Manan Sarupria, Sahir Gill and Sanjeev Sripadraj Murthy were awarded, Rs. 7,500/-, Rs. 5,000/- and Rs. 2,500/- respectively as recognition of their research work.

### Prof. Suresh Ramaswamy Memorial Awards

Prof. Suresh Ramaswamy Memorial Award was given to the project titled, "Design optimization of automobile crash box to improve performance test" done by Muskan Taneja.

### Prof. S S R Memorial Teaching excellence Award

Prof. SSR Memorial Teaching Excellence Award was awarded to Prof. Biju Raveendran of department of CS & IS, BITS Pilani K K Birla Goa Campus.

### Regular Activities

The Division also organized regular activities like bi-annual Director's Tea Party, batch snap sessions, Alumni Relations Cell registrations, souvenir distributions, bringing out the yearbook 'Mélange' for out-going students, hosting visiting alumni on campus, etc.

# significant projects

S.No	Title of the Project	Name of Principal Investigator (Co-investigator)	Funding Agency (Duration)	Proposed / Sanctioned amount (Rs. In Lakhs)
<b>Biological Sciences</b>				
1	Academia Engagement on Decentralized Sanitation under Sanitation Capacity building Platform at NIUA, New Delhi	Dr. M. Srikanth	Ministry of Housing & Urban Affairs New Delhi (8 months)	12.8
2	Literacy and Cognition project (MPI)	Dr. Veeky Baths (CO-PI Dr. Falk Huettig)	Max Planck Institute (2 years)	4.44
<b>Chemical Engineering</b>				
3	Performance Assessment Studies on the production process of Thiamethoxam	Dr. S. D. Manjare	M/s. Deccan Chemicals Ltd. (5 months)	3.09
4	Study of Dispersion of Particles Generated from Handling of Cargo at Mooring Dolphins for Mormugao Port Trust	Dr. S. D. Manjare	Mormugao Port Trust (MPT) (6 months)	16.75
5	Life cycle Assessment (LCA)	Dr. S. D. Manjare	Maharashtra Aldehydes & Chemicals Ltd(3 months)	6.9
<b>Chemistry</b>				
6	Development of mesoporous silica (for alumina)-SiC- metal nanoparticles based nanocomposites for rader absorption application at high temperature	Dr. N. N. Ghosh (Dr. Amrita Chatterjee)	DRDO (3 years)	15.13
7	Cyclic Peptide-based nanotubes for Efficient proton conducting material	Dr. Subhasish Roy	DST- Inspire (5 years)	35
<b>Mechanical Engineering</b>				
8	BMW Engine	Dr. Ranjit Patil	BMW	25
<b>Electrical &amp; Electronics Engineering</b>				
9	MPSoC Based Automated Digital Signal Processing System for Tokamak Reflectometry	Dr. Amalin Prince	BRNS (3 years)	35



# enriching the learning experience visits by faculty

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## international visits

**Dr. Anirban Roy**, Department of Chemical Engineering, visited Israel as part of 21 member delegation from India as part of “Discover Israel programme for young leaders in Innovation, Higher Education and Start-Ups” from 24th – 29th November, 2018.

**Prof. Raghu Nath Behera**, Department of Chemistry, visited University of Naples Federico II, Italy to attend the 6th International Conference on Research Frontiers in Chalcogen Cycle Science & Technology (Joint G16 & ABWET Conference) during 6th – 7th December, 2018; and presented his work titled “Theoretical investigations on the reduction of hydrogen peroxide by diselenide-based glutathione peroxidase mimics”.

**Dr. Parichay Patra**, Department of Humanities and Social Sciences, presented a paper titled ‘Transnational Cinema Studies and Interdisciplinarity: A South Asian Intervention’ at ‘Dial S for Screen Studies’, the annual symposium of the Sydney Screen Studies Research Network, hosted by the University of New South Wales, Sydney, Australia, on 12th November, 2018.

**Prof. D. M. Kulkarni**, Department of Mechanical Engineering, attended 13th International Conference on ‘Computational Structures Technology 2018’ held during 4th – 6th September, 2018 in Sitges, Barcelona, Spain organized by Elsevier.

**Dr. Geetha Bakilapadavu**, Department of Humanities and Social Sciences, visited University of the Visual and Performing Arts, Colombo, Sri Lanka for presenting a paper on “Folk Music Traditions from Western Rajasthan: Traditional Values and Modern Challenges” in the International Research Symposium held from 5th to 7th December, 2018 at the Foundation Institute Colombo, Sri Lanka.

**Dr. S D Manjare**, Department of Chemical Engineering, presented the paper on “Environmental im-

pact assessment studies for mining area in Goa Using the new approach” during 13th Conference on Sustainable Development of Energy, Water and Environment Systems – SDEWES- 2018, held between 30th September - 4th October, 2018, at Palermo, Italy.

**Prof. N N Ghosh**, Department of Chemistry, was invited to the University of Tartu with a Visiting Scholar Award to teach there in the EACH programme. During his visit, Prof Ghosh taught a course on Nanoscience and Nanotechnology, and its application in Analytical Chemistry.

## invited talks/workshops by faculty at other indian institutes

**Dr. Anil Kumar**, Department of Mathematics, delivered an invited talk entitled “Optimal Control Problem: A Use of Pontryagin Minimum Principle” during the National Conference on “Advances in Differential Equations -2018” held on 29th September, 2018 at Department of Mathematics, Vivekanand College, Kolhapur. Dr. Anil also chaired a paper presentation session.

**Dr. Anil Kumar** delivered lectures and held tutorial sessions on “Ordinary Differential Equations” in the Winter School on Differential Equations at Department of Mathematics, Savitribai Phule Pune University, Pune during 3rd to 14th December, 2018.

**Prof. Mridula Goel**, Department of Economics, delivered a talk entitled “Entrepreneurship and Healthcare opportunities” at Idea to Investment Entrepreneurship Workshop organized by The Federation of Indian Chambers of Commerce and Industry (FICCI) on 10th August, 2018 in Goa.

**Prof. Mridula Goel** delivered an invited talk on “Entrepreneurship and Business Model Canvas” organized by Don Bosco College of Engineering, Fatorda Goa for its final year students on 11th August, 2018.

**Prof. Mridula Goel** participated in a panel discussion on “Angel Investor fund & Venture Capital Fund for Start-up & MSMEs” in one-day conclave entitled ‘Catalyzing Startup Ecosystem through Academia-Industry Collaborations’ held on 18th August,

2018. Other speakers in the panel consisted of Dr. R. Ramanan – Mission Director, Atal Innovation Mission, NITI AAYOG, Ms. Padmaja Ruparel – Co-Founder and President, Indian Angel Network, Mr. P.S. Sreekanth - Investment Director, Hyderabad Angels, Mr. Apoorv Sharma - Co-founder and President, Venture Catalysts.

**Dr. Parichay Patra**, Department of Humanities and Social Sciences, presented a paper titled ‘In the Cinema/City: The Spatial Politics in the Parisian Queen’, at the International Conference on ‘Indian Cinema and Alternate Networks’, organized jointly by DME Media School, New Delhi, and School of Communications and Creative Arts, Deakin University, Australia, in New Delhi on 17th November, 2018.

**Dr. Parichay Patra** curated and organized a festival titled ‘50 Years of The Hour of the Furnaces and Other Argentine Political Experimental Cinema Since’ at the School of Arts and Aesthetics, Jawaharlal Nehru University, New Delhi, on 27th – 28th October, 2018 on invitation. He also participated in a panel discussion with the SAA faculty members.

**Dr. Parichay Patra** delivered an invited talk on ‘Beyond the Nation and Not Within: A Transnational Travelogue’, at the Dept. of Humanities and Social Sciences, IIT Ropar, on 13th September, 2018.

**Prof. Rajesh Mehrotra**, Department of Biological Sciences, delivered an invited talk entitled “Analysis of ACGT Cis elements across plant genomes and its characterization using protein phosphatase 2C like promoter from Arabidopsis thaliana” in Life Science Research and its Interface with Engineering and Allied Sciences at BITS Pilani, Pilani Campus during 1st to 3rd November 2018.

**Prof. Rajesh Mehrotra** presented a paper entitled “Genome wide analysis of AAAG and ACGT cis-elements reveals preferred orientation of AAAG(N) ACGT over ACGT(N)AAAG in Arabidopsis thaliana” at the International Plant Physiology Congress held in Lucknow during 2nd to 5th December 2018

**Prof. Veeky Baths**, Department of Biological Sciences, presented scientific talk titled “Automation of an electric wheelchair based on SSVEP and eye

blink commands” in Indian Association for Cerebral Palsy Conference 2018 -IACPCON 2018 held on 24th – 25th November, 2018 at Calcutta Medical College and Hospital, Kolkata. Prof. Baths received the best paper presentation award in the conference.

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## faculty achievements

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**Dr. Anirban Roy**, Department of Chemical Engineering, founded and established Epione Swajal LLP, a startup focused towards developing solutions in Water and Biomedical Sectors and is to be incubated at BITS-BIRAC-Bionest Facility.



**Prof. Arun V. Kulkarni**, Department of Physics, is appointed the Vice President of the Western Zone of the IAPT (Indian Association of Physics Teachers) comprising of four Western states in India namely - Goa, Maharashtra, Gujarat and Rajasthan.

**Prof. Ranjan Dey**, Department of Chemistry has been elected as the Fellow of the Royal Society of Chemistry (FRSC), UK, recognizing his efforts in the field of the chemical sciences. RSC is the world’s leading chemistry community, advancing excellence in the chemical sciences.

**Prof. Ranjan Dey** was invited as a Resource Person at the SCIFFI pre-event in Sharda Mandir High School, Panjim, and Resource Scientist at 75th SCIFFI event at Mount Litera Zee School, Sancoale.

**Dr. Richa Singhal**, Department of Chemical Engineering, received the Early Career Research Award from Science and Engineering Research Board (SERB), Government of India, for a research project entitled “Mechanistic approach to design composite metal-carbon nanofiber oxygen electrodes for high-performance metal-air batteries.”



**Mr. Tirtharaj Dash**, Department of Computer Science & Information Systems, received the Best Research Paper Award (Student Category) from Springer's Machine Learning Journal in the 28th International Conference on Inductive Logic Programming (ILP-2018) (Award: Certificate and USD 750). The paper was co-authored with Professor Ashwin Srinivasan and others.

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## student achievements

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### **BITS Goa Team wins the Regional Round of RBI Policy Challenge**

Reserve Bank of India (RBI) organizes a RBI Policy Challenge annually and the same is held in three stages across the nation. A team of BITS students comprising of Yash Agarwal, Nishchay Mehta, Tina Patil, and Shivang Gupta, all from economics department and currently in their 2nd year participated in the RBI Policy Challenge and won the regional round in Goa in Dec. 2018. They will now represent Goa at the Zonal Round (West Zone) that is scheduled in February at the College of Agriculture Banking, Pune. The team won a cash prize of Rs. 10,000/- in the regional round. The team is being guided by Dr. Arfat Ahmad Sofi, Assistant Professor, Department of Economics as faculty Advisor in the competition.

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**Mr. Joseph Fernandes** (2015PHXP014G), Research Scholar from the Department of Biological Sciences has received Prof. N J Chinoy award for the best oral presentation (second position) under the supervision of Dr. Arnab Banerjee at the Conference on Reproductive Physiology and Comparative Endocrinology (ICRPCE) and 36th Annual Meeting of The Society for Reproductive Physiology and Comparative Endocrinology (SRBCE-XXXVI) held from 20th -22nd January 2018.

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**Ms. Krishna Kumari Swain** (2015PHXF0408G), Research scholar, working under supervision of Prof. Sunil Bhand, received the Best Poster Presentation award (second prize) at the "Analytical Science at NCCCM: A Journey over 25 Years" organized by NCCCM, BARC Hyderabad during 29th November to 1st December 2018. The title of the research paper was "Development of an enzyme coupled nano-probe for analysis of Hg<sup>2+</sup>, Cd<sup>2+</sup> and Pb<sup>2+</sup> ions; ap-

plications to drinking water and fish." The paper was jointly authored by Krishna K. Swain and Prof. Sunil Bhand. The project is funded by DAE-BRNS, GoI.

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**Mr. Manish Varun Yadav** (2017PHXF0421G), a full-time research scholar from the Department of Electrical and Electronics Engineering presented a paper titled "A Compact High Gain Partial Ground Plane Monopole Antenna for WLAN Application" co-authored with Dr. Sudeep Baudha at the Conference on Information and Communication Technology (CICT'18) held in IIITDM, Jabalpur, during 26th – 28th October, 2018.

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**Ms. Mansi Baveja** (2010PH29405G) won first prize in oral presentation at the DBT sponsored National Conference on Bioactive Marine Natural Products and Their Therapeutic Application held at The Satyabhama Institute of Science and Technology, Chennai, on 24th and 25th January, 2018, under the supervision of Dr. Dibakar Chakrabarty.

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**Ms. Mansi Baveja** (2010PH29405G) won the first prize in poster presentation in life science category and the fourth prize in the poster presentation in Innovative Ideas and Patents Category at the National Biomedical Research Competition 2018 held at AIIMS Rishikesh on 15th October 2018, under the supervision of Dr. Dibakar Chakrabarty.

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**Ms. Mansi Baveja** (2010PH29405G) published newspaper articles in Times of India and Machine Times about bioactive potential of starfish in India, under the supervision of Dr. Dibakar Chakrabarty.

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**Mr. Nupur Kumar** (2012PHXF406G), a Research Scholar from the Department of Biological Sciences was awarded the sixth prize in poster presentation in Medical Sciences category at National Biomedical Research Competition 2018 held at AIIMS Rishikesh on 15 Oct. 2018.

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**Ms. Pinky** (2015PHXF0427G), a Research Scholar at the Department of Biological Sciences working under the supervision of Prof. Rajesh Mehrotra has been selected for the EMBO short-term fellowship. She will be visiting Prof. Tony Miller's laboratory, at John Innes Centre, Norwich, starting January 2019 to March 2019 for her research work.







**Mr. Rakesh Manuka** (2014PHXF0002G), Research Scholar from the Department of Biological Sciences, received the DST-SERB travel grant for attending the 16th International Symposium on Rice Functional Genomics (ISFRG 2018) scheduled from 5th to 7th September 2018 at Tokyo University of Agriculture in Japan.

**Mr. Abhineet Nigam** (2015B2A10744G) won First Degree Project Funding Sanction Letter for the project “Mixed Matrix Hollow Fiber Membrane Based Emergency Drinking Straw for Point-of-Use Drinking Water System.” Abhineet is the team leader of the project.

**Mr. Arijit Chakraborty** (2016A1PS0771G) received the IChE Award for the year, 2018. The Chemical Weekly Prize for Best Research Paper was awarded to him. He won the first prize for the paper titled: “Seasonal Variations in River Water Properties and Their Impact on Mixing Energies and Pressure Retarded Osmosis” which he co-authored with Anirban Roy.



**Mr. Atanu Guha** (2014PHXF401G) has been awarded Certificate of Reviewing, in recognition of the review made for the journal, PHYSICS LETTERS A, Elsevier, Amsterdam, The Netherlands in September 2018.

**Ms. Muskan Taneja** (2016A4PS0137G), a third year Mechanical Engineering student won the Student Innovator award of the Year 2018 hosted by Indian Automotive Technology and Innovation Awards by renowned magazine Autotech Review for the project “Design Optimisation of an Automobile Crash Box.” She received the Award for the best student innovation in the automobile industry among

applicants from hundreds of colleges all over India for which she received a cash prize of Rs. 50,000/, a gift voucher of 350 Euros, a gift hamper, a framed certificate, and a trophy.

**Mr. Nipun Sood** (2015A7PS0084G) secured a Student International Travel Grant for 650 AUD (Australian dollars) to present a research paper titled “Collaborative Neighbor Discovery with Slow Scan in Directional Sensor Networks” from the International Telecommunication Networks and Applications Conference (ITNAC) 2018 in Sydney, Australia. The paper was presented on 21st November 2018.

**Mr. Tuhin Malik** (2014PHXP402G), a PhD student of Dr. Tarun Kumar Jha, presented his work entitled, “Determination of the nuclear incompressibility and symmetry energy from neutron star tides,” at the International DAE Symposium in Nuclear Physics (Dec. 10 -14, 2018), BARC, Mumbai.

**Mr. Tushar Damani** (2017A1PS0725G) was awarded the second prize in the UG/PG category at the Goa state level All-India Essay Writing Competition for the Sahaj Marg organised by Shri Ram Chandra Mission in association with the United Nations Information Centre for India and Bhutan and Heartfulness Education Trust.

## student events

### WAVES 2018

A werewolf in a full moon night isn't scary, it's elegant. Almost as if he was meant to rule in the darkness. In 2018, Waves embraced the darkness within with the theme “Embrace the Shadows”. Held during 26th to 28th October, Waves 2018 was bigger than ever. Waves is BITS Pilani KK Birla Goa Campus's largest fest and it saw a record participation this year. Witnessing what goes into making a successful college festival, is like watching a Bollywood movie at 2x speed. There's drama, thrill, comedy and most of all satisfaction at the end.

The three days of this extravaganza ensured that events are going on throughout the day and night.

Waves had one of the best professional night lineup this year with Farhan Akhtar Live, DJ Quintino, Gaurav Kapoor and Anand Bhaskar Collective performances. Waves 2018 has broke all past records for the highest participation in any edition of Waves. The artworks this year were mesmerising and were appreciated by everyone. New events like Footloose, group street dance competition attracted a lot of participation and audience. This year witnessed the first Waves Youtube Conclave (Y'Clave) with prominent youtube channel representatives such as Veer Rajwant Singh, Meghna Kaur, Nayana Shyam, Raghu Ram, Avanie Joshi and channels such as Funk you and Cheers visiting the conclave. The workshops and informals that were conducted during the fest were also well received with good participation.

Waves 2018 embraced girl power as the coordinating committee (Co-Co) responsible for handling the fest comprised the highest number of female members ever. In spite of clash with many of the college fests, such as Oasis and Antragini, Waves was able to pull much participation owing to the prime location of Goa and spectacular job by the publicity team. Ku-

dos to Waves CoCo for making Waves 2018 such a big phenomenon in such a small time frame. However, behind the glamour of the CoCo, there is the vast army of faceless BITSians who have worked tirelessly to ensure the continuing success of Waves. In a technologically inclined college like ours, it is in festivals like Waves that the true, hidden potential in most of us emerges. Most of us, in our own seemingly insignificant way, have contributed to build this festival from scratch.

Waves 2017 did set a benchmark for everyone, but it won't be wrong to say that Waves 2018 broke the set benchmark. With one of the greatest professional night lineups, 40+ all day events and great ambience this Waves has certainly become a new benchmark.

### COALESCENCE'18

Coalescence'18, the e-summit of BITS Pilani, K K Birla Goa Campus, concluded after two days filled with amazing ideas and innovation. With a unique set of start-up plans, and enthusiastic attendees, the event proved to be a great platform for the budding



start-ups of the country. The 2018 edition of Coalescence was organised by CIIE In-charge, Prof. Mridula Goel, on 9th and 10th of September, 2018, and had speakers from a wide range of fields addressing the students.

The first day of Coalescence was graced by Ms. Ritu Marya who gave insights about how important it is to go beyond one's job description to increase the value one provides for his/her organisation. The second day was kickstarted by an interactive and lively session by Mr. Anand Munshi, a thought provoking leader who motivated the audience to take the remote of our lives in our own hands. The much awaited and coveted Rear Admiral Philipose G. further filled the auditorium with his awe-inspiring presence. He gave the engineering students insights on Navy and about the opportunities that lie for them in the field of naval aviation.

Mr. Vikram Gupta, the founder and managing director of the renowned IvyCap Ventures, inspired the students by telling them about the creative ways in which he increased the size of his pool of investors. The fourth speaker was Mr. Ajay Chaturvedi, an outspoken young leader, who challenged many of the economic beliefs we have today. He redefined true entrepreneurship based on inherent abilities of Indian communities and small scale businesses. "Why should you build a billion dollar company, if you can build a trillion dollar one".

Mr. Sarathbabu Elumalai shared his journey of how he came from a humble background to study at BITS Pilani, IIM Ahmedabad and founding Foodking. Mr. Sharad Sagar, the founder of Dexterity Global, also known as "The Vivekananda of 21st century" talked about his philosophy on leadership and gave an insight he developed when he met ex-president of the USA Barack Obama himself. A BITS Pilani Alumni panel discussion was held with Prof. Mridula Goel (Moderator), Mr. Ajay Chaturvedi, Mr. Sarathbabu Elumalai, Mr. Neeraj Joshi and Mr. Akhil Singh. The discussion was on how the real life of a hard-core entrepreneur differs from all the stereotypes attached to them. Finally, the much awaited Mr. Shivankit Singh Parihar, who has left a mark in the online entertainment industry, gave the last talk and concluded Coalescence 2018 on a fun note.

### **Top Indian flautist Pt. Pravin Godkhindi performed at BITS Pilani, Goa Campus**

Srutilaya, a classical music club of BITS Pilani Goa Campus organised Sursangam, a tribute concert to late Prof. Suresh Ramaswamy. It experienced a huge turnout of classical music enthusiasts. The opening concert was a mesmerizing Bharatanatyam performance by Mr. Anand Satheendran, followed by melodious Carnatic vocals by Mr. Balakrishna Raghavan – both alumni of BITS Goa.

Pt. Pravin Godkhindi commenced the concert with exquisite raag Puriya Kalyan, played in 'gayaki ang'. It was embellished with Kirana gharanas peculiar meends and two note taans. Later he presented Raag Hansadhvani in the 'tantrakaari' or instrumental style with Shri Mayank Bedekar, who matched him beat for note with his superb artistry on tabla. This composition was followed by a raag-malika of Raags Miyan Malhar, Jog, Kalavati, etc. and a Pahadi dhun which was the cherry on the cake. After the performance, the artistes were presented with a shawl and a memento by Prof. Radhika Vathsan. Pt. Godkhindi is the 1st Indian flautist to represent Bansuri at the WORLD FLUTE FESTIVAL held at Mendoza, Argentina and the 1st Indian flautist to perform on the 8 feet contrabass flute. He has received national awards for films Beru and Vimukthi and is recognized as "Top Ranking Artiste" in Hindustani Bansuri, by Akashvani (AIR). In terms of formal education, Godkhindi holds a B.E. degree in Electrical & Electronics engineering, with Distinction.

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### NIRMAAN ACTIVITIES

Nirmaan organised various events in the first semester, the highlights are as follows:

**JoGW** - Turn the frown upside down: From 16th to 23rd September, Nirmaan conducted Joy of Giving Week (JoGW), the festival of joy, an event of sports and fun-filled activities for children from around the campus and to spread a sense of joy among BITSians as well. With an aim to inculcate happiness, Nirmaan volunteers visited an old age home and a school for special children. Along with this, events like Evening of Joy and Meal of Joy helped introduce on-campus students to the "art" of volunteering. Events like the



beach-cleanup drive were conducted to provide students with an opportunity of contributing towards the society.



**#DoItForKerala:** To help people of Kerala who were fighting against the floods, Nirmaan, in association with the Alumni Relations Cell organised #DoItForKerala as a small contribution to the people. For every 5 glasses of karela juice which the students had, a medical kit was sponsored by the alumni. This event was mainly for the students who wished to support the paradise when it had fallen during some adverse times. Along with this, Nirmaan Organization's central team also contributed with volunteer work in Kerala with an initiative, Operation Sahaaya.

**Soch:** Discussions on socially prevalent topics involve putting your point-of-view forward and understanding other's view so that we can reach a consensus. With this motive, Nirmaan held an open discussion on the topic, "free speech." The topic explored the effect of dank memes on the crowd that views it and the discussion was aimed at understanding various viewpoints on the same.



**Street Play:** Any sort of change in society is brought about only when those affected by it realise the worth of that change. Awareness that is spread through

various actions reaches a large crowd and leaves a long-lasting impact. Talking about the adverse effects of drug abuse, Nirmaan took the responsibility to throw some light on the same and tried creating awareness by the means of a street play.

**Teach For A Day:** Every day, the joy we get by teaching kids in Zari is immense. With an aim to spread this joy and to make people realise the worth of their small efforts, Nirmaan organised "Teach For A Day." This event, which saw a participation of nearly 75 volunteers over 6 days, introduced students out of Nirmaan to the education-related work done by our organization.



**Eye check-up camp:** Be it childhood or old age, vision plays an important role and people need to act to keep their sight healthy. Keeping this in mind, on 30th September, 2018, Nirmaan, in association with Eye Fye, organised a free eye check-up camp at SYSM High School, Zari. Around 70 kids and 40 adults from Zari were given a free eye check-up where some of them were detected with having a high power anomaly. Doctors and the volunteers were able to provide correct guidance and support to the people.

**Diwali sale and stall:** On the auspicious occasion of Diwali, Nirmaan volunteers, with the help of Ashadeep (SHG from Zari) managed to sell diyas and decorative candles to students, faculty and staff members. Along with this, similar items created by the self-help group were also sold by volunteers on the cultural fest of our college, Waves. The students who came from across the country gained important insight into the work that Nirmaan does.

## Faculty members appointment on national/ international advisory committees/ acted as reviewers for books/ journals of national/ international repute

Faculty Name	Department of	Name of Advisory Committee /Editorial Board
Prof. Mukund K. Deshmukh	Electrical and Electronics Engineering	Technical Committee Member and Reviewer of the International Organizing Committee for 5th International Conference on Power and Energy Systems Engineering, September 20-21, 2018, Nagoya University, Nagoya, Japan (CPESE-2018)
Dr. Rajiv Kumar Chaturvedi	Humanities and Social Sciences	<ul style="list-style-type: none"> <li>• Member of the International Union for Conservation of Nature (IUCN) Global 'Commission on Ecosystem Management' for the Quadrennial Period 2017-2020</li> <li>• Associate Editor, editorial board of the international journal "Tropical Ecology". "Tropical Ecology" is being published by the prestigious publishers Springer-Nature, and currently it has an impact factor of 1.18.</li> <li>• Reviewed IPCC Special Report on Climate Change and Land (SRC-CL); IPCC = UN's Intergovernmental Panel on Climate Change</li> <li>• Planning Climate Resilient Forest Ecosystems: A case-study from North-eastern India at 14th National Silviculture Conference on Forest and Sustainability: Securing a Common Future. December 3-5, 2018, held Indian Institute of Science, Bangalore-560012</li> </ul>
Dr. Sharad Son-takke	Chemical Engineering	Reviewer for: Desalination and water treatment; Catalysis Letters; Journal of Hazardous Materials
Dr. Ashish Chittora	EEE	IEEE Transactions on Microwave Theory and Techniques
Mr. Tirtharaj Dash	Computer Science and Information Systems	Reviewed full research articles for the following journals: <ul style="list-style-type: none"> <li>• Robotica, Cambridge Press,</li> <li>• IEEE Transactions on Industrial Electronics</li> </ul>
Prof. Reena Cheruvalath	Humanities & Social Sciences	<ul style="list-style-type: none"> <li>• Member in the Board of Studies in Philosophy, Goa University</li> <li>• Reviewer journals - Child Abuse and Neglect, Elsevier European Journal of Engineering Education, Routledge</li> </ul>
Dr. Varinder Singh	Mechanical Engineering	Program Committee Member of Indian Subcontinent Decision Sciences Institute Conference held at SP Jain Institute of Management and Research, Mumbai during Dec 27-30, 2018
Prof. Rajesh Mehrotra	Biological Sciences	<ul style="list-style-type: none"> <li>• Reviewed an article entitled "Mutation in DDM1 inhibits the initiation of homologous recombination repair of double stranded breaks for PLoS One".</li> <li>• Reviewed an article entitled "Cloning and functional analysis of the promoter of a stress inducible gene(Z map) in maize for PLoS One".</li> </ul>
Prof. Ranjan Dey	Chemistry	Reviewer of journal of molecular liquids, international journal of biological macromolecules, fluid phase equilibria
Dr. Anirban Roy	Chemical Engineering	Reviewer of Journal of Environmental Chemical Engineering.
Prof. Kundan Kumar	Biological Sciences	<ul style="list-style-type: none"> <li>• Joined Editorial Board Member of PLOS ONE.</li> <li>• Reviewed papers for Plant Physiology and Biochemistry, Scientific Reports</li> </ul>

# introducing new faculty

Name of Faculty	Department	Designation	Area of Research Interest
Arfat Sofi	Economics	Assistant Professor, Gr-I	Economic Growth, Development Economics, Public Economics, Applied Spatial Econometrics
Hareesh A.G.	Humanities & Social Sciences	Visiting Faculty	Philosophy of Biology
Paramita Halder	Chemical Engineering	Assistant Professor, Gr-I	Molecular Simulation of Nanomaterials
Bidisha Banerjee	Humanities & Social Sciences	Assistant Professor, Gr-I	Health and mental health, Social and Cultural Psychology, Qualitative Psychology
Mithun Muthiah Sakthivel	Electrical & Electronics Engineering	Assistant Professor, Gr-I	Biomedical Instrumentation
Basabdatta Bhattacharya	Computer Science & Information Systems	Associate Professor	Spiking Neural Networks, Mean Field (Lumped parameter) Neural Networks, Bio-inspired Convolutional Neural Networks, Computational Neurology, Neuromorphic computing, Neural (Energy efficient) Information Processing
Subhasish Roy	Chemistry	Assistant Professor, Gr-I	Organic Chemistry
Anushaya Chittaranjan Mohapatra	Mathematics	Assistant Professor, Gr-I	Applied Mathematics, Dynamical Systems
Devendra Gokul Patil	Mechanical Engineering	Assistant Professor, Gr-I	Smart Structures & Systems (Using Smart Materials), Vibration & Control Systems, Structural Health Monitoring / Condition Monitoring
Swastibrata Bhattacharyya	Physics	Assistant Professor, Gr-I	Condensed Matter Physics (Theory & Simulation)
Sayantani Sarkar	Humanities & Social Sciences	Assistant Professor, Gr-I	Public Policy, Geography
Mohan Kumar Bera	Humanities & Social Sciences	Assistant Professor, Gr-I	Sociology
Soumyadip Bandyopadhyay	Computer Science & Information Systems	Assistant Professor, Gr-I	Formal Methods



Name of Faculty	Department	Designation	Area of Research Interest
Anup Basil Mathew	Computer Science & Information Systems	Assistant Professor, Gr-I	Logic & Automata Theory
Naveen Gupta	Electrical & Electronics Engineering	Assistant Professor, Gr-I	Wireless Communication (Cognitive Radio, D2D Communication, mmWave)
Sujith Thomas	Computer Science & Information Systems	Visiting Assistant Professor	Machine Learning, Data Science, Cognitive Science

## editorial board

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# BITS Pilani

K K Birla Goa Campus

## mediaspeak



### BITS Pilani signs MoU with University of Tartu, Estonia for Erasmus programme

**BY A CORRESPONDENT**  
birmagazine.com

Years: The University of Tartu, Estonia, has signed a Memorandum of Understanding (MoU) with BITS Pilani, K K Birla Goa Campus, for an Erasmus programme. The MoU, signed by the Vice-Chancellor of BITS Pilani, K K Birla Goa Campus, Prof. N. K. Bhattaraya, and the Vice-Chancellor of the University of Tartu, Estonia, Prof. K. K. Bhattaraya, will enable students of both universities to participate in the Erasmus programme. The MoU also provides for the exchange of faculty members and the sharing of research facilities.

The Erasmus programme is a European Union initiative that provides students with the opportunity to study abroad for a period of up to 12 months. It also provides for the exchange of faculty members and the sharing of research facilities. The MoU signed by BITS Pilani and the University of Tartu will enable students of both universities to participate in the Erasmus programme. The MoU also provides for the exchange of faculty members and the sharing of research facilities.

**Prof. N. K. Bhattaraya of BITS Pilani Goa Campus and Prof. K. K. Bhattaraya of University of Tartu, Estonia, signing the MoU.**

### Waves'18 - a three day extravaganza from Oct 26 - 28 at BITS Pilani Goa

**BY A STAFF REPORTER**  
birmagazine.com

Waves'18, a three-day extravaganza, is set to begin on October 26 at BITS Pilani Goa. The event, which is organized by the BITS Pilani Goa Chapter, will feature a variety of activities, including music, dance, and sports. The event is expected to attract a large number of students and faculty members from BITS Pilani Goa and other institutions.

The event is organized by the BITS Pilani Goa Chapter, which is a student organization that aims to promote the interests of BITS Pilani Goa students. The event is expected to be a great success and will provide a platform for students to showcase their talents and skills.

### BLS training conducted at BITS Pilani Goa campus

**BY A STAFF REPORTER**  
birmagazine.com

BLS training was conducted at BITS Pilani Goa campus on October 26. The training was organized by the BITS Pilani Goa Chapter and was attended by a large number of students and faculty members. The training covered a variety of topics, including first aid, CPR, and emergency response. The training was conducted by experienced instructors and was a great success.

The BITS Pilani Goa Chapter is a student organization that aims to promote the interests of BITS Pilani Goa students. The chapter is involved in a variety of activities, including sports, cultural events, and social service. The BLS training was one of the many activities organized by the chapter.

### METANOIA-a confluence of eminent BITS alumni held



**BY A STAFF REPORTER**  
birmagazine.com

METANOIA, a confluence of eminent BITS alumni, was held at BITS Pilani Goa campus on October 26. The event, which was organized by the BITS Pilani Goa Chapter, was attended by a large number of alumni and faculty members. The event was a great success and provided a platform for alumni to share their experiences and insights.

The BITS Pilani Goa Chapter is a student organization that aims to promote the interests of BITS Pilani Goa students. The chapter is involved in a variety of activities, including sports, cultural events, and social service. The METANOIA event was one of the many activities organized by the chapter.

### Workshop on data sharing at BITS held

**PANAJI:** The Cognitive Neuroscience Lab, Dept. of Biological Sciences of BITS Pilani, K K Birla Goa Campus and School of Biomedical Sciences at Leeds University jointly organized a two-day international workshop on 'Data sharing for open innovation in community-based rehabilitation'. This workshop centered on creating a forum for an open discussion of opportunities and avenues for the sharing of data documenting unmet rehabilitation needs and best practices in community-based rehabilitation (CBR) in resource-poor areas. The workshop also focused on creating networking and development of a joint research agenda, how CER data should be collected and shared by partner organizations and discussion of opportunities for data sharing and associated ethical issues and data management challenges.

### BITS Pilani signs MoU with University of Illinois System

**BY A STAFF REPORTER**  
birmagazine.com

BITS Pilani has signed a Memorandum of Understanding (MoU) with the University of Illinois System. The MoU, signed by the Vice-Chancellor of BITS Pilani, K K Birla Goa Campus, Prof. N. K. Bhattaraya, and the Vice-Chancellor of the University of Illinois System, Prof. Timothy S. Kilian, will enable students of both universities to participate in the Erasmus programme. The MoU also provides for the exchange of faculty members and the sharing of research facilities.

The Erasmus programme is a European Union initiative that provides students with the opportunity to study abroad for a period of up to 12 months. It also provides for the exchange of faculty members and the sharing of research facilities. The MoU signed by BITS Pilani and the University of Illinois System will enable students of both universities to participate in the Erasmus programme. The MoU also provides for the exchange of faculty members and the sharing of research facilities.

**Director of BITS Pilani, K K Birla Goa Campus, Prof. N. K. Bhattaraya and President of University of Illinois System Prof. Timothy S. Kilian exchanging the signed MoU.**

### All-India Cell Biology Conference held at BITS discusses cancer, toxicity & nanotechnology

**BY A STAFF REPORTER**  
birmagazine.com

All-India Cell Biology Conference was held at BITS Pilani Goa campus on October 26. The conference, which was organized by the BITS Pilani Goa Chapter, was attended by a large number of students and faculty members from various institutions. The conference was a great success and provided a platform for students to share their research and insights.

The BITS Pilani Goa Chapter is a student organization that aims to promote the interests of BITS Pilani Goa students. The chapter is involved in a variety of activities, including sports, cultural events, and social service. The All-India Cell Biology Conference was one of the many activities organized by the chapter.



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