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# BLUEPRINT

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### **VISION**

To be the Centre of Excellence in Civil Engineering Education and Consultancy by providing holistic, innovative and research centric environment and keeping pace with rapidly changing technologies.

### **MISSION**

- To impart quality education in civil engineering, through effectiveness and innovation in teaching and learning.
- To promote positive interactions among faculty and students and foster networking with alumni, industry and other stake holders.
- To train young minds in soft skills, intellectual and ethical strengths, conducive to globally competitive environment.
- To motivate students for research and entrepreneurship in relevant sectors of society with focus on excellence and creativity.
- To undertake sponsored research and provide consultancy services in all the areas of civil engineering beneficial to the community.

# FACULTY CORNER

## INTERNATIONAL CONFERENCE “Trending Moments and Steer Forces-Civil Engineering Today” (TMSF-2019)

A two day International conference was organised by the Department of Civil Engineering, Don Bosco College of Engineering in association with National Institute of Technology Karnataka on October 31st and November 1st 2019 at Don Bosco College of Engineering, Fatorda, Goa.

The conference was inaugurated by the Chief guest- Dr. Vivek Kamat, Guest of honour – Prof. M.R Madhav, visiting Professor from AICTE-INAE, invited guest Dr. Rishi Gupta from University of Victoria, Canada, Director- Fr. Kinley D’Cruz, Principal -Dr. Neena S. Panandikar ,Convener and HOD, DBCE – Dr. Shwetha Prashana, Prof. Varghese George the convener -NITK-Surathkal.



An abstract proceeding of International Conference was released during the Inaugural function. Vote of thanks was delivered by Assistant Professor Satyesh Kakodkar. The co-ordinators for the conference were Assistant Professor Satyesh Kakodkar, Swaroopa Sail from Don Bosco College of Engineering, Goa and Prof. Babunayanan from NITK, Surathkal.

This conference aimed to explore innovative applications and research in the areas of Structural and Concrete Engineering, Geotechnical Engineering, Transportation Engineering, Environmental Engineering, and Construction Technology and Management. The conference had 4 keynote lectures and the speakers were Prof. Madhav, Researcher, Educator and consultant, Visiting Professor IIT Hyderabad, Dr. Rishi Gupta, Associate Professor and Director of undergraduate program in the Department of Civil Engineering at the University of Victoria, Dr. Christy P. Gomez, Associate Professor, Former Deputy Director of Commercialization & Innovation, Universiti Tun Hussein Onn Malaysia and Dr. Akanshu Sharma, assistant Professor, Institute of Construction Materials, University of Stuttgart, Germany.

Altogether, 149 delegates from different Institutions across different parts of the world registered for the conference. Total 99 abstracts and 99 full length papers were received out of which 79 papers got accepted after the meticulous review and those papers were presented during the conference at different sessions. Out of 79 papers, 29 papers from structural and concrete Engineering, 19 papers from geotechnical engineering, 16 from construction Technology and Management, 11 papers in Environmental Engineering and 4 in the area of Transportation Engg. Paper presenters were from various institutions like National Institute of

Technology Karnataka, Surathkal, Karnataka, JSS Science and Technology University, Mysuru, Karnataka, MIT, MAHE, Manipal, Karnataka, M.S. Ramaiah Institute of Technology, Karnataka, Visvesvaraya Technological University, Bangalore, Karnataka, A. J. Institute of Engineering and Technology, Mangalore, Karnataka, Goa College of Engineering, Farmagudi, Goa, Don Bosco College of Engineering, Fatorda-Goa, National Institute of Technology, Farmagudi, Ponda-Goa, PSG College of Technology, Coimbatore, National Institute of Construction Management and Research, Goa, Birla Institute of Technology & Science, Pilani, Rajasthan, Acharya Institute of Technology, Karnataka, KLE Technological University, Hubballi, Karnataka, Shree Devi Institute of Technology, Mangalore, Karnataka, K.L.S Gogte Institute of Technology, Udyambag, Belagavi, Karnataka, S.D.M Institute of Technology, Karnataka, Ujire, College of Engineering Pune, Maharashtra, Central University of Karnataka, Gulbarga India. Karthikeyan Associates, Tamilnadu, and Shekhar Panandiker & Associates, Goa.

1st key note lecture was addressed by Prof. M.R. Madhav, he spoke about “Practice of Geotechnical Engineering-Examples”. Based on his years of experience he mentioned the IS code doesn’t always necessarily help to solve a problem. He also spoke about the gabions provided for coastal protection along the Gujarat coast and development of the new airport in Pakyong Sikkim, the tower of Pisa.

The second keynote speaker Dr. Aakashu Sharma from University of Stuttgart, Germany spoke about “Performance based seismic assessment and retrofitting of RC structures with focus on fastenings”. He explained how reinforced concrete was used for the elevation about 600 m in Dubai for Burj Khalifa, also the Stuttgart tower which was built 60 years ago. He elaborated about different ways that seismic structures are designed for nonlinear response, force redistribution, ductility and energy dissipators. He mentioned the use of seismic performance graphs, also explaining about moment distribution which is the relative stiffness method developed by Hardy cross, non-linearity, joint failure, horizontal cracks due to shear force, the degradation of strength, anchorage and strengthening performance of fastening. In the afternoon technical paper presentation (Structural Engineering and Materials, and Geotechnical Engineering) was held in Auditorium and Seminar hall respectively.

On the second day, Dr. Christy P Gomes from Malaysia commenced the lecture on “Holistic planning for better construction project site performance” by explaining how a project has a definite start and a definite end. He also stated that how planning a project is important for proper implementation, the sequence of activities, degeneration role of planning, Importance of performance than productivity and the difference between work structure and WBS.

Dr Rishi Gupta from Canada spoke about “The innovations in infrastructure monitoring using UAV’s. He explained how to inspect bridges not by visually looking at them but by actually performing tests. One of the test that he mentioned was using a survey chain and dragging it on the bridge and wherever a change in sound is heard, mark and check the depth of the cracks. He mentioned the benefits and limitations of drones/UAVs.

In the afternoon session, technical paper presentations with parallel sessions were held on construction technology and management, Environmental engineering and transportation engineering.

The Technical sessions were chaired by Dr Christy Gomes, Dr Akanshu Sharma, Prof. Varghese George, Prof. K. E. Prakash, Dr. K. G. Gupta, Dr. Purnanand Savoikar, Prof. B. B. Das, Prof. Srihari S and Prof. B. M. Sunil.

The two day event ended with the Valedictory function with Dr. Christy Gomes as the Chief guest and Dr. Akanshu Sharma as Guest of honour. Fr. Kinley D’Cruz, Dr. Neena Panandikar, Dr. Shwetha Prashana, Prof. Babu Narayan and editor of the proceedings Prof. P.B Das were present. Three best paper awards from Springer, three best paper awards from Don Bosco College of Engineering, Goa and two poster presentation awards were given. Vote of thanks was delivered by Assistant Professor Satyesh Kakodkar.

## PAPER/ JOURNAL PUBLICATIONS for International Conference

Author Name	Title of Paper	Details (journal name, volume, series, year)
Ajay Gaonkar, Shubham Arondekar, Akshay Mungarwadi, Pritesh Gaude, Vishwesh Gaude, Vedant Haldankar, Swaroopa Sail, Akshata Kudchadkar	Estimation of ultimate bearing capacity of soil for shallow foundation	International conference trending moments & steer forces-Civil Engineering Today (TMSF-2019)
Jyoti Kumari, Kohima Dessai, Zwegal Wynne Cardozo, Blacinta Pereira, Rhea Fernandes, Annapurna Sakhardande, Sanford Mascarenhas	River water resource management and flood control using GIS	International conference trending moments & steer forces-Civil Engineering Today (TMSF-2019) International
Shekhar Panandiker, Dr. Neena Panandiker, Celestan Braganza	Repairs & rehabilitation of concrete structures: case studies	International conference trending moments & steer forces-Civil Engineering Today (TMSF-2019)
Dr. Neena Panandikar, Dr. K.S. Babunarayan	Assessment of pushover response parameters using response surface methodology	International conference trending moments & steer forces-Civil Engineering Today (TMSF-2019)
Yannick Pereira, Vrushabh Dhond, Saahil Shirodkar, Shivam Naik Raikar, Deepraj Naik, Kaushik V. Pai Fondekar	Partial replacement of cement with GGBS for durability test	International conference trending moments & steer forces-Civil Engineering Today (TMSF-2019)
Aditi Lawande, Areeb Ahmed, Laukik Dessai, Rahul Naik, Tanvi Kavlekar, Gauresh Desai, Starina Dias, Kaushik Pai Fondekar	Partial replacement of fine aggregates with coconut shell ash in concrete	International conference trending moments & steer forces-Civil Engineering Today (TMSF-2019)
Evetta Raneyia Cardoso, Neena S.P. Panandikar, Kaushik V. Pai Fondekar	Experimental investigation of egg shell powder as partial replacement of cement in fibre reinforced concrete	International conference trending moments & steer forces-Civil Engineering Today (TMSF-2019)

Madhuraj Naik, Dr. Ganesh Hegde, Dr. Lalat Indu Giri	Optimisation of Infrared Thermography for damage detection in concrete structures using Finite Element Modelling	International conference trending moments & steer forces-Civil Engineering Today (TMSF-2019)
Prajyot Raiker, Aliton Rodrigues, Prajakt Shirodkar, Clinton Vales, Clive Vales, B.R. Anirudha, Madhuraj Naik	Evaluation of response reduction factor of RC structures using pushover analysis	International conference trending moments & steer forces-Civil Engineering Today (TMSF-2019)
Kohen Duarte, Paraj Fernandes, Nadya Baracho, Roshani Majik, Samantha Dias, Manisha Dias	Assessment of construction and demolition waste in Goa for re-use in new construction	International conference trending moments & steer forces-Civil Engineering Today (TMSF-2019)
Sajal Kamat, Atish Loliengar, B.R.Anirudha, Satyesh Kakodkar	Pervious concrete pavers: Modern way to recharge ground water	International conference trending moments & steer forces-Civil Engineering Today (TMSF-2019)
Atish Loliengar, Sajal Kamat, Gaurai Naik Gaunekar, Shwetang Nadkarni, Vikesh Malik, Satyesh A. S. Kakodkar	Brick Manufacturing Using Laterite Soil	International conference trending moments & steer forces-Civil Engineering Today (TMSF-2019)
Samiksha Naik , Shwetha Prasanna	Reinforcement of cohesionless soil by multi-oriented geosynthetic inclusions	International conference trending moments & steer forces-Civil Engineering Today (TMSF-2019)
Nevil Macedon Mendes, Shwetha Prasanna	Improvement of soil properties by using jute fiber as soil stabilizer	International conference trending moments & steer forces-Civil Engineering Today (TMSF-2019)

## WORKSHOPS/SEMINARS/EXPERT TALKS CONDUCTED

- Dr Shwetha Prasanna and Asst. Prof. Swaroopa Sail conducted an International conference on Trending moments & steer forces-Civil Engineering Today (TMSF-2019) on 31<sup>st</sup> October and 1<sup>st</sup> November 2019 at Don Bosco College of Engineering, Fatorda Margao-Goa.

## WORKSHOPS/SEMINARS/EXPERT TALKS ATTENDED

Name of the Faculty Participated	Topic	Date	Organisation
Dr. Shwetha P	Integrated waste management for a smart city	July – Oct 2019	NPTEL Online
Akshata Kudchadkar			
Swaroopaa Sail			
Annapurna Sakhardande	Third Dr. Victor de Mello Goa Lecture and ISSMGE TC-107 Symposium on laterites & lateritic soils	20/9/19- 21/9/19	Goa Engineering college, Farmagudi, Goa
Jeffrey Valadares			
Shwetha P			
Swaroopaa Sail			
Kaushik Fondekar	Advance concrete technology	29 <sup>th</sup> July -17 <sup>th</sup> Nov 2019	NPTEL online
Madhuraraj Naik	Design of Concrete road bridges	26 <sup>th</sup> Aug – 16 <sup>th</sup> Nov 2019	NPTEL online
Kaushik Fondekar			
Satyesh Kakodkar	Green audit for college campuses	29/8/2019 – 30/8/2019	Dnyanprassarak Mandal's college & Research centre in association with the Directorate of Higher Education, Government of Goa, India
Prachi Dessai			
Shruti Desai	Faculty knowledge sharing program on preparing students for the organizations of the future	30/8/19	Sterling resort, Bardez, Goa
Shwetha P	“Improvements to Engineering Governance through common ethics standards” and “The applications of geo-synthetics for various Civil Engineering disciplines”	27/9/19	ACECC(Asian Civil Engineering Coordinating Council) hosted by The Institution of Civil Engineers(India)
Swaroopaa Sail			

# STUDENTS CORNER

## CESA INAUGURAL 2019-2020

The installation ceremony of CESA council for the year 2019-2020 was held on 13th September, 2019. Er. Anil Ringane Chief Engineering -Sports Authority of Goa was Chief Guest. Director - Rev. Fr. Kinley D'Cruz, Principal – Dr. Neena Panandikar, Head of Dept. - Dr. Shwetha Prasanna, Faculty Coordinators – Prof. Satyesh Kakodkar and Prof. B.R. Anirudh and outgoing chairman Mast. Yash Ajgaonkar was present on the dais. Earlier Yash Ajgaonkar welcomed the gathering while outgoing secretary Mast. Saish Karwarkar presented the report of activities of 2018-2019. Prof. Satyesh Kakodkar administered the oath to the new council while Chief guest- Er. Anil Ringane pinned badges to the new council members. Yash Ajgaonkar handed over the CESA helmet to the new chairman Mast. Godwin Fernandes and then the new chairman took his place in the dais. Dr. Neena S.P. Panandikar addressed the gathering and congratulated the new CESA council members along with all the students who excelled in studies and competitions held in the year 2018-2019. Rev. Fr. Kinley D'Cruz addressed the gathering and said that associations like CESA provide a platform to showcase the students with their talents.

Er. Anil Ringane , in his address said that the college has done a lot of progress in a span of few years. He said that Civil Engineering is the mother of all other branches and based on the needs in civil industry other inventions happen. The students who excelled in academic year 2018-2019 were felicitated.



## Sustainable concrete is a step towards green and eco-friendly concrete says Aakash Khaunte



Sustainable concrete construction is a step towards green and eco-friendly concrete construction practices to solve global environmental problems said Aakash Khaunte, Managing Director of Alcon-Anil Counto Enterprise. He was speaking as the Chief Guest for the installation of Indian Concrete Institute –Don Bosco College of Engineering Student’s Chapter on 31st July 2019.

Er. Joseph Silveira – Chairman of Indian Concrete Institute –Goa , Fr. Kinley D’Cruz- Director , Dr. Neena Panandikar -Principal , Dr. Shwetha Prasanna -Head of department of Civil Engineering , Prof. Satyesh Kakodkar- Faculty Coordinator and Mr. Nathan Dias -President of Indian Concrete Institute –Don Bosco College of Engineering Student’s Chapter. Further speaking on the occasion Mr. Khaunte said that Concrete is one of the most widely used construction materials in the world. A sustainable concrete structure is constructed to ensure that the total environmental impact during its life cycle, including its use, will be minimal. He gave an overview of the manufacturing process of cement happening at Alcon-Anil Counto Enterprise.

A memorandum of understanding between Alcon-Anil Counto Enterprise and Don Bosco College of Engineering was signed on this occasion. Speaking on the occasion Er. Joseph Silveira extended his full support to the student’s chapter. He highlighted the various activities of ICI –Goa. Fr. Kinley D’Cruz in his address said that the student chapters help the student community to update their technical knowledge. Earlier Dr. Neena Panandikar welcomed the gathering while Prof. Satyesh Kakodkar proposed the vote of thanks. Ms. Jocelyin Godinho compered the programme. Prof. Kaushik Pai Fondekar and Prof. Shruti Dessai conducted the installation proceedings.

As a part of Industry –Academia linkage a lecture series was organised by ICI-Goa. Er. Shrikant Naik – Manager- Business Analysis and strategy at Alcon Goa Group , 1st Er. Subhash Sajne – Project Management Consultant and Dr. K.G.Guptha –Head of Civil Department at GEC-Farmagudi delivered the lectures.



## WORKSHOPS/ SEMINARS/ IN-HOUSE TRAININGS

AutoCAD plays an important role for making efficient civil engineering drawing; hence an advanced AutoCAD training course was organized for the students of third year Civil Engineering of Don Bosco College of Engineering Fatorda on **10<sup>th</sup> August 2019**. The resource person for the training programme was Mr. Celestan Braganza, a Civil Engineer and expert in AutoCAD from Shekhar Panandiker & Associates.

In this course, Mr. Celestan explained with the presentation the definition and properties of the layer command in AutoCAD. He also emphasized the importance of layers in drawing architectural and electric drawings etc. The students also got hands on practice on the layer and block command. During the latter half of the day, the students were given a diagram which they had to model in AutoCAD with the commands they had learnt.

The basic AutoCAD course for these interested students was conducted in their earlier semester by Asst. Prof. Shruti Desai and Asst. Prof. Starina Dias, wherein the basic commands like draw, modify toolbars were taught to them. These courses are provided to the students for their all-round development. In all, 59 students completed the course.

## EXPERT TALKS

### Talk-on-scopes-of-Civil-Engineering

The Department of Civil Engineering, Don Bosco College of Engineering organized an Alumni talk for Final Year Civil Engineering students on 26th September 2019 at the institute. The sessions were conducted by Mr. Akshay Gaad (Alumnus-2015). Mr. Akshay spoke to the students on scopes of Civil Engineering after graduation. He shared his experience working at GSIDC where he supervised for various roadworks carried out by them. He also spoke of his present job where he is carrying out survey and contracts.



## Talk on Opportunities in Built Environment



Dr. Shwetha Prasanna and Prof. Nadya Baracho organized a talk on Opportunities in Built Environment for Final year Civil Engineering students at Don Bosco College of Engineering on 12th September 2019. The speaker for this talk was Mr. Shekhar Vishnu Nagargoje, Associate professor, School of Real Estate and Infrastructure, RICS School of Build Environment, Amity University, Mumbai. He gave an overview of built environment opportunities that may help the students to know more about the topic. He spoke about real life examples that helped students to know their goals and acquire skills to achieve desired goals. It was an interactive talk wherein he conducted a small exercise to know the importance of setting goals and how to achieve them. He also spoke on the importance of emitting good values, skills and opportunities that RICS School of build environment provides to the students. It was an inspirational talk and helped students to know in detail about the opportunities available for career development in built environment.

## FIELD VISITS

Event/Workshop/Seminar/ Field visited	Class & Sem	Date	Name of Faculty
Field Visit To Flood Water Pumping Station, Sankhali	BE Civil students	23rd August 2019	Prof. Akshata A.S Kudchadker and Prof. B. R Anirudha.
Field trip to The State Assembly Complex and Central Library Building	TE Civil Students	23rd August 2019	Prof. Shruti Desai, Prof. Satyesh Kakodkar and Prof. Jeffrey Valadares
Field trip to District and session court at Merces	SE Civil students	28th September 2019	Prof. Starina Dias and Prof. Kaushik
Fieldtrip to residential building at Fatorda	SE Civil students	28th September 2019	Prof. Starina Dias and Prof. Kaushik
Field visit to Vasco Port Connectivity Project	TE Civil students	28th September 2019	Prof. Akshata Kudchadker Prof. Oswyn and Prof. Prachi Desai

Field to RMC Plant of ACC at Nessai	SE Civil students	28th September 2019	Prof. Starina Dias and Prof. Kaushik
Fieldtrip to Sewage treatment Plant, at Tonca	BE Civil students	11th October 2019	Prof. Prachi Dessai, Prof. Oswyn Soares
Fieldtrip to Zydus Cadilla	BE Civil students	11th October 2019	Prof. Prachi Dessai, Prof. Oswyn Soares

## CULTURAL

Type & Level of Cultural Activities	Date(s)	Organised by	Award/Prize won	Name (s) of Students
Your Swabhimaan Review, National Debate on Reservation	23rd September 2019	Kare College of Law, Margao	1st Prize	Yash Ajgaonkar Subrata Rai
Poster Competition	24th September 2019	NSS, DBCE	-	Jasmine Karapurkar Divyesh Naik Pawan Arolkar Gajanan Bandekar Priyanka Naik Sriyanka Rivanker

## SPORTS

Type & Level of Sports Activity	Date (s)	Organised by	Name(s) of Students
Chess competition	6th - 8th August 2019	Goa University	Sarvesh Sahadev Rao
Power Lifting	22nd - 27th August 2019	Goa University	Gautam Zangli Yash Shrikant Ajgaonkar
Football		Goa University	Floyd Lobo Harish Kamanache

## TECHNICAL

Seminar/Workshop/ Technical Events/Conferences/Training programmes etc.	Date(s)	Organised by	Attended by
A seminar on Design & Construction of Rigid Pavement & Industrial Floors	24th August 2019	Association of Consulting Civil Engineers	Declan Luis Parth S Kushte Ramnath Nayak Ratik Sawant Sourav Fadte Uttam Kalangutkar
Two Day State level Workshop on "Green Audit for Coege Campuses"	29th -30th August 2019	IQAC of Dnyanprassarak Mandal's College and	Floyd Lobo Godwin Fernandes Herrick Caldeira

		Research Centre, Assagao- Bardez, Goa	Ray Cortez Sanket Bhat Sonia Vasco Da Gama
Third Dr. Victor de Mello Goa Lecture and ISSMGE TC-107 Symposium on Lateritic Soils	20th -21st September 2019	Goa College of Engineering and Indian Geotechnical Society Goa Chapter	Aakash Gvandalkar Anushka Prasad Maryann De Souza Rhea Patil Deeptesh Morajkar Yatish Gaude Subrata Rai Danira Vaz Vianney Furtado
Seminars on Improvements to Engineering Governance through Common Ethics Standards and The applications of Geo-synthetics for various Civil Engineering disciplines	27th September 2019	Asian Civil Engineering Coordinating Council	Rohit Ravi Ramnath Nayak Ratik Sawant Nikhil Chinchawade Hrishabh Bhat Leon Lobo Kaushik Faldessai Hrithik Dessai Viraj Shirodkar Nashville Dias Anant Naik Ravindra Gurav Tanishq Kulkarni Uttam Kalangutkar Sonia Vasco Da Gama Leon Dsouza Yash Ajaonkar Manuja Naik Irfan Agwan Paritosh Sawant Neshville Dias
Epiphany 3.0 the annual State level Student Seminar & Paper presentation competition	1st October 2019	Department of English Dnyanprassarak Mandal's College and Research Centre, Assagao- Bardez, Goa	Ratik Sawant
Poster presentation Competition at TMSF, International Conference	31st October 2019	Civil Engineering Department of DBCE and NIT Suratkal	Nikhil Chinchawade Divyesh Naik Ramnath Naik Aakash Gavandalkar Anushka Prasad Maryann De Souza Rhea Patil Yatish Gaude Snevisa Rodrigues