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**3 DAYS INTERNATIONAL CONFERENCE ON
RECENT TRENDS IN CIVIL ENGINEERING, SCIENCE
AND MANAGEMENT**

ICCSM - 17



Guru Gobind Singh Foundation's

Guru Gobind Singh College of Engineering and Research Centre

Approved by AICTE New Delhi, DTE Mumbai, Govt. of Maharashtra .Affiliated to Savitribai Phule Pune University.



DNV-GL ISO 9001:2015

ON

24TH MARCH 2017 TO 26TH MARCH 2017

ISBN: 978-93-86171-34-4

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Editors

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PROF. TEJASHRI A. KULKARNI

Published By:

A.R. Research Publication

Preface

Conference World and AR Research Publication is fast growing group of academicians in Engineering, Sciences and Management. AR Research Publication is also known for fast reply and zero error work. Conference world has organized a various conferences at renowned places namely Delhi University; New Delhi, Jawaharlal Nehru University; New Delhi, PHD Chamber of Commerce and Industry New Delhi, YMCA New Delhi, India International Centre New Delhi Sri Venkateswara college of Engineering and Technology, Andhra Pradesh, Dhananjay Mahadik Group of Institutions (BIMAT), Shivaji University, Maharashtra, Vedant Engineering Kota and many more places across the country.

We are very pleased to introduce the proceedings of the “**3 Days International Conference on Recent Trends in Civil Engineering, Science and Management (ICCSM-17)**”. As For Previous conferences, the theme was the link between the information provided by conference world and the use made of this information in assessing structural integrity. These were the issues addressed by the papers presented at the conference. The level of interest in the subject matter of the conference was maintained from previous events and over 93 suitable papers were submitted for presentation at the conference.

Papers were well represented in the conference to arouse a high level of international interest. Three countries were represented in the final program from Europe, North America and Asia. In the event, the conference was highly successful. The presented papers maintained the high promise suggested by the written abstracts and the program was chaired in a professional and efficient way by the session chairmen who were selected for their international standing in the subject. The number of delegates was also highly gratifying, showing the high level of international interest in the subject. This is also indicated by the large number of countries, 04 represented by the delegates. This Proceeding provides the permanent record of what was presented. They indicate the state of development at the time of writing of all aspects of this important topic and will be invaluable to all workers in the field for that reason. Finally, it is appropriate that we record our thanks to our fellow members of the Technical Organizing Committee for encouraging participation from those areas. We are also indebted to those who served as chairmen, without their support, the conference could not have been the success that it was. We also acknowledge the authors themselves, without whose expert input there would have been no conference. Their efforts made a great contribution to its success.

Proceeding of the conference has been published with **ISBN: 978-93-86171-34-4**

“**3 DAYS INTERNATIONAL CONFERENCE ON RECENT TRENDS IN CIVIL ENGINEERING, SCIENCE AND MANAGEMENT (ICCSM-17)**” was organized at **Guru Gobind Singh Foundation’s, Guru Gobind Singh College of Engineering and Research Center, Nashik, India on 24th – 26th March 2017.**

Total 160 papers were received for the conference and 93 papers were shortlisted by the committee.

ABOUT Guru Gobind Singh Foundation, Nashik

GGSF is a registered Non- minority service organization established among the youth, to develop a sense of discipline which is important to mould them as innovative learner's intellectuals with social commitment.

GGSF has been instrumental in setting example of imparting education with high standards within nominal cost in Nashik city. GGSF spotted the chinks in the armor of education system in Nashik and went about changing it to make it more effective, productive, contemporary, progressive and powerful.

President Sardar Gurdev Singhji Birdi has been leading this Institute from 2000 he believes- "You take care of the society and society will reciprocate. You are not in isolation nor in your family, it is all part of society and growth is independent'. He believes that any duty towards Foundation should be done with honesty and responsibility. He believes knowledge is core strength of society, GGSF Institute follows this philosophy by serving the society in its own humble way and endeavor to be 'Perfect Education'.

Intuitions belongs to our Group

Guru Gobind Singh College of Engineering and Research Centre Nashik

Guru Gobind Singh Polytechnic Nashik

Guru Gobind Singh Public School Nashik

About Guru Gobind Singh College of Engineering and Research Center, Nashik.

"We Transform Youngsters by Creating Intellectuals and Innovative Learners with social Commitment"



Only Engineering College in Nashik Having Industrialist and Entrepreneurs as Pillars of Management;

Among the top FIVE Engineering College in Nashik;

Strong Team of 150+ highly qualified, experienced and committed faculty members;

State-of-the-art laboratories in every department ;

Well stocked library with more than 34000+ books, Access to 2000+ online journals and 150+ printed journals;

Purposefully designed 400+ capacity auditoriums;

Well-furnished Seminar Hall in each department;

Purposefully designed 400+ capacity auditoriums;

Book-bank scheme, open access to e-books and e-journals, and digital library;

Dedicated 100 Mbps leased line; Wi-Fi enabled internet campus;

Industrialists and Entrepreneurs, with long and rich experience, in “Local Managing Committee” and “Board of Governors” of the college.

PRESIDENT MESSAGE



Guru Gobind Singh Foundation is now more than 4 decades old in Nashik. It's the Foundation which is efficiently managed by elected committee, by Sikh citizens of Nashik democratically. They have demonstrated that this institute can be managed successfully and peacefully. We started as humble school and soon began to grow into mighty chain of Institute having School, Polytechnic and Engineering Institutes in 12 acres of land which has been carved out of landed donated by members of foundation. Thanks to the untiring commitment

and dedicated students their parents and staff of GGSF, Today the Institute has come long way to be regarded as among reputed academic center in Nashik.

Today our vision is to provide quality education even to the poorest of poor, cutting across all barriers of caste, creed and religion.

I thank all members of Foundation, Management Committee Members, Students and staff who have worked hard to make this Institute best in NASHIK.

With Best Wishes

S.Gurdev Singh Birdi

President GGSF

CEO'S MESSAGE



21st Century will be century of Imparting and Exchanging Knowledge. Education makes man knowledgeable and aware about his environment. Guru Gobind Singh Foundation is first step of our promise to the students to create intellectuals who are Innovative learners and socially committed, at same time they are financially independent and also dignified and honorable Indian citizens.

At Guru Gobind Singh Foundation teaching faculty hails from best educational Institutions all over India, having set global standards of education. We are also leaders in molding the career of students by imparting strict discipline and make them ready to

face challenges in the ever changing world with multi disciplinary growth of human knowledge.

At every step we have the support and motivation provided by the confident parents, dedicated teachers and committed students. Today GGSF has grown from strength to strength with ethical professional practices and is recognized as reputed name in Education.

Today my vision is set on raising the stature of GGSF of being one of most professionally managed, ultramodern student centric institute at National and International Forum.

The task is difficult and path is Grueling but I have two things which keep me going, “One my parents words of motivation and other unstinted support of Management committee and members of foundation”.

With Best Wishes
Permindur Singh
CEO GGSF

PRINCIPAL MESSAGE



It is my privilege to warmly welcome you our college, Guru Gobind Singh College of Engineering and Research Centre (GCOERC), which is an institution having a commitment towards quality education. With the inspiring thought of Guru Gobind Singh, Society has laid a Guru Gobind Singh Foundation to provide education in the field of engineering.

Guru Gobind Singh College of Engineering and Research Centre is awarded by ISO 9001:2015 certifications for Quality Management System.

I congratulate the faculty, non-teaching staff, students, parents and our industrial partners for the sincere efforts put in by them to achieve this milestone.

We very much look forward to welcome you as our students in your expedition for lifelong learning.

With best wishes
Dr. S. D. Kalpande
(Principal)

Hon. Chief Patron

S.G.S.Birdi ,S. Balbirsingh Chhabra

Patron

Permindur Singh, Dr. S. D. Kalpande

Chief Guest

Er. Kailas Pawar

Pawar Patkar Associates, Nashik.

Keynote Speaker

Dr. D. G. Regulwar

Professor, Department of Civil Engineering, Government College of Engineering, Aurangabad.

Dr. J. H. Godihal

Professor, Department of Civil Engineering, Marathwada Institute of Technology, Aurangabad.

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All the accepted and presented papers of the duly registered authors will be published in the following international journals

- **International Journal of Advance Research in Science and Engineering (IJARSE, ISSN-2319-8354) [www.ijarse.com]**
- **International Journal of Advance Technology in Engineering & science (IJATES, ISSN-2348-7550) [www.ijates.com]**
- **International Journal of Science Technology and Management (IJSTM, ISSN-2394-1537) [www.ijstm.com]**
- **International Journal of Innovative Research in Science and Engineering (IJIRSE, ISSN-2454-9665) [www.ijirse.com]**
- **International Journal of Electrical & Electronic Engineering (IJEEE, ISSN-2321-2055) [www.ijeee.co.in]**

Published by

AR Research Publication,

3/186 Santpura Govindpuri Modinagar- 201201 . Dist: Ghaziabad

“3 Days International Conference on Recent Trends in Civil Engineering, Science and Management (ICCSM-17)”. Vol 1 © 2017, by AR Research Publication (India)

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This edition can be exported from India only by the publishers, AR Research Publication (India) ISBN: 978-93-86171-34-4

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Cover Design: Sumit Kumar