



www.conferenceworld.in

**7th INTERNATIONAL CONFERENCE ON
SCIENCE, TECHNOLOGY AND MANAGEMENT**

ICSTM-17



GURU GOBIND SINGH FOUNDATION'S
GURU GOBIND SINGH POLYTECHNIC NASHIK, INDIA
ON
25 FEBRUARY 2017

ISBN: 978-93-86171-30-6

**7th INTERNATIONAL CONFERENCE ON
SCIENCE, TECHNOLOGY AND MANAGEMENT**

ICSTM-17

Editors

DR. NEERAJ TYAGI

PROF. SUNIL M.MORE

Publish 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 “*7th International Conference on Science, Technology and Management (ICSTM-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 45 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: 978-93-86171-30-6**

“*7th International Conference on Science, Technology and Management (ICSTM-17)*” was organized at **Guru Gobind Singh Foundation’s, Guru Gobind Singh Polytechnic Nashik, India on 23rd February 2017**

Total 211 papers were received for the conference and 81 papers were shortlisted by the committee.

ABOUT GURU GOBIND SINGH FOUNDATION'S 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.

Today GGSF is making mark in education all across the Nashik city and Maharashtra. GGSF which started intake of 9 students and 2 teachers in 1978 and today has more than 5000 students on its rolls and 400 plus faculty members.

Today GGSF houses School, Polytechnic and Engineering College at Khalsa Complex on Guru Gobind Marg, at Indira Nagar Annex, Nasik. The 12 Acres has been generously donated to foundation by the members of foundation.

GGSF was dream of our founder member Late S Amrik Singh Anand, Late S Harbans Singh Sachdeva, Late S Inder Singh Seble, Late Amrit Singh Bindra, Late S Arjun Singh Bagga late S Balwant Singh Chhabra late S Surjan Singh Gujral to name few who dreamed of starting education Institute way back in 1978 with unique concept of teaching that explores the innate talent in the students makes them academically strong, physically and mentally fit to lead successful life.

Foundation has about 400 members from Institute who elect Management Committee every two years democratically to manage day to day functioning of foundation.

President S.Gurdev Singh 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 Polytechnic Nashik

Guru Gobind Singh College of Engineering and Research Centre Nashik

Guru Gobind Singh Public School Nashik

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



The world around us is changing every moment; the new technological advancements are taking everyone by surprise. Things which we could only wish or imagine years back are becoming a reality. Just to mention a few, flying car with retractable wings, electricity generator using harmless viruses, a 3-D videoconferencing pod, bionic eye for the blind to see, etc. We at GGSP continuously keep our students updated on new technologies. The key Innovation, we create an environment in the institute where students are motivated to think of innovative ideas and are encouraged to put these ideas in their project work.

Apart from academic excellence, students are also trained on life skills so as to enable them to secure better placements. This is evident from the job offers they get from the best companies like Tata Motors, L&T, Glaxo, Gabriel, ABB etc. Our deliberate and consistent focus on quality education has resulted in getting us Accreditation from NBA for the period 2012-15, for which I wish to thank the management for their whole-hearted support. I also wish to congratulate the staff, students, parents and our industrial partners for the sincere efforts put in by them to achieve this milestone.

With Best Wishes

Prof. Puneet Singh Duggal

Principal GGSP

Hon. Chief Patron
S.G.S.Birdi ,S. Balbirsingh Chhabra

Patron
Permindur Singh

Chief Guest
Prof. Rajeve Gupta
Pro Vice Chancellor, R.T.U. , Kota

CHIEF COORDINATOR
Prof. P.S.Duggal

Keynote Speaker
Dr.O.G.Kulkarni
Scientist & Mentor
V. B. Raigaonkar
Director Dharampur Science Centre, Gujrat

Conference Convener
PROF. Sunil M.More

Session Chair
Prof.P.S.Duggal
Prof.D.S.Welkar
Prof.S.A.Kolhe
Prof.C.D.Patil
Prof.Swapnil Patil

Organizing Committee

Mr. Hemant Zhambare
Mr. Sandip Thapekar
Ms. D.R.Dhagate
Ms. V.S.Khule
Mr.A.B.Manghale
Mr. K.P.Bahirat
Mr. A.B.Manghale
Mr. K.B.Gunjal
Ms. V.S. Khule
Ms. H.R.Pathan
Ms. Samruddhi Nikam
Ms. Uttara Chaudhari
Ms. Sayali Pisolkar
Ms. Mokshada Gajare
Ms. Deepti Shirsath
Ms. Harshal Gaikwaad
Mr. Suraj Ghodke
Mr. Sameer Bonde
Ms. Manasi Pagare
Ms. Vaishnavi Pathak
Ms. Renuka Kharche
Ms. Manasi Mahendra More

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 (IJEED, ISSN-2321-2055) [www.ijeed.co.in]**

Published by

AR Research Publication,

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

“7th International Conference on Science, Technology and Management (ICSTM-17) (Vol-7)
Copyright © 2017, by AR Research Publication (India)

No part of this publication may be reproduced or distributed in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise or stored in a database or retrieval system without the prior written permission of the publishers. The program listing (if any) may be entered, stored and executed in a computer system, but they may not be reproduced for publication.

This edition can be exported from India only by the publishers, AR Research Publication (India)
ISBN: 978-93-86171-30-6

Managing Director: Gauri Sharma

Senior Researcher—Product Development: Dr. Neeraj Tyagi

Head—Production (Higher Education and Professional): Ms. Geet Sharma

Information contained in this work has been obtained by AR Research Publication (India), from sources believed to be reliable. However, neither AR Research Publication (India) nor its authors guarantee the accuracy or completeness of any information published herein, and neither AR Research Publication (India) nor its authors shall be responsible for any errors, omissions, or damages arising out of use of this information. This work is published with the understanding that AR Research Publication (India) and its authors are supplying information but are not attempting to render engineering or other professional services. If such services are required, the assistance of an appropriate professional should be sought.

Cover Design: Sumit Kumar