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**6TH INTERNATIONAL CONFERENCE ON
RECENT TRENDS IN ENGINEERING,
SCIENCE & MANAGEMENT**

ICRTEISM-17

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NATIONAL INSTITUTE OF TECHNICAL TEACHERS
TRAINING & RESEARCH,
CHANDIGARH, INDIA
ON
8TH JANUARY 2017**

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SHRI GURU TEG BAHADUR KHALSA COLLEGE,
ANANDPUR SAHIB, PUNJAB**

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**6TH INTERNATIONAL CONFERENCE ON
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ICRTESM-17

Editors

DR. KASHMIR SINGH

DR. AMANPREET SINGH

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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 “6th International Conference on Recent Trends in Engineering, Science & Management (ICRTE SM-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: 978-93-86171-21-4**

“6th International Conference On Recent Trends In Engineering, Science & Management (ICRTE SM-17) was organized at (NITTTR) National Institute of Technical Teachers Training & Research, Sector-26, Chandigarh, India by Shri Guru Teg Bahadur Khalsa College, Anandpur Sahib, Punjab on 8th January 2017

Total 622 papers were received for the conference and 153 papers were shortlisted by the committee.

ABOUT SRI GURU TEG BAHADUR KHALSA COLLEGE

Shri Guru Teg Bahadur Khalsa College Anandpur Sahib was established by the untiring and unstinted efforts of Sant Mahinder Singh Harkhowal wale in 1968 to commemorate the unique martyrdom of Sri Guru Teg Bahadur, the 9th Guru of Sikhs, for the cause of humanity and nation. His is a supreme and unparalleled sacrifice in the annals of human history for the cause of secularism. The College was taken over by Shiromani Gurudwara Parbandhak Committee (SGPC), Sri Amritsar, in 1977.

PRESIDENT MESSAGE

Shiromani Gurdwara Parbandhak Committee, Sri Amritsar, an apex body of the Sikhs, has always combined educational aims with its humanitarian and charitable enterprises. Though religious in spirit and objectives, SGPC, Sri Amritsar, performs multidimensional functions for the good of society, and providing opportunities for education to maximum number of youngsters is one of them. To fulfill this mission, SGPC has specially focused on opening schools and colleges in rural and semi-urban pockets of Punjab. Taking over the direct control of Shri Guru Teg Bahadur Khalsa College at Anandpur Sahib in 1977 was a step towards bringing education to those who had fewer means and less awareness. Since then the college may have seen many ups and downs, but it has never looked back.

It gives me real pleasure to know that Shri Guru Teg Bahadur Khalsa College is fulfilling SGPC's endeavour to provide a learning environment which not only nourishes and refines the creativity of the youth but also prepares them to be effective citizens and wholesome individuals.

The upward trend of the college graph during the past few years, both qualitatively and quantitatively, is indeed commendable. Another point of satisfaction for us is that most of the students are well-versed in the basic concepts of Sikh culture, such as purity of thinking, dignity of labour and dedication to serve the less fortunate and the underprivileged.

Situated at a place of vital religious and historical significance, this college is making every possible effort to leave a lasting impact on the surroundings through its awareness drives and community-centred activities, too.

I wish Shri Guru Teg Bahadur Khalsa College, Anandpur Sahib, every success in its noble aim of furthering the cause of education and also pray for its bright future.

With best wishes,

Prof. Kirpal Singh Badungar

President, S.G.P.C Sri Amritsar.

PRINCIPAL MESSAGE

Shri Guru Teg Bahadur Khalsa College Anandpur Sahib was established by the untiring and unstinted efforts of Sant Mahinder Singh Harkhowal wale in 1968 to commemorate the unique martyrdom of Sri Guru Teg Bahadur, the 9th Guru of Sikhs, for the cause of humanity and nation. His is a supreme and unparalleled sacrifice in the annals of human history for the cause of secularism. The College was taken over by Shiromani Gurudwara Parbandhak Committee (SGPC), Sri Amritsar, in 1977. It is an honour and privilege to be associated with this college which has been forging ahead as a multi-faculty institute of higher education catering to the needs of the students in various streams like basic science, humanities, commerce, computer science and agriculture. The College offers a wide variety of undergraduate and post graduate courses, and keeps on adding new courses in accordance with the pulse of time.

Education and learning of today should focus on the values ,attitudes and behaviours which enable individuals to learn to live together in a world characterized by diversity and pluralism. We feel proud to provide quality education by equipping our students with skills ,confidence and a positive approach so that their education is holistic and relevant to a globalized context. The college is striving to maintain academic excellence while encouraging the students to participate in co-curricular and extra-curricular activities. The activities of various clubs on the campus ensure that the students are well-groomed in social and event- management skills.

Placements of the students are the bottom-line for every institution and the college has a vibrant placement and training cell which guides, counsels and trains the students to get decent jobs in the volatile job market.

Our progressive management, under the dynamic leadership of **Prof. Kirpal Singh Badungar** ,President S.G.P.C. and Dr. Dharminder Singh Ubha, Director Education S.G.P.C.,is highly supportive of the overall development of the college.

The Faculty are committed and dedicated and play the role of facilitator as well as roll model to our students. The members of the Non-Teaching Staff are highly dedicated with total commitment towards achievement of our mission and goals.

We prepare young students to become leaders with multi-pronged talents, a sense of a responsibility and human values. I invite the youth of the country to this institution situated at the historic town of Sri Anandpur Sahib,"The Birth Place Of Khalsa".I want to assure the parents that the safety of their wards in the campus and providing them congenial academic atmosphere is always one of our chief priorities. I am always accessible to students and they can approach me anytime for their problems. Exciting times are ahead of us and I hope you will choose to be a part of our continuing success.

With best wishes,

Dr. Kashmir Singh

Principal, S.G.P.C Sri Amritsar.

Chief Guest**Dr. Dharminder Singh Ubha (Director)**

Education SGPC

Chief Patron**Dr. Kashmir Singh (Principal)**

SGTB Khalsa College , Anandpur Sahib

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Department of Physics, IISER, Mohali

Invited Talk/Speaker**Dr. S. N. Sulaiman (Professor)**

Northwest University, Nigeria

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Dr. B. C. Choudhary (Professor & Head)

Department of Applied Science NITTTR, Chandigarh

Guest of Honour

Dr. M.P. Poonia (Director) NITTTR, Chandigarh

Ms. Monika Gupta (Sr. Scientist) Indian Space Research Organisation (ISRO), Chandigarh

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 (IJEET, ISSN-2321-2055) [www.ijeet.co.in]**

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Managing Director: Gauri Sharma

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