

**International Conference on  
Advances in Science & Technology  
(ICAST-2018)  
May 04-05, 2018**

---

**Conference Report**

---



**Swami Keshvanand Institute of Technology,  
Management & Gramothan, Jaipur (India)**

# Contents

- 1. Introduction**
- 2. Objectives and scope of conference**
- 3. Journal Collaboration**
- 4. Organizing committee of the conference**
- 5. Technical report of the conference**
- 6. Conference Participants**
- 7. Outcome of the Conference**
- 8. Concrete Suggestions emerging from the Conference**
- 9. Event Photographs**

## 1. Introduction

International Conference on “**Advances in Science & Technology**” (ICAST-2018) organized by Swami Keshvanand Institute of Technology, Management & Gramothan (SKIT), Jaipur (India) during May 04-05, 2018. The conference was technically supported by “*Institution of Electronics and Telecommunication Engineers (IETE)*”, “*Indian Society for Technical Education (ISTE)*”, “*Institution of Engineers*”, “*Computer Society of India (CSI)*” and “*Easychair<sup>TM</sup>*”.

## 2. Objectives and scope of conference

Research in engineering and applied sciences has played a vital role in improving human life to a very great extent. With the development of instrumentation and computation facilities, research on frontier areas has gone manifold. The discussion on the frontier areas of research in interdisciplinary streams has always yielded novel ideas and collaborative research. In view of this, the **International Conference on Advances in Science & Technology (ICAST-2018)** was meticulously planned to muster innovative ideas from researchers, scientists, academicians, industry professionals and students. The aim of the conference was to provide a common platform to share and discuss the novel ideas, technologies and research findings to promote interdisciplinary research and to ignite young brains.

The conference was focused on the following broad areas:

- Materials Science, Nanomaterials for various Applications & Functional Materials, Plasma Physics, Astro-Particle Physics, Cosmology, Electromagnetism, Experimental High Energy Physics.
- Polymers, Catalysts, Membrane Science, Bio-Chemical Engineering, Bio-Materials, Organic & Electrochemistry, Green Composites, Water & Waste Water Treatment, Chemical Reaction Engineering, Separation Technology.
- Applied Mathematics & Modeling, Computational Mathematics, Mathematical Physics, Error Analysis, Operation Research, Coding Theory, Fractional Calculus, Bicomplex analysis, Fluid Dynamics, Integral Transform, Probability & Statistics.
- Water Resources, Structural & Construction Technology, Environmental & Transportation Engineering, Earthquake Engineering, Disaster Management, Renewable Energy, Architecture & Town Planning.
- Soft Computing, Network Security, High Performance Computing, Internet of things, modeling of Materials and Applications.
- Electronic Circuits & Systems, Semiconductor & Electron Devices, MEMS, Nano Technology, Communication Systems.
- Composite Materials, Gas dynamics, Refrigeration & Air Conditioning, Steam Turbine & Power Plant, Fluid Mechanics & Machinery, Tribology, Micro Manufacturing, Modeling And Simulation, Nanofluids Technology, Biofuels, Energy systems, Metallurgy, Corrosion and Surface Coatings, Ceramic Materials.
- Smart Grid, Power Electronics & Systems, Renewable Energy Technology.

### 3 Journal Collaboration

The selected papers of ICAST-2018, after peer review process, will be published in the following journals:

- (1). International Journal of Power Electronics (Inderscience)  
ISSN online: 1756-6398, ISSN print: 1756-638X
- (2). International Journal of Information Technology (Springer Nature)  
ISSN (Print Version):2511-2104, ISSN (Electronic Version): 2511-2112
- (3). Arabian Journal for Science and Engineering (Springer)  
ISSN: 2193-567X (print version), ISSN: 2191-4281 (electronic version)
- (4). Emergent Materials (Springer)  
ISSN: 2522-5731 (print version), ISSN: 2522-574X (electronic version)
- (5). International Journal of Chemical Sciences (Springer)  
ISSN: 0974-3626 (print version) ISSN: 0973-7103 (electronic version)

The rest of the quality papers may be comprising a special issue of SKIT Research Journal (An International Journal of Engineering, Science, Humanities and Management Innovation & Excellence- ISSN print: 2278-2508, ISSN online: 2454-9673).

### 4. Organizing committee of the conference

#### Convener

- Prof. Sudha Calla, Head, Deptt. of Basic Science & Humanities, SKIT
- Prof. R. K. Jain, Head, Department of Physics, SKIT

#### Organizing Secretary

- Dr. Mukesh K. Gupta
- Dr. Praveen K. Jain
- Dr. Rishi Vyas
- Mr. Anirudh Mathur

#### Local Organizing Committee

- |                       |                        |
|-----------------------|------------------------|
| • Dr. BasantAgarwal   | • Dr. Komal Sharma     |
| • Mr. MehulMahrishi   | • Dr. Brajraj Sharma   |
| • Dr. RukhsarZafar    | • Dr. Manasvi Dixit    |
| • Mr. AnkitAgarwal    | • Mr. Rajiv Kumar      |
| • Dr. Manu Augustine  | • Mr. Ajay Kr. Sharma  |
| • Mr. Manoj Kr. Sain  | • Mr. Pawan Kr. Jain   |
| • Mr. DhanrajChitara  | • Dr. Sangeeta Gupta   |
| • Mr. Ankit Vijay     | • Dr. Vijay Singhal    |
| • Dr. Anurag Sharma   | • Dr. ShaliniShekhawat |
| • Mr. KailashSoni     | • Dr. NehaPurohit      |
| • Mr. NishantSachdeva |                        |



## 5. Technical report of the conference

An International Conference on “Advances in Science & Technology (ICAST-2018)” was organized by Swami Keshvanand Institute of Technology, Management and Gramothan, Jaipur from May 04, 2018 to May 05, 2018 with an aim to encourage innovative ideas from industry, research community and students by providing them a common platform to discuss their research findings to promote interdisciplinary research.

Five international guest speakers and four Indian speakers addressed nine plenary sessions of the conference. About 400 papers were received which include 20 papers from outside India, from IITs, NITs, State Universities, and various other institutions affiliated to different universities along with thirty four (34) papers from faculty and students of the Institute. Out of these, 180 papers were presented during the Conference in 12 Technical sessions.

The Inaugural session was graced by **Prof. (Dr.) SivakumarManickam** (*Director, Professor, Chemical and Nanopharmaceutical Process Engineering and Director, Nanotechnology and Advanced Materials (NATAM), The University of Nottingham, Malaysia*) who is a pioneer in the field of Process Engineering of Nanomaterials especially Nanopharmaceuticals.

The inaugural was followed by deliberation of following resource persons:

- **Dr. Ankur Jain**, *Natural Science Centre for Basic Research and Development, Hiroshima University, Higashi-Hiroshima, Japan*
- **Prof. Tanka NathDhamala**, *Central Department of Mathematics, Institute of Science and Technology, Tribhuvan University, Nepal*
- **Dr. P.K. Khanna**, *Chief Scientist, CSIR-Central Electronics Engineering Research Institute, Pilani, India*
- **Dr. SandeepSrivastava**, *Department of Civil Engineering, MNIT Jaipur, India*

The first day was concluded with 54 technical paper presentation 21 poster presentations.

The second day of conference was started with plenary talk of **Dr. D.P. Kothari**, *former Director Incharge, IIT Delhi and former VC, VIT Vellore* which was followed by a plenary talk of following resource persons:

- **Dr. SupawudNedphokaew**, *Faculty of Engineering , Rajamangala University of Technology, Bangkok, Thailand*
- **Dr. Manish Pokharel**, *Department of Computer Science & Engineering, Kathmandu University, Nepal*
- **Dr. Bipin Kumar Gupta**, *Scientist, CSIR-National Physical Laboratory, New Delhi, India*

The second day was concluded with 75 technical paper presentations and 30 poster presentations.

In the valedictory ceremony a formal vote of thanks was proposed by convener to all of the delegates, participants, students, management of SKIT and organizing committee members of Conference for making this Conference a great success.

A Souvenir was published for the Conference containing messages from *Hon. Governor of Rajasthan Sh. Kalyan Singh Ji*, *Hon. Chief Minister of Rajasthan Smt. Vasundhara Rajeji*, *Chairman-UGC Prof. D.P. Singh*, *Vice Chancellor-RTU Kota Prof. N. P. Kaushik*, *Chairman-AICTE Prof. Anil D. Sahasrabudhe*, *Secretary SERB-DST Dr. Rajiv Sharma* and *Prof. Tseung-Yuen Tseng of National Chiao Tung University, Taiwan*. Souvenir contained Abstracts of all the accepted papers and was distributed to all delegates and guests.

**6. Conference Participants:** About 400 papers were received which include 20 papers from outside India, from IITs, NITs, State Universities, and various other institutions affiliated to different universities along with thirty four (34) papers from faculty and students of the Institute. Out of these, 180 papers were presented during the Conference in 12 Technical sessions.

## 7. Attainment of objective

The conference was able to meet its objectives. The specific benefits derived from the conference are, inter alia

1. The foreign as well as local guests appreciated the infrastructure, laboratory facilities and hospitality of the Institute. They also appreciated the involvement and enthusiasm of the students and faculty organizing and attending the conference.
2. The foreign guests were impressed with the quality of our faculty and students in terms of their research contribution to the conference. They recommended that they should be encouraged for taking up higher education abroad and setup collaboration with foreign research group.
3. The interaction with foreign guests has opened up the possibilities of exploring joint research projects. This will be pursued further by the Institute post conference.
4. Prof. Sivakumar Manickam proposed a 5-day summer school/workshop for “Nanotechnology: Fundamental to Application” at Institute which may be conducted by him as a resource person.
5. About 250 students of Institute benefitted from the experienced researchers from academia, industry and research.
6. The faculty and students presented their research and received accolade for their findings.

## 8. Concrete Suggestions emerging from the Conference

1. Research needs to be promoted in the field of nanotechnology, as it can prove to be a simple, low cost solution for improving quality of everyday life.
2. The trust should be given in the areas of interdisciplinary research to device application of the fundamental finding of basic research.
3. Researchers should be provided with ample opportunities to establish collaboration with overseas to get more exposure.

## 9. Event Photographs





