

*National Conference*  
*On*  
**Research Advances in Science & Technology**  
**NCRAST 2019**

22<sup>th</sup> February 2019



**KNOWLEDGE PARTNERS**

Innovation Business Development, Inc. (IBDI)  
Indian Association for Hydrogen Energy and Advanced Materials (IAHEAM)  
Institute for Research and Development India (IRD)  
The Biotech Research Society, India (BRSI)

**PUBLICATION PARTNER**

International Association of Scientific Innovation and Research (IASIR - USA Journal)

*Organized by*

*Organizing Partner*



**CSI COLLEGE OF ENGINEERING**

(Church of South India, Coimbatore Diocesan Council)

Affiliated to Anna University, Chennai, Approved by AICTE, New Delhi

**Venue : CSI College of Engineering, Ooty**

## NCRAST 2017

National Conference on Research Advances in Science & Technology – NCRAST 2017 was organized by Hillgrove research Pvt. Ltd. and CSI College of Engineering, Ooty on 26th & 27th May 2017, at CSI College of Engineering. Research scholars pursuing M.Phil. & Ph.D. programs in the faculties of Science and Technology from reputed universities and institutions namely, IIT - Madras, Bangalore University - Bangalore, National Institute of Technology – Karnataka, Jain University – Bangalore, University of Mysore - Mysore, Karunya University – Coimbatore PSG College of Technology – Coimbatore, NIE Institute of Technology – Mysore, UPASI Tea Research Centre - Coimbatore, participated and presented their research work.

Among the many research papers submitted, 31 were shortlisted based on immediate industry requirements and viability of its implementation and use. Experts from the industry were invited to gain first-hand information and to assess the feasibility of new technologies and its implications upon its use. Eight research papers were published by IASIR in their reputed and globally recognized International Journal.

Miss. Gulshan Khalique, Research Scholar (M.Phil. Microbiology), Jain University, Bangalore was awarded with the title of 'Most Contributing Research Work – 2017'. The award carried a 'Certificate of Achievement' and cash incentive of INR 5,000.

Innovation Business Development, INC. (IBD), Indian Association for Hydrogen Energy and Advanced Materials (IAHEAM), Institute for Research and Development India (IRD) and the Biotech Research Society, India (BRSI) were the knowledge partners and the International Association of Scientific Innovation and Research (IASIR) was the publication partner.



Miss. Gulshan Khalique receives the award

## CONFERENCE THEME

Research and development in science and technology has been identified as the conference theme as this is one among the core areas contributing to economic growth and social development. The theme shall include all research areas in the faculty of science and technology.

## CONFERENCE OBJECTIVE

The objective of this conference is to provide a platform for students, researchers, academicians, scientists and industry practitioners to share their intellectual capital that shall be of immense use to the society thereby paving way for an accelerated inclusive social growth, bring out constructive suggestions to policy makers and, facilitate the relevant industry to take it forward for use.

## CALL FOR PAPERS

Students (Graduates & post graduates), research scholars (M.Phil. & Ph.D.), academicians, scientists and industry practitioners' from all the branches of science and technology are invited to participate and present their research papers. Research papers are called from the following disciplines:

- Environment
- Physics
- Kinetics
- Mechanics
- Electromagnetics
- Thermodynamics
- Chemistry
- Inorganic Chemistry
- Electrochemistry
- Analytical Chemistry
- Physical Chemistry
- Biochemistry
- Organic Chemistry
- Geochemistry
- Biotechnology
- Agriculture
- Zoology
- Information
- Material
- Geoscience
- Other Related Faculty

## CATEGORIES OF RESEARCH PAPERS

### 1) Academic Papers

Academic research papers shall be either conceptual or empirical. The length of the paper shall be around 7000 words excluding acknowledgements and bibliography. *Conceptual research papers* should be comprehensive in nature and bring out new theoretical perspectives on the theme or in the focus disciplines as listed in the previous section. *Empirical research papers* should include substantial review of past literature, justify the need and importance of the study, the developed hypothesis and research design, data analysis and findings of the research. The paper should elaborate on theoretical and practical implications of the findings and the scope for further research in the area of discussion.

### 2) Case Studies

Typical cases are invited from all the disciplines of science and technology. Each case shall be of around 8000 words in length excluding acknowledgements and bibliography. Cases shall include a problem or a practice observed or experienced by the researcher and come out with solutions or better practices so as to overcome the identified research problem. All case studies must include teaching notes where the case is intended for academic use and publication. Teaching notes are not mandatory if the case study is not for academic use. Where a case study is connected to an organization, the original name and credentials of the organization is to be disclosed and a formal letter of 'No Objection' issued by that organization is to be submitted along with the case study.

### 3) Ph.D / M.Phil. Thesis

Research scholars who have submitted their thesis during the academic year 2016 - 18 may present their research work for the award of best research study. Research scholars pursuing M.Phil./ Ph.D. and who wish to present their research work shall do so as 'research in progress'.

## SUBMISSION OF ABSTRACT

An abstract in around 200 words is to be submitted that shall include a summary of all the contents in the research paper and the process adopted by the researcher to conduct the study. Every abstract should include the title of the research paper, followed by the name of the author(s). Below the abstract, 5 to 7 key words are to be included. In the foot note, the author(s) affiliations are to be included. The abstract must be limited to a maximum of one A 4 page. **All abstracts are to be emailed to: ncrast.hillgrove@gmail.com**

## SUBMISSION OF FULL PAPER

Once the abstract qualifies in the review process, authors will be communicated about the submission of their full paper. Upon the receipt of the full paper, the paper will be tabled for peer review and tested for plagiarism. Qualifying papers will be selected for presentation during the conference and publication thereafter. After which, the author(s) will be communicated about the final registration with the payment of applicable registration fee. Authors of selected papers are required to submit a declaration with regard to originality of their work and plagiarism. **All full papers are to be emailed to: ncrast.hillgrove@gmail.com**

## PREPARATION OF MANUSCRIPT (ABSTRACT & FULL PAPER)

The entire manuscript shall be prepared as per the guidelines below -

Paper Size	: A 4
Printing	: One Side
Font Style	: Times New Roman
Font Size	: Title – 14, Author(s) Name(s) – 10 Italics, Headings – 12 Bold, Sub-headings – 12, Body - 12
Spacing	: 1.5
Margins	: 1 inch on all 4 sides

Referencing is mandatory for research papers and shall be as per APA style of formatting (Ref. www.apa.org).

## PRESENTATION OF FULL PAPER

It is mandatory that at least one of the authors attend the conference in person and presents the paper. In case of M.Phil./ Ph.D. research in progress, the presentation shall be based on their research work as on date. In such cases, the rough draft of the research in progress is to be brought.

## AWARDS & RECOGNITION

All participants will receive a certificate of participation. Best three research papers will be awarded with certificates of achievement and cash prizes. Selected research papers will be published in the proceedings and in a reputed journal with ISSN and impact factor. The conference organizers shall hold the first right to publication of all the selected papers.

'Research in progress' of M.Phil./ Ph.D. research works are eligible for the award of most contributing research work and a certificate of contribution will be awarded. This forum shall also add value to the research in progress of the scholar.

## IMPORTANT DATES

Last date for the submission of abstract	15 <sup>th</sup> December 2018
Intimation of accepted abstracts	15 <sup>th</sup> December 2018
Last date for the submission of full paper	31 <sup>st</sup> January 2019
Intimation of accepted full papers	31 <sup>st</sup> January 2019
Last date for the payment of registration fee	15 <sup>th</sup> February 2019
Conference	22 <sup>nd</sup> February 2019

## CONFERENCE REGISTRATION

It is mandatory for every author to register along with the applicable registration fee. The registration fee for various categories of contributors is furnished below:

Participant Category	INR
Graduate Students	500
Post Graduate Students	700
Research Scholars (M.Phil./ Ph.D.)	1200
Academicians	1500
Industry Practitioners	1500

The registration fee includes a conference kit, conference proceedings, refreshments and working lunch on the day of the conference.

## PAYMENT OF REGISTRATION FEE

1. By DD: To be drawn in favor of "HILLGROVE RESEARCH PVT LTD" payable at Coimbatore.
2. By Internet Banking: "HILLGROVE RESEARCH PVT LTD", State Bank of India, Narasimanaickenpalayam Branch, A/c No. 35495376048, IFSC - SBIN0008155

## ABOUT THE CONFERENCE ORGANIZERS

### CSI College of Engineering

The CSI College of Engineering is approved by AICTE, New Delhi and the Government of Tamil Nadu. The college is affiliated to Anna University, Chennai. This college seeks to impart value based Technical Education to its students in order to meet the growing needs of such Technocrats and Entrepreneurs required in industries and business establishments. The college is a self-financing institution, offering degree courses at graduate and postgraduate level in different disciplines of Engineering Sciences. This college was founded by the Church of South India, Coimbatore Diocesan Council which is a pioneer in running educational institutions, from pre-primary to post matriculation and post-graduate levels, all known for their academic standards and discipline.

### HILLGROVE Research Pvt. Ltd.

HILLGROVE Research Pvt. Ltd. was incorporated with the long-term vision of its founders to contribute and promote research in the areas of Agriculture, Engineering, Science and Technology, Business and Management, and Innovation among others. To achieve its aim, the company fosters advocacy programs, capacity building workshops, training, technical education, rural entrepreneurship and literacy. For more details please visit our web site – [www.hillgroveresearch.com](http://www.hillgroveresearch.com).

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#### CONFERENCE DIRECTORS

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## ABOUT NILGIRIS

The Name 'Nilgiris' means Blue hills (Neelam - Blue and giri - Hill or Mountain) the first mention of this name has been found in the Silappadikaram. Nilgiris is located at the tri-junction of Tamil Nadu, Kerala and Karnataka. Nilgiris is a part of the Western Ghats. Ooty the "Queen of Hill Stations", Coonoor 19 kms from Ooty and Kotagiri 31 kms from Ooty, are the three hill stations of this district. Nilgiris is India's first biosphere. It has been declared as one of the 14 'hotspots' of the world because of its unique bio-diversity.

Rolling grasslands, dense forests, waterfalls, streams, lakes, vast expanse of tea plantations, interspersed with vegetable gardens, spectacular view points, an amazing variety of flora and fauna, fabulous trekking trails, innumerable heritage sites, spell binding sunrises and sunsets, magical light, pollution free atmosphere, mist, clouds, fog, star studded skies, serenity etc. are some of the many admirable in the Nilgiris. Nilgiris presents a truly breathtaking kaleidoscope of visual treats and soul stirring experiences and when you come.... You will experience it.....!

#### PROGRAM SCHEDULE

09.00 AM	: Registration
09.30 AM	: Inauguration
09.45 AM	: Inaugural Address
10.00 AM	: Technical Session - 1
11.30 AM	: Tea Break
11.45 AM	: Technical Session - 2
01.15 PM	: Lunch Break
02.00 PM	: Technical Session - 3
03.30 PM	: Tea Break
03.45 PM	: Special Invitee Talk
04.45 PM	: Valedictory