



BGSKH Education Trust (R.) – A unit of Sri Adichunchanagiri Shikshana Trust(R.) BGS College of Engineering and Technology (BGSCET)



(Approved by AICTE, New Delhi and Affiliated to VTU, Belagavi) Adjacent to Mahalakshmi Metro Station, Mahalakshmipuram, West of Chord Road, Bengaluru - 560 086, Karnataka.

International Conference on "Emerging Research in Computing, **Information, Communication and Applications**"



# ERCICA-2024 PBGSCET, Bengalwu, INDIA



# Invitation

To_		

## **Organized by:**

**BGS College of Engineering and Technology (BGSCET)** 

Mahalakshmipuram, Bengaluru - 560 086, Karnataka, India.

In collaboration with

National Research Development Corporation (NRDC), Ministry of Science & Technology, Government of India

Laghu Udyoq Bharati (LUB), Karnataka, India.

Innovation & Technology Partners - Taking Tech Innovation to the Next Level-NRDC

"Empowering India: The Sustainable Future of Startups & Entrepreneurs"



























International Conference on "Emerging Research in Computing, Information, Communication and Applications"

ERCICA-2024









Springer

"Empowering India:

Invited Plenary Talks from ISRO, NRDC, KSCST and LUB

Scopus

The Sustainable Future of Startups & Entrepreneurs" - Taking Tech Innovation to the Next Level-NRDC

## **Innovation & Technology Partners**



























## ABOUT THE CONFERENCE

### **ERCICA**

ERCICA, is one of the top ranked International Conferences in the country, and "Trademarked" by the Controller General of Patents, Designs and Trademarks (CGPDTM), Govt. of India with an objective to effectively bring in stakeholders from across the global on its platform to discuss among startups, entrepreneurs, researchers, engineers and scientists in order to promote research and exchange of knowledge. These endeavors aim to enhance the technological ecosystem and actively contribute to India's digital transformation.



The ERCICA Conference Books are available in the Digital Libraries of Topmost Universities (to name few noteworthy, University of Stanford, University of Yale, University of Wisconsin, University of Villanova, etc.,) and books are available at the Online bookstores all over the World (to name few, Amazon-USA, India, France, Germany, UK. Booksamillion, Sapnaonline, Worldcat, Booksdepository etc.) with hundreds of Citations and thousands of Online readers. All the books are indexed by EI Compendex and SCOPUS database, Google Scholar and Springerlinks.

### **ERCICA 2024**

## "Empowering India: The Sustainable Future of Startups & Entrepreneurs"

International Conference on "Emerging Research in Computing, Information, Communication and Applications" - ERCICA 2024 will be held during 18<sup>th</sup>, 19<sup>th</sup> & 20<sup>th</sup> July, 2024 at BGSCET Campus, Bengaluru, Karnataka, India in association with National Research Development Corporation (NRDC), Ministry of Science & Technology, Government of India & Laghu Udyog Bharati (LUB), Karnataka, India. As part of the conference, a Pre-Conference Technical Summit (PTS) will be organized by the Industry and Academia on 18<sup>th</sup> July, 2024.

## ERCICA 2024 Conference Themes, but NOT limited to:

- Artificial Intelligence and Machine Learning
- Aspects of Digital Forensics
- Automotive Supply Chain
- Big Data and Data Analytics
- Blockchain and Machine Learning for Cybersecurity
- Green Cloud Computing Tools & Applications
- Embedded and VLSI Systems
- Grid/Cloud/Soft/Super Computing
- Mobile Ubiquitous and Pervasive Computing
- Sensor/Cellular/Cognitive Radio Networking
- Multimedia Applications and Mobile Computing
- Parallel and Distributed Computing
- Internet of Things (IoT)
- System Performance Analysis
- Wireless Communications
- Smart Grid Applications
- Image and Signal Processing
- Optimization Heuristic Techniques
- Bioinformatics and Computational Biology
- Business Intelligence and Management
- Innovation & Emerging Technologies
- Space Science and Applications



It is planned to publish the peer reviewed and only selected papers of the conference as proceedings with SpringerNature in their prestigious "Lecture Notes in Electrical Engineering (LNEE)" Series. The books of LNEE series is indexed by EI Compendex and SCOPUS database, Google Scholar and Springerlink. Prospective authors are invited to submit full length original research papers strictly in .DOC/ .DOCX format to ercica.chair@gmail.com/ercica.paper@bgscet.ac.in

Final Paper Submission by : 05<sup>th</sup> May, 2024

Paper Acceptance by : 15<sup>th</sup> May, 2024

Registration Deadline by : 15<sup>th</sup> June, 2024

Conference Dates: 18<sup>th</sup>, 19<sup>th</sup> & 20<sup>th</sup> July, 2024



## ERCICA - 2024 EXPO

### "ISRO Space on Wheels & Start-ups Expo"

- (ii) 19<sup>th</sup>July, 2024
- Time: 10:00 A.M. to 04:00 P.M.
- BGSCET, Bengalwu, INDIA



## **Innovation & Technology Partners**













### **Associate & Academic Partners**













## **Publishing Partner**

### **Media Partners**

## Premier Partners













## **Industry Partners**























































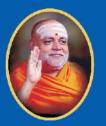














### II Jai Sri Gurudev II

BGSKH Education Trust (R.) - A unit of Sri Adichunchanagiri Shikshana Trust(R.)

## BGS College of Engineering and Technology (BGSCET)

(Approved by AICTE, New Delhi and Affiliated to VTU, Belagavi)

Adjacent to Mahalakshmi Metro Station, Mahalakshmipuram, West of Chord Road, Bengaluru - 560 086, Karnataka.



**Inspiring Plenary Lecture on Technological** Innovation and Inspiring India: ISRO

Mitigating the Challenge in Academia-Industries Collaboration: Laghu Udyog Bharati

Innovation from Lab to Landtowards Viksit Bharat: NRDC

**Empowering India-for Holistic Sustainable Development: Industry Partners** 











For further details scan/visit: https://www.bgscet.ac.in/ercica

#### **Divine Blessings**

His Holiness Jagadguru Padmabhushana

#### Sri Sri Sri Dr. Balagangadharanatha Mahaswamiji

71st Pontiff of Sri Adichunchanagiri Mahasamsthana Math,

Founder President, Sri Adichunchanagiri Shikshana Trust (R.), Karnataka, India

His Holiness Jagadguru Sri Sri Sri Dr. Nirmalanandanatha Mahaswamiji

72<sup>nd</sup> Pontiff of Sri Adichunchanagiri Mahasamsthana Math,

President, Sri Adichunchanagiri Shikshana Trust (R.) Karnataka, India.

**Sri Sri Sowmyanatha Swamiji** Secretary, Sri Adichunchanagiri Mahasamsthana Math, Bengaluru Branch, Karnataka, India.

#### **General Chair**

Dr. G.T. Raiu

Director, BGSCET, Bengaluru, Karnataka, India.

### **Program Chair**

Dr. Ravikumar G. K.

Principal, BGSCET, Bengaluru, Karnataka, India.

Dr. Prasad Naik Hamsavath Professor & HoD, Dept. of Al&DS, BGSCET, Bengaluru, Karnataka, India.

### **Publication Chair**

**SPRINGERNATURE-LNEE Series (SCOPUS Indexed)** 

#### **National Advisory Board**

Padma Shri & Padma Bhusan Smt. Sudha Murthy

Hon'ble member of Parliament (MP, Rajya Sabha), Govt. of Índia. & Indian Educator, Author and Philanthropist & Chairperson of Infosys Foundation, Bengaluru, Karnataka, India.

### Padmashri Dr. Prahlada Rama Rao

Advisor, S-VYASA Deemed University & Former Vice- Chancellor, Defence Institute of Advanced Technology (DIAT-Pune) & Former Director, Defence Research and Development Laboratory & Missile Scientist of India, Govt. of India.

#### Prof. T. G. Sitharam

Chairman, All India Council for Technical Education (AICTE), Govt. of India, New Delhi, India.

Former Chairman - RUSA Grants, Govt. of Karnataka, India

#### Prof. S. Vidyashankar

Hon'ble Vice Chancellor, Visvesvaraya Technological University (VTU), Belagavi, Karnataka, India.

#### Prof. M. A. Shekar

Vice-Chancellor, Adichunchanagiri University (ACU), Bengaluru, Karnataka, India.

### Prof. C. K. Subbaraya

Registrar, Adichunchanagiri University (ACU), Bengaluru, Karnataka, India.

#### Shri. B. N. Ramakrishna

Director- ISRO Telemetry Tracking and Command Network (ISTRAC), Indian Space Research Organization (ISRO), Bengaluru, Karnataka, India.

Prof. L. M. Patnaik
Former Hon'ble Vice-Chancellor, Defence Institute of Advanced Technology (DIAT), Pune, Maharashtra, India.

#### **Dr. Vilas Rathod**

Senior Scientist, ISROTelemetry Tracking and Command Network (ISTRAC), Indian Space Research Organization (ISRO), Bengaluru, Karnataka, India.

#### Dr. Bijav Kumar Sahu

Sr. Regional Manager & Head, National Research Development Corporation (NRDC), Ministry of Science & Technology, Govt. of India.

#### Prof. Usha Natesan

Director, National Institute of Technical Teachers Training and Research (NITTTR), Chennai, Tamil Nadu, India. Shri. Saidulu Adavath, IPS

Deputy Commissioner of Police (DCP), North Division, Bengaluru, Karnataka, India

### Prof. N. C. Shiyaprakash

Emeritus Professor, Instrumentation and Applied Physics, Indian Institute of Science (IISc), Bengaluru, Karnataka, India.

Director - Centre for Brain Research & Dean, Division of EECS & Indian Institute of Sciences (IISc). Bengaluru, Karnataka, India.

Former Hon'ble Vice-Chancellor, Bangalore University (BU), Bengaluru, Karnataka, India Prof. Puttaraju

Hon'ble Vice-Chancellor, Mandya University, Mandya, Karnataka, India

Principal, Adichunchanagiri Institute of Technology, Karnataka, India.

**Shri. E.S. Chakravarthy** Technocrat & Advisor, ACU, Karnataka, India Dr. C.T. Jayadeva

### **Industry Advisory Board**

Shri, Sachin Sabnis

President, Laghu Udyog Bharati, Bengaluru, Karnataka, India

Shri. K. Narayana Prasanna

Joint Secretary, Laghu Udyog Bharati, Bengaluru, Karnataka, India. Shri. Nambi Ganesh

Head, Tata Elaxi, Bengaluru, Karnataka, India

Shri. Rajiv P. CEO, Mukav Technologies Pvt, Ltd., Bengaluru, Karnataka, India.

Shri. S.K. Hussain

Director, Resonous Technologies, Bengaluru, Karnataka, India

Dr. Hemang J. Shah

Director, Engineering, Qualcomm India Pvt. Ltd, Bengaluru, Karnataka, India. Shri. Sudhakar Vemuri

CEO, Finexcore Software Solutions, Dubai

Shri. Varun Chandra

Head, Validation, LG Soft India Pvt. Ltd, Bengaluru, Karnataka, India.

Shri. Vivek Hegde CEO, Ahana Software Pvt. Ltd., Bengaluru, Karnataka, India.

Shri. Raja Ganabathi

#### Director, Zibtek Software Pvt. Ltd., Bengaluru, Karnataka, India. Shri. M.P. Dubey

Former Director, Software Technology Parks of India (STPI), Ministry of Science and Technology, Govt. of India & Advisor (Policy), Electronic Industries Association of India (ELCINA), New Delhi, India.

Ms. Aditi Umesh

### Founder CEO, Azaleos Biosciences Pvt. Ltd., Bengaluru, Karnataka, India.

Smt. Sanjana Rathi CEO, Cyberdiplomat Tech Pvt. Ltd., Bengaluru, Karnataka, India.

Shri. Rajesh M.R. CEO, SourceEdge Software Technologies Pvt. Ltd., Bengaluru, Karnataka, India.

Dr. Keshava Munegowda
Vice President, Securities Database Engineering Division of Goldman Sachs, Bangalore, Karnataka, India.

### Shri, Manikantan Mohanavelu

Chief Technology Officer, Abstream Technologies, Bengaluru, India

### Shri. Naveen Lakkur

Innovation Coach, Institute of Inspiring Innovation (III), Bengaluru, Karnataka, India.

### International Advisory Board

Prof. Rajkumar Buyya

Professor, University of Melbourne, Australia.

#### Prof. S.S. Iyenger

Distinguished Professor, Computer Science and Engineering, School of Computing & Information Sciences, Florida International University, Florida, USA.

## Prof. Masahiro Yoshimura Distinguished Visiting Chair Professor, Tokyo Institute of Technology, Japan.

Prof. Michel Driscoll

#### Professor, NYU Tandon School of Engineering, New York University, New York, USA.

Prof. Dr. Er. Harish Professor, College of Computer Science, King Khalid University, Abha, Saudi Arabia, UAE.

### Prof. Heggere S Ranganath

Emeritus Professor, The University of Alabama, Centre for Science and Technology, Huntsville, USA.

### Prof. Nagathihalli Nagaraj

Professor, University of Miami, Miami, South Florida, USA.

#### Dr. Hariprasad Govinda

Principal Economist, Economic Research Bureau, Competition Commission, Pretoria, South Africa,

#### Prof. Subarna Shakva

Professor, Pulchowk Campus, Institute of Engineering & Director, IT innovation Center,

#### Tribhuvan University, Kathmandu, Nepal.

Prof. Benjamin Wan-Sang Wah Professor, University of Hong Kong, Hong Kong.

#### Prof. Jin -Song Dong

Professor, National University of Singapore (NUS), Singapore. Prof. Roshan G. Ragel

#### Professor and Head, Computer Engineering, University of Peradeniya, Kandy, Sri Lanka.

Dr. Sundaram Suresh
Professor, School of Computer Science and Engineering, Nanyang Technological University - NTU Singapore.

#### Dr. Swetha Govindaiah

Senior Software Engineer, Smart Source Technologies, San Antonio, Texas, USA

Shri. Sriharsha N Nagaraj CEO, TypeTheta Technologies, London, UK,