



**GITAM**  
(DEEMED TO BE UNIVERSITY)  
NAAC A++ ACCREDITED

 **G-TEC**  
DST GITAM- Technology Enabling Centre

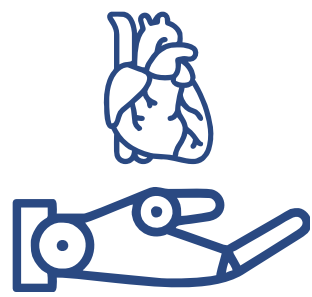


# 6th INAE – SERB – GITAM Youth Conclave 2023

on

## INNOVATION AND TECHNOLOGY FOR GLOBAL CHALLENGES

(November 3rd - 4th, 2023)



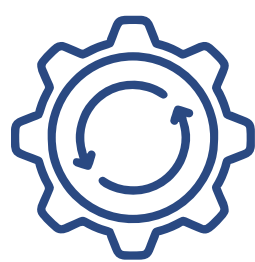
**AI in  
Healthcare**



**Space &  
Robotics**



**Green Energy  
and Storage**



**Circular  
Manufacturing**



**Smart City &  
Urban  
Planning**



**Biomedical  
Engineering and  
Devices**

Hosted by the GITAM School of Technology, **GITAM** (Deemed to be University) in association with the Indian National Academy of Engineering (**INAE**) and the Science and Engineering Research Board (**SERB**).  
GITAM Technology Enabling Centre (**G-TEC**) is co-hosting the event.



## भारतीय राष्ट्रीय अभियांत्रिकी अकादमी Indian National Academy of Engineering

### About INAE

The Indian National Academy of Engineering (INAE) comprises India's most eminent Engineers, Engineer- Scientists and Technologists.

**Founded: 20 April 1987**

**President: Prof Indranil Manna**

INAE had instituted a "INAE Youth Forum" in the year 2017 comprising of students at Bachelor/Master's and Doctoral Level with the objective of facilitating the engagement of Indian youth in the activities of INAE, so as to motivate them for pursuing engineering as a profession and contribute in Nation building. INAE through the Youth Forum desires to extend the membership to bright and young budding engineers, thereby endorsing their talent and advocating their ability to contribute meaningfully to the development of the country. The "INAE Youth Conclave" was launched as an annual flagship event of INAE, under the aegis of the INAE Youth Forum at BISR, Jaipur in August 2017, which was inaugurated by the Chief Guest, Dr K Kasturirangan, FNAE, former President, INAE. The proceedings of the INAE Youth Conclaves are interactive in nature, wherein engineering students are encouraged to interact with esteemed Fellows of INAE. The general themes of the Youth Conclave are chosen so as to promote engineering excellence, youth leadership and nation building.



### About GITAM (Deemed to be University)

During the past 42 years, GITAM has been committed to excellence in higher education foraying into diversified disciplines of learning. It has steadily evolved into a world-class university recognized for the experiential learning it offers, the competent and compassionate faculty, the stellar research laboratories, the academic vibrancy, and the cosmopolitan culture. **Founded by Late Dr. M.V.V.S. Murthi**, visionary, industrialist, educationist, philanthropist, and former parliamentarian, GITAM is in the fruitful fourth decade of its service to higher education. GITAM has become a diverse and dynamic and undergraduate, postgraduate research institution and its now led by **Honorable President Shri. M. Sri Bharat**. The university has three campuses - its main campus at Visakhapatnam, off campuses at Hyderabad and Bengaluru. Known for its creative dynamism and flexibility, the university offers varied programs blending skill development and value orientation to shape the career of students and develop holistic personalities to be privileged members of civil society. The university also offers several programs through distance learning to increase access to higher education with an emphasis on reaching the unreached. The university has been **accredited by NAAC as an A++ grade university and recognized by UGC - MHRD as a category - 'I' Deemed to be University**.

## **About INAE – SERB – GITAM Youth Conclave 2023**

INAE – SERB hosts the annual Youth Conclave in different institutes across India. **'Innovation and Technology for Global Challenges'** is the theme of the Youth Conclave's sixth edition.

The event's goal is to give young people a voice and showcase their creative problem-solving skills in an effort to improve our future as a whole. Students who attend will also have the unique opportunity to network with INAE fellows and other professionals who have made significant contributions to engineering research and development, industry, and education.

### **Youth Conclave has the following focus areas:**

- AI in Healthcare
- Space & Robotics
- Green Energy and Storage
- Circular manufacturing
- Biomedical Engineering and Devices
- Smart City & Urban Planning

### **The following Events are being organized in the above focus areas:**

- Poster Presentation
- Ideathon
- Model/Project Exhibition
- Start-up Showcase
- Keynote Speeches
- Master Classes
- Industry and R&D Exhibition

### **Eligibility:**

- Under Graduate
- Post Graduate
- Research Scholars

### **Key Takeaways:**

- Network with INAE Fellows
- Learn from Pioneers in Engineering
- Connect with Young Scientists
- Experience the start-up growth

### **Participants Benefits (FREE) :**

- Registration
- Lunch & Refreshments
- Travel & Accommodation for Outstation Students Only (\*T&C apply)

### **Prizes and Recognition :**

Under Poster Presentation, Ideathon, Model/Project Exhibition, Start-up Showcase

- First Prize : INR 25,000
- Second Prize : INR 15,000
- Third Prize : INR 10,000
- Exclusive Women ONLY Team Awards
- Participation Certificates for all

## AI in Healthcare

The field of healthcare is seeing a substantial transformation due to the advent of Artificial Intelligence (AI), which is fundamentally altering the methods employed by medical practitioners in disease diagnosis, treatment, and management, as well as the manner in which patients access healthcare services.



**This conclave invites ideas in the areas of**

- Medical Imaging
- Virtual Health Assistants
- Remote Monitoring
- Healthcare Operations and Administration
- Robot-Assisted Surgery

## Space & Robotics

The fields of space exploration and robotics are interrelated disciplines that have recently made remarkable progress, fundamentally changing our understanding of the universe and our ability to explore it.



**This conclave invites ideas in the areas of**

- Space Probes & Rovers
- Satellite Servicing
- AI & Autonomy
- Space Cleanup

## Green Energy and Storage

Green energy and energy storage technologies are pivotal in transitioning to a more sustainable and environmentally friendly energy landscape.



This conclave invites ideas in the areas of

- Renewable energy
- Biomass and Bioenergy
- Green hydrogen
- Intermittency Mitigation and Grid Stabilization
- Smart grids and Emission Reduction

## Circular Manufacturing

Circular manufacturing, alternatively referred to as circular economy manufacturing or closed-loop manufacturing, is a production methodology that endeavors to decrease waste generation, resource utilization, and ecological repercussions while maximizing the reutilization and recycling of resources.

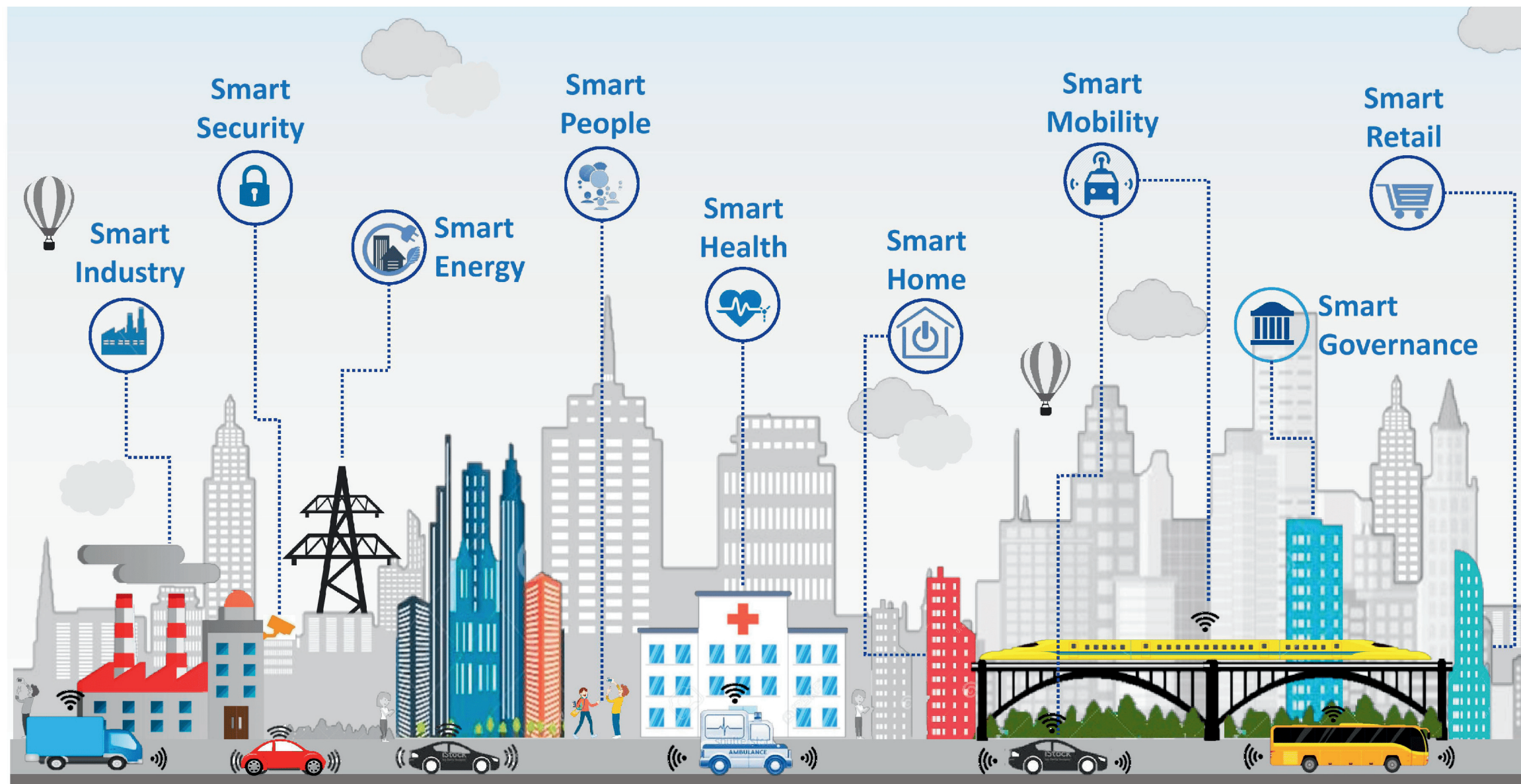


This conclave invites ideas in the areas of

- Design for Circular Manufacturing
- Resource Efficiency
- Waste Reduction and Management
- Re-manufacturing and Refurbishment
- Reverse Logistics and Circular Supply Chains

## Smart City & Urban Planning

Smart cities and urban planning are concepts and practices aimed at using technology and data-driven approaches to improve the quality of life, sustainability, and efficiency of urban areas.



### This conclave invites ideas in the areas of

- Information and Communication Technology (ICT) used in smart cities
- Data-Driven Decision-Making
- Sustainable Design
- Smart Infrastructure
- Resilience Planning
- Affordable Housing

## Biomedical Engineering and Devices

Biomedical devices are a crucial aspect of this field, as they encompass a wide range of instruments, tools, and technologies designed to diagnose, treat, monitor, and support medical conditions and procedures. Here are some key aspects of biomedical engineering and devices.



### This conclave invites ideas in the areas of

- Medical Imaging devices
- Prosthetics, Orthotics, and Implantable Devices
- Biomaterials and Assistive Devices
- Wearable Health Technology
- Biomechanics

## EVENTS

### Poster Presentation

Poster presentations are a valuable platform for knowledge sharing, discussion, and networking within the conclave. All presenters can showcase their work, receive feedback, and connect with others who share similar interests in their field of research or expertise.

- Team Size: 1 to 2
- The Presenter must submit a poster as per the template, and the selected teams are supposed to be present with their poster offline at the GITAM Visakhapatnam campus.
- [Click here for Template Link](#)
- [Registration Link](#)
- Last date of registration: 15.10.2023
- Shortlisted submissions will be informed through email before 20.10.2023

#### Rules

- Poster Dimensions: A4 in landscape orientation (horizontal)
- Accepted File Formats: PDF
- File Naming Convention: PP\_<Focus Area>\_<Team Name>.pdf

### Ideathon

An ideathon is a concentrated and dynamic gathering, allowing students to tackle some of the most pressing global challenges. These brainstorming sessions bring together individuals from varied backgrounds, each contributing their unique expertise, skills, and interests to tackle predefined problems. During an ideathon, participants collectively develop robust, inventive, and holistic solutions. The outcomes of an ideathon can encompass innovative ideas, detailed roadmaps, or actionable plans.

- Team Size: 1 to 3
- The Presenter must submit a report as per the template, and the selected teams are supposed to be present with their solution offline at the GITAM Visakhapatnam campus.
- [Click here for Template Link](#)
- [Registration Link](#)
- Last date of registration: 15.10.2023
- Shortlisted submissions will be informed through email before 20.10.2023

#### Rules

- Teams must leverage cutting-edge technologies to develop futuristic ideas, solutions, roadmaps, or actionable plans for the chosen problem statement.
- All submissions will be checked thoroughly, and plagiarism will lead to disqualification.
- Accepted File Formats: PDF
- File Naming Convention: ID\_<PS No.>\_<Team Name>.pdf

## Problem Statements for Ideathon

1. Develop an AI-driven healthcare solution that improves patient outcomes and reduces the burden on healthcare professionals.
2. Innovative AI solutions that can enhance the efficiency and accuracy of medical image analysis and diagnosis.
3. Design and build a low-cost, autonomous space probe or rover that can explore and collect data on a celestial body, such as the Moon or Mars, with limited human intervention.
4. Develop an artificial intelligence system that can independently navigate and make decisions for a spacecraft or rover on a planetary surface, adapting to unexpected obstacles and changing environmental conditions.
5. Develop a technology that converts waste materials into clean, renewable energy sources.
6. Develop more efficient and affordable energy storage solutions for renewable energy sources.
7. Urban planning solutions to enhance disaster resilience and response in rapidly growing cities.
8. Implement an intelligent transportation system that reduces traffic congestion and greenhouse gas emissions in a major city.
9. Design an energy-efficient building or infrastructure system that reduces energy consumption in urban areas.
10. Develop a low-cost, portable medical device to diagnose common diseases in resource-constrained regions.
11. Design a biomedical device that assists individuals with disabilities, enhancing their quality of life and mobility.
12. Develop a smart waste management system that optimizes waste collection and recycling in a metropolitan area.
13. Create a sustainable manufacturing process that minimizes waste and maximizes the reuse and recycling of materials.



## **Model/Project Exhibition**

Students can present their physical models and academic projects during the youth conclave. These presentations serve as a platform for students to showcase their creativity, innovation, and academic achievements.

- Team Size: 1 to 3
- The Presenter must submit a report as per the template, and the selected teams should be present with their model/project offline at the GITAM Visakhapatnam campus.
- [Click here for Template Link](#)
- [Registration Link](#)
- Last date of registration: 15.10.2023
- Shortlisted submissions will be informed through email before 20.10.2023

### **Rules**

- All the participants must showcase at least their working model / project and are advised to adhere to the Focus area.
- All the arrangements (power, tables, chairs, etc.,) will be provided at the assigned stall.
- Accepted File Formats: PDF
- File Naming Convention: MP\_<Focus Area>\_<Team Name>.pdf

## **Start-up Showcase**

Entrepreneurs who began their innovation journeys during their student years will share their experiences, providing valuable perspectives on the joys and challenges of entrepreneurship.

- Team Size: 1 to 3
- The Presenter must submit a report as per the template, and the selected teams are supposed to be present with their prototype/working model offline at the GITAM Visakhapatnam campus.
- [Click here for Template Link](#)
- [Registration Link](#)
- Last date of registration: 15.10.2023
- Shortlisted submissions will be informed through email before 20.10.2023

### **Rules**

- All the participants are required to showcase at least their working model and are advised to adhere to the Focus area.
- All the arrangements (power, tables, chairs, etc.,) will be provided at the assigned stall.
- Accepted File Formats: PDF
- File Naming Convention: SS\_<Focus Area>\_<Team Name>.pdf

## Keynote Speeches

Distinguished experts in engineering and technology will deliver the keynote addresses. The speakers will share their insights and perspectives on the latest trends and developments in engineering and science. They will also discuss the challenges and opportunities that lie ahead, and they will offer their advice to the next generation of leaders.

## Master Classes

Eminent personalities will deliver the master classes in the focus areas. They will share their expertise and experiences in their core areas. All the participants would dive and dwell in these master classes and learn from the masters.

## Exhibition by Industry and R&D laboratories

This conclave, an Industry and R&D Exhibition, is an excellent platform for showcasing various industries' cutting-edge technologies, products, innovations, and research developments. Such exhibitions bring together industry professionals, researchers, entrepreneurs, and the public to explore, learn, and collaborate.



# Committees

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- Shri M Sri Bharat, President
- Prof. Virander Singh Chauhan, Chancellor

## Patrons

- Prof. Dayananda Siddavattam, Vice-Chancellor
- Prof. Gunasekaran D, Registrar

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- Prof. K N S Acharya, Pro Vice-Chancellor, Bengaluru campus
- Prof. D Sambasiva Rao, Pro Vice-Chancellor, Hyderabad Campus
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- Prof. Rama Sastry Vedala, Dean - Core Engineering
- Prof. K Nagendra Prasad, Director - GST
- Prof. Balkumar Marthi, Dean - Entrepreneurship & Innovation
- Prof. Dandu Radha Prasada Raju, INAE Coordinator

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### Convener

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- Prof. D Mukunda Rao, Head, Dept. of Civil Engineering
- Ms. Sreedevi Devireddy, Director, Venture Development Centre

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- Dr. R Bhanu Pavan, Dept. of ME

### Coordinators

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- Dr. K Aravind Kumar, Dept. of EECE
- Dr. Md K M Chisti, Dept. of EECE
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- Mr. G Srinivasa Rao, Dept. of Civil
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## REGISTRATION



<https://tinyurl.com/ychelpdesk>



[www.inae.gitam.edu](http://www.inae.gitam.edu)



[inaeyc2023@gitam.edu](mailto:inaeyc2023@gitam.edu)

## HELP DESK



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