CGC UNIVERSITY MOHALI

Shaping Tomorrow, Today

Our Legacy

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2ND INTERNATIONAL CONFERENCE ON

ADVANCED MATHEMATICS, COMPUTATIONAL INTELLIGENCE, AND ENGINEERING APPLICATIONS

(AMCIEA-2027) (HYBRID MODE)

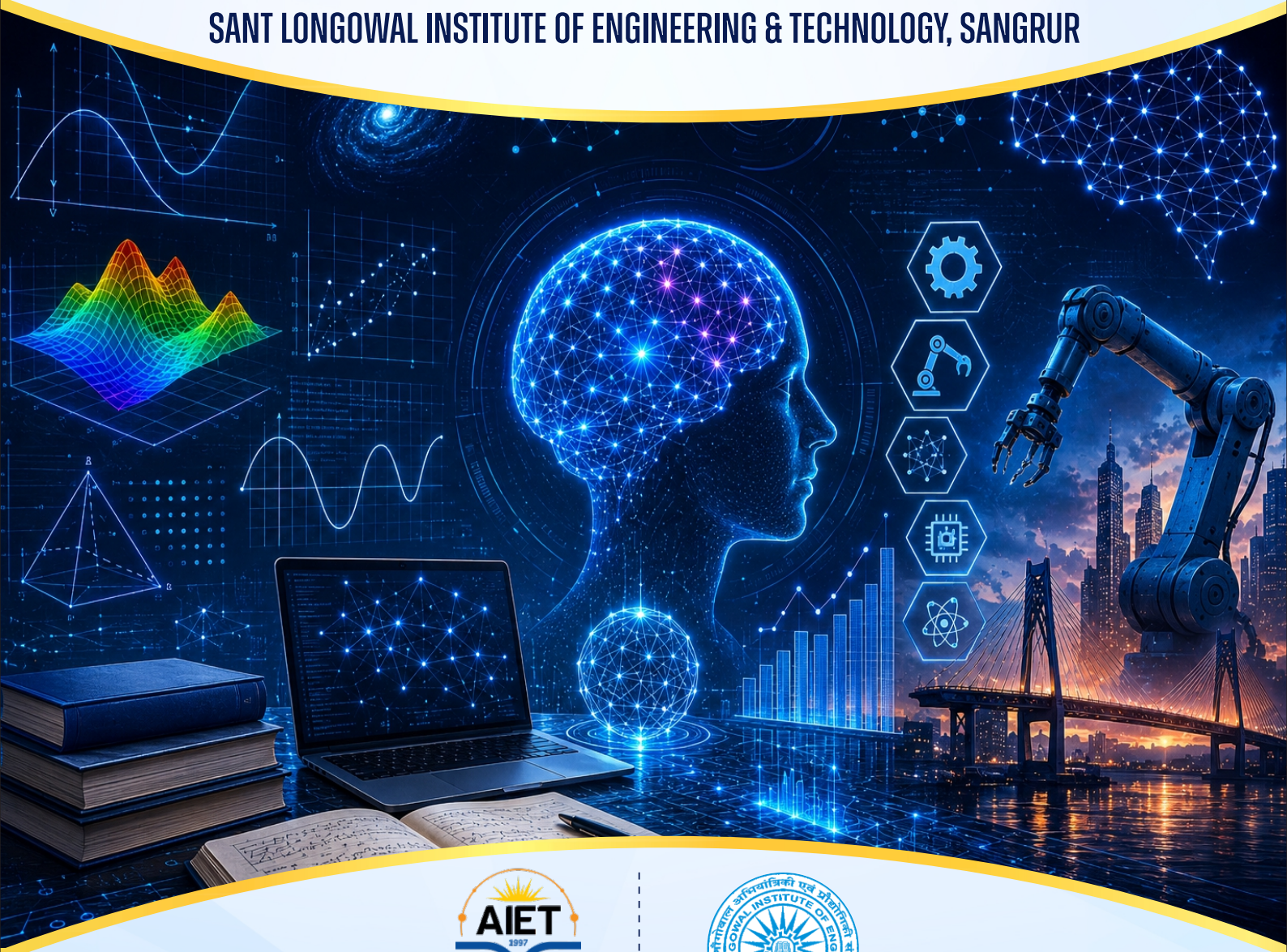
(22ND – 23RD JULY, 2027)

ORGANIZED BY: SCHOOL OF ENGINEERING & TECHNOLOGY IN ASSOCIATION WITH

ADVANCED CENTRE OF RESEARCH & INNOVATION (ACRI), CGC UNIVERSITY, MOHALI

ALEXANDRIA HIGHER INSTITUTE OF ENGINEERING AND TECHNOLOGY, EGYPT

SANT LONGOWAL INSTITUTE OF ENGINEERING & TECHNOLOGY, SANGRUR



AIET 1997

Alexandria Higher Institute of Engineering and Technology (AIET), Alexandria 21311, Egypt

Sant Longowal Institute of Engineering and Technology, Sangrur, Punjab, India, 148602

About the conference:

The International Conference on " Advanced Mathematics, Computational Intelligence, and Engineering Applications " aims to connect the researchers, industry experts, academicians and scholars together to explore the currently ongoing and forthcoming developments in mathematical sciences and computational technologies. The conference also focuses to encourage the collaboration between the experts from different areas of research as well as application such as mathematical sciences, healthcare, cybersecurity, data science, quantum computing, finance, education and widely more to meet the demand of today's world. The primary objectives of this conference are to provide deep insights on the interdisciplinary fields for diversification of traditional approaches, generating new opportunities and solving the unique challenges encountered in various fields.

The purpose of AMCIEA-2027 is to create a multidisciplinary forum that encourages collaboration and the exchange of knowledge, techniques and methodologies. Exchange and discuss the latest trends in different research and industry areas to bridge a gap between current knowledge and future opportunities. It also focuses to fill the gap between theoretical mathematics and real-world applications which will boost the opportunities for interdisciplinary collaboration and project development. The conference highlights successful development of new mathematical models, algorithms and computational techniques.

The young scientists/engineers/Field experts and research students will get opportunities to exchange their ideas/research with esteemed experts around the globe. So, to provide participants a podium, the CGC University, Mohali, Punjab, India in collaboration with Alexandria Higher Institute of Engineering and Technology, Alexandria, Egypt has taken an opportunity to organize International Conference on “Advanced Mathematics, Computational Intelligence, and Engineering Applications (AMCIEA-2027)”.

About University

CGC University, Mohali was established in 2025 under the Chandigarh Educational Society through the C.G.C University, Mohali Act, 2025 notified by the Government of Punjab. The University has been officially included in the list of State (Private) Universities recognized by the University Grants Commission (UGC) under Section 2(f) of the UGC Act, 1956.

Prior to becoming a full-fledged university, the institution was known as Chandigarh Group of Colleges, Jhanjeri — an institution with a legacy of 25+ years in higher education. During this period, it earned the prestigious NAAC A+ accreditation with an outstanding CGPA of 3.46/4.0, reflecting excellence in teaching, research, and institutional performance.

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With experienced faculty, advanced infrastructure, innovative pedagogy, and strong industry linkages, CGC University, Mohali continues its commitment to delivering high-quality and affordable education. The University focuses on holistic student development, practical learning, and strong career outcomes, making it one of the most promising higher education destinations for students across India.

About Academic Partners:

1. Alexandria Higher Institute of Engineering and Technology

The Alexandria Higher Institute of Engineering and Technology was established by Ministerial Decree No. 1103 dated 9/24/1997. It is the first private engineering institute in Alexandria. The bachelor's degree awarded by the institute is equivalent to the bachelor's degree awarded by Egyptian public universities in the corresponding specializations, and the certificate is accredited by the Minister of Higher Education. The Institute is in the heart of Alexandria city. The Institute seeks to prepare distinguished engineers capable of innovation, technological creativity, and competition in the labor market by offering distinguished programs in engineering disciplines that keep pace with scientific and research progress and improve professional performance in line with the developments of the times to achieve sustainable development to serve society and develop the environment. The Institute, as an educational and research institution, aspires to achieve excellence and leadership in engineering education at all local, regional, and international levels to keep abreast of engineering development and develop the educational and professional capabilities of its students to serve society and develop the environment.

2. Sant Longowal Institute of Engineering and Technology

Consequent upon the decision, taken by Govt. of India in 1985, to tender a valuable, yet humble tribute to the everlasting memory of the revered saint, Sant Longowal Institute of Engineering and Technology took its shape. The institute was established by Ministry of Human Resource and Development (MHRD), Govt. of India in the year 1989 and was formally inaugurated on 20th December 1991.

Accepting the new challenge of new education policy, Sant Longowal Institute of Engineering & Technology (SLIET) was established, with a vision to act as an international podium for the development and transfer of technical competence in academics. It is committed to provide best possible technical education and to cater to the technical manpower requirements with emphasis on practical training in industry.

The institute is an autonomous body, fully funded by Govt. of India and controlled by SLIET society, registered under Societies Registration Act, 1860. The institute awards its own Certificates, Diplomas, Undergraduate and Postgraduate approved and recognized by AICTE, New Delhi. Ph.D. programmes have also been started after it attaining status of Deemed to be University.

It was formulated that the institute, besides catering to the needs of formal education would undertake an arduous task to prepare the skilled and qualified manpower for self-employment. Further, the institute would take up a strategic research and development activities which along with entrepreneurship will help in extending the efforts of the institute in imparting education to the unemployed and working population by updating and upgrading their technical skills. The institute was thought to cater to then existing 3-tier system to modern industry, which incorporates workers, technicians and engineers.

The institute has a sprawling area of 451 acres of land provided by Punjab Government. Surrounded by lush green land, the campus of the institute extends a beautiful and well-developed area with many topographically featured picturesque landscape, numerous buildings of various nature and stature and metal road network. The campus presents a spectacle of harmony and natural beauty. It is embedded with all the amenities required for a complete township.

The conference will be conducted in HYBRID MODE.
Conference email id: amciea@cgcuniversity.in

Theme:

The topic " Advanced Mathematics, Computational Intelligence, and Engineering Applications " encompasses several key themes that highlights the intersection of pure mathematics, applied mathematics, scientific computing, data science and emerging computational paradigms. Here are Tracks:

Track 1: Foundations for Intelligent Computing Systems

1.Applied linear algebra, graph theory, and optimization for AI systems
2.Numerical computing and high-performance computing (HPC)
3.Dynamical systems and complex system modeling
4.Probabilistic modeling and uncertainty quantification
5.Algorithms, computational complexity, and formal methods
6.Mathematical foundations of machine learning and data science

Track 2: Artificial Intelligence, Learning & Cognitive Systems

1.Machine learning, deep learning, and foundation models
2.Reinforcement learning and autonomous agents
3.Evolutionary algorithms and bio-inspired intelligence
4.Fuzzy systems and soft computing
5.Knowledge representation and reasoning systems
6.Explainable AI, trustworthy AI, and ethical AI
7.Human-AI interaction and cognitive computing

Track 3: Data Engineering, Security & Trustworthy Systems

1.Data science, big data analytics, and data engineering
2.Cybersecurity, intrusion detection, and digital forensics
3.Cryptography, post-quantum cryptography, and secure protocols
4.Privacy-preserving AI and federated learning
5.Blockchain and decentralized systems
6.Information theory and secure communication
7.Trustworthy computing and AI assurance

Track 4: Next-Generation Computing & Intelligent Infrastructure

1.Cloud computing, edge computing, and distributed systems
2.Internet of Things (IoT) and cyber-physical systems
3.Digital twins and smart infrastructure
4.Quantum computing and quantum information systems
5.Neuromorphic and brain-inspired computing
6.Sustainable and green computing technologies
7.AI-enabled communication systems (5G/6G, intelligent networks)

Track 5: Intelligent Applications & Industry Systems

1.Smart manufacturing, Industry 4.0/5.0, and automation
2.Robotics, autonomous systems, and intelligent control
3.Smart grids, renewable energy, and power systems
4.Healthcare systems, bioinformatics, and medical AI
5.Transportation systems and smart mobility
6.AR/VR/XR and immersive technologies
7.Signal processing for communication, IoT, and multimedia
8.Aerospace systems and intelligent navigation

Call for Papers:

Original research papers are invited from researchers and professionals in relevant areas of nano-technology, energy, and environment. Submissions must be original and unpublished.

Note: The Conference will be in Hybrid mode.

The Microsoft CMT service was used for managing the peer-reviewing process for this conference. This service was provided for free by Microsoft and they bore all expenses, including costs for Azure cloud services as well as for software development and support.

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Associate Professor, School of Computer Science Engineering and Technology, Bennett University, Noida, Uttar Pradesh,

Submission of Papers:

Papers are invited for the oral presentations. The full-length paper should be typed in MS Word, Times New Roman 12-point font, single spacing with one-inch margins on all sides. The correspond author should be marked with asterisk (*) sign. The name of the presenting author should be underlined. The paper must include the affiliations of all authors along with email address. Papers will be selected for oral presentations based on peer reviewed by subject experts. The presenting/registered authors will receive the presenting/participation certificate. Authors are suggested to send only original and unpublished work within the scope of the conference topics.

Only one paper per registered participant will be considered for publication, however, one can be a co- author of more than one paper.

Important Dates:

Start Date for Full Paper Submission: 20th January 2027
Last Date for Full Paper Submission: 30th April 2027
Acceptance Notification: 30th May 2027
Last Date of online Registration: 20th June 2027
Conference Date: 22nd – 23rd July 2027

Registration:

The authors presenting the papers and others who are interested to participate in the conference must register themselves before the last date of registration. Only the registered persons will be given the certificate. The registration fee for various categories is as follows:

Delegates	Registration Fee
Research Scholars/Academicians	12,000 (INR)
Corporate/Industry	15,000 (INR)
Foreign Delegates	$ 200

Late registration fee of Rs. 300 (for Indians) and $10 (for foreign) delegates- extra will be charged.

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