Dear Participants,

Good morning/afternoon/evening! I am pleased to welcome you all to the AI-Integrated Physics, Technology, and Engineering Conference (AIPTEC 2025) brings together physicists, engineers, technologists, and AI researchers to explore innovations at the intersection of intelligent systems and the physical sciences. Your presence here is an important milestone in strengthening the global collaboration network, and I am very honoured to be part of this gathering of brilliant minds.

The theme of this conference is Discover how intelligent systems are transforming fundamental sciences and driving the next generation of innovation in applied physics and engineering became a solid foundation for exploring important aspects in various fields. From here we can delve deeper into the global challenges faced by our society.

AIPTEC 2025 emphasizes the integration of Artificial Intelligence (AI) with applied and theoretical physics, and welcomes contributions that explore novel intersections of AI, data-driven discovery, and advanced computational methods in physical sciences. Selected cross-domain topics in technology and engineering will also be considered when directly linked to physical phenomena and modelling.

The AI-Integrated Physics, Technology, and Engineering focuses on how artificial intelligence can accelerate progress in physics, engineering, and modern technology. It brings together researchers, practitioners, and educators to share methods, case studies, and theoretical advances at the intersection of:

Physics and AI – using machine learning and data-driven approaches to model complex physical phenomena, analyze experimental data, and support new discoveries.

Engineering systems and intelligent control – applying AI to design, optimize, and control mechanical, electrical, and mechatronic systems, including smart sensors, robotics, and automation.

Computational and simulation technologies – integrating AI with numerical methods, simulations, and high-performance computing to build faster, more accurate models and digital twins.

STEM education and innovation – exploring how AI tools can enhance the teaching and learning of physics and engineering, support virtual laboratories, and foster interdisciplinary problem-solving.

The conference provides a platform for paper presentations, discussions, and collaboration among experts from academia, industry, and research institutions, with the broader aim of advancing intelligent, sustainable, and high-performance technologies grounded in physical principles. Thank you for coming to this conference. We hope you can get a new knowledge and insight about AI-Integrated Physics, Technology, and Engineering.

Committee Chairman,

Alfian Ma’arif