

MATERIALS INFORMATICS

ACCELERATING MATERIALS RESEARCH AND DESIGN WITH ARTIFICIAL INTELLIGENCE

August 23-25, 2024, ICISE, Quy Nhon

Materials Informatics has emerged as a new subfield, or, in other words, a new ecosystem, of Materials Science & Engineering during about a decade ago or so, since the early 2010s. In this ultra-fast-growing and highly-interdisciplinary research and development (R&D) area, Deep Knowledge from multiple fields such as Physics, Chemistry, and Mathematics, Big Data of various natures from Materials Research, and especially advanced Artificial-Intelligent (AI)/Machine-Learning (ML) techniques, are integrated to deepen the understanding and to accelerate the discoveries of novel materials for targeted applications. In the last few years, Materials Informatics is blossoming globally with numerous discoveries of novel functional materials, e.g., semiconductors, superconductors, quantum materials, and polymers. This international workshop is designed with two main objectives, including (1) to introduce and disseminate Materials Informatics and its publicly-available infrastructures that were developed in the world during the last decade, and (2) to provide hand-on instructions that allow participants to access the infrastructures, to familiarize with the real problems, and to actually handle some simplest problems in a pedagogical way.

March 15th

Abstract submission and registration **OPEN**

July 15th

Abstract submission and registration **CLOSE**

August 23-25th

Conference session

International Advisory Committee

Prof. Jean Tran Thanh Van

ICISE, Quy Nhon, Binh Dinh, Vietnam

Prof. Le Kim Ngoc

ICISE, Quy Nhon, Binh Dinh, Vietnam

Prof. Masato Yoshiya

Osaka University, Japan

Prof. An Bang Ngac

Vietnam National University, Hanoi, Vietnam

Prof. Hieu-Chi Dam

Japan Advanced Institute of Science & Technology, Japan

Prof. Beatriz G Del Rio

Universidad de Valladolid, Spain

Prof. Christopher Künneth

University of Bayreuth, Germany

Prof. Toan T. Nguyen

Vietnam National University, Hanoi, Vietnam

Prof. Tomoyuki Yamamoto

Waseda University, Japan

Invited Speakers

Prof. Hieu-Chi Dam

JAIST/Tohoku University, Japan

Prof. Claudia Draxl

Humboldt Universität, Germany

Dr. Hiori Kino

National Institute for Materials Science, Tsukuba, Ibaraki, Japan

Dr. Tu C. Le

RMIT University, Australia

Dr. Saneev Nayak

University of Connecticut, CT, USA

Prof. Kanta Ono

Osaka University, Osaka, Japan

Dr. Tuan-Anh Pham

Lawrence Livermore National Laboratory, CA, USA

Prof. Sanjubala Sahoo

University of Connecticut, USA

Prof. Nguyen The Toan

Vietnam National University, Hanoi, Vietnam

Prof. Dave Winkler

La Trobe University/Monash University, Australia

Prof. Ryo Yoshida

Institute of Statistical Mathematics, Tokyo, Japan

Prof. Hongbin Zhang

Technische Universität Darmstadt, Germany

Topics

Materials data generation, management, and dissemination

Data featurization and dimensionality reduction

Approaches to handle data scarcity, including transfer, active, and multi-task learning

Novel AI-based methods for materials data learning and inverse design of materials

AI-based approaches to bridge the gap between microscopic simulations and realistic length and time scales

AI-driven robotic systems for optimizing and discovering targeted materials

Registration



For questions regarding the scientific program, please contact:

Dr. Huan Tran - huantd@gmail.com

Questions for local logistics (visa, travels, hotel, ...):
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