

## PARTNERSHIP FOR HIGHER EDUCATION REFORM – PHER

### Employing artificial intelligence to design intelligent materials



**Dr Tu Le**

School of Engineering, RMIT University, GPO Box 2476, Melbourne, Australia

E-mail: [tu.le@rmit.edu.au](mailto:tu.le@rmit.edu.au)

Date: Friday 24<sup>th</sup> February 2023, Time: 10:00 AM – 11:130 AM, Hanoi

**Webinar link:**

<https://us06web.zoom.us/j/82099487381?pwd=bHZlTm93RVdOU09VcE5saWQ5aGc2dz09>

**Abstract:**

The design and synthesis of materials with useful, novel properties is one of the most active areas of contemporary science, generating a veritable explosion of scientific activity in areas such as biomaterials, cell and tissue engineering, organic photovoltaics and light-emitting materials, and nanomaterials for a myriad of medical and nonmedical applications. This new era of materials design and discovery covers many disciplines from chemistry and biology to physics and engineering. Conventionally, it takes at least 20 years to move a material from initial discovery to the marketplace. To accelerate the pace of novel materials discovery, computational methods such as artificial intelligent machine learning techniques can be used to construct predictive materials property models and allow rapid scanning of large chemical datasets to systematically identify attractive candidates for specific applications. This presentation will showcase recent studies on data-driven design of functional materials for a broad spectrum of applications such as drug delivery, antifouling and 3D printed materials.

**Biography:** Dr. Tu Le is a Senior Lecturer at the School of Engineering, RMIT University, Australia. Prior to joining RMIT, she was a research scientist at the Commonwealth Scientific and Industrial Research Organization, Australia. Her research focuses on novel computational machine learning approaches to design and develop functional materials. As of February 2023, she has co-authored 42 peer reviewed articles and 3 book chapters. Her research outcomes have been published in high impact journals such as Advanced Science, Advanced Functional Materials, Chemical Reviews, Chemical Society Reviews, Small, and ACS Applied Materials and Interfaces. Her research impact and contributions have also been recognized through many awards and grants, such as the prestigious Vice Chancellor's Fellowship at RMIT University, Jacques-Emile Dubois award, CASS Foundation travel grant, and the joint Japanese Society for the Promotion of Science – Australian Academy of Science grant for attending the HOPE meeting with Nobel Laureates.

**Organizers:**

Assoc. Prof. Nguyen Tran Thuat (VNU-Hanoi)

Prof. Phan Bach Thang (VNU-HoChiMinh City)

Assoc. Prof. Jonathan Tran (RMIT-Melbourne)

Assoc. Prof. Nguyen Dinh Lam (Da-Nang University of Science & Technology)

**PHER Office in Vietnam**  
**Icon 4 Building**  
**243A De La Thanh St., Lang Thuong Ward**  
**Dong Da District, Hanoi**  
**Vietnam**

**Indiana University - Bloomington**  
**Office of the Vice President for International Affairs**  
**Bryan Hall Room 104, 107 S. Indiana Avenue**  
**Bloomington, IN 47405**  
**United States**