



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

SPECIAL COLLOQUIUM

Wave localisation in disordered systems

By

Prof. Habib Ammari

ETH, Zurich

Abstract

The aim of this talk is to prove ergodicity and spectral convergence properties of the density of states and to fully characterise the spectral gaps of bi-infinite, semi-infinite, and finite disorder arrays of resonators, constructed by sampling from a finite library of building blocks. The speaker will also investigate the competing mechanisms of localisation in disordered systems subject to non-reciprocal damping, induced by an imaginary gauge potential.

Bio: *Habib Ammari is a Professor of Applied Mathematics at ETH Zürich. He received his Ph.D. in applied mathematics in 1995 from the Ecole Polytechnique, France. Prof. Ammari is a world leading expert in wave propagation phenomena in complex media, mathematical modelling in photonics and phononics, and mathematical biomedical imaging. He was awarded a European Research Council Advanced Grant in 2010. He was named the 2013 winner of the Kuwait Prize in Basic Sciences. In 2015, he was the recipient of the Khwarizmi International Award in Basic Sciences. Prof. Ammari has been a fellow of the Tunisian Academy of Sciences, Letters and Arts since 2015 and of the European Academy of Sciences since 2018. Since 2021, he has been also fellow of the American Mathematical Society (2022 Class) and the Academia Europaea.*

Date : 21 October 2025 (Tuesday)

Time : 4:00p.m. - 5:00p.m.

Venue : Room 4582 (near Lift 27 & 28)

All Are Welcome!