

Distinguished Lecture Co-organized by HKIAS and MA

Wave Localisation in Disordered Systems

23 October 2025 (Thursday)

3:00pm - 4:00pm

Interdisciplinary Multi-function Room (AE-040), LG/F, Academic Exchange Building, CityUHK



Speaker:

Professor Habib Ammari

HKIAS Senior Fellow

Professor of Applied Mathematics, ETH Zürich

Member of the Academia Europaea

Member of the European Academy of Sciences

Recipient of Kuwait Prize in Basic Sciences (2013)

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.

Biography

Professor Habib Ammari is a Professor of Applied Mathematics at ETH Zürich. He is a member of the Academia Europaea, the European Academy of Sciences, and the American Mathematical Society. His research primarily focuses on wave propagation in complex media, inverse problems and imaging, and metamaterials.

Professor Ammari holds a Bachelor of Science, a Master of Science, and a Doctor of Philosophy in Applied Mathematics from Ecole Polytechnique, France, as well as a Habilitation Degree in Mathematics from the University of Paris VI.

Professor Ammari has authored over 300 papers in leading international peer-reviewed journals and has written or edited 20 books. His work has been highly cited, reflecting his significant contributions to the field.

Throughout his career, Professor Ammari has received numerous accolades, including the Khwarizmi International Award (2015), the Kuwait Prize in Basic Sciences (2013), and the European Research Council Advanced Investigator Grant (2010-2016).

Supported in part by: 光華教育基金會 Kwang Hua Educational Foundation



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