





The Department of Electrical and Electronic Engineering Science, Faculty of Engineering and the Built Environment, invites you to a Public Lecture by VISITING PROFESSOR HABIB HAMAM entitled:

## Natural vs Artificial Intelligence: Understanding the Foundations to Predict the Future of Intelligence

ABSTRACT • The rapid advancement of Artificial Intelligence (AI) technologies raises fundamental questions about the nature, limits, and trajectories of intelligence itself. This talk explores the reality of natural (human) intelligence compared to artificial intelligence, not in terms of philosophical abstraction, but through a concrete framework of 15 measurable conditions that determine intelligence performance, such as memory, specialization, adaptability, and ethical responsibility. By analyzing the interplay between these conditions and the eight emerging directions of AI development (e.g., specialized AI, personalized AI, responsible AI, human-machine symbiosis), we reveal the evolving architecture of intelligence in both biological and artificial systems. We argue that the essential question is no longer "Who is more intelligent?" but rather "What form of intelligence yields the most meaningful outcomes for society?" This talk bridges applied sciences, cognitive insights, and philosophical reflection to propose a roadmap for responsible and effective intelligence — one that combines human values with technological capacities. It will also highlight key ethical and

regulatory challenges, and offer directions for interdisciplinary collaboration.



SPEAKER **Professor Habib Hamam**, Uni de Moncton, Canada and Visiting Professor, University of Johannesburg, Department of Electrical and Electronic Engineering Science

DATE • Monday 12 May 2025 TIME • 13:50 to 15:30 VIRTUAL SESSION • https://shorturl.at/VedBL ONLINE ACCESS • Join the meeting now. Meeting ID: 372 672 128 139 4 Passcode: 8i6Fm9hY



DISCLAIMER: The University of Johannesburg encourages academic debate and discussion that are conducted in a manner that upholds respectful interaction, safety of all involved, and freedom of association as enshrined in the law, the Constitution, and within the boundaries of the University policies. The views expressed during events are expressed in a personal capacity and do not necessarily reflect the views of the University of Johannesburg. All events taking place in this venue may be photographed and video recorded for marketing, social media and media and purposes. By attending this event, you grant the University of Johannesburg permission to use and publish any recorded material.