

Physics Department Seminar



The Impact Centre: from fundamental science to societal impact

Presented by: M. Cynthia Goh, Departments of Chemistry, Materials Science & Engineering, Chemical Engineering & Applied Chemistry, Institute of Medical Science, Institute of Management & Innovation, University of Toronto

When & Where:

Monday, June 12, 2023

MACN 415

2pm

Abstract:

A deep understanding of the fundamental operation of our world ought to enable us to do good and make our lives better – this is what attracted me to scientific studies and discovery. In this talk I will illustrate how deep scientific understanding can lead to impact by examples of work done in my lab in the areas of nanomaterials, surface chemistry and diagnostic devices. I founded the Impact Centre to enable the movement of scientific discovery to societal impact, and I mentored over 140 science-based startups over 10 years, some of which are now quite successful. The success and evolution of the Impact Centre will be discussed and analyzed, and I will then present my latest work on community-based innovation, with the goal of leveraging science and technology to solve problems in under-resourced communities. The presentation will show how experiments can illuminate on the nuclear force prescriptions.

The discovery of unconventional features of the rare isotopes brings new information that will lead to an understanding of the behavior of matter under extreme neutron-rich conditions in our Universe. An outlook will be presented on some future prospects.



M. Cynthia Goh is a professor at the University of Toronto Department of Chemistry, cross-appointed to the Departments of Materials Science & Engineering and Chemical Engineering & Applied Chemistry, the Institute for Management and Innovation, and the Institute of Medical Science. Her research focus is on complex systems, biomaterials and nanoscience, investigating interactions, properties, the role of surfaces/interfaces, including the development of instruments for these studies. She has expertise in the translation of scientific discovery to technology/products that benefit society, and in the training of scientist-entrepreneurs. Her research has led to 8 science-based companies – from medical diagnostics to nanotechnology – that she co-founded with her students.

She has created successful training programs for scientist-entrepreneurs, including Entrepreneurship101@MaRS (which expanded to thousands registered annually) and Techno (which nucleated and nurtured 140+ student-led, science-based startups). She also works on building community-based innovation systems in Canada and in the Philippines, which includes leading a project on lighting up remote villages and developing a virtual library system for remote communities.