SEMINAR NOTICE

Department of Physics and Engineering Physics

University of Saskatchewan

SPEAKER: Dr. Emmanuel Haven, PhD, Faculty of Business Administration, Memorial University, St. John's NL

TOPIC: Physics and social science: can the concept of action show an interesting connection?

DATE: Tuesday October 27th, 2026

TIME: 3:30-4:30 p.m.

Room: Physics 103

Physics concepts have been used in the social sciences, most notably in economics and finance [1, 2, 3, 4]. After giving an overview of a couple of (what we believe are) noteworthy applications, we shall in this talk, focus on a specific concept in physics which cuts across both classical and quantum physics: the idea of action.

Can we make a rigorous argument for this concept to have value in financial theory? To what extent is the use of that concept aiding in possibly better modelling a time-dependent asset price process?

References

[1] Rangacharyulu, C.; Haven, E. (2010). Proceedings of the First Interdisciplinary CHESS Interactions Conference (Saskatoon- Aug 17-20, 2009). World Scientific

[2] Aerts, D., Haven, E. Sozzo, S. (2018). A proposal to extend expected utility in a quantum probabilistic framework. Economic Theory, 65, 1079-1109.

[3] Athalye, V.; Haven, E. (2025). Quantum Modelling of Economic and Financial Systems. Cambridge University Press

[4] Haven, E.; Khrennikov, A. (2013). Quantum Social Science. Cambridge University Press