

Mathematics, Physics & Computer Science Seminar Series

17 April 2024, 4:30PM, Meeting room nr. 300, Komenského náměstí 220/2

Kathryn Hess

Topological perspectives on networks

Kathryn Hess Bellwald is an American mathematician who is world-known for her work in algebraic topology, category theory and homotopy theory, and on applications of algebraic topology in neuroscience, cancer research and materials science. Professor Hess received her PhD in 1989 from the Massachusetts Institute of Technology, and she has been a professor at École Polytechnique Fédérale de Lausanne since 1999. Professor Hess was appointed to be a full member of the Swiss Academy of Engineering Sciences in 2016 and a Fellow of the American Mathematical Society in 2017. In addition to her outstanding research, Professor Hess is also known for her excellent expository skills: she was awarded the Credit Suisse teaching prize at EPFL in 2012, voted by EPFL students to receive the Polysphere d'Or Prize in 2013, and invited to deliver a public lecture at the European Congress of Mathematicians in 2021.

Abstract:

Over the past decade or so, tools from algebraic topology have been shown to be very useful in the analysis and characterization of networks, in particular for exploring the relation of structure to function. I will describe some of these tools and illustrate their utility in neuroscience.

More info [HERE](#).