

Lecture Hall **M1**, 4:00 pm, Wednesday, 27 September, 2023

Speaker: **Phan Thành Nam**

Title: **Isoperimetric inequalities and the critical mass in nuclear fission**

Abstract: I will discuss the connection from classical isoperimetric inequalities to the critical mass in nuclear fission reactions described via the liquid drop model. In particular, I will address several open questions and recent results on the existence/nonexistence of minimizers according to the change of the nuclear mass.

Phan Thành Nam is a Vietnamese mathematician and mathematical physicist and university professor at the Ludwig Maximilian University of Munich.

Phan Thành Nam studied mathematics and computer science from 2003 at the National University of Vietnam in Ho Chi Minh City, where he received a bachelor's degree in 2007, at the University of Orleans with a master's degree in 2008, and at the University of Copenhagen, where he joined in 2011 Jan Philip Solovej received his doctorate. As a post-doctoral student he worked with Mathieu Lewin at the University of Cergy-Pontoise and the CNRS until 2013 and at the Institute of Science and Technology Austria (IST) with Robert Seiringer until 2016. In 2016 he became an assistant professor at Masaryk University and in 2017 a professor at the University of Munich.

He deals with mathematical physics (many-body quantum mechanics, spectral theory), calculus of variations and partial differential equations as well as numerical analysis.

In 2018 he received the IUPAP Prize for Young Scientists in Mathematical Physics. For 2020/21 he received the EMS Prize (lecture: Excitation spectrum of dilute trapped Bose gases).