

Monday 17 February 2025

Urania Berlin, Old Wing (Altbau), 3rd floor, An der Urania 17



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12:00 Falk Hante (*HU Berlin*)**Discrete methods for mixed-integer optimal control using Pontryagin's principle**

In this talk, Hante explores ideas drawn from discrete optimization and domain decomposition to address the renowned Pontryagin's principle from the calculus of variations, specifically when applied to non-convex optimal control problems. By leveraging these concepts, potential advantages and practical applications for mixed-integer optimal control problems will be identified. Notably, these types of problems frequently arise in natural gas or hydrogen transport networks utilizing pipelines.

Falk Hante is head of the working group "Optimization of Complex Systems" at HU Berlin. 



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12:30 Anna Maria Hartkopf (*FU Berlin*)**Science Communication on Mathematics**

In this talk, Hartkopf will share insights from her work in science communication on mathematics, which blends creativity with academic research to design innovative media formats. As part of the MIP.labor, she will showcase their Design-Research based iterative approach and how they created an immersive VR experience to explore non-Euclidean geometry. The talk will conclude with three simple principles to help aspiring mathematicians effectively share their work with non-specialist audiences.

Anna Maria Hartkopf is the current Independent Junior Research Group Leader (JRGL) for "Science Communication on Mathematics" at FU Berlin. 