

Einladung zu einem Vortrag von

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zum Thema

Rigorous computations for dynamical systems

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Kurzfassung:

First, we discuss the basics of rigorous computations, namely, interval arithmetic and automatic differentiation. Then, we go through some applications of these for various dynamical systems: difference equations, ordinary differential equations, hybrid systems, and delay differential equations. We show how qualitative properties of maps may be found using graph representations (finite resolution dynamics), how rigorous time integration of ODEs / DDEs is possible, finally, we will analyze hybrid equations (ODEs coupled with discrete jumps) and show that even some Zeno systems (infinite number of discrete jumps in finite time) may be bounded using these techniques.

Das Institut für Mathematik freut sich auf Ihren Besuch.

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