



## Mathematisches Kolloquium

Am **Freitag**, dem 27. Oktober 2023, spricht um **14 Uhr s.t.** im Hörsal IV der Fachrichtung Mathematik, Gebäude E2.4, [Teams-Link](#),

**Prof. Dr. Andreas Neuenkirch,**  
**University of Mannheim**

über das Thema:

**Strong approximation of the CIR process: A never ending story?**

*Abstract:*

The CIR process is the prototype stochastic differential equation (SDE) for the class of square root diffusions. These equations have widespread applications, in particular in finance, biology and chemistry. Moreover, since the diffusion coefficient contains a square root and is not Lipschitz continuous, the CIR process is also the prototype example for an SDE whose coefficients do not satisfy the so-called standard assumptions for numerical analysis. Due to these reasons, the approximation of the CIR process has attracted a lot of attention in the last 20 years.

In this talk, I will firstly give an introduction into computational stochastic differential equations. Secondly, I will present a state-of-the-art summary for the strong approximation of the CIR process.

Der Gast wird von Prof. Dr. Christian Bender betreut.

Alle Interessenten und Interessentinnen sind zum Vortrag herzlich eingeladen. Der Vortrag findet im **hybriden Format** statt.

**Die Dozenten der Mathematik**