Fachgebiet Analysis
Prof. Dr. Daniel Hauer
Prof. Dr. Friedrich Sauvigny

Fachgebiet Optimierung
Prof. Dr. Sabine Pickenhain

Fachgebiet Optimale Steuerung
Prof. Dr. Gerd Wachsmuth

Brandenburgische
Technische Universität
Cottbus - Senftenberg

Forschungsseminar
Analysis und Optimierung

Sommersemester 2026

Im Rahmen des Forschungsseminars spricht am **Donnerstag, den 28. Mai 2026**

Prof. Yihong Du

(Universität von New England, Australien)

Titel: On the principal eigenvalue of asymmetric nonlocal diffusion operators and associated propagation dynamics

Inhalt: Let $\lambda^c(l)$ denote the principal eigenvalue of a nonlocal diffusion operator with a non-symmetric kernel function $J(x)$ and a drifting term with coefficient c over an interval of the form $(-l, l)$. We obtain a formula for the limit of $\lambda^c(l)$ as l goes to infinity. We then make use of this formula to obtain a rather good description of the propagation dynamics of the associated KPP model whose dispersal is determined by a nonlocal diffusion operator with such a non-symmetric kernel function $J(x)$. Our result on the propagation dynamics improves some recent ones with asymmetric nonlocal diffusion, and the method used in this approach is very different from those in the literature.

Weiter Details zum Seminar: Der Vortrag findet in Raum HG 3.35 des Zentralcampus Cottbus der BTU statt.