



Wintersemester 2023/24

# Dresdner Mathematisches Seminar

**Prof. Dr. Marie-Therese Wolfram**

University of Warwick, Mathematics Institute

## Collective dynamics in the social and life sciences

Collective dynamics can be observed in many situations in our daily lives, for example the motion of bird flocks, the formation of directional lanes in pedestrian flows or opinion dynamics on social media. In all these examples interactions of close individuals lead to the formation of complex phenomena in the entire population.

In this talk I will discuss different mathematical models to describe large interacting particle systems. I will then focus on the corresponding macroscopic equations in the context of pedestrian dynamics. And show special stationary solutions of these equations relate to real life observations such as directional lanes or boundary layers at exits and entrances.

Mittwoch, 13.12.2023, 17:00 Uhr – Willers-Bau, Raum C 129

Leitung: Jun.-Prof. Dr. Markus Schmidtchen

Vor dem Vortrag findet **ab 16:30 Uhr** ein gemeinsames **Kaffee-/Teetrinken** vor Hörsaal **WIL C 307 (!)** statt.

**Bereich Mathematik und Naturwissenschaften**

Fakultät Mathematik