



**UNIVERSITÄT  
BIELEFELD**

Fakultät für Physik

# Physikalisches Kolloquium

## Jubiläumsvortrag

**Prof. Dr. Dr. h.c. Helmut Satz**

**Bielefeld University**

### **The Statistical Mechanics of Bird Swarms**

In recent years, the study of swarm formation and structure has become a challenging field of research on complex systems, in which biology and physics overlap. It was shown that mathematical models of many identical components subject to simple interactions produce behavior patterns similar to the self-organized structure of swarms. The crucial data for such swarm behavior was obtained through high statistics measurements of starling flocks in Rome, carried out by the EU STARFLAG collaboration directed by Giorgio Parisi, recently awarded the Nobel Prize in Physics for his work on complex systems.

**Monday, November 15, 2021, 4:15 p.m.**

**H4**

**Im Anschluss an das Kolloquium  
gibt es einen Umtrunk vor dem H4.**