



# Öffentlicher Vortrag / Public Lecture

## Paradoxical decompositions, groups and growth rates

# Prof. Richard Sharp University of Warwick, UK

### Where, when and for whom:

Haus der Wissenschaft, Sandstr. 4/5, Bremen

7. August 2019, 18:00 - ca. 19:30, free entry

For everyone, who is mathematically interested; talk is in english.

### Brief description by the speaker:

The Banach-Tarski paradox says that it is possible to decompose a 3-dimensional ball into a finite number of pieces and rearrange them to form two copies of the original ball. This is perhaps the most striking example of the type of paradoxical decompositions that were discovered in the early 20th century. It was already realised in the 1920s that these decompositions are intimately related to the structure of the underlying symmetry groups. Perhaps even more surprising, the last 60 years have seen that this theory is related to an apparently very different set of problems: understanding some of the growth (or decay) rates that occur in probability, geometry and chaotic dynamics. I will discuss some of these topics and the connections between them.



Organising Committee: M. Keßeböhmer, M. Oliver, S. Petrat, A. Pohl, J. Rademacher and D. Schleicher

