



universität  
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Fakultät für Mathematik

## Mathematisches Kolloquium

Mittwoch, 5. Juni 2019

Sky Lounge

### EINLADUNG

**Peter Grabner**

(Technische Universität Graz)

„How to distribute many points on spheres“

## „How to distribute many points on spheres“

### **Abstract:**

*Given a fixed (large) number of points, how to distribute them on a sphere is a natural question, which has surprisingly complex and diverse answers. Of course, it is insinuated that the distribution has to be „good“ in some sense. Several different quality measures for distribution will be discussed. It turns out that the „zoo“ of constructions of point sets is much smaller than in the euclidean case; furthermore, much less is known about the different quality measures of these constructions. For instance, no deterministic construction of points on  $\mathbb{S}^2$  is known that achieves the best possible bound for the discrepancy  $\mathcal{O}(N^{-3/4}\sqrt{\log N})$ . We will give a survey on different aspects of point distributions on spheres.*

**15.45 Uhr: Kaffeejause**

**16.15 Uhr: Vortrag**

**vinum cum pane im Anschluss**

Christian Krattenthaler