

## EINLADUNG

zum

## HABILITATIONSVORTRAG

**Dr. Cesar Ceballos**

(Fakultät für Mathematik, Universität Wien)

**“Hopf Algebras and Diagonal Harmonics”**

## **“Hopf Algebras and Diagonal Harmonics”**

### Abstract:

*The theory of Hopf algebras is a fundamental area in mathematics which originated in the 1940's and 1950's motivated by work of Hopf on algebraic topology and of Diedonné on algebraic groups. Diagonal harmonics, on the other hand, is a more recent and apparently unrelated area initiated by Garsia and Haiman in the early 1990's, which has remarkable connections to Macdonald polynomials, algebraic geometry, representation theory, knot theory, and mathematical physics.*

*In this talk, I will give an insight to these fascinating areas, mainly through a series of examples and without many technicalities. The main purpose is to present some unexpected connections arising in the study of a Hopf algebra structure on pipe dreams, certain discrete objects that provide a combinatorial understanding of Schubert polynomials.*

*The talk is addressed to a general mathematical audience and no previous knowledge of Hopf algebras or diagonal harmonics will be assumed.*

**Montag, 11. Mai 2020  
10:00 Uhr**

**Via Zoom**  
(für den Link bitte  
[dekanat.mathematik@univie.ac.at](mailto:dekanat.mathematik@univie.ac.at) kontaktieren)

Alberto Mínguez