

# INVITATION TO THE DOCTORAL SEMINAR

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**Daniel Krenn**

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**“Research in the spirit of analytic combinatorics  
explained on the example ‘Quicksort algorithm’  
(Habitationskolloquium)”**

📍 HS 4

📅 Friday, 25 January 2019

🕒 10:30 a.m.

## **Abstract**

In this lecture, we will walk through the typical steps of analytic combinatorics in order to predict properties of large combinatorial configurations. For illustration, we consider the Quicksort algorithm: the analysis of its running time provides an introductory example in this field. In each step, we will see the need to build bridges to disciplines like probability theory, number theory and symbolic computation. The contents of the habilitation thesis will be presented by swinging back and forth between our example, state-of-the-art research of other combinatorial structures and modern variants of quicksort.

Barbara Kaltenbacher and the Department of Mathematics look forward to seeing you at the talk!