ALPEN-ADRIA UNIVERSITÄT KLAGENFURT

# INVITATION TO THE DOCTORAL SEMINAR

**Sarah Jane Selkirk**
Universität Klagenfurt

**"Down-step statistics in generalized Dyck paths"**

https://classroom.aau.at/w/adv-ezd-k9g

Wednesday, 2 December 2020

10:00 a.m.

**Abstract**

In this talk we will discuss the enumeration of the number of down-steps between pairs of up-steps in $k_t$-Dyck paths, which are a generalization of Dyck paths consisting of steps $\{(1,k),(1,-1)\}$ such that the path stays (weakly) above the line $y=-t$. These down-step statistics have applications in other combinatorial enumeration problems. We will also establish a connection between these $k_t$-Dyck paths and binary matrices used in coding theory, connecting the two areas of study and leading to a new interpretation for the Catalan numbers.

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