Combinatorics
(University of Vienna, Supervisor: C. Krattenthaler)

The topic of the proposed project is in the area of the combinatorics of tableaux and posets.

One of the outstanding formulae of tableau combinatorics is the hook-length formula for the number of all standard tableaux of a given shape. This formula does not only exist for straight shapes and shifted shapes but more generally for d-complete posets. The latter is a result of Peterson and Proctor. From the combinatorial point of view, this result is poorly understood. Only for the straight-shape and the shifted-shape case there exist bijective proofs (due to Novelli, Pak and Stoyanovskii, respectively to Fischer). The goal of the project is to develop similar ideas and algorithms for further classes of d-complete posets.

Applications have to be sent via the Job Center of the University of Vienna at the [Reference number 10414](#). The deadline for application is **February 20, 2020**.