ALPEN-ADRIA UNIVERSITÄT KLAGENFURT

INVITATION TO THE DOCTORAL SEMINAR

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"A generalization of conjugation of integer partitions"

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Abstract

Integer partitions are among the most ubiquitous objects in combinatorics and there is a wide variety of bijections between certain sets of partitions. However, only three bijections are known to preserve the size of a given partition. One of these is the canonical conjugation of integer partitions, while the other two are families of bijections introduced by Glaisher and Franklin, and by Loehr and Warrington, each depending on a given parameter.

In this talk, we present a new family of involutions on the set of partitions that generalizes the notion of conjugation and preserves two statistics depending on a given integer s: the first counts the number of parts divisible by s, while the second counts the number of cells in the Ferrers diagram whose leg length is zero and whose arm length has a remainder of $s-1$ when divided by s.

This is joint work with Seamus Albion, Theresia Eisenkölbl, Ilse Fischer, Moritz Gangl, Christian Krattenthaler and Martin Rubey.

Angelika Wiegele and the Department of Mathematics look forward to seeing you at the talk!