Speaker: Matjaz Konvalinka (Ljubljana)

Title: The First Bijective Proof of the ASM Theorem

Virtual Combinatorics Colloquium, 2020 January 15

Alternating sign matrices (ASMs) were introduced by Robbins and Rumsey in the early 1980s. Together with Mills they conjectured an enumerative formula for the number of ASMs of size n x n, which was proved independently by Zeilberger and Kuperberg about 10 years later. In this talk, I will present the first bijective proof of this result. A crucial part is played by signed sets and sijections (bijections on signed sets).

This is a joint project with Ilse Fischer.