Alternating sign matrices with reflective symmetry and plane partitions: n+3 pairs of equivalent statistics

02.07   **Hans Höngesberg**
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Abstract: Vertically symmetric alternating sign matrices are known to be equinumerous with lozenge tilings of a hexagon with a central triangular hole of size 2 that exhibit a cyclical as well as a vertical symmetry, but no bijection between these two classes of objects has been constructed so far. To approach a possible bijection, we introduce $n + 3$ parameters for both objects and show that the joint distributions coincide. In fact, we present several versions of such results, but in all cases certain natural extensions of the original objects are necessary and that may hint at why it is so hard to come up with an explicit bijection. This is joint work with Ilse Fischer.