Schröder coloring and applications
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We present several bijections, in terms of combinatorial objects counted by the Schröder numbers, that are then used (via coloring of Dyck paths) for the enumeration of rational Schröder paths with integer slope, ordered rooted trees, and simple rooted outerplanar maps. On the other hand, we derive partial Bell polynomial identities for the little and large Schröder numbers, which allow us to obtain explicit enumeration formulas.

This is joint work with Daniel Birmajer, Juan D. Gil, and Michael Weiner.

Keywords: Schröder numbers, colored Dyck paths, partial Bell polynomials.