

Counting spanning hypertrees and meanders

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Abstract: In this talk we revisit the notion of a spanning hypertree of a hypermap and show that it allows to shed new light on a very diverse set of recent results. The tour of a map along one of its spanning trees used by Bernardi may be generalized to hypermaps and it is equivalent to a dual tour described by Cori and Machì. We introduce hyperdeletions and hypercontractions in a hypermap which allow to count the spanning hypertrees of a hypermap recursively. Having a particular interest in hypermaps which are reciprocals of maps, we generalize the reduction map introduced by Franz and Earnshaw to enumerate meanders to a reduction map that allows the enumeration of the spanning hypertrees of such hypermaps.