1145-05-971 **sarah-marie belcastro*** (smbelcas@toroidalsnark.net) and **Ruth Haas**. *Color-induced subgraphs of Grünbaum colorings of triangulations.*

We consider properly edge 3-colored cellularly embedded cubic graphs and their dual Grünbaum-colored triangulations. The collection of edges of a single color induces a matching in the cubic graph and, in the dual triangulation, a *color-induced subgraph (CISG)*.

Previous study of CISGs has regarded the properties of an embedding corresponding to all CISGs being connected—this has been characterized for the sphere and projective plane. In the present work, we focus on Hamilton cycles in embedded cubic graphs and the structure of corresponding CISGs in the dual triangulations. Unsurprisingly, the CISG structure depends on the embedding surface. For all surfaces, we characterize CISG structure in triangulations when the dual cubic graph has a Hamilton cycle. We also indicate conditions under which particular CISG structures in a triangulation reveal the existence of a Hamilton cycle in the dual cubic graph. As time permits, we will comment on other aspects of CISG structure.

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