1162-57-156 **Jeffrey Meier**, **Abigail Thompson** and **Alexander Zupan*** (zupan@unl.edu). *Cubic graphs induced by bridge trisections.*

A bridge trisection of a knotted surface $\mathcal{K} \subset S^4$ induces a cell decomposition of the underlying surface whose 1-skeleton is a cubic Tait-colored graph Γ; that is, every vertex of Γ has valence three, and each edge of Γ is colored red, blue, or green, with the property that every vertex is incident to edges of all three colors. A natural question is whether this process can be reversed: Given a cubic Tait-colored graph Γ, does there exist a surface $\mathcal{K} \subset S^4$ and a bridge trisection of $\mathcal{K}$ inducing Γ? We answer the question in the affirmative, showing further that $\mathcal{K}$ can even chosen to be unknotted and with any possible normal Euler number (if $\mathcal{K}$ is nonorientable). (Received August 30, 2020)