BOJAN MOHAR, Simon Fraser University

Average degree condition forcing complete graph immersion

An immersion of a graph H into a graph G is a one-to-one mapping $f : V(H) \to V(G)$ and a collection of edge-disjoint paths, one for each edge of H, such that the path P_{uv} corresponding to edge uv has endpoints $f(u)$ and $f(v)$. We prove that every simple graph with average degree $\Omega(t)$ immerses the complete graph K_t. Moreover, if G is dense enough, then there is an immersion of K_t in which each path P_{uv} is of length precisely 2. This is joint work with Matt DeVos, Zdenek Dvorak, Jacob Fox, Jessica McDonald, and Diego Scheide.