FERENC BENCS, Alfréd Rényi Institute of Mathematics
Zero-free regions for some graph polynomials.

In this talk, I will show regions that contain no zeros in the complex plane for some graph polynomials. The edge cover polynomial of a graph G is the generating function of edges, that covers $V(G)$. It is known that the zeros of this polynomial have length at most $\frac{(2+\sqrt{3})^2}{1+\sqrt{3}}$, that we strengthen by showing that it is at most 4. We use the general subgraph counting polynomial of Wagner to establish this result along with its generalization for hypergraphs, and to obtain further results for another graph polynomial. Joint work with Péter Csikvári and Guus Regts.