SURESH ESWARATHASAN, Dalhousie University
Counting tangencies of nodal domains

Fix a smooth vector field V, with finitely many zeroes, on a compact surface $(\mathcal{M}, g)$ without boundary. We give results on the distribution of the number of tangencies to V of the nodal components of random band-limited functions. In the high-energy limit, the distributions obey a universal deterministic law, independent of the surface $\mathcal{M}$ and the vector field V. Applications towards arithmetic random waves on the flat torus will be discussed. This is joint work with I. Wigman (King's College London).