HARI KUNDURI, Department of Mathematics and Statistics, Memorial University *Divergence identities for stationary vacuum black holes*

I will sketch the derivation of new identities relating the geometric invariants of five-dimensional, asymptotically flat, stationary and biaxisymmetric vacuum black hole solutions. In addition to the usual physical charges (e.g. mass, angular momenta) these identities include contributions from the topology of the spacetime. The proof employs the harmonic map formulation of the vacuum Einstein equations for solutions with these symmetries.