Thomas, Anne: Large-scale geometry of right-angled Coxeter groups

Given a simplicial graph \Gamma with vertex set S, the associated right-angled Coxeter group W_\Gamma has generating set S, and relations s^2 = 1 and st = ts whenever s and t are adjacent vertices in \Gamma. Right-angled Coxeter groups are often studied via their action on the associated Davis complex, a CAT(0) cube complex with 1-skeleton the Cayley graph of W_\Gamma. We discuss joint work with Pallavi Dani on the rate of divergence of geodesics in the Cayley graph of W_\Gamma. For triangle-free \Gamma we characterise quadratic divergence, and we exhibit a family of graphs \Gamma_d such that the associated right-angled Coxeter group has geodesics diverging at polynomial rate of degree d.