Regularity of minimisers of distortion functionals and a question of Gromov

Gaven Martin

Massey University, New Zeland G.J.Martin@massey.ac.nz

We establish new existence and C^∞ - regularity results for minimisers of certain distortion functionals, including the exponential distortion. We discuss uniqueness as well. These align with a question of Gromov about identifying a (possibly singular) metric in which the extremal quasiconformal mapping between surfaces is harmonic.