Cardiff Analysis Seminar

Monday 18 March, 15:10–16:10, Room M/2.06

Jonathan Bevan (University of Surrey)

Title: "N-covering stationary points and constrained variational problems"

Abstract: In this talk we show how degree N maps of the form $u_N(z) = \frac{z^N}{|z|^{N-1}}$ arise naturally as stationary points of functionals like the Dirichlet energy. We go on to show that the u_N are minimizers of related variational problems, including one whose associated Euler-Lagrange equation bears a striking resemblance to a system studied by N. Meyers in the 60's, and another where the constraint $\det \nabla u = 1$ a.e. plays a prominent role.