

**On the nonlinear Dirac equation on noncompact
metric graphs**

Raffaele Carlone

Università Federico II Napoli

raffaele.carlone@unina.it

William Borrelli

Università Cattolica del Sacro Cuore

william.borrelli@unicatt.it

Lorenzo Tentarelli

Politecnico di Torino

lorenzo.tentarelli@polito.it

We discuss the Nonlinear Dirac Equation, with Kerr-type nonlinearity, on non-compact metric graphs with a finite number of edges, in the case of Kirchhoff-type vertex conditions. We will present results about the well-posedness for the associated Cauchy problem in the operator domain and, for infinite N-star graphs, and the existence of standing waves.