CENTRO DE
MATEMÁTICA
UNIVERSIDADE DO PORTO

GEOMETRY AND TOPOLOGY SEMINAR

The singular Hitchin fibration and cameral data

Alexander Früh

Abstract. I will consider the Hitchin fibration for Higgs bundles with arbitrary reductive structure group, and study its singular locus using the centraliser of the Higgs field. I restrict to the case where the Higgs field has constant centraliser dimension, and describe a non-abelian structure on the corresponding locus in the moduli stack. If the structure group is classical, I construct a factorisation of the Hitchin map through an abelianised fibration on a natural class of components of this locus, and describe the abelianised fibres with a generalisation of the cameral data of Donagi and Gaitsgory. I apply these results to Hitchin fibrations for real groups, and if there is time, I will describe some connections with the representation theory of the Lie algebra. This seminar is based on work in `https://arxiv.org/abs/2602.00274`.

THURSDAY, MARCH 12   15H30   ROOM FC1-0.06

There will be coffee after the talk.