



CENTRO DE  
**MATEMÁTICA**  
UNIVERSIDADE DO PORTO

GEOMETRY AND TOPOLOGY SEMINAR

# Modular Operads and Moduli Spaces of $k$ -Higgs Bundles

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**Abstract.** There is already a generalized description of classes of moduli spaces of geometric structures on surfaces by Giansiracusa [2]. That description includes moduli of spin surfaces,  $r$ -spin surfaces, surfaces with a principal  $G$ -bundle, surfaces with maps to a background space, among others. Here, we want to compute the homotopy groups of the moduli spaces of  $k$ -Higgs bundles, with the modular operads as main tool, and then, compare them with the results of Hausel [4] and the results of Bradlow et.al. [1]. Joint work with Jesús E. Sánchez Guevara.

## References

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10H30

ROOM 1.09

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