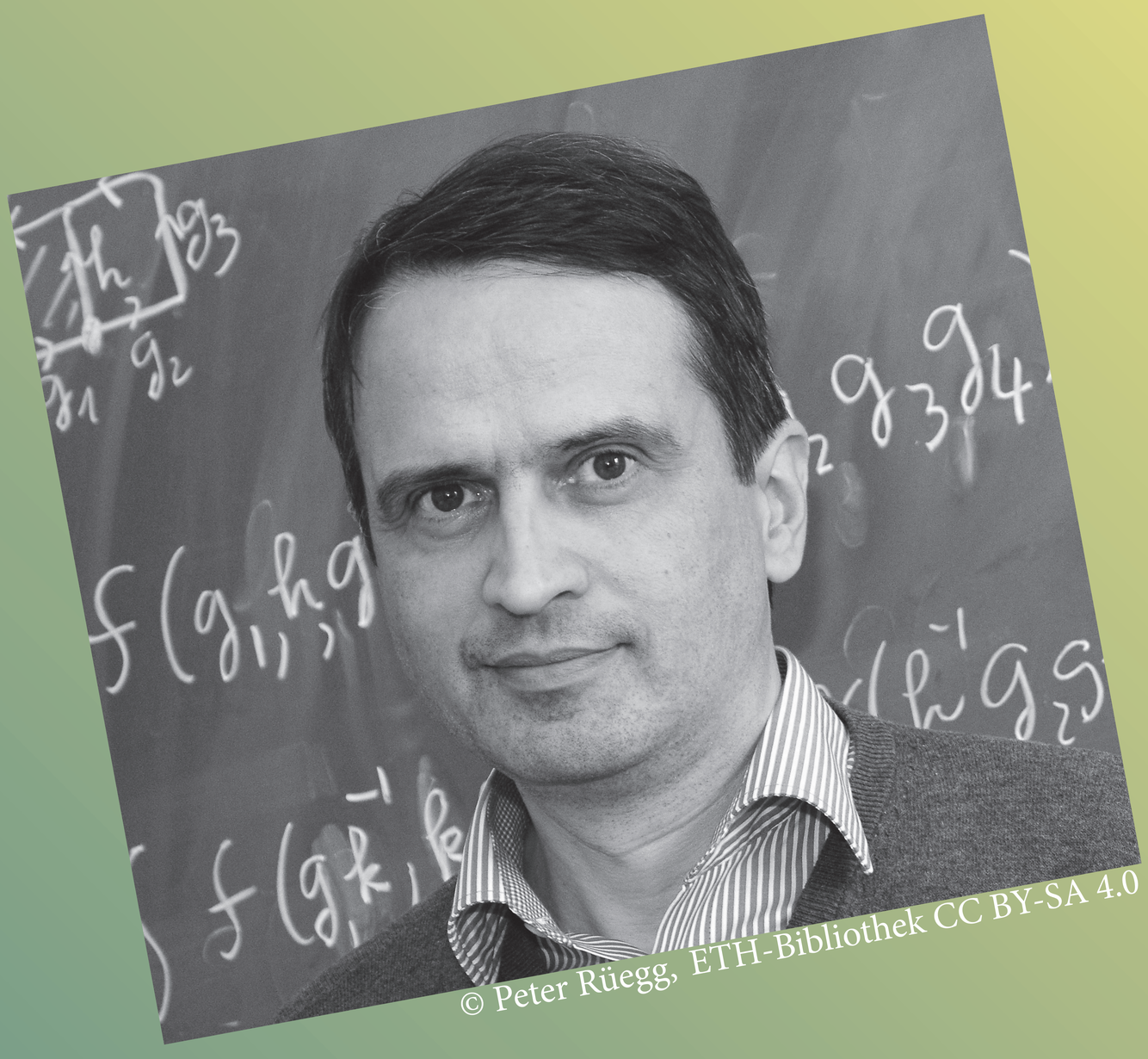
COLLOQUIUM DE L'IMJ-PRG

Giovanni Felder

(ETH Zurich)

Representation homology, combinatorial identities and gauge theory



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Jeudi 24 février 2022
17h00-18h00
Université de Paris,
Bâtiment Sophie Germain,
salle 1016 (1er étage)

Derived representation schemes are a derived version of spaces of finite dimensional representations of an associative algebra. I will review this theory, as introduced by Berest, Khatchatrian and Ramadoss, and concentrate on examples associated with quivers. I will discuss how this theory produces new (mostly conjectural) combinatorial identities generalizing Macdonald's identities and how it is related to Nekrasov's partition functions and the K-theory of Nakajima varieties. The talk is based on joint works with Y. Berest, M. Müller-Lennert, S. Patotski, A. Ramadoss, T. Willwacher and the doctoral thesis of S. D'Alesio.