Contribution ID: **21** Type: **not specified**

# Dualities and exact results in 3d supersymmetric gauge theories

*Wednesday, 19 July 2017 14:00 (1 hour)*

[Colloquium.] Dualities give us new perspectives on the dynamics of supersymmetric gauge theories and are valuable tools to explore the strongly coupled phases. We know different types of dualities such as holographic, UV and IR dualities and various examples of correspondences relating supersymmetric gauge theories to lower-dimensional theories such as 2d CFTs. Over the last 10 years the application of the localization technique to supersymmetric theories defined on compact spaces in various dimensions has allowed us to calculate exactly partition functions and correlators and to perform non-trivial tests of previously conjectured dualities and to discover new ones. I will review various types of IR dualities for 3d supersymmetric theories and discuss the strategies to test them. I will then propose a new family of IR dualities involving theories with monopole operators deformations entering the superpotential. I will argue that monopole deformed theories can exits even if the monopole deformation is irrelevant at the IR fixed point of the undeformed theory.

**Presenter:** PASQUETTI, Sara (University of Milan-Bicocca)