

SPEAKER: Alfredo Grillo

TITLE: **Gravitational waves from quantum
Seiberg-Witten curves**

DATE: 3 Nov 2021, 15:00

PLACE: P4C Edificio Paolotti

ABSTRACT

A recently established connection relating the linear response to perturbations of curved space-times to quantum Seiberg-Witten curves of $\mathcal{N} = 2$ SYM theories, provides a new tool for the computation of the characteristic frequencies of gravitational waves. After a brief introduction to the concept of quasi-normal modes, and their relation to geodesic approximations and photon-spheres, I will show how to establish a dictionary between the gauge and gravity theories in the context of this connection. I will then provide different examples to illustrate how the field theory description can give valuable insight on the related gravity systems, and finally show some numerical results for D3-brane and Kerr-Newman black holes.

Organized by

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