



**UPO** UNIVERSITÀ DEL PIEMONTE ORIENTALE  
DIPARTIMENTO DI SCIENZE E INNOVAZIONE TECNOLOGICA

## EVENTI DiSIT

Seminari di ricerca dipartimentale | Departmental research seminars

Venerdì 15-12-2023 ore 10:00-11:00

Aula 301

Martedì 19-12-2023 ore 14:00-16:00

Aula 302

Mercoledì 20-12-2023 ore 14:00-16:00

Aula 302

# Curvature in noncommutative geometry

[Prof. Masoud Khalkhali](#)

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I shall indicate the origins of noncommutative Chern-Weil theory as it emerged in the work on Alain Connes in 1981. I shall then sketch efforts to define and compute curvatures of noncommutative manifolds directly in terms of Dirac operators that define them and will indicate open problems that still remains to be tackled. I shall then review recent progress in understanding and computing the spectral density functions at large  $N$  limits of certain toy models of Euclidean quantum gravity. The emphasis will be on mathematical problems in random matrix theory that emerges.

EVENTO APERTO A:

Docenti | Teachers, Borsisti | Research Fellows, Assegnisti | Postdoctoral researchers

SEMINARIO IN LINGUA: Inglese

