

## **The many faces of Ricci curvature: Relativity, geometric flows, renormalization group**

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Riemannian geometry and Relativity are two leading themes in Levi-Civita's research, and the notion of Ricci curvature is one of the main characters featuring in such a framework.

Powered by Ricci flow theory, this classical subject has recently experienced a renaissance providing a fil rouge connecting geometric analysis, optimal transport, synthetic geometry, and their applications to theoretical physics ranging from mathematical general relativity to renormalization group theory.

In this talk we touch upon some of these themes as well as on some unconventional aspects that Ricci curvature still holds in store.