

Prof. Ruobing Zhang

Princeton University

**Metric geometry of Einstein 4-
manifolds: recent progress and open
questions**

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Abstract: The studies of degenerating Einstein manifolds have been very active during the past three decades. Compared with rather complete understandings in the volume non-collapsing case, due to substantial challenges and fundamental difficulties, the geometry of collapsing Einstein manifolds is much less explored while its applications are being widely demanded in different disciplines of geometry and physics.

Intensive investigations focus on the collapsing Einstein 4-manifolds with special holonomy in the recent years. This talk will exhibit major progress by different research groups in the field, which can be regarded as an important step towards the direction of studying the general case. We will also propose open questions (some of them are folklore).

