

Invariant gauge theory on asymptotically local conical G2 metrics

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Asymptotically locally conical (ALC) G2 metrics can be viewed as higher-dimensional analogues of the Ricci-flat Taub-NUT metric. In the co-homogeneity one setting, families of complete examples can be realised by gluing an asymptotically conical G2 metric into a conically singular G2 metric with an asymptotically locally conical end: this suggests a similar gluing approach to describing their gauge theory, currently being investigated in an ongoing joint work with Matt Turner (Bath). In this talk, I will report on the current progress on this work, and other projects using co-homogeneity one symmetries to do gauge theory.