

1139-53-564

Emily Autumn Windes* (ewindes@u.rochester.edu), 1181 S. Plymouth Ave., Rochester, NY 14611. *Killing Vector Fields on G_2 Manifolds.*

G_2 manifolds are 7-dimensional Riemannian manifolds with holonomy group $\text{Hol}(g)$ contained in the exceptional Lie group G_2 . They are Ricci-flat and almost compact. Even though we expect to have many of them, we still don't have an existence theorem which gives necessary and sufficient conditions under which a 7-manifold admits a G_2 metric. In this talk, I will report on my work related to Killing vector fields on G_2 manifolds as well as recent research on related problems. (Received February 19, 2018)