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**Juanita Pinzon-Caicedo\*** (jpinzonc@nd.edu), **Tye Lidman** and **Raphael Zentner**. *Toroidal integer homology spheres have irreducible  $SU(2)$ -representations.*

The fundamental group is one of the most powerful invariants to distinguish closed three-manifolds. One measure of the non-triviality of a three-manifold is the existence of non-trivial  $SU(2)$ -representations. In this talk I will show that if an integer homology three-sphere contains an embedded incompressible torus, then its fundamental group admits irreducible  $SU(2)$ -representations. This is joint work with Tye Lidman and Raphael Zentner. (Received January 05, 2021)