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John Etnyre and **Hyunki Min***, School of Mathematics, Georgia Institute of Technology, 686 Cherry Street, Atlanta, GA 30332, and **Anubhav Mukherjee**. *Every 3-manifold bounds exotic 4-manifolds.*

After the groundbreaking work of Freedman and Donaldson, there have been a number of results showing that many simply connected, closed 4-manifolds admit infinitely many smooth structures. In this talk, we will consider a relative version of this phenomena: all 3-manifolds bound a simply connected 4-manifold which admits infinitely many smooth structures. We also discuss that all symplectically fillable contact 3-manifolds admit infinitely many symplectic caps. This is joint work with John Etnyre and Anubhav Mukherjee. (Received January 20, 2019)