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## Diffeomorphisms of reducible 3-manifolds

*Friday, 19 September 2025 09:30 (1 hour)*

I will talk about joint work with Corey Bregman and Jan Steinebrunner, in which we study the moduli space  $B \operatorname{Diff}(M)$ , for  $M$  a compact, connected, reducible 3-manifold. We prove that when  $M$  is orientable and has non-empty boundary,  $B \operatorname{Diff}(M \operatorname{rel} \partial M)$  has the homotopy type of a finite CW-complex. This was conjectured by Kontsevich and previously proved in the case where  $M$  is irreducible by Hatcher and McCullough. The theory we develop to prove this theorem has other applications, and I'll provide an overview of these.

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