1171-54-162 **Mark Hughes*** (hughes@mathematics.byu.edu). *Branched coverings and (broken) Lefschetz fibrations on noncompact 4–manifolds.*

In this talk I will discuss a construction of Lefschetz type fibrations on 4–manifolds via branched coverings and braided surfaces. When applied to noncompact 4–manifolds these techniques yield fibrations with fibers of infinite type. As an application we obtain branched coverings and monodromy representations of Casson handles and exotic $\mathbb{R}^4$s. (Received August 10, 2021)