

## Generalizations of gropes

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**Abstract.** Gropes are 2-complexes that can be viewed as approximations to 2-disks. Immersed gropes encode information about the lower central series and the derived series of the fundamental group of a space. Considering knots or links that bound embedded gropes in 3-space or 4-space gives rich filtrations of knots and links. We describe generalizations of gropes that are related to more exotic commutator series and give different nontrivial filtrations of link concordance. Much of this work is joint with Carol Gee, Shelly Harvey and Connie Leidy.