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Hom-Complexes: An Overview

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Complexes of graph homomorphisms, *Hom-complexes* for short, are gadgets introduced by Lovasz to study topological obstructions to the existence of graph colorings. These complexes came as a natural generalization of neighborhood complexes, which were so spectacularly used by Lovasz in resolving the Kneser conjecture. In these talks I will give motivation for introducing complexes assigned to graphs. Then I will define Hom-complexes, and give an overview of their properties and the existing results on this topic.
