

Higher-Order Degrees of Complex Hypersurface Complements

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In this talk, I will define higher-order Alexander modules and higher-order degrees, which are invariants of a complex hypersurface complement. These invariants come from the module structure of the homology of certain solvable covers of the complements. Such invariants were originally developed by Cochran and Harvey, and were used to study knots and 3-manifolds. I will generalize the result proved by Maxim and Leidy for plane curves to higher-dimensional hypersurfaces.