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Larry Moss* (larry.moss@gmail.com), Indiana University, Department of Mathematics, 831 East Third Street, Bloomington, IN 47405-7106. *Final Coalgebras: A Survey*.

The area of coalgebra originated as a general study of discrete dynamical systems aimed at applications in the theory computation. It may be regarded as a generalization of parts of automata theory. But because the generalization is category-theoretic, it has connections with other areas, including ones which might interest participants in the AMS and ASL meetings: universal algebra, non-wellfounded set theory, general topology, modal logic, and even aspects of analysis and combinatorics.

My talk will be an introduction to coalgebra for a mathematics audience. I will be especially concerned with constructions of 'final coalgebras'; these are duals to initial algebras, but the construction methods are usually more intricate, and the resulting objects more interesting. I will try to present as many different examples as possible, hinting at the theory of coalgebra and making the case that it is a subject of broad interest in logic and mathematics. (Received September 20, 2010)