Subgraphs in random graphs
Amanda Redlich, Bowdoin College

This talk explores the number of copies of a fixed subgraph modulo q in a random graph. Although it seems this should be uniformly distributed, that is not always the case. There are subgraphs that are exactly three times more likely to appear an even number times than an odd number. The proof of this unlikely result uses lattices, partitions, block degrees, scissors, and glue. A recent paper of Kolaitis and Kopparty extends the zero-one law for random graphs to first-order logic with parity; this research is an extension of their extension.

Based in part on joint work with Bobby DeMarco, Elizabeth Field, Jeff Kahn.