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**Network analysis of physics discussion forums and links to course success** ADRIENNE TRAXLER, Wright State University, ANDREW GAVRIN, Indiana University Purdue University Indianapolis, REBECCA LINDELL, Purdue University — Large introductory science courses tend to isolate students, with negative consequences for long-term retention in college. Many active learning courses build collaboration and community among students as an explicit goal, and social network analysis has been used to track the development and beneficial effects of these collaborations. Here we supplement such work by conducting network analysis of online course discussion forums in two semesters of an introductory physics class. Online forums provide a tool for engaging students with each other outside of class, and offer new opportunities to commuter or non-traditional students with limited on-campus time. We look for correlations between position in the forum network (centrality) and final course grades. Preliminary investigation has shown weak correlations in the very dense full-semester network, so we will consider reduced "backbone" networks that highlight the most consistent links between students. Future work and implications for instruction will also be discussed.

Adrienne Traxler  
Wright State University

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