Social network analysis of a project-based introductory physics course
CHRISTOPHER OAKLEY, Spelman Coll — Research suggests that students benefit from peer interaction and active engagement in the classroom. The quality, nature, effect of these interactions is currently being explored by Physics Education Researchers. Spelman College offers an introductory physics sequence that addresses content and research skills by engaging students in open-ended research projects, a form of Project-Based Learning. Students have been surveyed at regular intervals during the second semester of trigonometry-based course to determine the frequency of interactions in and out of class. These interactions can be with current or past students, tutors, and instructors. This line of inquiry focuses on metrics of Social Network analysis, such as centrality of participants as well as segmentation of groups. Further research will refine and highlight deeper questions regarding student performance in this pedagogy and course sequence.