Abstract Submitted
for the APR21 Meeting of
The American Physical Society

Patterns of introductory physics students interactions during remote learning: a network approach MEAGAN SUNDSTROM, DAVID WU, COLE WALSH, ASHLEY B. HEIM, N. G. HOLMES, Cornell University — As social interactions enhance student motivation and attitudes toward learning, it is important to determine the patterns by which students interact with one another. Physics education researchers, most notably using Social Network Analysis (SNA) methods, have studied how students develop social ties to one another during in-person instruction. With the ongoing worldwide pandemic, however, it is increasingly necessary to determine patterns of and course elements impacting student interactions in remote learning settings. Given the limited nature of the interactions, it is also important to understand how biases in students' interactions and perceptions of peers, previously observed during in-person instruction, may also emerge in remote instruction. Using students self-reports of who they believe is strong in the course material and which of their peers they have interacted with about the course, we used SNA to examine what social connections introductory physics students in remote courses form amongst each other. In this talk, I will present data from our study including network graphs of students survey responses, how responses correlate with factors such as engagement in online discussion forums, and what biases (if any) exist in these interactions.

Meagan Sundstrom
Cornell University

Date submitted: 08 Jan 2021   Electronic form version 1.4