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In-person college classes require students, faculty, and staff to congregate together in indoor spaces creating a higher risk for possible COVID-19 infection. Small residential colleges such as the five Claremont Colleges (5Cs), where a majority of the students live on campus, present a relatively closed campus environment, curtailing students' interactions with their greater community. However, the close knit quarters in which students live may contribute to a rise in infections that may ultimately reach other more vulnerable populations on the campuses such as faculty and staff.

In this talk, we present a model of COVID-19 spread consisting of several interconnected modified SEIR differential equations to investigate the dynamics between different populations at the 5Cs and the influence of mitigation techniques such as students adhering to health protocols and contact tracing. We then present an app which allows the user to vary parameters in our model, providing intuition and guidance on campus openings under a range of conditions. (Received September 05, 2020)