

Online Seminar on Undergraduate Mathematics Education

Manipulative Calculus: Active Learning with 3D Models

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Manipulative Calculus is a project based at Harvard University focused on developing active learning lessons in calculus courses centered around digitally fabricated 3D models. In these lessons, we put digitally fabricated models into students'

hands, and they are asked to make geometric sense of the concepts learned in the course through problems requiring them to handle, discuss, and sketch on the models. At this point, the lessons and models have been in use for several semesters by dozens of instructors and thousands of students. In this talk, I will give some background by describing some of the lessons and accompanying 3D models and then report on the findings of assessments we've conducted on the project thus far.

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Zoom link: <https://cornell.zoom.us/j/92415199317>, passcode olsume

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