

CSAAPT Spring 2022 Semi-Virtual Meeting



Chesapeake Section of the
American Association of Physics Teachers
Spring 2022 Semi-Virtual Meeting
April 2, 2022 @ **RADFORD** UNIVERSITY

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Type: **Talk**

Using 3D Printing within my Physics Education through Free Computer-Aided Design Resources

Saturday, April 2, 2022 4:00 PM (15 minutes)

The usage of 3D printing and various modeling software is discussed in the context of an undergraduate physics education. There are a variety of free resources for students and teachers to use for designing 3D objects, including TinkerCAD, OpenSCAD, and a student version of AutoCAD software. In addition, each of these CAD (Computer-Aided Design) programs are directed towards a different level of user, allowing even novice students to create objects with ease, while also offering more functionality for advanced students. There are a variety of activities available to instructors through the PICUP website (<https://www.compadre.org/PICUP/>), which allows educators to share computational and 3D printing activities with other educators. This talk offers helpful hints and free resources for anyone interested in learning CAD software and 3D printing, as well as how these skills can be integrated inside the classroom. Lastly, the impact of such an education on the student will be discussed, as well as how it relates to future careers and interests.

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