# Talk Math 2 Me

## (A mathematics seminar for students and by students)

Associate Professor,

Dr. Nestor Guillen will speak on:

### PDEs and algorithms:

### from computer animation to physical simulations

Friday November 3, 2023 DERR 240 12:00pm-1:30pm

#### **Abstract**



A little bit of mathematical analysis and computer programming can be a powerful combination — with it, one can make beautiful 2D and 3D graphics or accurate computer simulations of physical models. In this talk I will present a selection of partial differential equations (PDE) and computer algorithms that are commonly used in computer graphics, procedural animation, and computer modeling of physical phenomena. I will illustrate or mention some of the mathematics that go into all of this — including mathematical analysis, differential geometry, and graph theory. This talk only requires some familiarity with multivariable calculus, linear algebra, and a capacity to enjoy cool pictures and animations.

