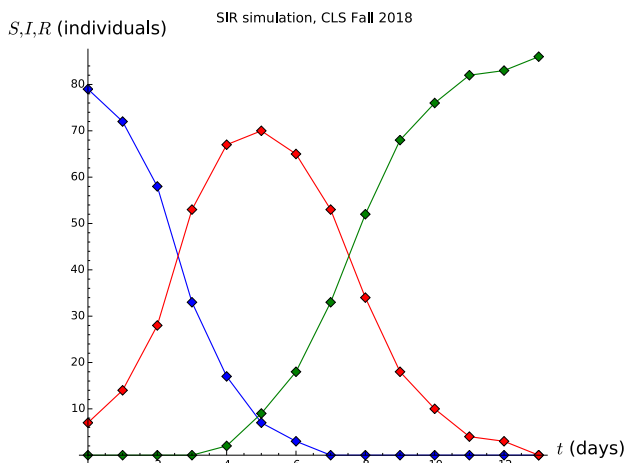# Electronic Seminar on Mathematics Education

Calculus in Context: Introducing Calculus Ideas through Epidemiology Models

Eric Stade, Univ of Colorado Boulder

S,I,R (individuals) — SIR simulation, CLS Fall 2018 — t (days)

Noon ET
April 14, 2020

Now is probably as good a time as any, unfortunately, to argue for a first-semester Calculus course that begins with the S-I-R, or Susceptible-Infected-Recovered, dynamical system from epidemiology. I'll describe how I use S-I-R to kick-start a course, that, eventually, gets to all of the usual Calc I stuff, and is richly satisfying to math geeks (like me) while still appealing to students who are perhaps less geeky, or geeky in different directions. This course is based on the brilliantly subversive, but wonderfully accessible, text *Calculus and Context* by the Five-College Calculus Team: James Callahan, David A. Cox, Kenneth R. Hoffman, Donal O'Shea, Harriet Pollatsek, and Lester Senechal.

To join the seminar, go to https://cornell.zoom.us/j/169462410

For more information on ESME: http://math.mit.edu/seminars/esme/