Mathematics Department Colloquium

Organizer: Kenneth Ribet

Thursday, 4:10–5:00pm, 60 Evans Hall

Apr. 24   **Steve Evans**, Mathematics and Statistics, UC Berkeley
             Unexpected appearances of mathematics in biology

When mathematicians think about applications of mathematics to biology, the fields that probably come to mind are ODE, linear PDE, and elementary probability such as finite state space Markov chains. While it is true that these areas are definitely the workhorses, many other, more unexpected, branches of mathematics also show up in interesting biological problems. I will give an account of how bits and pieces of subjects as diverse as Choquet theory, commutative algebra, spectral theory, Fourier analysis on groups, combinatorial matching theory, Dirichlet forms, random matrices, and max-plus algebras have appeared in my own work on questions from biology. I will not assume any prior knowledge of biology.