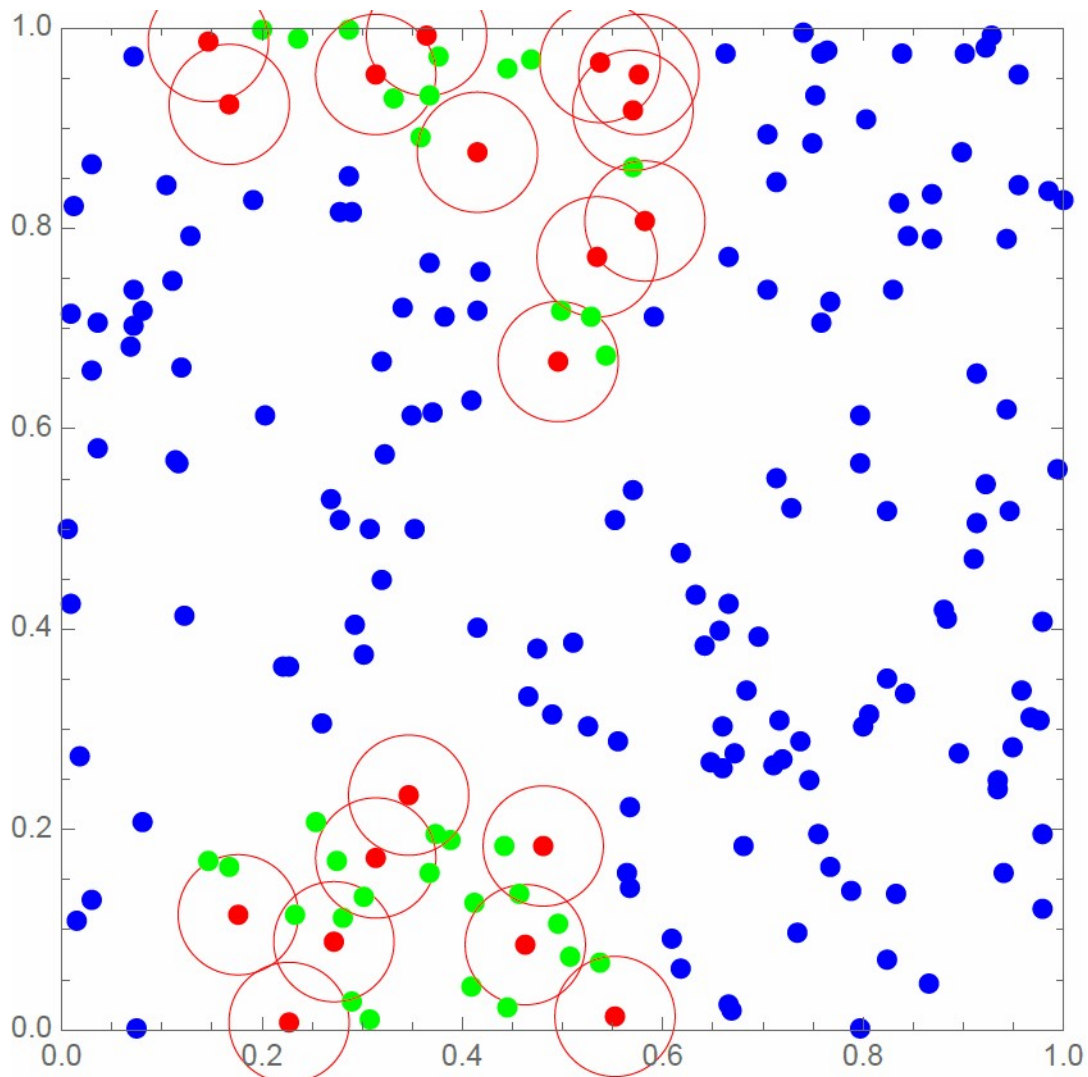# Mathematical and computational approaches to population biology

Fugo TAKASU [Environmental Sciences Course]

Spatial spread of an infectious disease as SIR point pattern dynamics. Susceptible shown in blue, Infectious in red with infection range, and Recovered in green.

My interests cover general ecological and evolutionary biology in terms of mathematical modeling. I use mathematical and computational approaches to better understand population and evolutionary dynamics. I have been working on various topics from practical issues like conservation biology of an endangered species to purely theoretical ones like spatial population/evolutionary dynamics as point pattern dynamics. For these years, I focus on spatial population dynamics as point pattern dynamics, e.g., population/community dynamics, evolutionary games, epidemiology as point pattern dynamics.

Keywords : Mathematical models, Ecology, Behavioral Ecology