

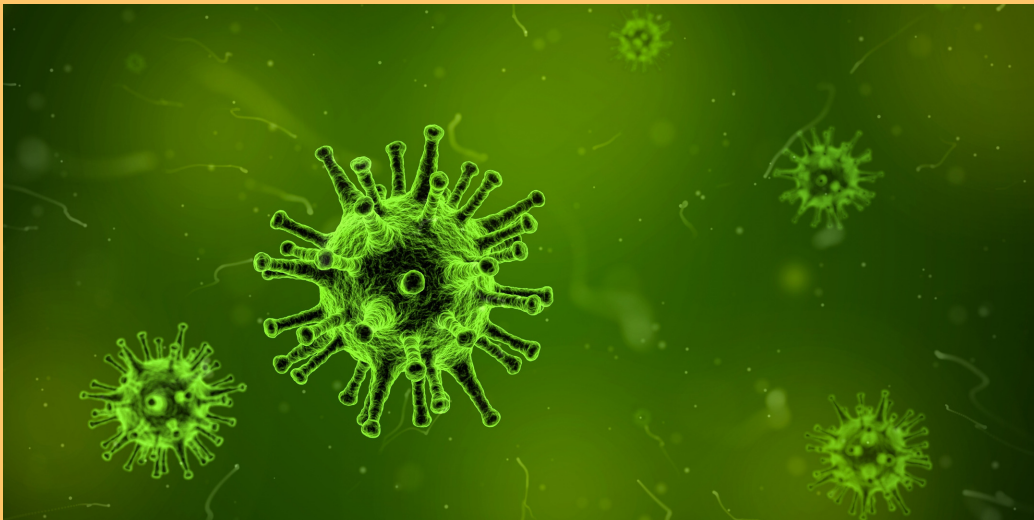
# Infected

## Understanding the Spread of Disease

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Contagious diseases threaten human populations. Acting essentially as viruses with legs, zombies wreak havoc in movies like *World War Z*, *I am Legend*, and *28 Days Later*. Have you ever wondered how the Centers for Disease Control or a medical professional always seems to swoop in and provide much needed intelligence about the spread of the disease in those films? There is a real-life branch of science, Mathematical Epidemiology, where mathematical models for the spread of disease are created and analyzed in order to help understand epidemics. One well-known example of such a model is the S-I-R model for infectious disease. The focus of this talk is to introduce the S-I-R model with an aim of understanding how it can be created based on real-life observations and how it can be used to inform people's decisions about the control of contagious disease.