Modeling Reproductive Hormones: Fitzhugh-Nagumo Analysis, Hodgkin-Huxley Models, and Applications in GnRH Secretion

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Gonadotrophin-releasing hormone, or GnRH, plays an important role in such regular and crucial bodily functions as menstruation and ovulation. At the intersection of biology and mathematics, scholars consider individual GnRH neurons as similar to electrical circuits, complete with currents, conductance, and resistance. In this talk, I will focus on the mathematics behind that comparison, namely Fitzhugh-Nagumo Analysis and Hodgkin-Huxley Models.

Date: May 1, 2019
Time: 7:00 pm
Place: Park 328