

**Date: THURSDAY, May 26**

**Time: 3:30-4:45 PM**

**Place: Buchanan 1930**

**Speaker: Dirk Brockmann, Professor at the Institute for Theoretical Biology, the Integrated Research Institute for the Life-sciences at Humboldt University of Berlin**

**Title: "The Hidden Geometry of Complex, Network-Driven Contagion Phenomena"**

**Abstract:**

The last decade has witnessed the emergence and global spread of new, often highly contagious and virulent pathogens that spread across the globe in a matter of weeks or months. Emergent infectious diseases have not only become a key threat to global public health, but carry the potential of yielding major economic crises. Understanding and predicting the geographic spread of emergent infectious diseases has become a major challenge to epidemiologists, public health organizations and policy makers. Large-scale computer simulations that harbor methods from statistical physics, complex network theory and dynamical systems theory have become a key tool in this context. I will report on state-of-the art research in this area and will focus on a recent theoretic approach that reveals hidden geometries in global contagion phenomena of today. I will discuss how these methods have been employed to assess the import risk of cases during the 2013/14 Ebola crisis and related outbreaks.