



Institute colloquium

The Institute Colloquium: Population genetics, on land and at sea

David Nelson

Harvard University

Host:

It is widely appreciated that population waves have played a crucial role in the evolutionary history of many species. Neutral mutations optimally positioned at the front of a growing population wave can increase their abundance via a "surfing" phenomenon. Similar issues arise in growing spherical cell clusters, where cell division is confined to the cluster surface, and genetic drift -- the discrete nature of cells -- can be very important. This kind of growth occurs in cells proliferating in soft agar, and can also serve as a simple model of avascular tumors. We discuss the survival probability for both circular and spherical range expansions, and find that it is strongly influenced by inflation at the frontier. Experimental and theoretical studies of these effects will be presented, as well as recent attempts to extend statistical dynamics ideas to microorganisms cooperating and competing in the turbulent environment of the ocean.

Monday, September 26, 2016 04:00pm - 05:15pm

Raiffeisen Lecture Hall, Central Building



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.

Please find a schedule of the ISTA Shuttle on our webpage:

<https://ista.ac.at/en/campus/how-to-get-here/> The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.