



THE UNIVERSITY OF
CHICAGO

Department of Statistics
PHD THESIS PRESENTATION

DESISLAVA PETKOVA

Department of Statistics
The University of Chicago

**Inferring Effective Migration from Geographically
Indexed Genetic Data**

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ABSTRACT

Genetic data often exhibit patterns that are broadly consistent with “isolation by distance” a phenomenon where genetic similarity tends to decay with geographic distance. In a heterogeneous habitat, decay may occur more quickly in some regions than others: for example, barriers to gene flow such as mountains or deserts could accelerate the genetic differentiation between neighboring groups. In this thesis we present a method to quantify and visualize variation in effective migration across the habitat, and, under further assumptions, to infer the presence or absence of barriers to migration, from geographically indexed large-scale genetic data.

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