

# IAB-Colloquium

zur Arbeitsmarkt- und Berufsforschung

Einladung  
15/2018

## Bayesian Multiregional Population Forecasting

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In this paper, we extend the well-known multiregional population projection model developed by Andrei Rogers and colleagues to be fully probabilistic. Multiregional models provide a general and flexible platform for modelling and analysing population change over time. They allow combining all the main components of population change by age with various transitions that population groups may experience throughout their life course. What distinguishes these models from ordinary projections is that they include transition matrices of interregional migration by age. This information is an important component of subnational population change yet models for forecasting the patterns for use in population projections are largely non-existent. To provide measures of uncertainty, we develop a Bayesian hierarchical model to forecast age-specific interregional migration, and then include this information with probabilistic forecasts of regional births, deaths, immigration and emigration. The results demonstrate the differences that arise from different specifications and the promise of the general approach.

**Datum:**

Donnerstag,  
24. Mai 2018

**Uhrzeit:**

11:00 Uhr

**Ort:**

Regensburger Str. 100  
Sitzungssaal E10  
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