

## 2022 *JGS* best paper award and the editors' choice paper volume 25(1)

Manfred M. Fischer<sup>1</sup>  · Antonio Paez<sup>2</sup>  · Petra Staufer-Steinnocher<sup>1</sup> 

© Springer-Verlag GmbH Germany, part of Springer Nature 2023

With the first issue of 2023, it is our pleasure to continue two initiatives started in 2020 to acknowledge and celebrate the outstanding quality of research published in the journal. First, the annual *JGS Best Paper Award*, and second, the **Editors' Choice** of their favorite paper of each issue. The members of the editorial board of the journal and/or the editors may nominate candidates for the *JGS* Best Paper award. Following the nominations, the decision about the award rests with the editors-in-chief of the journal. The winners of the yearly award and the authors of the quarterly editors' choice articles are listed on the website of the journal, alongside previous awardees. Their respective papers are made free access for a certain amount of time.

The objective of the *JGS Best Paper Award* is to encourage and recognize excellent scholarship published in the journal in the preceding year. For the year 2022, one excellent paper clearly stands out. It properly represents the broad scope of a journal that covers the fields of GIScience and spatial planning, as well as spatial statistics and econometrics.

In 2022, *JGS* published 26 papers, all undergoing a stringent peer review process. All of them are of excellent quality, making any decision about prizes normally a difficult one. Choosing among this pool of top research in our field this time was not difficult at all: The scientific community recognized the paper published online first on May 23, 2021, with outstanding attention in terms of accesses and citations. Therefore, it is our great pleasure to announce that the winner of the 2022 *JGS* Best Paper Award is the contribution by **Timo Mitze** and **Reinhold Kosfeld**, already acknowledged as Editors' Choice Paper Volume 24(1). Their respective original research paper is summarized next and can be accessed in full via the Journal's homepage (DOI is given below).

---

✉ Petra Staufer-Steinnocher  
Petra.Staufer-Steinnocher@wu.ac.at

<sup>1</sup> Institute for Economic Geography and GIScience, WU Vienna University of Economics and Business, Vienna, Austria

<sup>2</sup> School of Earth, Environment & Society, McMaster University, Hamilton, Ontario, Canada

## 2022 *JGS* Best Paper Award

### **The propagation effect of commuting to work in the spatial transmission of COVID-19**

by **Timo Mitze** and **Reinhold Kosfeld**, published in the *Journal of Geographical Systems* Issue 24(1), pages 5–31 (2022) (<https://doi.org/10.1007/s10109-021-00349-3>).

This is an interesting and impressive paper that presents an econometric analysis of the spatial–temporal dynamics of COVID-19 in Germany during the first pandemic wave in spring 2020. The study uses a spatial panel error correction model that adopts the logic of HHH-type epidemiological models and places a space–time dynamics autoregressive mechanism at the center of the short-run specification of the model. To cover disease transmission through stock–flow relationships, the authors suggest an estimation approach that adopts the logic of space–time cointegration and error correction. This allows to add long-run information about the cumulative number of COVID-19 cases within and across regions in the short-run model specification. The paper provides empirical evidence that spatial dependence matters for the regional evolution of newly reported cases in German NUTS-3 regions and that commuter flows represent an important channel of epidemic diffusion. Strong points of the study are the embedding in the epidemiological literature, the stationarity tests applied to the daily and the cumulative numbers of infected people, and the analysis of temporal heterogeneity of the parameters based on the different policy interventions that have been imposed. The importance of said task already has led us to recognize this paper as the Editors’ Choice Paper Volume 24(1). The abstract of the paper is as follows:

This work is concerned with the spatiotemporal dynamics of the coronavirus disease 2019 (COVID-19) in Germany. Our goal is twofold: first, we propose a novel spatial econometric model of the epidemic spread across NUTS-3 regions to identify the role played by commuting-to-work patterns for spatial disease transmission. Second, we explore if the imposed containment (lockdown) measures during the first pandemic wave in spring 2020 have affected the strength of this transmission channel. Our results from a spatial panel error correction model indicate that, without containment measures in place, commuting-to-work patterns were the first factor to significantly determine the spatial dynamics of daily COVID-19 cases in Germany. This indicates that job commuting, particularly during the initial phase of a pandemic wave, should be regarded and accordingly monitored as a relevant spatial transmission channel of COVID-19 in a system of economically interconnected regions. Our estimation results also provide evidence for the triggering role of local hot spots in disease transmission and point to the effectiveness of containment measures in mitigating the spread of the virus across German regions through reduced job commuting and other forms of mobility.



(Sources: University of Southern Denmark 2023, University of Kassel 2023)

**Timo Mitze** is an Associate Professor of Macroeconomics at the Department of Economics, University of Southern Denmark. He is also a Research Fellow at the Rimini Center for Economic Analysis (RCEA) and a member of the RWI Research Network and the Committee for Regional Theory and Policy of the German Association of Economists (VfS). His main areas of research relate to empirical modeling in urban and regional economics, innovation economics and international economic relations. One particular focus of his work is the analysis of the causal effects of economic policy measures, in particular regional economic development, with the help of micro- and macro-econometric methods (<https://cepr.org/about/people/timo-mitze>).

**Reinhold Kosfeld** is Associate Professor and Head of Statistics at the University of Kassel. His main fields of research lie in regional economics, spatial econometrics and applied time series analysis and forecasting methods. He has published in renowned journals of regional science and empirical methods, among which are *Regional Studies*, *Journal of Regional Science* and *Urban Economics and Statistical Papers*. He has also contributed to textbooks on Econometrics and Statistics. Reinhold Kosfeld is a member of the editorial board of the *Review of Regional Research* (<https://cepr.org/about/people/reinhold-kosfeld>).

*On behalf of the editors-in-chief and the editorial team of Journal of Geographical Systems, our warmest congratulations to the 2022 awardees of the JGS Best Paper Award!*

## Editors' Choice Paper Volume 25(1)

The **JGS Editors' Choice Article** is one article from each issue that the editors recognize as providing an especially significant contribution to the field. The selected articles are announced through Twitter @JGeoSys and @Springernomics and listed on the *JGS* Editors' Choice Article website. The recognized papers will be made free access for a certain amount of time.

The **JGS Editors' Choice** of the current volume 25(1) is

### **A partition-free spatial clustering that preserves topology: application to built-up density**

by Gaëtan Montero, Geoffrey Caruso, Mohamed Hilal, and Isabelle Thomas (<https://doi.org/10.1007/s10109-022-00396-4>).

This paper proposes a novel clustering approach for point clustering that preserves the topological properties of the initial arrangement. The application is to building centroids, and in this sense it gives an alternative perspective on the concept of density. In their reports, the reviewers noted that the work is innovative, and that it might contribute in a significant way to ongoing discussions about urban morphology and structure. Beyond this, the approach presented here may also provide new tools in any field where point pattern analysis is relevant. We wish to congratulate the authors for their excellent work and recognize it as this issue's Editors' Choice.

*On behalf of the editors-in-chief and the editorial team of Journal of Geographical Systems, our warmest congratulations to the awardees of the JGS Editors' Choice Award!*

**Publisher's Note** Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.