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About

(/university/colleges/les/research-gallery/emmanouil-tranos.aspx) Dr Emmanouil Tranos is an economic geographer focusing primarily on digital geographies. He has published on issues related with the spatiality of the Internet infrastructure, the economic impacts that this infrastructure can generate on space and the position of cities within spatial, complex networks. His research in this area led to a monograph on “The Geography of the Internet: cities, regions and Internet infrastructure”. Recently, he has been focusing on the use of big data of high spatio-temporal resolution (e.g. mobile phone data) in urban and regional analysis. Regarding research methods, his work combines econometric methods and spatial analysis with tools and concepts from network theory.

Qualifications

PhD Newcastle University, 2010
MA in Regional Development, Newcastle University, 2006
MSc in Planning and Regional Development, University of Thessaly, 2004

Biography

Dr Emmanouil Tranos obtained his first degree in Planning and Regional Development from the University of Thessaly in Greece. After working as a consultant for a year, he moved to Newcastle, UK where he completed an MA in Regional Development and a PhD on the Geography of the Internet Infrastructure. After working for one year as a postdoc at the School of Engineering in Newcastle, he moved to The Netherlands, where he worked for three years as a researcher for the Department of Spatial Economics at VU Amsterdam. He is now a Lecturer in Human Geography at the University of Birmingham.

Teaching

URS201: The Urban and Regional Economy

GGM105: First Year tutorials

GGM354: Network Geographies

Postgraduate supervision

Dr Emmanouil Tranos welcomes PhD students in areas related with:

- Digital geographies
- Cities, regions and spatial networks
- Urban and regional analysis using big data

Research

SSRN page: http://ssrn.com/author=1666192 (http://ssrn.com/author=1666192)

Research interests

Digital economy and the digital infrastructure

The digital infrastructure including hubs and fibre optic links is the backbone of the digital economy. Despite the common perception of a black box and a unified system, the digital infrastructure is embedded in places. It is unequally distributed across cities both reflecting past and current spatial development patterns, but also affecting economic development. Dr Emmanouil Tranos’ research sheds light on these questions by exploring the spatiality of this infrastructure and also quantifying the impacts that this infrastructure can generate.

Urban systems and spatial networks

The increased urban interdependencies result in myriads networks, which underpin urban systems. Such networks are of various different forms: from transportation networks to social virtual networks and from scientific links to digital networks. Common characteristics of these networks are their structural characteristics and signatures as well as their embeddedness in place and space. Dr Emmanouil Tranos’ research sheds light to the geography, the typology and the attributes of different spatial networks.

Urban and regional analysis using big data

The immense penetration of Information and Communication Technologies, apart from various economic opportunities and radical changes in our everyday lives, has also resulted in the creation of a huge pool of big digital data capturing almost every aspect of human activity. Such data might also create opportunities in urban and regional

analysis as it enables the study of human dynamics at a very precise spatial and temporal resolution. Various mapping applications of such data have gained publicity over the past 5-10 years. However, we are now reaching a critical point as we need to understand how this type of data can result in new knowledge on the way cities and regions function.

Publications

Monograph

Tranos, E. (2013). *The Geography of the Internet: Cities, Regions and Internet Infrastructure in Europe.* Cheltenham, UK: Edward Elgar (New Horizons in Regional Science Series).

Publications in refereed journals

Tranos, E., & Mack, E. (2015). Broadband provision and knowledge intensive firms: a causal relationship? *Regional Studies, in press*.

Tranos, E., & Nijkamp, P. (2015). Mobile Phone Usage in Complex Urban Systems: a space-time, aggregated human activity study. *Journal of Geographical Systems, 17,* 157-185.

Tranos, E., Gheasi, M., & Nijkamp, P. (2015). International migration: a global complex network. *Environment & Planning B, 42*, 4-22.

Tranos, E., & Nijkamp, P. (2015). Editorial: Special issue on mobile phone data and geographic modelling" has been accepted for publication in Telecommunications Policy. *Telecommunication Policy, 39,* 333-334.

Steenbruggen, J., **Tranos, E.**, & Nijkamp, P. (2015). Data from mobile phone operators: a tool for smarter cities? *Telecommunications Policy, 39, 335-346*.

Jacobs-Crisioni, C., Rietveld, P., Koomen, E., & **Tranos, E.** (2014). Evaluating the impact of land-use density and mix on spatiotemporal urban activity patterns: an exploratory study using mobile phone data. *Environment and Planning A, 46*, 2769-2785.

Tranos, E., Kourtit, K., & Nijkamp, P. (2014). Digital urban network connectivity: Global and Chinese internet patterns. *Papers in Regional Science, 93*, 409-428.

Tranos, E., & Davoudi, S. (2014). The regional impact of climate change on winter tourism in Europe. *Tourism Planning & Development, 11*, 163-178.

Tranos, E., & Nijkamp, P. (2013). The death of distance revisited: cyber-place, physical and relational proximities. *Journal of Regional Science, 53*, 855-873.

Tranos, E., Reggiani, A., & Nijkamp, P. (2013). Accessibility of cities in the digital economy. *Cities, 30*, 59-67.

Tranos, E., & Gertner, D. (2012). Smart Networked Cities? *Innovation: The European Journal of Social Science Research, 25*, 175-190.

Tranos, E. (2012). The causal effect of the Internet infrastructure on the economic development of the European city-regions. *Spatial Economic Analysis, 7*, 319-337.

Tranos, E. (2011). The topology and the emerging urban geographies of the Internet backbone and aviation networks in Europe: a comparative study *Environment and Planning A, 43*, 378-392.

Tranos, E., & Gillespie, A. (2011). The urban geography of Internet backbone networks in Europe: roles and relations. *Journal of Urban Technology, 18*, 35– 49.

Tranos, E., & Gillespie, A. (2009). The spatial distribution of Internet backbone networks in Europe: a metropolitan knowledge economy perspective. *European Urban and Regional Studies, 16*, 423-437.

Petrakos, G., & **Tranos, E.** (2008). Egnatia Odos and regional development. A theoretical and experimental study. *Review of Economic Science, 14*, (in Greek).

Publications in edited volumes and other publications

Tranos, E. (2014). Networks in the innovation process. In M. M. Fischer & P. Nijkamp (Eds.), *Handbook of Regional Science* (pp. 489-504). Berlin - Heidelberg: Springer.

Tranos, E., & Nijkamp, P. (2014). Digital infrastructure and physical proximity. In A. Torre & F. Wallet (Eds.), *Regional development and proximity relations* (pp. 267-290). Northampton, MA: Edward Elgar.

Tranos, E., & Nijkamp, P. (2014). Urban and regional analysis and the digital revolution: challenges and opportunities. In B. Derruder, S. Conventz, A. Thierstein & F. Witlox (Eds.), *Hub cities in the knowledge economy* (pp. 145-162): Ashgate.

Tranos, E. (2013). Book review: Complexity, Cognition and the City by J. Portugali. *Environment and Planning B, 40*, 183-184.

Lückenkötter, J., Langeland, O., Langset, B., **Tranos, E.**, Davoudi, S., & Lindner, C. (2013). Economic effects of climate change on Europe's regions. In P. Schmidt-Thomé & S. Greiving (Eds.), *European climate vulnerabilities and adaptation: A spatial planning perspective* (pp. 95-112). West Sussex: Wiley&Blackwell.

Tranos, E. (2011). e-Regional Science: why should regional science focus on the digital revolution? *Regional Insights, 2*, 5.

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