Job Opening

in the Institute of Economics, Centre for Economic and Regional Studies, Hungarian Academy of Sciences

Position: Post-Doc Researcher, full time

„The Role of Geography in the Complex Diffusion of Innovation”

Period: 2 years.

Job description:

The Agglomeration and Social Networks MTA KRTK Lendület Research Group (ANET Lab) aims to uncover how urbanization and the structure of social networks are interrelated and seeks for new approaches in economic geography, computational social science and network science. We build our research projects on large data bases and intend to answer the questions how social networks form in geographical space, how the structure of social networks explain economic and technological progress in cities and how dynamic learning and spreading processes happen in spatial social networks.

ANET Lab is involved in a variety of international scientific collaboration and is also active in research co-operation with companies. Our scientific articles have been published in interdisciplinary journals (PLoS ONE, PNAS, Scientific Reports), in leading journals from in geography (Economic Geography, Journal of Economic Geography, Regional Studies) and economics (American Economic Review). Our research is directly relevant for innovation policy and provides new insights for company managers and for the public. For further information about the research lab, see http://anet.krtk.mta.hu.

The future Post-Doc colleague will be employed in a 2-year project entitled „The Role of Geography in the Complex Diffusion of Innovation”: Diffusion of new technologies, new products, services or even news receive an increasing attention in various disciplines. In this interdisciplinary project, motivated by the increasing urban-rural divide in Western societies, we aim to understand how topologies of large social networks influence adoption dynamics on local scales. To achieve that, we analyze data revealed from various sources including social media websites, cell-phone communication, patent and scientific databases and uncover empirical features of spatial diffusion. Further, we develop models of dynamic adoption in networks, which reflect on the role of social connections within towns and across locations in order to better forecast adoption in specific places and over the life-cycle of technologies.

The project will be carried out in the Budapest research team, in close collaboration with research partners at Central European University, University College Dublin, University of California at Berkeley, University College London and Utrecht University. Further information about the project can be inquired at the PI Balazs Lengyel by email: lengyel.balazs@krtk.mta.hu.

The tasks of the candidate is to actively collaborate with other group members, international collaborators and business partners in carrying out the research project, to prepare statistical analyses and visualizations, to develop agent-based models, to write papers for leading interdisciplinary journals (such as journals published by AAAS. The National Academy of Sciences of the USA, Springer-Nature and The Royal Society), leading field journals in physics, economics, geography or related and/or leading data science conferences such as (organized by IEEE, ACM, SIAM etc.)

The ideal candidate is passionate about high quality research and publication in top journals, is ready to actively contribute to the group’s science organization and knowledge dissemination, and is willing to spend time on foreign research visit at partners.

Salary and amenities:

The cost of living in Hungary is below the EU standards. The annual salary is 6,000,000 HUF (equals to 18,500 EUR) that is competitive in Hungarian standards and allows good quality of life in Budapest. Based on personal agreement, a yearly conference budget is available.

Eligibilities:

- PhD degree in Economics, Geography, Statistics, Sociology, Physics, Network Science, Computational Methods or related.
- Good skills in statistics and visualization techniques
▪ Experience with statistical softwares (e.g. R, Python) and working on servers
▪ Outstanding use of English
▪ Good programming skills

Advantages:
▪ Experience with infrastructures that can deal with large datasets (e.g. Spark)
▪ Previous work on social and collaboration networks
▪ Excellent publication record

Application documents:
▪ Detailed CV in English
▪ List of publications
▪ Copy of the two most important publications
▪ Letter of motivation
▪ Name and address of two referees
▪ Copy of PhD degree
▪ Declaration that the candidate authorizes the employer to handle his data

Start date:

From February 4, 2019, upon agreement

Deadline for application: January 30, 2019.

Interview day (online): January 31, 2019.

Submission:
▪ By email to Edit Máder at mader.edit@krtk.mta.hu.

Further information can be required from
▪ Balazs Lengyel, head of ANET Lab at lengyel.balazs@krtk.mta.hu.
▪ On the website of ANET Lab at www.anet.krtk.mta.hu.

Decision process:

All submitted applications will be considered and the shortlisted candidates will be interviewed by members of ANET Lab. Decision will be made by the head of ANET Lab. All applicants will be notified.

Decision deadline: February 1, 2019.