Cover Letter: NBER Innovation Research Boot Camp 2026

Dear Innovation Research Boot Camp panel members,

Please see on the following pages my application for the NBER Innovation Research Boot Camp 2026, including:

1. Application Essay
2. Curriculum vitae including a list of courses

The application will also be accompanied by a recommendation letter from Yian Yin, assistant professor at Cornell Information Science.

My contact details are as follows:

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Sincerely,

Šimon Trlifaj

Application Essay: NBER Innovation Research Boot Camp 2025

Šimon Trlifaj

I am deeply interested in finding policies that encourage and direct innovation to address today's most pressing crises, building on my policy experience in the European Commission and academic research at Cornell and Central European University. I am eager to participate in the NBER boot camp to deepen my understanding of innovation processes from top researchers in the field, and to engage with the community on the subject.

My research uses unique large-scale granular datasets to examine innovation systems and the intended and unintended effects of policy on those systems. It leverages advances in machine learning and econometrics to investigate: (1) the distributional effects of market structure in innovation, and (2) the political economy of regulatory transparency:

1. What are the distributional effects of market structure on innovation? The innovator's dilemma predicts that startups seek new consumer niches, whereas incumbents linger in established value chains and consumer groups. My work with Yian Yin (Cornell Information Science) finds evidence that this also translates into startups innovating for underrepresented groups in the society, including using difference-in-difference design.

2. What are the effects of transparency and secrecy on innovation? My second project, under review in AEJ: Economic Policy, leverages unique web-scraped dataset of all wireless-capable devices on the U.S. market to study a sudden increase in government transparency. It finds a significant increase in follow-on innovation in exposed technologies using regression discontinuity and difference-in-difference designs.

I believe that my academic record, policy-making experience, and understanding of political procedures would enrich the discussions in the boot camp—and contribute to as much as benefit from the condensed week of academic excellence and a vibrant community at the boot camp.

Šimon Trlifaj

Vienna, Austria simontrlifaj@gmail.com +420 776 202 343 (GSM, WhatsApp, Signal)

Overview

Science and innovation deeply impacts society. I research the interactions between researchers and innovators and governments and the impact of science and innovation with novel large-scale datasets and advanced methods from econometrics, data science, and computational social science. My work informs academics and practitioners in economics, public policy, political economy, business, and science of science and innovation.

Education

Central European University (Vienna, Austria)
PhD in Political Science: Public Policy Track *Sep 2021 – Dec 2025 (submitted)*

- Dissertation: 'Alienability, Transparency, Equity: Three Works on Innovation Policy', supervisor: Cristina Corduneanu-Huci.
- Selected coursework: Agent Based Models, Data Mining and Big Data Analytics, Scientific Python, Big Data for Public Policy, Research Design, Research in Global Governance, Domestic Politics in the Global Economy, Public Policy and Public Administration, Survey Methodology.
- Service: Public Policy track representative, member of the Student Union PhD Committee.

Master of Public Administration *Sep 2016 – Jul 2018*

- Thesis: 'How knowledge becomes a public good: permanency, patents, secrecy'.
- Led an applied policy project on generic medicines licensing and the Medicines Patent Pool.
- Selected coursework: Economic Analysis, Economics of Regulation, Advanced Impact Evaluation, Global Political Economy, Public International Law in Argument and Practice, Thinking Experimentally about Policy, Corruption, Corruption Control and Global Governance.

Charles University (Prague, Czechia)
Bachelor in Economics and Finance *Oct 2011 – Jun 2016*

- Thesis 'Patent trolls: do their patents differ?'.
- Selected coursework: Econometrics (two terms), Macroeconomics (two terms), Microeconomics (two terms), Mathematics (four terms), Institutional Economics, Comparative Economics, Stata for Economists.

Research and Policy Experience

UNU-MERIT, Maastrich University (Maastricht, Netherlands; remote)
Researcher (contractor) *Dec 2025 – Jun 2026 (exp.)*

- Leading analysis of online job vacancies, firms, and patents as a measure of innovation capabilities and industrial dynamics in rural areas (w. Tommaso Ciarlo, UNU-MERIT, Bernardo Caldarola, JRC).

Cornell University (Ithaca, New York, U.S.)
Visiting Researcher *Aug 2023 – Dec 2023*

- Ongoing collaboration with Yian Yin on the role of startups in directing innovation towards underserved gender, race, and ethnic groups (see work in progress).

European Commission (Brussels, Belgium)
Economic and Policy Analyst *Oct 2019 – Sep 2021*

- Led the implementation of new 'key impact pathways' monitoring and evaluation framework for EU research and innovation (R&I) projects.
- Pioneered analysis of patents from EU R&I projects, managed externalized analytical projects.
- Seconded to Secretariat-General and DG GROW as part of the Junior Professional Program. Worked on analysis of barriers to the single market.

Trainee *Mar 2023 – Aug 2023*

- Analyzed the network patterns of the Widening Program, which aims to include less innovative regions in European research and innovation.

City of Prague (Prague, Czechia)
Advisor to the Vice-Mayor for Finance *Aug 2018 – Mar 2019*

Central European University (Budapest, Hungary)
Research Assistant (part-time) *Nov 2017 – Mar 2018*

– Co-developed a database of randomized controlled trials. The resulting paper analyzes the political economy of policy evaluation. 10.1016/j.jce.2020.09.002

Junák – Czech Scouting (Prague, Czechia)
Group Leader (volunteer) *Oct 2008 – Jul 2016*

Peer-reviewed Publications

Trlifaj, Š. (2023). The alienability of innovation: evidence from patent transfers. *Economics of Innovation and New Technology* (Vol. 33, Issue 7, pp. 891–925). 10.1080/10438599.2023.2261871

Corduneanu-Huci, C., & **Trlifaj, Š.** (2024). Freedom of information acts (FOIAs) and government accountability. In de Sousa, L., & Coroado, S. (Eds.), *Elgar Encyclopedia of Corruption and Society* (pp. 115–119). 10.4337/9781803925806.ch25

In Progress

Trlifaj, Š. (under review in *AEJ: Economic Policy*). Government transparency and innovation: evidence from wireless products. *arXiv* 10.48550/arXiv.2510.19377

– Presented at *ICSSI 2025* and *Munich Summer Institute 2025*.

Trlifaj, Š. & Yin, Y. (manuscrip). Startups attenuate demographic disparities in biomedical, cultural, and commercial innovation

– Presented at *ICSSI 2025*.

Other Publications

European Commission. Directorate General for Research and Innovation. (2023). Newcomers in EU R&I programmes: main trends in Horizon 2020, first evidence from Horizon Europe. Publications Office. (Co-authored institutional publication.) 10.2777/911220

Kadunc, M., & **Trlifaj, Š.** (2020). Patents in the Framework Programme. In European Commission. Directorate General for Research and Innovation, *Keeping our eyes on the Horizon: monitoring flash series: a Horizon 2020 monitoring report*. Publications Office. (pp. 69–83). 10.2777/303024

Awards and Scholarships

Advanced Doctoral Students Award *2025*
Central European University, Austria ceu.edu

Fulbright Postgraduate Researcher Scholarship *2023*
Fulbright Commission, Czechia fulbright.cz

Academic Achievement Award for First-Year PhD students *2023*
Central European University, Austria ceu.edu

Outstanding Academic Achievement Award *2018*
Central European University, Austria ceu.edu

Visegrad Scholarship *2017*
International Visegrad Fund visegradfund.org

Conference and Workshop Presentations

Int. Conference on the Science of Science and Innovation *2025*
Regulatory transparency and innovation
Minority groups as an innovation niche (with Yian Yin, Cornell University)

Munich Summer Institute *2025*
Regulatory transparency and innovation

Competition and Innovation Summer School *2024*
Transparency and deregulation in wireless devices: evidence from FCC product authorization

European Political Science Association Annual Conference *2022*
The alienability of innovation: evidence from patent reassignments

International Public Policy Association IWPP3 *2022*
The alienability of innovation: evidence from patent reassignments

Teaching

Introduction to Social Science Statistics – Math Refresher *Fall 2024/25*
Instructor, *Central European University*
- Designed and taught a mathematics and statistics refresher for incoming MA students.

Economic Analysis for Public Policy *Winter 2022/23*
Teaching Assistant, *Central European University*
- Lecture on the economics of science and innovation.

Invisible University for Ukraine *Spring 2021/22*
Student Mentor, *Central European University*

Further Training

Advanced Certificate in Data Science *2023*
Central European University, Department of Network and Data Science ceu.edu

Economics of Ideas, Science and Innovation *2022*
Institute for Progress ifp.org

Patent Law *2020*
University of Pennsylvania via Coursera.org upenn.edu

Writing in the Sciences *2015*
Stanford University Online stanford.edu

Skills

Methods: Advanced experimental (RCT), quasi-experimental (difference-in-differences, instrumental variable analysis, 2SLS, synthetic control, regression discontinuity design, encouragement design) and observational econometrics (time-series, regression discontinuity, panel data, survival analysis), advanced data science (web scraping, fuzzy matching, support vector machines, [Post-] Lasso and Ridge regressions, decision trees and random forests, topic modeling, factor analysis), large language models (vector embeddings, GPT API), survey design, agent-based modeling.

Databases: PatentsView, USPTO, PATSTAT, Google BigQuery, NielsenIQ Consumer Panel, GS1 and UPC codes, ORBIS and ORBIS IP, Crunchbase, OpenCorporates, OpenStreetMap API, OpenAlex, EU research and innovation projects (CORDIS), online job vacancies, Open Food Facts API, The Movie Database API, Amazon products.

Software: Python, R, Stata, SQL, Adobe CC, LaTeX.

Languages: English (C2), French (B1), Czech (native).

Coursework

PhD courses: Agent Based Models, Data Mining and Big Data Analytics, Scientific Python, Big Data for Public Policy, Research Design, Diving in the Digital Public Space: From individual digital traces to collective social and political dynamics, Research in Global Governance, Domestic Politics in the Global Economy, Public Policy and Public Administration, Survey Methodology

Selected MA courses: Economic Analysis, Economics of Regulation, Advanced Impact Evaluation: Management and Methodology, Global Political Economy, Health Policy, Public International Law in Argument and Practice, Thinking Experimentally about Policy, Corruption, Corruption Control and Global Governance, Just Data

Selected BA courses: Econometrics 1+2, Macroeconomics 1+2, Microeconomics 1+2, Mathematics 1–4, Theory of Rules and Economies in Transition, Institutional Economics, Comparative Economics, Ethics and Economics, Stata for Economists

Selected online courses: Economics of Ideas, Science and Innovation, Institute for Progress (2022), Writing in the Sciences, Stanford University (2015, with distinction), Democratic Development, Stanford University via Coursera.org (2014)

Yian Yin
Assistant Professor
Cornell Ann S. Bowers College of Computing & Information Science
Department of Information Science
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Web: www.yianyin.net

Cornell Bowers CIS
Information Science

Dear Colleagues,

This letter is to confirm my enthusiasm for Mr. Šimon Trlifaj's application to the NBER Innovation Research Boot Camp 2026. I regard him as an exceptional young scholar in the economics of innovation and believe he will be a terrific addition to the Boot Camp.

As an Assistant Professor of Information Science at Cornell University, my research interests lie in the science of science and innovation. Before joining Cornell, I spent seven years at Northwestern, collaborating with Ben Jones and Dashun Wang. Among the many Ph.D. students I had the pleasure to work with at Northwestern and Cornell, Šimon clearly stands out as a highly promising young scholar.

I began working with Šimon last summer when he visited Cornell as a Fulbright scholar. During his stay, Šimon led a novel project examining the role of start-ups in the direction of innovation. This ambitious project covered several large-scale innovation datasets, ranging from patents to drugs to commercial products. Despite the project's complexity, Šimon made substantial progress in just a few months. He not only analyzed the data using advanced methods such as text embedding but also identified a clean natural experiment for identification. From our daily interactions, I am convinced that he is an extremely motivated, dedicated, and bright researcher with a broad knowledge of the innovation literature. Importantly, he has demonstrated a unique combination of knowledge in economic theory, policy practice, and data science, making him an especially insightful contributor to my lab.

Besides his research potential, Šimon also has a unique career trajectory, having served in the European Commission as an analyst specializing in research and innovation. I understand that he is keenly interested in contributing to the European innovation policy sphere after completing his current Ph.D. at Central European University. In my opinion, his focus on policy impact and international perspectives makes him a truly unique candidate among the pool of applicants. I have no doubt that his participation would greatly benefit not only his academic growth but also that of other participants.

Thank you for your consideration.

Sincerely,

Yian Yin
Assistant Professor of Information Science
Bowers College of Computing & Information Science
Cornell University