

Elena Cossu, PhD

POSTDOCTORAL RESEARCHER

Paris, France

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I am a political scientist with a Ph.D. in Quantitative Political Economy, specializing in applying data science and quasi-experimental techniques to comparative political research. Currently, I am a postdoctoral researcher at SciencesPo Paris, where I NLP techniques to map and predict the political configurations of European parties based on text data. My expertise lies in employing machine learning and quasi-experiments to assess causality and explore social and political dynamics. I am deeply passionate about the intersection of data science and politics, with extensive experience in quantitative social research.

Employment

SciencesPo Paris

Paris, France

POSTDOCTORAL RESEARCHER

Apr. 2023 - Nov. 2024

- Postdoctoral researcher for the project “Neo-authoritarianisms in Europe and the liberal democratic response” (AUTHLIB) of the Horizon Europe and funded by the European Commission
- Using Natural Language Processing (NLP) to map political ideological configurations and dimensions across Europe
- Working under the direction of Prof. Rovny at the CEE and Prof. Cointet at Medialab
- Writing high- quality publications, drafting and submission of research reports to the European Commission
- Part of the Centre for European Studies and Comparative Politics (CEE)

National Centre for Social Research

London, United Kingdom

SENIOR EVALUATION RESEARCHER

Nov. 2021 - Oct. 2024

- Design and implementation of experiments (Randomised Control Trials) and Quasi-Experiments (e.g. Synthetic Control, Propensity Score Matching, etc.) to measure the effect of UK policies on certain segments of the population
- Clients include the UK Ministry of Justice, The National Lottery Community Fund, the UK Department for Education, the Education Endowment Foundation, the Department for Health and Social Care (DHSC), and others

Corvinus University of Budapest

Budapest, Hungary

ASSISTANT LECTURER

Sep. 2021 - Jan. 2022

- Assistant teacher for Master level courses

European Commission MSCA

Budapest and London

EARLY STAGE RESEARCHER

Aug. 2018 - Sep. 2021

- Researcher as part of the Horizon 2020 European Commission project FATIGUE, a Marie Skłodowska-Curie Innovative Training Network (MSCA)
- Assist with the analysis and the writing of reports and articles for long-term research projects
- Duty stations for the project: (1) the European Bank for Reconstruction and Development (EBRD), Office of the Chief Economist, Transition Impact and Global Economics Team; (2) the Slavonic School of Eastern European Studies (UCL SSEES); (3) Corvinus University of Budapest Institute of World Economy

Education

Corvinus University of Budapest and University College London

Budapest, Hungary

PHD IN ECONOMICS

Aug. 2018 - Oct. 2023

- Dissertation title: ‘Essays on Conceptualising Policies Linked to Populist Rhetoric in Europe and Measuring their Effects in Hungary’
- Co-supervised at University College London (UCL)
- PhD sponsored by the European Commission Marie Skłodowska-Curie Innovative Training Network (MSCA) as part of the FATIGUE research project

SciencesPo Paris and Bocconi University

Paris and Milan

DOUBLE MASTER’S DEGREE IN INTERNATIONAL ECONOMICS AND MANAGEMENT

Aug. 2014 - Apr. 2017

- MA in International Public Management with a specialisation in Global Risks from SciencesPo Paris School of International Affairs (PSIA), with a final dissertation called «Fighting terrorism and fundamental rights»
- MSc in Economics and Management of International and Public Affairs from Bocconi University, with a dissertation called «The Parisian transport system: a best practice of urban mobility»

Università Cattolica del Sacro Cuore

Milan, Italy

BACHELOR’S DEGREE IN POLITICAL SCIENCE AND INTERNATIONAL RELATIONS

Sep. 2011 - Oct. 2014

- Final dissertation: «The Hungarian Transition from Planned to Capitalist Economy»
- Erasmus at Pázmány Péter Catholic University in Budapest during the 2013/2014 academic year

Research output

PEER-REVIEWED PUBLICATIONS

- 2024 **Application of Natural Language Processing to the Electoral Manifestos of Parties Characterised by Populist Rhetoric in Central and Eastern Europe**
East European Journal of Society and Politics
Forthcoming (December 2024)
- 2023 **Clustering and Analysing Relevant Policy Dimensions of Populist, Left-Wing, Centrist, and Right-Wing Parties across Europe**
Central European Journal of Public Policy, 17(1), 41–54
<https://doi.org/10.2478/cejpp-2023-0004>
- 2023 **The Economic Effect Of Populist Rhetoric In Hungary**
Online Journal of Modelling the New Europe, 41, 105–138
<https://doi.org/10.24193/OJMNE.2023.41.05>
- 2021 **Understanding Contemporary Populism Through the Latin American Experience**
AARMS – Academic and Applied Research in Military and Public Management Science, 20(3), Article 3
<https://doi.org/10.32565/aarms.2021.3.4>
- 2019 **The Gravity Model for Trade Theory**
Köz-gazdaság, 14(3), Article 3
<https://doi.org/10.14267/RETP2019.03.25>

UNDER PEER-REVIEW

- 2025 **How the Charlie Hebdo Attacks Shape Political Agendas on Multiculturalism in France. Evidence from The Rejection of Multiculturalism in French Party Social Media Data**
Politics and Governance
Forthcoming

WORKS IN PROGRESS

- 2025 **The Social Bases of Democracy** Rovny, J., Cossu, E., & Sattelmayer, L.
- 2025 **Conceptualizing Illiberalism Using Natural Language Processing** Cossu, E., Cointet, J., Froio, C., Lachat, R., & Rovny, J.
- 2025 **Extremely Large and Efficient Neural Architecture for Political Polarization Prediction** Cossu, E., & Mishra, S.
- 2026 **Mapping the Content of Illiberal Speech in Europe** Cossu, E.
- 2026 **The dynamics of economic clusters in the UK using a novel, granular and bottom-up industrial classification** Cossu, E., Tranos, E., Wolf, L., & Zhu, R.
- 2026 **Clustering within buildings? The case of London** Cossu, E., Tranos, E., Wolf, L., & Zhu, R.
- 2026 **Building an Atlas of Economic Activities using open web data** Cossu, E., Tranos, E., Wolf, L., & Zhu, R.

REPORTS

- 2023 **Literature Review on How to Measure Illiberalism Using Text Data**
Authlib Project and SciencesPo Paris
<https://www.authlib.eu/literature-review-how-to-measure-illiberalism-using-text-data/>
- 2023 **Yorkshire and Humber COVID-19 campaign pilot**
UK Health Security Agency
<https://assets.publishing.service.gov.uk/media/652fe1fc92895c000ddcb9c3/Yorkshire-and-Humber-COVID-19-campaign-pilot-evaluation-report.pdf>
- 2023 **LNK Educate: Feasibility and pilot study**
Youth Endowment Foundation
<https://youthendowmentfund.org.uk/funding/evaluations/lnk-educate/>

OTHER PUBLICATIONS

- 2024 **Populists in Europe: A Political Group with Its Distinct Policy Preferences?**
AuthLIB Blog
<https://www.authlib.eu/populists-in-europe-a-political-group-with-its-distinct-policy-preferences/>
- 2022 **A Small Country Trying To Go Big, A Big Union Trying Not To Go Small**
Australian Institute of International Affairs
<https://www.internationalaffairs.org.au/australianoutlook/a-small-country-trying-to-go-big-a-big-union-trying-not-to-go-small/>
- 2021 **Chinese vaccine diplomacy in Latin America could change the international order**
ECPR The Loop
<https://theloop.ecpr.eu/chinese-vaccine-diplomacy-in-latin-america-could-change-the-international-order/>
- 2020 **Book Review: The Glass Half-Empty: Debunking the Myth of Progress in the Twenty-First Century by Rodrigo Aguilera**
LSE Review of Books
<https://blogs.lse.ac.uk/lsereviewofbooks/2020/10/27/book-review-the-glass-half-empty-debunking-the-myth-of-progress-in-the-twenty-first-century-by-rodrigo-aguilera/>

Grants and Funding

- 2023 AUTHLIB – Neo-Authoritarianisms in Europe and the Liberal Democratic Response, European Union and the UK Research and Innovation
- 2018 Delayed Transformational Fatigue in Central and Eastern Europe, Horizon 2020 Grant agreement ID: 765224

Awards and Honors

- 2023 ACRI Young Investigator Prize ECOMOD 2021

Teaching experience

- 2024 S1 Policy Analysis and Assessment Methods Course (SciencesPo Paris)
- 2024 S1 Democracy in Europe Seminar (SciencesPo Paris)
- 2023 S2 Democracy in Europe Seminar (SciencesPo Paris)
- 2023 S2 Text as Quantitative Data PhD Seminar (SciencesPo Paris)
- 2023 S2 Impact Evaluation Quasi-Experimental Design (NatCen Course for the Office for National Statistics (ONS))
- 2022 S2 Impact Evaluation Quasi-Experimental Design (NatCen Course for the Office for National Statistics (ONS))
- 2021 S1 International Organizations and Economic Diplomacy Seminar (Corvinus University of Budapest)
- 2021 S1 Global Economic Trends Seminar (Corvinus University of Budapest)
- 2018 S2 Development Economics Seminar (Corvinus University of Budapest)

Presentations and Conferences

- 2024 **MethodNet Conference** Measuring Illiberalism Using Text Data and Machine Learning
- 2022 **ECPR General Conference** Assessing the economic performance of a government characterised by populist rhetoric in Hungary: A synthetic control approach
- 2021 **The Doctoral Student Association of the University of Pécs Conference (PTE DOK)** Macroeconomics and Politics in Hungary: How an Illiberal Government Characterised by Populist Rhetoric Deals With its Public Budget
- 2021 **inGRID Workshop** Macroeconomics, Policies, and CEE: a Machine Learning Approach to Social Investment and Social Protection Policies
- 2020 **ASEEES 52nd Annual Convention** A Review of Quasi-Experimental and Predictive Methodologies in Relation to Measuring Populism and its Outcomes
- 2020 **Science is Wonderful! European Commission Outreach Event** FATIGUE Project Workshop
- 2019 **WINIR Symposium 2019** Economic populism, fiscal policies and budget deficits: the sustainability implications for Central and Eastern Europe
- 2019 **RSA Winter Conference** Present and future populist policies in Europe: the Cases of Hungary and Bulgaria
- 2019 **UACES 49th Annual Conference** The New Populist Policies Prescriptions

Relevant Skills

Data Analysis

- Natural Language Processing (NLP)
- BERT Modelling
- Quantitative Sentiment Analysis
- Data Scraping Techniques
- Cluster Analysis
- Imputation Techniques (K+means and regression analysis inputting)
- Randomized Control Trials (RCTs)
- Matching Methods (including Mahalanobis matching and Kernel matching)
- Propensity Score Weighting (PSW)
- Synthetic Control Methods (SCM)

Programming Languages:

- R, Python, SQL, command-line programming, Git, STATA, SPSS, HTML, LaTeX

Natural Languages:

- English, French, Italian, Spanish, Hungarian (basic)

Certifications

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| 2023 | Google Data Analytics Professional Certificate
https://www.coursera.org/account/accomplishments/verify/XZCBSTWMZ3W4 |
| 2022 | Office for National Statistics Accredited Researcher |
| 2022 | DataCamp Data Scientist with R Certificate https://www.datacamp.com/statement-of-accomplishment/track/6fda0ea43ab0dfbfd376032fd6e1072ca796a097 |
| 2019 | Centre for Microdata Methods and Practice Policy Evaluation Methods |

References

- Available upon request