

Yen-Chieh (David) Liao

The Centre for Artificial Intelligence in Government and the Institute for Data and AI
University of Birmingham

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ACADEMIC POSITIONS

University of Birmingham

Research Fellow in NLP at the Centre for Artificial Intelligence in Government

Sep 2024 –

Affiliate Fellow at the Institute for Data and AI

Jul 2025 –

University College Dublin

Post-doctoral Researcher at the School of Politics and International Relations

Aug 2023 – Sep 2024

University of Bamberg

Pre-doctoral Researcher at the Chair of Comparative Politics

Dec 2021 – Dec 2022

RESEARCH INTERESTS

Measuring ideological preferences through quantitative and computational methods, including ideal point estimation from legislative voting, surveys, and political texts.

Current focus: multi-agent LLM systems for survey experiments and deliberation simulation.

EDUCATION

University of Essex

PhD in Politics

Oct 2017 – Jan 2023

National Taipei University

BA and MA in Public Administration and Policy

RESEARCH

Publications

Forthcoming Electoral Systems and Geographically-Targeted Oversight: Evidence from Taiwan Legislative Yuan. (with Li Tang) *Electoral Studies*.

2025 Catalysts for Progress? Mapping Policy Insights from Energy Research. *Energy Research and Social Science*. (with Brian Boyle, Stefan Müller, Sarah King and Robin Rauner) [DOI: <https://doi.org/10.1016/j.erss.2025.103955>]

2025 Bureaucratic Reinterpretation of Leaders' Ideologies: A Case Study of People's Daily's Commentary on Xi Jinping Thought on Diplomacy (in Chinese). *Mainland China Studies*. (with Yi-Nung Tsai) [[https://doi.org/10.30389/MCS.202503_68\(1\).0003](https://doi.org/10.30389/MCS.202503_68(1).0003)]

2024 (Mis)perception of Party-voter Congruence and Satisfaction with Democracy. *Political Science Research and Methods*. (with Li Tang and Royce Carroll) [DOI: <https://doi.org/10.1017/psrm.2024.48>]

2024 Electoral Reform and Fragmented Polarization: New Evidence from Taiwan Legislative Roll Calls. *Legislative Studies Quarterly* [DOI: <https://doi.org/10.1111/lsq.12459>]

2023 The Role of Rituals in Adversarial Parliaments: An Analysis of Expressions of Collegiality in the British House of Commons. (Invited Contribution) *Historical Social Research*. 48 (3): 209-234. (with David Beck and Thomas Saalfeld) [DOI: <https://doi.org/10.12759/hsr.48.2023.31>]

2015 The Rationale for Supporting Nuclear Power: Analysis of Taiwanese Public Opinion Survey. *International Relations of the Asia-Pacific*. 15 (1): 147-176. (with Xiaochen Su, Chung-li Wu, Tai-De Lee, and Chen Tsao) [DOI: <https://doi.org/10.1093/irap/lcu019>]

Under Review

Estimating Factions of Red Guard under Mao's China: A Slogan-based Text Scaling Method with Historical Documents. (with Yi-Nung Tsai) *Invited to Revise and Resubmit. Journal of Computational Social Science.*

Electoral Reform and Issue Attention in Legislative Oversight: From SNTV to Mixed-Member Majoritarian System in Taiwan. (with Yu-Ceng Liao and Yi-ting Wang) *Under Review.*

Selected Working Papers

Multi-Agent Systems with LLMs for Synthetic Survey Experiments on Misinformation: Design and Implementation. (with Linette Lim and Slava Jankin)

Cross-Lingual Stance Detection in Political Texts: Comparison and Application. (with Stefan Müller)

Political Text Analysis with Embedding Regression: From Multilingual to Cross-lingual Application. (with Chen Zheng, Winnie Xia and Slava Jankin)

ACADEMIC TRAINING PROGRAMMES

2024 *ARCHER2 Message Passing Programming with MPI (Edinburgh Parallel Computing Centre)*

2023 *Oxford Large Language Models for Social Science Workshop* | 57th *Essex Summer School: Advanced Survey Data Analysis and Survey Experiments*

2022 *56th Essex Summer School, Introduction to Social Network Analysis*

2021 *Machine Learning Summer School: Standard Training Programme* | 55th *Essex Summer School: Advanced Methods for Text-as-Data–Natural Language Processing; Quantitative Methods for Causal Inference and Policy Evaluation*

2019 54th *Essex Summer School: Introduction to Bayesian Analysis for the Social Sciences*

2018 53rd *Essex Summer School: Ideal Point Estimation and Scaling Methods; Generalized Linear Models*

CODE & OPEN-SOURCE PACKAGES

flaiR: An R wrapper for accessing the Flair NLP library in Python.

legisTaiwan: An R package for accessing real-time Taiwan Legislative Data.

asmcjr: An R Package for Supporting the Book 'Analyzing Spatial Models of Choice and Judgment.

TEACHING & SUPERVISION

University of Birmingham MSc Supervision

2024-05 Florida Ferizolli (MSc in AI and Government) | Jiaqi Liu (MSc in AI and Sustainable Development,)

Course and Module

2024 *University College Dublin* Quantitative Text Analysis (Led by Stefan Müller)

Guest Lecturer in Weeks on Word Embeddings and Transformers

Invited Talks

2025 *Centre of Taiwan Studies, SOAS*

Taiwan's Electoral System & Legislative Behaviour

2025 *Taipei R LADIES*

Data Analysis and Applications with **legisTaiwan** and Taiwan Legislative Yuan API.

2024 *SPIRe PhD Workshop, University College Dublin*

Introduction to High-Performance Computing with SLURM

Teaching and Workshops

2023 *GESIS Fall Seminar in Computational Social Science*

Instructor in Big Data and Computation for Social Data Science (Co-lecturing with Akitaka Matsuo)

2022 55th Essex Summer School

Teaching Assistant for Iulia Cioroianu — Course: Quantitative Text Analysis

Teaching Assistant for Akitaka Matsuo — Course: Introduction to Programming in Python

2021 54th Essex Summer School

Teaching Assistant for Johannes Karreth — Course: Introduction to Quantitative Methods in R

2021 EITM Europe Summer Institute

Teaching Assistant for Ken Benoit and Nicole Baerg — Course: Quantitative Text Analysis

2020 53rd Essex Summer School

Teaching Assistant for Iulia Cioroianu — Course: Quantitative Text Analysis

2020 ECPR Summer School

Teaching Assistant for Akitaka Matsuo - Course: Machine Learning with Big Data for Social Scientists

2019 53rd Essex Summer School

Teaching Assistant for Iulia Cioroianu — Course: Quantitative Text Analysis

RESEARCH GRANTS & FUNDING

2023 The Scholarship for Attending Oxford Large Language Models for Social Science Workshop, £300

2021–22 Taiwan Overseas Pioneers Grants of Ministry of Science and Technology Taiwan, USD\$32,000

2018 Attendance Scholarships to Essex Summer School in Social Science Data Analysis, £250

2017–21 The Government Doctoral Scholarship in Legislative Studies and Comparative Politics, Taiwan's Ministry of Education USD\$168,000

JOURNAL REFEREE SERVICE

European Journal of Political Research × 2; *Political Science Review* × 3; *Political Science Research and Methods* × 3; *Journal of Taiwan Politics* × 1; *Legislative Studies Quarterly* × 3; *Government and Opposition* × 1

CONFERENCES (*: discussant; +: Poster)

2025 PolMeth Europe (LSE) | PolMeth⁺ (Emory) | APSA* (Vacouver) | EPSA* (Madrid)

2024 COMPTTEXT (Amsterdam) | EPSA (Cologne) | APSA* (Philadelphia)

2023 EPSA (Glasgow) | APSA* (LA) | ECPR SG Parliaments (Vienna)

2022 ECPR (Innsbruck) | PolMeth⁺ (WashU) | COMPTTEXT (Dublin)

2021 MLSS⁺ (NTU, Taiwan) | APSA (Online)

2019 EPSA (Online) | Asian PolMeth⁺ (Online)

2018 EPSA (Belfast)

REFERENCES

Prof. Stefan Müller

School of Politics and International
Relations
University College Dublin
☎ muellerstefan.net

Prof. Thomas Saalfeld

Chair of Comparative Politics
University of Bamberg
☎ uni-bamberg.de

Prof. Slava Jankin

Chair in Data Science
and Government
University of Birmingham
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Dr. Nicole Baerg

Department of Government
University of Essex
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Prof. Jonathan Sullivan

School of Politics and International
Relations
University of Nottingham
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Prof. Royce Carroll

Department of Political Science
University of Houston
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