

# David, Yen-Chieh Liao

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Researcher at the Chair of Comparative Politics University of Bamberg

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## RESEARCH INTERESTS

distributive politics, legislative control and oversight in Taiwan and Asian democracies; quantitative study of ideological preference using text data and legislative voting; computational social science.

## EDUCATION

PhD Candidate at Department of Government, University of Essex	Nov 2018 – Expected Jul 2022
MPhil/PhD Student at Department of Government, University of Essex	Oct 2017 – Nov 2018
MA in Public Administration, National Taipei University	Sep 2010 – Feb 2014
BA in Public Administration, National Taipei University	Jun 2005 – Aug 2010

## ADDITIONAL TRAINING

Essex Summer School Social Science Data Analysis

2021 Quantitative Methods for Causal Inference and Policy Evaluation; Advanced Methods for Text-as-Data: Natural Language Processing

2019 Introduction to Bayesian Analysis for the Social Sciences

2018 Ideal Point Estimation and Scaling Methods; Generalized Linear Models

Machine Learning Summer Schools

2021 Standard Student Program and Poster

## PHD DISSERTATION PROJECT

*Title: “Pork Barrel, Polarization and Competition within the Congress: The Applications of Computational Social Science”*

*Chapter 1* Mayors and Pork Barrel: Legislative Experience Bias in Intergovernmental Transfers to Taiwan Municipalities [[paper](#)][[slides](#)][[relication](#)]

*Chapter 2* Electoral Reform and Disunited Polarization: Evidence from Legislative Roll Calls [[paper](#)][[slides](#)][[relication](#)]

*Chapter 3* When Speaking of Pork: Exploring Parliamentary Questions Using NLP Transformers

*Chapter 4* Measuring Party Cohesion on Parliamentary Question Keywords (co-authored with Calvin, Yu-Ceng Liao, Post Doctoral Research Fellow at Taiwan Studies Center, National Chengchi University)

## WORKING PAPERS & WORKS IN PROGRESS

Factionalism and the Red Guards under Mao’s China: Ideal Point Estimation Using Text Data (with Yi-Nung Tsai, National Chengchi University; Dechun Zhang, Leiden University) [[paper](#)] [[slides](#)][[relication](#)]

Income Insufficiency, Party Misperception and Democracy Distrust (with Li Tang; Tzu-Ping Liu, University of Taipei)

This is What We Hope: Estimating Perceptions on Political Trust (with Li Tang, University of Essex and Middlesex University London; Tzu-Ping Liu, University of Taipei)

Topic Models for Short Text (with Julia Ju Yuon Park, University of Essex)

Estimating Fiscal Policy Objectives in the UK with Text Analysis (with Li Tang and Pei Kuang, University of Birmingham)

Measuring China's Online Nationalists on Weibo (with Dechun Zhang, Leiden University)

## EXPERIENCE

### Teaching Assistant

Teaching Assistant to Dr. Johannes Karreth (Ursinus College) 2L Introduction to Quantitative Methods in R, 54<sup>th</sup> Essex Summer School in Social Science Data Analysis, July 26 – August 6 2021

Teaching Assistant to Prof. Ken Benoit (LSE) Quantitative Text Analysis Using R and Dr. Nicole Baerg (University of Essex) Linking Theory with Text as Data, *Empirical Implications of Theoretical Models Europe (EITM Europe)*, Jun 14 - Jun 25 2021

Teaching Assistant to Dr. Akitaka Matsuo (University of Essex), VB21 - Machine Learning with Big Data for Social Scientists, 15<sup>th</sup> ECPR Summer School in Methods and Techniques, Aug 10 - 14 2020

Teaching Assistant to Prof. Royce Carroll, 3L Scaling Methods for Social Science: Measuring Patterns and Preferences in Surveys and Behavior, 53<sup>rd</sup> Essex Summer School in Social Science Data Analysis, Aug 10 – 21 2020

Teaching Assistant to Dr. Iulia Cioroianu (University of Bath), 1B Introduction to Quantitative Text Analysis, 53<sup>rd</sup> Essex Summer School in Social Science Data Analysis, Jul 13 - 24 2020

Teaching Assistant to Dr. Raymond Hick (Columbia University), 1B Introduction to Quantitative Text Analysis, 52<sup>nd</sup> Essex Summer School in Social Science Data Analysis, Jul 13 - 24 2019

### Research Assistant

Graduate Research Assistant to Prof. Royce Carroll, University of Essex, Jun 2019 – Oct 2019

Senior Research Assistant to Prof. Chung-li Wu, Institute of Political Science, Academia Sinica, Feb 2014 – Jul 2017

Graduate Research Assistant to Prof. Ching-jyuhn Luor, Department of Public Administration and Policy, National Taipei University in Taiwan, Jul 2010 - Jan 2014

## SERVICES TO ACADEMIC ACTIVITIES

### Manuscript Referee

Political Studies Review; Economics - The Open-Access, Open-Assessment Journal

### Membership

2019 EPSA; 2020 MPSA; 2020 APSA; 2021 EPSA; 2022 MPSA

### Seminar Organiser

Co-organizer for POPE Research Group (Public Opinion, Parties and Elections) for early career researchers at Department of Government, the University of Essex, Oct 2019 - May 2020.

Co-organizer for HEROES (Helping Each-other Research On Empirical Subjects) / PhD Colloquium at Department of Government, the University of Essex, Oct 2018 - May 2019.

## SKILLS

**Programmings** R (basic statistical analysis, visualization, machine learning in *mlr3* framework, multiple applications to natural language processing), Python (webscraping in Selenium & Scrapy framework, natural language processing, machine learning, deep learning with Tensorflow)

**Database** MySQL & MySQLWorkbench

**Editing** L<sup>A</sup>T<sub>E</sub>X, HTML & CSS (working knowledge of web editing and webscraping), Hugo

**High Performance Computing** AWS, CERES (HPC, University of Essex)

## RESEARCH GRANTS

2022 Departmental Fund (£900) and Travel Grant from Taiwan's Council of Indigenous Peoples for attending 2022 MPSA Conference (USD£678)

2021 Taiwanese Overseas Pioneers Grants (*TOP Grants*), Ministry of Science & Technology in Taiwan (August 2021- July 2022) (USD\$32,000)

2019 Departmental Fund (£450) and Travel Grant from Taiwan's Council of Indigenous Peoples (USD\$630) for attending 2019 EPSA Conference

The 2018 Attendance Scholarships (£250) to Essex Summer School in Social Science Data Analysis

The Taiwan Government Scholarship to Study the Doctoral Programme in the Field of Legislative Studies and Comparative Politics in the UK, Ministry of Education Taiwan (August 2017- July 2021), USD\$168,000

## TOOLKIT

**asmcjr** (with Dave Armstrong, Royce Carroll, Christopher Hare, Ryan Bakker, Keith Poole, Howard Rosenthal)

The asmcjr package supports the book "*2nd Analyzing Spatial Models of Choice and Judgment*", and streamlined functions for scaling and visualising estimates with ggplot2.

**legisCrawler** (with Calvin Yu-Ceng Liao)

An automation web crawling framework for retrieving parliamentary questions on The Website of Legislative Yuan (<https://lis.ly.gov.tw/>) based on Selenium and Chrome browser.

**bisCrawler** (with Li Tang)

An automation web crawling framework for retrieving for Extracting Central Bankers' Speeches on the Website of Bank for International Settlements (<https://www.bis.org>) based on Selenium and Chrome browser.

**legisTaiwan** (coming soon)

An R package for searching and retrieving the titles of budgets, the legislation, the speeches and legislator demographics from Taiwan Parliamentary Data Catalogs via Parliamentary Library API.

## REFERENCE

**Prof. Royce Carroll**, Professor in Department of Government, The University of Essex and Director of The Essex Summer School in Social Science Data Analysis.

**Dr. Nicole Baerg**, Senior Researcher at the Bank of England and Senior Lecturer (Associate Professor) in Department of Government, University of Essex

**Dr. Pei Kuang**, Associate Professor in Macroeconomics, University of Birmingham

**Prof. Chung-li Wu**, Research Fellow (Professor) and Director, Institute of Political Science, Academia Sinica, Taipei.

**Dr. Tamir Libel**, Senior Lecturer (Associate Professor) at the Swedish Defence University