David, Yen-Chieh Liao

PhD Candidate at Department of Government
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RESEARCH INTERESTS

distributive politics, legislative control and oversight, quantitative study of ideological position and preference, natural language processing, computational social science

CURRENT POSITION

Pre-doctoral Researcher of Legislators between Accountability and Collective Agency (LACAN) at the Chair of Comparative Politics, University of Bamberg   Dec 2021-

TOP Grants Fellowship, Ministry of Science & Technology Taiwan   Aug 2021- Jul 2022

EDUCATION

PhD Candidate at Department of Government, University of Essex   Nov 2018 – Expected Sep 2022

MPhil/PhD Student at Department of Government, University of Essex   Oct 2017 – Nov 2018

MA in Public Administration and Policy, National Taipei University   Sept 2010 – Feb 2014

BA in Public Administration and Policy, National Taipei University   Jun 2005 – Aug 2010

ACADEMIC 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 Electoral Reform and Disunited Polarization: Evidence from Legislative Roll Calls (**Presentation at APSA 2020 & MPSA 2020**) [paper] [slides]

Chapter 2 Electoral Reform and Pork Barrel in Parliamentary Questions (**Presentation at COMPTEXT 2022**)

Chapter 3 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 **Presentation at APSA 2022**)

Chapter 4 Mayors and Pork Barrel: Legislative Experience Bias in Intergovernmental Transfers to Taiwan Municipalities (**Presentation at EPSA 2019**) [paper] [slides]

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 | **Presentation at Asian PolMeth VIII 2022**) [paper] [slides] [code]

Income Insufficiency, Party Misperception and Democracy Distrust (with Li Tang; Tzu-Ping Liu, University of Taipei | **Presentation at MPSA 2022**) [slides]

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)

State-led Nationalism: Measuring China's Online Nationalists on Weibo (with Dechun Zhang, Leiden University)

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)

EXPERIENCE

Teaching Assistant

2021 Introduction to Quantitative Methods in R (Instructor: Dr. Johannes Karreth, Ursinus College), 54th Essex Summer School, Jul 2021

—— Quantitative Text Analysis Using R (Instructor: Prof. Ken Benoit, LSE) and Linking Theory with Text as Data (Instructor: Dr. Nicole Baerg), Europe Empirical Implications of Theoretical Models, May 2021

2020 Machine Learning with Big Data for Social Scientists (Instructor: Dr. Akitaka Matsuo), 15th ECPR Summer School, Aug 2020

—— Scaling Methods for Social Science: Measuring Patterns and Preferences in Surveys and Behavior (Instructor: Prof. Royce Carroll), 53rd Essex Summer School, Aug 2020

—— Introduction to Quantitative Text Analysis (Instructor: Dr. Iulia Cioroianu, University of Bath), 53rd Essex Summer School, Jul 2020

2019 Introduction to Quantitative Text Analysis (Instructor: Dr. Raymond Hick, Columbia University), 52nd Essex Summer School, Jul 2019

Research Assistant

Research Officer 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

SKILLS

Programmings R (statistical analysis, parallel computing, machine learning under *mlr3* framework, natural language processing), Python (webscraping in Selenium & Scrapy, natural language processing, machine learning and deep learning with Tensorflow), HTML & CSS (working knowledge in webscraping and website editing)

Computing AWS, CERES (High Performance Computing at University of Essex)

Editing LaTeX, Hugo, Markdown

Advertising Google Analytics

Software & IDE PyCharm, VScode, JupyterLab, Rstudio

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

Organizer for POPE Research Group (Public Opinion, Parties and Elections), Oct 2019 - May 2020

Organizer for HEROES (Helping Each-other Research On Empirical Subjects) / PhD Colloquium, Oct 2018 - May 2019

RESEARCH GRANTS

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

2021 Ministry of Science and Technology Taiwanese Overseas Pioneers Grants (Aug 2021- Jul 2022) (USD$32,000)

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

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

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

TOOLKIT

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

bisCrawler An automation web crawling framework for retrieving for extracting speeches from the Website of Bank for International Settlements (https://www.bis.org) based on Selenium and Chrome browser

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

REFERENCE

Prof. Royce Carroll Professor in Department of Government, the University of Essex and Director of 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

Prof. Chung-li Wu Research Fellow (Professor) and the Head of Institute of Political Science at Academia Sinica, Taiwan

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

Dr. Tamir Libel Senior Lecturer (Associate Professor) in Department of Leadership and Command & Control at the Swedish Defence University