

Siting Estee Lu

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Education

PhD	University of Edinburgh , PhD Economics	Oct 2020 – Aug 2025
	• Thesis Title: Essays on Constrained Decision-Making and Strategic Interactions (Defended - No Corrections: 20 Aug 2025, Awarded: 1 Sep 2025)	Edinburgh, UK
	• Supervisors: Prof. Ed Hopkins & Dr. Axel Gottfries	
Visit	Columbia University , Visiting Scholar	Jan 2025 – May 2025
	• Cognition and Decision Lab	New York, US
	• Host Faculty: Prof. Michael Woodford	
MSc	University of Edinburgh , MSc Economics (Scottish Graduate Programme in Economics)	Sep 2018 – Aug 2019
	• Dissertation focus on Behavioural Game Theory	Edinburgh, UK
BSc	National University of Singapore , BSc (Honours) Economics	Aug 2012 – Jun 2016
	• Specialized in Applied and Policy Economics	Singapore

Research Interests

Behavioural Economics, Game Theory, Learning, Market Design, Large Language Model Applications

Academic/Teaching Experience

Stipendiary Fellow	University of Edinburgh	Sep 2025 –
2025	ECNM11043 - Econometrics 1 (Postgraduate)	
2025	ECNM10070 - Topics in Microeconomics (Year 3 Undergraduate)	
2025	ECNM10090 - Experimental Economics (Year 3 Undergraduate)	
2025	ECNM08013 - Economics 1 (Year 1 Undergraduate)	
Tutor	University of Edinburgh	Sep 2020 – Aug 2025
2024	ECNM08016 - Statistical Methods for Economics (Year 2 Undergraduate)	
2022-24	ECNM10066 - Behavioural Economics (Year 3 Undergraduate)	
2021, 23-24	ECNM08013 - Economics 1 (Year 1 Undergraduate)	
2020	ECNM08004 - Economic Principles (Year 1 Undergraduate)	

Job Market Paper

Costly Job Search with Inattentive Workers	2025
<i>Keywords:</i> Rational Inattention, Partially Directed Search	
Abstract: Labour market mismatch can arise from workers having limited attention. This paper proposes a Generalized Partially Directed Search model, extending existing literature by allowing inattentive workers to have diverse priors and heterogeneous attention costs. I show that mismatch can be inherited from bias in workers' default search strategies, and heterogeneous attention costs could contribute to greater variability in equilibrium outcomes. I also explore equilibrium multiplicity that was not adequately accounted for in previous studies. Equilibria where workers adopt different application strategies may generate both higher market efficiency and lower monopsony power than workers employing the same application strategies.	
This information-theoretic approach offers insights on attention-based policies. Preprint	

Publications/Working Papers

Game-theory behaviour of large language models: The case of Keynesian beauty contests	2025
<i>Economics and Business Review</i> 11 (2), 119-148, 10.18559/ebr.2025.2.2182	
<i>Keywords:</i> Large Language Models, Competitive Games	

Abstract: The growing adoption of large language models (LLMs) presents potential for deeper understanding of human behaviours within game theory frameworks. This paper examines strategic interactions among multiple types of LLM-based agents in a classical beauty contest game. LLM-based agents demonstrate varying depth of reasoning that fall within a range of level-0 to 1, which are lower than experimental results conducted with human subjects in previous literature, but they display similar convergence pattern towards Nash Equilibrium choice in repeated setting. Through simulations that varies the group composition of agent types, I found that environment with lower strategic uncertainty enhances convergence for LLM-based agents, and environments with mixed strategic types accelerate convergence for all. Results with simulated agents not only convey insights on potential human behaviours in competitive setting, they also offer valuable understanding of strategic interactions among algorithms.

Learning to Coordinate: Adaptive Learning and Equilibrium Selection in Labour Market

2025

Keywords: Adaptive Learning, Coordination, Job Search

Abstract: Workers' past application choices can act as heuristics for future decisions. By integrating learning theory into search model, this work explores the role of experiences on workers' application choices. It provides an evolutionary perspective to the labour market dynamics, and offers insights on equilibrium selection. I propose two market structures, where wages are unobservable and observable to workers, and I model workers' application strategies over time using reinforcement learning and best response dynamics respectively. I show that in presence of multiple equilibria, experience-based learning generally leads workers to coordinate on a more efficient, locally asymptotically stable equilibrium, in which they apply with high probability to different firms, in both static and dynamic wage-setting environments. Learning models not only highlight potential mechanisms for equilibrium selection, they also suggest process-oriented policies to improve market efficiency. [Preprint](#)

Economics Arena for Large Language Models (with Shangmin Guo, Haoran Bu, Haochuan Wang, Yi Ren, Dianbo Sui, Yuming Shang)

2024

Keywords: Large Language Models, Game Theory, Benchmarks

Abstract: Large language models (LLMs) have been extensively used as the backbones for general-purpose agents, and some economics literature suggest that LLMs are capable of playing various types of economics games. Following these works, to overcome the limitation of evaluating LLMs using static benchmarks, we propose to explore competitive games as an evaluation for LLMs to incorporate multi-players and dynamicise the environment. In this work, we provide an economics arena for the LLMs research community as a dynamic simulation to test abilities of LLMs (i.e. rationality, strategic reasoning ability, instruction-following capability). [arXiv](#)

Status Signalling with Luxury and Cultural Goods

2020

Keywords: Social Status, Signalling, Conspicuous Consumption, Inconspicuous Consumption, Cultural Goods

Abstract: As the world shifts towards greater consumerism, there is an increasing tendency for individuals to distinguish themselves from the others through the goods that they purchase, which assert the society of their taste and implicit social status. While the pursuit of social status has been well-explored, most studies in this area tend to focus on luxury consumption, limited research investigated the inclusion of cultural goods (books, etiquette classes, etc.) as another signalling tool. The main objective of the paper, therefore, seeks to understand and provide a theoretical grounding for individuals' choices between the status goods, and its implications for policy formulations and social mobility. [RePEc](#)

Forecasting from Human Pre-Play Chats: Evaluating Predictive Accuracy of AI and Human in Strategic Games (with Pedro González-Fernández, Helena Normann)

IN PREPARATION

Professional Experiences

Fiscal Analyst (Fixed Term), Scottish Fiscal Commission

Nov 2019 – May 2020
Edinburgh, UK

- Property tax, fiscal forecasting, policy briefs, housing price forecasting models.

Market Analyst in Big data, AI/Cognitive Computing Research, IDC Asia Pacific

Jan 2018 – Jul 2018
Singapore

- AI consulting, technology trends and user demand predictions, competitive analysis.

Research Analyst, Datarama Technology

Jun 2016 – Jan 2018
Singapore

- Data sourcing, data architecture design, database management, risk rating

Grants, Awards & Fellowships

2025-26	Moray Endowment Fund, Research Grant (£2,000)
2025	European Economic Association (EEA) Travel Grant
2025	Economics Graduate Research Scholarship
2024	Shortlisted for Student Tutor of the Year (University-wide), Teaching Awards
2023	The Scottish Economic Society Small Grants (£500)
2020-24	Research and Training Scholarship, University of Edinburgh
2014	National University Singapore Awards for Study Abroad (NASA) Exchange Scholarship
2013	National University of Singapore French Language Immersion Award

Conferences/Workshop Presentations

2025	EEA Congress (Bordeaux, France)
2025	15th Annual Conference of the French Association of Experimental Economics (ASFEE) (Nancy, France)
2024	Language Gamification Workshop at NeurIPS (Vancouver, Canada)
2024	Foundations of Utility and Risk (FUR) Conference (Brisbane, Australia)
2024	Scottish Graduate Programme in Economics (SGPE) PhD Conferences (Edinburgh, UK)
2023	SABE-IAREP Conference (Nice, France)
2023	10th Toulouse Economics and Biology Workshop (Toulouse, France)
2023	5th Queen Mary University of London (QMUL) Economics and Finance Workshop for PhD & Post-doctoral Students, <i>Presenter and Discussant</i> (London, UK)
2023	SGPE PhD Conferences (Edinburgh, UK)
2021	SGPE PhD Conferences (Edinburgh, UK)
2020	15th Annual International Symposium on Economic Theory, Policy & Applications (Virtual)

Advanced Trainings and Summer Courses

2024	1st Summer School in Experimental and Behavioral Economics, European Economic Review
2024	Cognitive Foundations of Decision-Making Summer School (RISL $\alpha\beta$)
2023	The 33rd Advanced School in Economic Theory: Imperfect Cognition and Economic Behaviour
2023	2nd Summer School of Computational and Experimental Economics (BESLab)
2023	Toulouse Summer School in Quantitative Social Sciences
2023	Replication Games - Comment Report: on Proto, E., Rustichini, A., & Sofianos, A. (2022). <i>Intelligence, errors, and cooperation in repeated interactions</i> . <i>The Review of Economic Studies</i> , 89(5), 2723-2767. (with Peter Moffatt, Stefania Sitzia and Graciela Zevallos)
2022	University of East Anglia Behavioral Game Theory Summer School - Experimental Idea: <i>Would Selective Recall from Past Experiences and Feedback Affect People's Judgement of Their Ranking</i>

Miscellaneous

Activities	Student representative, Programme Rep (PhD Economics), University of Edinburgh
Technical	Python, L ^A T _E X, Mathematica, STATA, SQL, R, Mongodb, Neo4j, IBM i2
Certificates	DELF B1 and B2 French Attestation de Reussite, Financial Risk Management I
Languages	English, Mandarin Chinese, French (Intermediate, B2), German (Basic, A1)
Citizenship	Singapore

References

Prof. Ed Hopkins ↗ ed.hopkins@kcl.ac.uk Economics Department, King's College London Dr. Axel Gottfries ↗ Axel.Gottfries@ed.ac.uk School of Economics, University of Edinburgh	Dr. Tatiana Kornienko ↗ tatiana.kornienko@kcl.ac.uk Economics Department, King's College London
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