

# Siting Estee Lu

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## Education

<b>PhD</b>	<b>University of Edinburgh</b> , PhD Economics <ul style="list-style-type: none"><li>Thesis Title: Essays on Constrained Decision-Making and Strategic Interactions (Defended - No Corrections: 20 Aug 2025, Awarded: 1 Sep 2025)</li><li>Supervisors: Prof. Ed Hopkins &amp; Dr. Axel Gottfries</li></ul>	Oct 2020 – Aug 2025 Edinburgh, UK
<b>Visit</b>	<b>Columbia University</b> , Visiting Scholar <ul style="list-style-type: none"><li>Cognition and Decision Lab</li><li>Host Faculty: Prof. Michael Woodford</li></ul>	Jan 2025 – May 2025 New York, US
<b>MSc</b>	<b>University of Edinburgh</b> , MSc Economics (Scottish Graduate Programme in Economics) <ul style="list-style-type: none"><li>Dissertation focus on Behavioural Game Theory</li></ul>	Sep 2018 – Aug 2019 Edinburgh, UK
<b>BSc</b>	<b>National University of Singapore</b> , BSc (Honours) Economics <ul style="list-style-type: none"><li>Specialized in Applied and Policy Economics</li></ul>	Aug 2012 – Jun 2016 Singapore

## Research Interests

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

## Academic/Teaching Experience

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

## Job Market Paper

**Costly Job Search with Inattentive Workers** 2025

*Keywords: 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

*Economics and Business Review* 11 (2), 119-148, [10.18559/eb.2025.2.2182](https://doi.org/10.18559/eb.2025.2.2182)

*Keywords: 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

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

## Conferences/Workshop Presentations

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

## Advanced Trainings and Summer Courses

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<b>2024</b>	1st Summer School in Experimental and Behavioral Economics, European Economic Review
<b>2024</b>	Cognitive Foundations of Decision-Making Summer School (RISL $\alpha\beta$ )
<b>2023</b>	The 33rd Advanced School in Economic Theory: Imperfect Cognition and Economic Behaviour
<b>2023</b>	2nd Summer School of Computational and Experimental Economics (BESLab)
<b>2023</b>	Toulouse Summer School in Quantitative Social Sciences
<b>2023</b>	Replication Games - Comment Report: <i>on Proto, E., Rustichini, A., &amp; Sofianos, A. (2022). Intelligence, errors, and cooperation in repeated interactions. The Review of Economic Studies, 89(5), 2723-2767.</i> (with Peter Moffatt, Stefania Sitzia and Graciela Zevallos)
<b>2022</b>	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

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<b>Activities</b>	Student representative, Programme Rep (PhD Economics), University of Edinburgh
<b>Technical</b>	Python, $\LaTeX$ , Mathematica, STATA, SQL, R, MongoDB, Neo4j, IBM i2
<b>Certificates</b>	DELF B1 and B2 French Attestation de Reussite, Financial Risk Management I
<b>Languages</b>	English, Mandarin Chinese, French (Intermediate, B2), German (Basic, A1)
<b>Citizenship</b>	Singapore

## References

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