

# Guo Mia Bai 白果

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## EDUCATION

University College London (UCL)

PhD in Economics

Supervisors: Prof Martin Cripps, Dr Deniz Kattwinkel, Prof Konrad Mierendorff

London, UK

Expected 2023

University College London (UCL)

MSc in Economics (Distinction)

London, UK

November 2016

University of Liverpool<sup>1</sup>

BSc in Economics (First Class)

Liverpool, UK

July 2015

## RESEARCH

### Interests

Microeconomic theory, information economics, search and learning.

### Working papers

#### **Private Information Acquisition and Preemption: a Strategic Wald Problem**

*Job Market Paper*

This paper introduces strategic preemption motives into a dynamic information acquisition model. Two players can acquire costly information about an unknown state before taking an irreversible safe or risky action. The risky action gives the players a higher payoff than the safe action only in the high state and there is a first-mover advantage associated with it. The competition is private as the action taken and the information acquisition are not observable. Examples include market entry, R&D races and priority races in research. I show that, depending on prior beliefs, information acquisition can be a strategic complement or a strategic substitute. When the players have sufficiently uncertain prior beliefs, multiple equilibria, where players use the random stopping strategy, can be sustained.

#### **Linear Search or Binary Search: Time Risk Preferences and Pool Sizes**

This paper studies how time risk attitude and patience level affect an agent's optimal choice of a sequence of pooled tests within a dynamic single agent's model. To disentangle the effects of time risk attitude and the patient level, I consider a generalized expected discounted utility function. I show that when the agent's prior belief is uniform, only Linear Search or Binary Search can be optimal. All other sequences of the tests are suboptimal. The optimality of the sequence of linear searches or binary searches depends on the tradeoff between the time risk attitude and the patience level.

#### **Learning How People Learn**

This paper investigates whether it is possible for a designer to learn how a decision maker learns from the information. The decision maker observes signals about an unknown payoff-relevant state, learns about the state from the signals and then takes an action at each time. A designer designs the payoff the decision maker obtains, observes the decision maker's signals and actions, and then tries to learn how this decision maker learns from the information. This paper investigates a starting point of this

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<sup>1</sup> 4-Year undergraduate course: Year 0-1 at Xian Jiaotong-Liverpool University (China). Year 2-3 at the University of Liverpool.

problem: given the common knowledge that the decision maker is Bayesian but the prior is unknown, is it possible for the designer to learn the decision maker's prior? This paper studies the probability of the designer learning the decision maker's prior and characterises the optimal payoff structure that maximises this probability.

## TEACHING EXPERIENCES

<b>Teaching Assistant, UCL</b>	<b>Gower Street, London</b>
Economics of Information	2019, 2020-2022
Game Theory	2017, 2020, 2021
Economics	2021
Microeconomics	2017, 2018
Behavioural Economics	2017
Applied Economics	2017

## RESEARCH POSITION

Research Assistant, UCL, Dr Nikita Roketskiy	2019-2020
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## REFERENCES

Prof Martin Cripps University College London Department of Economics economics.jobmarket@ucl.ac.uk	Dr Deniz Kattwinkel University College London Department of Economics economics.jobmarket@ucl.ac.uk	Prof Vasiliki Skreta University of Texas, at Austin, UCL and CEPR Department of Economics economics.jobmarket@ucl.ac.uk
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## MISCELLANEOUS

**Awards:** Brian Hillier Memorial Prize (University of Liverpool)

**Technical Skills:** Experienced with MATLAB, STATA and LaTeX.

**Languages:** English (Fluent), Mandarin Chinese (Native).