# Qingchao Zeng

Department of Economics, University of Fribourg, Phone: +41-77-231-038-9 90 boulevard of Pérolles, 1700, Fribourg, Switzerland Email:qingchao.zeng@unifr.ch Employment University of Fribourg 2025 - present Post-doctoral Fellow - Chair: Prof. Dr. Berno Büchel Education 2019 - 2024 Ph.D. in Economics, University of Essex - Supervisors: Simon Weidenholzer and Friederike Mengel **Beihang University** 2016 - 2019 Master in Statistics, 2012 - 2016 Bachelor in Mathematics, **Beihang University Research Interests** Microeconomic theory, Evolutionary Game Theory, Social Networks

# Working in Progress

# Network Formation with Local Benefits

**abstract**: We consider a non-cooperative model of network formations where agents decide on whom to form costly links to. Links are unilaterally formed and payoff flows one way to the active side. We study discontinuous information flows where agents only receive benefits from other agents that are at a distance of two in the network. For the static game, we show that the set of Nash equilibria encompasses a multiplicity of core-periphery network structures. We further study a noisy best response process to obtain long-run predictions. Doing so, we find that the set of stochastically stable states retains a multiplicity of network structures, many of which are not efficient.

# Stochastic Stability in Coordination Games Under Heterogeneous Constraints

**abstract**: In this paper, we present an evolutionary model of coordination and network formation where agents have two different linking constraints. We examine the agents' choices regarding both actions in coordination games and linking strategies, with a focus on stochastic stability. We find that an increase in the constraints leads to a higher inclination toward risk-dominant strategies. The co-existence of risk-dominant action and the payoff-dominant action starts to emerge when the lower constraint decreases and the higher constraint increases.

## Publications

Ping, Li, Zhang Ziyi, Yang Tianna, and Zeng Qingchao (2018). "The relationship among China's fuel oil spot, futures and stock markets". In: *Finance Research Letters* 24, pp. 151–162.

Zeng, Qingchao (2019). "Social Coordination and Network Formation with Heterogeneous Constraints". In: Game Theory for Networking Applications, pp. 153–162.

## **Conferences and Seminar Presentations**

- 2024: Royal Economic Society 2024 Annual Conference
- 2023:  $10^{th}$  China Meeting on Game Theory and Its Applications (CMGTA)

### Teaching

Assistant LecturerIntermediate MicroeconomicsAssistant LecturerMathematical Methods in EconomicsAssistant LecturerIntroduction to Econometric Methods

(2022 -23, 2023-24) (2023 Spring, 2024 Spring) (2022 Autumn, 2023 Autumn)

#### Scholarships

Social Sciences Doctoral Scholarship, University of Essex, 2019-2023 Second-class Academic Scholarship, Beihang University, 2017 National Scholarship for postgraduate students, Beihang University, 2016 National Endeavor Scholarship, Beihang University, 2014

#### Lguage

Fluent in English, Native in Mandarin, Advanced in R and MatLab

#### Reference

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**Prof. Dr. Berno Büchel** University of Fribourg berno.buechel@unifr.ch Prof. Friederike Mengel University of Essex fr.mengel@gmail.com

Prof. Zhiwei Cui Renmin University of China zhiweicui@ruc.edu.cn