

# Zuo Yang

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Department of Economics, National University of Singapore

## EDUCATION

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Ph.D. Economics, National University of Singapore	Aug 2020 – June 2025
MSc. Economics, National University of Singapore	Aug 2019 – July 2020
B.A. Economics, Huazhong University of Science and Technology	Sep 2014 – June 2018

## WORKING PAPERS

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### Rational Strategic Behaviors in Finite Models

**Abstract:** Rational behavior needs to be justified by rational beliefs (or types) in complex game situations. Such beliefs (or types) may be infinitely many, even in finite games. In this paper, we utilize the framework in Chen et al. (2015) to study rational behavior in game situations where players may have general preferences. We show that for any analytical model of a finite game, there exists a finite model that gives rise to the exact same rational behavior. In particular, the Iterated Elimination of Never Best Responses (IENBR) procedure in any type structure model can be implemented by a finite type structure model. We also extend the analysis to situations with non-singleton beliefs. We find that, under certain decision criteria, the (Optimistic/Wald) Rationalizability procedure can also be implemented by a finite type structure model.

### Backward Induction: A Characterization

**Abstract:** The main purpose of this paper is to provide a foundation for backward induction (Perea 2014) via the notion of future rationality in game environments. We formulate and show that “common knowledge of future rationality” ( $CKR^F$ ) strategically implies subgame rationalizability in dynamic games. In doing so, this paper offers a foundation for backward induction: in the generic case of perfect-information games,  $CKR^F$  leads to the unique backward induction outcome. We also formulate an iterative backward induction procedure that gives rise to subgame rationalizability in dynamic games and prove its order independence.

## TEACHING EXPERIENCE

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*Teaching Assistant, Department of Economics, National University of Singapore*

EC6101 Advanced Microeconomics Theory (Ph.D. Course)	Spring 2024
EC3303 Financial Economics	Fall 2022
EC3342 International Finance	Spring 2023

*Exam Grader, Department of Economics, National University of Singapore*

## SUMMER SCHOOL AND CONFERENCES

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EPICENTER Summer Course in Epistemic Game Theory, Maastricht University	July 2024
Singapore Joint Economic Theory Workshop	Nov 2024
NUS Theory Lunch Workshop	

## AWARDS AND SCHOLARSHIPS

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Conference Funding For Graduate Students (SGD2,000), NUS	July 2024
Research Scholarship, NUS	2020-2024
Best Academic Performance in Core Modules (SGD5,000), NUS	Fall 2019

## MISCELLANEOUS

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Programming: Python

Language: English, Chinese (Native)

*Updated on Oct 16, 2025*