



Education

- 2022– **Ph.D. in Applied Mathematics**, *University Paris 1*, Paris, France
 Present Dissertation: Theory of Fixed Points with Discontinuities and Applications in Game Theory
 Advisor: Philippe Bich
- 2021–2022 **Master in Modeling and Mathematical Methods in Economics and Finance**,
University Paris 1, Paris, France
 Très bien
 Master thesis: Fixed-Point Theorems for Discontinuous Mappings on Topological Vector Space.
- 2019–2021 **Master in Fundamentals mathematics**, *University Paris 7*, Paris, France
 Master thesis: Asymptotic of the Bergman kernel on a projective complex manifold.
- 2013–2017 **Bachelor in Mathematics**, *Ocean University of China*, QingDao, China

Publications

- Lu Yu. Remarks on “some fixed point theorems for s -convex subsets in p -normed spaces”.
The Journal of Analysis, Vol. 32, No. 2, pp. 1139-1143, 2023.
- Lu Yu. Existence and structure of Nash equilibria for supermodular games. *Order*, pp.1-12,
 2024.
- Lu Yu. Generalization of Zhou fixed point theorem. *International Game Theory Review*,
 2024.
- Lu Yu. Notions of relative interior for compact convex sets. to appear in *Journal of Convex
 Analysis*, accepted, 2024.
- Lu Yu. Nash equilibria of quasisupermodular games. to appear in *Operations Research
 Letters*, accepted, 2024.

Preprints under review

- Lu Yu. The degree sequence of the preferential attachment model. minor revision in *Discrete
 Applied Mathematics*.
- Lu Yu. Nash equilibria of games with generalized complementarities. under review in
International Journal of Game Theory.
- Lu Yu. A degree theoretical proof of Singbal’s fixed point theorem. under review in *Analysis
 Mathematica*.
- Lu Yu. Fixed point theorems for correspondences on posets. under review in *Economic
 Theory*.

Preprints

- Philippe Bich and Lu Yu. A Brouwer-Tarski fixed-point theorem.
- Lu Yu. Monotone comparative statics of parameterized games.
- Lu Yu. Nash equilibria in discontinuous and non-quasiconcave games.

Lu Yu. Existence of pure stationary equilibria for stochastic games.

Lu Yu. Discounted stochastic game with unbounded costs on compact action spaces.

Invited talks

Conference

2024.10.28-10.30 Young Researchers in Applied Mathematics conference, ENS Lyon, Lyon, France

2025.01.06-01.10 Asian School in Economic Theory, Abu Dhabi, the United Arab Emirates

Seminar

2023.06.23 Mathematics Day in University Paris 1, Paris, France

2024.10.14 Paris Junior Game Theory Seminar, Institut Henri Poincaré, Paris, France

Workshop

2024.07.10-07.12 Sorbonne Workshop in Economic Theory (poster session), Venice, Italy

2024.12.05-12.07 IX Hurwicz Workshop on Mechanism Design Theory(Chair for session Mathematical Economics), Warsaw School of Economics, Banach Center, Warsaw, Poland

Teaching experience

2022 S1 **Mathematics foundation**, *Teaching assistant for exercise session 24h*, University Paris 1

2022 S2 **Analysis mathematics**, *Teaching assistant for exercise session 24h*, University Paris 1

2023 S2 **Analysis mathematics**, *Teaching assistant for exercise session 48h (for 2 groups)*, University Paris 1

Skills

Programming Python, Matlab , C++, L^AT_EX

Languages English (B2), French (B2) , Chinese

Miscellaneous

I organized summer school mathematics courses for high school students.

I am passionate about swimming and roller skating.

I am skilled at cooking and looking after children.