

Byunghoon Kim

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EDUCATION

University of Pennsylvania

Ph.D. in Economics

2019 – Present

- **Advisors:** George Mailath and Kevin He

Sogang University

B.A. in Economics, Summa Cum Laude

2011 – 2015

RESEARCH AND TEACHING INTERESTS

Primary: Microeconomic Theory, Game Theory

Secondary: Industrial Organization, Organizational Economics, Innovation and R&D

WORKING PAPERS

“Serial Experimentation with Career Concerns” (Job Market Paper)

With Marcus Tomaino

Abstract: This paper develops a model of serial experimentation where an entrepreneur experiments with different ideas until one of them produces a success. The entrepreneur starts with one idea and new ideas arrive over time, but switching from the current idea to an untried new idea is irreversible and requires funding by an investor. A more creative entrepreneur both generates ideas faster and creates more profits when an idea succeeds. Since creativity is not directly observable, investors infer creativity from an entrepreneur’s timing of switching, creating an incentive for the entrepreneur to distort their behavior to influence these perceptions. Equilibrium distortion differs from the standard signaling intuition: more creative type distorts towards less frequent switching while less creative type distorts towards more frequent switching, compared to a benchmark where creativity is observable. This arises for two reasons: (i) switching time is an imperfect signal of creativity, and (ii) investors’ uncertainty about creativity affects the entrepreneur’s continuation payoff after switching. We also endogenize investors’ preference for creativity, accounting for the risk that projects are abandoned when the entrepreneur switches. This abandonment risk creates a trade-off for the venture capitalist: while a more creative entrepreneur generates more profitable ideas, they are also more likely to abandon projects prematurely, potentially leading investors to favor less creative types who are more committed to sticking with their projects. Under this general framework, we explore how the investors’ equilibrium preference over creativity is affected by the observability of this trait, and characterize the equilibrium when creativity is either preferred or not by the investor.

“Innovation Races with Endogenous Transparency”

With Marcus Tomaino

Abstract: This paper examines the strategic role of transparency in a ‘winner-takes-all’ innovation race, where two competing firms race to achieve three technological breakthroughs in order to obtain the innovation. At each stage of the race, firms decide on their level of transparency which moderates the likelihood of their technological breakthroughs leaking to their competitors. Our model reveals that full transparency can emerge as an equilibrium strategy during the early stages of the race, but also that transparency must decline as technological leads extend. If transparency enhances productivity, then a firm’s openness gradually decreases as its lead grows, while if transparency solely affects information diffusion, the firm’s equilibrium strategy becomes “bang-bang” — either fully transparent or fully opaque at any given stage. These findings offer insights into empirical transparency dynamics such as the evolving strategies of research companies currently engaged in the race for artificial general intelligence, where early transparency has given way to increasing secrecy.

WORK IN PROGRESS

“Signal Jamming by Shirking and Theory of Tenure”

TEACHING EXPERIENCE

Intermediate Microeconomics

Teaching Assistant for Prof. George Mailath

University of Pennsylvania

Spring 2023, Spring 2024

Intermediate Microeconomics

Teaching Assistant for Prof. Francesco Agostinelli

University of Pennsylvania

Fall 2023

Microeconomic Theory I (Graduate)

Teaching Assistant for Prof. Steven Matthews and Prof. Andrew Postlewaite

University of Pennsylvania

Fall 2021

Microeconomic Theory II (Graduate)

Teaching Assistant for Prof. George Mailath

University of Pennsylvania

Spring 2021

Microeconomic Theory I (Graduate)

Teaching Assistant for Prof. Aislinn Bohren and Prof. Andrew Postlewaite

University of Pennsylvania

Fall 2020

RESEARCH EXPERIENCE AND OTHER EMPLOYMENT

Research Assistant

For Prof. Kevin He

University of Pennsylvania

2022

PROFESSIONAL ACTIVITIES

Stony Brook International Conference on Game Theory

Presenter

2024

Pennsylvania Economic Theory Conference

Poster Session

2023

HONORS, SCHOLARSHIPS, AND FELLOWSHIPS

Graduate Fellowship

University of Pennsylvania

2019 – 2023

REFERENCES

Prof. George Mailath

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Prof. Kevin He

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Prof. Juuso Toikka

The Wharton School
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