Nawaaz Khalfan

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My research is in microeconomic theory, with a focus on models of information acquisition, mechanism design and search. I explore questions related to how agents use tools such as costly inspection, signalling and indexing in order to acquire and share information, and what the resulting outcomes look like in strategic settings.

University of Pennsylvania

Placement Director: Iourii Manovskii, manovskii@econ.upenn.edu, 215-898-7194
Placement Director: Holger Sieg, holgers@econ.upenn.edu, 215-898-7194
Graduate Coordinator: Gina Conway, gnc@sas.upenn.edu, 215-898-5691

Education

University of Pennsylvania (2019-)
PhD candidate in Economics, expected July 2023
Thesis: "Strategic Search and Exploration"
Committee: Rakesh Vohra, George Mailath, J. Aislinn Bohren

University of Pennsylvania (2016-2019)
Master of Economics
Thesis: "Search with Evolving Outside Options"
Readers: Rakesh Vohra, Andrew Postlewaite

The Australian National University (2011-2014)
Bachelor of Economics with first class honours and a minor in Econometrics
Thesis: "Comparing Patent Regimes: An Analysis of Sequential Innovation under Incomplete Contracts"
Supervisor: Rohan Pitchford

Canberra Grammar School (2005-2010)
Higher School Certificate, New South Wales

Referees

Rakesh Vohra, George A. Weiss and Lydia Bravo Weiss University Professor, rvohra@seas.upenn.edu, 215-898-6777

George Mailath, Professor of Economics, Walter H. Annenberg Professor in the Social Sciences, gmailath@econ.upenn.edu, 215-898-7908

J. Aislinn Bohren, Associate Professor of Economics, abohren@sas.upenn.edu, 215-898-7908

Research Fields

Microeconomic Theory, Information Economics, Search and Exploration, Mechanism and Market Design, Game Theory

Research Papers

1. "Optimal Allocation with Noisy Inspection" [Job Market Paper]

A principal receives an unknown reward from allocating to an agent who has private information about the reward. Prior to allocating, the principal may elicit a report from the agent and inspect them at a cost, but must do so without transfers. When the private information is noisy, the unique separating mechanism that maximizes the principal's expected return segments signals into two groups, inspects the high types, allocating to them only if the inspected return is sufficiently positive, and doesn't inspect low types, compensating them with a small probability of allocation. This relates to a number of applied settings such as employer hiring strategies, public grant mechanisms and portfolio investment rules.

2. "Strategic Private Exploration"

In a strategic exploration game, multiple players determine the order in which they explore unknown options with the objective of maximizing the sum of discovered rewards. Exploration is private in the sense that players cannot condition the order in which they explore on their competitor's decisions. Equilibrium exploration procedures are determined, and losses characterized as a function of how the rewards are split when simultaneously explored by multiple players. This informs how we should design markets around such strategic exploration games such as patent races, research and development tournaments and antitrust regulation.

3. "Pandora's Linear Program" with Rakesh Vohra

In this article, we map Weitzman's canonical search problem into a linear program that allows us to re-derive existing results and extend the setup to problems pertaining to strategic search, information acquisition, index manipulation and robust search.

Research Projects

"Optimal Allocation with Sequential Testing"

"Optimal Allocation with Noisy Search"

"Manipulation Robust Search Procedures"

Teaching Fields

Microeconomics, Economic Theory, Mechanism Design, Market Design, Game Theory

Teaching Experience

The University of Pennsylvania

As instructor:

BDS 509: Applied Game Theory - 2022 Summer

ECON 1/LPS 601: Introductory Microeconomics - 2019 Spring, 2020 Fall, 2020 Summer

As teaching assistant:

PPE 3001: Strategic Reasoning - 2022 Fall

ECON 262: Market Design - 2021 Spring

ECON 235: Industrial Organization - 2020 Fall

ECON 1: Introductory Microeconomics - 2018 Spring, 2018 Fall

ECON 10: Introductory Business Economics - 2017 Fall, 2021 Fall

The Australian National University

As tutor and teaching assistant:

ECON 8021: Topics in Microeconomic Theory (graduate) - 2015 S2

ECON 3101: Microeconomics III – 2016 S1

ECON 3100: Economics IV Honours – 2015 S2

ECON 2141: Strategic Thinking – 2015 S2, 2016 S1

ECON 2101: Microeconomics II – 2015 S1

ECON 1101: Microeconomics I – 2014 S2, 2015 S1

ECHI 1006: The Australian Economy – 2013 S2, 2014 S1

Research Experience

Research assistant for Professor Rohan Pitchford at the ANU Research School of Economics, 2015-2016

Research assistant for Professor Peter Drysdale and Dr. Shiro Armstrong at the East Asia Bureau of Economic Research at the ANU Crawford School of Public Policy, 2015-2016

Research assistant for Dr. Paul Chen and Dr. Martin Richardson at the ANU Research School of Economics conducting behavioural experiments, 2016

Research and teaching assistance for Dr. Juergen Meinecke at the ANU Research School of Economics in lectures in econometrics, 2015

Economic Analyst at the Australian Competition and Consumer Commission (ACCC) in the Weighted Average Cost of Capital team at the Australian Energy Regulator (AER), 2014

Scholarships and Awards

College of Business and Economics Teaching Award for Excellence in Tutoring, 2015
Economic Society Prize for Economics III, 2014
Commercial Representatives' and Agents' Association of Australia Limited Prize, 2013
Economic Society Prize for Economics II (Honours), 2012
Gold and Silver Duke of Edinburgh Award, 2009 and 2010
Canberra Grammar School Medal for Outstanding Contribution, 2010
Bill De Salis Scholarship, 2009 and 2010
Warren-Williams Award, 2009

Personal

Nationality: Australian

Language(s): English

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