Amirreza Ahmadzadeh

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Address: Toulouse School of Economics, 1 Esp. de l'Université, 31000 Toulouse, France.
Telephone: (+33) 6 60 83 40 35
E-mail: amirreza.ahmadzadeh@tse-fr.eu
Homepage: https://sites.google.com/view/amirreza-ahmadzadeh

Fields of Concentration:

Microeconomic Theory and Game Theory
Topics: Dynamic Games, Mechanism Design

Desired Teaching:

Microeconomics, Game Theory, Optimization

Committee:

Professor Johannes Hörner (chair)
Professor Thomas Mariotti
Professor Anna Sanktjohanser
Professor Jean Tirole

Education:

Ph.D., Economics, Toulouse School of Economics, 2026 (expected)
Visiting scholar, Department of Economics at Yale University, spring 2025
M.Sc, Economics, Tehran Institute for Advanced Studies, 2020
B.S., Mathematics, Sharif University, 2017

Publication:

"Matching Workers to Firms Facing Budget Constraints", with Behrang Kamali (*Economics Letters*, 2024)

Working Papers:

"Trust with Evidence" (job market paper)
"Mechanism Design with Costly Inspection", with Stephan Waizmann (Revise & Resubmit at *Theoretical Economics*)
"Matching Unskilled/Skilled Workers to Firms Facing Budget Constraints" with Behrang Kamali

Work in Progress:

"Costly State Verification with Limited Commitment"

"Politicians Competition in Persuading Voters", with Pedram Pooyafar

Research Assistance:

2023 for Professor Johannes Hörner

2020-2022 for Professor Jean Tirole

2019 for Professor Mohammad Akbarpour

Selected Teaching Experience:

Microeconomic Theory (Ph.D.), TA to Professor François Salanié and Professor Thomas Mariotti, Fall 2022 and Fall 2023

Optimization (Ph.D.), TA to Professor David Martimort and Professor Thomas Mariotti, Fall 2021, 2022, 2023

Game Theory (Master), TA to Professor Bertrand Gobillard, Fall 2021 and Fall 2022

Mathematics for Economists (Master), TA to Professor Erfan Salavati, Fall 2018 and Fall 2019

Real Analysis (Master), TA to Professor Siavash Shahshahani, Fall 2018

Seminar and Conference Presentations:

2025: University of Bonn, SAET Ischia, 14th Conference on Economic Design (Essex)

2024: Leuven Economic Theory Conference, ESEM Rotterdam, EARIE Amsterdam

2023: ESEM Barcelona, HEC Paris Economics PhD conference, EARIE Rome, Oligo workshop Padova

Selected Fellowships and Awards:

Tehran Institute for Advanced Studies Fellowship, 2017-2019

Founder of Iranian Geometry Olympiad (IGO), 2014

Exceptional Talents, and admitted to double major programs, Sharif University, 2013

Silver Medal, National Mathematical Olympiad, 2010

Languages:

Persian (native), English (fluent), French (basic)

References:

Professor Johannes Hörner
Toulouse School of Economics
johannes.horner@tse-fr.eu

Professor Thomas Mariotti
Toulouse School of Economics
thomas.mariotti@tse-fr.eu

Professor Anna Sanktjohanser
Toulouse School of Economics
anna.sanktjohanser@gmail.com

Professor Jean Tirole
Toulouse School of Economics
jean.tirole@tse-fr.eu

Abstracts

Trust with Evidence (job market paper)

We study a dynamic principal–agent relationship in which an agent must exert costly effort to learn a privately observed binary state before taking an action. The principal wants to match the action with the state, while the agent is biased toward one action, generating both a moral hazard (effort choice) and an adverse selection (action choice) problem. The principal disciplines the agent through verification (at a cost), reduced workload and termination. We show reduced workload is always a valuable instrument, even when the cost of verification is small and the loss from shirking is large. By promising a reduced workload in the future, the principal can lower verification costs across multiple periods. For high biases, verification and reduced workload are insufficient instruments, and the principal must rely on firing along the equilibrium path. The threat of future firing complements verification and saves verification costs over time.

Mechanism Design with Costly Inspection (with Stephan Waizmann)

This paper studies how to combine screening menus and inspection in mechanism design. A Principal procures a good from an Agent whose cost is his private information. The Principal has two instruments: screening menus --- i.e., quantities and transfers --- and (ex-ante) inspection. Inspection is costly but reveals the Agent's cost. The combination of inspection and screening menus mitigates inefficiencies: the optimal mechanism procures an efficient quantity from all Agents whose cost of production is sufficiently low, regardless of whether inspection has taken place. However, quantity distortions still necessarily occur in optimal regulation; the quantity procured from Agents with higher production costs is inefficiently low. In contrast to settings without inspection, incentive compatibility constraints do not bind locally. Nonetheless, the paper characterizes which incentive constraints bind.

Matching Unskilled/Skilled Workers to Firms Facing Budget Constraints (with Behrang Kamali)

We study a matching model with salaries where firms face budget constraints. Mongell and Roth (1986) proved that this setting may not have a stable matching. We show that if workers are homogeneous from the firms' point of view then a weak stable matching always exists; furthermore, when a strong stable matching does not exist, there is a close-by budget vector for firms such that a strong stable matching exists for the problem with perturbed budgets. On the flip side, if firms are homogeneous from the workers' point of view, a stable matching may not exist; however, one can get to a stable matching by changing the budget of firms where the total budget remains the same and each firm's budget change is bounded by the value of at most one worker to that firm.

Costly State Verification with Limited Commitment

This paper examines a principal-agent model. The principal mandates actions and conducts costly inspections without transfers. The principal prefers lower actions, while the agent prefers higher actions. The agent has private information about his type and is protected by ex-post participation constraints and he rejects any action below his private type. The principal faces a trade-off between the benefit from mandating lower actions and the risk that the agent rejects actions and chooses his outside option. We analyze various levels of the principal's commitment ability. First, if the principal can commit to both stochastic inspection and the action in case inspection does not take place, and if the principal's fear of ruin is greater than the agent's, then a deterministic inspection policy is optimal. Second, if the principal cannot commit to either inspections or actions, the principal's highest equilibrium payoff involves only deterministic inspection strategies. Finally, if the inspection cost is low and the principal commits to inspecting whenever requested by the agent, the principal can achieve the payoff of the optimal deterministic inspection policy.

Matching Workers to Firms Facing Budget Constraints (with Behrang Kamali)

We study a many-to-one matching model with salaries in which firms face budget constraints. Mongell and Roth (1986) show that when firms face a budget constraint, a stable matching may not exist. We introduce an algorithm to find a strong stable matching by changing the budget of firms such that the total budget remains the same and each firm's budget change is bounded by the value of at most one worker for that firm.