CERGE-EI researchers will present three different topics in economic theory using advanced math tools.

WE INVITE: Math and physics BA/MA students, PhD students, postdocs, researchers, and professors to join us to learn more about the uses of various tools of advanced mathematics in theoretical economics.

Advanced Math in Economics
Three snapshots from CERGE-EI*

Wednesday March 18 from 15:40 to 17:00

Location: Lecture hall K1, Charles University's MFF branch, Sokolovská 49/83, Prague 8–Karlín (metro station Křižíkova)

CERGE-EI

I.

Optimal Tax Rules for Distorted Production Networks

MAREK KAPIČKA (CERGE-EI Director)

Production organized through input-output networks with varying market power creates distortions that propagate throughout the network. This lecture addresses the challenges of using taxes to correct for the inefficiencies and generating revenue at the same time.

The optimal tax structure uses both sectoral taxes and taxes on intermediate goods to mitigate distortions. A quantitative analysis calibrated to the US economy will illustrate optimal tax reforms, with and without intermediate goods taxes.

II.

Distributional Consequences of Government Purchases

CTIRAD SLAVIK (CERGE-EI Economist)

Changes in the size and composition of government purchases influence the economy. This analysis studies how using an enhanced heterogeneous-agent macroeconomic model with multiple sectors and skill heterogeneity.

Two scenarios are examined: (1) an increase in government purchases and (2) a rise in military spending, both funded by non-distortionary taxes. The results show that the multiplier for government purchases (0.7) exceeds that for military spending (0.6), disproportionately affecting low-skilled workers. When financed by distortionary taxes, the multipliers decline and the distributional impacts reverse.

III.

Influence Motivated Communication

KONURAY MUTLUER (CERGE-EI Economist)

I study strategic communication by an expert who is motivated by influence: she values her advice being followed as an end in itself. I find that this expert behaves as if she could ex-ante commit to an advice strategy. The listener's informedness determines the direction of causality in communication: as the listener becomes more informed, the expert stops being an "opinion leader" and becomes a "follower". The listener gains the most from advice when she is neither too ignorant nor too informed.