

# Andrei Karavaev

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## Curriculum Vitae

- CITIZENSHIP:**
- Russian Federation
- EDUCATION:**
- Ph.D. in Economics, The Pennsylvania State University, Spring 2008
  - M.A., Economics, New Economic School, Moscow, 2002  
**Thesis:** “Analysis of Fishing Quota Auctions”
  - Diploma, Moscow State University, 1995. Major: Statistics.
- Ph.D. THESIS:**
- “Essays in Economic Theory”  
**Thesis Advisor:** Professor Kalyan Chatterjee
- FIELDS:**
- **Primary:** Game Theory
  - **Secondary:** Microeconomic Theory
- PAPERS:**
- “Information Trading in Social Networks”
  - “A Theory of Continuum Economies with Idiosyncratic Shocks and Random Meetings”
  - “Limit Epsilon-Equilibria,” with Sophie Bade (in progress)
- GRANTS & FELLOWSHIPS:**
- Full Scholarship, New Economic School, 2000-2002
  - Bates White Fellowship, 2004-2005
- TEACHING EXPERIENCE:**
- Instructor: International Economics (2003), Econometrics (1999-2000), Intermediate Microeconomics (2005)
  - Teaching Assistant: Advanced Microeconomics (graduate, 2003), Intermediate Macroeconomics (2002-2003)
- RESEARCH EXPERIENCE:**
- Research Assistant, Professor Robert C. Marshall (2007-2008)
  - Internship, Bates White, Washington, DC (2004)
- PRESENTATIONS & OTHER PROFESSIONAL ACTIVITIES:**
- The Cornell-PSU Macro Workshop (2006)
  - The Conference on Game Theory at Stony Brook (2006)
  - Midwest Economic Theory Meeting (2006, 2007)
  - 12th CTN Workshop at CORE, Belgium (2007)
- REFERENCES:**
- Professor Kalyan Chatterjee, e-mail: kchatterjee@psu.edu
  - Professor Robert Marshall, e-mail: rcm10@psu.edu
  - Professor Sophie Bade, e-mail: sub18@psu.edu

## THESIS ABSTRACT

### *Essay 1: Information Trading in Social Networks (Job Market Paper)*

This paper considers information trading in fixed spatial networks of infinitely lived economic agents who can observe and trade only with their neighbors. The game proceeds as follows: Agents initially obtain i.i.d. realizations of a  $\{0,1\}$  random variable. If an agent gets a realization of 1 (this happens with probability  $p$ ), he is "informed"; otherwise she is "uninformed." Informed agents observe whether their neighbors are informed or not and can offer to sell the information to them if they are uninformed. Anyone who obtains the information can freely resell it to her own neighbors. The agents benefit from both knowing the information and selling it to neighbors. We allow agents to make only one price offer although this price can be accepted at any time. We study the nature of price competition for information in this environment.

The linear network example, when the agents are located at the integer points of the real line, is completely characterized in the paper. The sellers in the symmetric stationary equilibria of this network play one of three strategies. The first possibility is that the sellers choose only one price; this happens only for a low  $p$ . The second possibility is that the price is a mix of some value (with a non-zero probability) and some continuous distribution. The third possibility is that the price has a continuous distribution; this happens only for a high  $p$ . All the mass points of the price are above any individual's utility from the information, and the continuous part of the distribution is always below this value. In the first and second type of equilibria, any agent has a non-zero probability to stay uninformed forever, because he can get two simultaneous offers exceeding his valuation of the information. Although it might look as if this equilibrium is special, for a small  $p$  it is a limit of equilibria of finite-horizon games.

### *Essay 2: A Theory of Continuum Economies with Idiosyncratic Shocks and Random Meetings*

Many economic models use a continuum of agents to avoid considering one agent's effect on others. Along with a continuum of agents, these models also incorporate independent shocks and random meetings over time (Edward J. Green, Ruilin Zhou, 2002. "Dynamic Monetary Equilibrium in a Random Matching Economy". *Econometrica*, vol. 70). Questions have been raised about the mathematical consistency of the assumptions used. In this paper we demonstrate that it is possible to construct a framework in which the desirable properties, including no aggregate uncertainty and mixing, hold. The main new idea is that the agents live in the probability space, and the probability distribution for each agent is replaced by the population distribution over the states. Although each agent knows his history of shocks and meetings, he does not know his "location" in this space.