Alexey Kushnir

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Personal information:
Born in Moscow, Russia, 11.25.1983
Gender: Male
Marital status: Married
Citizenship: Russian Federation
Current Visa: F-1

RESEARCH INTERESTS:

Primary: Economic theory, Market design, Matching markets, Auctions
Secondary: Industrial organization

WORKING PAPERS:

"Signaling in Matching Markets," with Peter Coles and Muriel Niederle (2009) (Job Market Paper)

"Harmful Signaling in Matching Markets" (2009) (Job Market Paper)

"Centralized Matching Markets With Interdependent Values," with Utku Unver (in progress)

"Private Value Contests," with Lev Lokutsievskiy (in progress)

REFERENCES:

Vijay Krishna (advisor)
Professor of Economics and Director of Graduate Studies, Pennsylvania State University
vkrishna@psu.edu, (814)863-8543

Utku Unver
Associate Professor, Department of Economics, Boston College
unver@bc.edu, (617)552-2217

Marek Pycia
Assistant Professor of Economics, University of California, Los Angeles
pycia@econ.ucla.edu, (310)794-7241

Muriel Niederle
Associate Professor, Department of Economics, Stanford University
niederle@stanford.edu, (650)723-7359

Peter Coles
Assistant Professor of Business Administration, Harvard Business School
pcoles@hbs.edu, (617)495-9819

EDUCATION:

The Pennsylvania State University; **Fall 2006 – present**
PhD in Economics (Expected)

New Economic School (NES); **Fall 2004 – Spring 2006**
Master of Arts in Economics (Cum Laude)

Moscow Institute of Physics and Technology (MIPT); **Fall 2004 – Spring 2006**
Master of Science in Physics and Mathematics (with Honors)

Moscow Institute of Physics and Technology (MIPT); **Fall 2000 – Spring 2004**
Bachelor of Science in Physics (with Honors)

OTHER PROFESSIONAL ACTIVITES:

Visiting scholar:
Harvard Business School (visit Peter Coles); **August 2009 –September 2009**
Boston College (visit Utku Unver); **March 2009 – May 2009**

TALKS:

2009: Boston College, UCLA
2008: New Economic School

CONFERENCE PRESENTATIONS AND TALKS:

2009: 14th Coalition Theory Network Workshop, Midwest Economic Theory Meeting
2008: Society of Economic Design, SUNY Stony Brook, Midwest Economic Theory Meeting
2006: XIX New Economic School Conference
2005: XLVIII Moscow Institute of Physics and Technology Conference

AWARDS AND FELLOWSHIPS:

Pennsylvania State University, Department of Economics, Outstanding Undergraduate Instructor Award (Summer, 2009)
Pennsylvania State University Teaching Assistantship (2006/07/08/09)
Pennsylvania State University Summer Fellowship (2007)
Pennsylvania State University Graduate Scholar Award (2006)
New Economic School Best Student Award (2006)
New Economic School Fellowship (2004/05/06)
MIPT Academic Council Fellowship (2003)
Mayor-of-Moscow Fellowship (2002/03/04)

RESEARCH ASSISTANTSHIPS:

Peter Coles (Summer 2009)
Vijay Krishna, NSF grant (Summer/Fall 2008, Spring 2009)

OTHER RESEARCH CONTRIBUTIONS:

"Solutions manual for Vijay Krishna's 'Auction Theory' book (2nd ed.)," with Jun Xiao (2009)

"Orphans and children deprived from parental care," with Ekaterina Zhuravskaya and Igor Fedukin, CEFIR working paper (2007)

"Collective action problem in revolutions" Best Student Paper NES (2006)

TEACHING EXPERIENCE:

Penn State University (2006-2009)
Lecturer: Introductory Econometrics (U), evaluations: 6.22/7.00

TA: Adv. Microeconomics (G), Microeconomics (G) (x2), Political Economics (U), Economics of the Corporation (U)

New Economic School (2005-2006)
TA: Auctions (G), Theory of Economic Reforms (G), Mathematics for Economists (G)

Moscow Institute of Physics and Technology (2004-2005)
TA: Stochastic Processes (U)

WORK EXPERIENCE:

Economist, Center of Economic and Financial Research (CEFIR); May 2007 – August 2007

COMPUTER SKILLS:

Advanced in C/C++, Microsoft Visual Studio, Java, Matlab, Mathematica, Gauss, Eviews

LANGUAGE SKILLS:

Russian – native
English – fluent; oral and written

Job Market Papers Abstract

My job market papers examine a natural signaling mechanism in two-sided matching markets between firms and workers. We consider a game of incomplete information. Each worker can send a limited number of costless signals to firms indicating her interest in positions there; workers send signals simultaneously. Then, each firm makes an offer to at most one worker; firms make offers simultaneously. Finally, workers choose at most one offer from those available to them. Recently, the American Economic Association has introduced such signaling option in the job market for new Ph.D. economists. In a similar setting, some online dating sites (e.g., www.cupid.com) allow agents to send virtual roses to potential partners as signals of their interest.

The two papers study the same model and differ only in how agents' preferences are assumed to be distributed. In the first, agents' preferences are quite dispersed. In the second, agents' preferences are tightly distributed. The influence of costless signaling in the two environments is quite different.

The paper "*Signaling in Matching Markets*" (written jointly with Peter Coles and Muriel Niederle) analyzes markets with firm segments. Workers agree on the ranking of firms across "segments," but have idiosyncratic and uniformly distributed preferences within segments. For instance, all workers may agree as to which firms are in the "top five" segment and which are in the "six to ten" segment, etc., but may disagree as to the exact ranking within a segment. Firm preferences over workers are idiosyncratic and uniformly distributed. We show that, on average, introducing a signaling mechanism increases both the expected number of matches as well as the expected welfare of workers for this environment (more precisely, any non-babbling equilibrium that satisfies the refinement D1 of Cho and Kreps has these properties). The welfare of firms, on the other hand, changes ambiguously. In addition, the signaling mechanism adds the most value for markets wherein the number of firms and the number of workers are of roughly the same magnitude. Furthermore, the optimal number of signals—the number of signals that maximizes the expected increase in the number of matches—increases when workers have more positions to fill. Finally, additional periods of interaction between firms and workers decrease the impact of signaling.

By contrast, the paper "*Harmful Signaling in Matching Markets*" shows that there are instances when preference signaling is actually harmful for matching markets (more precisely, the expected number of matches is weakly smaller in any equilibrium of the game with signals than in the unique equilibrium of the game with no signals; moreover, there is an equilibrium where this comparison is strict). Workers have almost aligned preferences over firms: each worker has "typical" commonly known preferences with probability close to one and "atypical" idiosyncratic preferences with the complementary probability close to zero. Firms have some commonly known preferences over workers. Though signals transmit previously unavailable information, they also facilitate information asymmetry. Prior to the signaling, all firms have identical beliefs about worker preferences. However, after the signals are received they may have diverse beliefs. This disparity in beliefs leads to coordination failure. As a result, the introduction of a signaling mechanism may decrease the total number of matches and the welfare of agents.

The papers together suggest that signals play two important roles in match formation: they transmit information and they facilitate information asymmetry. When there is a small amount of information about agent preferences available, as in "*Signaling in Matching Markets*," information transmission plays a more important role in match formation. However, when there is almost complete information about agent preferences, as in "*Harmful Signaling in Matching Markets*," the introduction of signals may lead to coordination failure.