

UNIVERSITY OF  
ROCHESTER  
Economics



Job Market  
Candidates  
2017-2018

**University of Rochester - Department of Economics**  
**2017-2018 Job Market Candidates**

NAME	Job Marker Paper	FIELDS	REFERENCES
<b>Acelya Altuntas</b>	<i>A New Rule for Probabilistic Assignment Based on Trade</i>	<ul style="list-style-type: none"> <li>• Microeconomic Theory</li> <li>• Resource Allocation</li> <li>• Mechanism Design</li> </ul>	William Thomson* Paulo Barelli Srihari Govindan Steven Landsburg
<b>Andrew Baynes</b>	<i>Measuring State Business Cycles</i>	<ul style="list-style-type: none"> <li>• Macroeconomics</li> </ul>	Yongsung Chang* George Alessandria Michael Wolkoff
<b>Alon Bergman</b>	<i>The Causal Effects of Pharmaceutical Payments on Physician Prescriptions</i>	<ul style="list-style-type: none"> <li>• Health Economics</li> <li>• Applied Microeconomics</li> <li>• Economics of Education</li> </ul>	Ronni Pavan* Gregorio Caetano* Carolina Caetano
<b>Esat Doruk Cetemen</b>	<i>Achieving Efficiency in Repeated Partnerships via Information Design</i>	<ul style="list-style-type: none"> <li>• Game Theory</li> <li>• Information Economics</li> <li>• Dynamic Games</li> </ul>	Srihari Govindan* Paulo Barelli* Alessandro Bonatti Guy Arie
<b>Hao Teng</b>	<i>Social Networks and Consumption Behavior: Evidence from Yelp</i>	<ul style="list-style-type: none"> <li>• Applied Microeconomics</li> <li>• Social Interactions</li> <li>• Economics of Education</li> </ul>	Gregorio Caetano* Ronni Pavan Josh Kinsler

\*Advisor

# Açelya Altuntaş

---

Department of Economics	Phone: (+1) 585-771-7890
University of Rochester	E-mail: altuntasacelya@gmail.com
Harkness Hall	Homepage: <a href="https://acelyaaltuntas.wixsite.com/home">https://acelyaaltuntas.wixsite.com/home</a>
Rochester, NY 14627, USA.	Citizenship: Turkey (F1 Visa)

---

## Education

Ph.D. in Economics, University of Rochester, USA, 2018 (expected)  
M.A. in Economics, University of Rochester, USA, 2013  
M.A. in Economics, Bilkent University, Turkey, 2011  
B.S. in Mathematics, Middle East Technical University, Turkey, 2009  
*Minor in Economics*

## Research Fields

Microeconomic Theory, Resource Allocation, Mechanism Design.

## Working Papers

"A New Rule for Probabilistic Assignment Based on Trade" with William Phan (*Job Market Paper*)  
"Probabilistic Assignment of Objects When Preferences are Single-Dipped", 2016  
"Fair Reallocation of Objects When Monetary Transfers are Available", 2015  
"Measuring Self-Selectivity via Generalized Condorcet Rules" with Semih Koray, 2011

## Work In Progress

"Scheduling Problem at Work" with Jens Gudmundsson

## Teaching Experience

Instructor, University of Rochester  
Principles of Economics, Summer 2016, Summer 2015  
Teaching Assistant, University of Rochester  
Intermediate Microeconomics, Fall 2017, Fall 2016, Fall 2015, Fall 2014, Fall 2013  
Topics in Microeconomic Theory, Spring 2016, Spring 2015  
Principles of Economics, Spring 2016  
Econometrics, Spring 2014  
Teaching Assistant, Bilkent University  
Math Review (graduate), Summer 2010  
Industrial Economics, Fall 2010

Introduction to Economics, Spring 2011, Spring 2010, Fall 2009

## Fellowships and Scholarships

Graduate fellowship and tuition scholarship, University of Rochester, 2011-2016

Summer Research Grant, University of Rochester, Summer 2013

Graduate fellowship and tuition scholarship, Bilkent University, 2009-2011

## Conference Presentations

Ottawa Microeconomic Theory Workshop, 2017

Conference on Economic Design, 2017

Bosphorus Workshop on Economic Design, 2011

## Professional Service

Referee for: *Games and Economic Behaviour*

## Languages

English (fluent), Turkish (native), French (beginner)

## References

### **Professor William Thomson** (Advisor)

Department of Economics

University of Rochester

Rochester, NY, 14627, USA.

Phone: (+1) 585-275-2236

Email: wth2@mail.rochester.edu

### **Professor Paulo Barelli**

Department of Economics

University of Rochester

Rochester, NY, 14627, USA.

Phone: (+1) 585-275-8075

Email: paulo.barelli@rochester.edu

### **Professor Srihari Govindan**

Department of Economics

University of Rochester

Rochester, NY, 14627, USA.

Phone: (+1) 585-275-7214

Email: s.govindan@rochester.edu

### **Professor Steven Landsburg** (Teaching)

Department of Economics

University of Rochester

Rochester, NY, 14627, USA.

Phone: (+1) 585-275-4971

Email: recs@landsburg.com

## **A New Rule for Probabilistic Assignment Based on Trade**

*(Job Market Paper)*

We consider object allocation problems when rules can select lotteries. We introduce a family of rules indexed by two parameters. The first parameter can be interpreted as the “trading rights” of agents over objects. When several agents have positive rights over the same object, a priority order associated with that object specifies who is allowed to trade that object first, second and so on. The second parameter is the profile of priorities attached to objects. Each of our rules is defined by an algorithm similar to Gale’s Top Trading Cycles algorithm (Shapley and Scarf, 1974). Cycles are formed according to this algorithm. In each cycle, agents trade a common probability share of objects. The family includes prominent *sd-strategy-proof* rules, such as the Top Trading Cycles rule, the Serial Priority rules (Svensson, 1999), and the Hierarchical Exchange rules (Pápai, 2000). We prove that each of our rules is *sd-efficient*. We provide a full description of the subclass of our rules that satisfy the *sd-endowment lower bound*. When there is an agent who has positive shares of two objects, no rule within our family satisfies both the *sd-endowment lower bound* and *sd-strategy proofness*. Thus, our paper contributes to the understanding of which social objectives are compatible and which are not.

## **Probabilistic Assignment of Objects When Preferences are Single-Dipped**

We consider the probabilistic object allocation problem. We are interested in rules satisfying *equal treatment of equals*, *sd-efficiency* and *sd-strategy-proofness*. On the domain of strict preferences, no rule satisfies these three properties together (Bogomolnaia and Moulin, 2001). We consider, instead, the domain of single-dipped preferences. We show that when the number of agents is even, no rule satisfies these axioms. This incompatibility holds as soon as the domain contains three single-dipped preferences that differ only in the ranking of three objects, the ranks of the other objects being the same across the agents.

## **Scheduling Problem at Work**

We consider the problem of assigning shifts to agents at work. The work day is an interval of time. Each agent has a single-peaked preference over subintervals of length 1, from which his preference over connected subintervals of the same length is derived. Each agent is required to work  $h$  consecutive hours. There is a lower bound on the number of agents assigned to each hour,

which is determined by the firm. At a feasible allocation, each agent is assigned a subinterval of length  $h$  and the lower bound requirement is met. A natural social objective is to minimize the sum of the distances between each agent's assigned shift to his most preferred subinterval of length  $h$ . We propose an algorithm that meets this objective.

# Andrew Baynes

---

University of Rochester

Phone: (917) 991-9856

Dept. of Economics

E-mail: [j.andrew.baynes@gmail.com](mailto:j.andrew.baynes@gmail.com)

Harkness Hall

Homepage: [baynzo.com](http://baynzo.com)

Rochester, NY 14627

Citizenship: USA

---

## Education

University of Rochester: Rochester, NY.

Ph.D., Economics: 2018 (Expected).

M.A., Economics: 2012.

University of Pennsylvania: Philadelphia, PA.

Post-baccalaureate Study: 2008-2009.

Yale University: New Haven, CT.

B.A., History: *cum laude*, 2000.

## Fields of Research Interest

Macroeconomics, Econometrics, Applied Micro.

## Working Papers

"Measuring State Business Cycles," 2017.

## Works-In-Progress

"A Model of Capacity Trade," 2017.

"Dispersion Among State Business Cycles," 2017.

## Teaching Experience

Instructor (University of Rochester)

Essentials of Economics (Early Connection Africa): Summer 2017.

Intermediate Macroeconomics (ECO 209): Fall 2015.

Teaching Assistant (University of Rochester)

Economic Statistics (ECO 230): Spring 2014.

Intermediate Macroeconomics (ECO 209): Spring 2012.

Intermediate Macroeconomics Honors (ECO 209H): Fall 2011, Fall 2012.

## Fellowships and Scholarships

University of Rochester

Tuition Scholarship: 2009-2014.

Graduate Fellowship: 2009-2011, 2012-2014.

Wallis Fellowship: 2011-2012.

## Other Employment

Goldman Sachs: 2001-2008.

Commonwealth Associates: 2000-2001.

## Professional Membership

CFA Charterholder.

## References

**Professor Yongsung Chang** (Advisor)

Department of Economics

University of Rochester

Harkness Hall

Rochester, NY 14627, USA.

Phone: (585) 275-1871

E-mail: yongsung.chang@rochester.edu

**Professor George Alessandria**

Department of Economics

University of Rochester

Harkness Hall

Rochester, NY 14627, USA.

Phone: (585) 275-3096

E-mail: george.alessandria@rochester.edu

**Professor Michael Wolkoff** (Teaching)

Department of Economics

University of Rochester

Harkness Hall

Rochester, NY 14627, USA.

Phone: (585) 275-5279

E-mail: michael.wolkoff@rochester.edu

## **Measuring State Business Cycles**

This paper examines the classical cycle for a variety of economic time series for each of the 50 states and, in so doing, fills a significant gap in the empirics of regional economies, which has heretofore largely focused on growth cycles. Further, the relation between the states' cycles and the national economy is explored: most notably, the turning points in state cycles provide information likely useful in forecasting national aggregates. Finally, treating the states as a cross-section of small open economies facilitates two key results: (i) state cycles comove to a greater extent than do cycles of E.U. members; and (ii) trade among states plays a significant role in synchronizing cycles and propagating shocks.

# Alon Bergman

---

Department of Economics  
University of Rochester  
Harkness Hall  
Rochester, NY 14627, USA.

Phone: +1 (585)-880-3987  
E-mail: [alon.bergman@gmail.com](mailto:alon.bergman@gmail.com)  
Website: [www.alonbergman.com](http://www.alonbergman.com)  
Citizenship: Israel (US Permanent Resident)

---

## Education

- Ph.D. in Economics, University of Rochester, USA, 2018 (expected)
- M.A. in Economics, University of Rochester, 2014
- B.A. in Economics, Tel Aviv University, 2010

## Research Fields

Health Economics, Applied Microeconomics, Economics of Education

## Working Papers

- “The Causal Effects of Pharmaceutical Payments on Physician Prescriptions” (**Job Market Paper**)
- “Strategic Pricing and Competitive Procurement in the Physician Services Market”, with Guy Arie and Gerard J. Wedig (*submitted*)
- “Athletic Competition and High School Performance: A Dynamic Regression Discontinuity Analysis” (*submitted*)

## Work In Progress

- “Identifying Sorting Into Echo Chambers” with Dionissi Aliprantis and Gregorio Caetano
- “Trade Costs Uncertainty” with Corina Boar

## Teaching Experience

- Instructor for Econometrics (Undergraduate), University of Rochester, Fall 2016
- Teaching Assistant for Econometrics (Undergraduate), University of Rochester, Fall 2014, Spring 2015, Fall 2015, Fall 2017
- Teaching Assistant for Labor Markets (Undergraduate), University of Rochester, Spring 2016

- Teaching Assistant for Industrial Organization (M.B.A.), Tel Aviv University, Spring 2011, Fall 2011, Spring 2010

## Fellowships, Scholarships, and Awards

- Lionel and Blanche Mckenzie Family Fellowship, University of Rochester, 2016-2017
- The Conibear Prize for Best Third Year Paper, University of Rochester, 2015
- Program in Empirical Policy Research (PEPR) Grant, University of Rochester, Fall 2015, Spring 2015
- Economics Department fellowship and scholarship, University of Rochester, 2012-2016

## Seminar Presentations

- United States Naval Academy, March 2016

## Others

- Languages: English (fluent), Hebrew (native), German (intermediate), French (beginner)
- Computer Skills: Stata, R, Python, Matlab, Mathematica, SAS, EViews,  $\LaTeX$

## References

### **Professor Ronni Pavan** (Co-Advisor)

Department of Economics  
University of Rochester  
Rochester, NY 14627, USA.  
Phone: (+1) 585-275-6279  
E-mail: ronni.pavan@rochester.edu

### **Professor Gregorio Caetano** (Co-Advisor)

Department of Economics  
University of Rochester  
Rochester, NY 14627, USA.  
Phone: (+1) 585-275-3968  
E-mail: gregorio.caetano@rochester.edu

### **Professor Carolina Caetano**

Department of Economics  
University of Rochester  
Rochester, NY 14627, USA.  
Phone: (+1) 617-253-3895  
E-mail :carol.caetano@rochester.edu

## **The Causal Effects of Pharmaceutical Payments on Physician Prescriptions**

*(Job Market Paper)*

I provide estimates of the causal effects of payments from pharmaceutical companies on the prescribing habits of Medicare Part D physicians. Identifying the causal effects of payments associated with pharmaceutical “detailing” (marketing to physicians) is confounded by dynamic selection in and out of payment assignment by the drug producer. I employ a novel identification strategy which uses exogenous variation in brand-related payments due to pharmaceutical producers undergoing acquisitions by other firms. The analysis focuses on aminosalicylates, the drug class used to treat inflammatory bowel disease, and finds that stopping payments to a physician reduces the probability that she will prescribe *any* drug from the aminosalicylates class by around 5 percentage points. Decomposing payment effects to persistent and temporary components, I find that at most 50 percent of brand-specific effects and 80 percent of class-specific effects are persistent. Payment effects in other drug classes seem to exhibit similar patterns.

## **Strategic Pricing and Competitive Procurement in the Physician Services Market**

*(with Guy Arie and Gerard Wedig)*

We propose and test a model of the strategic interaction between public and private insurers in the physician services market. We depart from the standard healthcare service pricing model and allow physicians to (partially) adjust patient access based on price differences between insurers. Analysis of private and public sector insurer prices and public sector quantities supports the hypothesis that physicians respond to insurer price differences: A 10 percent increase in private prices decreases public beneficiaries’ share of physician services by 4 percent, equivalent to a per capita decrease of 1-14 percent in services per public beneficiary, *ceteris paribus*.

## **Athletic Competition and High School Performance: A Dynamic Regression Discontinuity Analysis**

I estimate the effects of interscholastic athletic competitions on student performance in public high schools in Texas. I use discontinuities in assignments of schools to interscholastic athletic conferences to identify these effects, and utilize the dynamic RD estimator developed by Cellini et

al. (2010) to overcome identification challenges resulting from persistent conference assignments. I find that increased levels of competition have an adverse effect on student performance, with school average ACT scores decreasing by 1.4 percent and rate of students passing the TAKS exam dropping by 3 percentage points. Potential effect mediators are discussed and analyzed.

# Doruk Cetemen

---

Department of Economics  
University of Rochester  
Harkness Hall  
Rochester, NY 14627, USA.

Phone: +1 (585) 298 75 92  
E-mail: dorukcetemen@gmail.com  
Homepage: <https://sites.google.com/site/dorukcetemen/>  
Citizenship: Turkey (F1 Visa)

---

## Education

Ph.D. in Economics, University of Rochester, USA, 2012-2018 (expected)  
M.A in Economics, Boston University, USA, 2011.  
B.S. in Computer Engineering, Bilkent University, Turkey, 2010.

## Research Fields

Game Theory, Information Economics, Dynamic Games

## Publications

“Implementing equal division with an ultimatum threat,”(with Emin Karagözoğlu) *Theory and Decision*, 2014, Volume 77, Issue 2, pp 223-236.

## Working Papers

“Achieving Efficiency in Repeated Partnerships via Information Design” (**Job Market Paper**)  
“Uncertainty-driven Cooperation”, with Ayca Kaya and Ilwoo Hwang  
“Dynamic Revenue Maximization on a Network”, with Heng Liu  
“Bargaining with Synergies”, with Bingchao Huangfu and Heng Liu  
“Rewards Must Be Proportional in the Core of Large Claim Games”, with Kevin Hasker and Emin Karagözoğlu

## Work In Progress

“Equity Financing of Innovation”, with Alessandro Bonatti  
“Dynamic Moral Hazard and Strategic Reporting”, with Guy Arie and Dmitry Orlov  
“Auto Recall Announcement: A Dynamic Mechanism Design Approach”, with Bharadwaj Kadiyala and Shouqiang Wang  
“Dynamic Bargaining with Endogenous Stakes”, with Emin Karagözoğlu and Hüseyin Çağrı Sağlam

## Teaching Experience

Teaching Assistant, University of Rochester

Game Theory (Graduate) – Professor Paulo Barelli (Spring 2015, 2016)

Game Theory (Undergraduate) – Professor Paulo Barelli (Fall 2014, 2015, 2016)

Intermediate Microeconomics (Undergraduate) – Professor Kuzey Yilmaz (Spring 2014)

Economic Statistics (Undergraduate) – Professor Nese Yildiz (Fall 2017)

## Fellowships, Scholarships, and Awards

Graduate Fellowship and Tuition Scholarship, University of Rochester, 2012-2017

Summer Research Grant, University of Rochester Summer 2014

Conibear Prize for Best Third Year Paper 2015

The Lionel and Blanche McKenzie Family Fellowship 2016-2017

Tapan Mitra Theory Prize for Best Fifth Year Paper 2017

## Conference & Seminar Presentations

Bilkent University 2016, Canadian Economic Theory Conference 2016, Econometric Society

North American Summer Meeting 2016, Stony Brook Game Theory Festival 2016 and 2015

## Others

**Languages:** Turkish (native), English (fluent)

**Computer Skills:** Java, C++, C, Matlab, Mathematica

## References

**Professor Srihari Govindan** (Co-Advisor)

Department of Economics

University of Rochester

Rochester, NY 14627, USA.

Phone: (+1) 585-275-7214

E-mail: s.govindan@rochester.edu

**Professor Paulo Barelli** (Co-Advisor)

Department of Economics

University of Rochester

Rochester, NY 14627, USA.

Phone: (+1) 585-275-8075

E-mail: paulo.barelli@rochester.edu

**Professor Alessandro Bonatti**

Sloan of School of Management

Massachusetts Institute of Technology

Cambridge, MA 02142 USA.

Phone: (+1) 617-253-7190

E-mail: bonatti@mit.edu

**Professor Guy Arie**

Simon Business School

University of Rochester

Rochester, NY 14627, USA.

Phone: (+1) 312-283-4501

E-mail: guy.arie@simon.rochester.edu

## **Achieving Efficiency in Repeated Partnerships via Information Design**

*(Job Market Paper: Extended Abstract)*

How transparent should a partnership be? More specifically, should information be centralized in one agent or should it be diffused among agents? I consider a dynamic partnership model in which partners exert effort to contribute a common project. The value of the project is determined by the aggregate effort of the partners and an underlying productivity parameter, which is constant over time. In the baseline model, each member has private information about the productivity parameter. At each instant, agents observe a public noisy signal of total effort. The public signal enables agents to learn from each other's effort choices and signal their private information through own effort choices. An equilibrium is Markov if effort choices of agents depend only on the beliefs about the value of the project and the calendar time. I characterize symmetric linear Markov equilibrium as a solution to a nonlinear boundary value problem. A solution to this problem exists and is unique, which implies the existence and uniqueness of the symmetric linear Markov equilibrium. Equilibrium features a mutual "encouragement effect" – agents exaggerate their effort in order to signal their private information, thereby affecting future effort choices of other agents. This "encouragement effect" counteracts "free-riding", but it can create another source of inefficiency: excessive signaling.

In the case of centralized information, where one agent has all the information, there is also a unique linear Markov equilibrium. In the equilibrium, the "excessive signaling" motive of the informed party reaches its peak. I compare the centralized and diffused information structures in terms of welfare and total output. If the project lasts sufficiently long, diffused information structure approximates the first-best in terms of welfare, but it can be dominated by centralized information in terms of total output under some parameter values.

### **"Uncertainty-driven Cooperation"**

*(with Ayca Kaya and Ilwoo Hwang)*

We study the dynamics of team production with unknown true prospects. Team members receive interim feedback that is informative of their current effort levels and the project's prospects. We show that the presence of uncertainty alleviates inefficiencies arising from free-riding. Team members exaggerate their effort to influence the interim feedback signal, which in turn, affects their partners' beliefs about the prospects and consequently affects their future effort choices. The free-riding problems can vanish in the limit where feedback is sufficiently responsive. Our result implies that introducing uncertainty into team production can be welfare improving. Utilizing the tractability of our framework, we analyze various implications for optimal team design, such as the effects of team flexibility and asymmetric information among team members.

## **False-name Bidding in Revenue Maximization Problems on a Network**

*(with Heng Liu)*

This paper studies the allocation of several heterogeneous objects to buyers with multidimensional private information. Motivated primarily by airline-pricing problems, we impose certain substitution and complementarity assumptions on the buyers' preferences over bundles of objects. A novel incentive concern arises in this setting: buyers can false-name bid, i.e., one buyer submitting multiple bids as several different buyers. We study both static and dynamic revenue maximizing mechanisms that are false-name proof. Our main finding is that randomized mechanisms can dominate deterministic mechanisms, as the former can relax buyers' false-name proof constraints via randomized allocation rules, which in turn lead to higher revenues for the seller. Furthermore, in the dynamic setting, within the class of deterministic mechanisms, we show that false-name proofness justifies the consideration of "bid pricing" mechanisms.

## **Bargaining with Synergies**

*(with Bingchao Huangfu and Heng Liu)*

This paper studies a durable-good monopoly problem in which a divisible good can be sold as bundle in one market or can be divided into several products and sold in different smaller markets. If the goods are complements, then there is a delay on the equilibrium path and the monopolist can extract rents from the buyers for the following reasons: (1) A war of attrition arises between small markets due to positive externalities; (2) The monopolist uses these small markets as an outside option in the bigger market. Therefore, in order to increase profits monopolist should optimally design the product in order to create endogenous outside options.

# Hao Teng

---

University of Rochester  
Department of Economics  
Harkness Hall  
280 Hutchison Road  
Rochester, NY 14627

Phone: (612) 805-3100  
Email: [haoteng@rochester.edu](mailto:haoteng@rochester.edu)  
Homepage: <https://sites.google.com/site/ureconhaoteng/>  
Citizenship: China (F1 Visa)

---

## Education

Ph.D. in Economics, University of Rochester, expected 2018

M.A. in Economics, University of Rochester, 2014

B.S. in Economics, University of Minnesota, 2012.

B.A. in Mathematics, University of Minnesota, 2012.

## Research Fields

Applied microeconomics, Social interactions, Economics of Education

## Working Papers

"Social Networks and Consumption Behavior: Evidence from Yelp" (*Job Market Paper*)

"Towards Causal Estimates of Children's Time Allocation on Skill Development", with Gregorio Caetano and Josh Kinsler (Revision requested, *Journal of Applied Econometrics*)

## Work In Progress

"Out-of-school Suspension Reduction, Racial Discipline Gaps, and Student Performance: Evidence from Apparent Policy Changes", with Richard DiSalvo and Josh Kinsler

## Teaching Experience

Instructor, University of Rochester

Economic Statistics (undergraduate), Summer 2016

Teaching Assistant, University of Rochester

Applied Econometrics (undergraduate), Fall 2014

Principle of Economics (undergraduate), Spring 2015

Economic Statistics (undergraduate), Fall 2015

Econometrics (undergraduate), Spring 2016, Fall 2016, Fall 2017  
Pricing Policies (MBA), Winter 2015-Fall 2017

## Fellowships, Scholarships, and Awards

The Lionel and Blanche McKenzie Family Scholar, University of Rochester, 2012-2014  
Graduate Fellowship and Tuition Scholarship, University of Rochester, 2012-2017  
Summer Research Grant, University of Rochester, Summer 2013, Summer 2014

## Conferences

NBER Economics of Education Conference, Cambridge, MA, 2016

## Others

**Computer Skills:** STATA, MATLAB, R, Python, ArcGIS, C++, Julia, and LaTeX.  
**Languages:** Chinese(native), English(fluent), Japanese(basic)

## References

### **Professor Gregorio Caetano (Advisor)**

Department of Economics  
University of Rochester  
Harkness Hall  
280 Hutchison Road  
Rochester, NY 14627

### **Professor Ronni Pavan**

Department of Economics  
University of Rochester  
Harkness Hall  
280 Hutchison Road  
Rochester, NY 14627

### **Professor Josh Kinsler**

Terry College of Business  
Department of Economics  
University of Georgia  
B414 Amos Hall  
Athens, GA 30602

## Social Networks and Consumption Behavior: Evidence from Yelp

*(Job Market Paper)*

Despite their instant popularity in the past decade, little is known about how online social networks are shaping our consumption behavior. This paper uses a novel research design to empirically detect the causal effect of online social interactions on restaurant visits. My identification strategy exploits variation in social relationship within groups of individuals with very similar characteristics and restaurant preferences, and offers a new and easy-to-implement method for identifying social influence while accounting for the homophily effect. Using Yelp data, I find that individuals who are friends are 1.7 times more likely to visit the same restaurant than those who are not friends. Additional exploration of the heterogeneous effects suggests that (1) online social influence is stronger for newer users; (2) older, more popular (measured by number of friends and followers), or more active users are not more influential than newer, less popular and less active users respectively; (3) the social influence increases with friends' restaurant ratings; (4) the estimated effect varies with restaurant types, for instance, it is stronger for night life venues (e.g. bars) and weaker for chain restaurants. These findings not only provide us with a better understanding of what drives contagions in online social networks, but also offer important implications to marketers and online recommendation-system designers.

## Towards Causal Estimates of Children's Time Allocation on Skill Development

*with Gregorio Caetano and Josh Kinsler*

Cognitive and noncognitive skills are critical for a host of economic and social outcomes as an adult. While there is broad agreement that a significant amount of skill acquisition and development occurs early in life, the precise activities and investments that drive this process are not well understood. In this paper we examine how children's time allocation affects their accumulation of skill. Children's time allocation is endogenous in a model of skill production since it is chosen by parents and children. We apply a recently developed test of exogeneity to search for specifications that yield causal estimates of the impact time inputs have on child skills. We show that the test, which exploits bunching in time inputs induced by a non-negativity time constraint, has power to detect endogeneity stemming from omitted variables, simultaneity, measurement error, and several forms of model misspecification. We find that with a sufficiently rich set of controls, we are unable to reject exogeneity in our most detailed production function specifications. The estimates from these specifications indicate that active time with adult family members, such as parents and grandparents, are the most productive in generating cognitive skill.

# Out-of-school Suspension Reduction, Racial Discipline Gaps, and Student Performance: Evidence from Apparent Policy Changes

*with Richard DiSalvo and Josh Kinsler*

Out-of-school suspension (OSS) is a widely used, though controversial, means of disciplining students in American schools. To inform the debate, we use a new approach to estimate the typical effects of school and school district policy changes that directly target suspension reduction, using public national data from the Office of Civil Rights over the period 2000 to 2014. Due to the absence of comprehensive national data on official school policies, we attempt to infer likely policy changes by identifying large, abrupt jumps in reported OSS rates. We study the characteristics of schools and districts that are more likely to have engaged in these “apparent policy changes,” finding that, after controlling for baseline out-of-school suspension rates, schools and school districts with a greater share of black students are more likely to engage in abrupt increases in suspension and less likely to engage in abrupt decreases. Then, we use these apparent policy changes as instruments in a difference-in-differences framework, estimating the average impacts of changes in OSS rates when they are achieved through policy changes. We study effects on school test scores, school district graduation rates, and city-level juvenile arrest rates. We estimate that aggregate out-of-school suspension rates have effects on test scores that are comparable to previous literature: roughly, a 10 percentage point decrease in OSS rates translates into a 0.02 to 0.04 standard deviation increase in test scores. Estimated effects on dropout and arrest rates are very imprecise.