



# RICE ECON

News and Views from the Economics Department at Rice

## Welcome Back!

In this issue of our Newsletter, we welcome Prof. George Zodrow back as our Department Chair – a position that he had held previously in the late 1990s. In the attached interview, Prof. Zodrow discusses his research projects and highlights his vision for the continued success of our Department. We introduce a new Assistant Professor in the Department, Dr. Nina Bobkova, who explains to students how her version of Econ 470, Market Design, may differ from the version previously taught

by Dr. Mallesh Pai. We also congratulate Dr. Yinghua He for winning the *American Economic Journal – Microeconomics* Best Paper Prize for 2019. The Spotlight on Faculty section includes an interview with Prof. Xun Tang, highlighting his recent research activities, including a new grant from the National Science Foundation, and his vision for the econometrics MTEC capstone course, Econ 497. We highlight this year’s RISE Nobel Laureate Series Lecture, by Prof. Peter A. Diamond,

entitled “The Future of Social Security.” We close the Newsletter by interviewing MTEC Senior Biz Rasich, who has herself conducted the interviews with Profs. Zodrow and Tang, which are included in this Newsletter. She answers questions about her educational journey, and offers some advice for younger students contemplating degrees and careers in Economics.

## Meet Dr. Nina Bobkova, Our Newest Faculty Member



Nina Bobkova received her PhD from Bonn University in 2018. Before joining Rice University, she was an Assistant Professor at the European University Institute in Florence, Italy. Her research interests are in the area of microeconomic theory, in particular auctions and information design. She focuses on information choice and disclosure in various strategic environments: whether to seek or distribute information before voting, or which information to acquire before an auction.

This semester, she is excited to be taking over the course Market Design (ECON 470) previously taught by Prof. Mallesh Pai, with an increased emphasis on how to run auctions.

## Newsworthy: Dr. Yinghua He Wins Best Paper Award

Dr. Yinghua He has won the *American Economic Journal (AEJ)* Best Paper Award in *Microeconomics* for his paper “A Pseudo-Market Approach to Allocation with Priorities,” which he co-wrote with Antonio Miralles, Marek Pycia, and Jianye Yan. The paper is available [here on the American Economic Association website](#).



### RISE Lecture

#### Nobel Laureate Peter A. Diamond

**Who**

Peter Diamond, Institute Professor Emeritus at MIT and winner of the 2010 Nobel Prize in Economic Sciences for his research analyzing markets with search frictions

**What**

“The Future of Social Security”

**When**

Wednesday, October 30, at 5 p.m.

**Where**

Shell Auditorium, McNair Hall

## Meet Our New/Returning Department Chair



### **Dr. George Zodrow, Allyn R. and Gladys M. Cline Chair of Economics**

*Research Interests: Tax Reform in the U.S. and Developing Countries, State and Local Public Finance, and Computable General Equilibrium Modeling of the Effects of Tax Reforms*

George Zodrow holds the Allyn R. and Gladys M. Cline Chair of Economics and is a Faculty Scholar at the Center for Public Finance in the Baker Institute for Public Policy. He also holds an appointment as an International Research Fellow at the Centre on Business Taxation at Oxford University. He is the recipient of the 2009 Steven D. Gold Award, presented by the National Tax Association, the National Conference of State Legislatures, and the Association for Public Policy Analysis and Management, to recognize significant contributions to state and local fiscal policy and a capacity to cross the boundaries between academic research and public policy making.

**You are once again taking on the role of Economics Department Chair, a position you also held from 1995-2000. What plans do you have for the department over the next few years?**

My main goal is to continue the excellent progress we have made in the last five years under the Rice Initiative for the Study of Economics or RISE, a five-year program led by former Economics Department Chair and Social Sciences Dean Antonio Merlo, that significantly enhanced both teaching and research in economics at Rice. In particular, we are hiring two new assistant professors this year who I hope will continue to raise the international research profile of the Department. I also plan to focus on continuing to improve both our undergraduate and graduate programs, which were restructured in 2015.

**Tell me about your involvement in tax reform projects in various world governments. How do you bridge the world of research and policy?**

I have been involved in tax reform projects in numerous countries, ranging, as I used to tell my daughters, from Aruba to Zambia. The projects are fascinating, and involve a complex combination of explaining theories of desirable features of tax systems as well as how those theories have successfully been applied in practice around the world to government officials, always taking into account the special characteristics and preferences of the country involved. And some of tax policy consulting simply involves attempting to ensure that countries avoid enacting bad policies, often referred to as tax “deforms.”

**As a Rice alumnus who majored in Mechanical Engineering and Economics, you were an undergraduate in the department you’re now leading. What has changed over the years? What’s stayed the same?**

As in all programs in Economics, our majors have become more rigorous from a mathematical standpoint – especially our major in Mathematical Economic Analysis, which was not part of the curriculum when I was an undergrad – and have a more comprehensive empirical component. We have a larger and more accomplished faculty, lots of new courses, and a more vibrant graduate program. But one of my favorite memories of my days as a Rice undergrad was when I was having a hard time with a concept in intermediate microeconomics and visited my professor, who re-explained it to me. I still really didn’t get it, but I said thanks and was getting up to leave when he looked at me quizzically and more or less said, “You’re still clueless, aren’t you?” I unenthusiastically admitted that I was, and he proceeded to go over it again until I had it down pat. I believe that our current instructors still exhibit that kind of perceptiveness and commitment to educating our students that makes Rice the fabulous educational institution that it is today and was back then.

**What makes tax policy a compelling area of research for you? What new areas of research excite you?**

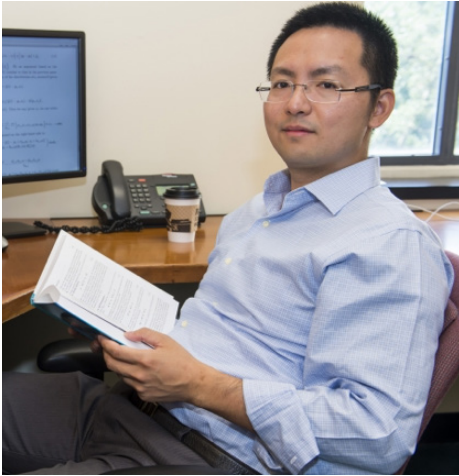
I have been fascinated by tax policy since my years as a Rice undergraduate. Modern

economics is basically the analysis of decision making under constraints, and taxation affects all of those decisions, for individuals and businesses not to mention governments, in many complex ways that are still not fully understood but extremely interesting to investigate. One critical issue is the implementation of carbon taxes as a method of addressing the problem of climate change. In that area, John Diamond and I are currently working on modeling how carbon taxes can be designed to significantly reduce carbon emissions while minimizing deleterious effects on economic growth and the distribution of income.

**In your time at Rice, you’ve mentored many students as research assistants. What’s your advice to undergraduates early in their careers at Rice who want to prepare themselves to undertake undergraduate research?**

The best thing to do is to start early – take all the math, statistics and economics core courses as soon as you can so that you have the skills to participate in a research project fairly early in your career at Rice. But beyond that, find a professor or two whose research interests you, take their upper level courses, get to know them, and then talk to them about their research and what role you might be able to play in it. It can be a very rewarding experience – for both the student and the professor. And the best research assistant is someone like you, Biz, who has great math skills and economic intuition – but also can write clearly, cogently and concisely!

## Spotlight on our Faculty



### **Dr. Xun Tang, Henry S. Fox Sr. Chair of Economics**

*Research Interests: Econometric Theory and Empirical Microeconomics*

Xun Tang joined the economics faculty at Rice University in July 2014 after having previously served as faculty at the University of Pennsylvania. He received a Ph.D. from Northwestern University, in addition to a Master of Public Policy degree from the University of Chicago. His research focuses on the robust econometric analysis of economic models about agents' behavior in environments with or without strategic interactions.

#### **Tell me your economics origin story. What got you interested in the field?**

My first job before grad school was with a newspaper, and that got me interested in analyzing public policy questions. Later I studied for a master's degree in public policy, but felt that was insufficient to satisfy my research interest. I am interested in applying more logic and quantitative thinking to address policy questions. After talking to my master advisors and fellow graduate students from an economics Ph.D. program, I decided to pursue a doctoral degree in economics.

#### **What are your research interests, and why do you find your area of research fascinating? Is there anything new and exciting happening in your subfield?**

I am fascinated by econometric theory and empirical microeconomics because they allow us to adopt a scientific approach to infer the incentives of economic agents from their reported decisions and use them to answer meaningful business or welfare questions (such as how individuals and firms interact in hypothetical scenarios featured in policy discussions). These fields are dynamic and ever-growing, with lots of unanswered research questions. The new topics that I find exciting include: estimating individual preferences or information sets in bargaining episodes under different protocols, inferring peer effects in social networks when the data is subject to measurement error, and estimating bidders' valuations in various auctions with non-standard formats such as scoring or multi-attribute auctions.

#### **I heard that you recently received a joint National Science Foundation (NSF) grant with Arthur Lewbel, an economics professor at Boston College. Can you**

#### **tell me more about the award and the research involved?**

The award is based on our proposal to analyze peer and contextual effects in social networks when the data available to researchers do not measure the links between individuals perfectly. For instance, students' test performance may be influenced by many factors beyond their own characteristics (a.k.a. direct effects), such as the social environment in the classroom (a.k.a. peer effects). The goal of empirical research is to infer the magnitude of these different sources of effects and use them for policy designs. For instance, if the goal is to improve average performance and the estimates suggest that the peer effect is large and positive, then you'd want to encourage student friendships (or work groups) instead of only counting on admitting good students in the class. In reality, the estimation of such effects always requires some measure of the links (e.g. self-reported friendships) but such measures are subject to error. The goal of our award is to propose new ways to incorporate and account for such measurement errors while estimating the effects.

#### **MTEC undergraduates choose between ECON 496 (Capstone in Economic Theory) and ECON 497 (Capstone in Econometrics) to complete their degree. Why would someone choose your Econometrics course over the Econ Theory course?**

ECON 497 and ECON 496 are courses with different goals, tailored for students with different interests and strengths. As far as ECON 497 is concerned, I have two primary goals. The first is to provide students with an in-depth review of some of the classical tools in econometrics. I want to make sure that students fully understand why these methods work (e.g. what assumptions are needed for valid inference), as opposed to just memorizing the "recipes" or Stata commands. The

other goal of ECON 497 is to help students appreciate how economic models can be elegantly integrated with econometric methods in modern empirical research. One of the main themes for this part of the course is that valid identification and inference are always specific to and constrained by the data-generating process (e.g., statistical assumptions about the relation between observed and unobserved variables). As a responsible researcher, one always needs to be aware of the conditions that underlie their conclusions and ideally should try to test those conditions if possible.

#### **What's the optimal time for students to take your course?**

I highly recommend students take ECON 497 in their junior year if they can. This probably means a student needs to commit to and focus on an Econ major path as early as possible. Parts of the course material in ECON 497 can be a bit dense, and therefore require lots of attention and time commitment. Based on responses from past students, I believe seniors juggling interviews and their job search would be at a bit of disadvantage due to multitasking. More importantly, understanding and mastering the course materials would actually help you improve job prospects in the long run. You want to learn these tools earlier and be able to implement them in later research/intern work, which will, in turn, help you improve your resume by the time you go on the job market.

## Senior Spotlight: An Interview with Biz Rasich '19



*Biz Rasich is a senior MTEC major and a member of Lovett College.*

### **When did you know that you wanted to major in Economics? How would you advise younger students who are contemplating majoring in ECON or MTEC to explore the majors as they relate to their educational and career interests?**

My dad is a Kellogg MBA and he instilled good business fundamentals in me and my siblings as soon as we could walk and talk. If we wanted to exchange a \$20 gift card for cash, we got a lecture on liquidity. When our grandparents took us on a spending spree at Christmastime, the amount we got to spend was indexed to inflation. By the time I got to college, majoring in Economics wasn't really a question! The next choice was whether I would major in ECON or MTEC. For me personally, I felt so intellectually engaged in ECON 200 (Microeconomics), learning about the mathematical underpinnings of the field, that I had already begun thinking about graduate school in the future. I decided that MTEC would give me the best preparation for graduate work and for conducting my own research. My biggest piece of advice to students is to carefully consider which major will further their careers. MTEC is great preparation for grad school and quantitative research careers because of its emphasis on mathematics and empirical work. However, if you're interested in going into consulting,

investment banking, or a general business career, it may actually be more useful to use the ECON major's flexibility to take additional economics electives rather than bulking up on multivariable calc and linear algebra concepts you won't necessarily need.

### **You're not an English major, but you've taken English classes every semester. How have those classes helped you in your MTEC coursework and how do you envision them helping in your career?**

My passion for reading and writing has become a major asset in my classes, my internships, and my job search. I've found, for example, that being able to structure an argument in a proof actually has a lot of similarities to how you might set up an argument about oceanic symbolism in Mrs. Dalloway. Recruiters have also been excited to hear that I have a background in English. When I interviewed for a Business Development internship, I was stunned that my interviewer started by saying, "I see you've taken several English courses and have published a few short stories. Tell me more." They knew I'd be able to analyze spreadsheets but also communicate clearly with coworkers, executives, and potential buyers. In the end, being able to communicate clearly is such a fundamental aspect of what economists do. Whether in the business world or academia, it's not enough to be brilliant at math and econometrics—you have to be able to make cogent arguments and explain why your ideas matter.

### **Tell me a little bit about your research project this year. How did your coursework in the department prepare you for this research?**

This year, I'm finishing up a research project that aims to predict the likelihood of someone going bankrupt before they

actually file in court. Dr. Yinghua He's ECON 209 (Applied Econometrics) class was fundamental in preparing me to conduct my own research. It's an incredible course because it opens the door to exploring your own questions about the world. I didn't have to wait for anyone else to write a paper—I could finally write my own! Throughout the semester, we kept learning new tools to do research and seeing the ways that math could so elegantly make sense of data. I still remember the day Dr. He taught us about fixed effects because I went back to my room and excitedly tried to explain it to my roommates. When I started my bankruptcy research, I actually came to Dr. He and asked to borrow the textbook we used in that class so I could refresh a few concepts!

### **What has been your thought process about applying to graduate schools now vs. working for some time before applying?**

My original plan was to apply for graduate school the fall of my senior year (i.e., now), so I prepared with extra math courses and research classes as well as taking the GRE the summer after sophomore year when I would have the most time to study. That plan was shaken a bit after I had a difficult internship experience (it was an all three meals eaten at your desk, never seeing the sun type of job) and I discovered that I needed a break before I took on the heavy workload of graduate school. After all, I don't want to just survive my Ph.D. program—I want to excel. With that in mind, I view my gap year as a time to explore the world and gear up for graduate school. Wherever I end up, I'll have industry-specific knowledge to draw upon in future work, and I'll have the space and time to generate new research questions. I'm looking forward to what's next!