### A Letter from the Chair

#### Happy holidays from Chapel Hill!

You probably remember this time of year at Carolina. Your parents and friends were all holiday shopping and house-decorating, while you were attending classes and studying obsessively for your final exams. It's rare for those in college to envy those not in college, but I'm sure it's true in Chapel Hill at this time of year.

It's my privilege to serve as Department Chair in Economics, and I can tell you that our students—whether undergraduate or graduate—continue to enjoy excellent opportunities to learn economic theory and to practice its applications to real-world events. (Translation—yes, they're stressed, but they're also learning a great deal.) The word is obviously out on campus: the number of students declaring Economics as a major rose again last year and has gone up by nearly 50 percent since 2012. The word is also out around the world, as we received over 400 graduate applications for 18 spaces in the first-year graduate class.

Why? I think it's because our undergrads see that we're innovating—we're not standing pat with the course structures of the last century. Our instructors continue to lead in bringing activity to the large-enrollment classroom. Our joint degree program with the National University of Singapore provides creating learning opportunities in one of the fastest-growing regions in the world. Our Minor in Entrepreneurship challenges its students to describe their "big idea" to change the world—and then gives them the tools and space in order to put their big idea into action. Our prospective grad students see the quality and relevance of the research undertaken by our top-flight faculty, and can't wait to join in.

This year, we are piloting three new undergraduate initiatives that you'll find written up inside, and I hope you'll have a look. The first is the credential in Quantitative Financial Economics that transforms our class offerings in the area. The second is a massive increase in sponsorship of experiential learning opportunities (internships, mentored

individual research projects, financial support for seniorthesis research, and others) for out-ofclassroom learning. The third is the "EconAid" center established to provide walk-in support to our students in our core classes. All build on



the fundamental educational concept of "learning by doing," and all take the concept in directions that deepen our undergraduates' critical thinking capabilities. We have external funding to offer these for the next few years, and then we'll assess. I'm impressed, though, with the possibilities for our students that these offer.

Let me use this space to give a shout-out to our many donors. Our enrollments are rising much more rapidly than faculty size, and this could lead to a less personalized learning experience for our students. The grants we win and the donations we receive make it possible to fund the "individual learning opportunities" that are so critical to an understanding of economics. Thank you! If you'd like to join the donor group, please see the last page of this newsletter for options in giving.

We have a smorgasbord of news for you describing our students, our alums, our faculty and our donors. I hope that you'll enjoy this taste of what we do. Should you wish to find more, or simply wish to read online, you can go to econ.unc.edu and click on "News."

And, should you be in Chapel Hill, please stop by to visit.

Patrick Conway
Professor and Department Chair
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#### Women in Economics

Srihita Bongu and Mijal Bucay are two of our best and brightest among the undergraduate majors. Srihita is Co-President of the Economics Club, and Mijal Bucay is the captain of our Federal Reserve inter-University Challenge team. Both are strong performers in the classroom, and both have taken on a new role recently as undergraduate learning assistants advanced undergraduates who provide tutoring and mentoring to students in the introductory and core economics courses. When they looked around the Economics classroom in their upper-level courses, they noticed something surprising: they were outnumbered! Why, they asked, were there so few women majoring in Economics?



On the steps of Gardner Hall: (l-r) Srihita Bongu, Professor Kalina Staub, Mijal Bucay

The Economics major has always had more men than women, but the divergence now is striking. In our introductory classes of a typical academic year, women make up about half of those enrolled. However, when we look at those graduating with a major in Economics, we find that women are only one-third of the total. This is not specific to UNC: in a Journal of Economic Literature article in Fall 2016, Amanda Bayer and Cecilia Rouse report that nationwide fewer than 30 percent of undergraduate Economics majors are women.

Mijal and Srihita talked with their classmates in Economics, both male and female, and came up with their proposal—

"Women in Economics." This is a club with a series of events on campus to introduce women interested in Economics as a major to women who have built successful careers based on their Economics training. As faculty adviser they made an inspired choice—Kalina Staub. Kalina is an instructor in her second year on campus with an interest in gender differences in economics choices and outcomes. The three together planned their first event—a "coffee break" with six of the women on the UNC Economics faculty that drew over 40 undergraduate women for an hour-long discussion. They are also inviting alumnae from our Advisory Group to visit the club.

There are many women to admire in business and economics: government officials like Janet Yellen, business leaders like Meg Whitman, and state leaders like Janet Cowell, state treasurer of North Carolina. The next generation of leaders is probably in this club!

Thanks to Srihita, Mijal and Professor Staub for their mentoring.

For more updates about Women in Economics Club, check our website econ.unc.edu/news.

### **Curricular Innovation: The New Quantitative Financial Economics Credential**



(l-r) Dr. Michael Aguilar and Gonzalo Asis

Education researchers know that experimentation and practical experience are important aspects of the learning process for many students. UNC Economics believes it as well, but our academic setting has made it hard for us to incorporate practical application into our on-campus courses.

This year we've introduced an innovation for our courses in the economics of financial markets. We've created a threecourse sequence that will include not only the study of the theory and history of financial-market activity, but also practical applications of the theory to a host of market-related outcomes. With the generous funding of the Nasdaq Educational Foundation, we have created the template for a truly handson learning experience. Students completing the sequence will learn both the theoretical knowledge of financial markets and the practical experience of financial-market transactions.

#### What's the innovation? Learning by doing.

- It is one thing to understand the theory of asset pricing, and another to incorporate that knowledge into bidding in a financial auction. Our students through participating in the bidding will deepen their understanding of asset pricing.
- Learning the theory of Federal-Reserve use of interestrate targeting is only the beginning to understanding the connection of monetary policy and the real economy. Experimenting with quantitative modeling techniques provides the depth of understanding crucial to any financial-market analyst.

We have a dynamic team leading this innovation. Dr. Michael Aguilar is Senior Lecturer in Economics and the lead instructor for the credential. He has designed all three courses around active-learning strategies and has incorporated market simulations as a staple of the practical applications. He's pleased with the opportunity to innovate in financial economics instruction:

"I'm an avid proponent of experiential education. There is no better way to understand a subject than learning-by-doing. That is precisely what we will do in this Credential. In every class session, students will be introduced to theory, and then put that theory into practice."

"I often speak with prospective employers. They have always been impressed with the analytical skills of our Economics graduates, but often want more quantitative and practical experiences. The Credential is designed to fill this gap. We provide students with the computational and statistical tools necessary to bring the theory of financial economics to practice. In so doing, we complement the strong analytical foundation that is the hallmark of our economics program."

Gonzalo Asis is the teaching assistant for the project and will be supervising the practicum. He brings a wealth of experience to this project, including spending the summer of 2016 as an intern at Tiger Global.

The Nasdaq Educational Foundation shared our vision and has provided a three-year grant to fund its implementation. In appreciation we will call this the Nasdaq Initiative for Quantitative Financial Economics. Students completing the three-course sequence will receive a credential from the Economics Department indicating their achievement.

We think this is an important and powerful approach to liberalarts education. Incorporating practical exercises, quantitative simulations and creative experimentation will lead to better learning outcomes for most of our students. While we will demonstrate the value of the approach first for financial markets, we plan to extend it to other economic choices: health care, labor supply, industrial organization and consumer choice.



This photo is a message that Nasdaq broadcast on their tower in Times Square. The world is learning about us!

### **EconAid: Study Assistance When You Need it**



Remember those days before the big midterm? You've reviewed the book, you've reviewed the class notes, and now you have 15 questions about what you've read that you just can't answer. You get together with your study group, but that only clears up five of the questions—now everyone in the study group is obsessing about the other ten. The undergraduate learning assistants (ULAs) are having a help session, but it's during an hour when you have a class. The TA's office hours were two days ago. The professor is having a review session just before the exam, but that's cutting it pretty close.

That's a classic economic problem. There are many possible sources of tutorial help, but they occur on a fixed schedule. The many students in our core classes study, and come up with unanswered questions, on their individual timetables. What's the solution?

At UNC Economics, the solution is EconAid. EconAid is both a place, and a promise, for our struggling Economics students. The place is Room 009, a repurposed classroom in the basement of Gardner Hall. The promise is that during a fixed number of hours each day the room will be staffed with a professor (or TA or ULA) who can answer your questions on subject matter from any of the core classes.

Professor Kalina Staub came up with the idea, and implemented it during the summer sessions in 2016 with financial support from the UNC Summer School. We evaluated it after the summer sessions were completed, and the UNC Economics Department agreed to sponsor it for the 2016/2017 academic year. It's not very expensive: in many cases the instructors, TAs and ULAs are just spending their scheduled office hours in 009 Gardner. For those EconAid hours that aren't covered in this way, the Economics Department funds graduate students on an hourly basis to answer questions.

Student responses to the innovation? Very positive. Brooke Mundy, a History Education major and a first-year student from Black Mountain, says:

"The EconAid Center is always a great place to be! Sometimes I go in there to work on my Econ assignments without having any questions because it is such a quiet place with a great atmosphere to work. Any time I do go in with questions, they are answered in a way that I understand and know I will remember. I am very grateful for the EconAid Center!"

Professor Staub teaches an upper-level course (Economics 480 - Labor Economics) and the introductory course (Economics 101). She's also very pleased with the outcome.

"Before problem sets are due and before exams office hours get much busier with up to 20 students in the center at one time. It is nice to be able to use the space to work problems out on the board together instead of trying to address each student's questions individually in my office."

We also find groups of students using the EconAid space at night and on weekends for joint study sessions. It's that Gardner Hall magic—it makes studying economics easier at any time of day!



### **Economics Major Named a 2016 Schwarzman Scholar**



Jialing (LingLing) Jiang, a senior Economics major at the University of North Carolina at Chapel Hill, has been selected for the Schwarzman Scholars program, an elite China-based scholarship modeled after the Rhodes Scholarship and founded by Blackstone Co-Founder and CEO Stephen A. Schwarzman. This innovative master's degree program supports the study of public policy, economics

and business, or international studies at China's prestigious Tsinghua University.

LingLing is one of 129 global recipients selected for the oneyear award, which provides unparalleled learning opportunities with leaders from China and the world through high-level interactions at lectures, an internship program, a mentorship network and intensive travel seminars.

LingLing plans to graduate this May with majors in economics and philosophy and a minor in philosophy, politics and economics (PPE). While at Carolina, Jiang founded the UNC International Ambassadors program. She is also passionate about social entrepreneurship and has provided improvement coaching for 16 nonprofits in eight cities around the country. Jiang has researched Africa-China relations at Stellenbosch University in South Africa and hopes to be an agent for intercultural relations and international development by starting a social enterprise that focuses on alleviating rural poverty.

"I am very honored for the opportunity to spend next year with some of the brightest young people across the globe at Tsinghua University," said Jialing. "I cannot wait to learn about China from a new perspective and meet top China scholars and business leaders through the Schwarzman program."

#### The PHI BETA KAPPA Society **AWARDS 2015-2016**

Brian Patrick Bartholomew Meera Chakravarthy Borahmie Chon Olivia Colson Zachary Dvorak Ian Michael Gallager Chiraayu Piyush Gosrani Daniel C. Hawke Aaron D. Homburger Connor Ko Caroline Kellogg Ann Lowery Rachel Lee Nesbit Laura Therese Sale Randall Allen Short Graham C. Treasure Andrew H. Wells, Jr Jerome John Zinn



MICHAEL A. **CATALANO Undegraduate Prize** in Economics 2016

Congratulations LingLing!

### **OMICRON DELTA EPSILON**

The International Honor Society for Economics • 2016 Inductees

Evan Garrett Allen Agustin Baler Srihita Bongu Hayley Carter Andrew William Keahi Castro Vivien Y. Chen Carly Marie Collette Fuhui Fang Brannum Forsyth

Katherine Elizabeth Goss Sofoklis Goulas Alec Jeffrey Haidinger Qijun He Morgan Herman Alice Haiyu Huang Hailey Kay Jacob David Kang Christina Kochanski

Christopher Lee Zihao Li Kara Mitchell Rachel Nesbit Nicole Sonderegger Norris Justin M. Pack Laura Kathleen Potter Sage Makenzie Stahmer Stephanie Zayed



### **Entrepreneurship's Secret Weapons**

"This program is so different. You spend so much time with us, helping us with internships, job searches and our future careers."

The Minor in Entrepreneurship is an undergraduate academic program based in the Economics Department that reaches out to students across the Carolina campus. It may look like a typical academic program on paper, but that ignores its greatest assets—the Entrepreneurs in Residence.

You'll recall the courses during your time on campus: a classroom, a professor at the podium, a graduate student as teaching assistant. We've become more creative and interactive over the years, but instructors still focus on classroom interactions. The Minor in Entrepreneurship employs a different paradigm: a focus on the student rather than the class. The entrepreneurs in residence are critical pieces in that changing focus.

Charles Merritt is the director of the Minor and a former entrepreneur in residence. His view: this is an inspired application of the liberal-arts education. "We love the fact that we are in the College of Arts and Sciences. We think this is a great way to take an academic pursuit or passion and then add this layer of skills that helps you develop an entrepreneurial mindset," Merritt said. "It's a great marriage between the liberal arts and the applied/practical. The entrepreneurs-in-residence are helping our students become better problem-solvers in the real world."

Entrepreneurs-in-residence teach classes, mentor students, counsel them on internships and job opportunities, help them network and make connections, and more. They represent different industries that enhance students' exposure to the nine tracks in the Minor: commercial, social, scientific, artistic, sport, public health, design, media and computer science. Most importantly, they foster that spirit of discovery in each individual student.



Buck Goldstein is the University Entrepreneur in Residence and the longest-serving of the group. He received his BA and LLD degrees from Carolina, and returned to Chapel Hill ten years ago to develop the Minor. Among his recent accomplishments was coauthorship of the book The Entrepreneurial University with former chancellor and serial

entrepreneur Holden Thorp; they are currently working on a sequel. A decade of Entrepreneurship students have absorbed his mantra: "Don't be afraid to fail. If you fail, though, do it quickly!"



Jed Simmons is our Media and Technology Entrepreneur in Residence. His business career was a striking marriage of media and technology, beginning with Turner Broadcasting in Atlanta and moving on to You Tube and Google. He jumped at the opportunity to work with UNC students, and has made an immediate impact. In his first year on campus, the undergraduates voted him the Carolina Chiron Award winner—the faculty member from whom they most wished to hear a "last lecture". He challenges the students to think differently, and has become a mainstay of our Introduction to Entrepreneurship course.



Bernard Bell is our Social Entrepreneur in Residence. His day job is as managing director of Urban Media Solutions (UMS) of Washington, DC, a media consulting firm. Launched in 2010, Urban Media coaches high growth startups, corporations and government agencies on traditional media and digital strategy around the urban market. He's a Carolina grad, but took some convincing to get in front of the classroom. In the end, though, he decided just to "tell it like it is". Mission accomplished, say the students.



Jan Davis is Commercial Entrepreneur in Residence and a Carolina alumnae. She is a retired CEO and active board member and adviser of companies in software, analytics, direct and interactive marketing, and personal information. She is an investor in Triangle Angel Partners and is the immediate past president of its executive committee. Students who find profit and loss calculations dreary stuff in their other Economics classes get excited when Jan explains—especially when she combines it with her descriptions of the pitfalls she's observed in start-ups that didn't master the technique.

Charles Merritt recognizes the value of his colleagues: "They bring the 'wow' factor in terms of their experience and background". Merritt, a Morehead-Cain Scholar and Economics major at Carolina who went on to develop the successful financial fund Parish Capital in the 2000s, brings his own share of "wow."

Our pictures are a bit misleading, because they're all taken in the classroom. The students will tell you—the contributions of the Entrepreneurs in Residence is much larger than their classroom spiel. They are mentors for the out-of-class moments too. (Photos in this article courtesy of Kristen Chavez)

For more information and resources about The Entrepreneurship Minor program, visit: www.unceminor.org

## Silicon Valley: A Burch Field **Research Seminar-Spring 2017**

#### **Entrepreneurship In Silicon Valley**

This Burch Field Research Seminars allows students to spend a semester interning in an innovative enterprise while pursuing course work associated with the Minor in Entrepreneurship. The seminar takes full advantage of the area's strong entrepreneurial culture, including trips to the Stanford Design Lab and the Y-Combinator Incubator. Iconic companies such as Apple, Google, Twitter, and Uber are incorporated into the curriculum and local entrepreneurs are involved in teaching, speaking, and mentoring.

January 6 - May 8, 2017

Faculty Directors: Buck Goldstein and Charles Merritt





## **Grad Students in International Macroeconomics Receive Summer Internships**



(l-r) Ryan Leary, Karlye Dilts Stedman, Gonzalo Asis

Three of our graduate students received macroeconomicsoriented summer internships in 2016.

Karlye Dilts Stedman was a research intern in the Western Hemisphere Department of the International Monetary Fund. Her current research at UNC examines spillovers from unconventional monetary policy in advanced

- economies to emerging markets. At the IMF, she assessed the external competitiveness of Argentina.
- Ryan Leary had two internships in Washington, DC. For the first half of the summer he interned at the Congressional Budget Office; he then moved out Constitution Avenue for a dissertation internship at the Federal Reserve Board of Governors. His research in Chapel Hill has addressed the effect of capital flows from the rest of the US on the macroeconomic performance of Puerto Rico.
- Gonzalo Asis was an intern at the hedge fund Tiger Management LLC. His current research focuses on corporate fragility in emerging markets and its effect on the global economy. This internship provided him with the opportunity to view this phenomenon through the private-sector perspective.

Congratulations to all three!

### 2015-2016 Teaching Awards



**DAVID DIAZ** Vijay Bhagavan Award for the Outstanding Econ 101 TA



**DANNY SOQUES** Best TA in a Graduate Level Course



**BRIAN MCMANUS** Jae-Yeong Song/ Chunuk Park Award for Excellence in **Graduate Teaching** 



**JEFF ACKERMANN** Award for Outstanding TA Instructor in Undergraduate Course



MICHELLE SHERAN-**ANDREWS** Excellence in Undergraduate Teaching

### **Incoming Graduate Class—Fall 2016**

Andrew DeJong finished his undergraduate program at Bowdoin College with BA in both Economics and Mathematics in addition to a minor in Classical Studies.

Audrey Ford completed a BS in Business Administration with a major in Economics and minors in Statistics, French and Francophone Studies from the University of Florida.

Jiadong Gu earned a BA degree in Economics from Soochow University and an MA in Economics from Peking University. This spring, he earned an MA in Economics from the Toulouse School of Economics.

Sasha Harrison received a BA in Actuarial Science and an MA in Economics from the University of West Indies in Jamaica. She then completed the Postgraduate Diploma in Education program at the University of the West Indies.

Lakshita Jain earned a BA and an MA in Economics from the University of Delhi. After graduating two years ago, she worked as a unit manager for the ICICI Bank in Hyderabad and as a research assistant at the University of Delhi.

Bhavna Joshi graduated from the University of Delhi in 2014 with BA and MA degrees in Economics. She served as a research assistant at the Centre of Social Sciences and Humanities in New Delhi.

Bennett Kobos completed a BA in Economics along with a minor in Mathematics from the University of North Carolina in Charlotte.

Linzhi Li has a BA in Economics from Peking University and an MS in Applied Economics from the Guanghua School of Management at Peking University.

Yunjuan Liu received her undergraduate degree in Financial Engineering from the Southwestern University of Finance and Economics in Chengdu, China.

Ke Meng received a BA in Public Administration and an MA in Population Studies from Renmin University. He also hold a PhD in Applied Demography from the University of Texas at San Antonio. He is currently a research data statistical analyst at UNC.

Tsuyoshi Nakano has a Bachelors in Engineering and an MBA from Kyoto University, and master's degree in Mathematical Sciences from the Australian National University.

Aneesh Pasricha completed a BA in Computer Science and Economics at Amherst College.

Steven Raybon graduated from Florida Central University with a BS in Mathematics in May 2014. After that, he worked at Siemens Energy, Inc. and Florida Blue as an actuarial analyst.

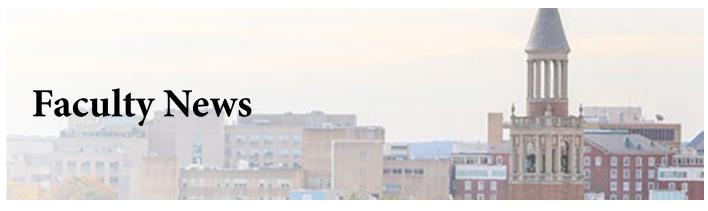
Sergio Restrepo received a BA and an MS in Economics from Pontificia Universidad Javeriana in Colombia three years ago. Upon graduating, he served as an economist with the Programming and Inflation Department for Banco de la República.

Garrett Scott received dual degrees with a BA in Economics and a BS in Mathematics along with minors in Financial Literacy & Spanish from Indiana University.

Jacob Spratt earned a Bachelor of Business Administration from the University of North Alabama with majors in Economics and Finance in 2013. After graduating, he interned with ServisFirst Bank, taught English in China, and worked as a program control analyst for System Studies & Simulation, Inc.

#### Recent Economics Graduate Degrees

#### 2015 Volha Belskaya ...... PhD Justin Casey Contat......PhD Christian Manuel Posso......PhD John Stuart Rabon ...... MS Kenneth Dean Reddix, II......PhD Gerard Robert Fischetti......MS Rayan Joneydi ...... MS Yiyi Liu.....PhD Daniel F. Soques......PhD 2016 Kanat Abdulla ...... MS John Wiley Dennis, III...... MS Ahmed Rachid El-Khattabi......MS Samuel H. Flanders ......PhD Deepak Gautam ...... MS Roberto M. Gonzalez.....PhD Matthew Taylor Horne.....PhD Joshua Thomas Horvath ...... MS Sarah Joye Rogers ...... MS Pragya Singh ......PhD William Edwin Watkins...... MS Aisling Winston......MS Yi Zhong......MS Ruchita Manghnani......PhD Mahnaz Parsanasab...... MS



### The New Latané Distinguished Professor of Economics



Peter Reinhard Hansen has been named as the third recipient of the Henry A. Latané Distinguished Professorship of Economics In the Department of Economics. He comes to Chapel Hill from his post as Professor of Econometrics at the European University Institute in Florence Italy and previously held academic positions at Brown University and Stanford

University. Professor Hansen received a Masters of Science in Mathematics and Economics from the University of Copenhagen and a Ph.D. in Economics from the University of California at San Diego.

Professor Hansen conducts research in time-series econometrics, with special attention to forecasting and volatility. His recent work has been published in leading econometrics journals including Econometrica, the Journal of Applied Econometrics, Econometric Theory, the Journal of Econometrics, Econometric Reviews and the Journal of Financial Econometrics. He is associate editor for Quantitative Economics, the Journal of Applied Econometrics, and Econometric Theory. Professor Hansen has been invited to present his work at universities and conferences throughout the world. He has appeared on Thomson Reuters' list of the World's Most Influential Scientific Minds in each year since 2014.

Henry A. Latané received his Ph.D. in economics from UNC-Chapel Hill in 1958. In 1960, he was appointed professor of economics in the College of Arts and Sciences and professor of finance in the School of Business. In 1969, he was the first recipient of the Meade H. Willis Professorship in Investment Banking. Latané was a pioneer in the rigorous numerical analysis of financial decision-making. He retired in 1980 and died in 1984. His family established the Latané Distinguished Professorship in his memory.



### In Memoriam: **Tiago Pires**

UNC Economics lost one of its best-loved professors this past April with the untimely death of Tiago Pires. Tiago joined the Economics Department of the University of North Carolina at Chapel Hill as an

assistant professor in 2013 and, from the beginning, left his mark as a passionate researcher and a caring, talented teacher and advisor.

Tiago was originally from Amadora, Portugal, and completed his undergraduate degree at Universidade Nova in Lisbon in 2006. He received his Ph.D. from Northwestern University in the US in 2013. In his three years on campus, Tiago became one of the best-known of the Economics faculty members. His students marveled at his attention to their learning undergraduates learned that there was no five-minute visit to his office hours. Tiago would spend whatever time it took for the student to leave with the necessary understanding of the material they were discussing, and the students loved him for it. We have many accomplished instructors in Economics, but it was common to hear the undergrads say: "Tiago Pires—best instructor ever!".

Perhaps the best testimonial to Tiago came from one of his graduate students now at the University of Chicago: "On the best days Tiago would be there to celebrate your smallest or biggest victories. On the worst days, he was the bright spot in a dark storm. He had a special talent for helping me see the other side of a bad situation. More than anything, he was a genuine role model. Happiness and genuine gratitude for the small things do not come easily for most of us, but Tiago was always there to cheer us along and encourage us."

Tiago was our resident footballer (in the European sense), and his unexpected death was a shock to all of us. The faculty in Economics has agreed to place a memorial in our seminar room in Gardner Hall to remind us all of the winning traits of energy, collaboration and intellectual curiosity that Tiago exemplified. We know that those of you who experienced his classes will understand our desire to hold on to his memory.

#### A Conversation with Professor Jane Fruehwirth



Jane Fruehwirth is an assistant professor in the Department of Economics with a curiosity about the choices individuals, especially children and adolescents, make, the role of their social context, such as classmates or schoolmates, and the effects on inequality. This has led her to study the economics of education, such as how the characteristics of classmates serve to reinforce

achievement gaps and the effects of school desegregation. Now she's researching a more contentious choice - the choice of adolescents to attend religious institutions and to believe in a higher power. Her research question is a simple one: "Do adolescents that exhibit more religious behavior than their peers have fewer symptoms of depression?" You may find her conclusions surprising!

Professor Fruehwirth joined the faculty here in Chapel Hill in 2015. She graduated from the College of William and Mary, has a doctorate in Economics from Duke University, and has served on the faculties of the University of Wisconsin in Madison and of Cambridge University in the UK. She teaches labor economics at the graduate level, and economics of education at the undergraduate level. She appreciates the large number of kindred spirits on our faculty in applied microeconomics—this group (including specialties in labor, education, health, industrial organization and econometrics) is both collaborative and constructively critical in equal measure. She is also excited to be affiliated with the Carolina Population Center and to be a part of the Education Inequality seminar group on campus, where she is meeting researchers in other disciplines, with similar interests in inequality, education, religion, and mental health.

Her research technique is relentlessly empirical. She begins from a simple theory of how people should behave, and then uses evidence from surveys to test how closely observed behavior tracks that prediction.

#### Why have you chosen to study the question of depression among adolescents?

On the personal side, my husband was studying counseling in England when I began working on this topic, so his studies certainly piqued my interests! But, as I began to read the literature, I also found that depression is a topic that is vastly understudied by economists. This became more surprising when I found that there were some great measures of depression out there that had been validated in clinical trials, based on individual self-reports to questions indicative of depression. I was hooked!

But, you may still ask, why you should care? Depression is a critical issue among adolescents worldwide. The World Health Organization highlights adolescence as a key period that needs to be addressed to combat depression, given the evidence of high probabilities of repeat incidences in adulthood. In the US, 11 percent of adolescents suffer a major depressive episode over a 12-month period. Mental health care has also become increasingly costly over the past decade, rising to the third largest source of medical spending.

#### What link do you believe ties the choice of a more religious lifestyle to depression?

First, it is easy to under-estimate the continued importance religion plays in the daily lives of young people in our increasingly secular world. Sixty-five percent of Americans of all ages say religion plays an important part in their daily lives. Among adolescents, 31 percent of twelfth graders attend church on a weekly basis.

A contentious literature dating back to Freud in the early 1900s debates the role of religion in mental health and has been highly influential in the treatment of mental health problems. Considerable scientific evidence suggests that religiosity is positively correlated with mental health. It is unclear whether this correlation reflects a positive effect of religiosity or whether the correlation simply reflects underlying unobservables, such as a stable home environment, which may be correlated with both religiosity (positively) and depression (negatively). And, there are many hypotheses out there for why religiosity might matter, ranging from improved psychological resources, reduced exposure to stressors (like divorce), and social support provided by religious institutions and networks.

Our research—I work on this with my co-authors Sriya Iyer and Anwen Zhang—uses variation in the social context within schools to determine whether the link between religiosity and depression is causal, using a nationally representative sample of adolescents in the US. Interestingly, the data we use, the National Longitudinal Study of Adolescent to Adult Health, were collected by (and follow up surveys continue to be conducted by) researchers at UNC!! The research stemming from these data is vast and has had a huge effect on our understanding of adolescent behavior.

#### What do you find in your empirical analysis?

We measure religiosity through adolescent reports of church and youth activity attendance, the importance of religion in their lives and frequency of prayer. We find that religiosity has sizeable effects on depression in adolescence. For example, a one standard deviation increase in religiosity decreases the probability that an adolescent is depressed by 11 percent.

By comparison, increasing mother's education from no high school degree to a high school degree or more only decreases the probability of being depressed by about 5 percent. We further find that more depressed individuals benefit significantly more from religiosity than the least depressed. This offers a startling contrast to evidence on the effectiveness of cognitive based therapy, one of the most recommended forms of treatment, which is generally less effective for the most depressed individuals.

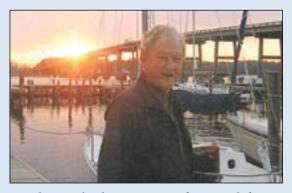
Is there any other evidence that religious participation has positive social or mental-health effects?

We find that the benefits of religiosity do not derive from a more religious social context in the school. Religiosity helps to buffer against stressors, such as worse physical health or the suicide of someone close. Furthermore, individuals who have fewer support structures in place at home and in school experience more benefits from religiosity. We also find evidence that part of the effect of religiosity derives through improved self-esteem and coping skills.

Couldn't this just be the positive aspect of repeated social interaction with peers? Could joining the chess club at school have the same effect?

We do not find any substitution effect of school club or athletic participation for religiosity. This suggests that the social support or sense of meaning provided by club and athletic participation does not substitute for religiosity in its effects on self-esteem or symptoms of depression.

### In Memoriam: **David McFarland**



David McFarland, emeritus professor and former department chair, passed away in late October 2016 here in Chapel Hill. David received his A.B. degree from Millsaps College in 1953 and his Ph.D. from Vanderbilt University in 1963. He came to UNC in 1964 after a year on the faculty at Princeton University. He served as chair of the department from 1968 to 1975, and retired from the faculty in 2002 after 38 years of influential teaching and research.

Christina Benson, class of 1977 and Economics major, is a former student of David's. Her thoughts are shared by many who knew him: "Professor McFarland epitomized what makes UNC a special place. He brought humor and warmth to his classrooms and took a keen interest and pleasure in his students' well-being and successes after they left UNC. His wise counsel and advice were instrumental in my career, and for that I am ever grateful."

There will be a celebration of his life at the Carolina Inn on 15 January 2017 from 1 to 3 pm. If you have memories of David that you'd like to share, please come join in.

### **UNC Hosts the Triangle Microeconomics** Conference in 2017

The UNC Economics Department is serving as host once again to the Triangle Microeconomics Conference. On 14-15 April 2017 scholars and practitioners will come together for presentations and discussions with the common theme of "industrial organization", the theory and empirical study of business strategies when the business has a significant share of the market for its product. We've attracted a large participant group from universities across the US: MIT, Yale, University of Southern California, Northwestern, Michigan, Penn and others. We have a conference website at econ. unc.edu/workshops/triangle-microeconomicsconference/, and you're welcome to check it periodically to find the research papers that will be discussed.

We first hosted this conference last year, and welcomed 60 participants from the Triangle area, the US, and Europe. The co-convenors last year were UNC Professors Fei Li and Tiago Pires, and our feedback from participants was uniformly excellent. This year, Professors Fei Li and Jonathan Williams are leading the organizational effort. The generosity of our donors is helping defray the costs of this important conference. Thank you!



### **Funding Individual Learning Opportunities in Economics**



(l-r) Matt and Paige Guest under Carolina Blue skies

Matt Guest is a 1997 graduate of UNC with majors in Economics and International Studies. While on campus he was a member of Lambda Chi Alpha fraternity and the Phi Beta Kappa honorary society. He is currently a partner at the law firm Wachtell, Lipton, Rosen and Katz in New York City where he practices corporate and securities law, with a focus on public company mergers and acquisitions. He, his wife Paige (also UNC class of 1997) and his four children live in Maplewood, New Jersey.

Matt grew up in Indianapolis, but found an intellectual home when he visited Chapel Hill. "I was initially attracted by the climate and beautiful campus. Upon visiting and touring the school and meeting students and professors, I was greatly impressed by the quality of the academics, which matched Carolina's lofty reputation." Once on campus, he gravitated to Economics as a major. "I had great experiences with professors in my first few classes taken in the Economics Department, so it was an easy decision to pursue the major from there."

This year Matt and Paige established The Guest Family Fund for Excellence in Economics, a \$200,000 commitment to the department. They've designated the gift to support experiential learning opportunities for undergraduate students. Examples of the potential uses of these funds will be summer research fellowships and internships for economics majors, undergraduate faculty-mentored research, research expenses associated with writing honors theses, and travel assistance for research, competitions or academic conferences.

Why experiential education? It stems from Matt's experiences at Carolina. As he put it, "I wrote an undergraduate honors thesis, and looking back on it believe additional funding would have greatly enhanced my experience. Our idea [in making this gift] was simply to provide some additional resources to allow undergraduates an opportunity to better explore and refine their academic or career interests at a key point in time."

Patrick Conway, chair of the Economics Department, welcomed the gift, which follows a previous fund established by the Guest family in 2012 in memory of Matt's father. "This generous gift from Matt and Paige Guest provides us in the Economics Department with the resources to assist our Economics students in deepening their understanding of the economics concepts and principles that they learn in class. 'Learning by doing' is an important component of any student's education, and for some of our students an internship or mentored summer research project will be just the experience to bring an abstract economic concept into focus. We are very pleased to be able to add these opportunities to our major."



#### We would love to hear from you as well!

Share your stories and experiences with us of life outside UNC. Email us at: economics@unc.edu

For more alumni news, visit: econ.unc.edu/alumni

#### Be an Economic Journalist. See the World!



Keith Bradsher '86 was your typical overcommitted Economics major—but with a difference. While many of his classmates were interning with financial firms, Keith wrote for the Daily Tar Heel. He graduated with highest honors in Economics and went on to the Woodrow Wilson School at Princeton University for a Masters in public policy, but he kept his eye on his prize: the opportunity to report on economics-related issues for a national newspaper. Oh, and seeing the whole world would be nice as well.

His opportunities came quickly. During summers at Carolina he served as a stringer in Mexico for US business magazines. At the Woodrow Wilson School he worked at the Los Angeles Times as a business reporter. After obtaining his masters degree, he became an economics reporter with the New York Times. His postings have been in New York (1989-1991), in Washington, DC (1991-1995), in Detroit (1996-2002), and in Hong Kong (2002-2016). That's where he's been based, but he's traveled quite extensively. As he says, "Along the way, I've done reporting trips to Europe, Africa, South America, the Mideast, South Asia and Australia. I'm still missing Antarctica. The New York Times does cover that continent, but it's unfortunately not considered a business story." He's now been asked to reopen the Times' Shanghai bureau, and has been there since November 2016.

Keith has become the go-to guy at the New York Times in recent years on economics and economic-policy issues in Asia. In his words: "I write a variety of daily stories, analyses and features, particularly on economic policy issues." As a true journalist, though, he knows that his job description is not so neatly defined. Wherever the New York Times needs an expert observer, he's there. "I'm not limited to covering economics. After Typhoon Haiyan struck Tacloban in the Philippines in November, 2013, leaving the roads lined with drowned bodies and triggering a week of chaotic looting, I lived in the ruins of the city for two weeks and filed articles by satellite phone."

With a travel resume like Keith's, it's irresistible to ask about the most exotic place he's visited. His answer is all business. "In July 2015 I traveled to Kano in northern Nigeria to interview the emir. There was still a large blast mark on the ground outside his palace, where Boko Haram had killed as many as 500 people a few months earlier. I was deeply impressed with the emir's bravery in continuing to advocate for polio vaccinations, more electricity and better rail lines. I walked through the narrow alleys of the ancient walled city to visit a tannery full of python skins, crocodile skins and other leathers; the tannery had lost most of its business to synthetic fabric imports from China."

Many of us in reading this are saying to ourselves: How do you create a career like this? Keith has a simple answer: it starts at Carolina. "My undergraduate work at Chapel Hill prepared me very well. My economics training at Carolina gave me an absolutely indispensable foundation for nearly 30 years of economic journalism, helping me to understand abstruse speeches by Alan Greenspan or to interview central bank governors and finance ministers in Asia."

When asked for a photo for this article, he sent the one above. No peaks, no beaches—just Keith Bradsher, notepad in hand, inspecting a Chinese automobile plant. That's part of the world, too.

### New in 2017: Administrative Appointments in Economics



#### **JONATHAN HILL Director of Graduate Studies**

Jonathan Hill will be the new Director of Graduate Studies starting January 1. His responsibilities are all those related to graduate students: supervising admissions, ensuring that students receive adequate support (both financial

and intellectual), and ensuring that students complete all requirements for graduation with an MS or Ph.D. degree.



#### RITA BALABAN **Director of Undergraduate Studies**

Rita Balaban will be the new Director of Undergraduate Studies starting January 1. Her responsibilities will be to the undergraduate curriculum. Our undergraduates already know her well, since many of them have taken her Economics 101 course.

She is a recent winner of the Tanner Award for Excellence in Undergraduate Teaching.

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Questions? Contact Ronda Manuel at 919-962-7266 or ronda.manuel@unc.edu



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