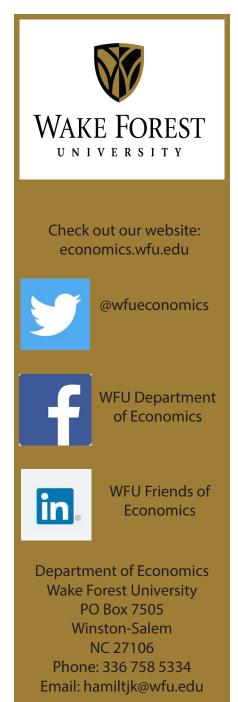


Edited by Amanda Griffith and Jo Hamilton



A Great Start to the Year - Heading Towards Normal





Fall 2021 office hours for Professor Megan Regan (top) and Professor Todd McFall - It was great to be back in person even with masks.

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Welcome from the Department Chair



Dear Readers,

Welcome to the ninth issue of the annual newsletter – Deaconomics – from the Department of Economics at Wake Forest University. We are proud to share with you news and stories from the last year, about our faculty, students, and alumni. If you missed previous editions of our newsletter, you can find them archived on the department's website: <u>http://economics.wfu.edu/newsletters.</u>

We begin with comings and goings in the department and are sad to say goodbye to Dr. Jane Ryngaert and longstanding faculty member Dr. John Wood who retires after 37 years. We wish them all the best as they move on. Then we warmly welcome two new assistant professors, Andre Mouton and Andreea Rotarescu, and two new visiting assistant professors, Yinlin Dai and Tabitha Knott. We are also thrilled to be able to welcome Megan Regan as she transitions to her new role as an assistant teaching professor in the department, and to congratulate Professor Todd McFall for his promotion to associate teaching professor.

We were happy to have a more usual academic year after the pandemic and now share with you our many faculty, student, and alumni achievements. We have an item on our inaugural department research series and you can read about the research of Professors Tommy Leung, Mark Curtis, and other faculty contributions in the media.

Our undergraduate students continue to be involved in great research alongside our faculty as they engage in high quality experiential learning opportunities in the department.

(continued on next page)

Welcome from the Department Chair (continued)

This year we had two students present at the Undergraduate Research Day, both advised by Professor Fred Chen. Two other students attended the Public Choice Conference in Nashville with Professor Jac Heckelman and we share their reports with you.

In addition to economic research our economics majors who are also talented in many other areas and we spotlight some of them over several pages. There is even a music video link on page 20!

We hope that you will all join us in celebrating our 2022 graduating students. We also highlight the research subjects of our students graduating with Honors and High Honors so you can take in the rich diversity of ideas among this set of students.

The newsletter concludes with the list of papers published by our faculty since last September, what events are coming up, and the names of all the 2022-23 faculty members.

Everything we do in the Department of Economics is supported by the generous donations of alumni and friends. Your gifts enhance our ability to pursue academic excellence, both as teachers and scholars, and we sincerely thank you for your support. If you are interested in making a gift to the department, more information appears on the final page of this newsletter.

We hope you enjoy this latest installment of Deaconomics. Please keep in touch and follow us on social media. We love to share our alumni accomplishments, so please let us know of anything we can share for next year.

Happy reading! Amanda Griffith Department Chair

Our Homecoming welcome was part of the Festival on the Quad in 2021. We will be there again when alumni come back in Fall 2022. Please come and say hello and check out our department swag. Here is a photo of Professor Megan Regan from last year.





Coming and Goings









Professor Jane Ryngaert has moved to the University of Notre Dame and we wish her all the best in this next stage of her career.

After 37 years as part of our department, Professor John Wood has retired. John has spent his first few months of retirement completing his most recent book and we have no doubt that he will continue to pursue his scholarship for years to come. We wish John and his wife Norma all the best in this new retirement adventure.

Professor Todd McFall was promoted to Associate Teaching Professor.

Professor Megan Regan continues in the department in her new role as Assistant Teaching Professor.

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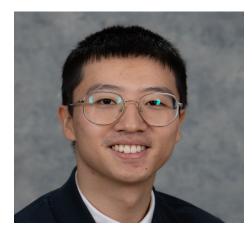
Coming and Goings - We Welcome our New Faculty



Andre Mouton, Assistant Professor, joins us after earning his Ph. D. from Carnegie Mellon University. He studies macroeconomics with a focus on labor markets and industrial organization.



Andreea Rotarescu, Assistant Professor, completed her Ph. D. at Johns Hopkins University. Her primary field of research is macroeconomics, particularly productivity and growth, firm dynamics, and international finance.



Yinlin Dai, Visiting Assistant Professor, received his Ph. D. from Clemson University. His research interests lie in the fields of gender economics, family economics, and labor economics.



Tabitha Knott, Visiting Assistant Professor, completed her Ph. D at Clemson University. Her research interests are public economics and applied econometrics.

Congratulations to Our Faculty



Professor Mark Curtis was selected as a 2021 Equitable Growth grantee. The Washington Center for Equitable Growth announced a record \$1.39 million in research grants for scholars examining economic inequality and growth. Mark and Ioana Marinescu will study the distributional implications for U.S. workers in a low-carbon economy. They will look at the effects of reducing dependence on carbon-intensive industries and increasing investment in green and renewable industries on opportunitites and wages for workers, as well as which workers benefit from such changes.

Professor Alex Yu won the Localize My Course Mellow Grant Award 2022 for designing a new elective course in Environmental Economics which addresses issues that are significant and important for our local community. Alex will teach the course in the Fall 2022 semester.



Professor Amanda Griffith was awarded a National Science Foundation Award with her co-principal investigator Joyce Main of Purdue University. Amanda and Joyce will examine how economic, social, and cultural capital translate to engineering degree attainment. See more <u>here.</u>

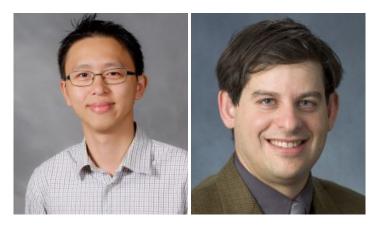


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Congratulations to Our Faculty (continued)



In January 2022, Professor Jac Heckelman was named an Honorary Vice President of the Korean Public Choice Society.



Professors Tommy Leung and Koleman Strumpf received a grant from the University of Pennsylvania's Center for Technology, Innovation and Competition (CTIC) and The Warren Center for Network and Data Sciences for the *Economics of Digital Services* Research Initiative for their work on headlines at the New York Times. See here.



Professor Robert Whaples has been made a life member of the Economic History Association in recognition of his contributions to the economic history field, as book review editor for EH.Net for the past 25 years. The end of his tenure came in Fall 2021 and this honor was announced to the EHA meeting in Tucson to "unanimous acclamation and praise" (John Wallis, president). The EH. Net Book Review Library contains reviews by top scholars of more than 2,200 books.

Inaugural Deaconomics Research Series

This series gives faculty the opportunity to share what they are currently researching with the rest of our faculty. The inaugural meeting took place on November 1, 2021 with Professor John Wood and Professor Tommy Leung presenting to a mix of in-person and Zoom faculty members.





"Meet a Deac" Tommy Leung

In the fall of 2021 The Office of Family Engagement posted the following "Meet a Deac Monday" article by Betsy Chapman Ph. D. ('92, MA '94) about our own Professor Tommy Leung (edited).

Tommy, thanks so much for being our Meet A Deac this week. Let's start with the easy questions: <u>Please tell me your title and how long you have been at Wake.</u> I'm an Associate Professor in the Economics Department. I've been here since Fall 2016, so this is my sixth year.

And tell me a little about your educational background. I got my Ph. D. in Economics from the University of Minnesota. My undergraduate degree was Business and Administration (with a concentration in Economics) from the Hong Kong University of Science and Technology. Before coming to Wake Forest, I was an Assistant Professor at the Chinese University of Hong Kong, where I also taught Economics.

I teach Economics! Specifically, there are two courses that I have taught so far at Wake Forest. One of them is ECN 150 (Principles of Economics) in which I teach (continued on next page)

"Meet a Deac" Tommy Leung (continued)

the basic concepts (demand and supply...) of Economics. This is an interesting course because I have the chance to introduce how many things (such as whether to grant COVID vaccine an emergency approval) can be viewed/analyzed from economics perspectives. Because it is a pre-req for the Business major, I have had a lot of bright and motivated students over the years!

Another course that I have taught at Wake is ECN 393 (Economics of Industry) in which I discuss how firms make decisions in different market structures, and how should government regulate different markets in response to the rise of market powers from firms. This is a more advanced economics course than 150, and students will need to be "tech-up" in order to understand many of the materials. They would need to make and present an anti-trust case towards the end of the course as well. But I find it very fulfilling to have guided them making many brilliant presentations over the years!

Besides the two courses, I have also guided students to work on their honor thesis, and hired some students as my research assistants over the years. I enjoy showing the students the way to conduct research in economics. Regardless of whether they move on to pursue a postgraduate degree in economics (many of them do not), these skills are still useful for their future career.

<u>COVID impacted all of our jobs in so many ways – what new roles did you take on during COVID?</u>

What were some of the challenges? I got tenure during COVID! So that's one "challenge" that I took. Joking aside, one of the major challenges during COVID was to work from home. Everything went virtual. Teaching was virtual, doing research with coauthors was virtual. I had to redesign my courses, make videos, and sit in front of my computer for hours. While technology is good in the sense that we are able to work virtually, I could not wait to be back working on campus!

Despite COVID, I was still able to work on my research, which is focused on the economics of digitization. My project with Dr. Koleman Strumpf (also of the Economics Department) on the causes and impact of A/B testing in the media industry was recently funded by the Center for Technology, Innovation and Competition at the University of Pennsylvania Law School. Finally, my youngest son was born last year during COVID. So that's another BIG project there as well.

Congratulations on both tenure and the new little one in your house! What were you most looking forward to as we started the fall semester? In-person teaching and really interacting with students and colleagues! (continued on next page)

"Meet a Deac" Tommy Leung (continued)

So you obviously have a lot of contact with students as a teaching faculty member. What advice would you give your students if they asked you? Be open to taking more challenging courses. College is probably the last stop where you can solely focus on learning before you go on with your career. I had not taken many math courses in high school and early in my college years, but then took real analysis (Math) in my last year of college and it was one of my favorite courses I have ever taken. I sort of regretted not taking it earlier.

How about advice you would offer to parents and families? I know many students at Wake are well supported by their parents and families. So keep up the good work.

In your opinion, what is the best part of working at Wake? There are many things I like about working at Wake Forest. Students at Wake are bright and hardworking, I have colleagues who share similar research interests. But I think the collegial environment in the department is the thing I appreciate the most.

Now it's time for our bonus questions!

Book you are reading now: The Age of Openness: China before Mao by Frank Dikotter.
Favorite music: Norah Jones.
Favorite movies, TV shows, Netflix, etc: The Office.
Websites you frequent: Google.
Guilty pleasures: Chinese food.
Introvert or extrovert? Introvert.
Something most people don't know about you: I am a big soccer fan.

Major Minor Fair Fall 2021



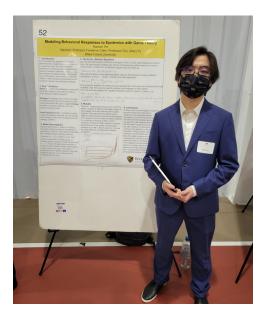




Professors Tommy Leung, Robert Whaples, Fran Flanagan and John MacDonald providing students with information about the Economics and Mathematical Economics Majors and Economics Minor.

Undergraduate Research Day Fall 2021

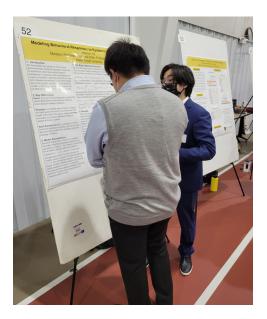
Professor Fred Chen was the advisor for two of the students at the Undergraduate Research Day on October 1, 2021. Both students had completed summer research projects with Professor Chen.



Haosen He ('22) is an econ major with a Wake Forest Summer Research Fellowship. The research was titled "Modeling Behavioral Responses to Epidemics with Game Theory".



Jessica Li ('23) is a math econ major with a Richter Scholarship. The research was titled "A Socio-Economic Examination of the "Street Stall Economy" Policy in China".





Students at Public Choice Conference, Nashville, March 2022



Camden Walrath, Professor Jac Heckelman and Cynthia Wang

Report from Camden Walrath:

Report from Cynthia Wang:

Attending the Public Choice conference this year was a great opportunity for me to grow as both an economist and an individual. It allowed me to meet and make connections with numerous influential scholars within the realm of public choice as well as develop my knowledge of the topics that currently captivate public choice research.

I am currently enrolled in both Professor Heckelman's public choice and theory of social choice courses and I was able to make real life connections between the topics that are being covered in the course with current research being conducted and produced, many of which could have important implications. Beyond developing my knowledge of public choice, it grew my interest in conducting research (continued on next page) The Public Choice Conference was very interesting and it was great to meet so many experts in the area.

The conference was divided into different topics and there were about 6 sessions held simultaneously. In each session, scholars presented their papers, and another scholar reviewed those papers. If there was time left, there would be a discussion. I was surprised to see how other scholars reviewed a paper with less praise but rather more constructive suggestions. The presenter, contrary to what I expected, accepted those suggestions pleasantly and wrote down those comments carefully. Dr. Heckelman explained that most scholars would revise their papers based on the suggestions after the conference.

(continued on next page)

Students at Public Choice Conference, Nashville, March 2022 (cont)

of my own and has inspired me to look for ways in which I can be part of influential economic research like the ones presented.

When I applied to attend the conference I was unsure of my post graduation plans. I knew that I was interested in pursuing a master's degree in economics, however, I had little knowledge of the application process or what kind of work I could do in the field. Throughout the conference I had the opportunity to sit down and converse with top professors from prestigious doctorate and master's programs throughout the country who were able to provide me with valuable information about how higher education in the field of economics works. I also had the opportunity to establish connections with people from multiple programs that give students resources to aid them with tuition costs as well as sponsoring their research.

Having this unique opportunity to attend the conference as an undergraduate student really pushed me to start pursuing opportunities to conduct undergraduate research as well as start the necessary steps to begin my application to economic graduate programs. I believe that the conference could serve as a great opportunity for undergraduate students to see what a future in economic research could look like for them. The humbleness and rigorous attitude of those scholars was self-evident.

It was also a great opportunity and experience to talk to professors from other universities about masters degree and Ph. D. applications. Professors were giving us suggestions on how to become stronger candidates during the application process. I learned that learning Stata and R are useful tools for research and it's important to do analysis work during my undergraduate years. In addition to talking to professors, I learned a lot from other graduate students. A student from Harvard gave a great presentation about criminal law and voting. She was an interesting presenter and researcher and I realized what a graduate student could become.

Finally, I would like to express my appreciation to Dr. Heckelman for giving me this opportunity, introducing me to other professors during the conference, and most importantly, being a mentor on masters application and career goals. His advice of "you want to find a career, not just a job" left a deep impression and will be a principle for me to follow in the future.

Student Economic Organization on Campus

The Society of Economists, with faculty advisor Professor Todd McFall, hosted several events over the year. Professor McFall helped Grace Castaneda ('22) and Ashu Ebsa ('23) establish the Society of Economists as a college-recognized club.

The Society of Economists student club hosted tonight three recent alums for a panel discussion on being an econ major at WFU, their career paths, and a bunch of other stuff you missed since you're not in the club. Thanks Lilly, @amanda_frazier8, and James!

@tamcfall



The Society held a Virtual Panel Discussion with Lilly Gaeto ('19), Amanda Wilcox ('20), and James Lee ('20). James is a research analyst at the Federal Reserve bank of Dallas. He interned at the FDIC as a risk manager. Amanda is a senior research assistant, Advanced Foreign Economics division of international finance for the Board of Governors of the Federal Reserve System. She interned at the Federal Reserve and the Council of Economic advisors. Lilly is a Ph.D. student in economics at Vanderbilt. She interned at Ernst and Young in transfer



Jared Bernstein, Member of the Council of Economic Advisers in the Biden administration, was the guest when senior Grace Castaneda conducted the interview for the Society of Economists.

pricing.



Nell Minow of Value Edge Advisors took part in a webinar interview conducted by junior Ashu Ebsa. Nell discussed her career and experience in thinking about good corporate governance. She recommended the movie "Solid Gold Cadillac" as a good depiction of corporate governance in action!

Congratulations to our Multi-Talented Students and Alumni





Tal Feldman ('23), a double major in economics and mathematics, has been named a 2022 Truman Scholar. Tal, from Fort Worth Texas, spent this past year at the London School of Economics. He has established an international reputation as an expert in government focused AI and machine learning. The Truman Scholarship is the most competitive national scholarship program for juniors in the country. It is designed to support the future of public service in America. Students receive up to \$30,000 to support graduate or professional school studies, participate in leadership development activities and join an alumni network that includes Stacey Abrams, Susan Rice and Daniel Pink. You can read more in WFU's Kim McGrath's article here.

Economics alum Cameron Young ('19) finished in second place at the 150th Open Championship in St. Andrews, Scotland, and is in the running for Rookie of the Year. Brandon Chubb ('15) (left) speaks at a panel discussion for the NFL Players Association. The former Wake Forest standout, whose NFL playing career was cut short by a knee injury, now serves as a player director for the NFLPA. (Photo courtesy of Brandon Chubb.)

See<u>here</u> for an NCAA media article by Corbin McGuire about Econ alum Brandon Chubb and how he has found fulfillment through his Chubb Foundation and his role with the NFLPA.



Congratulations to our Multi-Talented Students and Alumni (continued)







Junior econ major, and midfielder Meike Lanckohr ('23) has been named to the First Team All Atlantic Coast Conference Field Hockey team for the second straight year. Meike was also named a National Field Hockey Coaches Association All-American, selected to the First Team NFHCA All-Region, and selected to the ACC Academic Honor Roll.

Econ major Matt Thompson ('23) was one of three Wake Forest men's tennis players to be selected to the Academic All-ACC Team.



Tennis' Siddhant Banthia ('22), an econ major graduate, earned all American honors with his doubles partner Jakob Schnaitter.

Junior econ major and golfer Michael Brennan ('24) received Second Team All American by the Golf Coaches Association of America and was named Golfweek Second Team All-American. He represented Team USA over the summer as part of the Arnold Palmer Cup Team. Michael was Academic All-ACC and GCAA All American Scholar.



Econ graduate Zach Facioni ('22) was named a Weaver-James-Corrigan-Swofford Postgraduate Scholarship Award recipient. Zach was also named to the All-ACC Outdoor Track & Field Academic Team.



Footballer Tyriq Hardimon ('21) who majored in Economics and is currently earning a masters in Sustainability, received his fifth selection to the ACC Academic Honor Roll.



Congratulations to our Multi-Talented Students and Alumni (continued)



Basketball player, Christina Morra ('22), was named to the Academic All-ACC team for the third time. She graduated with a psychology major and economics minor and moves on to a professional basketball career.



Economics major Nico Benalcazar ('23), from Wilton, Conn has signed a Homegrown Contract with New York City FC. Nico was also selected to the ACC Academic Honor Roll.



Footballer Luke Masterson double majored in econ and communications and graduated in 2022 with a WFU masters in Sustainability. He was awarded Hula Bowl defensive MVP in January 2022 and for the fifth time was selected to the ACCAcademic Honor Roll. <u>Deacon Sports Extra</u> had five questions with Luke for a Go Deacs March 2022 article, see below.

Five Questions With Luke Masterson by Les Johns

"I'm a Deac for life, and I have a deep connection to the program for years to come." -Luke Masterson Luke Masterson just wrapped up his sixth and final year with Wake Forest Football, transitioning to linebacker where he led the team in tackles as they moved from 'Good to Great' with an 11-win season capped with a 38-10 Gator Bowl victory over Rutgers.

Masterson was twice named team captain, and finished his storied Wake Forest career with 218 tackles, 19 tackles for loss, 3.5 sacks and one interception. He led the Deacs in tackles in the Gator Bowl victory and recently won Hula Bowl Defensive MVP as he prepares for his professional career. Deacon Sports Xtra recently caught up with Masterson for this Five Questions feature.

What was your best moment at Wake Forest?

Masterson: "I don't know about the best moment, but most of my top moments come from this last year. Being named a captain both in 2020 and this year was a memorable event. I really took that to heart and felt honored to be elected a captain. The NC State game this year was one of the best moments that I've been a part of, just having the fans storm the field. The significance of that win was that it put us in a great position to play for the ACC Championship. Obviously playing in the ACC Championship was a great moment, although obviously it didn't finish the way we wanted. I've never been part of such an atmosphere like that. You could feel the energy from the fans. It was electric. It's hard to pin it on one moment, but this season had a ton of those moments." (continued on next page)

Congratulations to our Multi-Talented Students and Alumni (continued)

How was the position switch from safety to linebacker?

Masterson: "I'm thrilled that it happened. I always believe that things happen for a reason. Switching between the two positions throughout my career helped me this year, because I was able to use cover skills that I used at safety. I was able to know what was going on behind me and beside me in the secondary. All that stuff I experienced at safety and other positions helped me this year at linebacker. Obviously, I feel most comfortable at linebacker and it gave me the opportunity to play my best football."

What were you able to accomplish off the field during your time at Wake Forest?

Masterson: "I double majored in economics and communications, with a minor in entrepreneurship. Then I finished my master's in sustainability this year. I'm always open to new things and new opportunities, but opening my own business is something I'd be interested in. I've always had an interest in wealth management, and working with athletes, especially with all the connections I'm making throughout my athletic career. I like helping people too, so that would be a good combination."

How connected do you plan on being to the program moving forward?

Masterson: "I'd like to come up for the spring game and to as many games as I can, depending on what I'm doing. I'll be watching all of them. I'm a Deac for life, and I have a deep connection to the program for years to come. That's one of the positives to being a six-year guy. I'm going to know players for many years to come. It's going to be fun to watch and see guys who joined this year and see how they grow."

Did you imagine the 'Good to Great' motto coming to fruition the way it did this season?

Masterson: "That was one of the main reasons I came back. I really did believe we had the talent and leadership on the team to make that happen. I said this in my senior speech to the team. It was easy to buy into that 'Good to Great' motto during winter workouts and during spring ball, and even the summer. The season wasn't anywhere close. It was easy to say, but then as we got closer, went to ACC Media Day and kind of put it out there, it became more real.

"You realized we had to back it up or we would have looked dumb. Good to Great was such a bold motto for the year. If you came out and just won five-or-six games, it would have looked dumb. The pressure was definitely on, but behind all of that the core belief we had as a team to do it was there. It wouldn't have happened if guys didn't completely buy in. From the first team meeting where we introduced that motto, guys bought into it. It was the best offseason workouts, best spring ball and best camp l've ever been part of and it all helped us accomplish that. We all knew what every game meant. You couldn't waste a game or take a day off. They all mattered."

Congratulations to our Multi-Talented Students and Alumni (continued)



Econ major alumnus Griffin Kurzius ('15) and Michael Zavagno ('15) a History major, set up a Fantasy football start up TopProp Fantasy Sports. See WFU magazine article February 23, 2022 "Fun for Real-They played fantasy football in college. Now it's their business" by Rafael Lima ('21) <u>here.</u>



Econ major and WFU golfer Michael Brennan ('24) features in a commercial for Tom Brady's new line in golf apparel. You can read the Golf Channel's article "College stars Cole Hammer, Michael Brennan part of Brady Brand golf collection unveiling" by Brentley Romine and watch the commercial <u>here</u>.





Ben Wojnar ('18) appears in a music video from Ally Brooke "Por Ti" (from the group Fifth Harmony). You can watch the video <u>here.</u>

Grace Lyons ('22) Equestrian Team (OGB Jan 20, 2022) Senior Grace Lyons, one of the members of the Equestrian Team, competes at Tyron International Equestrian Center over 2021 Fall break.



"Will Machines Replace Human Workers?"

Professor Mark Curtis was interviewed by WFU reporter Kim McGrath and Chris Amaral ('23) for this question and answer session which first appeared on the <u>WFU News site on March 10, 2022.</u>



Economists have long studied the question of whether machines might one day replace human workers, but the advent of new technologies makes it particularly important as we consider the future of work in the 21st century. New research by Wake Forest economics professor Mark Curtis and co-researchers from the University of Pennsylvania, Grinnell College and Duke University, sheds light on the question by studying a tax policy that incentivized firms to invest in new machinery.

What did your research show?

Firms responded by dramatically increasing new purchases of machinery and equipment. However, new machines did not replace workers. In fact, firms actually increased the size of their workforce following these new investments and historically disadvantaged workers (those with less formal education, minorities, women and young workers) saw the largest employment gains.

What does this suggest for concerns that machines will take our jobs?

The research suggests that workers may actually benefit as firms invest in new machinery. Tax policies can incentivize both the addition of machines and workers. While certain investments may replace workers, the typical investment in capital results in firms hiring more workers. On the whole, concerns that machinery (continued on next page)

"Will Machines Replace Human Workers?" (continued)

investment will replace workers are overblown. That workers operating production machinery saw the largest gains suggests that machines and workers continue to be complementary inputs in modern manufacturing processes.

How did you connect the increase in new technology to the increase in employment?

U.S. Census Data on manufacturing establishments between 1997 and 2011 allowed us to track plants that benefited from the investment tax policy, relative to those that did not. Before the policy, these two groups looked very similar. When the policy began we observe the affected plants increasing their levels of both investment and employment. However, we did not observe increases in average wages or productivity gains. If there was no increase in productivity or wages, is tax savings the sole incentive for a business to adopt new technology?

A major reason for the new investment is the desire for growth. Firms affected by the tax policy are able to grow. This is particularly true for firms that might have had limited access to financing and as such were constrained in their ability to grow. One of the most striking results is that output and sales increased as well in response to the policy.

<u>The robotization of industry is typically associated with the manufacturing sector, how do you see</u> <u>this trend affecting other industries?</u>

Labor markets are constantly changing in response to new technologies. Tasks that can be automated, will eventually be replaced. However, as certain jobs become obsolete, entirely new categories of jobs are created. Education plays a key role in ensuring that workers have skills needed to make transitions throughout their careers. Many skills, such as the ability to communicate with others and creative thinking will always be in demand.

At a more local level, what do these results tell us about the future of industry in the Carolinas?

Between new tech jobs in the triangle and new plants locating here in the Triad, there are many exciting economic stories occurring here in North Carolina. Many new jobs are being created in a variety of industries. As the state looks forward they have the ability to use the tax code to incentivize future investments here in the state. Some have argued that these incentives should always be directly tied to the number of jobs that are created. Our results suggest that policies that incentivize capital investment will also positively affect the number of workers hired and that these investments will tend to benefit historically disadvantaged workers that are most likely to interact with the new machinery.

(continued on next page)

"Will Machines Replace Human Workers?" (continued)

Looking forward, what do you think the next steps are in this line of research?

Moving forward we would like to understand the long-run implications of these investments for workers by tracking workers in affected industries across many years. What skills do they gain from interacting with the machines, which occupations benefit most and how does the occupational composition of the workforce change over time. We'd also like to understand the environmental implications of these investments. Do firms take advantage of these incentives to replace old and dirtier machines with cleaner technologies or do they simply add to their existing capital base and pollute more.

by Kim McGrath | mcgratka@wfu.edu | 336.758.3209 & Chris Amaral ('23) | media@wfu.edu | 336.758.5237



Professors Megan Regan (third from left) and Fred Chen (fifth from left) were nominated by players to be recognised at the field hockey faculty appreciation game in October 2021.

Faculty in the Media and in the Community



CHEN'S RESEARCH QUOTED IN VOX ARTICLE ON Synthetic Rhino Horns

Frederick Chen, Professor of Economics, is referenced in "Fake Rhino Horns Were Supposed to Foil Poachers. What Went Wrong?" on <u>VOX</u>.

<u>Fred Chen was quoted in Vox "Fake rhino horns were supposed to foil poachers. What went wrong?</u>" by Benji Jones.

""Economic principles tell us that the availability of synthetic horns can reduce the supply of wild horns — and even drive out wild horn sellers completely from the horn market," Frederick Chen, an economist at Wake Forest University, wrote in one of the studies, published in the journal Ecological Economics in 2017. (Chen is also a co-author on the other study, along with 't Sas-Rolfes, which similarly suggests that synthetic horns could reduce poaching under certain conditions. It was published earlier this year.)"

<u>Mark Curtis's research was referenced in a New York Times opinion piece by Paul Krugman "Did Democrats</u> <u>Just Save Civilization?"</u> about the Inflation Reduction Act.

"Furthermore, it's a strategy that seems likely to pay political dividends in the future. One new study, by E. Mark Curtis and Ioanna Marinescu, finds that "the growth of renewable energy leads to the creation of relatively high paying jobs, which are more often than not located in areas that stand to lose from a decline in fossil fuel extration jobs.""

Mark Curtis was interviewed by WFDD for a piece "Fast-growing green jobs pay more, Wake Forest economist says" by Paul Garber.

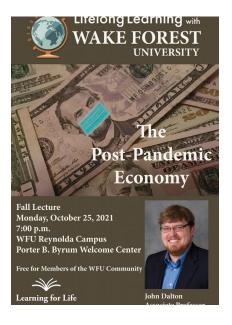
"New research by Wake Forest University economist Mark Curtis finds that jobs in the renewable energy sector have tripled in the last 15 years, a figure that could grow with the recent passage of the federal Inflation Reduction Act. Curtis says the research found renewable energy jobs have a pay premium of about 20 percent over similar jobs in the fossil fuel industry. And he says that much of the job growth has occurred in places threatened with losses in the carbon fuel-based workplace."

Mark Curtis's research was quoted in a MarketWatch article "Where are the high-paying "green" jobs? Often in the states fighting against them" by Rachel Koning Beals.

"Solar and wind jobs pay roughly 20% above the U.S. median salary, and they tend to be created where fossil fuels have dominated local economies, new research shows".

Faculty in the Media and in the Community (continued)

John Dalton presented "The Post-Pandemic Economy" to the WFU Lifelong Learning community.



John Dalton's research was referenced in a SupplyChainDive article by Matt Leonard

"Just-in-time and safety stock require a careful balance".

"Japan adopted lean practices a full decade before companies in the U.S., John Dalton, an economics professor at Wake Forest University, noted in a 2013 research paper (<u>A Theory of Just-in-Time and the Growth in</u> <u>Manufacturing Trade.</u>)

The idea, which U.S. companies began to adopt, is simple: Businesses want to try and match their level of inventory to consumer demand as closely as possible. In a well-oiled supply chain, manufacturers can meet fluctuations in demand, and theoretically sell more while reducing inventory carrying costs, Dalton wrote."

<u>Fran Flanagan</u> was interviewed by All Things Considered on NPR. What it means for the jury to be nearly all white in trial for Ahmad Aubrey's killing.

Tommy Leung and Koleman Strumpf's working paper on the New York Times "All the Headlines that Are Fit to Change: Analysis of Headline Changes in the Media Industry" was cited in this Citizens Journal article "Researchers Studied When and Why NYT Changes Headlines" by Oscar Mejia Garcia.

"The researchers concluded that New York Times editors are more likely to change a headline – or run an A/B test in which two headlines are shown to random groups of users to determine which is more popular – on articles that elicit more engagement among more partisan readers. The researchers used Ground News' Blindspotter tool, which allows users to analyze the partisan balance of any Twitter user's news consumption, to determine the ideological leanings of users who engaged with New York Times articles."

Faculty in the Media and in the Community (continued)

<u>Tommy Leung</u> was interviewed with WFMY News 2<u>"History of Cyber Monday and how it's expanded small</u> <u>business shopping"</u>.

""In total spending was close to 3.7 billion, 2017 4.7 billion, 2018 it was 6 billion, 2019 7.9 billion, and 2020 was 8.9 billion. So on average, it's about 20%-30% growth from year to year."

There aren't any numbers out yet for this year's Cyber Monday spending totals. If they're anywhere near the 20 to 30 percent growth like years previous, we're talking about north of \$10,000,000,000 dollars within 24 hours.

"That's a good thing for small businesses because they really rely on the online platform to reach consumers across the country. Whereas in the past with brick & mortar model, there was no way for small businesses to reach a wide audience."



<u>Todd McFall</u> was interviewed multiple times during the year by WFMY News2. You can watch the various videos at the links below:

On jobs in the Triad:

<u>Thousands of jobs could be coming to Greensboro. What comes next and how soon.</u>" by Ben Briscoe and Tom Santaniello.

"Both development plans use lots of taxpayer money. Todd McFall said he's skeptical about the projects. "The amount of tax revenue that would be lost from...incentives needs to be made up from income taxes and sales taxes that would come from the jobs that would be created".

On Inflation:

How inflation is impacting the cost of living in Greensboro by Tom Santaniello.

"In the next six months, I would be surprised to see conditions in the housing market look like they do now because of credit market tightening," Todd McFall, assistant professor of economics at Wake Forest University, said. (continued on next page)

Faculty in the Media and in the Community (continued)

"The demand's just going to dry up because there's a fixed number of people looking for those units."

On gas prices:

- What's driving up gas prices? Experts say drivers can expect to see high gas prices for the foreseaable future by Lauren Coleman. "People are trying to figure out how they can reorganize their life to use less gasoline and yet supply still is tight with Russia not being able to supply like they normally are, like countries not willing to purchase gasoline from Russia in the way that we have in the past".
- <u>What's fueling the price hike at the pump</u> by Stacey Spivey.
- How Bidens strategic oil release will help you save money at the pump by Lauren Coleman.
- <u>Will gas prices drop with Bidens release from the Strategic Reserve experts say not in the long-run by</u> Lauren Coleman.

Robert Whaples gave the following talks:

- "Anti-racism and Liberty," Bastiat Society in Raleigh.
- Forsyth Country Club speaker series (on the state of the economy).

Robert Whaples gave interviews you can listen to at the following links:

• "Cryptocurrencies Explained," EWTN Radio, Kresta in the Afternoon.

"As a Senior Fellow of the Independent Institute, Robert Whaples talks about cryptocurrency and how it is used. Bitcoin is the most popular cryptocurrency, but others are gaining popularity. He decribes who is usuing it and whether it will have a more widespread function in the future."

• <u>"The Four-Day Workweek is Here,"</u> Build for Tomorrow Podcast.

"The norm was that people worked almost from sun up to sun down...The default setting at first was that... you're going to work about as much on this job as you would if you were working on a farm, if you were a hired hand. The estimates are that in the 1800s, a little bit before the Civil War, the average length of the workweek in the U.S. was about 69 hours".

<u>Alex Yu</u> contributed to Wake Forest's Center for Energy, Environment & Sustainability article by CEES staff <u>"Understanding what the Inflation Reducation Act means for U.S. climate policy".</u>

"A lot of firms are adapting their production processes in order to reduce carbon emissions, but such green technologies often require a lump sum investment and might take years to break even and make a positive profit. The same is true for households that would like to install solar panels and purchase electric vehicles. Overall, the Act would give an extra incentive for firms and households to make this green transition today."



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Faculty in the Media (continued)



GLOBALIZATION AND THE RISE OF ACTION MOVIES IN HOLLYWOOD By Shi Qi and Tin Cheuk (Tommy) Leung

Professor Tommy Leung was invited to contribute to a blog post about his recent publication in the Journal of Cultural Economics for economiststalkart.org. Here's the <u>link</u> of the blog post and the text is be-low.

What has caused the influx of superheroes such as The Avengers and The Justice League in Hollywood in recent years? Leung and Qi (2021) empirically show that globalization plays a huge part, especially with the emergence of the Chinese market in which Action movies face fewer cultural and language barriers. The movie industry experienced two tectonic shifts in the past two decades. First, action and adventure movies have become dominant in the box office, and their box-office market share went from less than one-third in the late '90s to almost 60 percent in 2019. Second, Hollywood has become increasingly reliant on foreign markets. The US share of the worldwide box-office revenue has declined from 60 percent in the mid-1990s to less than 40 percent in the present day.

In this article, we explain these parallel developments in the movie industry. In particular, our work shows that Globalization and the growth of international markets have significantly contributed to the rise of action movies in Hollywood.

China's emergence in the movie market epitomizes the growing influence of international markets. Hollywood movies started to enter China officially in the mid-1990s. In November 1994, The Fugitive, starring Harrison Ford, was the first to be released in China. In 1995, only six US movies were released in China. While the Action movie True Lies was the most successful Hollywood film in China that year, the Oscar-winning drama Forest Gump was a relative failure. Even for True Lies, the gross Chinese box office revenue of \$12.3 million was inconsequential, compared to the worldwide gross of \$365.8 million.

From 2009 to 2019, the number of Chinese cinema screens has grown from 4,723 to 69,787, an almost fifteen-fold growth. With such an explosive increase in demand, China has become the second-largest market for Hollywood movies. (continued on next page)

Faculty in the Media (continued)

Nowadays, at least 10 percent of Hollywood's annual gross box-office revenue comes from China. China has become a prime export destination, especially for blockbuster Action movies. For example, the Chinese box-office revenue of Avengers: Infinity War (released in 2018) was \$360 million, more than half of the North American revenue.

Compared to US audiences, consumers in foreign markets have a stronger preference for Hollywood Action and Adventure movies over other genres (e.g. dramas and romantic comedies). Intuitively, Action movies face fewer cultural and language barriers. Films are inherently cultural, and their perceived qualities are subjective to consumer preferences and vary across countries and cultures. For example, 12 Years a Slave, a biographical period drama set in the US Antebellum South, won the Academy Award for Best Picture in 2013 but had hardly any presence in East Asian countries. In contrast, Iron Man 3, a super-hero action movie released in the same year, was more popular overseas, and its gross box-office revenue in the international markets was twice as much as that in the US.

As the international market becomes more important, Hollywood studios reallocate budget investments from Non-Action to Action movies to satisfy the international audiences' tastes. In recent years, Action movies typically spent a significant fraction of their budgets on expensive special effects using Computer Generated Imagery (CGI). For example, the Marvel Studio's The Avengers, released in 2012, had a budget of \$220 million, of which more than half (approximately \$120 million) were on the special effects. The fantastic visual imageries are the common thread of all these new modern Action and Adventure films. The Quidditch games in Harry Potter, the Battle of Mordor in the Lord of the Rings, and Avengers battling Thanos in the Marvel Cinematic Universe, all have dazzled the audiences with tremendous Computer-Generated Imageries. Intuitively, a higher budget investment in CGIs can significantly increase an Action movie's perceived quality in international markets. However, raising budgets by the same amount to hire dialogue coaches may have a much less effect on the perceived qualities of dramas or romantic comedies.

Based on our model estimation, the reallocation of resources from other genres to Action movies disproportionately favors international consumers, especially in Asia. However, while producers increasingly tailor their products to attract international consumers, domestic consumers can be worse off. Our results illustrate a potential downside of Globalization, and a disproportionate increase in one type of cultural product can raise consumer welfare in some countries at other regions' expense.

Leung, T.C., Qi, S. Globalization and the rise of action movies in Hollywood. Journal of Cultural Economics (2022). https://doi-org.eur.idm.oclc.org/10.1007/s10824-021-09438-z

Invited Speakers



Professor Koleman Strumpf invited two speakers to campus in the Fall. First was Dr. Sandy Darity, the Samuel DuBois Cook Professor at Duke University, whose public talk was titled "Understanding Wealth Inequality in America". This event was sposored by our Department of Economics and the Dean of the College, and co-sponsored by the Humanities Institute, the Slavery, Race, and Memory Project, and the African American Studies Program.

The second speaker was Dale Folwell, the North Carolina State Treasurer who spoke to students on the "\$tate of the \$tate"



Professor Robert Whaples invited Dr. Marcus M. Witcher, Assistant Professor of History at Huntingdon College, to speak on the Economics of the Great Depression. This lecture was co-sponsored by our Department of Economics, the WFU Department of History, and the WFU Humanities Institute with support made possible by a major grant from the National Endowment for the Humanities.

Congratulations to the Class of 2022!

This year our department had 100 students graduating with a major in Economics and 5 with a major in

Mathematical Economics. There were 37 students graduating with a minor in Economics. Congratulations!

<u>Congratulations to this year's winners of our department awards:</u>

David and Lelia Farr Prize for Excellence in Economics was presented to Gina A. Beyer

and for Excellence in Mathematical Economics was presented to Haosen He.

<u>Claire and Dan Hammond Economics Award for Leadership and Service</u> was presented to Jadyn H. Ives.

Michael Lawlor Macroeconomics Prize, was presented to Robert Farnham V.

The highest score on the Department Economics Exit Assessment was earned by Ben Raiford and the

highest scorer on the Department Mathematical Economics Exit Assessment was Kina Huang.

They win the Deacon Econ and Deacon Math Econ Prizes.

We would also like to recognize the students who graduated with

Honors in Economics:

Gina Beyer – "Let's Talk About 'It': The Effect of Campus Sexual Assault and Associated Publications on Current Student and Prospective Applicant Outcomes"

Sara Cullen – "The Interaction of the Concentration and Duration of LIHTC on Health Outcomes"

Maya Gerster – "Is Civic Pride Worth Subsidizing? An Analysis of How Stadium Subsidies Impact Local Economies"

Henry Hu – "What is Ideal Covid-19 Policy Action that Balances the Tradeoff Between Health and Economic Outcomes"

Congratulations to the Class of 2022! (continued)

Honors in Economics (continued)

Jadyn Ives - "Three Strikes and You're Out? Analyzing the Impact of California's Three Strike Policy"

Morgan Jacobi – "Understanding Technology as a Catalyst for Changes in Mental Health Outcomes During the COVID-19 Pandemic"

Matthew Kowalishin – "The Effects of Extreme Weather on Labor Market Dynamics: Hurricane Katrina and Workforce Composition"

Brigid McNamara – "The Relationship between Team and Venue Quality and Fan Engagement in Major League Baseball and the National Basketball Association"

High Honors in Economics:

Jacob Grossman – "Incentives for Sponsorship: Does Wearing an Apparel Brand at the AAU and NCAA Levels Increase the Likelihood of Wearing the Same Brand in the NBA?"

Grace Lyons – "The Impact of Comorbid Psychological and Behavioral Conditions on the Length of Pediatric Hospital Stays"

Haosen He - "Modeling Behavioral Response to Infectious Diseases Under Information Delay"

Economics Honors 2022





Commencement for 2020 and 2022

The pandemic delayed the commencement ceremony for the class of 2020 but those students were able to come back to campus for graduation on 18 September 2021. Then the supporting faculty had another opportunity to share in the fun in May 2022 for the class of 2022. Here are photos from both events with Professors Griffith, Regan, MacDonald, McFall and Ryngaert.











Faculty Publications

Where available, clicking on the paper titles below will link directly to the article itself.

- <u>"A Graphical Exposition of the Profit Maximizing Two-part Tariff" (Chen, F.), The American Economist, 2022,</u> 05694345211019721.
- <u>"An Agent-based Model of Elephant Crop Consumption Walks using Combinatorial Optimization" (He, H.,</u> Buchholtz, E., Chen, F., Vogel, S., and Yu, C.), Ecological Modelling, 2022, 464, 109852.
- <u>"Reducing Demand for Overexploited Wildlife Products: Lessons from Systematic Reviews from outside</u> <u>Conservation Science</u>" (MacFarlane, D., Hurlstone, M., Ecker, U., Ferraro, P., van Der Linden, S., Wan, A., Veríssi-<u>mo, D., Burgess, G., Chen, F., Hall, W., and Hollands, G.), Conservation Science and Practice, 2022, 4, e627.</u>
- <u>"Teaching and Learning Schumpeter: A Dialogue Between Professor and Student" (Dalton, J. T. and Lo-</u> gan, A. J.), Review of Austrian Economics, 2022, 35 (2), 235-256.
- <u>"Schumpeter in Vienna: A Study Abroad Course" (Dalton, J. T. and Logan, A. J.), in Off-Campus Study, Study</u> <u>Abroad, and Study Away in Economics: Leaving the Blackboard Behind, edited by Joshua Hall and Kim Holder,</u> <u>Springer, 2021, 175-190.</u>
- <u>"Choosing an Engineering Major: A Conceptual Model of Student Pathways into Engineering" (Main, J. B.,</u> <u>Griffith, A. L., Xu, X., and Dukes, A. M.), Journal of Engineering Education, 2022, 111, 40-64.</u>
- <u>"The Role of the Teaching Assistant: Female Role Models in the Classroom" (Griffith, A. L., and Main, J. B.),</u> <u>Economics of Education Review, 2021, 85.</u>
- <u>"Characterizing Plurality using the Majoritarian Condition: A New Proof and Implications for Other Scor-</u> ing Rules" (*Heckelman, J.*), *Public Choice, 2021, 189, 335-346*.
- <u>"Targeting Inflation Targeting: The Influence of Interest Groups" (Heckelman, J. and Wilson, B.), Public</u> <u>Choice, 2021, 189, 533-554.</u>
- <u>"Don't You be my Neighbor: Support for Racial-Exclusion Constitutional Provisions in Mid-19th Century</u> Indiana and Illinois" (*Dinan, J. and Heckelman, J.*), *American Politics Research, 2021, 49, 504-516*.

(continued on next page)

Faculty Publications (continued)

- <u>"Market-Based Monetary Policy Uncertainty" (Lakdawala, A., Bauer, M., and Mueller, P.), The Economic Jour-</u> nal, 2022, 132, 1290-1308.
- <u>"The Growing Impact of US Monetary Policy on Emerging Financial Markets: Evidence from India" (Lak-</u> <u>dawala, A.), Journal of International Money and Finance, 2021, 119, 102478.</u>
- <u>"The International Spillover Effects of US Monetary Policy Uncertainty" (Lakdawala, A., Moreland, T., and</u> Schaffer, M.), Journal of International Economics 2021, 133, 103525.
- <u>"Bank Regulation and Monetary Policy Transmission: Evidence from the U.S. States Liberalization" (Lak-</u> dawala, A., Minetti, R., and Schaffer, M.), European Economic Review, 2021,138, 103859.
- <u>"Federal Baseball Turns 100: The Long Legal Game of Athletes Gaining Economic Rights in the United</u> <u>States" (McFall, T. and Tatich, K.), Wake Forest Journal of Business & Intellectual Property Law, 2022, 22, 314-</u> <u>370.</u>
- <u>"An Applied Statistics Teaching Lesson that uses NBA Playoff Data to Illustrate Uncertainty in Sporting</u> <u>Contests," (Lumbantobing, R. and McFall, T.), Teaching Statistics, 2022.</u>
- <u>"Where Do the Poorest Americans Stand in the Income Distribution among All People Ever Born?" (Whap-les, R.), The Independent Review, 2022, 27 (1), 155-159.</u>
- <u>"COVID-19's U.S. Temperature Response Profile" (Carson, D., Carson, S., Dye, T. Mayfield, S., Moyer, D., and</u> Yu, C.), Environmental and Resource Economics, 2021, 1-30.

Cornhole Final December 2021 ECN 333 Economics in Sports

James Everitt and Brandon Kagen defeated Addy Temkin and Tyler Andriga in a spirited final match.







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John Wood Retirement Party



John Wood and family



John Wood and Fred Chen



Mark Curtis and John Wood



John Wood and Amanda Griffith



John Moorhouse and Robert Whaples



John Wood, Jac Heckelman, Christina Dalton



Todd McFall and John Wood



John Wood and Megan Regan



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What's On Fall 2022

Wednesday, September 7 Faculty seminar - Derek Lemoine from the University of Arizona

Monday, September 12 Public Talk- Gary Hoover from Tulane University

Weekend of September 16/17 Homecoming. We will have a welcome tent at the Festival on the Quad on Saturday, September 17, 10am to 1 pm

Tuesday, September 20 Faculty seminar - Viral Acharya from New York University

Wednesday Monday, October 3 Faculty seminar - Maria-Jose Carreras-Valle from Purdue University

Thursday, October 13 - Friday, October 14 Fall Break

Wednesday, November 23 - Sunday, November 27 Thanksgiving Break



December 2021 Department Get-together



Check out our website: economics.wfu.edu



@wfueconomics



WFU Department of Economics



WFU Friends of Economics

Department of Economics Wake Forest University PO Box 7505 Winston-Salem NC 27106 Phone: 336 758 5334 Email: hamiltjk@wfu.edu

Deaconomics News From the Wake Forest University Department of Economics

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Amanda Griffith, Department Chair

Stephen Calabrese (Visiting) Frederick H. Chen Allin Cottrell E. Mark Curtis Yinlin Dai (Visiting) Christina Marsh Dalton John T. Dalton Francis X. Flanagan Joshua Gorsuch (Visiting) Joanna Hamilton (Admin) Jac C. Heckelman Tabitha Knott (Visiting)

Aeimit Lakdawala Leah Lakdawala Tin Cheuk (Tommy) Leung John A. MacDonald Todd A. McFall Andre Mouton Megan Regan Andreea Rotarescu Koleman S. Strumpf Robert M. Whaples Chu (Alex) Yu