

ECONOMICS

# **ALUMNI NEWS**

# Department of Economics Indiana University of Pennsylvania

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# MAPPING THE RISK OF COMPUTERIZATION IN THE U.S. By Dr. Brandon Vick





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#### **Editor:**

Dr. David B. Yerger

Department of Economics Indiana University of PA 213 McElhaney Hall 441 North Walk Indiana, PA 15705-1018 http://www.iup.edu/economics Economist Nathan Rosenberg once described the interactions between technological change and the economy as a "Black Box." In writing several books on the history of such change, he details how these processes are diverse, the effects on the economy are extremely complex, and the impacts on people are ultimately unpredictable.

We human beings tend to be risk averse – we do not like the idea that something diverse, complex, and unpredictable might change our lives. This is especially true of our working lives, where most of us have shed blood, sweat, and tears furthering our careers. News stories show truck drivers talking about their fears of autonomous driving. One can imagine accountants having nightmares about friendly tax bots helping families file their own taxes.

Technological change affects different occupations in different ways. For some, it may lead to the total automation of certain tasks, possibly eliminating the need for a current occupation altogether. In others, computerized systems may change the tasks that are performed on the job or create new jobs that replace the old ones. In line with Rosenberg's focus on complexity and unpredictability, we do not necessarily know how change will affect an occupation. Autonomous vehicles may not reduce the demand for truck drivers if a human is required to be in the moving vehicle. Tax software is not reducing the demand for accountants at this point – employment is projected to grow 10% over the next decade, according to the Bureau of Labor Statistics. In both cases, legal, political, and economic institutions and incentives will affect the extent of technological disruption



Dr. Brandon Vick

My current research looks at the occupations that are most at risk of computerization. Who works in these jobs? Where do they live? Are they suffering other forms of economic hardship? To tell the extent that different occupations are at risk of computerization, I use information from a 2017 paper titled "The future of employment: How susceptible are jobs to computerization?" by Carl Frey and Michael Osborne. The authors lay out three task areas that serve as "bottlenecks" to computerization: unstructured perception and manipulation tasks; creative intelligence tasks; and social intelligence tasks. To the extent an occupation is made up of tasks related to these three bottlenecks, they are more immune to computerization advances in the near future. Those that are made up of more routine tasks and less of these bottlenecks have a higher risk of computerization. For 702 occupations, Frey & Osborne estimated the probability that each can be replaced by computer capital in the next decade or two. A higher probability suggests a higher measure of disruption to be expected within an occupation. They define "high risk" occupations as those having a probability of 70% or more; "low risk" occupations have a probability of 30% or less.

I link the computerization probability for occupations to worker data from the American Community Survey (ACS), 2013-2017. This dataset contains information about a person's demographics, earnings, location, and occupation. The dataset that I analyzed contains information for 4.6 million workers between 25 and 55 years old. Since the survey is weighted to reflect the entire U.S. population, estimates reflect a prime-age workforce of approximately 100 million. By linking the ACS to Frey & Osborne's index, each worker's profile contains his or her occupational risk of computerization.

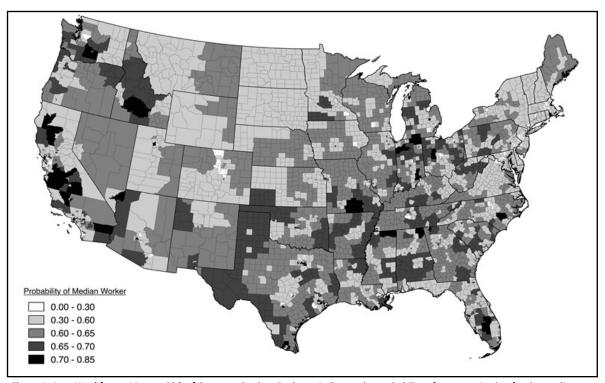
With the combined data, I can describe the high-risk occupations employing the largest number of prime-age workers. One group consists of occupations heavily employing production, construction,

# MAPPING THE RISK OF COMPUTERIZATION (cont.)

(continued from page 1)

and transportation tasks. Autonomous heavy equipment, automated factories, pre-fabricated buildings, and self-driving automobiles represent some of the technological innovations already impacting these industries. Truck driving is the largest high-risk occupation. Approximately 2.3 million truck drivers (82% probability of computerization) and 1.3 material movers (85% probability) will likely see major changes in the types of tasks they do on the job. A second group consists of some types of office and administrative support occupations. Growing access to information and advances in big data algorithms and machine learning give computerized systems the potential to do a number of tasks more efficiently than the 2 million administrative assistants (90% probability) and 1.4 million accountants (94% probability) currently in the workforce. A third group relates to service-oriented jobs: retail sales, cooks, cashiers, and waiters/waitresses, all with probabilities of computerization over 70%. According to my estimates, about 38 million workers are in high-risk occupations, which is 38% of the prime-age workforce. This estimate is similar to other studies on the subject.

Now that we know who is most likely to be impacted, we can look at where they work. Merging the ACS workforce data with geographical shapefiles from the U.S. Census, I created a map showing the Public-Use Microdata Areas (PUMAs) with the greatest concentration of high-risk workers. A PUMA is an area that contains between 100,000 to 200,000 persons and tends to correspond with county and metropolitan boundaries. Several sparsely-populated counties are combined into one PUMA and a dense city is split into several PUMAs so that each area is roughly similar in terms of population (but not geographic size).



**Figure 1: Area Workforces Most at Risk of Computerization.** Darkness indicates the probability of computerization for the median worker in the area. 2,336 Public-Use Microdata Areas are shown.

Source: Author's calculations, American Community Survey 2013-2017, and occupational probabilities from Frey & Osborne (2017).

The areas presented in Figure 1 show the computerization risk for the median worker in that area. Workers in each area are distributed across occupations in a way that describes the local workforce. Some areas will be more distributed toward occupations relating to information technology and finance, while others will be more heavily distributed toward services or manufacturing. Areas in black indicate local workforces where the median worker (and at least half of the local workforce)

# **MAPPING THE RISK OF COMPUTERIZATION (cont.)**

(continued from page 2)

works in a high-risk occupation. Conversely, areas in white show workforces where at least half are in occupations that have a low risk of computerization. Many of the darker areas reside in the Midwest manufacturing belt, Appalachia, and rural-agricultural areas throughout the west. While it would be inaccurate to say that half of the workforce in these areas will lose their jobs due to automation in the next decade or so, they are more likely to see greater disruption in the nature of their work, likely requiring greater adjustments to the new tasks that may arise due to computerization. Productive investments in technology are likely to create the greatest changes for the workforces in these areas.

Similar studies have focused on computerization at the city level and found that smaller cities are more susceptible to computerization; large cities have greater specialization toward high-skill, low-risk occupations which lowers the mean risk of automation for the city's workforce. However, the story gets more complicated when you drill from the city level to the PUMA level, as I do in this analysis. Large cities have areas where low-risk and high-risk workers concentrate. Zooming into the map shows the variability of computerization risk within cities (those interested can zoom into the map here: https://www.crimeconomics.com/computerization).

The average computerization risk for an entire city obscures the fact that many neighborhoods within cities are likely to experience the greatest disruption from computerization. For example, taking the city of Los Angeles and surrounding areas altogether, the median worker has a 56% risk of computerization, placing it 189th of 360 metropolitan areas measured – well over



Source: Pixabay, Danbo Cardboard Box Robot.

half of the workforce is fairly safe from the impact of computerization. By zooming into Los Angeles County, one will see 69 smaller PUMAs. Of these, half of workers in each of 16 areas are at high risk of computerization, while 9 areas are low risk (less than 30% risk for the median worker). In three of the high risk PUMAs, half of workers are in occupations with an 80% risk of computerization. Among the ten PUMAs with the highest risk across the U.S., four are in the Los-Angeles area. Similar levels of concentration can be found in cities like Houston, Las Vegas, and New York – neighborhoods within these cities have high-risk workforces.

As the darkest areas on the map suggest who will experience the largest impact from computerization, they also show which groups of workers currently earn the least and experience the most poverty. Compared to the lowest-risk areas, high-risk PU-MAs have a much less educated workforce, half the average income, and four times the poverty rate. The 131 PUMAs in the high-risk category contain about 16.6 million people and 5 million prime-age workers. Nearly 13% of workers in these areas were in poverty at the time of the survey. 2.6 million workers face the dual-hardship of individually being in a high-risk (low-pay) occupation and living in an area where over half of the workforce also faces a high risk of computerization in the coming years.

Potential shocks from automation will need to be addressed at both the individual and community level. As 56% of workers in the high-risk areas have no more than a high-school education, they will likely need to re-train for the types of tasks that will emerge as computerization increases. At the community level, barriers to such training will need to be addressed and training programs will need to be designed to meet the needs of the computerized labor market.

This might be easier said than done, however. Rosenberg argued that one thing might help us understand the "Black Box." Technological change possibly shows *path dependence* – the history of a system explains the probable direction of future growth. According to a 2019 report by the Brookings Institution, areas with the highest share of easily-automatable jobs in 1980 tended to see the largest increases in low-skill, low-pay service employment over the next 35 years. Will high-risk workers in high-risk areas open a black box of technological change that leads to continued economic hardship? Or, will innovative minds find the mix of policy, investment, and practice that helps these workers successfully ride the wave of change?

# PHILANTHROPY ABOUNDS AT IUP!

By Drs. James J. and Stephanie M. Jozefowicz

The university community celebrated "Philanthropy Day" on Thursday, February 28, as it has every spring semester since 2012. According to an article by Regan Hauser in the Fall-Winter 2012 issue of *IUP Magazine*, Philanthropy Day previously was known as "Tuition Freedom Day" and served to symbolically acknowledge the point in the academic year when tuition revenue is supplanted by private giving as the means of paying the university's bills. Regardless of the moniker, the motivation behind the festive event is to encourage current IUP students to take a break from their daily routines to realize the wide-ranging impact of philanthropic dollars on their potential educational experiences at IUP.

This semester, IUP students dropped in to write thank-you notes to donors, enjoy snacks generously donated by Aramark, and get a coveted commemorative t-shirt. The photo booth was a popular attraction with students lining up to express their IUP enthusiasm using a variety of props. The Student Philanthropy Council manned a table encouraging students to donate to the "Help A Hawk" campaign as it seeks to establish a permanent food pantry for IUP students.

Philanthropy Day features various speakers from the IUP community to kick off the festivities. This year, Stephanie Sell ('10), interim director of annual giving, invited Drs. Stephanie and Jim Jozefowicz to offer faculty remarks. After a brief overview of their own IUP story, they discussed having the privilege of witnessing firsthand the significant impact of scholarship donations on students in their classrooms. In addition, they shared their own personal motivation for charitable giving directed to the IUP Foundation. Afterwards, they made their first *Facebook Live* debut by way of interviews for the social media outreach component of the event!

The timing of IUP's Philanthropy Day intersects with the University Family Campaign. This campaign encourages current faculty, staff, and administrators to make a financial gift to IUP to support any area of its mission. The Department of Economics has reached a participation rate of 100% during the University Family Campaign for the 4<sup>th</sup> year in a row. IUP boasts a very high university-wide participation rate for an institution of its size.

Continuing the philanthropic theme of the spring semester, the IUP "Celebration of Philanthropy" event took place on Friday, April 5, 2019, in the KCAC. Scholarship recipients and donors enjoyed a special evening of conversation, dinner, and music, and IUP administrators updated the crowd about the progress of the Imagine Unlimited Campaign. To date, the Imagine Unlimited Campaign has raised \$62 million and is on its way to the ultimate goal of \$75 million.

Among the 450 people in attendance were economics majors Matt Cellucci, Jacobo Diaz, Josh Edgar, Shannon Ferguson, Hailey Fisher, Justin Foran, Caleb King, Anthony Maticic, Abby Redlich, and Ben Snyder; economics faculty members Stephanie and Jim Jozefowicz; College of Humanities & Social Sciences Dean Yaw Asamoah; and economics alumni Dave Reed ('00), Tina (Black) Steffy ('06), and Jennifer (Swartz) Quinlan ('07).



Recipients and donors attending IUP's Celebration of Philanthropy included: Back row: Matt Cellucci, Justin Foran, Caleb King, Dr. Jim Jozefowicz, Jacobo Diaz, and Dave Reed ('00). Front row: Shannon Ferguson, Anthony Maticic, Abby Redlich, Dr. Yaw Asamoah, Jennifer (Swartz) Quinlan ('07), Hailey Fisher, and Dr. Stephanie Jozefowicz.

# **SCHOLARSHIPS: HOW YOU CAN HELP**

As current economics students juggle financing their college education with other responsibilities, they often look towards scholarships to help fill the gap. Through the support of generous alumni, faculty and staff members, emeriti professors, and friends, six scholarships are currently (or eventually will be) available to current economics students:

5351 - Economics Department Scholarship

0648 - Drs. Jozefowicz Department of Economics Scholarship

5375 - Nicholas Karatjas Scholarship for Economics

0505 - Karl A. McDermott Scholarship for Economics

0449 - Robert J. Stonebraker Scholarship for Economics

0359 - Donald A. Walker Department of Economics Scholarship

To increase the impact of these economics scholarships, your support is critical. You can support future economics students by designating your gift to any of these scholarship funds. Go to the IUP secure on-line giving form at www.iup.edu/giveagift to make your gift now. Be sure to select the "specific area at IUP" option and indicate your fund designation (see account numbers above) in the "other" area on the form.

For more information about how you can support one of these economics scholarships or to discuss the process of establishing your own scholarship, please contact: Anthony Cancro, Director of Development, at 724-357-2380 or acancro@iup.edu.

Additionally, inaugural members of the recently established Leadership Society Council, Drs. Jim and Stephanie Jozefowicz, are available to assist you in any questions you might have about how to become a Leadership Society member and a supporter of the Economics Department.

I would like to support scholarships for IUP students in the Economics Department by making a gift to the Foundation for IUP.								
Name(s):	IUP ID (if known):_@							
Address:								
City:		State:	Zip Code:	Phone Number	:			
Email:					circle one:	Home	Cell	
Please accept my support to the following scholarship for Economics (circle your fund preference):								
5351 – Economics Department Scholarship 0648 – Drs. Jozefowicz Department of Economics Scholarship 5375 – Nicholas Karatjas Scholarship for Economics 0505 – Karl A. McDermott Scholarship for Economics 0449 – Robert J. Stonebraker Scholarship for Economics 0359 – Donald A. Walker Department of Economics Scholarship  With my gift or pledge to the Foundation for IUP of \$, to be paid by: Check, made payable to the FOUNDATION FOR IUP A pledge, payable in								
To make a one-time or recurring gift online, visit www.iup.edu/giveagift.								
Please mail this form along with payment, if applicable to: Foundation for IUP, Sutton Hall, Room G1, 1011 South Drive, Indiana, PA 15705-1046. Or, to pay by credit card visit www.iup.edu/stonebraker.								
I prefer n	ot to have my name inclu	ded in IUP's online do	nor listing (please initial).					
The Foundation for IUP is a 501(c)(3) organization; gifts to The Foundation are tax deductible as per IRS regulations. The official registration and financial information of the Foundation for Indiana University of Pennsylvania may be obtained from the Pennsylvania Department of State by calling toll free, within Pennsylvania, 1-800-732-0999. For calls which originate outside of Pennsylvania, the telephone number is 717-783-1720. Registration does not imply endorsement.								
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# ECONOMICS CLUB FEATURED ALUMNA SPEAKER: STEPHANIE (PERKOVICH) KLINE

By Dr. James J. Jozefowicz

On Wednesday, February 13, 2019, Stephanie (Perkovich) Kline was the featured alumna speaker at the Economics Club meeting. She earned a degree in economics/mathematics with minors in applied statistics and political science from the Robert E. Cook Honors College at IUP in May 2007 and later obtained her MBA from IUP in 2013. Stephanie also earned a Stonier Graduate Banking Diploma and a Wharton Leadership Certificate at the University of Pennsylvania in 2017.

Stephanie currently is vice president and assistant treasurer at S&T Bank in Indiana, PA. Her 12-year career trajectory at the bank began with a marketing analyst position followed by a stint as a finance analyst and included several other assistant vice president and vice president roles. Managing a team of three analysts, Stephanie is responsible for managing the bank's interest rate risk, liquidity, and capital.

Stephanie began her presentation by highlighting the fact that students can expect to work a long time and told them to think about what they want to do professionally. In her own case, she discovered via her IUP education that solving puzzles intrigued her and so she sought analyst positions as she embarked on her job search. Similarly, she advised the students to check out available jobs in areas of their interest on sites like Monster and Indeed.



Stephanie Kline with the Economics Club Officers (from left to right): Angela Mosbrucker, Valerie Berryman, Stephanie Kline, Brooke Allen, and Shannon Ferguson.

While studying at IUP, Stephanie's presentation titled, "Factoring Finance into Film: A Study of Box Office Revenue in the Motion Picture Industry," won the Best Paper Award at the inaugural Undergraduate Scholars Forum in 2006. When queried about the topic of her econometrics paper by a student currently enrolled in Advanced Econometrics, Stephanie explained the key elements of her study about movies and enthused, "The econometrics program was hands down one of the best things I did at IUP!" Furthermore, she encouraged the econometrics students present to take a copy of their research paper with them to interviews to offer as a professional writing sample.

Having just completed the hiring of a new analyst for her team, Stephanie compared the interview process to speed dating where you have to make a long-term decision in a rather short period of time. Given the importance of interviewing, Stephanie offered specific advice to the students beyond the givens of being on time and showing up well dressed. In particular, she encouraged them to bring a pen and a pad with five "good" questions written on it. Stephanie emphasized that the questions should not be ones that easily could be answered via a Google search. She also emphasized the change in mindset necessary when going from a college environment to the workplace. As an example, she offered that earning 92% on an exam in college is a reason for celebration, but 92% accuracy on a résumé or work product is unacceptable.

The Department of Economics values its many accomplished alumni, and we always appreciate having the opportunity for our current students to learn from the personal and professional experiences of our graduates.

#### INTERESTED IN BEING AN ECONOMICS CLUB SPEAKER?

If you plan to be in the area (or live in the area) and would be interested in speaking to the Economics Club, please contact Dr. Chris Jeffords at Christopher.Jeffords@iup.edu.

# **FACULTY NOTES**

The article, "Assessing the Nutrition and Family Usage of a Backpack Food Program," by Drs. Idamarie Laquatra (IUP Food and Nutrition), **Brandon C. Vick**, and Amanda Poole (IUP Anthropology) was published online in the *Journal of Hunger & Environmental Nutrition* (November 16, 2018).

**Dr. Yaya Sissoko** presented a research paper titled, "The Development of Real-Life Economics Courses for Freshman and Sophomore Students at the Collegiate Level," co-authored with Dr. Brian Sloboda (University of Phoenix) at the American Economic Association (AEA) Conference held in Atlanta, GA, on January 4-6, 2019. Dr. Sissoko also presented a poster titled, "Integration of Economics from the Classroom to the Newspaper," co-authored with Dr. Brian Sloboda at the AEA Economic Education Poster Session.

**Dr. Yaya Sissoko** attended a workshop about "Time-Series Econometrics" organized by Dr. James Stock, Harvard University, and Dr. Mark Watson, Princeton University, at the AEA Continuing Education Program in Atlanta, GA, on January 6-8, 2019.

Three recent papers written by **Dr. Christopher R. Jeffords** and co-authors Drs. Joshua Gellers (University of North Florida) and Lanse Minkler (Emeritus Faculty, University of Connecticut) were cited in a July 2018 report (no. A/73/188) by the United Nations Special Rapporteur on Human Rights and the Environment David Boyd (University of British Columbia). The report covers the issue of the human rights obligations related to the enjoyment of a healthy, clean, and sustainable environment.

A recent article by Dr. Joshua Gellers (University of North Florida) and **Dr. Christopher R. Jeffords** examines the extent to which decisions regarding Chinese investment in Africa is motivated by environmental factors. The paper is currently available online in the *Journal of Environment and Development*, and will be published in a forthcoming edition of the journal.

**Dr. Alexi S. Thompson's** paper titled "The Exchange Rate Regime Switch and Current Account in Greece, 1976-2014" co-authored with Dr. Henry Thompson (Auburn University) was published in the *Economia Internazionale/International Economics* 71.3 (2018): 371-386.

Drs. Susan Boser (IUP Sociology), **Brandon C. Vick**, Alex Heckert (IUP Sociology), and **David B. Yerger** prepared the report "Employment Opportunities for Rural Residents with Disabilities in Pennsylvania," which has been published by The Center for Rural Pennsylvania, a legislative agency of the Pennsylvania General Assembly.

**Drs. Christopher R. Jeffords** and **Alexi S. Thompson's** paper "The Human Rights Foundations of an EKC with a Minimum Consumption Requirement: Theory, Implications, and Quantitative Findings" was published in *Letters in Spatial and Resource Sciences* (2019): 1-9.

**Dr. Stephanie M. Jozefowicz** presented "Résumé Night" at February's Economics Club Meeting. Dr. Jozefowicz discussed tips for building a résumé and taking advantage of the many opportunities available on campus and off campus to distinguish oneself from other job/internship candidates.

#### **Faculty**

- Dr. Christopher R. Jeffords *Christopher.Jeffords@iup.edu*
- Dr. James J. Jozefowicz

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- Dr. Robert J. Stonebraker stonebraker946@gmail.com
- Dr. Donald A. Walker dawalker@iup.edu

**Drs. Stephanie Brewer Jozefowicz** and **James Jozefowicz** participated in the Spring 2019 meeting of the Pennsylvania Economic Association Board of Directors on Wednesday, March 13, 2019. Among topics discussed was the upcoming 2019 PEA Conference to be held at Kutztown University of Pennsylvania, May 30–June 1. Stephanie Brewer Jozefowicz serves as PEA secretary and James Jozefowicz is an ex-officio member of the PEA Board of Directors.

# **FACULTY NOTES (cont.)**

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A recent paper titled "Retail Margins in Illegal Drug Markets" by **Drs. Alexi S. Thompson** and **Christopher R. Jeffords** explores retail margins in the United States for four common street drugs: marijuana, cocaine, methamphetamine, and heroin. The paper is currently available online in the journal, *Economic Analysis and Policy*, and will be published in a forthcoming edition of the journal.

A recent paper titled "NFL Salary Cap Allocation: Matching Theory with Observed Behavior" by **Drs. Christopher R. Jeffords** and **Todd B. Potts** was published in a recent volume of *Economics Bulletin* (2019, Vol. 39, No. 1). The paper discusses the allocation of the NFL salary cap to component positions within teams and across years.

**Dr. Todd B. Potts** attended the Eastern Economic Association annual conference which was held in New York, NY, on February 27 - March 2, 2019. At the conference Dr. Potts presented the paper "The Macroeconomic Impact of Energy Price Shocks: Threshold Effects and the Fracking Boom" (co-authored with **Dr. David B. Yerger**).

In October 2018, the Environmental Affairs Officer of the Environment and Development Division at the United Nations Economic and Social Commission for Asia and the Pacific invited **Dr. Christopher R. Jeffords** and Dr. Joshua Gellers (University of North Florida) to contribute to a report titled "Accelerating Progress: An Empowered, Inclusive and Equal Asia and the Pacific." This report was released on March 27, 2019, at the sixth annual Asia-Pacific Forum on Sustainable Development. As contributing authors, Drs. Jeffords and Gellers wrote a section about rights-based approaches to sustainable development focusing on how ensuring rights correlates with improved environmental outcomes.

**Dr. Yaya Sissoko** participated in International Unity Day 2019 on Saturday, April 13, in the HUB. Dr. Sissoko prepared food from his home country of Mali. The purpose of International Unity Day is to make the university and the general community aware of the diversity of cultures at IUP.

**Drs. James J. and Stephanie M. Jozefowicz** attended the Imagine Unlimited Volunteer Breakfast held at the KCAC on Saturday, April 6, 2019. Among those seated at their table was economics alumnus **Myron Tomb ('69)**. Drs. Jozefowicz also participated in the IUP Leadership Society Advancement Council meeting held at the HUB later that morning.

**Dr. David B. Yerger** presented the research paper "Quebec's Fracking Restrictions: Squandered Opportunity or Prudent Conservation?," co-authored with **Dr. Todd B. Potts**, at the scholarly colloquium *Quebec Society in 2019: Current State and Future Prospects* hosted at the Ecole nationale d'administration publique (ENAP) in Montreal, Canada, on March 14-16, 2019. Colloquium sponsors included ENAP, McGill University, University of Quebec at Montreal, and Fulbright Canada. Twenty-four colloquium papers were selected from a competitive submission process. In addition to the aforementioned universities, presenters came from many prominent Canadian universities including McMaster, Carleton, Concordia, and the University of Montreal.

On April 25, 2019, **Dr. Todd B. Potts** presented highlights from his research paper, "The Macroeconomic Impact of Energy Price Shocks: Threshold Effects and the Fracking Boom," coauthored with **Dr. David B. Yerger**, to an engaged group of economics faculty and students. The talk was in recognition of Dr. Potts' selection for the *Garvin-Kort Faculty Award for Research in Economics*. Generous donations from alumnus **Dr. John Kort ('74)** and the late **Dr. Alexander Garvin**, economics faculty 1969-1998, provide support for a faculty member to present their research at a professional conference. Dr. Potts presented this paper at the March 2019 Eastern Economic Association Conference in New York City and plans to soon submit the paper to one of the leading energy journals.



Dr. Todd B. Potts, this year's recipient of the Garvin-Kort Faculty Award for Research in Economics.

# STUDENT NOTES

Economics major **Jeff Arnold** has been selected as an honorable mention on the 2018 Don Hansen NCAA Division II All-America Team. This marks the first time in his career that the junior offensive lineman on the IUP football team has earned All-American honors. *Congratulations, Jeff!* 

Economics major **Jacobo Diaz** advanced all the way to the Top 25 Watch List for the 2018-2019 Bevo Francis Award, according to Small College Basketball. A senior forward on the IUP men's basketball team, Cobo is the first player in program history to attain this recognition. Cobo also was named to the Reese's Division II College All-Star game. Cobo concludes his career at IUP as one of the most decorated members in the history of the men's basketball program. He is a two time All-American (2017-18, 2018-19), and a two time first team All-Region selection. Cobo additionally was named the PSAC West Athlete of the Year for the second time in his IUP career, making him the only player in IUP history to earn the award twice during his career. He finished his career second in IUP history with 1,747 points and 1,105 rebounds. His 45 double-doubles are the third most among Division II active players. The IUP Men's Basketball team won the PSAC tournament this year and advanced to play in the second round of the NCAA Atlantic Regional tournament this year. *Congratulations, Cobo!* 

In February, the department received a visit from **Jin Qin** and his parents from China. Jin studied economics at IUP as an international exchange student from Shanghai Normal University during the 2011-2012 academic year. He recently defended his doctoral dissertation and will receive his Ph.D. in economics from North Carolina State University in May 2019. *Congratulations, Jin!* 

Several economics majors shared the results of their scholarly pursuits at the 2019 Scholars Forum held on Wednesday, April 3, in the KCAC. Drs. James J. Jozefowicz, Yaya Sissoko, and Alexi S. Thompson sponsored oral presentations by the following students:

#### Session Title: Crime and Drugs

 Angela Mosbrucker: "Unemployment and Crime within the Rust Belt" (Faculty Mentor: Dr. Alexi S. Thompson)

### Session Title: Portfolio Development and Planning

 Ridge Williams: "Portfolio Management: Handling Investments and Trading Strategies" (Faculty Mentor: Dr. Yaya Sissoko)

Participants in the Scholars Forum included (from left to right): Faculty mentor Dr. James Jozefowicz, Garrett Haffner, Shannon Ferguson, Nicole Trojanowicz, Kaitlin Albright, Brooke Allen, Jesalyn Fada, Hailey Fisher, Megan McCunn, and Angela Mosbrucker.

#### Session Title: Demographic Trends and Implications

- Megan McCunn and Hailey Fisher: "The Effect of Legal Immigration on the United States Economy Based on Gross State Product" (Faculty Mentor: Dr. James J. Jozefowicz)
- Kaitlin Albright and Jesalyn Fada: "The Effects of Explanatory Variables on the Labor Force Participation Rate of Women in the United States Between 1980 and 2010" (Faculty Mentor: Dr. James J. Jozefowicz)

#### Session Title: Purpose and Self

- Shannon Ferguson and Brooke Allen: "A Guide to Universal Well-Being" (Faculty Mentor: Dr. James J. Jozefowicz)

### Session Title: The Impact of Culture and Ideology

- Tara Dylewski: "Economic and Social Report on Poverty in Rwanda" (Faculty Mentor: Dr. Yaya Sissoko)
- Nicole Trojanowicz: "How Genocide Has Affected Poverty in Rwanda" (Faculty Mentor: Dr. Yaya Sissoko)

### Session Title: Using Evidence in the Pursuit of Predictive Knowledge

Garrett Haffner and Brandon Lynd: "Swing Batter Batter, Swing Batter Batter, Swing: Determinants of Batting Averages from the 2017 Major League Baseball Season" (Faculty Mentor: Dr. James J. Jozefowicz)

# **STUDENT NOTES (cont.)**

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Mark Hilliard ('00) gave a presentation to the Economics Club on March 6, 2019, as part of the Club's Alumni Speaker Series. Mark became President of the Indiana County Chamber of Commerce in 2018. He graduated from IUP as a Communications/Media major and obtained a Master's Degree in Business Education from Grand Canyon University. Mark discussed his responsibilities as President of the Chamber, provided information about the Indiana County Chamber of Commerce, gave insight as to what skills employers are looking for, and offered advice on how students can become more involved within the Indiana community. The information and advice given by Mark was extremely beneficial and appreciated. The Economics Club is thankful for his willingness to come and present.

During a trip to the U.S., German native **Luise von Agris ('18)** met with the Economics Club on April 3, 2019, as part of the Club's Alumni Speaker Series. Luise spoke about her experiences at IUP, insights for adapting to day-to-day life in another culture, and advice for the job market. As a former student of both Drs. J., they enjoyed seeing her and will be sure to share highlights of her remarks with their current students!

Senior economics major **Garrett Haffner** delivered a poster presentation of his research entitled, "Swing Batter Batter, Swing Batter Batter, Swing: Determinants of Batting Averages from the 2017 MLB Season," co-authored with fellow economics major **Brandon Lynd**, at the Pennsylvania Sports Business Conference held at IUP on Friday, April 5, 2019. The study was completed in the Introduction to Econometrics (Fall 2018) course as part of the honors track in economics.

On Saturday, April 13, 2019, some members of the Economics Club participated in "Into the Streets." (See picture on right.) This is a day of service for IUP students to become involved in the community by helping various participating agencies with such tasks as landscaping, conducting clean-up efforts, and painting. *Great job, guys!* 

On Wednesday, April 24, 2019, the Economics Club hosted the End-of-Semester Party in the Oak Grove. Economics students and faculty en-



Economics Club members who volunteered to assist with clean-up duties on Philadelphia Street included (starting at top row): Hailey Fisher, Brandon Lynd, Justin Foran, Angela Mosbrucker, Sarah Friedrich, Shannon Ferguson, and Brooke Allen.

joyed getting together along with great food and a corn hole toss. Thank you for a great academic year, Econ Club!



#### **Alumni Information**

The Department of Economics aims to maintain a current contact list of all of our alumni. Please let us know what you are doing!

Name:	
Graduation year, degree earned:	
Address:	
City, State, Zip:	
Your news for the newsletter:	

Mail to: Alumni News, Department of Economics, 213 McElhaney Hall, Indiana University of PA, Indiana, PA 15705

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# **ALUMNI NEWS**

**Spring 2019** 

Department of Economics Indiana University of Pennsylvania

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