CELEBRATING THE VITALITY OF A STRATEGIC SUPPLY CHAIN VIEW.

GSCMI CENTER
For ten years the GSCMI (Global Supply Chain Management Initiative) Center has been the focal point within the Krannert School of Management for promoting education, research and industrial engagement with those interested in supply chain management. The Center accomplishes this through various conferences, student competitions, and company projects that create venues for collaboration between firms, students and faculty across the state and around the globe.

Dear center collaborators,

This year’s Annual Report will highlight our global collaborations with industry, students and faculty. For this academic year, we selected “TPP and Global Supply Chain Impact” as our theme. You will read about our student activities, conferences hosted on campus, global internships by our students, projects with industry partners and blogs. In summary, the 2015-16 center efforts built a foundation for us to build an ever stronger footprint in the global supply chain arena. Our (spring) conference on January 29, 2016 provided an opportunity to learn about the Trans-Pacific Partnership and its impact. We had presentations by Dean David Hummels - a trade economist’s view of TPP, USTR’s Edward Gresser, Eyal Barash about intellectual property issues, Brent Yeagy on the impact of TPP on Wabash National and the container industry, Eduardo Huerta proving a Peruvian industry perspective on TPP and Kent Anderson proving an Indiana perspective on TPP. While the merits of TPP at the national level continues to be debated, our spring conference highlighted the opportunities offered by TPP to industry when associated issues get resolved. All the presentations and associated interview will remain available for continued use at (http://www.krannert.purdue.edu/centers/dcmme_gscmi/events/2016-spring-conference/speakers.php) Our center student collaborators are the heartbeat of the center and their stories are available at (http://www.krannert.purdue.edu/centers/dcmme_gscmi/students/home.php). You will see their reporting on successful implementation and emerging challenges with TPP (the TransPacific Partnership) in the blogs they developed (https://dcmme.wordpress.com/). Our goal with these blogs is to be a resource – we will use these blogs as a foundation to develop industry newsletters this year. Center projects with industry and funded by the Indiana Manufacturing Center (INMaC) were launched with the first project with our long term partner American Axle Manufacturing’s (AAM) location in Rochester, Indiana. Our student collaborators and center staff and faculty had a great opportunity to work with senior managers at AAM to learn about and develop a toolkit to address business opportunities and challenges in advanced manufacturing. We look forward to expanding our industrial engagement footprint this year as we expand our project collaborators.

You will also read about our continued collaboration with TVS and the global manufacturing internship in India. Our student projects on site in Bangalore continue the over 10 year tradition of onsite learning, with over 125 students having benefited from the amazing dedication of top management at TVS, their generosity in covering costs for our students on site for three weeks and for creating learning opportunities through projects for our students on site. This year will see us focused on building on our foundation, expanding our collaboration with industry and creating new opportunities for our students. We are excited about our newly acquired Smart Lean Ecosystem Engagement Center and hope you will help us build it to its fullest potential. We have many exciting partnerships being explored and new industry collaborators working with us. We look forward to an exciting year exploring the opportunities in manufacturing management, please contact us at dcmme@purdue.edu for a conversation.

Ananth V. Iyer, Center Director
Professor Iyer is the Susan Bulkeley Butler Chair in Operations Management at the Krannert School of Management. He is also the Director of Purdue NExT (a University wide modular online interactive courses for global distribution) and Director of the DCMME & GSCMI Centers. He was the Associate Dean for Graduate Programs (2011-2013) and Director of DCMME (Dauch Center for the Management of Manufacturing Enterprises) and the founding Director of GSCMI (the Global Supply Chain Management Initiative) (2006-2011) at the Krannert School of Management. Previously, he was Purdue University Faculty Scholar from 1999-2004. His teaching and research interests are operations and supply chain management.

With multiple years of private sector experience, Steven Dunlop incorporates a unique approach to education. As Managing Director, he is currently responsible for the operations and deliverables for Purdue NExT, a non-credit distance education program/classes for Purdue University. Prior to Purdue NExT, he managed multiple projects for Purdue University. These grants and projects have covered content areas in battery research, development of coursework (online and face-to-face), pharmacy, chemistry, video conferencing, and information visualization, as well as STEM based projects in the K12 environment. In addition, Steven Dunlop is an Assistant Professor (courtesy appointment) of Organizational Leadership and Supervision within the College of Technology. He has developed and co-taught a course on Hybrid-Electric Vehicles, project management and major event planning (relating to events at the Indianapolis 500). He is currently the lead instructor for OLS Training Methods on Purdue’s West Lafayette campus. He also provides outside consulting in the areas of leadership in training and training methods.

Heidi Allwes started with the Center in June 2012. In her role as Center Coordinator, Heidi coordinates the Center’s annual conferences and student competitions. She also coordinates the annual TVS Motor Company India Internship, one of the central Krannert School of Management study abroad programs offered to Krannert Masters students. This year marks the 10th anniversary for this unique international study abroad opportunity. In addition to event coordination, Heidi oversees the marketing communication & designs the Center marketing materials.
Dedicated industry partnerships are at the heart of success for the DCMME and GSCMI Centers. We thank our many distinguished industry partners for their significant and ongoing involvement and support. Our mission and the many important objectives set for the Center could not be accomplished without you.

Thank you.
reaching globally.
The TVS India Internship organized by the Center in conjunction with the TVS Motor Company was developed in 2006. Providing a unique study abroad internship opportunity in Bangalore, India, this trip assists students in developing a global business perspective while enhancing their resume profiles. Participants have a distinctive occasion to take concepts learned in the classroom and apply them to real life business situations. “My experience at TVS was the highlight of my Krannert Life. I learned strategic planning as well as operational execution. It was an amazing opportunity to apply my knowledge from Krannert and solve real world challenges,” says Hyejin Kim, MBA 2017. This innovative and challenging global program is celebrating 10 years with a total of 135 students having participated, represented by MBAs, MSHRM, and engineering students. Work on this three credit course begins in mid-February when students begin communication with their mentors. Discussions with their mentors regarding project objectives and completion of research pre-departure for India help to ensure a productive and successful internship for everyone involved. The course culminates in May with a three week visit to Bangalore, India where students continue work on their projects with TVS mentors and present their final work to TVS Company representatives. This year 9 students headed for the airport on May 10th to begin their flight to Bangalore, India, the location of their TVS internship. Students were accompanied by professors of management, Professor Suresh Chand and Professor Tom Brush. The internship lasted three weeks ending after final presentations on May 30th. Students received intimate
exposure to TVS Motors and its strong culture through presentations and discussions from company leadership, a plant tour, and a visit to one of their corporate social responsibility villages. TVS also ensures that students get a taste of Indian culture outside of the office by coordinating dinner for the students to meet with various Indian families in their homes as well as provide an evening of classical Indian music and dance. “Bangalore is a vibrant city,” Dennis Hernandez, MBA 2017. A weekend trip to the Taj Mahal is yet another highlight to the trip. TVS arranged a visit to the beautiful Bangalore Infosys campus where students learned about how the company develops its human talent. Mason Preusser, MBA 2017 reflects on the company exposure during the trip, “My internship at TVS granted me irreproducible insight into how companies work overseas. Both the exposure to consumer sentiment and business culture in India are invaluable assets.” TVS selects their projects primarily based on meaningful work product. Part of the success of the program rests on the fact that students are aware that the consulting projects carry great importance to the firm, and if done well, they will likely become part of an adoption and implementation strategy. The projects that the firm
ultimately offers tend to have a unique balance of the following qualities: analytical complexity, urgency for resolution, lack of available resources to assign internally, and a desire to test a current business situation against international best practices. Projects cover many different management areas including Operations and Supply Chain Management, Human Resources Management, Sales, and Management Information Systems, naming just a few. Deron Leslie, MBA 2017, sums up the trip—“The TVS Motors Internship in India gave me a new, refreshing perspective on friendship, culture, global industry and life in general.”
The 2016 Global Supply Chain Management Initiative Spring Conference at the Krannert School of Management was held on Friday, January 29, 2016. The conference theme was **Trans-Pacific Partnership & The Global Supply Chain Impact**.
centered around the Trans-Pacific Partnership involving 12 countries including the United States and its impact on the global supply chain. Speakers included Edward Gresser, Policy Planning Director at the US Trade Representative’s office in Washington DC; Kent Anderson, Vice-President of Business Development at the Indiana Economic Development Corporation; Krannert Dean David Hummels; intellectual property attorney, Eyal Barash; a Krannert executive program alumnus, Eduardo Huerta talking about the impact on the country of Peru; and our local industry, Wabash National, represented by Brent Yeagy. In conjunction with the conference, GSCMI hosted our annual intercollege MBA case competition, sponsored by General Motors and Arcelor Mittal, using a case written by Eyal Barash and Dr. Ananth Iyer. The first round selected the top six schools to participate in round two – teams from Illinois, Penn State, Purdue, University of Michigan, University of North Carolina and Washington University of St. Louis- to compete for the final prize of $8000 in total prizes [pg. 25]
Kent Anderson discussed the importance and impact of the Trans-Pacific Partnership Agreement to the United States and especially to the State of Indiana. As the Vice President of Business Development for the Indiana Economic Development Corporation, Kent Anderson has lead projects and efforts to attract and retain companies from around the world to invest in the State of Indiana. Additionally, he has overseen the streamlining of the organization’s international footprint. During his presentation, Mr. Anderson explained some of the main misconceptions...
of the Transpacific Partnership Agreement. For example, he discussed why the TPP is more than just tariffs, since it involves other relevant topics such as intellectual property, standards, government procurement, rules of origin, among others. Moreover, the agreement is more than just manufactured goods, considering that it also covers services and investments. Kent Anderson discussed an example of the impact of the TPP on the automotive industry; particularly he explained how tariffs were the main driving factor behind Audi’s decision to build their first North American factory in Puebla, Mexico. Finally, Kent Anderson showed several U.S Free Trade Agreements that involve more than twenty countries and define most of the world’s economy. In this way, the speaker highlighted the relevance of the current decision regarding the TPP on the U.S economic growth, as well as mentioned the key activities that the state of Indiana is currently doing in order to guarantee the state’s development.

- Gisela Condado
  (GSCMI Graduate Student Assistant )

Mr. Kent Anderson has been the Vice President of Business Development at Indiana Economic Development Corp. since March 2014. Mr. Anderson joined the state’s job hunting agency in January 2012 as the director of international business development, spearheading the state’s efforts to attract and retain companies from around the world. In addition, he oversaw the restructuring and streamlining of the IEDC’s international footprint. Mr. Anderson served tours with the Indiana National Guard in Iraq and the U.S. Navy during the Gulf War. In addition, he planned and implemented logistics processes for German luxury carmaker AUDI AG at its Ingolstadt, Germany headquarters and served with Switzerland-based Georg Utz, Inc. as its first general manager of North American operations. Most recently, Mr. Anderson lead the Columbus Area Metropolitan Planning Organization. Mr. Anderson is a 1990 graduate of the U.S. Naval Academy and holds a master of international business studies from the University of South Carolina’s Moore School of Business.
Mr. Yeagy spoke about the strategic implications of the Trans Pacific Partnership (TPP) on the United States trucking and logistics industries and the impact that it would have on Wabash National. His presentation focused on whether the TPP would be a significant driver of strategic change in the trucking industry or not. He started with a brief overview of Wabash National and the trucking industry in general, and then he stressed how trucking is the dominant transportation mode in the United States and that it would remain the dominant mode into the future. From there he spoke about
Joey Meisberger is a second year MBA student at Purdue University’s Krannert School of Management with concentrations in Operations and Supply Chain Management. Originally from Indianapolis, IN, Joey completed his undergraduate degree at Purdue University, where he earned a Bachelor of Science in Mechanical Engineering Technology. Prior to coming back to Purdue, he worked for 1 year as a contract Mechanical Design Engineer for Sikorsky Aircraft and almost 4 years as a Mechanical Design Engineer for Juno Lighting Group.

The direct influence of the TPP on the trucking industry is minimal. He believes that the overall increases in North American foreign trade will have a positive impact on freight tonnage over the next ten years. However, he stressed that the specific impact of the TPP is not on the radar of most of their customers right now. He listed several reasons why the TPP will not heavily affect the trucking industry and their customers. Their customers are mainly focused on the following issues in the trucking industry; final mile delivery, driver shortages, the expansion of the Panama Canal, hours of service and regulations, and chemical processing capacity investments. Even though the TPP represents one-third of the global GDP, the trucking industry and their customers are more focused on these issues than the effect of the TPP on foreign trade. To wrap his presentation up, Brent reiterated the fact that the jury is still out on the “real effect” of the TPP on the trucking industry. He believes that the TPP will not have a significant impact on the trucking industry in the short term, 1-5 years, and listed several reasons for this. The first being that there will not be an immediate freight acceleration because the relaxation of tariffs and tariff barriers will be slow. The second being that there will only be a modest increase in GDP for North American countries from the TPP over the first ten years. And finally that there will be little to no substantial growth in the automobile industry’s import/export volume. He concluded by giving the strategic implications of the TPP for Wabash National and stated that the TPP has little impact on their short term strategic outlook.

- Joey Meisberger (GSCMI Graduate Student Assistant)

Brent Yeagy was appointed to Senior Vice President – Group President, Commercial Trailer Products on June 1, 2013. Yeagy joined Wabash National in 2005 as Director of Manufacturing and has held a number of positions of increasing responsibility, most recently serving as Vice President and General Manager of Commercial Trailer Products. Prior to Wabash National, he held the position of Director of HR/EHS at Delco Remy International from 2001 to 2003 and Manager of HR/EHS from 1998 to 2001. From 1994 to 1998, Yeagy was a Senior Engineer/Facilities Maintenance Manager at Rexnord. He also served as a Machinist Mate/Officer Candidate in the United States Navy from 1991 to 1994. Yeagy holds a Bachelor of Science in Environmental Engineering Science and a Master of Science in Occupational Heath and Safety Engineering from Purdue University, as well as an MBA from Anderson University.
Mr. Edward discussed the main reason why the U.S Government decided to take on the Trans-Pacific Partnership Agreement. The TPP can be considered a tool for America to create options and build a more solid base for its economy in the advent of future downturns. He also briefly covered what is included in the TPP agreement’s chapters and what products are being negotiated including trademarks and researches. His job, together with his colleagues, is also to take a look on agreements that have been done in the past and identify what went well, what went wrong, and what the government
Pablo comes from Venezuela with a bachelor diploma in Electrical Engineering. Pablo worked for the Generation Dept. at the largest electric service supply in Venezuela before moving into the service industry. He later found his passion in customer service and operations when he joined Eurobuilding International Hotel enterprise. A year later, he was granted the opportunity to join Krannert School of Management where he now focuses on service operations and supply chain.

Ed Gresser joined the GlobalWorks Foundation as Director of the ProgressiveEconomy project on February 15, 2011. One of America’s most influential trade analysts, he has conducted path-breaking research on the American tariff system and its effects on low-income American families and poorer nations, trade relations with the Muslim world, Asian economic integration and other topics. His research has been covered by major media outlets including the Washington Post, the New York Times, the Los Angeles Times, the Financial Times, the Far Eastern Economic Review and others, and been cited by leaders of the World Trade Organization, the World Bank, the IMF and other institutions. His first book, Freedom From Want: American Liberalism and the Global Economy, was published in 2007. He also created and edits ProgressiveEconomy’s widely praised “Trade Fact of the Week” electronic information service. Gresser came to GlobalWorks after two years at the Democratic Leadership Council, where he served as Trade and Global Markets Director and as interim President during the permanent CEO’s leave of absence in 2010. Before joining DLC, Mr. Gresser was Trade and Global Markets Director for the Progressive Policy Institute from 2001 to 2009. From April 1998 through the close of the Clinton Administration in 2001, he served as Policy Advisor to U.S. Trade Representative Charlene Barshefsky. In this position he was the USTR’s principal policy advisor, speechwriter and research aide. In a span of three years, Mr. Gresser twice received USTR’s prestigious “Special Achievement Award,” first for contribution to passage of the African Growth and Opportunity Act and Caribbean Basin Initiative enhancement, and then for accomplishment “far above and beyond the call of duty” in the negotiation of China’s WTO accession agreement and passage of permanent Normal Trade Relations. Mr. Gresser graduated from Stanford University with Distinction in Political Science in 1984. He earned a Master’s Degree from Columbia University and a Certificate from the Averell Harriman Institute for Advanced Study of the Soviet Union in 1987.
David Hummels presented on the context nature and complexities of TPP, especially in regards to modern trade. The majority of people understand free trade to be reducing tariffs, barriers and the government getting out of the way. However, a modern Free Trade Agreement has to deal with a lot of aspects, especially IP rights, technical barriers to trade, FDI rules, Government Procurement as an agency or a government unit (Public Sector Units), subsidies by one government, antitrust laws etc. Arguably, one of the most critical aspects is the IP rights transfer from one country to another.
This is especially true if the Patent laws vary a lot between the two countries. Some of the issues are based on recognition of patents and the cost of buying patents in other countries, or if a good can even be patented in another country, and whether technology transfers need to be mandatory with the transfer of a product. This will be especially critical if the IP development was funded by a government. Thus we need a policy environment that facilitates trade, and the regulations do not end at the borders. This is especially challenging since this requires a highly complex and harmonized regulation, and we still do not have a good understanding of likely effects of a policy on firms. So, why is such a policy needed? If we look closely, a commodity trade has reduced, and today most of the trade is done in manufacturing sector where a fast supply chain can impact a lot. The manufacturing firms need policies which reduce delays and ports, facilitate air shipments, reduce or eliminate custom processes and equitable treatment of cargo. It is very important to reduce the lead time for customs as the Tariff equivalent for time cost to import is often much higher than the actual tariff paid. In conclusion, TPP is complex, far-ranging and a potentially intrusive harmonization of economic policy. While we do not have a good evidence of the impact of such a policy, it is nevertheless required considering the complex world of modern trade that we have.

- Akshit Bajpai  
(GSCMI Graduate Student Assistant)

David Hummels began serving as the Dean of the Krannert School of Management in 2015. In his faculty life, Professor Hummels teaches courses in International Economics, and has won multiple teaching awards at the graduate and undergraduate level. His research focuses on a broad range of issues in international trade, including: offshoring, product differentiation, barriers to trade and the broader impacts of aviation, infrastructure, and trade facilitation on trade and economic development. He has published four books and over forty research articles in major economic journals including American Economic Review, Journal of Political Economy, Quarterly Journal of Economics, Review of Economics and Statistics, the Journal of International Economics, and the Journal of Economic Perspectives. Professor Hummels is a Research Associate of the National Bureau of Economic Research, an Associate Editor of the Journal of International Economics, and an Associate Director of the Forum for Research on Empirical International Trade. He has worked as a consultant for and visiting scholar at a wide variety of central banks, development banks and policy institutes around the world. David previously worked as an assistant professor of economics at the University of Chicago’s Graduate School of Business.
On January 29, 2016, Eyal Barash discussed intellectual property law and the process by which companies acquire patents, protect them, and the legal implications that these patents have on businesses and product development. A patent is a property right and a right to exclusion. This allows the patentee to prevent others from making, using, selling and importing a patented invention. Contrary to popular belief, a patent is not a right to use an invention. When one company has the patent to make and sell a product, but the other has the patent to deliver a particular service but no right to manufacture it, these companies form...
what is called a license. This allows for the continued use of products and services and allows business to move forward. In the U.S. inventions can qualify for patents if they can meet three requirements outlined by the federal government. These criteria include the usefulness of the invention, the novelty, and if it is non-obvious. With regards to the novelty of the product it must be something new. The product, process, or intellectual property cannot have existed prior to the new invention. Drug patents filed with the FDA must use an NDA, or new drug application. This is usually done at the end of a successful phase three trial when the drug has been deemed effective and safe. If granted the patentee will receive four years of exclusivity with respect to its data use and five years of market exclusivity. When thinking about all the research, testing, and approval that goes into acquiring a patent, five years of market exclusivity is not very much. To really get a return on investment, ten year market exclusivity is the key. There are several challenges that companies face when they deal with exclusivity. It only provides protection from third-parties referencing your data and does not protect against the third party developing its own data. Another factor that comes into play is the length of the exclusivity. As time goes on, it becomes more viable for the third party to create its own data and develop its own similar product and thus threaten the market share of the original product.

- Matthew Jung
  (GSCMI Graduate Student Assistant)
At the recent Trans-Pacific Partnership (TPP) & The Global Supply Chain Impact conference hosted by Purdue’s Global Supply Chain Management Initiative, the recent approval of the TPP and its effects on diverse industries was discussed. Eduardo Huerta-Mercado, the CEO of Value Chain Consulting and Technology, as well as a Purdue Executive MBA graduate, spoke specifically about his home country of Peru and how the TPP would affect Peru and other Latin American countries. While Eduardo was very clear that the TPP would not make Peru the most dominant force in Latin America, the potential
positive effects he discussed and are listed below:

• Peru could become a trade hub between Asia and South America
• The TPP could result in knowledge and technology transfer beneficial to Peru
• The TPP can promote small business “inclusion” in global value chains
• Peru’s competitiveness would improve
• The TPP would help Peru support an image of a stable and investment friendly nation
• Peru could see an increase in exports of agricultural goods such as avocados, asparagus, saccha inchi, chia, and quinoa among others
• Peru would experience an estimated 2% increase to their GDP

Along with the many presented benefits, Eduardo also outlined a few of the major struggles that Peru, among other TPP participating countries could experience. Two of the major challenges he outlined were:

• Will the Trans-Pacific Partnership result in increased health care services costs?
• With easier exportation and importation of goods, will traditional agriculture come to an end in Peru, resulting in a loss of the thriving historical agricultural heritage?

One of the unique aspects of Eduardo’s discussion was its specific relation to Purdue University. As stated earlier, Eduardo is an Executive MBA alumnus and has a keen interest in creating an increased partnership with Purdue University through the executive and corporate ties he holds in Peru. Value Chain Consulting and Technology, for whom Eduardo is the CEO, has already facilitated 25 and 22 undergraduate internships in 2014 and 2015 respectively, and Eduardo placed a major emphasis on his desire to increase this number, as well as possibly expanding to graduate level students. Eduardo highlighted that these internships represent an enormous amount of knowledge and academic knowledge transfer that Peru can benefit from, as well as a learning experiences for the students involved. With the TPP now approved, Peru is poised to benefit from the new changes, and in turn assist Purdue University in benefiting from them as well.

- Taylor Haws
(GSCMI Graduate Student Assistant)

Eduardo Huerta-Mercado is currently Director of Operations for River Logistics in Lima, Peru. He is also the Director of Latin American Operations for Softeon Inc., an International Consultant Public Sector for the World Bank, and CEO at Value Chain Consulting & Technology.
Schools from across the US and around the globe were invited to participate in the 2016 GSCMI Intercollege Case Competition. Written by Center Director Dr. Ananth Iyer and attorney Eyal Barash, the case emphasized the conference theme of Trans-Pacific Partnership (TPP) & the Global Supply Chain Impact. The student competition consisted of two phases. The 1st phase occurring in November served as a virtual qualifying round to select the top six teams to participate in this final phase. In Phase 1, teams were presented with a case problem in which they were asked to submit a PowerPoint presentation of their recommendations. These recommendations were then judged by a blind panel of academic evaluators on the basis of strategic vision, practicality.
of implementation, use of quantitative analysis to develop a strategy, consideration of resources, and overall solution viability. The six teams participating in the final phase received the case on Thursday, January 28th before the conference. This case provided student teams with new case materials, questions and problems for the team to reconsider as they build on their Phase 1 case presentation. All six invited teams worked through the night to develop their new problem solution and prepared tirelessly to present the new solution before the panel of industry judges at the conference. The top three teams with the most compelling solutions received cash awards for their efforts thanks to generous funding from General Motors & ArcelorMittal.

11 universities

University of North Carolina
Washington Univ. St. Louis
University of Minnesota
University of Illinois at Urbana-Champaign
Penn State University
Vanderbilt University
University of Michigan
Purdue University
University of Melbourne
UNIVERSIDAD DE LIMA
IIM Udaipur

EVENT SPONSORS
IT’S ALL IN THE DETAILS

CENTER GRADUATE ASSISTANTS PROVIDE CONSULTING SERVICES TO PREMIER AUTO DETAILING & WASH

by Joey Meisberger (MBA 2016)
Premier Auto Detailing was established in 2003, and is a local car wash and detailing facility located in Lafayette, Indiana. Premier Auto Detailing services both local businesses and the greater Lafayette community. Premier Auto Detailing partnered with the Center to obtain an improved understanding of their current financial situation and to obtain innovative ways to improve their current operational processes. The financial analysis intended to guide management from Premier Auto Detailing to identify potential problems in their accounting and managerial systems, and the process improvement analysis was intended to find areas of improvement within their operational processes as well as to address any issues that their management team brought up. Multiple cost saving and process improvements were recommended to Premier Auto Detailing, including reducing their number of magazine subscriptions, imposing caps on some of their monthly expenses, implementing a vehicle classification system, and including a web based self-check in on their website. If Premier Auto Detailing implements some of these recommendations, we believe that they will see direct benefits from these cost saving and process improvement measures. This will be an ongoing collaboration between Premier Auto Detailing and the Center.

meet DONTE
[creating happiness through professional detailing]

Premier Auto Detailing and Wash was founded on humble origins by Donte Wilburn in 2008. Donte had worked in the detailing industry and felt there was a better way to build a positive, happy business atmosphere for both the employees and the customers. Donte graduated from Purdue University in 2005 and started his career at Premier (a car wash line at that time) in 2005. In 2011 Premier opened its doors to a new building with Donte leading thirteen employees. In 2012 Premier expanded services to include a mobile washing business that specializes in vehicles, fleet trucks, semis, and concrete pressure washing. That year as gross sales doubled, Premier hired twenty more employees.

“At Premier, we believe our mission is to create happiness through professional detailing and our purpose is to exhibit a philosophy of servanthood!”
In 2014, American Axle & Manufacturing, Inc., purchased what is now AAM’s Rochester Manufacturing Facility (ROMF), which is a 71,000 square foot facility with various machine tools in Rochester, Indiana. This is the first IN-MaC project grant for the center which emphasizes Indiana economic improvement. The project objective is to model, analyze and evaluate various proposals to maximize the Gross Profits, Contribution Margin and Internal Rate of Return (IRR) to support the utilization planning for the open floor space currently available. Through the adoption of these modeling and analysis capabilities, this project will result in the following outcomes:

1. Written proposal and recommendation of various alternatives utilizing a variety of academic methods/tools.
2. Final Project Summary to support the cost justification and project return on investment, implementation plan, etc. Detailed inventory storage management models and multiple plant layouts were recommended. Also included were financial analysis, material flow and SWOT analysis for different plant configuration and optimization of storage space including holding cost analysis.

about AAM

For over 20 years, vehicle manufacturers around the world have entrusted AAM to design, engineer and manufacture driveline systems for their vehicles. Over that time, we’ve delivered innovative technologies and solutions that are smarter, lighter, smaller, electric and even more powerful. We’re in the business of Delivering POWER that keeps the world moving at the speed of efficiency. To learn more, visit aam.com.
Every firm has that list of important projects that just never seem to reach peak priority for the limited resources available. These are exactly the projects that the DCMME and GSCMI Centers are interested in assisting you with.

If your company is interested in supplying a project to our team, please contact us at gscmi@purdue.edu
UNDERGRAD OPERATIONS AND SUPPLY CHAIN ORGANIZATION

OSCO’s mission is to provide the means for members to gain exposure in the field of operations and supply chain management while effectively networking with companies to cultivate career opportunities for the future. The Operations & Supply Chain Organization offers its members plant visits, guest speakers, and information sessions throughout the year in order to learn about the operations of various companies in the surrounding area. OSCO@PURDUE.EDU

GRADUATE KRANNERT OPERATIONS CLUB

The KOC mission is to expose students to real-world opportunities through different channels; KOC hopes to broaden the understanding of Operations beyond the traditional classroom setting. During the course of the year, they organize various events bringing in operational leaders from industry to provide students with insight and future outlook. KOC@PURDUE.EDU

... View further student information at gscmi.org
PARTNERING WITH STUDENT CLUBS

EXPOSING STUDENTS TO REAL-WORLD OPPORTUNITIES

GSCMI CENTER VOLUNTEER OPPORTUNITIES

The Center partners with OSCO & KOC to offer many occasions for both undergraduate and graduate students to experience action-based activities which give real-world experience and provide vital leadership preparation. Our events utilize and enhance their skills and provide excellent networking opportunities with potential employers.

To our many student volunteers,

Thank you, You help make our events a success.
Krannert MBA Option in Operations Management

Operations Management is a multi-disciplinary field that focuses on managing all aspects of an organization’s operations to provide products and services. Operations managers apply ideas and technologies to increase productivity and reduce costs, improve flexibility to meet rapidly changing customer needs, enhance product quality, and improve customer service. The concerns of Operations Management range from strategic to tactical and operational levels, which involve designing, planning and managing the system. The Operations Management Concentration is designed to prepare students for leadership in their operations management careers. With the trend in globalization and decentralization, successful management of supply chain requires system thinking and cross-functional skills. The rigorous coursework and curriculum offered by Operations Management faculty at Krannert aim at providing state-of-the-art training to ensure the competitiveness of our students.

Undergraduate-- Supply Chain, Information, and Analytics Major

The Supply Chain, Information, and Analytics major is a boundary-spanning field of study that integrates supply chain- the sequence of organizations and activities in acquiring, producing, and delivering goods and services all over the world- and analytics- the broad set of analytical and numerical methodologies that enable business problem solving and decision making. The program unites the strengths of three elite programs in Krannert: Operations Management, Management Information Systems and Quantitative Analysis. The curriculum is designed to meet the rapidly growing business need for multi-disciplinary talents with strong analytical and leadership skills. Students complete a set of courses in all three sub-areas and select a career track of one sub-area for in-depth study. While the career tracks allow students to be well-prepared for a career in supply chain, information systems, or business analytics, the major prepares students with a cross-functional career that is required of major global companies.

Master of Science in Global Supply Chain Management Program

• Full-Time, One Year Program (Spring, Summer and Fall).
• Curriculum designed to meet the rapidly growing business need for specialized talents with thorough understanding of the intricacies involved in global supply chain management as well as strong analytical and leadership skills.
• A wide selection of courses developed by Krannert faculty who teach in our elite Operations programs (ranked #3 and #7 for undergraduate and MBA in 2014 US News and World Report).
• International partnership across a global supply chain with Tianjin University (China), Institute of Management Udaipur (India), and Universidad Popular Autónoma del Estado de Puebla - UPAEP (Mexico) bring unique global perspective and experience to the students.
• Faculty directed summer internship and experiential learning projects give students unique learning experience by working in international teams to apply classroom knowledge to the real world under close faculty guidance. The Global Supply Chain Initiative (GSCMI) Center works with partner institutes and company sponsors to offer the students project opportunities in China, India, Mexico, and the United States.

MTM and GSCM Option Certificates

The DCMME & GSCMI Centers offer two certificates to our Master’s Students: GSCM and MTM Option Certificates. By taking specific required courses to obtain these two options, students will be better prepared for many of the challenges that must be faced in order to succeed in today's highly competitive world of manufacturing.

Managing a manufacturing enterprise has never been more challenging or exciting than today. With the focus of corporate leaders increasingly shifting towards innovation and entrepreneurship and high-value, high-margin products in new and evolving industries, students must be well-prepared to succeed in today’s highly competitive world of manufacturing. The Manufacturing & Technology Management (MTM) option focus allows students to prepare for these challenges. The Center granted 34 MTM Certificates in 2016.
2016 US NEWS AND WORLD REPORT TOP RANKED

KRANNERT OPERATIONS MANAGEMENT

OPERATIONS MBA

#3 UG OPERATIONS

#7
We are grateful to the many faculty at Krannert who participate in Center sponsored events, projects and research. Thanks to each one for their efforts to progress the scholarly works in Operations and Global Supply Chain Management.
Faculty Bios

Gemma Berenguar
Professor Berenguar is an Assistant Professor of Management. Gemma received her Ph.D. in Operations Research from the University of California, Berkeley in 2012. Her research interests include supply chain design and operations research resolution methods, sustainable and socially responsible operations, analysis of nonprofit supply chains, and benchmarking studies in global health supply chains. She was a recipient of the 2012 Doug and Maria DeVos Faculty Summer Support Award in global supply chain management.

Tom Brush
Thomas H. Brush is a Professor of Management in the Strategic Management Area at the Krannert School of Management, Purdue University. He is Senior Associate Dean, and Head of the Management Department. He received his Ph.d in Economics and Business Administration at the University of Michigan where his doctoral dissertation received the 1991 Free Press Award for Outstanding Dissertation Research in Business Policy and Strategy. Before coming to Purdue University, Dr. Brush spent two years on the faculty at the University of Minnesota’s Carlson School of Management and a sabbatical year in 2001 as a Visiting Research Scholar at the Watson Research Center of the IBM Corporation. His research focuses on corporate strategy and manufacturing strategy topics such as acquisitions, diversification, manufacturing capability exploitation within companies, and supplier relationships and alliances. Connections between these streams include the disintermediation of existing business models with IT initiatives and the rise of new outsourcing opportunities in both primary activities and business processes. Some specific applications include HR outsourcing, knowledge management in outsourcing, e-commerce marketplaces, and the effect of customer capabilities on performance in online banking. His current research focuses on technology diffusion and the competitive choices of standards selection by incumbents and potential disruptors as well as corporate

**Suresh Chand**

Professor Chand is the Professor and Louis A. Weil Jr. Chair of Management and the Associate Dean of Graduate Studies. He teaches Operations Management. His current research interests include the application of Operations Management principles in improving health-care delivery processes, supply chain models to match supply with demand with multiple orders, and investigating characteristics of batch sizes in the presence of learning and forgetting. Professor Chand has been with Krannert since 1979. He has taught a variety of OM courses at Krannert ranging from core courses for the MBA (both regular and executive) and undergraduate students to electives for undergraduate and MBA students on topics such as Factory Physics, Technology Management, Supply Chain Management, and Service Operations Management. He also teaches doctoral seminars. He is currently senior editor for Production and Operations Management. He served as Associate Editor for Management Science (1986-2008). He was area editor for Production and Operations Management (1988-2003). He was also senior editor for Manufacturing and Service Operations Management (1999-2003). He was the general chair for POM 2005, the annual international conference of the Production and Operations Management Society.

**Amy David**

Amy David joined the Krannert School of Management as a Clinical Assistant Professor in August 2014 after completing her Ph.D. in Industrial Engineering and Operations Research at the University of Illinois at Chicago. She teaches the faculty-directed student project course, as well as undergraduate and graduate courses in production planning and control and supply chain management. Previously, Professor David worked as Logistics Planning and Process Development Manager at USG and a Logistics Analyst at Medline Industries. She holds an MBA from Lake Forest Graduate School of Management and the APICS CPIM designation.

**Annabelle (Qi) Feng**

Q. Annabelle Feng is John and Donna Krenicki Chair in Operations Management, Professor of Operations Management. She joined the Krannert School of Management as an associate professor in June 2012. She was a faculty member at McCombs School of Business, The University of Texas at Austin since 2006. Her main research interest lies in studying firms’ sourcing decisions in the broad context of supply chain management. Her work focuses on individual firm’s procurement planning in uncertain environment and multiple firms’ interactions in sourcing relationships. She received the first prize in the INFORMS Junior Faculty Paper Competition in 2009 and the Wickham Skinner Early-Career Research Accompaniment Award in 2012. Her work with Hewlett-Packard on product proliferation management won the 2009 Edelman Award.

**Greg Hundley**

Professor Hundley’s interests include human resource management, compensation and reward, international human resource management, and entrepreneurship. His current areas of research include strategic human resource management, self employment, and international compensation. Professor Hundley is also interested in the effects of national culture on human resource outcomes. Professor Hundley has been on the faculties of the University of Oregon, University of Western Australia and Xavier University. He is on the editorial board of the Asia-Pacific Journal of Human Resources. He is a member of the Academy of Management and the Industrial Relations Research Association. In 2001, he received the John and Mary Willis Young Faculty Scholar Award.
Ananth Iyer
Professor Iyer is the Susan Bulkeley Butler Chair in Operations Management at the Krannert School of Management. He is also the Director of Purdue NExT - a University wide modular online interactive courses for global distribution. He was the Associate Dean for Graduate Programs (2011-2013) and Director of DCMME (Dauch Center for the Management of Manufacturing Enterprises) and the founding Director of GSCMI (the Global Supply Chain Management Initiative) (2006-2011) at the Krannert School of Management. Previously, he was Purdue University Faculty Scholar from 1999-2004. His teaching and research interests are operations and supply chain management. Professor Iyer’s research currently focuses on the analysis of promotions on logistics systems in the grocery industry, and analysis of the impact of competitors on operational management models and the role of supply contracts. His other topics of study include inventory management in the fashion industry, effect of supplier contracts, and use of empirical data sets in operations management model building. He has four books ranging from a textbook on Managing Supply Chains to trade books on Toyota Supply Chains, Supply Chains on the Silk Road and Orchestrating Supply Chain Opportunities. He has published in MandSOM, Operations Research, Management Science, Naval Research Logistics, Networks, and Manufacturing and Service Operations Management. He was the FMC Scholar in 1990-91. He has served as a Department Editor of Management Science, Associate Editor of Operations Research, is on the editorial boards of Operations Research Letters, IIE Transactions, the ECR Journal and Manufacturing and Service Operations Management editorial board, and member of INFORMS. He was president-elect of the MSOM Society of INFORMS in 2001-02 and served as president for the year 2002-03. Prior to joining the Krannert faculty in 1996, Professor Iyer taught at the University of Chicago. He has been affiliated with the Production and Distribution Research Center at Georgia Tech, and a consultant to Daymon Associates, Sara Lee, Turner Broadcasting and others. He served his Chicago community as a pro bono consultant to the Chicago School System and the Chicago Streets and Sanitation Department.

Justin Jia
Professor Jia joined the Operations Management group in the Krannert School of Management in fall 2011 after completing his Ph.D. in Supply Chain and Information Systems at the Pennsylvania State University Smeal College of Business. He conducts research on pharmaceutical supply chain, closed-loop supply chain, and procurement auctions. Professor Jia teaches the core undergraduate Operations Management course and an elective undergraduate course, Supply Chain Analytics.

Karthik Kannan
Karthik Kannan is an Associate Professor at Purdue’s Krannert School of Management. He has pioneered the concept of “Design for Instincts” as a way to organize businesses in the current age. To learn more about the concept, visit http://www.designforinstincts.com. His research also can be themed along the same dimension “design for instincts.” His research work tries to understand and sometimes even manipulate human’s instinctive behavior in specific contexts through the use of information technology. He works on two primary research streams markets and pricing of information goods and services through auctions, and economics of information security. His papers have been accepted in several leading conferences and journals in the information systems area, including Management Science, Information Systems Research, Workshop on Information Technology and Systems, Workshop on Information Systems Economics, International Conference on Information Systems, and Conference on Information System and Technology. His papers have won the Best Paper Awards in the 10th and the 15th Annual Workshop on Information Technology and Systems. He currently serves/ has served as an Associate Editor for Management Science, Information Systems Research, and MIS Quarterly. He is a member of AIS and INFORMS. He is also a CERIAS Fellow and Krannert’s Faculty Fellow. At Purdue, he teaches the IT course in the MBA programs (in the regular, weekend, and Exec Ed MBA). He has also been a visiting faculty member at GISMA and ISB. Previously he taught undergraduate required courses as well as a database course. Prior to joining Purdue, Karthik obtained his PhD in information systems, his MS in Electrical and Computer Engineering, and MPhil
in Public Policy and Management all from Carnegie Mellon University. His undergraduate degree is in Electrical and Electronics Engineering from NIT Trichy (formerly, REC Trichy). Before joining the graduate school, Karthik worked with Infosys Technologies.

**Ellen Kossek**

Ellen Ernst Kossek is the Basil S. Turner Professor at Purdue University's Krannert School of Management and Research Director of the Susan Bulkeley Butler Center for Leadership Excellence. She holds educational degrees from Yale University (Ph.D in organizational behavior), the University of Michigan (MBA in human resources); and Mount Holyoke College (with honors in psychology.) Her research has won awards including the 2015 Rosabeth Moss Kanter award for research excellence, the Families and Work Institutes’ Work-Life Legacy award for helping to build or advance the work-life movement and the Academy of Management’s Gender and Diversity Division’s Sage Scholarly achievement award for advancing understanding of gender and diversity in organizations. She was the first elected president of the Work-Family Researchers Network, a founding member of the Work Family Health Network and elected a Fellow in the American Psychological Association and the Society for Industrial and Organizational Psychology. She was elected to serve on the Academy of Management’s board of governors, and Chair, of the Gender & Diversity in Organizations Division. She has won distinguished faculty teaching awards for multiple years at Purdue. She has been invited to give keynote speeches to managers, scholars, students and policymakers in over a dozen countries. Prior to becoming a chaired professor at Purdue, she was awarded the rank of University Distinguished Professor at Michigan State University. She has been a visiting scholar at Kings’ College London, Harvard Business School, the University of Adelaide, Australia, and the University of Michigan’s Institute of Social Research, and Center for Education of Women (awarded a Jean Campbell Fellowship). Prior to becoming a professor, she worked in Human Resources in Asia, Europe and the U.S. for Hitachi, IBM & GTE. She works globally to advance knowledge on gender and diversity and positive employment practices.

**Yanjun Li**

Professor Li’s teaching interests include management science, statistics, production, optimization models, and algorithms. His current research includes discrete optimization and application, approximation algorithms, network and graph, location and distribution, vehicle routing, lot sizing and scheduling, inventory and supply chain management, and financial optimization. He received the Jay N. Ross Young Faculty Scholar Award (2005), John and Mary Willis Young Faculty Award (2008), and Krannert Faculty Fellow (2008) at the Krannert School of Management, Purdue University. He is a member of the Institute for Operations Research and the Management Sciences (INFORMS), Mathematical Optimization Society (MOS), and Society for Industrial and Applied Mathematics (SIAM).

**Yaroslav Rosokha**

Dr. Rosokha received his Ph.D. in Economics from the University of Texas at Austin in 2013. His research interests concern individual and social learning under uncertainty. Also among his interests are Behavioral Operations Management, Experimental Economics, and Game Theory. He has taught courses in Operations Management and Economics.

**George Shanthikumar**

Professor Shanthikumar is the Richard E. Dauch Distinguished Professor in Manufacturing and Operations Management and the Director of the Dauch Center for the Management of Manufacturing Enterprises and Global Supply Chain Management Initiative. He joined the Krannert faculty in 2009. Prior to coming to Purdue, he was a Chancellor’s Professor of Industrial Engineering and Operations Research at the University of California, Berkeley. His research interests are in integrated interdisciplinary decision making, model uncertainty and learning, production systems modeling and analysis, queueing theory, reliability, scheduling, semiconductor yield management, simulation stochastic processes, and sustainable supply chain management. He has written or co-written more than 250 papers on these topics. He is a co-author (with John A. Buzacott) of the book Stochastic Models of Manufacturing Systems and a co-author (with Moshe Shaked) of the books Stochastic Orders and Their Applications and Stochastic Orders. He was a co-editor of Flexible Services & Manufacturing Journal and is (or was) a member of

Masha Shunko
Professor Shunko joined the faculty at the Krannert School of Management in July 2011. Her primary professional interest is in tax efficient global supply chain management, where she focuses on the effective usage of transfer prices and sourcing policies to take advantage of operating in favorable tax jurisdictions. The second area of interest is healthcare operations where she focuses on the effect of ambulance traffic coordination to improve performance of the emergency departments. Professor Shunko has worked on consulting and research projects with Caterpillar Inc. and University of Pittsburgh Medical Center, which have shaped her research areas. Prior to the academic career, she worked for Deloitte. in Estonia, where she audited and consulted various manufacturing and banking clients in Estonia, Latvia, Belarus, and Russia. Professor Shunko teaches the core Operations Management course in the MBA program and an elective MBA course in Supply Chain Management. Professor Shunko completed her PhD in Operations Management at the Tepper School of Business, Carnegie Mellon University, during which she received the 1st prize in the POM Supply Chain Management student paper competition in 2009.

Susan Watts
Professor Watts’ research focuses on the effect of information and competition in markets as well as issues in corporate social responsibility. She has published papers in the Journal of Accounting Research, Journal of Accounting and Economics, The Accounting Review, The Rand Journal of Economics, Management Science, Contemporary Accounting Research, Review of Accounting Studies, Journal of Management Accounting Research, Journal of Economics and Management Strategy, and other accounting, economics and finance journals. Professor Watts teaches both financial and managerial accounting as well as courses focused on corporate social responsibility. She also teaches in the doctoral program and is the Accounting area doctoral student academic advisor. She has won numerous teaching awards at the university, school and departmental levels and was included in Purdue University’s Book of Great Teachers in 2008. Other awards include the Purdue University Charles B. Murphy Outstanding Teaching Award, Purdue University Teaching for Tomorrow Award, Excellence in Undergraduate Teaching Award, and Best Teacher Award in the School of Management. She is also a Fellow in Purdue University’s Teaching Academy and was named a Purdue University Faculty Scholar. Prior to joining Krannert, she taught at Indiana University-Bloomington, where she also won university, school and departmental teaching awards, and at the University of British Columbia. She taught at the University of Northern Iowa while a doctoral student. Before going to graduate school, she was an accountant with Brown Group, Inc. in St. Louis. She has a CPA certificate from the State of Missouri, and is a member of the American Accounting Association, the Canadian Academic Accounting Association, the American Finance Association, Financial Management Association, INFORMS, the National Investor Relations Institute, FEI, Beta Alpha Psi and Beta Gamma Sigma.
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Through the generous sponsored scholarships provided by our industry partners, students who express sincere interest in supply chain management and manufacturing management can benefit from Krannert’s highly regarded undergraduate and MBA programs.

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