

# 2014 | Annual Report

Student Focused. Faculty Directed.

Student Focused | Faculty Directed.

## Directors' Letter

On behalf of the DCMME-GSCMI Centers and students, thank you to our generous partners and friends. Our mission and our many important Center goals would not be possible without you. As your manufacturing and global supply chain management centers at the Krannert School of Management at Purdue University, we continue to strive to fulfill our mission of promoting education, research, and industrial engagement with those interested in operations and supply chain management while maintaining our vision of a “student focused and faculty directed” center. Our fall conference featured a forum & panel discussion on “My Career in Operations & Supply Chain” followed by our spring conference focused on “Technology Driven Supply Chain.” You can read more about both of these events in the pages that follow (p. 5, 19). These conferences provide the opportunity for you to share perspectives and gather insight among industry professionals while facilitating the occasion for interaction with Krannert students. The Center provides a wide range of engagement opportunities for our students including the Summer Internship Poster Competition (p. 13) and our GSCMI Student Case Competition (p. 25) held in conjunction with the two conferences. The competitions aim to provide students with the opportunity to transfer their classroom learning to practical problems and demonstrate their capability to an industry judge panel. There was a large turnout for this year’s case competition with the generous support from Eaton Corporation totaling twelve undergraduate teams and fifteen graduate teams. To wrap up the events, students from five other schools joined us for our 2014 GSCMI Intercollege Case Competition: Olin Business School at Washington University of St. Louis, SUNY Buffalo, UNC Kenan-Flagler Business School, University of Illinois at Urbana-Champaign, and Vanderbilt University-Owen Business School. Student enrichment is our mission, and we thank our many faithful partners for making this mission a reality. We look forward to partnering with you in the coming year ahead.



**J. George Shanthikumar**

Richard E. Dauch Distinguished Professor in Manufacturing and Operations Management  
Director, Dauch Center for the Management of Manufacturing Enterprises  
& Global Supply Chain Management Initiative

*JG Shanthikumar*



**Qi (Annabelle) Feng**

Professor of Operations Management  
Associate Director, Dauch Center for the Management of Manufacturing Enterprises  
& Global Supply Chain Management Initiative

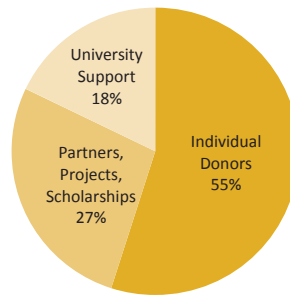
*Qi Feng*



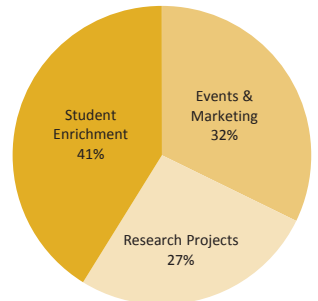
**Heidi Allwes**

Center Coordinator, Dauch Center for the Management of Manufacturing Enterprises  
& Global Supply Chain Management Initiative

*Heidi Allwes*



**INCOME SUMMARY 2013-2014**



**EXPENSE SUMMARY 2013-2014**



**Thank you.**

Dedicated industry partnerships are at the heart of success for the DCMME-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 Centers could not be accomplished without you!

The DCMME-GSCMI Center exists because of our faithful partners. Your involvement in Center events & interaction with Krannert students leaves a lasting impact. Supporting our "student focused" Center truly invests in the goals & long-term successes of Krannert students. With your support, we provide our students with events that enhance their education by providing real-life experiences outside of the classroom. Take a moment to read about one such real-life experience opportunity provided through DCMME-GSCMI- the TVS Motor Company India Internship (p. 33). This innovative & challenging global program is celebrating its eighth year of success with a total of 107 students having participated,

represented by MBAs, MSHRMs, and engineering students. Your support affects our faculty as well by enabling them to conduct further research in operations and supply chain. The DCMME-GSCMI Centers will continue to provide our partners with occasions to share insight and interactions in order to become further equipped for emerging demands and challenges in business. During the 2013-2014 term, 41% of total funding was dedicated to student enrichment throughout the year. A sincere thank you to all of our center partners & sponsors; the value of your company's support is far reaching.



Heidi Allwes  
Center Coordinator, DCMME and GSCMI





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# Student Focused.





# Faculty Directed.



Developing meaningful coursework.

Exploring innovative approaches towards operational improvement.

Creating venues for collaboration among firms,  
students and faculty around the state and across the globe.



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## | About Us

For twenty-five years the DCMME-GSCMI Center has been the focal point within the Krannert School of Management for promoting education, research and industrial engagement with those interested in operations management, manufacturing management, and supply chain management. This long standing history has bred a rich tradition of developing meaningful coursework, exploring innovative approaches towards operational improvement, and creating venues for collaboration between firms, students and faculty around the state and across the globe. Partnering with organizations, companies, not-for-profit as well as governmental and economic development agencies has allowed our Center to create the essential linkages that foster innovation, develop rich insights, and enable us to accomplish our mission of celebrating the vitality of operational excellence and importance of a strategic supply chain view. The Global Supply Chain Management Initiative and the Dauch Center for the Management of Manufacturing Enterprises provide current and new partners, students and faculty the synergies of the two organizations working together with a shared support staff and a common structure. The goals of both are aligned and allow for opportunities for co-programs available to students and partners involved in either center according to their specific interest in manufacturing or supply chain.

**The Center of Management of Manufacturing Enterprises**

was initiated in 1987 with grants from Ameritech, Chrysler, Ingersoll-Rand, Hillenbrand Industries, and TRW. The Center was established in 1988 with the goal of creating a partnership between academia and the manufacturing community to develop academic and research programs for the purpose of producing technically sound, globally cognizant professionals and academicians to enhance global manufacturing competitiveness. In 1998, the Krannert School announced the naming of the center as the Dauch Center for the Management of Manufacturing Enterprises (DCMME) in honor of the Richard E. Dauch family. Manufacturing Excellence is what our partners practice, our faculty research, and our students learn. For 25 years, we have stood ready at the nexus of industry, faculty, and student endeavors to meet the wide array of challenges that face the manufacturing sector, serving as a catalyst for collaboration and a motivating force in:

- Creating innovative solutions for our corporate partners.
- Driving cutting-edge manufacturing management research by our faculty partners.
- Delivering course content that compels and excites our student partners.

Please explore our website to learn more about our passion for manufacturing, and how you can share in and benefit from our efforts!

**The Global Supply Chain Management Initiative** was launched in 2005 to provide a forum for students, faculty, industry partners and alumni to engage and interact through programs and services that will result in greater understanding of the differentiating advantage realized by a strategically coordinated global supply chain. The supply chains that typify commerce in today's global economy are highly fragmented, consisting of numerous

independent entities scattered across the globe and separated by geographic, political, and economic barriers. The impact of establishing and maintaining these complex supply chains is immense. The Global Supply Chain Management Initiative gives current and future managers the opportunity to be on the forefront of emerging ideas and technologies that promise to provide a differentiating advantage to businesses in the future. This initiative offers a broad-based, global approach to taking your business skills global through a variety of programs.

Many of today's most successful firms attribute their success to a strategically managed global supply chain. The complexities of coordinating and collaborating within a global network of designers, manufacturers, distributors and retailers grow as businesses seek to attain a competitive advantage through carefully formulated strategies for managing flows in physical, informational and financial channels. SCM stands for 'Supply Chain Management' and is the process of ensuring that products are manufactured and delivered quickly and efficiently.

- Drives coordination of processes and activities with and across marketing, sales, product design, manufacturing, finance and information technology.
- Encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all Logistics Management activities.
- Includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers.
- Integrates supply and demand management within and across companies.
- Responsible for linking major business functions and business processes within and across companies into a cohesive and high-performing business model.

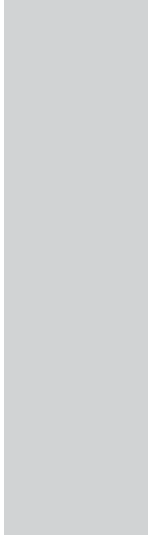
# 2013 DCMME Fall



# Conference



The 2013 DCMME Fall Operations Conference gathered students, faculty, and industry participants. Executives from Amway, Akoya Inc., Caterpillar, ConAgra Foods, Evonik, Hewlett-Packard, John Deere, & Twitter shared their unique experience and insight about their “Careers in Operations & Supply Chain.” One of the featured events at the conference was the Student Summer Internship Poster Competition which provided a wonderful opportunity for students to share their summer internship experiences.



The conference provided vital points for charting a successful path in the field of supply chain management. All of the issues discussed made for fascinating learning.

**Pradeep Hiremath (MS GSCM 2013)**

It was a great experience to attend this enlightening conference and interact with the great leaders and industry experts. I would like to thank the organizers, volunteers, and everyone who added efforts to make this conference a successful event.

**Bharat Varshney (MS GSCM 2013)**

The DCMME Forum on My Career in Operations & Supply Chain was both interesting and enriching for me. It was an absolute privilege to have attended the conference featuring eminent speakers and panelists from a wide variety of companies.

**Ankur Bhatia (MBA 2014)**

The Fall 2013 DCMME Fall Forum was an outstanding opportunity for undergraduates like myself to interact with successful alumni from Purdue University as well as executive leaders from top companies who have established a great relationship with Krannert School of Management.

**Nicholas Bafunno (Undergraduate)**

The career forum was very informative; the guest speakers not only talked about their current job, life experiences, and future goals, but they also related these topics to Krannert students. One of the things that made this career forum unique was how it included both guest speakers and a poster competition. It was great seeing the current business leaders talk about their occupation and experiences and future business leaders competing against each other and showing their knowledge and skills.

**John Nafar (Undergraduate)**



# Student Summaries

## Jerry Bronkema, Amway Cultural Diversity

-Josef Conner (MBA 2014)

I particularly enjoyed Jerry Bronkema's talk about preparation for cultural diversity in the workplace. He sets the development of cultural intelligence in a real-world context with stories that illustrated how to effectively implement them. His point was further cemented by his comment that an "international company" is a given now, and the global economy revolution is not revolutionary anymore; it is a fact of business. This struck particularly true for me given my experiences this past summer. I worked for a company headquartered in Germany, with plants in North America, all of which had been acquired by the company. In addition to this initial cultural shock between the parties (American culture and German culture), there were also the culture differences between each individual plant, and the plants in other countries. It revealed a very real competency that I need to work on, and using Mr. Bronkema's tips will aid me in the event that I work at another company with this unique structure. Cultural intelligence is not something that can be developed naturally or without effort, it is a skill that must be developed. As I progress into the full-time workforce, I want to seek the ability to adapt regardless of the cultural situation, and I would like to think Mr. Bronkema's presentation aided in this.

## Karen Caswelch, Akoya Inc. Work-life balance & Ambition

-Ellen Coates (MBA 2014)

In Karen's speech titled "Work-life Balance and Ambition", the first topic she brought up was the importance for every person having the experience of working on a manufacturing floor. She started her career in this environment and found it to be extremely rewarding. Karen mentioned that the hardest thing to do is manage people. This point was particularly interesting to me because I am currently looking for a full-time position. I usually turn my head at supervisor roles because I want to go directly to supply chain. However, I see the importance of working as a supervisor. It is too often that you see leaders in a corporation who are too far removed from manufacturing to know what is happening. An experience as a supervisor will help me with my skills as a leader, give me a better understanding of the manufacturing environment, and become more in touch with the issues that occur in this setting. The second topic was work-life balance. Karen believes that there is no such thing as work-life balance and everything has to do with choices. The choices include how ambitious you want to be, what kind of lifestyle you want to lead, if you want to be married, if you want children, and how you handle the unexpected things in life. I really enjoyed when she spoke about these points, because I thought I would hear more about this in the MBA program. However, it is a topic that has been walked around with other speakers and clubs. It was nice to hear about how she handled these situations, and to think about how I will handle them in the future







### Cara Curtland, Hewlett-Packard Woman in Career. Strategy, Vision, and Creativity

-Peter Jacobson (MBA 2015)

Purdue alumnus Cara Curtland (BSIE, 1994; MSIE 1996) has blazed an impressive career since her days as an undergraduate and masters student and IE TAP consultant at Purdue. In 17 years with HP, she has held many roles, and is currently a Strategist in the area of Strategic Planning and Modeling in Vancouver, Washington. Using examples from her career, Cara provided Krannert students with some excellent insights as they are about to embark on their career journeys. First, she encouraged students to do what they love, as an individual must genuinely love the job that they are doing to perform at the highest level. In addition, she highlighted the importance of self-awareness. Students should also know what they do best, and where their weaknesses lie. They should always seek to continuously improve, but remember that they shouldn't try to go it alone. They should balance their weaknesses by seeking teammates with strengths in those areas. She also highlighted the importance of integrity, teamwork, asking questions, and client-focus. She closed with a powerful quote from Albert Einstein: "Not everything that counts can be counted, and not everything that can be counted counts."

### Gary Bear, Caterpillar Motivation

-Jose Rodrigo Espinosa (MS GSCM 2013)

Gary Bear from Caterpillar, focused on the importance of motivation. Within this topic, he was able to tie it back to Supply Chain Management and the challenges present today. He spoke of SCM perhaps being a new discipline and a trending industry topic, but that people need to realize it is certainly not simple. Some of the current challenges include the presence of natural disasters, recessions, and intense competition. To combat the challenges faced in this area, it is crucial to be transparent to customers and communicate expectations to the entire supply chain. Thus, more than ever factors like response time (instead of lead time), supplier relationships, innovation, and leadership are requiring more attention. In fact, Gary Bear spoke of not being afraid of confronting these challenges and the importance of being willing to take some risk. He discussed the need to realize the importance of your role and how motivation to give back to your company fuels you to lead your teams to high performance.

# Featured Panelists

**Panelist: Kellie Antes, Supervisor, Supply Chain Planning, Amway**

Kellie is a supply chain professional with 22 years of experience in the field, APICS CPIM certification, and a Bachelor of Business Administration. She has been an Amway employee for eight years where she has undertaken a variety of planning roles, multiple process improvement projects, and currently leads a team of planning professionals.

**Panelist: Bill Ensign, Associate Senior Procurement Agent, Evonik**

Bill Ensign is currently responsible for the purchasing of equipment, supplies, and services for Evonik Corporation - Tippecanoe Laboratories (formerly owned by Eli Lilly). He has worked in supply chain roles his whole 23 years of employment. He received his bachelor's degree from Krannert in Industrial Management with an Industrial Engineering minor in December 1990. He is currently assisting in establishing the academic/business partnership between Evonik Corporation and

Purdue. He is the co-founder of the Supplier Diversity Development (SDD) Coalition of Greater Lafayette - a group of major employers that invites diversely owned firms to present their capabilities.

**Panelist: Elizabeth Menozzi, Supply Chain Manager, Twitter**

Elizabeth Menozzi is currently a Supply Chain Manager at Twitter where she is adapting product supply chain principles to large scale data centers. Previously, she implemented S&OP at Microsoft and managed forecasting and planning for the launch of the Xbox 360 gaming console. She has worked on supply chains for products as commoditized as toilet paper (Kimberly-Clark), as complex as aircraft (Boeing), and as intangible as "megawatts" (PECI). Elizabeth holds a B.S. degree in Industrial Management from Purdue University, an M.B.A. from Seattle University, and an APICS CSCP certification.

**Panelist: Mark Burton, Strategic Sourcing Manager, John Deere**

Mark Burton was born and raised in central Indiana and graduated from Purdue University in 1978 with a Bachelor's Degree in Industrial Engineering and a minor in Economics. Mark then received his Master's in Business Administration in 1985 from the University of Iowa. Mark has been with John Deere since 1978.

**Panelist: Phillip O'Keefe, Director – Procurement Services, Purdue University**

Philip was appointed Director of Procurement Services in September of 2011. He brings over 30 years of experience and success in management and senior management in a variety of industries in Europe, the United States and elsewhere, including more than 20 years in management in High Tech Hardware and Software, Power Generation, Transmission and Distribution, Telecommunications and Financial Services organizations.



**Panelist: Jesse Moore, Director –  
Supplier Diversity Development,  
Purdue University**

In February 2005, Purdue University recruited Jesse Moore to create their first Office of Supplier Diversity Development. His challenge was to increase the opportunities and the number of contracts awarded to women and minority owned businesses. Moore has also served as state procurement officer in the Office of Minority Business Enterprise (OMBE) within the State Department of Commerce, Executive Director of Economic Development and Small Business for the Indiana Chamber of Commerce, and Executive Director of the Indianapolis Black Chamber of Commerce.

**Panelist: Craig Andrews, Director  
–Continuous Improvement,  
ConAgra Foods, Inc.**

Craig has over 30 years of experience in manufacturing, operations, training, and continuous improvement. He graduated from Purdue University with a BS in Industrial Engineering in 1983. Upon

graduation, Craig embarked on a 23 year career with R.R. Donnelley, North America's largest commercial printer. At ConAgra Foods, an \$18+ Billion global food company, Craig has been leading continuous improvement efforts via ConAgra Performance System for over 5 years.

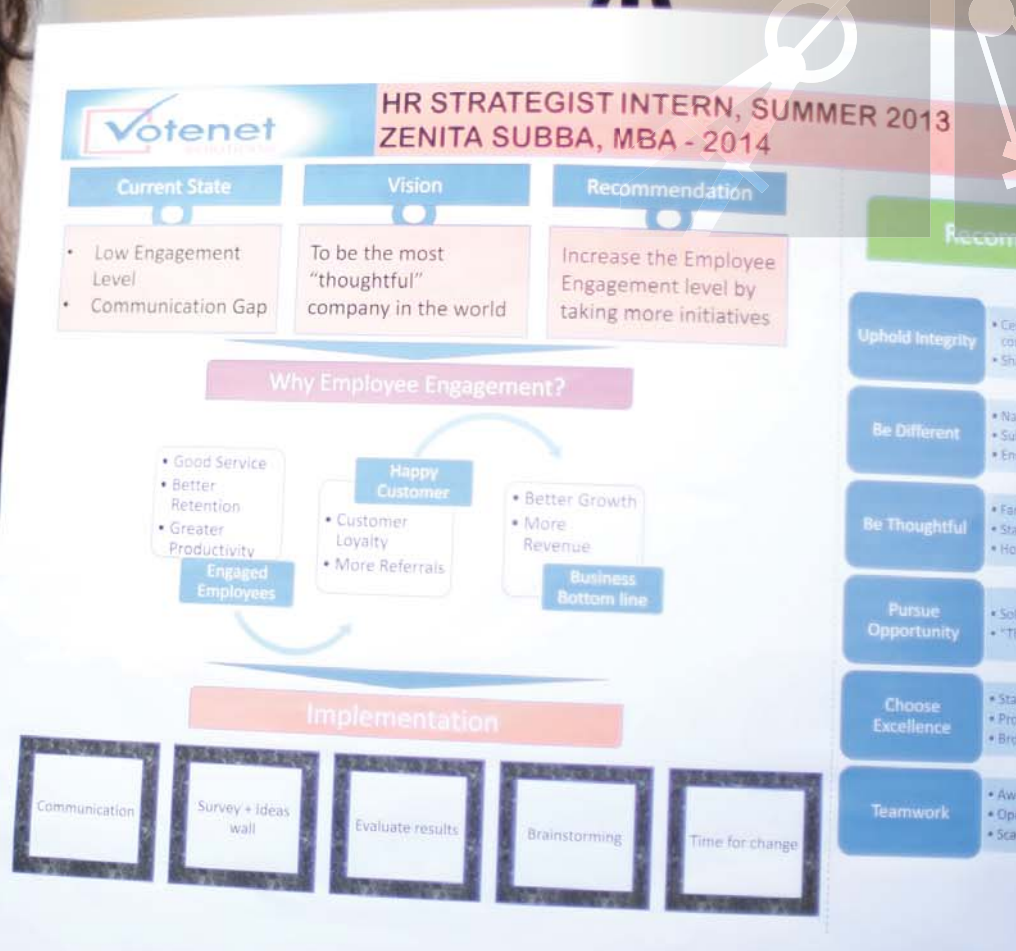
**2013-2014 DCMME  
Outstanding Partner Award  
Mark Burton, Strategic Sourcing Manager  
John Deere**

The Outstanding Partner Award is given annually to a Center Partner who best exemplifies the following qualities:

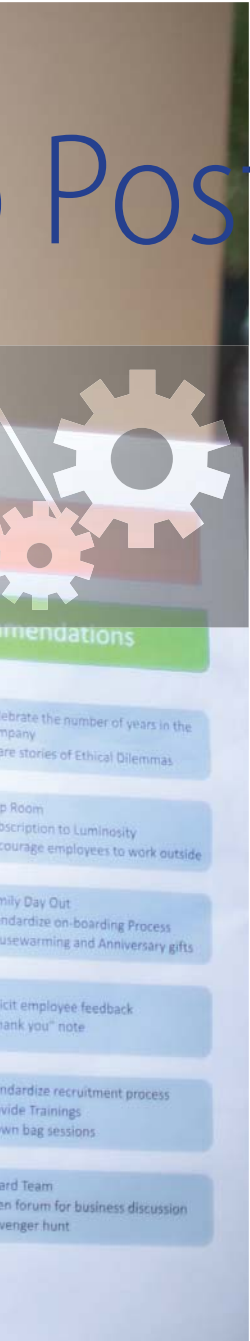
- 1) Provides internship opportunities or projects for center students to engage in
- 2) Financially supportive
- 3) Speaks at conferences regularly or arranges for another speaker from their company
- 4) Regularly attends and engages in center events: judging for poster & case competitions
- 5) Initiates outreach & interaction with DCMME-GSCMI
- 6) Provides student scholarships
- 7) Speaks during classroom guest lectures
- 8) Facilitates company plant tours



# Summer Internship



# Poster Competition



The Student Summer Internship Poster Competition is a fun and informative student event held in conjunction with the annual fall operations conference. This lively “speed dating” formatted competition was created to benefit industry visitors as well as students .



If your firm is looking for a way to connect one on one with the best operations and supply chain students, sponsoring this event is definitely something you should consider.

**Contact us to learn more!**

This competition was created to benefit both industry visitors as well as students by accomplishing three primary objectives:

- 1) Demonstrate to industry visitors the caliber of summer projects that Krannert students can complete during an internship and provide an alternative resource for locating student candidates interested in operations and supply chain careers.
- 2) Provide an opportunity for graduate students to promote their talents and refine their presentation skills by marketing themselves to industry visitors.
- 3) Expose undergraduate and incoming 1st-year MBA students to the variety of companies and employment opportunities they might encounter when searching for internship employment themselves.

Participating as judges for the competition, our industry conference guests have the opportunity to meet all of the competitors individually. Judges listen carefully and ask probing questions as the students articulate their internship work experience and accomplishments. Each group of judges rotates around the line of competitors listening to each student presenter. Students are given 3 minutes to present to each group followed by a 2 minute Q & A.

Students are then judged based on content, poster display, and presentation. This year a total of twelve students participated in the competition, consisting of three undergraduate and nine graduate students.

**Congratulations to the four winners selected by our guests:**

Seongjin Shin- Undergraduate 2015  
(1st place for Undergraduate Student)

Kurtis Homan- MBA 2014  
(1st place for Graduate Student)

Zenita Subba- MBA 2014  
(2nd place for Graduate Student)

Manigandan Ramesh- MBA 2014  
(3rd place for Graduate Student)

**We value all of our participants' preparation and willingness to share their experiences with us at the conference.**



### Graduate 1st place

#### Kurtis Homan

The objective of my internship was to evaluate the newly opened Inbound Center, APIC, for all of North America. Through my evaluation of the Inbound Center we identified how to standardize processes between the many different job functions across the inbound center and increase cross training. When the jobs were standardized we were able to identify an underlying problem in the facility. On further study the problem was attributed to OS&D (overages, shortages, and damages) issues. After analyzing data, we implemented a new process improvement initiative from a theory from Factory Physics that showed an annual cost savings of temporary workers by 10% of total cost. The results of my internship at AGCO showed a bottom line impact of over \$4 million dollars of cost savings and a 10% decrease of annual operation costs associate with best business practices. I also left in place forecasting methodology for the supplies that will be received and for product demand. This forecasting methodology will decrease backlogs and also keep a KPI of stock-to-stock near their goal.

### Graduate 2nd place

#### Zenita Subba

This summer I interned at Votenet Solutions, a small software company. It is a \$3 Million company and is the leading provider of secure on-demand voting and balloting software. I was recruited for the summer in order to work with the CEO to change the culture of the organization. The CEO's vision was to make Votenet the "most thoughtful company in the world." With this vision in mind, I started working on Employee Relations. This project helped me understand the importance of having engaged employees in the organization. After researching comprehensively, I created an employee engagement survey. Before distributing the survey to the employees, I communicated the importance of engagement

and our vision to them. Along with heading the Employee Relations project, I also worked on recruitment. I proposed the idea of tying every activity that an employee undertakes to his/her performance appraisal to the CEO and told him that this would be a better way of getting employees engaged in the organization.

### Graduate 3rd place

#### Manigandan Ramesh

The primary objective of this project was to analyze the root causes of the LEX1 controllable kickouts in the slam lines and implement solutions to reduce the DPMO on the slam lines. Kickout data was collected for all outbound slam lines from January to June 2013. Kickouts were categorized into LEX1 controllable and uncontrollable (network wide change) based upon the causes of failure, and pareto analysis was performed to identify the top three LEX1 controllable defects. The top three defects were identified as Weight out of Tolerance, Scanner1 hardware failure and Missing package data. Results: Scanner1 Kickouts on flats lines have been reduced by 72.5% from an average of 160 to 44 per day. Scanner1 Kickouts on autobox have been reduced by 74.17% from an average of 151 to 39 per day. Missing package data kickouts on Flats line have been reduced by 40% from an average of 63 to 38 per day. Overall weekly average DPMO was reduced from 21710 to 17937(17% reduction) and slam operator hours were reduced by 810 per month at the end of my internship.

### Undergraduate 1st Place

#### Seongjin Shin

This summer I interned for CJ Korea Express in their CL (Contract Logistics) Planning and General Affairs Division in Seoul, Korea. My project for the summer internship was to find issues and optimize the Chevrolet SKD (Semi-Knocked Down) Center in Incheon. Semiknocked down is a product that is exported in a set of parts that have been partially assembled, and which are then completed for sale to customers. This is a third-party logistics business. CJ and Chevrolet started the SKD business last September in order to export Chevrolet's vehicles with reduced taxes. Since then, the company has promoted improvements, but is not free of error. Therefore, I had to assess the situations and the triage process in order to prioritize the project. Based on inspection and survey from on-site managers and technicians, my goal was focused on two things: optimizing operation process production

efficiency and improving SKD Center work environment. With great feedback and support from mentors and coworkers from HQ and SKD Center, I had the chance to learn and contribute to many valuable things. They are summarized below: 1. Analyzed and prioritized issues for Chevrolet disassembly factory based on inspection and survey from technicians. 2. Applied ergonomics and Toyota Production System principles to design the factory layout and disassembly processes. 3. Designed OJT (On the Job Training) system and emergency plan to reduce mistakes and eliminate bottlenecks. 4. Proposed ROI analysis for factory optimization and a new line balance and manpower arrangement to reduce process lead-time. 5. Created and Visualized SOP (Standard Operating Procedure) for Chevrolet Trax to boost production efficiency.

## 2013 Boeing Case Competition

The second annual Boeing Case Competition involved a total of 30 students from Purdue University competing together in teams for a chance to qualify for the second round against the University of Illinois.

#### FIRST ROUND FINALISTS

Shudan Ma (UG-Accounting)  
Yinan Wang (UG-Economics)  
Tianyi Zhang (UG- Supply Chain Mgmt)  
Jenae Sumler (UG-Accounting)

This team was flown to Seattle, Washington and hosted by Boeing during the final round competition against the University of Illinois on November 1st.





**AMERICAN  
AXLE &  
MANUFACTURING**



## 2013 AAM-DCMME Shanghai Internship

BY PAN PAN (MBA 2014)

I worked for American Axle & Manufacturing (AAM) at the Shanghai Asian Headquarters as a supply chain management intern this summer. This internship opportunity is provided to through the DCMME Center. AAM is a founding sponsor of DCMME and, Chad Cannaday, a passionate Purdue alum from AAM worked tirelessly with DCMME faculty to develop this opportunity for Krannert students. I met Chad in April when he came to Krannert to serve on the judge panel for the Graduate Student Case Competition organized by the DCMME Center. That case competition brings me a lot of fond memories—not only did my team win the competition, but also it landed me an offer for the AAM Shanghai internship. The internship project was extremely interesting as well as challenging. AAM creates equipment specification manuals which serve as guide books in equipment procurement. The objective of the manuals is to standardize the components used in the manufacturing machine itself. There has been a heavy burden of costs for factories in Asian areas to procure the listed components in the manuals. This is because they can only be imported from North America or Germany. My project was to discover the replacement components in the local market, explore the base of suppliers, and draft a new equipment specification manual for the Asian area. The project required the use of various tools that helped us focus on comparing the configurations, analyzing the costs, and negotiating with suppliers. After careful research and analysis, we created a new list of approved components manual. The conclusion of the project is that around 15% of capital

expense and 80% of lead-time can be saved based on my project's initiative. The manual will help AAM to build a new supply base from local markets and provide a large potential of more savings. I learned a lot from the project and enjoyed the two months in Shanghai very much. My supervisor was Dean Samuels, the Director of AAM Shanghai, who is also a Purdue graduate. He had kept close contact with me throughout the summer, following every step I was making and providing me guidance. Even though Chad Cannaday is located at Three Rivers, he and Bradley Hartzell acted as my mentors, who provided tremendous help for my work as well as my stay in Shanghai. I was highly inspired by the moral of my team, and there was always someone who would offer a hand. It is not overstated to say that the summer I had in AAM is the most memorable one I have ever had.

After my return to Krannert, Chad came over to have a follow up meeting with DCMME faculty and myself. I am happy to learn that Chad is planning to continue Shanghai Supply Chain Internship Program for Krannert students next year. I am sure the next batch of students will find this opportunity highly valuable.

# 2014 GSCMI Spring

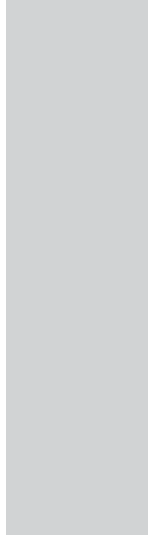


# Conference



This year's conference gathered students, faculty and industry participants for an important discussion on "Technology Driven Supply Chain."

Executives from Allegion, Amway, ConAgra Foods, Dow AgroSciences, FedEx, and IBM shared their unique perspectives on this topic. One of the featured events held in conjunction with the conference was the GSCMI Internal & Intercollege Student Case Competition, featuring both an undergraduate and graduate case competition with over 100 student participants.



First, the conference was well organized and executed. It was a great opportunity to see fellow students who are also passionate about supply chain management that I do not have the opportunity to interact with during my day-to-day life at Krannert. Second, this was a great opportunity for me to learn more about the DCMME and GSCMI Centers and meet, in-person, some of the key administrators and faculty associated with both entities. I was very inspired and felt proud to be involved with the GSCMI Center.

**Amadin Osagiede (MBA 2015)**

Overall I think attending this conference was one of the most informative extracurricular activities that I have attended while a part of the MBA program.

**Robert Ramer (MBA 2014)**

I really enjoyed the GSCMI Conference. The logistics of the conference was extremely well coordinated. One element that made this conference unique and worthwhile was the variety of companies in attendance. The topics that the speakers discussed were relatable and could be applied to many industries.

**Dawn Edwards (MBA 2015)**

Once again, I enjoyed the DCMME/GSCMI Spring Conference at Purdue last week and really appreciated the hard work of many Krannert students and faculty/staff to host. I think you really have some exciting initiatives started.

**Chad Cannaday (American Axle & Manufacturing)**

I want to thank GSCMI and all members who organized and offered this wonderful conference.

**Hirota Aiura (MBA 2015)**





## Student Summaries

### **David Pollard, FedEx Does Building a Seamless Supply Chain Seem Hopeless?**

Alex Serena (MBA 2015)

David Pollard of FedEx started off the conference by providing key points to ensure a seamless supply chain. His first point was in regards to collaboration. Ninety percent of employees know only 10% about other departments' processes and goals. He stressed the importance of communication to improve supply chain flow and avoid duplicative work and unnecessary miscommunication. His second point was about innovation and the need to look at other industries for how they transitioned ideas that worked. This method avoids reinventing the wheel by seeking to transition successful processes in other industries and slightly tweaking them to fit the needs of another industry. Connectivity was his last point; Pollard stressed the need for companies to leverage their IT capabilities to build a seamless supply chain. Access to consistent, uniform information is crucial for a supply chain to meet the needs and demands of a global market.

### **Allison McFadden, IBM Donnie Hays, IBM Smarter Supply Chain – IBM Case Study in Supply Chain Transformation & Innovative Use of Analytics**

Daniel Rowe (MBA, 2015)

Allison McFadden and Donnie Hays from IBM discussed the

topic, "Smarter Supply Chain". They started by claiming that not only was the math associated with improving an entire supply chain challenging, implementing it is much more challenging. They proposed that there are four levels of analytics. First, descriptive, is the analysis of information from the entire supply chain that describes what happened in the past to make better decisions for the future. Second, predictive analysis is regarding what will happen in the future. Third, prescriptive analysis focuses on what we should do about it. Finally, cognitive considers how we can optimize our supply chain. Allison & Donnie suggested that projects should be implemented with an iterative approach, with proper incentive alignment, and stakeholders' willingness to change for the better.

### **Eric Schmidt, Amway Procurement, Technology & Big Data at Amway**

Peter Jacobson (MBA 2015)

Eric Schmidt of Amway addressed the evolution of information technology in supply chain since the turn of the twenty-first century and its implications on users. Fifteen years ago, systems were inefficient and could not effectively coordinate the activities of businesses. To address this problem, corporations began to adopt more robust major ERP systems. Contrary to old systems, these systems now provide an "ocean of data," and the challenge is now filtering through the complexity to determine what is relevant and adds value.



### **Josh Merrill, Dow AgroSciences Technology Opportunities in Agricultural Supply Chains**

Vikram Bharadwaj (MBA 2015)

The talk by Mr. Joshua Merrill, Global Molecule Supply Chain Manager, Dow AgroSciences, gave me a new perspective on how technology was leveraged in a complex supply chain set-up. Some of the challenges that were addressed by Mr. Merrill include lack of trust in the supply chain to share information. Secondly, innovation in agricultural technology (such as Big Data tools & Data Visualization tools) is key to connecting the ag-food value chain, but lack of budget for innovation is directly impacting this growth. Lastly, tools can never replace people. While it's important to have continuous investments in developing innovative technology, investing in the right people is equally important. I really liked his closing statement: "Technology tools don't replace people, it just enables them."

### **Cindy Farrer, Allegion Operational Excellence as a Key Growth Strategy**

Xia Chen (Undergraduate)

Ms. Cindy Farrer discussed Operational Excellence at Allegion. Allegion Pioneering Safety's Corporate Center located in Carmel, IN. Allegion provides security products and solutions for homes and businesses around the world. It is a \$2 billion company which employs nearly 8000 employees globally. Allegion became publicly traded in Dec 2013. Allegion is acutely focused on growth continuation

by using some key strategies such as expansion in both core and developing markets and new product innovations. It also has a strong foundation in Operational Excellence. Operational Excellence is an element in operational leadership that improves the company's key performance. The Operational Excellence in Allegion focuses on improving the customer experience in terms of service, lead time, delivery consistency and quality. This approach will give the customer a better experience about the products and services.

### **Craig Andrews, ConAgra Foods, Inc. Leveraging Technology to Drive Results**

Peter Jacobson (MBA 2015)

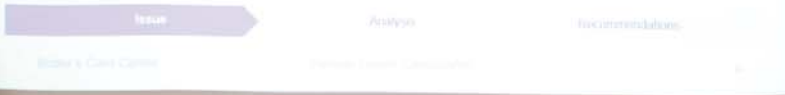
Craig Andrews of ConAgra Foods discussed how ConAgra leverages technology to drive results as it manages the planning, buying, making, delivering, and serving of foods to its customers. ConAgra uses demand sensing to better plan its short-term orders. It utilizes supplier collaboration and joint planning to share forecasts with strategic suppliers to make better buying decisions. Several systems are used throughout ConAgra's manufacturing organization to optimize processes and improve quality. Transportation management systems improve the transportation management and execution processes from ConAgra to its customers. Finally, point of sale data systems tie back to the demand sensing step at the start of this process to enable informed materials procurement and inventory replenishment.

# 2014 GSCMI-EATC

Luyen Nguyen

## The Problem

- Capacity Utilization
- High Turnover Rate/Low Retention Ratio
- Concerns for Patient Health
- Potential Healthcare Policy Changes



## The Problem

- Capacity Utilization
- High Turnover Rate/Low Retention Ratio
- Concerns for Patient Health
- Potential Healthcare Policy Changes





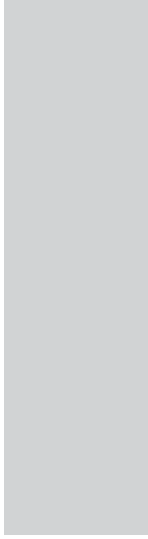


# Olin Case Competition



In conjunction with the GSCMI Spring Conference, the Centers also host an internal & intercollege undergraduate and graduate student case competition. The competitions aim to provide students with the opportunity to transfer their classroom learning to practical problems and demonstrate their capability to an industry judge panel. There was a large turnout for this year's case competition with the generous support from Eaton Corporation, totaling twelve undergraduate teams and fifteen graduate teams. To wrap up the events, students from five other schools joined us for our 2014 GSCMI Intercollege Case Competition: Olin Business School at Washington University of St. Louis, SUNY Buffalo, UNC Kenan-Flagler Business School, University of Illinois at Urbana-Champaign, and Vanderbilt University-Owen Business School.





"I would like to thank the GSCMI department for providing such a great opportunity for us to work with a real case provided by Eaton Corporation. It was an honor to join this competition and compete with other excellent teams."

**Yidi Xu (Undergraduate)**

"The GSCMI-Eaton case competition put Krannert students' supply chain talents to the test and showcased their outstanding analytical and presentation skills. It was a pleasure working with Eaton as a GSCMI graduate assistant to put on such a great event."

**Peter Jacobson, MBA 2015**

"As a GSCMI Graduate Assistant, it was a pleasure to help with the planning and delivery of another great conference. This Spring conference would not have been a success without the support and engagement of our industry partners, especially EATON, who sponsored the case competition. EATON was fundamental to the success of the case competition by providing a fascinating case, judges, and great feedback."

**Gustavo Amorim, MBA 2015**

"The GSCMI Case Competition was a great experience to help close out my freshman year of college. We did not know how the competition would go because this was our first, but by getting positive feedback from the judges, we were able to gain more confidence in our abilities to analyze, our trust in each other, and our presentation skills. This competition was a great way to end my freshman year of college, and I cannot wait to be involved in more case competitions and GSCMI events."

**Jay Petrie (Undergraduate)**





“The GSCMI Case Competition is a great opportunity for each and every Krannert student to get in touch with one of the best learning opportunities - case competitions. During these competitions nearly all skills relevant in the business world are needed, e.g. time management, team coordination, analytical problem solving, presentation skills and all this under time pressure. Summing up, both days of the GSCMI Case Competition were a great and enriching experience. I would like to thank the organizers for this great event and my team for the wonderful work.”

**Patrick Haslanger, MBA 2015 -First Place Team**

“I had the opportunity to participate in two GSCMI case competitions. I have really enjoyed the opportunities GSCMI has offered me, and would encourage anyone interested in supply chain or operations to participate in the conference and the case competition.”

**Andrew Tye, MBA 2014 -Best Presenter**

“It was a great pleasure for our Eaton team to visit campus. We were very impressed with the professionalism and insightfulness of the faculty and students at Purdue. We wish our partnership, in both recruiting and potentially academia, can continue in future. Also the students did a wonderful job during the case competition and we gained many insights from it. They should be very proud.”

**Kai Kang, Eaton -Author of the Case**

“The case competition was very well organized and I thought the student participation was phenomenal. The students were able to provide well thought solutions, exhibiting their presentation skills and supply chain knowledge. Being a formal graduate of Purdue University, it is great to see that GSCMI is continuing to have a presence in Krannert and across the university. Great job!”

**Kyle Young, Eaton**



## 2014 GSCMI-EATON Case Competition

Eaton Corporation is a power management company with sales of \$22 billion in 2013. Eaton provides energy-efficient solutions that help its customers effectively manage electrical, hydraulic and mechanical power more efficiently, safely, and sustainably. Eaton has approximately 102,000 employees and sells products to customers in more than 175 countries. It has four main business sectors: Electrical, Aerospace, Vehicle, and Hydraulics. The Electrical Sector is the biggest sector among the four. It offers a comprehensive portfolio of end-to-end electrical solutions including distribution, generation, and quality control equipment and full-scale engineering and support services. The product categories it offers include Automation and Control, Circuit Protection, Electrical Distribution, Residential Power Management, and Backup Power and Monitoring Systems. This particular case focused on the Customer Manufacturing Solutions Center (CMSC) of the Electrical Sector.



... View more student comments  
on GSCMI events at [gscmi.org](http://gscmi.org)

<b>Undergraduate</b>	<b>Student Participants</b>
Winner	Yidi Xu - Junior Yueyi Ma - Junior Malcolm Hooks - Senior
Runner Up	Riley Owens - Freshman Jay Petrie - Freshman John Riddell - Freshman Christine Rasquinha - Freshman
Best Presenter	Yueyi Ma

<b>Graduate</b>	<b>Student Participants</b>
Winner (Internal Round)	Tiffany Wendler - MSIA 2014 Lukas Brenner - MSIA 2014 Andrew Tye- MBA 2014 Patrick Haslanger - MSIA 2014
Runner Up (Internal Round)	Javier Arguello - MBA 2015 Jin Guo - MSF 2014 Raudel Medina - MBA 2015 Peter Jacobson - MBA 2015
Best Presenter (Internal Round)	Andrew Tye
Winner (Intercollege Round) Krannert School of Management	Tiffany Wendler - MSIA 2014 Lukas Brenner - MSIA 2014 Andrew Tye- MBA 2014 Patrick Haslanger - MSIA 2014
Runner Up (Intercollege Round) Olin Business School at Washington University in St. Louis	Austin Murray- MBA 2015 Chris Walling- MBA 2015 Mike Puno- MBA 2015 Priya Iyer- MSSCM 2014 Jacob Cantu- MSF 2014

## 2014 GSCMI-EATON Case Competition Winners.

# Thank you to our dedicated judge panel.

## **AAM**

Chad Cannaday

## **Amazon**

Mishtee Chatterjee

## **American Woodmark Corporation**

Mike Feighery

## **Amway**

Eric Schmidt

Angela Gauldin

## **ArcelorMittal**

Matt Dobin

Sharon Nichol

## **AT Kearney**

Debdeep Roy

## **ConAgra Foods**

Craig Andrews

## **Dow AgroSciences**

Joshua Merrill

## **Eaton (Sponsor Team)**

Allan Outlaw

Taylor Nations

Andrew Pierce

Kristina Redinbo

Kyle Young

Kai Kang

## **Evonik**

Bill Ensign

## **FedEx**

Kent Fleming

Lia Douglas

Scott Orr

Dave Pollard

Senator Hershman

## **IBM**

Allison McFadden

## **Southwest Airlines**

Pete McGlade



The Eaton logo, consisting of the word "EATON" in a bold, blue, sans-serif font. The letter "O" is stylized with a white dot in the center.

# 2014 TVS India Inter





# ernship



The TVS India Internship organized by the DCMME/GSCMI 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.



# 2014 TVS Projects

Project Title	Student Participants
Improving suppliers' schedules by improving resource utilization at TVS Motor Co. and its suppliers	Isra Gadri
Non-Consideration study on mopeds and recommendations for growth	Patrick Haslanger Lukas Brenner
Business analytics with dealership service data-insights into product quality	Venkata Mujje Yunyang Liu
Defining a predictable retail model at the area level	Zachari Tahiru Tiffany Wendler
Identifying possible disruptions and innovations in the market, and defining a futuristic portfolio for the 3W business.	Daisuke Yano Peter Jacobson
Measuring the employee productivity for existing task force states	Monique Kenney



This innovative & challenging global program is celebrating its eighth year of success with a total of 107 students having participated, represented by MBAs, MSHRMs, and engineering students. Work on this two 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 ten 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

"This experience exceeded my expectations in every way. I was pushed out of my comfort zone like never before. We received intimate exposure to TVS Motors and other businesses in India. Through my project, I was able to study and understand the dramatic political, economic, social, and technological changes India is undergoing as it develops. We were exposed to the richness and diversity of Indian culture through events and weekend travel to different parts of India. As a student, I can't think of a better way to gain international business experience—I worked in a different country for a company based outside of my own, on a project focused on foreign markets, alongside a partner from a different country. I can't think of a better way to visit India for the first time." **Peter Jacobson- MBA 2015**

<b>Project Objective</b>	
	To improve the component wise schedule to the suppliers to avoid high fluctuation affecting utilization of resources.
	To understand root causes for moped category performance & to arrive at solutions/ recommendations for enhancing performance on a sustainable basis.
	To analyze complaint information & predict the trend and be more proactive in correcting any complaints or failure before it becomes a major issue.
	To enable area managers to better predict & deliver their monthly retail volumes.
	To define at least 3 options of ladders to the sky for the 3W product portfolio for the next 5-10 years.
	To measure employee productivity for task force state.



homes as well as provide an evening of classical Indian music and dance. 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. Students also enjoyed dinner with Purdue alum Rohan Chandrashekhar; Rohan is the CEO of data-driven content marketing boutique BUZZVALVE, a columnist for the Wall Street Journal, and serves as the President of the Purdue Alumni Association in India.

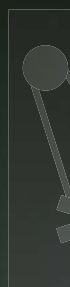
TVS selects their projects primarily based on meaningful work product. Part of the success of the program rests on the fact that students are aware that the consulting projects carry great importance to the firm, and if done well, they will likely become part of an adoption and implementation strategy. 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 & Supply Chain Management, Human Resources Management, and Sales, & Management Information Systems, naming just a few.

TVS is a Deming Prize winning two-wheeler manufacturing company producing motorcycles, scooters, and mopeds. TVS has been credited with many innovations in the Indian automobile industry, notable among them being the introduction of India's first two-seater moped. Krannert alumnus Venu Srinivasan (MSM '77) is the chairman and managing director of TVS Motor Company.

## **Who is TVS?**



# Student Engag



# Engagement Opportunities



## Student Focused.

DCMME & GSCMI strive to bring our students the best occasions to support their academic endeavors through a wide range of engagement opportunities including interaction with industry, international internships, academic programs, competitions and a variety of other events. Center events are academically enhancing and provide excellent venues for networking with faculty and industry executives.

### **We highly encourage our students to:**

- Join us in DCMME & GSCMI Conferences
- Participate in DCMME & GSCMI Student Competitions
- Become a volunteer for DCMME & GSCMI events
- Become a GSCMI Undergraduate Student Member
- Participate in company sponsored projects under the supervision of DCMME & GSCMI faculty
- Do research in Supply Chain and Operations under the guidance of DCMME & GSCMI faculty
- Become a graduate assistant for DCMME & GSCMI

### **Faculty Directed Student Projects:**

Every firm has that “job jar” of important projects that just never seem to reach peak priority for the limited resources available. These are exactly the projects that the DCMME-GSCMI Centers are interested in assisting you with.

#### **1. Warehouse Optimization Project, Caterpillar**

•*Student team: Yoshitake Tajima, Meng Zhang, Qi Zhang*

•*Faculty Advisor: Sang-Phil Kim*

Caterpillar Inc. is an American corporation which designs, manufacturers, markets and sells machinery and engines and sells financial products and insurance to customers via a worldwide dealer network. Caterpillar Inc. traces its origins to the 1925 merger of the Holt Manufacturing Company and the C. L. Best Tractor Company, creating a new entity: the California based Caterpillar Tractor Company. In 1986, the company re-organized itself as a Delaware corporation under the current name —Caterpillar Inc. Caterpillar Inc. is the world’s leading manufacturer of construction and mining equipment, diesel and natural gas engines, industrial gas turbines and diesel-electric locomotives. With more than US\$89 billion in assets, Caterpillar was ranked number one in its industry and number 44 overall in the 2009 Fortune 500.

The Caterpillar manufacturing plant in Lafayette, Indiana was opened in 1982, and has since become the company’s main source for medium-speed diesel engines for marine, petroleum, electric power, locomotive and industrial applications. Producing Caterpillar’s most well recognized and durable engines, the 3500 and 3600/C175 series engines, the Lafayette Engine Center now consists of 1.3 million square feet (123,000 square meters).

Caterpillar Inc. eliminated one of the three logistics buildings within Lafayette area a month ago. The current local logistics warehouse structure supporting production is made up of two logistics building called VMPE and 30th ST. This project developed an algorithm and process to evaluate the most cost efficient storage location and resulting local shuttle routes to maximize shuttle usage while supporting build needs. The team established a dynamic model for consolidating the production inventory into two of the warehouses, which includes three potential reallocation policies that could be selected in the light of changing demand.

#### **2. Inventory Optimization Project, Coleman Cable**

•*Student team: Linjie Wang, David Windmiller, Xiangyang Song*

•*Faculty Advisor: Sang-Phil Kim*

CCI is a leading manufacturer and innovator headquartered in Waukegan, IL which produces wire, cable and other electrical products, serving a multitude of channels and industries. CCI categorizes their broad assortment of products into 4 categories; Industrial, Electronic, Assembled and Copper Fabrication. Over the past 40 years, CCI has built the business through a series of strategic acquisitions and organic growth to ensure exceptional performance.

The scope of this engagement was to both optimize inventory levels and investigate changes in production quantities for Coleman Cable. The team's recommendations were presented in a PowerPoint presentation and Excel worksheets, and included suggestions for implementing a (Q, r) inventory control policy, focused on implementing reorder points and levels of safety stock in order to reduce lead time to the fabrication department's customer. These reorder points and levels of safety stock were suggested according to both normal and Poisson distribution models. Additionally, optimal production quantities (batch sizes) were proposed for 9 of CCI's products according to the Economic Order Quantity (EOQ) model.

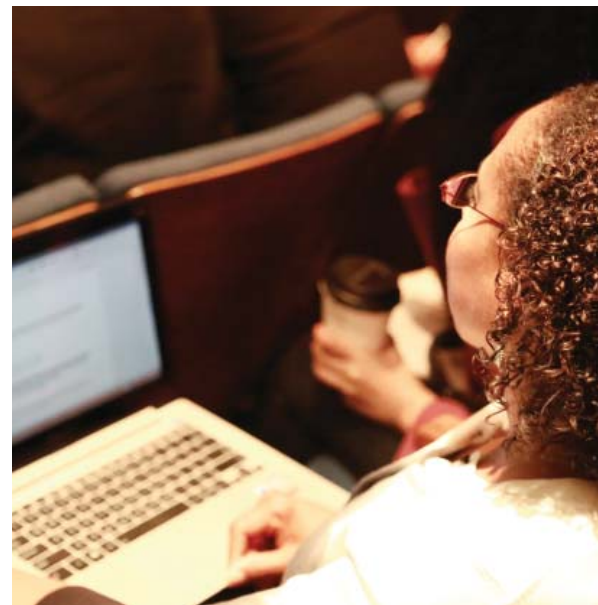
### **3. Supply Chain Improvement, Allegion**

•*Student team: Ji Lei, Pengyu (Peter) Zhai,*

*Meng-i (Nathan) Chou, Juan Jose Guerrero*

•*Faculty Advisor: Sang-Phil Kim*

Allegion, an international company, focuses on manufacturing security products and providing security solution for homes and business. It is made up of 27 global brands including CISA, Interflex, LCN, Schlage and Von Duprin. The \$2 billion company employs around 8000 people and sells products in more than 120 countries across the world. Confronted with the fact that market and product grow fast, it has become critical to consider how to continuously decrease cost. In this project, the team implemented a clustering algorithm to identify the opportunities to consolidate the screw packs. They also conducted make/buy analysis to seek opportunities to decrease cost.



If your company is interested in supplying a project to our students, please contact us at [gscmi@purdue.edu](mailto:gscmi@purdue.edu)

## Company Projects

## Volunteer Opportunities

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

- DCMME Fall Operations Conference
- GSCMI Spring Conference
- GSCMI Spring Case Competition

**To our many student volunteers**

Thank you.

**You make our events a success.**

## Student Clubs Supervised by Center Faculty

### 1. Operations & Supply Chain Organization (OSCO)

Mission: 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.

*President: Jessica Miller, mille955@purdue.edu*

*Senior VP: Nicholas Bafunno, nbafunno@purdue.edu*

*VP of Professional Activities: Kaila Flanagan, flanagak@purdue.edu*

*VP of Marketing: Edward Parchment, eparchme@purdue.edu*

*VP of Operations: Rajiv Samagon, rsamagon@purdue.edu*

*Finance: Eric Mirro, emirro@purdue.edu*

### 2. Krannert Operations Club (KOC)

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.

*President: Brandon Titelbaum, btitelba@purdue.edu*

*VP Events: Priyanka Govindraj, pgovindr@purdue.edu*

*VP APICS: Daniel Terayanont, dterayan@purdue.edu*

*VP Case Competitions: Peter Jacobson, jacobsop@purdue.edu*

*VP Communications: Dawn Edwards, edward98@purdue.edu*

*VP Internal Development: Isra Gadri, igadri@purdue.edu*





### 3. Krannert Asian Business Club

The club was formed to enhance Asian students' experiences at Krannert. It is intended to keep the members in touch with the business communities in Asia and the US. The club also assists the recruitment efforts through on- and off -campus events that are professional, educational, and cultural. The vision of the club is to build awareness of doing business in Asia among the student and alumni body.

*President: Xi Wen, wen41@purdue.edu*

*VP Professional Development: Yu Wen, wen47@purdue.edu*

*VP Finance: Kunat Chongcharoenpaisarn, kchongch@purdue.edu*

*VP Communications: Yizhu Xiao, xiao87@purdue.edu*

*VP Internal Development: Xiaoyang (Chelsea) Chen, chen625@purdue.edu*

*Faculty Advisor: Dr. Feng, annabellefeng@purdue.edu*

#### GSCMI Undergraduate Membership

The purpose of the GSCMI Undergraduate Membership is to recognize undergraduates who are excellent academically and demonstrate leadership through various experiences; GSCMI will provide those who are serious in pursuing a supply chain and operations career unique opportunities in their knowledge building and career development including the following:

- o Work on Supply Chain and Operations Projects supervised by faculty members
- o Participation in faculty directed undergraduate research projects
- o Exposure to GSCMI organized conferences and case competitions
- o Interaction with graduate students
- o Opportunity to have a graduate mentor

#### *Requirements:*

- o Interest in Supply Chain and Operations Management
- o Sophomore or above
- o Apply at gscmi.org

#### Center Graduate Assistants (2013-2014)

- Gustavo Amorim, MBA 2015--Graduate Assistant of the Year
- Xiaoyang Chen, MSGSCM 2014
- Mirant Desai, MBA 2014
- Peter Jacobson, MBA 2015
- Stephanie Kruse, MBA 2015
- Arjjodev Mukherjee, MBA 2014
- Dane Snyder, MBA 2015
- Surnaik Srivastava, MBA 2014--Graduate Assistant of the Year
- Andrejs Strateicuks, MBA 2014--Graduate Assistant of the Year
- Daniel Terayanont, MBA 2015
- Yesh Yalanahalli, MBA 2014

#### **Gustavo Amorim, MBA 2015 (Graduate Assistant of the Year 2014)**

Gustavo Amorim is a second year MBA student at Purdue University's Krannert School of Management with concentrations in operations, supply chain, and strategic management. Originally from Brazil, Gustavo moved to the United States to study at Brigham Young University, where he earned a bachelor's degree in Business Management. After his graduation from BYU, he worked for Novell in Information Technology.

Prior to coming to Purdue, he worked for 3 years in the Global Mining division of Caterpillar as a contract analyst in the service department. In this role, he prepared business proposals and performed financial analysis and profitability studies. His role at Caterpillar gave him experience with many different areas of the company adding versatility to his repertoire.



# Krannert Operations Club (KOC)

## 2013-2014 Activities and Events

The Krannert Operations Club offers its members plant visits throughout the year in order to learn about the operations of various companies in the surrounding area.

Plant visits for 2013-2014 included:  
Amazon, Caterpillar, ConAgra, FedEx, Subaru, & Sysco.

### TRIP HIGHLIGHTS

#### **Amazon Visit:**

The Operations Club members visited Amazon's Fulfillment Center IND1 at Indianapolis. Members observed how Amazon handles large volumes of inbound and outbound packages in their daily operations. Members discovered that Amazon is a living breathing unit that only works when all of the associates and management are working together. The stress on continuous improvement is exactly what makes Amazon the largest e-retailer in the United States.

#### **FedEx Visit:**

Club Members had the opportunity to visit the Indianapolis FedEx Hub to understand package sort operations. Students toured the 2 million square foot facility to see inbound packages unloaded from planes, moved systematically through miles of conveyor belts, and loaded back onto planes for the final destination.

#### **Sysco Visit:**

The Operations Club visited Sysco Foodservice's Indianapolis distribution centers during the second part of the City Trek. Sysco, which channels independent restaurants to larger chain accounts, operates with over 200 employees and services customers throughout Indiana and Midwest region. Participants of the trip learned about the sales, marketing, distribution, transportation and financial elements of the company. Students toured the grocery and refrigerated freezer buildings to experience the network of the shipping and receiving aspects of the daily operations.



## MIT Sloan 10th Annual Ops. Sim. Comp

**MIT Sloan's 10th Annual Operations Simulation Competition-- 250 Teams across the U.S. compete in this three day event....**

### **KOC Teams Placing in Top 50:**

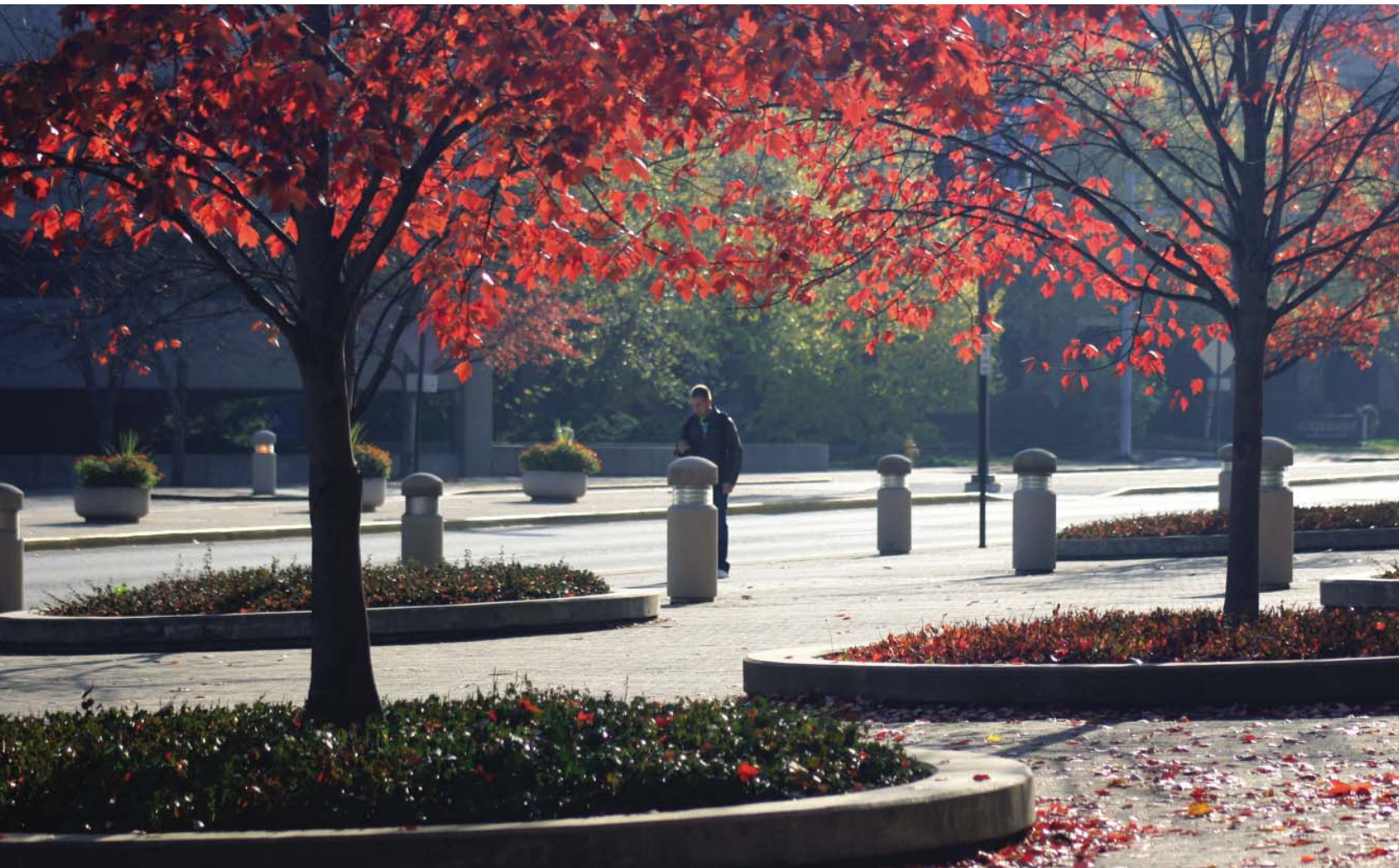
**Krannert team 1** – Egemen Gozoglu, Sudavee Nantavipavong, Harschal Samant, Naoto Utsumi

**Krannert team 2** – Thomas Grimes, Kian Hui Quek, Daniel Rowe, Andrejs Strateicuks

**Krannert team 3** – Edward K Addo-Chidie, Bayu Daryanto, Aurelia de Larrard, Yuji Sakakibara

### **Operations Club – Krannert Placed 1st in APICS Great Lake Case Competition:**

**Team 1 (1st place):** Bhoomika Chilakamarri, Kashif Khan, Shreyas Mehta, Daniel Rowe, Jing Zhao



## Operations & Supply Chain Organization (OSCO) 2013-2014 Activities and Events

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, & information sessions throughout the year in order to learn about the operations of various companies in the surrounding area.

### Guest Speakers:

#### **Brain Hudson-Purdue Alum (Class of 1990)**

A Lean Six Sigma Coordinator at Franciscan St. Elizabeth Health gave students a healthcare view of operations. Brain talked about his work with hospital staff on Lean Six Sigma training and improvement tools as well as leading a number of teams in improvement projects. Some of the teams have worked on improving charge capture, reducing time for heart attack patients to receive care, and the patient discharge process.

#### **Dr. Julie Kalish-**

Dr. Kalish, an Operations professor here at Purdue, talked about operations in various industries and the general concepts of operations and supply chain. She also provided a manufacturing simulation game that highlighted some of the objectives which operations management focuses on. Dr. Kalish has spoken with OSCO multiple times and always brings new insight to the students.

### Plant Tours:

#### **Frito-Lay:**

A guided tour through a Frito-Lay plant in Indiana that allowed students to see operations at work and ask questions to employees in the field.

#### **Information Sessions:**

Total Quality Logistics

Detroit Diesel

Hormel Foods

Con Agra Foods

#### **OSCO Leadership:**

President: Jessica Miller, mille955@purdue.edu

Senior VP: Nicholas Bafunno, nbafunno@purdue.edu

VP of Professional Activities: Kaila Flanagan,  
flanagak@purdue.edu

VP of Marketing: Edward Parchment,  
eparchme@purdue.edu

VP of Operations: Rajiv Samagon, rsamagon@purdue.edu

Finance: Eric Mirro, emirro@purdue.edu

... View further student  
information at [gscmi.org](http://gscmi.org)

# Academic Programs

2013-2014

## Krannert School of Management

### **GSCMI Center offers two certificates to our Master's Students.**

The Global Supply Chain Management (GSCM) option allows students to learn how the network of suppliers, manufacturing facilities, distribution centers and customers located around the world work together to ensure that the right product arrives at the right place at the right time for the right price. The Center granted 43 certificates in 2014.

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 28 certificates in 2014.

### **Master of Science in Global Supply Chain Management Program Highlights**

- 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) brings unique global perspective and experience to the students.
- Faculty directed summer internship/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 United States.

### **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 Operation 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 to be leaders 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, & 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.

# GSCMI Scholarships

## 2013-2014

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.

**A special thanks to all who contribute to scholarship funding for our DCMME/GSCMI students.**

### **Caterpillar GSCMI Scholarship**

**Linnea Cline  
Kimberly Obergfell  
Michael Samm  
John Riddell**



### **Ensign-Bickford Scholarship**

**Ethan Gilmer  
Audrey Pierick**



### **John Deere GSCMI Scholarship**

**Trevor DeWitt**



### **Joseph Turk DCMME Scholarship**

**Nicole Nulf**

**JOSEPH TURK  
SCHOLARSHIP**



Recognition: a top ranked program  
The Krannert Operations Management option has been recognized for its excellence by national publications that ranks such programs/specialty areas. 2014 US News and World Report ranked our operations MBA and Undergraduate options #7 and #3;

**Top Ranked.**

# Industry Engagem





# ment Opportunities



Dedicated industry partnerships are at the heart of success for the DCMME- 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 Centers could not be accomplished without you.

Thank you.

# Interested in partnering with us?

## •Global Supply Chain Master's Program Fellowship

This is an exclusive offer to our Executive Partners. The Center provides \$15,000 tuition scholarship to a qualified employee from your company, who enters the nine-month Master's Degree Program in Global Supply Chain Management at Krannert.

## •Faculty-Directed Student Projects and Internship

As an Executive or Premier Partner, you can bring us the problems you have in your organization. Our faculty will carefully scope out the projects, select the interested students with the right skills and closely guide them toward tangible deliverables to your organization. This is a great opportunity to interact and work with our talented students who could be your potential future employees.

## •Case Studies & Case Competitions

You may want to tell about your new initiatives in your organization, and our faculty will put together a case study for student case competitions. Or, you may simply sponsor a student case competition and provide a named prize for the winners.

# Here are some benefits to consider...



To become a Partner, choose a funding level appropriate for your organization.

**Executive Partners provide annual funding at the level of \$40,000 or more.**

**Premier Partners provide annual funding at the level of \$25,000 or more.**

**Corporate Partners provide annual funding at the level of \$15,000 or more.**

## Partnership.

## •Named Scholarships

Give a scholarship to our elite students with your company name- your encouragement to our students will always be remembered by the students and by Krannert.

## •Executive Short Courses & In-House Training

Send your employees to get customized training that meets the need for the business growth. Krannert offers world renowned teachers in supply chain, logistics and operations management.

## •Resume Scrapes

We have students that have identified themselves as operations oriented. We can get you these resumes sooner to improve your chances for recruiting.



Center Partners and Event Sponsors:



**Thank you.**

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# Faculty Involvement





## Faculty Directed.

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

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### **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 he spent 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, 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. Current research focuses on technology diffusion and the competitive choices of standards selection by incumbents and potential disruptors as well as corporate governance in acquisitions. He has published in Management Science, Strategic Management Journal, Academy of Management Journal, Organization Science, Production and Operations Management, Journal of Operations

# Faculty Bios

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Management, Journal of Economic Behavior and Organization, Managerial and Decision Economics and Explorations in Economic History. He is an active member of the Academy of Management and the Strategic Management Society. He has done consulting and teaching for such firms as IBM, Dow Corning, Pioneer Hi-Bred, Navistar International, the American Animal Hospital Association and American Axle Manufacturing. He is also on the Board of Directors of Mackey Bancorp.

## **Suresh Chand**

Professor Chand is the Professor, Louis A. Weil Jr. Chair of Management and Associate Dean of Graduate Studies. He teaches Operations Management. His current research interests include 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 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 to 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 Associate Director of DCMME (Dauch Center for the Management of Manufacturing Enterprises) & GSCMI (the Global Supply Chain Management Initiative) and 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 has 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 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 analysis of supply chains including the impact 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/ 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. Earlier he has taught undergraduate required course as well as a database course. Prior to joining Purdue, he obtained his PhD in information systems, 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, he worked with Infosys Technologies for a couple of years.

### **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 will be teaching 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 & 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 the editorial boards of the *Asia-Pacific Journal of Operations Research*, *IEEE Transactions on Automation Sciences and Engineering*, *IIE Transactions*, *International Journal of Flexible Management Systems*, *Journal of Discrete Event Dynamic Systems*, *Journal of the Production and Operations Management Society*, *Operations Research*, *Operations Research Letters*, *OPSEARCH*, *Probability in the Engineering and Information Sciences*, and *Queueing Systems: Theory and Applications*. Professor Shanthikumar has extensively

consulted for various companies, including Applied Materials (AMAT), Bellcore, IBM, KLA-Tencor, NTT (Japan), Intel, Intermolecular, ReelSolar, Safeway, and Southern Pacific. Through KLA-Tencor, he has worked on joint development projects for Advanced Micro Devices, IBM, Intel, LSI, Motorola, Texas Instruments, Toshiba, Fujitsu, Taiwan Semiconductor Manufacturing Company, and UMC.

### **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.



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& Global Supply Chain Management Initiative

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