

THE CENTER FOR VALUE CHAIN RESEARCH





▶ With the global economy in a constant state of change, industry professionals need to know their value chain options.

They get that here at Lehigh.



There are very few value chain research centers in higher education that successfully bridge the disciplines of engineering and business. That's not the case at Lehigh, where our Center for Value Chain Research (CVCR) has distinguished itself as an integrated, cross-disciplinary hub of activity. As Lehigh University continues to place significant emphasis on globalization, we are uniquely positioned to become a valuable resource for worldwide supply chain practitioners. Here's why.

01 A national business and engineering reputation. The CVCR distinguishes itself from many other supply chain research centers because of our ability to transparently integrate business with engineering. Lehigh is a relatively small university with a powerful research infrastructure, and boasts a vibrant academic culture. It's a highly collaborative approach to education and research—an approach that works well in the study of the global value chain. The marriage of business and engineering brings together two of Lehigh's traditional strengths—two academic programs consistently ranked among the nation's most elite by *Bloomberg BusinessWeek* and *U.S. News & World Report*. Lehigh's supply chain program has itself been named among the country's best by AMR Research and *Inbound Logistics*.

02 Research to practice. Lehigh offers access to notable scholars and researchers who are widely recognized throughout the industry. In the past few years, faculty associated with the CVCR have

regularly been cited in such leading publications as the *Wall Street Journal*, *The Economist*, *Industry Week*, *Inbound Logistics*, *Supply Chain Quarterly* and *Supply Chain Management Review*. That visibility is due to our faculty's experience in industry and firsthand appreciation for the day-to-day challenges faced by supply chain managers. Not only do we develop new knowledge, but we work with our corporate partners to help transition our research into practice—actual solutions that improve their work processes.

03 A strong academic foundation. The hallmark of a Lehigh education is the real-world experience our students earn before they graduate. Our supply chain students at both the undergraduate and graduate levels are well-rounded, with an academic foundation that allows them to become strong supply chain practitioners. The CVCR is critical in this endeavor, and our students' success is a long-term mission that we—and the center's partners—take seriously.



› THE CVCR TEAM

The management of the CVCR includes co-directors Robert Trent, the George N. Beckwith '32 Professor (left), and Larry Snyder, associate professor of industrial and systems engineering (center). Joel Sutherland, board chair of the Council of Supply Chain Management Professionals, is the center's managing director (right).



IN THE KNOW

Launched in 2002, the Center for Value Chain Research has grown substantially in both size and reputation. Consisting of faculty from Lehigh's College of Business and Economics and the P.C. Rossin College of Engineering and Applied Science, the center boasts more than 25 faculty members who work collaboratively on joint research projects—as well as an impressive cast of supply chain alumni who have used their education to launch successful careers in the field. Here are a few.

Oliver Yao
E-Commerce

Yao, the C. Scott Hartz '68 Assistant Professor at Lehigh, is the recipient of the prestigious E. Grovesnor Plowman Award from the Supply Chain Management Educators Conference. His work in information systems and network technology has won accolades from his peers. "Few programs in the United States offer such an intense partnership between academia and industry. It's one of the reasons I chose to teach here at Lehigh."

S. David Wu
Demand Planning

Iacocca Professor and Dean of the P.C. Rossin College of Engineering and Applied Science, Wu's expertise includes forecasting and demand analysis for high-tech industries. A CVCR project on capacity planning for the semiconductor industry, which spanned research with Agere and, later, Intel Corporation, was selected as a 2009 finalist for the INFORMS Wagner Prize.

Nada Sanders
Forecasting

One of the most highly regarded academics in the area of business forecasting sector, Sanders, the Lee A. Iacocca chair, was invited to participate in the Gordon Cook Conversations at Windsor Castle, a worldwide gathering of social and business visionaries charged with developing strategies that will positively impact the coming decade. "I'm new to Lehigh, but I'm not surprised by its growing stature among the supply chain field. The joint program at the center is in the top I've come across."

Robert Storer
Adaptive Scheduling

An expert on manufacturing logistics, Storer is a professor of industrial and systems engineering and the co-director of Lehigh's competitive Integrated Business and Engineering Honors Program. He's been awarded multiple research grants from agencies like the National Science Foundation, the NATO Collaborative Research Grants Programme, and Ben Franklin Technologies Partners for value chain research.

Matt Lisk '05
Boeing Satellite

As an undergraduate, Lisk connected with Boeing through CVCR while pursuing research linking internal performance measures to customer satisfaction. Impressed with his work, Boeing offered Lisk a job and, today, he's an integrated materials and information management program manager. "Lehigh had the best business school, and I knew I wanted to pursue this career course," says Lisk. "No other college could have provided me with those opportunities."

Peter Ruggiero '03G
Crayola

As the executive vice president of global operations at Crayola, Ruggiero has helped steer the company's global expansion. He's helped get newer and innovative products to markets quickly and efficiently, stemming the possible impacts of the global economic downturn. "The point I continually make when I talk to incoming students is that the M.B.A. program at Lehigh is very pragmatic," he says. "I consistently found that the [supply chain] concepts I learned in the classroom were immediately applicable in my business career."



› **SUSAN A. SHERER**,
the William R. Kenan, Jr.
Professor and Chair,
Department of Management

Sherer cofounded the Center for Value Chain Research in 2002 along with Dean David Wu (opposite) to bring a unique and multidisciplinary approach to supply chain research. She was instrumental in the development of Lehigh's information systems programs and is the author of Software Failure Risk: Measurement and Management. A former Fulbright Scholar whose research interests include managing IS system risks and inter-organizational IS, Sherer managed projects for several manufacturing companies including Leeds & Northrup Company and Union Carbide Corporation.

MEMBER BENEFITS



Guided by an advisory committee established in 2009, the Center for Value Chain Research blends the scholarship of academia with the practical problem-solving experiences of industry. This integrated and collaborative partnership allows for a highly diverse community of practitioners who are able to interact with the center in a variety of ways. Here's a snapshot of what we offer.

AREAS OF EXPERTISE

- Inventory optimization and management
- Facility location & network design
- Pricing & revenue management
- Supply chain coordination and collaboration
- Vehicle routing
- General-purpose mathematical optimization
- Lean manufacturing and distribution
- Collaborative transportation
- Scheduling
- Supply chain risk management
- Information system risk
- Information systems payoff
- Business forecasting
- Demand planning
- Electronic commerce
- Inter-organizational information systems
- Role of logistics in SCM
- Buyer-supplier collaboration
- Supply management future scenarios
- Health care information systems
- Predictors of supply chain effectiveness

01 Customized partnerships.

Today's companies are faced with different challenges unique to their own corporate culture, market, and infrastructure. Lehigh works closely with member companies to identify bottlenecks, and can tailor research projects and studies to resolve complicated supply chain issues. For Just Born, it was a network optimization problem (see opposite page). For Air Products, we planned production and inventory strategies that are robust to electrical power interruptions. We have collaborated with companies such as Hershey Corporation, IBM, and Agere/LSI. The results of these in-depth studies and partnerships are shared at our symposia and with the center's community online.

02 A hub of research.

The center serves as a valuable repository of research related to global trends in supply chain management. Since 2005, we've partnered with our industry counterparts to develop dozens of white papers, all of which are available to our members online. Many of those papers sparked ideas for our popular symposia, a semiannual series of gatherings in which over 90 companies exchange ideas and discuss best practices with Lehigh University faculty and students. Featured presenters include

executives from such international companies as Kraft Foods, Colgate-Palmolive, Crayola, Hewlett Packard, Merck, and Volvo.

03 Funding opportunities.

Lehigh and the CVCR have taken a leadership role in offering help to secure research grants from state and national funding agencies. We have a strong relationship with PITA—the Pennsylvania Infrastructure Technology Alliance—and are well-positioned to help researchers seek funding opportunities from such agencies as the National Science Foundation and its GOALI (Grant Opportunities for Academic Liaison with Industry) program.

04 An established network.

The CVCR issues its newsletter to thousands of supply chain professionals, industry insiders, academics, and members of the media from more than 70 countries three times every year. While we report on developments here at Lehigh, we also feature guest contributions from our membership and colleagues around the world. That network meets not only at our semiannual symposia, but also in executive roundtable sessions, professional development seminars, and customized on-site workshops led by Lehigh faculty members.



> A SWEET DEAL
Just Born's Alan Sargent, director of logistics (left), and Executive Vice President and COO Matt Petronio

A partnership between Just Born, Inc. and the CVCR has led to significant cost savings for the candy manufacturer, thanks to a new model for network optimization jointly developed by Larry Snyder, co-director of the CVCR, and Just Born's supply chain management team, led by Alan Sargent. The model proposed shifting the balance between direct and less-than-truckload (LTL) customers and eliminating six regional distribution centers, ultimately saving 2% of the company's overall logistics costs.

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*For more information on CVCR activities and benefits,
please visit our website at www.lehigh.edu/CVCR.*

