

BUILDING RESILIENT SUPPLY CHAINS



UNIVERSITY OF PITTSBURGH

2022 PITT OHIO SUPPLY CHAIN MANAGEMENT SYMPOSIUM

MARCH 24 & 25, 2022

Pitt Business | Center for
Supply Chain Management

PITT OHIO
SUPPLY CHAIN • GROUND • LTL • TL

DIRECTOR'S MESSAGE

I am honored to welcome you to the **2022 PITT OHIO Supply Chain Management Symposium** scheduled for March 25th with additional activities on March 24th. We are grateful to PITT OHIO for being a naming sponsor for the 6th Annual Symposium organized by the Center for Supply Chain Management.



Our Symposium is hybrid this year with both in-person and virtual events. The theme this year is “Building Resilient Supply Chains.” Resilience permits a supply chain to not only continue operations when faced with unexpected shocks but to also recover quickly if operations do get adversely affected. Building resilient supply chains has been a principal strategic objective of CSCOs worldwide for decades. Yet, more needs to be done. While previous events such as tsunamis, earthquakes, volcanic eruptions, and longshoremen’s strikes have disrupted supply chains in the past, never has the importance of resilience been spotlighted more vividly than it was in the past two years due to reasons led by Covid-19 and exacerbated by other independent events. Resilience can be enhanced, for example, by real-time sensing technologies and AI/ML analytics, shortening supply chains through reshoring, reengineering supply chains through distribution center location and inventory decisions, and proactive management of global challenges. In our 2022 Symposium, global supply chain leaders at leading companies will discuss how they are using these and other approaches to transform supply chains for improved resilience.

Our main event will be held virtually on Friday, March 25th, when our speakers, who have invaluable experience managing supply chains at global companies will present their views and lead discussions about supply chain resiliency. Our lineup this year includes: **Ivanka Janssen from Philips, Arkajit Rakshit from Amazon, Ashwin Rao from Wayfair, Hans Thalbauer from Google Cloud, and Lynn Torrel from Flex.** We are delighted that **Paul Page, editor of the Logistics Report at The Wall Street Journal** will moderate the Symposium again this year and share his insights. **Sandy Turko, Senior Manager and Enterprise PMO, Argo AI** and **Lisa Scales, CEO of the Greater Pittsburgh Community Food Bank** will introduce the speakers. In a special session, Lisa will provide an update about the progress made and the challenges at the Food Bank.

We are excited that we will hold our first in-person event in more than two years. On Thursday, March 24th, we will have a networking event, happy hour and light dinner. In keeping with past tradition, we have planned a student poster competition during the event—like last year, we will have students from regional colleges in addition to Pitt participating in the competition. My heartfelt gratitude goes out to our speakers, event presiders, and poster competition judges for volunteering their time with us at our Symposium.

Our Annual Symposium is our marquee event and is integral to the Center’s mission. By facilitating an exciting congregation of industry leaders and the academic community, we create an environment conducive to networking and knowledge sharing.

Beyond the Symposium, we invite you to participate in the Center’s many activities. Our Breakfast Speaker Series hosts industry experts who address contemporary supply chain issues during a morning of food and fellowship. As the pandemic wanes, we will restart this in-person series. Our virtual discussion series, Fast Focus Forums, examines COVID-19 related supply chain challenges for regional companies. Our case competitions, judged by industry leaders, provide students with hands-on experience in real-world issues. We would be honored if your organization would sponsor the Center. For more information, please speak with me or contact the Center at scmcenter@katz.pitt.edu.

I offer my sincere thanks to all our sponsors for making the Center’s activities possible. Special thanks go to **PITT OHIO** for becoming our first Platinum sponsor. We also welcome **Citizens Bank, Highmark** and **PNC Bank** as new sponsors. We are grateful for the generous patronage of our continuing annual sponsors: **ARMADA, FedEx Ground, Giant Eagle, Honeywell, MSA, and UPMC, and UPS.** Many thanks to our student poster competition sponsor, **Traffic Club of Pittsburgh**; our preferred-level sponsor **Catalyst Connection**; and our signature-level sponsor **Pitt Business/Business Analytics & Operations Area.** My deepest gratitude goes to **Jay Kent, Managing Director of SLB Performance** for successfully chairing the Center’s new Fundraising Committee. Your help to the Center is truly appreciated! I am especially grateful to **GENCO** and its **Executive Chairman, Herb Shear**, for providing the seed funding to establish our Center.

Finally, I would like to express my gratitude to my colleagues at the Center—Associate Director and Clinical Associate Professor **Eric Paljug** and Program Manager **Janice Trygar**—as well as the members of our Breakfast Speaker Series Planning Committee and Corporate Advisory Board. Many of them are attending the Symposium and supporting the related activities in various ways. A special thank you to **Ash Brady**, Applications Support Lead at Katz Graduate School of Business. I deeply appreciate their support, and contribution to the planning, coordination, and execution of the Symposium.

I am glad that we have been able to transition to a hybrid event this year, giving us a chance to meet in person on Thursday, and virtually on Friday. I hope the Symposium proves to be a rewarding and enjoyable experience.

EVENT SCHEDULE

Thursday, March 24, 2022

5:00 – 5:15 p.m.	Check-in and Networking
5:15 – 5:20 p.m.	Welcome by <i>Prakash Mirchandani</i>
5:20 – 6:00 pm.	Networking Continues
6:00 – 6:30 p.m.	Visit Poster Presenters - all attendees
5:30 – 6:00 p.m.	Poster Competition - time for judges to evaluate
6:00 – 6:30 p.m.	Judge Deliberation
6:30 – 6:45 p.m.	Awards Presentation
6:45 – 7:25 p.m.	Light Dinner and Networking
7:25 – 7:30 p.m.	Wrap Up

Friday, March 25, 2022

8:00 – 8:35 a.m	Check In, Coffee, and Networking
8:35 – 8:40 a.m.	Welcome by <i>Prakash Mirchandani</i>
8:40 – 8:45 a.m.	<i>Dean Arjang A. Assad</i> Remarks
8:45 – 8:50 a.m.	Remarks by <i>Geoff Muessig</i> , representing our event naming sponsor, PITT OHIO
8:50 – 8:55 a.m.	Speaker Introduction by <i>Sandra Turko</i>
8:55 – 9:27 a.m.	Artificial Intelligence Methods to Increase Supply Chain Resiliency Talk by <i>Ashwin Rao</i>
9:27 – 9:37 a.m.	Q&A
9:40 – 10:12 a.m.	Amazon Transportation's Response to Global Supply Chain Constraints Talk by <i>Arkajit Rakshit</i>
10:12 – 10:22 a.m.	Q&A
10:22 – 10:45 a.m.	Coffee and Networking (Theme Rooms)
10:45 – 10:50 a.m.	Post-break Speaker Introductions by <i>Lisa Scales</i>
10:50 – 11:22 a.m.	Building Resilient Supply Chains: Lessons for the Future Talk by <i>Lynn Torrel</i>
11:22 – 11:32 a.m.	Q&A
11:35 a.m. – 12:07 p.m.	The Four Pillars of a Digital Supply Chain Talk by <i>Hans Thalbauer</i>
12:07 – 12:17 p.m.	Q&A
12:20 – 12:52 p.m.	Building Resiliency Through Innovation Talk by <i>Ivanka Janssen</i>
12:52 – 1:02 p.m.	Q&A
1:02 – 1:17 p.m.	A Conversation with <i>Lisa Scales</i> led by <i>Paul Page</i>
1:17 – 1:45 p.m.	Networking with speakers and board members/Wrap-up
1:45 p.m.	Thank You Message (Networking Continues)

SPEAKERS



IVANKA JANSSEN | CHIEF SUPPLY CHAIN OFFICER, EVP | PHILIPS

As Chief Supply Chain Officer at Philips, [Ivanka Janssen](#) is responsible for all end-to-end supply chain activities across the full Philips product portfolio. She is passionate about transforming supply chains into high performing customer centric ecosystems, digitally driven, respecting the planet we live on. In her eyes an essential ingredient for success is working with diverse teams that embrace an inclusive mindset and have an eagerness to learn and grow. Ivanka has a degree in Business Economics and an MBA of Rochester University, New York. She is a seasoned Supply Chain and Operations leader, who gained extensive experience over her 20+ year career, starting in Customer Services where her conviction of the impact supply chain can have on customer satisfaction begun. At companies like Diageo PLC she held roles such as Managing Director Global Supply Chain and Global Director Sales Operations Excellence. Before joining Philips she was Vice President Supply Chain for the Europe, Eastern Europe & Sub Saharan Africa region at Pepsico. Her career has brought her across the globe allowing her to be inspired by a diversity of people and cultures. Being a fierce advocate of seeing more women working in the field of supply chain, she is one of the founders of a Supply Chain Women network.



ARKAJIT RAKSHIT | DIRECTOR, SUPPLY CHAIN | AMAZON

[Arkajit Rakshit](#) (Arko) is a Regional Director in Amazon, who leads the Supply Chain organization for North America Amazon Logistics (AMZL), Amazon's last mile delivery solution. Arko joined Amazon in 2011 as an Operations Manager where he worked in frontline leadership roles in various fulfillment centers. He led large teams of hourly workforce and operation managers. He has launched several fulfillment centers managing inbound, outbound logistics while being responsible for safety, quality, variable and fixed cost performance of these fulfillment centers. In 2018, Arko took over the leadership of the first mile supply chain organization. He managed Inbound supply chain, long and short-term S&OP and labor planning for the entire first mile fulfillment network in North America. Over the past three years Arko has spent time in planning and growing Amazon North America's outbound transportation network including the middle mile and last mile. In his current role he is responsible for network design, short and long-term demand, and capacity planning for AMZL.



ASHWIN RAO | CHIEF SCIENCE OFFICER | WAYFAIR; ADJ. PROFESSOR | STANFORD UNIVERSITY

[Ashwin Rao](#) is the Chief Science Officer at Wayfair, where he and his team work on problems involving Demand Forecasting, Supply-Chain Optimization, Dynamic Pricing, Recommendation Systems, Search, and Marketing Science. Ashwin is also an Adjunct Professor in Applied Mathematics at Stanford University, leading Stanford's Mathematical and Computational Finance Program. Prior to joining Wayfair, Ashwin was the Vice President of Artificial Intelligence at Target. Previously, Ashwin had a 14-year-long career on Wall Street—he was a Trading Strategist at Goldman Sachs in the area of Interest Rate and Mortgage Derivatives and was subsequently a Managing Director of Market Modeling at Morgan Stanley. Ashwin was the founder and CEO of Zlemma, a startup (later acquired by Hired) that focused on precise talent and job matching. Ashwin's current research and teaching is in AI for Adaptive Decisioning under Uncertainty, with focus on Reinforcement Learning algorithms. Ashwin holds a B.Tech. in Computer Science from IIT-Bombay and a Ph.D. in Computer Science from University of Southern California.



HANS THALBAUER | MANAGING DIRECTOR, GLOBAL SUPPLY CHAIN & LOGISTICS INDUSTRY | GOOGLE CLOUD

[Hans Thalbauer](#) is the Managing Director, Supply Chain & Logistics Industry Solutions. He joined Google Cloud in August 2020 and is responsible for the vision, mission, and strategy for global supply chain and logistics business solutions across all industries. Hans is a recognized supply chain industry veteran with more than 20 years of experience in solution management and sales functions. He was the senior vice president for digital supply chain management solutions at SAP. Hans was also the global leader at SAP for Industry 4.0 and supply chain sustainability initiatives. Hans is working closely with Google Cloud's supply chain and logistics customers globally to help them solve their most pressing business problems through the power of cloud. Hans is based in California.



LYNN TORREL | CHIEF PROCUREMENT & SUPPLY CHAIN OFFICER | FLEX

[Lynn Torrel](#) is Chief Procurement and Supply Chain Officer at Flex, a global diversified manufacturer that helps a diverse customer base design and build products that improve the world. Through the collective strength of a global workforce across 30 countries and responsible, sustainable operations, Flex delivers technology innovation, supply chain, and manufacturing solutions to numerous industries and end markets. In her role at Flex, Torrel is responsible for direct and indirect materials, transportation and logistics, business operations, materials management, and strategic supply chain management. Prior to joining Flex in September 2019, Torrel held several leadership roles at Avnet spanning global supply chain solutions, strategic accounts, and semiconductor business development, among others. She holds a bachelor's degree from the University of Minnesota-Duluth and an MBA from Arizona State University.

EVENT PRESIDERS



PAUL PAGE | EDITOR, LOGISTICS REPORT | THE WALL STREET JOURNAL

[Paul Page](#) is editor of *The Wall Street Journal's* Logistics Report, the Journal's dedicated site for all things supply chain and logistics that he helped launch in 2015. He came to the Journal from Congressional Quarterly, where was economic policy editor from 2012 to 2015. He has had a long career in logistics reporting, including nearly 20 years at The Journal of Commerce, where he was editorial director from 2009 to 2012. Paul is an innovative, agile journalist who has led publishing operations in new strategic directions, developed and implemented new editorial models to meet changing market demands and organized, trained and molded staffs at various operations to bring high-quality business writing to high-level readership in a dynamic publishing environment. Paul holds a BA in Communications and Literature from American University.



LISA SCALES | PRESIDENT AND CEO | GREATER PITTSBURGH COMMUNITY FOOD BANK

[Lisa Scales](#) has been President and CEO of Greater Pittsburgh Community Food Bank since 2012, leading the organization in distributing food for nearly 45 million meals annually through a network of 850 community partners in 11 counties of southwestern Pennsylvania. She holds a Juris Doctor (J.D.) degree from Boston University School of Law and Bachelor of Arts degree in Social Sciences from Seton Hill University, from which she received the 2019 Distinguished Alumna Leadership Award. Scales serves on the Board of Directors of Adagio Health and is an advisory board member of the Center for Supply Chain Management at the University of Pittsburgh, the Centers for Community Engagement at Robert Morris University and the University of Pittsburgh Johnson Institute for Responsible Leadership. Additionally, Scales is a member of the University of Pittsburgh Institute of Politics Board of Fellows. She currently serves as Chair of Feeding Pennsylvania, a statewide association of Feeding America food banks. In 2018 Scales was the recipient of the Greater Pittsburgh ATHENA Award; in 2020 she received Duquesne University's Eileen Zungolo Spirit of Service Award; in January 2021 Pittsburgh Magazine named Scales as Pittsburgher of the Year; in December 2021 she received the Coleman Award for Excellence in Community Service from the University of Pittsburgh Institute of Politics; and in February 2022 was included in the Pittsburgh Business Times Power 100 list of most influential business leaders.



SANDRA TURKO | SR. MANAGER, ENTERPRISE PMO | ARGO AI

[Sandra Turko](#) is an accomplished supply chain and IT professional. Her 20+ year experience spans a broad range of supply chain, IT and sales functions across technology, utility, manufacturing, and healthcare industries. Sandra currently leads the advancement of Argo AI's Enterprise Project Management Office (PMO), Business Systems and IT Process Management at Argo AI. She is accountable for leading cross-functional teams to define and effectively implement innovative systems and processes to build out world class information technology solutions for a growing organization. Prior experience also includes working closely with the CIO and CFO to evaluate IT Contracts/Services and transfer of assets for a \$200+ Million USD divestiture. She actively volunteers for youth sports programs, local charities and serves as the EMBA Ambassador supporting recruitment events for the Katz EMBA Program. Sandra earned her B.A in Philosophy/Pre-Law from St. Bonaventure University and an MBA from the University of Pittsburgh Katz Graduate School of Business.

ABSTRACTS

FRIDAY, MARCH 25, 2022

BUILDING RESILIENCY THROUGH INNOVATION | IVANKA JANSSEN

All industries were impacted by COVID-19, but none more so than the healthcare industry. As a result, supply chain innovations in the healthcare industry that were already occurring continue to be adapted and adopted in an accelerated fashion. In this talk, Ivanka Janssen, the Chief Supply Chain Officer of Philips and responsible for all supply chain activities across the enterprise, will discuss how Philips is constantly innovating to provide value at all stages of a customer's healthcare needs. Her talk will focus on the supply chain trends, and the many challenges that global supply chains face. She will discuss strategies that can be used to improve supply chain resiliency despite these challenges and will end her talk by sharing a few words on the bright future of supply chain management.

AMAZON TRANSPORTATION'S RESPONSE TO GLOBAL SUPPLY CHAIN CONSTRAINTS | ARKAJIT RAKSHIT

The COVID-19 pandemic imposed constraints on global supply chains and impacted almost every industry including retail. Consumers encountered high out-of-stock items, exceptionally long lead times, inordinate shipping delays and higher prices. While being a lifeline for many of us during the pandemic, Amazon had to manage several supply chain challenges. In this presentation, Arkajit Rakshit, Director, Supply Chain at Amazon, will discuss how inventory constraints, manufacturing delays and labor shortages shaped Amazon's fulfillment strategy and how adding flexibility to the transportation network enabled it to continue providing elevated shipping speed and higher delivery accuracy. He will structure his talk around three specific timelines: (i) pre-COVID (baseline), (ii) post-COVID-2020 (high demand), and (iii) post-COVID-2021 (supply constraints). He will discuss how Amazon's outbound transportation strategy had to be changed over the last two years to be resilient to evolving supply chain ecosystems.

ARTIFICIAL INTELLIGENCE METHODS TO INCREASE SUPPLY CHAIN RESILIENCY | ASHWIN RAO

Artificial Intelligence (AI) is affecting all aspects of our personal lives. In this talk, Ashwin Rao, Chief Science Officer at Wayfair, will provide an overview of how AI techniques involving Forecasting and Optimization can be used to automate decision-making for complex Supply-Chains. Ashwin will start with the core problem of Customer Demand Forecasting that can be solved quite effectively with modern deep learning methods like Transformers. These demand forecasts help build stochastic simulations of the supply chain that enable supply chain planning for network configurations, inventory optimization, delivery frequency, case-pack sizing, labor scheduling etc. Lastly, Ashwin will introduce the innovative and powerful of Reinforcement Learning methods, that when combined with Demand Forecasting, can be used to optimize inventory movements across the supply chain, managing supply and network constraints, and yet ensuring high availability of products to customers.

THE FOUR PILLARS OF A DIGITAL SUPPLY CHAIN | HANS THALBAUER

From semiconductor chip shortages to congestion at ports, supply chain disruptions have paralyzed the global economy. These challenges have highlighted structural deficiencies in our supply chain networks that increase the risks of meeting customer demand. Hans Thalbauer, Managing Director, Supply Chain & Logistics Industry at Google Cloud will discuss four pillars needed for digital supply chains that provide the end-to-end visibility, sustainability, and resilience to anticipate and mitigate these risks. Using examples from various industries, Hans will identify organizational capabilities needed for building these foundational pillars and discuss the benefits and opportunities that can be unearthed as a consequence.

BUILDING RESILIENT SUPPLY CHAINS: LESSONS FOR THE FUTURE | LYNN TORREL

The past 2+ years has been a perfect storm for supply chains with trade wars, Covid-19, digitalization, and unbalanced global logistics. These developments have amplified the importance of resiliency and highlighted the need for a fundamental change in the industry. Lynn Torrel, the Chief Procurement and Supply Chain Officer at Flex, will discuss how the company has built resiliency for one of the world's largest and most complex supply chains that has 1000 customers, 16,000 suppliers and spans more than 30 countries. Optimal network design coupled with real-time data usage to develop foresight and proactive decision making, partnering with suppliers, etc., has enabled Flex to weather this storm. Lynn will also discuss lessons for the future learned during these challenging times.

STUDENT POSTER COMPETITION

- Event Sponsor: Traffic Club of Pittsburgh -

Graduate and undergraduate students from local universities were able to explore their areas of interest in supply chain management through the poster session.

GRADUATE DIVISION FINALISTS	
Team	Poster Title
Ei Zar Li Aung Nabila (Bella) Hamzah Aditi Ravi Shetty	Optimizing Food Waste Process at University Dining Hall with Six Sigma Strategies
Tashefine Bouggar Leslie Keegan Andrew Tarbet	Reducing Carbon Footprints with Grinding Energy Systems
Vipin Chandran Aman Sardana Neelika Sareen	Commercial Autonomous Trucking: Current Location & Future Destinations
Robert Lois	Supply Chain Risk Assessment through Data-Driven Bayesian Networks
Bernard Arthur Jonah Nordman	A Case Study of Food Waste and Awareness

UNDERGRADUATE DIVISION FINALISTS	
Team	Poster Title
Kayla Boehm Audrey Galligan Paige Mitis	The Human-less, Robotic Supply Chain: Pipe Dream or Reality?
Sophie Guthrie Kinsey Johnston Catherine Lecher	How was the complexity of production, manufacturing and distribution altered from the COVID-19 vaccine to ensure the products are potent and effective at their point of use?
Michael Sandner	Sustainability Outlooks in Packaging and Distribution
Mikayla Maksym Christopher Tinney Domenic Viskovicz	Economies of Scale of a Social Network of One Million Users

JUDGES

GRADUATE DIVISION

[Nora Frank](#) | Senior Director Strategic Sourcing, UPMC
[Steve Myers](#) | Senior Vice President Operations Planning & Engineering, FedEx Ground (CHAIR)
[Harrison Urash](#) | Senior Director Supply Chain, Giant Eagle, Inc.

UNDERGRADUATE DIVISION

[J.R. Ellis](#) | Vice President Supply Chain Engineering, ARMADA
[Anne Herman](#) | Vice President Global Operational, Excellence, MSA – The Safety Company (CHAIR)
[Geoff Muessig](#) | CMO and Executive Vice President, PITT OHIO

FIRST ROUND JUDGES

[Ednilson Bernardes](#) | Professor, Supply Chain Management, Program Coordinator, Global Supply Chain Management, West Virginia University
[Matt Drake](#) | Associate Professor of Supply Chain Management, Duquesne University
[Michael Hamilton](#) | Assistant Professor of Business Administration, University of Pittsburgh
[Eric Paljug](#) | Clinical Associate Professor of Business Administration, Assoc. Director, Center for Supply Chain Management, University of Pittsburgh

[Sangho Shim](#) | Associate Professor, Industrial and Manufacturing Engineering, School of Engineering, Mathematics and Science, Robert Morris University
[John S. Stakeley](#) | Assistant Professor of Management, Dept. of Business and Entrepreneurship, Chatham University
[Michael Urick](#) | Associate Professor of Business Administration, Saint Vincent College

PRIZES

GRADUATE POSTER ENTRIES

- \$750 for First Place
- \$400 for Second Place
- \$250 for Third Place

UNDERGRADUATE POSTER ENTRIES

- \$600 for First Place
- \$300 for Second Place
- \$200 for Third Place

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SPECIAL THANKS TO OUR EVENT PRESIDERS:

Paul Page | Editor, Logistics Report, *The Wall Street Journal*

Lisa Scales | President and CEO, Greater Pittsburgh Community Food Bank

Sandra Turko | Sr. Manager, Enterprise PMO, Argo AI

The Center has been established with funding from GENCO,
and its (former) Executive Chairman, Herb Shear.

Mark Your Calendar

FAST, FOCUS FORUM

FRIDAY, MAY 20, 2022 (TENTATIVE)

SUMMER MIXER

THURSDAY, JULY 7, 2022 (TENTATIVE)



**During these challenging times,
consider a donation!**

**Donte Here: Greater Pittsburgh
Community Food Bank**

Center News

The Katz School Ranked as a

TOP 25

**Graduate Supply Chain
Management Program**

(Gartner 2020)

**PITT OHIO became a
platinum sponsor**

**Welcome new sponsors:
Citizens Bank, Highmark,
and PNC Bank**

Get Involved

Center for Supply Chain Management

Prakash Mirchandani, Director
Eric Paljug, Associate Director
Janice Trygar, Program Manager

Email: scmcenter@katz.pitt.edu

Phone: 412-648-1602

www.business.pitt.edu/scm

University of Pittsburgh
Joseph M. Katz Graduate School of Business
and College of Business Administration
Center for Supply Chain Management
111 Mervis Hall
Pittsburgh, PA 15260

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