

IISE

GREAT LAKES REGIONAL CONFERENCE

FINDING THE
IE
IN RELIEF

FEB. 24-25, 2017

OHIO UNIVERSITY

— WELCOMES YOU —

ATHENS | OHIO



OHIO
UNIVERSITY

THE RUSS COLLEGE
OF ENGINEERING
AND TECHNOLOGY

Create
for Good.

1 SCHEDULE OF EVENTS



FRIDAY, FEB. 24

2:00 P.M. - 7:00 P.M.

HOTEL CHECK-IN

4:30 P.M. - 6:00 P.M.

TOUR OF SOUTHEASTERN OHIO FOOD BANK

Southeastern Ohio Food Bank

(Meet at 1005 C I C Dr., Logan, OH 43138)

7:00 P.M. - 9:00 P.M.

CONFERENCE REGISTRATION, NETWORKING EVENT

Baker Center Ballroom | *Refreshments provided*

SATURDAY, FEB. 25

8:30 A.M.

BREAKFAST | Baker Center Ballroom

9:00 A.M. - 9:45 A.M.

WELCOME ADDRESS | Baker Center Ballroom

Robert Judd, Ph.D., Chair

Russ College of Engineering and Technology

Department of Industrial and Systems Engineering

OPENING KEYNOTE

Felipe Aros-Vera, Ph.D., Assistant Professor

Russ College of Engineering and Technology

Department of Industrial and Systems Engineering



SATURDAY, FEB. 25

10:00 A.M - 11:00 A.M. | BREAKOUT SESSION 1*

11:10 A.M - 12:10 P.M. | BREAKOUT SESSION 2*

12:10 P.M - 1:10 P.M. | LUNCH KEYNOTE | Baker Center Ballroom
 Amy Renner
Southeastern Ohio Food Bank

1:30 P.M - 3:00 P.M. | GROUP ACTIVITIES

3:00 P.M - 5:00 P.M. | CAREER FAIR & PROFESSIONAL DEVELOPMENT ACTIVITIES

5:00 P.M - 5:30 P.M. | NETWORKING RECEPTION | Baker Center Honors Collegium

5:30 P.M - 8:00 P.M. | FORMAL DINNER | Baker Center Ballroom

WELCOME

Dennis Irwin, Ph.D., P.E., Dean
Russ College of Engineering and Technology

DINNER KEYNOTE

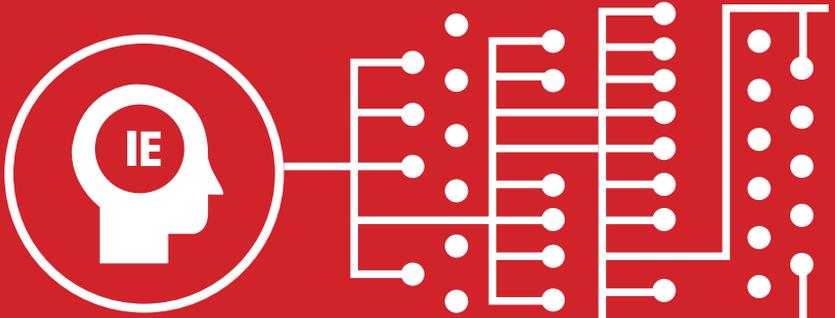
UPS

IISE ORGANIZATIONAL UPDATE

Michael Foss, President
IISE Board of Trustees

AWARDS AND FINAL REMARKS

* SEE PAGE 5 FOR SESSION INFORMATION. EACH SESSION WILL BE OFFERED TWICE.



FELIPE AROS-VERA | OHIO UNIVERSITY

Felipe Aros-Vera, Ph.D., is an assistant professor of industrial and systems engineering at Ohio University's Russ College of Engineering and Technology.

His research spans the fields of disaster relief logistics, transportation, and urban logistics. Before joining Ohio University, he worked as a postdoctoral research associate at the Center for Infrastructure, Transportation and the Environment at the Rensselaer Polytechnic Institute (RPI). His expertise includes transportation operations and planning, operations research, mathematical optimization, and computer programming.

Aros-Vera's work has been published in prestigious journals such as European Journal of Operational Research (EJOR), Journal of Operations Management (JOM), and Transportation Research Part B: Methodological. He has participated in several research and applied research projects including: Park and Ride Facility Location in New York City, Integrative Freight Demand Management in the New York City Metropolitan Area, and Cyber Enabled Discovery System for Advanced Multidisciplinary Study of Humanitarian Logistics for Disaster Response.

Aros-Vera holds a Ph.D. in Transportation Engineering from RPI, and an M.S. and B.S. in Engineering Sciences from the Pontificia Universidad Católica de Chile.



AMY RENNER | SOUTHEASTERN OHIO FOOD BANK

Amy Renner is the food bank coordinator for the Southeastern Ohio Food Bank, a program of Hocking Athens Perry Community Action (HAPCAP). She oversees the logistics and warehouse operations of the food bank and enjoys overcoming the many challenges that arise when distributing food across the organization's rural 10-county region. Renner has a bachelor's degree in business administration from Ohio University and a master's degree in business administration from Bowling Green State University. She lives in Chauncey with her husband Jason, daughter Astrid, and dog Luna.

CHIP CHAPPELLE | UPS

Chip Chappelle is the current transportation products senior director for UPS. Among many other responsibilities, he heads Humanitarian Relief Customer Care, Solutions, Engineering, and Operations.

Chappelle has helped coordinate UPS relief operations support for disasters and humanitarian needs for China's earthquakes, American Samoa's tsunami and floods, Haiti's earthquake and cholera outbreak, Chile's mine collapse, and Mauritania/Sahel's famine, and led efforts to kit and ship clothing for Syrian child refugees living in camps in Iraq and Lebanon.

Chappelle is the recipient of the Points of Light 2011 Champion of Inspiration Award, awarded for his work in coordinating with UPS and more than 50 humanitarian organizations from around the world to transport more than 15,000 cubic meters of critical supplies to Haitian families in 48 hours after the devastating earthquake in 2010.

MICHAEL FOSS | IISE

Michael Foss is a senior member of the Institute of Industrial and Systems Engineers and has served IISE for many years. He's the current president of the Board of Trustees.

In 2015, Foss was admitted into the global Council of Industrial and Systems Engineers (CISE). The 20 council members comprise ranking executives with extensive experience in industrial and systems engineering and serve as an advisory group to academia and the profession. Foss is passionate about leadership, motivation, and continuous improvement.

UPS HUMANITARIAN LOGISTICS

BAKER CENTER 242

UPS has supported global communities for decades with funding, but recently, the UPS Foundation has begun to share the company's logistic and IE capabilities as in-kind gifts. By leveraging its IE expertise and wide-ranging air, ocean, and surface transportation and distribution capabilities, UPS has successfully and efficiently transported and distributed life-saving materials to global communities in need. This session will detail the power of using basic IE principles in organizing ad hoc and scheduled supply chains using several recent case studies.

USING DATA, ANALYTICS, AND SIMULATION IN HOSPITAL DESIGN

BAKER CENTER 239

A freestanding, non-profit children's hospital in downtown Akron, Ohio, Akron Children's Hospital has grown considerably over the past few years, starting several major building projects to best serve its patients and families. Industrial and systems engineers have used data, analytics, and simulation modeling to better determine physical space needs and establish efficient processes within the new spaces. This presentation will showcase several examples including an outpatient surgery center, an outpatient specialty clinic centralized check-in process, and an emergency department.

DHL SOLUTION DESIGN : VOLUNTEERING EXPERTISE TO HELP LOCAL CHARITIES

BAKER CENTER 230

This session will overview two major pro-bono consulting supply-chain related projects that DHL completed for charities. The first was a transportation and facility project, undertaken as an extracurricular exercise for the Mid-Ohio Food Bank. The session will describe the trade-offs between transport saving versus additional fixed costs associated of opening up a new facility. The second was for Saint Vincent Family Center, which operates a joint public/private early education school for special needs children serving the Columbus metropolitan area. The organization wanted to reduce student transportation expenses while meeting time constraints for busses and taxis. Both projects use a similar design methodology that DHL applies in industry situations.



USING AMERISOURCEBERGEN'S DISTRIBUTION EXPERTISE & GLOBAL REACH FOR GOOD

BAKER CENTER 237

Every day, AmerisourceBergen utilizes a powerful distribution network and state-of-the-art technologies to deliver life-saving products to patients. John Shook, vice president of engineering, will share how AmerisourceBergen's global network of companies and patient-focused culture play an important role in every day patient care. He'll also share how AmerisourceBergen provides critical relief support and access to healthcare supplies following disasters like the earthquakes in Nepal, Ecuador, and Haiti; flooding in Louisiana and Texas; and following the June 2016 shooting in Orlando. Not only are AmerisourceBergen's associates passionate about giving back to the communities where they work and live, but through the work of the AmerisourceBergen Foundation and the Associate Assistance Fund, the organization aims to improve access to healthcare and education in underserved communities around the world.

DONATION DRIVE SIMULATION

BAKER CENTER 240

Donation drives are philanthropic activities that request donations such as clothing, canned food, and cash for people who need it. In the aftermath of disasters and catastrophic events, such drives can play a key role in bringing supplies to survivors that depend almost exclusively on external help. This hands-on activity will focus on the operation of a donation drive to help people in need after a disaster. Participants will see first-hand the challenges of handling, sorting, and delivering supplies in crisis situations. Lessons from previous disasters and key insights from disaster responders will be included.

GRADUATE RESEARCH

BAKER CENTER 233

Nick Loree (Ohio University): Traditional facility location models used in industry can't adequately designate distribution facility locations in the context of post-disaster humanitarian logistics. Commercial models focus on facility placement, operations, and logistics costs, but they lack an appropriate evaluation of the opportunity cost incurred when critical supplies aren't accessible to the affected population. The economic cost of human suffering, known as deprivation cost, is an important component of humanitarian logistics math modeling. This research integrates traditional facility location decision making with the inventory-allocation and distribution model proposed by Pérez-Rodríguez and Holguín-Veras (2015), which explicitly considers deprivation costs.

Amit Pathak (Ohio University): The healthcare sector has many unaddressed, complex issues in a number of nations, including the United States. To find solutions, data-backed predictions are required for effective decision making. The EuroQol five Dimension (EQ-5D) questionnaire developed by the Euro-Qol group is one of the most widespread tools used to assess the generic health status of a population. It uses five dimensions: mobility, self-care, usual activities, pain/discomfort and anxiety/depression. This research focusses on creating forecasting models using statistical techniques and artificial neural networks to predict the EQ-5D model indicators by analyzing data for age groups 18-75+ for 12 countries, using 65 indicators from World Bank Data, World Health Organization Data and United Nations Development Programme Data.

MYTHS OF DISASTER RESPONSE OPERATIONS

BAKER CENTER 231

Jose Holguin-Veras, Ph.D., William H. Hart Professor in the Department of Civil and Environmental Engineering at the Rensselaer Polytechnic Institute, will reflect on common myths, and current and future research needs, about humanitarian efforts and disaster response logistics.

An expert in humanitarian logistics and freight transportation in urban areas, Holguin-Veras has extensive field experience in disaster relief in responding to 9/11, Hurricane Katrina, the Haiti Earthquake, Japan cascading disasters, Superstorm Sandy and, most recently, the Gorkha Earthquake in Nepal.



NETWORKING AND LIFE AFTER GRADUATION

BAKER CENTER 366

Information sharing session focused for new graduates and students. Get to know fellow industry young professionals through a laid-back networking event, followed by a panel discussion about the transition from academia to the professional world, hosted by IISE Young Professionals.

UNDERGRADUATE STUDENT TECHNICAL PAPER COMPETITION

BAKER CENTER THEATER

Oral presentations of all undergraduate student technical papers will be given for final judging.

ACCESS RESTORATION COMPETITION

WALTER HALL 135

This exercise illustrates the main characteristics, challenges, and decision support technologies for restoring access in the aftermath of a disaster and during disaster response operations. Disaster response operations require access to the disaster site so activities such as search-and-rescue and delivery of critical supplies to survivors, also known as post-disaster humanitarian-logistics, can begin. Participants will work in teams to develop an access restoration plan based on a preliminary assessment of damage and a real time streaming of aerial images of the disaster site using drone technology.

GLRC17 CAREER FAIR

BAKER CENTER 240

Network with representatives from several major companies looking to hire industrial and systems engineers, including GLRC17 corporate sponsors, and explore graduate school opportunities to hone your expertise after graduation. Bring plenty of copies of your resume to share.



WORKSHOP: LINKEDIN AND SOCIAL MEDIA OPTIMIZATION

BAKER CENTER 242 (2-5 P.M., ONE HOUR SESSION, REPEATED HOURLY)

LinkedIn and other forms of social media continue to be a strong influence in landing a great job. Join Ohio University alumnus and serial entrepreneur Michael Giuliano as he provides perspective on these technologies and how to best utilize them to your advantage.

This will be an inclusive session that is 100 percent interactive and collaborative, so bring your laptops and gadgets. Be sure to create a LinkedIn account before the session in order to maximize the opportunity.

PROFESSIONAL HEAD SHOT PHOTO STATION

BAKER CENTER THEATER LOBBY

Need a professional head shot for your LinkedIn profile or website? Stop by the photo station between 3-5 p.m. and get a free head shot taken, courtesy of GLRC17 and the Ohio University chapter of IISE.

UPS

Natural and human-caused disasters often devastate local businesses, demolish infrastructure, displace residents and bring commerce to a halt. When communities around the world endure these hard times, UPS works with global relief and aid organizations to respond and help rebuild communities so they're better prepared to withstand future disasters.

The company's global reach and optimized network in more than 220 countries and territories enables aid when and where it's needed most. In addition to providing funds and in-kind assistance, UPS also partners with many of the world's top humanitarian relief agencies such as the American Red Cross, Aidmatrix Foundation, CARE, Salvation Army, UN-OCHA, UNICEF, UNHCR, Good360, NVOAD, MedShare, WHO, Save the Children, and the World Food Programme. A collaboration of skills and expertise has the power to help communities recover more efficiently and more effectively. UPS donates money and materials, as well as the time and expertise of skilled employees who supplement our partner organizations' efforts by volunteering in times of greatest need.

AMERISOURCEBERGEN

AmerisourceBergen is one of the largest global pharmaceutical sourcing and distribution services companies, helping both healthcare providers and pharmaceutical and biotech manufacturers improve patient access to products and enhance patient care. Offering services ranging from drug distribution and niche premium logistics to reimbursement and pharmaceutical consulting services, AmerisourceBergen delivers innovative programs and solutions across the pharmaceutical supply channel in human and animal health. With more than \$140 billion in annual revenue, AmerisourceBergen is headquartered in Valley Forge, Pennsylvania, and employs approximately 19,000 people. AmerisourceBergen is ranked 12th on the Fortune 500 list. AmerisourceBergen has demonstrated a continued commitment to worldwide humanitarian and relief efforts through the work of the AmerisourceBergen Foundation and the Associate Assistance Fund. For more information, go to www.amerisourcebergen.com.



SAFETY NOTES

To ensure the safety of all participants at the IISE Great Lakes Regional Conference this year, here are a few campus-wide regulations and points of contact.



OHIO UNIVERSITY IS A SMOKE- AND TOBACCO-FREE CAMPUS.

* THIS INCLUDES BUT IS NOT LIMITED TO CIGARETTES, ELECTRONIC CIGARETTES, CIGARS AND CIGARILLOS, HOOKAH-SMOKE PRODUCTS, AND ORAL TOBACCO.



THE CONSUMPTION OF ALCOHOL IS PROHIBITED IN ALL ACADEMIC BUILDINGS.

IMPORTANT CONTACTS



- Cami Jones, IISE Student Chapter Conference Chair: **937.768.1149**
- Greg Schirmer, IISE Student Chapter Logistics Chair: **215.353.7038**
- Landon Rehmar, Chapter Liaison: **440.591.0286**
- Ohio University Police Department: **740.593.1911**
- Ohio University Inn: **866.593.6661**
- Fairfield Inn: **740.589.5839**
- Hampton Inn: **740.593.5600**
- Green Cab: **740.594.7336**

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