

## PUBLICATIONS

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## INVITED LECTURES

- Scheduling and Routing Home Healthcare Workers, *Care Systems, Inc.*, Rockville, MD (January 2024).
- Restricting Air Traffic Controller Schedules to 40 hours per Week, *Federal Aviation Administration* (December 2023).
- Providing an Improved Work-Life Balance for Railway Engineers, *University of Texas*, Dallas, TX (November 2023).
- Data-driven Approach to Scheduling Freight Engineers, *Union Pacific Railroad*, Omaha, NE (May 2023).
- Inventory Management in a Low Volume Factory, *Applied Materials, Inc.*, Austin, TX (June 2023).
- Multi-machine Setups for Semiconductor Assembly and Test, *Global Meeting on Industrial and Manufacturing Engineering*, online (June 2023).
- Developing Weekly Schedules for Railroad Engineers and Trainmen, *Planmatics, Inc.*, Rockville, MD (July 12 2022).
- Improving Warehouse Logistics and Storage *Alibaba*, online (January 2022)
- Managing Security Personnel at Airports, *Planmatics, Inc.*, Rockville, MD (August 2021).
- Multi-machine Setups for Semiconductor Assembly and Test, *Global Meeting on Industrial and Manufacturing Engineering*, online (December 2020).
- Discrete Convexity Results for Scheduling In-clinic and Virtual Medicine Patients in an Integrated Practice Unit, *2020 POMS Annual Conference*, Minneapolis, MN (April 2020).
- The Costs of Transportation Barriers for Economically Disadvantaged Patients at a Family Health Center, *University Hospital System*, San Antonio (September 2019).
- History of Operations Research and Supply Chains, *Alibaba*, Hangzhou, China (August 2019).
- Application of Operations Research in Supply Chain Management, *Alibaba*, Hangzhou, China (August 2019).
- Investigation of Transportation Options for Economically Disadvantaged Patients at the Family Health Center, *University Hospital System*, San Antonio (May 2019).
- Monthly Assignment of Clinic Duty to Internal Medicine Residents, *The Technical University of Munich*, Munich, Germany (August 2018).
- Internal Mail Transport at Mail Processing & Distribution Centers, *Annual Industrial & Systems Engineering Research Conference, Best Paper Award*, Orlando, FL (May 2018).
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Monthly Clinic Assignments for Internal Medicine Residents. Department of Industrial & Systems Engineering, North Carolina State University, Raleigh, NC (February 2016).

Scheduling Internal Medicine Residents for Monthly Clinic Duty. Department of Industrial & Systems Engineering, Pennsylvania State University, State College, PA (April 2015).

An Investigation of Operations at an Outpatient Clinic, Wright State University, **Kettering Distinguished Lecture**, Dayton, OH (November 2014).

Planning and Scheduling for Healthcare Workers, *CLAIO XVII/CSMIO III*, **Plenary Speaker**, Monterrey, Mexico (October 2014).

Weekly Planning for Home Healthcare Delivery, Technical University of Munich, Germany (June 2014).

Monthly Clinic Assignments for Residents, The George Washington University, Washington, DC (May 2014).

Clinic Scheduling for Internal Medicine Housestaff, University of Houston, Houston, TX (February 2014).

Improving Healthcare Delivery Through University-Industry Collaboration, *IEEE Communications & Signal Processing Society Annual Meeting*, Austin, TX (December 2013).

Optimizing Healthcare Worker Schedules, *University of Texas Systems Engineering Healthcare Conference*, Houston, TX (November 2013).

Staff Scheduling, Value Stream Mapping & Process Improvement at Care Institutions, *Health Technology Forum*, Austin, TX (October 2013).

Implementing a Patient-Centered Surgical Home to Improve Out-Patient Surgical Processes of Care and Outcomes, *McCombs Healthcare Initiative Symposium*, Austin, TX (April 2013).

Designing Driver Work Areas for Pickup & Delivery Operations, HEC, University of Montreal, Montreal, Canada (December 2012).

An Integer Programming Model for Nurse Scheduling in Operating Room Suites, *UT Systems Engineering Conference*, MD Anderson, Houston, TX (October 2012).

Weekly Routing and Scheduling of Home Healthcare Workers, University of Houston, Houston, TX (February 2012).

Designing Pickup and Delivery Routes in a Local Service Area, Guangxi University of Technology, Liuzhou, China (December 2010).

Flight Schedule Reoptimization after Groundings & Delays, Guangdong University of Technology, Guangzhou, China (December 2010).

Creating Vehicle Routing Zones for Pickup & Delivery Carriers, *Transportation & Logistics Workshop*, The Complex Engineering Systems Institute, **Plenary Speaker**, Renaca, Chile (December 2009).

Solving Large-Scale Integer Programs with Column Generation, Technical University of Munich, Germany (July 2009).

Using Branch and Price to Solve the Midterm Physician Scheduling Problem, *EURO XXIII*, Bonn, Germany (July 2009).

Mid-term Scheduling of Physicians in Hospitals. *POMS Conference*, Orlando, FL (May 2009).

Work Area Design for Local Pickup & Delivery Operations. Northwestern University, Evanston, IL (November 2008).

Perspective on Issues and Problems in Health Systems Engineering: Opportunities for Operations Research & Industrial Engineering. North Carolina State University, Raleigh (April 2008).

Using Branch and Cut to Solve the Vehicle Routing Problems with Time Windows. Royal Institute of Technology, Stockholm (June 2007).

Cyclic Nurse Scheduling Using a Bundle Method. Linköping University, Linköping, Sweden (June 2007).

Solving Large-Scale Staff Scheduling Problems with Column Generation. *International Workshop on Optimization (IWOS2005)*, Shanghai (May 2005).

Heuristics and Exact Methods for Vehicle Routing Problems with Time Windows. Nankai University, Tianjin, China (May 2005).

Daily Adjustments to Staff Schedules Using Branch and Price: A Nurse Management Application. Department of Industrial Engineering and Engineering Management, Hong Kong University of Science and Technology, Hong Kong (May 2005).

Personnel Planning and Scheduling in the Service Industry. *Annual IIE Conference*, Atlanta (May 2005).

Optimizing Aircraft Routings in Response to Groundings and Delays. *Annual IIE Conference*, **Best Paper**, Portland (May 2003).

Solving Vehicle Routing Problems with Time Windows Using Branch and Cut. Universidad Autónoma de Nuevo León, Monterrey, Mexico (March 2003).

From Model Development to Implementation: Increasing the Chances for Success. *12<sup>th</sup> Annual Industrial Engineering and Management Conference*, **Keynote Speaker**, Tel Aviv, Israel (March 2002).

Using OPL Studio to Implement a Staffing Algorithm for the Service Industry. Office of Technology, US Department of Transportation (July 2000).

Algorithms for Rescheduling Aircraft Due to Flight Disruptions. University of Arizona, Tucson (November 1998).

Solution Procedures for a Class of Routing Problem. Texas A&M University, College Station (February 1998).

Implementing a Branch and Cut Algorithm for the Vehicle Routing Problem with Time Windows. Center for Operations Research and Econometrics, Louvain-la-Neuve, Belgium (March 1996).

Designing Long Distance Telecommunications Networks. Royal Institute of Technology, Stockholm, Sweden (June 1995).

The Use of Simulation Methodologies to Design Mail Processing Facilities. Ministry for Posts and Telecommunications. Tokyo, Japan (June 1994).

Production Planning and Decision Support for Printed Wiring Board Assembly. Center for Economic Research, Tilberg University, The Netherlands (May 1994).

Heuristics and Exact Methods for the Vehicle Routing Problem. Department of Economics, Free University of Berlin, Germany (April 1994).

Sequencing Mixed-Model Assembly Lines to Maximize System Performance. College of Engineering, École Centrale de Lille, France (March 1994).

Reengineering and Production Planning for Electronic Assembly. Workshop on Mathematical Models of Organizational Design, European Institute of Advanced Studies in Management, Brussels, Belgium (March 1994).

Personnel Scheduling in Service Organizations. School of Management, Erasmus University, Rotterdam, The Netherlands (March 1993).

Using Decomposition to Solve the Tour Scheduling Problem. *3rd Stockholm Optimizations Days*, **Keynote Speaker** (July 1992).

Machine Scheduling in General Mail Facilities. Decision Sciences Department, College of Business Administration, University of Arizona, Tucson (February 1992).

Some Theoretical and Algorithmic Results for Sequencing Mixed Model Assembly Lines. *Optimization Days*, University of Montréal, Quebec, Canada (May 1992).

Modeling and Analysis of Mail Processing Facilities. U.S. Postal Service, Headquarters, Washington, D.C. (December 1991).

Network Design for Resellers of Long Distance Services. San Marcos Telephone Company, San Marcos, TX (April 1991).

Optimally Configuring General Mail Facilities. *Fourth USPS Advanced Technology Conference*, Washington, D.C. (November 1990).

Algorithms for Mixed Integer Linear Programming. Technion, Israel Institute of Technology, Faculty of Industrial Engineering and Management, Haifa (April 1990).

Equipment Selection and Machine Scheduling for Mail Processing. Department of Industrial Engineering, Tel Aviv University, Ramat Aviv, Israel (November 1989).

Use of Multicriteria Methods for Evaluating Advanced Technologies. Johnson Space Center, NASA, Houston (June 1989).

Convex and Linear Bilevel Programming. *Optimization Days*, University of Montréal, Quebec, Canada (May 1989).

Decomposition Techniques for Short-Term Scheduling of Electric Power Generators. Department of Industrial Engineering, Texas A&M University, College Station (October 1988).

Recent Developments in Mixed Integer Linear Programming. Department of Operations Research, University of North Carolina, Chapel Hill (March 1987).

