

I-Lin Wang

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EDUCATION

- 2003 Ph.D. in Industrial Engineering, ISyE, GA Tech, U.S.A.
- 1996 M.S. in Operations Research, OR Center, M.I.T., U.S.A.
- 1991 B.S. in Aeronautical & Astronautical Engineering, NCKU, Taiwan

EMPLOYMENT

- 2014.8 - Professor, Department of Industrial & Information Management, NCKU, Taiwan
- 2007.8- 2014.7 Associate Professor, Department of Industrial & Information Management, NCKU, Taiwan
- 2003.8- 2007.7 Assistant Professor, Department of Industrial & Information Management, NCKU, Taiwan
- 1996.4- 1997.3 Foreign Researcher, Fujitsu Research Lab. L.T.D., Kawasaki, Japan

RESEARCH INTERESTS

Network Optimization, Integer Programming, Algorithm Design, Scheduling, Logistics, Shared Mobility

PUBLICATIONS

A. Journal Papers

- 20 papers published in 2005-2020 on the following journals and topics:
 - Applied Mathematics and Computation* (2011): bioinformatics, haplotype inference
 - Asia-Pacific Journal of Operational Research* (2008): new shortest path algorithm
 - Computers & Industrial Engineering* (2011): asset management optimization, pavement project
 - Flexible Services and Manufacturing* (2013): semiconductor manufacturing, scheduling
 - IEEE Transactions on Electronics Packaging Manufacturing* (2006): reverse logistics, network design
 - International Journal of Integrated Supply Management* (2008): motorcycle courier system, city logistics
 - International Journal of Operations Research* (2018, 2018, 2020): multicommodity network flow; UAV routing
 - International Journal of Reliability and Quality Performance* (2009): manufacturing network optimization
 - Journal of Industrial and Management Optimization* (2006, 2009, 2016): manufacturing network optimization
 - Journal of Intelligent Manufacturing* (2012): semiconductor manufacturing, scheduling
 - Mathematical Biosciences* (2011): bioinformatics, haplotype inference
 - Numerical Algebra, Control, and Optimization* (2021): shared mobility, bicycle sharing, repositioning
 - Operations Research* (2013): shared mobility, bicycle sharing, repositioning
 - Pacific Journal of Optimization* (2014): manufacturing network optimization
 - Transportation Research Part C* (2016): electric vehicle logistics system
 - Transportation Science* (2005): new shortest path algorithms

B. Conference Papers

- 29 International Conference papers outside T.W. (APIEMS, APMC, C.I.E., INFORMS, MLOG, TLOG)
- 30 International Conference papers inside T.W. (APIEMS, Automation, EAWIE, ICLS, ICTPA, I.P.O.)
- 43 Domestic Conference papers inside T.W. (CIIE, C.I.T., ORSTW)

HONORS AND AWARDS

A. Personal Awards

- 7 awards in INFORMS Railway Application Section Problem Solving Competition:
 - 1st Place (2017); 2nd Place (2014, 2016, 2019); 3rd Place (2011); Honorable Mentions (2010, 2013)
- Lu Feng-Chang Medal in Management, 2013, by the Chinese Management Association
- Young Researcher Innovated Research Competition, 2013, the honorable mentions (top 3 in Social Science), by the Taiwan Comprehensive University System
- 3 Best Research Project Poster Awards by National Science Council (NSC/MOST) in 2009, 2016, 2018,

B. Thesis or Paper Awards with Students

- 24 Thesis or Paper Awards by the Chinese Industrial Engineering Society
- 16 Thesis or Paper Awards by the Operations Research Society of Taiwan
- 19 Thesis or Paper Awards by other organizations

PROJECT GRANTS

A. Grants by the National Science Council (NSC/MOST) of Taiwan & NCKU

- 2003-04: Multiple Pairs Shortest Paths Algorithms
- 2004-05: New column generation and partitioning methods for multicommodity network flow problems
- 2005-06: New nonnegative least squares primal-dual methods for network optimization problems
- 2006-07: On solving the minimum distribution cost flow and maximum distribution flow problems
- 2007-08: Haplotyping population by optimization theorems and algorithms (I)
- 2008-09: Haplotyping population by optimization theorems and algorithms (II)
- 2009-11: A Study on Reliability for Distribution Networks with Multi-state Capacitated Arcs
- 2011-13: A Study on the Network Design and Bike Repositioning for Urban Bike Sharing Systems
- 2013-16: Design and Repositioning Strategies for the Public Bike and E-scooter Sharing
- 2016-19: On scheduling multi-mode restoration tasks for networks of broken nodes or arcs in humanitarian logistics
- 2019-20: Optimal Coordinated Deployment and Route Planning for Searching and Patrolling by Multiple Unmanned Vehicles (I)
- 2020-21: Optimal Coordinated Deployment and Route Planning for Searching and Patrolling by Multiple Unmanned Vehicles (II)

B. Grants by Other Organizations

- 2008: Flexible Scheduling Algorithms for Semiconductor Manufacturing, by TSMC
- 2012: Strategic Design of Bicycle Sharing Systems in Tainan City, by Tainan City Government
- 2013: Strategic Design and Tactical Management for Metropolitan Public Bike Sharing Systems by Sumitomo Foundation (2012 GRANT FOR JAPAN-RELATED RESEARCH PROJECTS)
住友財団の2012年度「アジア諸国における日本関連研究助成」
- 2015: Chicken Slaughterhouse Demand Forecasting and Inventory Planning, by DaChan Co.
- 2016: Evaluation of the Introduction of Industry 4.0 to the Textile Industry, by Everest Textile
- 2016: Design of Mathematical Optimization Models for Demand Response, by ITRI
- 2017-19: Strategic Design of E-car Sharing Systems, by Kaison Green Energy Technology Co.
- 2019-20: Optimal W.I.P. Allocation and Scheduling for Smart Manufacturing, by Innolux Co.
- 2020-21: Smart Energy Storage System Management, by Far Eas Ton Co.

COURSES TAUGHT

Undergraduate courses

- Data Structure, Discrete Mathematics, Computer Programming and Application

Graduate courses

- Supply Chain Management, Network Optimization, Optimization Models and Applications

PROFESSIONAL SERVICES

Area Editor *Computers and Industrial Engineering*, 2013 - now

Associate Editor *Journal of Industrial and Production Engineering*, 2011 - now

Associate Editor *International Journal of Operations Research*, 2012 - now

PROFESSIONAL AFFILIATIONS

INFORMS (Institute for Operations Research and the Management Sciences)

CIIE (Chinese Institute of Industrial Engineering)

ORSTW (Operations Research Society of Taiwan)

C.I.T. (Chinese Institute of Transportation)

C.M.A. (Chinese Management Association)