I-Lin Wang

Department of Industrial & Information Management
National Cheng Kung University
No.1 University Rd., Tainan, 704
Taiwan

Tel: (+886) 6-2757575-53123
Fax: (+886) 6-2362162
Email: ilinwang@mail.ncku.edu.tw
URL: http://ilin.iim.ncku.edu.tw/

EDUCATION

2003   Ph.D. in Industrial Engineering, ISyE, GA Tech, USA.
1996   M.S. in Operations Research, OR Center, M.I.T., USA
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. LTD, Kawasaki, Japan

RESEARCH INTERESTS

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

PUBLICATIONS

A. Journal Papers

1. Wang, I.-L.*, E.L. Johnson, J.S. Sokol, 2005, A multiple pairs shortest path algorithm, *Transportation Science*, 39(4), pp. 465-476.
2. Sheu, R.L.*, M.J. Ting, I.-L. Wang, 2006 Aug., Maximum flow problem in the distribution network, *Journal of Industrial and Management Optimization*, 2(3), pp. 237-254.
3. Wang, I.-L.*, W.-C. Yang, 2007 Apr., Fast Heuristics for Designing Integrated E-Waste Reverse Logistics Networks, *IEEE Transactions on Electronics Packaging Manufacturing*, 30(2), pp. 147-154.
4. Wang, I.-L.*, 2008, Distributing Small Packages in Metropolitan Area by Motorcycle Courier Services, *International Journal of Integrated Supply Management*, 4(1), pp. 88-101.
5. Wang, I.-L.*, 2008, On solving shortest paths with a least-squares primal-dual algorithm, *Asia-Pacific Journal of Operational Research*, 25(2), pp. 135-150.
6. Wang, I.-L.*, Y.-H. Yang, 2009, On Solving the Uncapacitated Minimum Cost Flow Problems in a Distribution Network, *International Journal of Reliability and Quality Performance*, 1(1), pp. 53-63.
7. Wang, I.-L.*, S.-J. Lin, 2009, A network simplex algorithm for solving the minimum distribution cost problem, *Journal of Industrial and Management Optimization*, 5(4), pp. 929-950.
8. Wang, I.-L.*, Y.-C. Tsai, F. Li, 2011, A Network Flow Model for Clustering Pavement Segments with Minimum Total Costs, *Computers & Industrial Engineering*, 60(4), pp. 593-601.
9. Wang, I.-L.*, C.-Y. Chang, 2011, Mathematical properties and an integer programming model on haplotyping populations by pure parsimony, *Mathematical Biosciences*, 231(2), pp.120-125.
10. Wang, I.-L.*, H.-E. Yang, 2011, Haplotyping populations by pure parsimony based on compatible genotypes and greedy heuristics, *Applied Mathematics and Computation*. 217(23), pp.9798-9809.
11. Wang, I.-L.*, T.H. Yang, Y.-B. Chang, 2012, Scheduling two-stage hybrid flow shops with parallel batch, release time, and machine eligibility constraints, *Journal of Intelligent Manufacturing*, 23(6), pp.2271-2280.
12. Wang, I.-L., Y.-C. Wang*, C.-W. Chen, 2013, Scheduling unrelated parallel machines in semiconductor manufacturing by problem reduction and local search heuristics, *Flexible Services and Manufacturing*, 25(3), pp.343-366.
13. Shu, J.*, M.C. Chou, Q. Liu, C.-P. Teo, I.-L. Wang, 2013, Models for Effective Deployment and Redistribution of Bicycles within Public Bicycle-Sharing Systems, *Operations Research*, 61(6), pp.1346-1359.
14. Wang*, I.-L., 2014, An algebraic decomposed algorithm for all pairs shortest paths, *Pacific Journal of Optimization*, 10(3), pp.561-576.

15. <u>Wang*, I.-L.</u>, J.-C. Lin, 2016, A compaction scheme and generator for distribution networks, ***Journal of Industrial and Management Optimization***, 12(1), pp.117-140.
16. <u>Wang*, I.-L.</u>, Y. Wang, P.-C. Lin, 2016, Optimal recharging strategies for electric vehicle fleets with duration constraints, ***Transportation Research Part C***, 69(8), pp.242-254**.**

B. International Conference Paper outside Taiwan

1. <u>Wang, I.-L.</u>, 2005 July, Solving Multiple Pairs Shortest Paths by LU Decomposition: New Algorithm and Computational Evaluation, ***Proceedings of the First International Conference on Transportation Logistics (TLOG) 2005***, Singapore.
2. <u>Wang, I.-L.</u>, 2007 Apr., On solving the minimum distribution cost problem, ***Workshop on Advances in Optimization***, Tokyo, Japan.
3. <u>Wang, I.-L.</u>, 2007 Jul., A Network Generator and Compaction Scheme for Mininimum Distribution Cost Problems, ***Proceedings of the International Conference on Business and Information (BAI) 2007***, Tokyo, Japan.
4. <u>Wang, I.-L.</u>, 2008 Mar., Haplotyping Populations by Pure Parsimony Based on Compatible Relations and Greedy Heuristics, ***the 2nd INFORMS Optimization Society Conference 2008***, Atlanta, USA.
5. <u>Wang, I.-L.</u>, 2008 Mar., A Least-Squares Dual-Primal Algorithm for the Maximum Flow Problem, ***the 2nd INFORMS Optimization Society Conference 2008***, Atlanta, USA.
6. <u>Wang, I.-L.</u>, 2009 Apr., Solving maximum flows by proportional flow augmentations on layered networks, ***the 1st International Symposium on Maritime Logistics and Supply Chain Systems (MLOG 2009)***, Singapore.
7. <u>Wang, I.-L.</u>, 2010 Nov., On Redistributing Bikes for Urban Bike Sharing Systems, ***INFORMS Annual Meeting (INFORMS 2010)***, Austin, TX, USA.
8. <u>Wang, I.-L.</u>, 2011 Nov., Bicycle-sharing System: Deployment, Utilization and the Value of Re-distribution, ***INFORMS Annual Meeting (INFORMS 2011)***, Charlotte, NC, USA.
9. <u>Wang, I.-L.</u>, 2012 Jul., Self Bike Redistribution Models for Public Bike Sharing Systems, ***Proceedings of the International Conference on Business and Information (BAI) 2012***, Sapporo, Japan.
10. <u>Wang, I.-L.</u>, 2012 Oct., Managing Public Bike Sharing Systems by Demand Profile and Temporary Manpower Allocation, ***INFORMS Annual Meeting (INFORMS 2012)***, Phoenix, AZ, USA.
11. <u>Wang, I.-L.</u>, 2013 Apr., Optimal Vehicle Deployment for Public Electrical Scooter Sharing Systems, ***2013 International Conference on e-Commerce, e-Administration, e-Society, e-Education, and e-Technology (e-CASE & e-Tech 2013)***, Kitakyushu, Japan.
12. <u>Wang, I.-L.</u>, C.-W. Wang, 2013 Aug., Analyzing Bike Repositioning Strategies based on Simulations for Public Bike Sharing Systems, ***1st ACIS International Symposium on Applied Computing & Information Technology (ACIT 2013)***, Matsue, Japan.
13. <u>Wang, I.-L.</u>, 2013 Oct., On Deploying Vehicles for Public Electrical Scooter Sharing Systems, ***INFORMS Annual Meeting (INFORMS 2013)***, Minneapolis, MN, USA.
14. <u>Wang, I.-L.</u>, 2014 Apr., On simulating the effects of information sharing for the bike sharing systems, ***2014 International Conference on e-Commerce, e-Administration, e-Society, e-Education, and e-Technology (e-CASE & e-Tech 2014)***, Nagoya, Japan.
15. <u>Wang, I.-L.</u>, 2014 Nov., On Scheduling Recovery Teams for Reaching Shelters in Minimum Time in Disaster Management, ***INFORMS Annual Meeting (INFORMS 2014)***, San Francisco, CA, USA.
16. <u>Wang, I.-L.</u>, 2014 Dec., On Locating Recharging Stations for Electrical Vehicles of Fixed Routes with Time Windows, ***The 16th Asia Pacific Management Conference (APMC2014)***, Kobe, Japan.
17. <u>Wang, I.-L.</u>, 2015 Sep., Optimal arc restoration schedules with resource constraints, ***2015 International Conference on e-Commerce, e-Administration, e-Society, e-Education, and e-Technology (e-CASE & e-Tech 2015-Fall)***, Kyoto, Japan.
18. <u>Wang, I.-L.</u>, 2015 Sep., Optimal arc restoration schedules with resource constraints, ***The 17th Asia Pacific Management Conference (APMC2015)***, Seoul, Korea.
19. <u>Wang, I.-L.</u>, 2015 Nov., Optimal arc restoration schedules with resource constraints for recovering nodes in a network of damaged arcs, ***INFORMS Annual Meeting (INFORMS 2015)***, Philadelphia, PA, USA.
20. <u>Wang, I.-L.</u>, 2016 Aug., Logistics Issues in Bike Sharing Systems, ***20th Asia Logistics Research Workshop***, Naha, Japan.

21. <u>Wang, I.-L.</u>, 2016 Nov., On scheduling restoration tasks for pipeline networks in post-disaster management, *INFORMS Annual Meeting (INFORMS 2016)*, Nashville, TN, USA.
22. <u>Wang, I.-L.</u>, 2016 Nov., A crowdsourced repositioning framework for public bike sharing systems, *The 18th Asia Pacific Management Conference (APMC2016)*, Sendai, Japan.
23. <u>Wang, I.-L.</u>, P.-C. Lin, F.-Y. Cheng, 2017 Jun., Shortest path based self-adjusted algorithms for joint optimization on train timetabling and maintenance task scheduling, *International Symposium on Scheduling (ISS 2017)*, Nagoya, Japan.
24. <u>Wang, I.-L.</u>, 2017 Oct., Optimal Security Deployment over Moving Trains in Rail Transit Networks, *INFORMS Annual Meeting (INFORMS 2017)*, Houston, TX, USA.
25. <u>Wang, I.-L.</u>, 2017 Nov., Network Restoration Scheduling in Humanitarian Logistics, *IMI Workshop at Kyushu university: Advancement of mathematical model of disaster prevention and evacuation planning toward social implementation*, Fukuoka, Japan.

HONORS AND AWARDS
Personal awards
• INFORMS Railway Application Section 2017 Problem Solving Competition, 1st Place worldwide (advisor)
• INFORMS Railway Application Section 2016 Problem Solving Competition, 2nd Place worldwide
• INFORMS Railway Application Section 2014 Problem Solving Competition, 2nd Place worldwide
• INFORMS Railway Application Section 2013 Problem Solving Competition, 4th Place worldwide
• INFORMS Railway Application Section 2011 Problem Solving Competition, 3rd Place worldwide
• INFORMS Railway Application Section 2010 Problem Solving Competition, 4th Place worldwide
• Lu Feng-Chang Medal in Management, 2013, by the Chinese Management Association
• Young Researcher Innovated Research Competition, 2013, the honorable mentions （top 3 in the subdivision of Social Science）by Taiwan Comprehensive University System

Advised thesis/paper awards
• 2 Best Poster Award in the OR category in National Science Council IE subdivision, 2009, 2016
• 8 Best Paper Awards issued by the Chinese Industrial Engineering Society, 2010 – 2016
• 6 Best Paper Awards issued by the Operations Research Society of Taiwan, 2008 – 2012
• 4 Best Thesis Awards by the Chinese Management Association 2017, and ICLS 2011, respectively

Project grants
• Grants supported by the National Science Council (NSC) of Taiwan
• "Design and Repositioning Strategies for the Public Bike and E-scooter Sharing", 2013/08 – 2016/07
• "A Study on the Network Design and Bike Repositioning for Urban Bike Sharing Systems", 2011/08 – 2013/07
• "A Study on Reliability for Distribution Networks with Multi-state Capacitated Arcs", 2009/08 – 2011/07
• Grant supported by Tainan City Government Tourism Bureau, 2012/08 – 2012/12

TEACHING
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)
CIT (Chinese Institute of Transportation)
CMA (Chinese Management Association)