Akang Wang

General Information

Date of Birth: March 8, 1994
Nationality: People's Republic of China
Languages: Mandarin (native), English (fluent), Cantonese (beginner)
Address: DH 1207, Carnegie Mellon University, Pittsburgh PA 15217, USA
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Education

Ph.D., Chemical Engineering, Carnegie Mellon University, Pittsburgh, PA *Sept. 2015 - present*

- Thesis Title: "Optimization Algorithms for Vehicle Routing under Uncertainty and Irregular Shape Nesting"
- Advisor: Chrysanthos E. Gounaris
- GPA: 3.94/4.00

B.S., Chemical Engineering, Tianjin University, Tianjin, China *Sept. 2011- Jul. 2015*

- Thesis Title: "The Bioinspired Fabrication, Modification and Application of Fiber-Optical SPR Sensors"
- Thesis Advisor: Rongxin Su
- GPA: 3.85/4.00

B.A., Finance, Nankai University, Tianjin, China *Mar. 2013- Jul. 2015*

- Thesis Title: "The Study on Diversification of China's Foreign Exchange Reserve"
- Thesis Advisor: Fenglong Gao

Research Experience

Ph.D. Research, Carnegie Mellon University, Chrysanthos E. Gounaris *Sept. 2015 – present*

- Developed a customized Branch-and-Bound approach for nesting problems
- Built a branch-price-and-cut algorithm for vehicle routing problems
- Cultivated a dynamic programming method for SPPRC

Senior Thesis Research, Tianjin University, Rongxin Su *Dec. 2014 – Jun. 2015*

Honors & Awards

James C. Meade Graduate Fellowship, Carnegie Mellon University *Dec.2016*
Institutional Honor, Tianjin University *Jul. 2015*
Shanghai Pudong Development Bank Endeavour Fellowship, Tianjin University *Dec. 2014*
National Scholarship, Ministry of Education of the People's Republic of China *Dec. 2013*
Shanghai Pudong Development Bank Scholarship, Tianjin University *Dec. 2012*

Publications

Subramanyam, A., **Wang, A.** Gounaris, C.E., "Generic Branch-and-Bound Schemes for Time Window Assignment Vehicle Routing Problems," Working Paper, 2018.

Wang, A., Hanselman, C.L., Gounaris, C.E., "A Customized Branch-and-Bound Approach for Irregular Shape Nesting," Under Review, 2017.

Shi, S., Wang, L., **Wang, A.**, Huang, R., Ding, L., Su, R., Qi, W. and He, Z., 2016. Bioinspired fabrication of optical fiber SPR sensors for immunoassays using polydopamine-accelerated electroless plating. *Journal of Materials Chemistry C*, *4*(32), pp.7554-7562.

Presentations

Wang, A., Hanselman, C.L., Gounaris, C.E., "Irregular Shape Nesting via Branch-and-Bound Using Custom Relaxations," INFORMS 2017 Annual Meeting, Oct. 25, 2017.

Wang, A., Gounaris, C.E., "A Branch-Price-and-Cut Approach for Robust Vehicle Routing", INFORMS 2017 Annual Meeting, Oct. 24, 2017.

Wang, A., Gounaris, C.E., "Branch-Price-and-Cut for Distribution via Heterogeneous Fleets," Enterprise-Wide Optimization Meeting, Sept. 20, 2016. Poster.

Wang, A., Shi, S., Su, R., "The Bioinspired Fabrication, Modification and Application of Fiber-Optical SPR Sensors," Senior Thesis Presentation in Tianjin University, June 26, 2015.

Teaching Experience

Teaching Assistant, Carnegie Mellon University *Jan. 2016 – Dec. 2017*

- Optimization Modeling and Algorithms
- Chemical Process Systems Design
- Special Topics: Process Systems Engineering

Skills

CPLEX, GAMS, Matlab, C++