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| EDUCATION | <p>Ph.D. Candidate, Management Science and Engineering Nanjing University of Aeronautics and Astronautics <i>Apr. 2019 - present</i> Nanjing, China</p> <ul style="list-style-type: none">– Advisor: Prof. Jianjun Zhu– College of Economics and Management– Concentrations: Disaster and Humanitarian Operations Management <p>Visiting Student, Industrial Engineering <i>Sep. 2019 - Dec. 2019</i> Texas State University San Marcos, U.S.</p> <ul style="list-style-type: none">– Advisor: Dr. Zhijie Sasha Dong– UTIL Lab at Ingram School of Engineering– Research project: A Stochastic Optimization Approach for Prepositioning Relief Supplies Considering Lateral Transshipment^[3]– Funded by NUAA <p>M.S., Management Science and Engineering <i>Sep. 2016 - Apr. 2019</i> Nanjing University of Aeronautics and Astronautics Nanjing, China</p> <ul style="list-style-type: none">– Advisor: Prof. Jianjun Zhu– College of Economics and Management– Dissertation: Models and Algorithms for Post Disaster Rescue Route Optimization. (full text) <p>B.S., Industrial Engineering <i>Sep. 2011 - Jul. 2015</i> Henan Polytechnic University Jiaozuo, China</p> <ul style="list-style-type: none">– School of Energy Science and Engineering |
| RESEARCH INTERESTS | <ul style="list-style-type: none">◇ Disaster and Humanitarian Operations Management: The location, routing, and allocation problem for humanitarian planning and response.◇ Optimization Modeling and Algorithms: Stochastic programming, mixed-integer programming, and decomposition algorithms. Development for optimization packages. |
| SKILLS | Solid knowledge of modeling and algorithms for optimization problems. 50k+ lines of Python code (including <code>gurobipy</code> for Gurobi, <code>Pyomo</code> for optimization modeling, <code>Matplotlib</code> for visualization, and <code>Django</code> for web development). Beginner of Julia. Working proficiency in typesetting by L ^A T _E X. Native in Chinese Mandarin. |
| RESEARCH PAPERS | <p>[4] Guo,P., Zhu,J.* (working paper). Capacity Reservation for Humanitarian Relief: a Logic-based Benders Decomposition Method with Subgradient Cut.</p> <p>[3] Guo,P., Dong,Z.S.*, Zhu,J. (working paper). Nested Logic-based Benders Decomposition for Disaster Preparedness Planning with Horizontal Coordination.</p> <p>[2] Guo,P., Zhu,J.*, Wang,H. (2019). Location-routing-allocation Problem with Consolidated Shipping of Heterogeneous Relief Supplies in Post-disaster Rescue. <i>Systems Engineering - Theory & Practice</i>, 39(9),2345-2360. (in Chinese, full text)</p> <p>[1] Guo,P., Zhu,J.*, Wang,H. (2018). Multi-location Emergency Rescue Route Optimization under the Condition of Natural Disaster Considering Safety and Time Cost. <i>Systems Engineering</i>, 36(6),62-70. (in Chinese, full text)</p> |
| RESEARCH EXPERIENCE | ACADEMIC Integrated Optimization for Large-scale Natural Disaster Emergency Rescue Location-Routing-Allocation Problem <i>Jun. 2017 - Nov. 2018</i> <ul style="list-style-type: none">– Project supported by Foundation of Graduate Innovation Center in NUAA. |

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| SCHOLARSHIPS, HONORS, AND AWARDS | Joint Ph.D. scholarship (NO. 202106830115) – Supported by the China Scholarship Council (CSC) for 12 months. | <i>Jul. 2021</i> | |
| | Short-term visiting Ph.D. scholarship – Supported by NUAA for three months. | <i>Jun. 2019</i> | |
| | 2 nd Price (top 3% of participants) – The 2 nd National Innovation Competition of Industrial Engineering and Lean Management. – Name of the Project: Models and Algorithms for Emergency Rescue Location-Routing Optimization with Stochastic Demand | <i>May 2019</i> | |
| | Outstanding Postgraduate Student (top 20% of postgraduate student) – By NUAA graduate school. | <i>Apr. 2019</i> | |
| | 3 rd Price (top 30% of participants) – The 15 th China Post-Graduate Mathematical Contest in Modeling. | <i>Dec. 2018</i> | |
| | National Scholarship (top 0.5% of graduate student) – By Ministry of Education of the People’s Republic of China. | <i>Oct. 2018</i> | |
| | 3 rd Price (top 30% of participants) – The 2018 NUAA Post-Graduate Mathematical Contest in Modeling. | <i>Jun. 2018</i> | |
| | 3 rd Price (top 30% of participants) – The 14 th China Post-Graduate Mathematical Contest in Modeling. | <i>Dec. 2017</i> | |
| | OPEN SOURCE ACTIVITIES | Benders.jl https://github.com/phguo/Benders.jl – A Julia package for Benders decomposition and its variants (now support the classical Benders). | <i>May 2022 - present</i> |
| | | BendersLib https://pypi.org/project/BendersLib – A Python library for Benders decomposition (under development). | <i>Jun. 2021 - present</i> |
| VRP2E https://github.com/phguo/VRP2E – A coevolutionary-algorithm solver for multi-objective two-echelon vehicle routing problems. | | <i>Jan. 2018</i> | |
| arxiv-latex-cleaner https://pypi.org/project/arxiv-latex-cleaner – Contributor. – A 3k+ stars tool that cleans the LaTeX code for submitting to arXiv. | | <i>Jan. 2022</i> | |
| MEMBERSHIP | | INFORMS Student Member (ID: 1606090) – The Institute for Operations Research and the Management Sciences (INFORMS) | <i>Apr. 2021 - present</i> |
| | ORSC Student Member (ID: S390022695M) – The Operations Research Society of China (ORSC) | <i>Oct. 2021 - present</i> | |
| | SESC Member – The System Engineering Society of China (SESC) | <i>Oct. 2021 - present</i> | |
| | SCOPE Student Member (ID: S320005073A) – Chinese Society of Optimization, Overall Planning and Economic Mathematics (SCOPE) | <i>Oct. 2021 - present</i> | |