

# Guangrui Tang

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## EDUCATION

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| <b>University of Arizona</b><br><i>PhD in Systems and Industrial Engineering, GPA: 4.0/4.0</i> | Aug. 2019 – Present    |
| <b>University of Arizona</b><br><i>Master in Statistics and Data Science, GPA: 4.0/4.0</i>     | Aug. 2021 – Present    |
| <b>Beihang University</b><br><i>Master in Biomedical Engineering, GPA: 3.69/4.0</i>            | Sept. 2016 – Jan. 2019 |
| <b>Beihang University</b><br><i>Bachelor in Biomedical Engineering, GPA: 3.61/4.0</i>          | Sept. 2012 – July 2016 |

## SKILLS

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**Language Proficiency:** Mandarin, Fluent in English  
**Programming:** Python, MATLAB, R, CPLEX, SQL, Julia, AMPL, SAS, Tensorflow, Pytorch  
**Machine Learning:** Statistical Machine Learning, Neural Network, Regularization, Parameter tuning  
**Optimization:** Convex Optimization, Linear Programming, Nonlinear Optimization, Bilevel Optimization, Large scale Optimization

## RESEARCH EXPERIENCE

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| <b>Department of Systems and Industrial Engineering, University of Arizona</b>  | Aug. 2019 – Present |
| <ul style="list-style-type: none"><li>• Bilevel Support Vector Machines under Adversarial Label Flips</li><li>• Doubly Regularized Least Absolute Deviations (DRLAD) Regression</li><li>• Solution path algorithm for Double Margin Support Vector Machines</li></ul> |                     |

## INDUSTRY EXPERIENCE

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| <b>Research Intern at Machine Learning Systems US Group</b><br><i>Bytedance (TikTok), New York</i>   | May 2022 – Aug. 2022 |
| <ul style="list-style-type: none"><li>• Sparse Embedding Optimizers for Advertising Algorithm</li><li>• Higher-order Optimizers for Neural Network</li></ul> |                      |

## PUBLICATIONS

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- **Guangrui Tang, Neng Fan.** A Survey of Solution Path Algorithms for Machine Learning Models. *Annals of Data Science*, 2022
- *Yegang Hu, Yicong Lin, Baoshan Yang, Guangrui Tang, Tao Liu, Yuping Wang, Jicong Zhang.* Deep Source Localization with MEG Based on Sensor Array Decomposition and Beamforming. *Sensors*, 2017,17(8):1860
- *Yegang Hu, Yicong Lin, Baoshan Yang, Guangrui Tang, Yuping Wang, Jicong Zhang.* MEG Source Imaging Algorithm for Finding Deeper Epileptogenic Zone. *Advanced Computational Methods in Life System Modeling and Simulation*, 2017:536-544

## INVITED TALK

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**Solution Path Algorithm For Distributionally Robust Support Vector Machine**  
INFORMS Annual Meeting, Indianapolis, IN, 2022

**Solution Path Algorithm For Distributionally Robust Regression**  
IISE Annual Conference, Seattle, WA, 2022

**Solution Path Algorithm For Doubly Regularized Least Absolute Deviations Regression**  
INFORMS Annual Meeting, Anaheim, CA, 2021

**Bilevel Support Vector Machines under Adversarial Label Flips**  
INFORMS Annual Meeting, Washington, DC, 2020

## TEACHING EXPERIENCE

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**Instructor:**

SIE 340: Deterministic Operations Research, Summer 2021

**Teaching Assistant:**

SIE 270: Mathematical Foundations of Systems and Industrial Engineering, Spring 2020, Spring 2021

SIE 340: Deterministic Operations Research, Summer 2020, Fall 2020, Fall 2021

SIE 415/515: Technical Sales and Marketing, Fall 2022

## PROFESSIONAL MEMBERSHIP AND SERVICE

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**Journal Reviewer:** Optimization Letters

**Professional Membership:** Institute for Operations Research and the Management Science (INFORMS)

**Session Chair:** INFORMS Annual Meeting, Anaheim, CA, 2021