ZEGUAN WU

CONTACT INFORMATION	Lehigh University 200 W Packer Ave Bethlehem, PA 18015	*Phone:* (929) 319-2255 *Email:* zeguan.wu@lehigh.edu *Last updated*: April 13, 2023

EDUCATION

Lehigh University — Bethlehem, PA
Ph.D., Industrial and Systems Engineering — May 2025 (*expected*)
Advisor: Tamás Terlaky & Xiu Yang

Columbia University — New York, NY
M.Sc., Operations Research — Dec 2019

Nanjing University — Nanjing, China
B.Sc., Material Physics — Jul 2018

RESEARCH INTERESTS

Quantum Linear Algebra, Quantum Computing, Optimization, Machine Learning

RESEARCH EXPERIENCE

Lehigh University — Bethlehem, PA — 2020 - Present
Department of Industrial & Systems Engineering
Advisor: Tamás Terlaky & Xiu Yang
Topics: Optimization and Machine Learning with Quantum Computing

Columbia University — New York, NY — 2019 - 2020
Department of Civil Engineering and Engineering Mechanics
Advisor: Xuan (Sharon) Di
Topics: Bi-level Optimization in Traffic Network Modeling

WORK EXPERIENCE

Lehigh University — Bethlehem, PA — 2020 - Now
Research Assistant

PAPERS UNDER REVIEW

1. "*An Inexact Feasible Interior Point Method for Linear Optimization with High Adaptability to Quantum Computers*", submitted to SIAM-OPT, Mohammadhossein Mohammadisiahroudi, Ramin Fakhimi, **Zeguan Wu**, and Tamás Terlaky.

WORKING PAPERS

1. "*Preconditioned Quantum Interior Point Method for Linear Optimization*", **Zeguan Wu**, Xiu Yang, and Tamás Terlaky.

2. "*An Inexact-Feasible Quantum Interior Point Method using Normal Equation System*", Mohammadhossein Mohammadisiahroudi, **Zeguan Wu**, Arielle Carr, and Tamás Terlaky.

PUBLICATION

1. "*An Inexact Feasible Quantum Interior Point Method for Linearly Constrained Quadratic Optimization*", Entropy, **Zeguan Wu**, Mohammadhossein Mohammadisiahroudi, Brandon Augustino, Xiu Yang, and Tamás Terlaky.

2. "*Quantum-enhanced Regression Analysis Using State-of-the-art QLSAs and QIPMs*", ACM/IEEE Quantum Workshop, Mohammadhossein Mohammadisiahroudi, **Zeguan Wu**, Brandon Augustino, Arielle Carr and Tamás Terlaky.

CONFERENCE

1. "*Inexact Feasible Quantum Interior Point Method for Linearly Constrained Quadratic Optimization*", Talk, IISE Annual 2023, New Orleans, LA.

2. "*Inexact Feasible Quantum Interior Point Method for Linearly Constrained Quadratic Optimization*", Talk, Mid-Atlantic NA-Day 2022, Philadelphia, PA.

3. "*Preconditioned Quantum Interior Point Method for Linear Optimization*", Flash Talk, INFORMS Annual 2022, Indianapolis, IN.

4. "*Preconditioned Quantum Interior Point Method for Linear Optimization*", Poster, ICCOPT & MOPTA 2022, Bethlehem, PA.

2023S ISE 111 Engineering Probability, TA

TEACHING EXPERIENCE	2022F ISE 406 Introduction to Mathematical Optimization, TA	
	2022S ISE 305/404 Simulation, TA	
	2021F ISE 365/465 Applied Data Mining, TA	
ACADEMIC SERVICE	Vice President, Lehigh University INFORMS Student Chapter	2022-2023
RELATED COURSEWORK	Convex Optimization, Conic Optimization, Stochastic, Algorithms, Data Analytics, Data Mining, Machine Learning, Quantum Computing, Quantum Mechanics	
COMPUTER SKILLS	Qiskit, Python, Matlab, C++, GAMS, Cplex, GuRoBi, AMPL	
LANGUAGES	Mandarin (*native*), English (*professional proficiency*)	