

Ning Liu

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Baltimore, MD, 21211

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Research Interest

Mathematical programming, nonsmooth nonconvex optimization, first order methods.

Education

Johns Hopkins University <i>Ph.D in Applied Math and Statistics</i> Advised by Benjamin Grimmer	Baltimore, MD <i>Present</i>
Johns Hopkins University <i>M.S. in Applied Math and Statistics, M.A. in Math</i>	Baltimore, MD 2018
Renmin University of China <i>Bachelor in Human Resource Management</i>	Beijing 2012

Publication

N. Liu, B. Grimmer, "Gauges and Accelerated Optimization over Smooth and/or Strongly Convex Sets", <i>Under major revision at Mathematical Programming</i>	2023
N. Liu, B. Grimmer, "On the Structure of Gauges of Weakly Convex and Weakly Concave Sets", <i>Submitted</i>	2024

Conferences

SIAMOPT, Seattle, WA	2023
ICCOPT, Bethlehem, PA	2022
Fourth Chicago Summer School in Analysis with full NSF funding, Chicago, IL	2017
Joint Mathematics Meetings, Atlanta, GA	2017
Third Chicago Summer School in Analysis with full NSF funding, Chicago, IL	2016

Teaching

Johns Hopkins University

553.600 Mathematical Modeling and Consulting, Teaching Assistant	Fall 2018
553.665 Introduction to convexity, Teaching Assistant	Fall 2018
553.783 Reliability Analysis, Teaching Assistant	Spring 2019
553.797 Intro to Control Theory and Optimal Control, Teaching Assistant	Spring 2019
553.785 Asymptotic Analysis, Teaching Assistant	Fall 2019
553.847 Financial Math Seminar, Teaching Assistant	Fall 2019
553.762 Nonlinear Optimization II, Teaching Assistant	Spring 2020
553.385 Numerical Linear Algebra, Teaching Assistant	Fall 2020
553.766 Combinatorial Optimization, Teaching Assistant	Spring 2021

553.762 Nonlinear Optimization II, Teaching Assistant	Spring 2021
553.761 Nonlinear Optimization I, Teaching Assistant	Fall 2021
553.671 Combinatorial Analysis, Teaching Assistant	Fall 2023
553.762 Nonlinear Optimization II, Teaching Assistant	Spring 2024
553.740 Machine Learning, Teaching Assistant	Fall 2024

Awards & Honors

JHU MINDS Data Science Fellowship	2023
Undergraduate scholarship in Renmin University of China	2011
Second Prize in Chinese Mathematical Olympiad	2007

Specialized Skills

Programming Languages: Python, Matlab, Julia.