# At-A-Glance Schedule

# 23 Conference on Optimization

May 31–June 3, 2023 • The Sheraton Grand Seattle, Seattle, Washington, U.S.

# Conference on Applied & Computational Discrete Algorithms

May 31–June 2, 2023 • The Sheraton Grand Seattle, Seattle, Washington, U.S.

# **Online Program and Mobile App**

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# Tuesday, May 30

..... 3:00 p.m. - 7:00 p.m. Registration Desk Spruce, 2nd floor

### 5:00 p.m. – 7:00 p.m. Welcome Reception Grand Ballroom Foyer, 2nd floor



# Wednesday, May 31

7:00 a.m. - 5:30 p.m. Registration Desk Spruce, 2nd floor

### 7:45 a.m. – 9:00 a.m. .....

JP1 Welcome Remarks and Joint Plenary with ACDA23 - On the Optimization of Nonsmooth Problem without Generalized Derivatives Andrea Walther, Humboldt University Berlin, Germany Grand Ballroom B/C/D, 2nd floor

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9:00 a.m. – 9:15 a.m. Intermission

### 9:15 a.m. – 10:45 a.m.

### **Concurrent Sessions** MS1 Recent Advances in Large-Scale Nonlinear Optimization - Part I of IV Grand Ballroom B/C/D, 2nd floor MS2 Advances in First-Order Primal-Dual Methods - Part I of IV Grand Ballroom A, 2nd floor MS3 New Methods for Very-Large-Scale Linear Programming and Relatives - Part I of II Willow A, 2nd floor MS4 Advances in Mixed-Integer Nonlinear Optimization Problems - Part I of II Willow B, 2nd floor MS5 Recent Advances in Optimization Under Uncertainty: Theory, Algorithms, and Applications in Energy Systems - Part I of IV Redwood A, 2nd floor MS6 Parameterizations and Nonconvex Landscapes - Part I of II Redwood B, 2nd floor MS7 New Sparse Optimization: Modeling, Algorithms and Applications - Part I of III Cedar A, 2nd floor MS8 First-order Algorithms for Minimax Problems - Part I of II Cedar B. 2nd floor MS9 Beyond ERM and RL: Emerging Optimization Problems and Algorithms for AI - Part I of II Boren, 4th floor MS10 Software in Optimization (SOOP) - Part I of IV Columbia, 4th floor

# Wednesday, May 31

MS11 Data-Driven Decision-Making Under Uncertainty I - Part I of III Jefferson A, 4th floor MS13 PDE-Constrained Optimization with Nonsmooth Structures or under Uncertainty - Part I of III Seneca, 4th floor MS14 Principled and Computer-assisted Approaches for the Analysis and Design of Optimization Algorithms - Part I of IV Virginia, 4th floor MS16 New Methods for Variational Inequality and **Constrained Optimization Problems** Ballard, 3rd floor MS17 Optimization with Polynomials, Moments and Tensors - Part I of III Kirkland, 3rd floor MS19 Large Scale Network Design - Part I of III Medina, 3rd floor MS20 Delayed Gradient Methods for Optimization and Applications - Part I of II Ravena A, 3rd floor MS21 Recent Advances in Stochastic Programming - Part I of IV Ravena B, 3rd floor MS22 Quantum Computing and Optimization - Part I of IV Ravena C, 3rd floor MS50 Tractable Non-Convex Problems in Low-Dimensional Learning - Part I of II Jefferson B, 4th floor MS280 Wasserstein Gradient Flows and Applications - Part I of III: Diffusion models Leschi, 3rd floor **CP1** Nonlinear Optimization University, 4th floor CP2 Semidefinite and Conic Programming Diamond B, 1st floor

..... 9:30 a.m. – 4:30 p.m.

Exhibits Grand Ballroom Foyer, 2nd floor

### 10:45 a.m. – 11:15 a.m. Coffee Break

Grand Ballroom Foyer, 2nd floor .....

11:15 a.m. – 12:45 p.m. **Concurrent Sessions** MS23 Recent Advances in Large-Scale Nonlinear Optimization - Part II of IV *Grand Ballroom B/C/D, 2nd floor* MS24 Advances in First-Order Primal-Dual Methods - Part II of IV Grand Ballroom A, 2nd floor MS25 New Methods for Very-Large-Scale Linear Programming and Relatives - Part II of II Willow A, 2nd floor MS26 Advances in Mixed-Integer Nonlinear Optimization Problems - Part II of II Willow B, 2nd floor

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# Wednesday, May 31

MS27 Recent Advances in Optimization Under Uncertainty: Theory, Algorithms, and Applications in Energy Systems - Part II of IV Redwood A, 2nd floor MS28 Parameterizations and Nonconvex Landscapes - Part II of II Redwood B, 2nd floor MS29 New Sparse Optimization: Modeling, Algorithms and Applications - Part II of III Cedar A, 2nd floor MS30 First-order Algorithms for Minimax Problems - Part II of II Cedar B, 2nd floor MS31 Beyond ERM and RL: Emerging Optimization Problems and Algorithms for AI - Part II of II Boren, 4th floor MS32 Software in Optimization (SOOP) - Part II of IV Columbia, 4th floor MS33 Data-Driven Decision-Making Under Uncertainty I - Part II of III Jefferson A, 4th floor MS35 PDE-Constrained Optimization with Nonsmooth Structures or under Uncertainty - Part II of III Seneca, 4th floor MS36 Principled and Computer-assisted Approaches for the Analysis and Design of Optimization Algorithms - Part II of IV Virginia, 4th floor MS38 Recent Developments on Minimax **Optimization Problems** Ballard, 3rd floor MS39 Optimization with Polynomials, Moments and Tensors - Part II of III Kirkland, 3rd floor MS41 Large Scale Network Design - Part II of III Medina, 3rd floor MS42 Delayed Gradient Methods for Optimization and Applications - Part II of II Ravena A, 3rd floor MS43 Recent Advances in Stochastic Programming - Part II of IV Ravena B, 3rd floor MS44 Quantum Computing and Optimization - Part II of IV Ravena C, 3rd floor MS72 Tractable Non-Convex Problems in Low-Dimensional Learning - Part II of II Jefferson B, 4th floor MS300 Wasserstein Gradient Flows and Applications - Part II of III: Sampling Leschi, 3rd floor CP3 Nonlinear Optimization, Dynamics and Control I University, 4th floor **CP4** Applications (Energy) Diamond B, 1st floor

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# Wednesday, May 31

### 12:45 p.m. – 1:45 p.m.

Lunch Break attendees on their own

### 1:45 p.m. – 2:45 p.m.

**IP1** Acceleration of First-order Optimization Algorithms via Damped Inertial Dynamics Hedy Attouch, Université Montpellier II, France *Grand Ballroom B/C/D, 2nd floor* 

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**2:45 p.m. – 3:15 p.m.** Coffee Break *Grand Ballroom Foyer, 2nd floor* 



# Wednesday, May 31

**MS59** Advances in Optimization and Feasibility Methods for and with Machine Learning - Part I of II

Diamond A, 1st floor MS60 Nonsmooth Analysis and Optimization Ballard, 3rd floor MS61 Optimization with Polynomials, Moments and Tensors - Part III of III Kirkland, 3rd floor MS63 Large Scale Network Design - Part III of III Medina, 3rd floor MS64 Efficient Optimization in High Dimensions -Part I of II Ravena A, 3rd floor MS65 Recent Advances in Stochastic Programming - Part III of IV Ravena B, 3rd floor MS66 Quantum Computing and Optimization - Part III of IV Ravena C, 3rd floor MS319 Wasserstein Gradient Flows and Applications - Part III of III: Optimal Transport Leschi, 3rd floor CP5 Black-Box, Derivative-Free and Global Optimization I University, 4th floor CP6 Diverse Optimization Applications I Diamond B, 1st floor

**4:45 p.m.** – **5:00 p.m.** Intermission

..... 5:00 p.m. – 6:30 p.m. **Concurrent Sessions** MS34 First-Order Methods for Linear Programming - Part II of II Redwood B, 2nd floor MS67 Recent Advances in Large-Scale Nonlinear Optimization - Part IV of IV Grand Ballroom B/C/D. 2nd floor MS68 Advances in First-Order Primal-Dual Methods - Part IV of IV Grand Ballroom A, 2nd floor MS69 Large-Scale and Structured Optimization Willow A, 2nd floor MS70 Structured Discrete Optimization - Part II of Π Willow B, 2nd floor MS71 Recent Advances in Optimization Under Uncertainty: Theory, Algorithms, and Applications in Energy Systems - Part IV of IV Redwood A, 2nd floor MS73 Inverse Optimization: Theory and Application Cedar A, 2nd floor MS74 Bilevel Optimization - Part II of IV Cedar B, 2nd floor MS75 Game Theory, Equilibrium Problems and Multi-Leader-Follower Problems - Part II of II Boren, 4th floor

# Wednesday, May 31

MS76 Software in Optimization (SOOP) - Part IV of IV Columbia, 4th floor MS77 Data-Driven Decision-Making Under Uncertainty II - Part I of III Jefferson A, 4th floor MS78 Free Descriptions of Convex Sets and Applications - Part II of II Jefferson B, 4th floor MS79 Scientific Machine Learning for PDE-Constrained Optimization - Part I of III Seneca, 4th floor MS80 Principled and Computer-assisted Approaches for the Analysis and Design of Optimization Algorithms - Part IV of IV Virginia, 4th floor MS81 Advances in Optimization and Feasibility Methods for and with Machine Learning - Part II of Π Diamond A, 1st floor MS82 Structure Identification and Utilization for Nonsmooth Optimization Ballard, 3rd floor MS83 Polynomial and Tensor Optimization - Part I of III Kirkland, 3rd floor MS86 Efficient Optimization in High Dimensions -Part II of II Ravena A, 3rd floor MS87 Recent Advances in Stochastic Programming - Part IV of IV Ravena B, 3rd floor MS88 Quantum Computing and Optimization - Part IV of IV Ravena C, 3rd floor CP7 Black-Box, Derivative-Free and Global Optimization II University, 4th floor CP8 Diverse Optimization Applications II Diamond B, 1st floor

6:30 p.m. – 7:30 p.m. PP1 AWM Workshop and ACDA23 Poster Session *Grand Ballroom Foyer, 2nd floor* 



6:45 p.m. – 7:45 p.m. SIAG/OPT Business Meeting Grand Ballroom B/C/D, 2nd floor Complimentary beer and wine will be served

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# Thursday, June 1

### 7:30 a.m. – 5:15 p.m.

Registration Desk Spruce, 2nd floor

### 8:00 a.m. – 9:00 a.m.

**IP2** Convex-Composite Optimization James V. Burke, University of Washington, U.S. *Grand Ballroom B/C/D, 2nd floor* 

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**9:00 a.m. – 9:15 a.m.** Intermission

# 9:15 a.m. - 10:45 a.m.

**Concurrent Sessions** MS89 Recent Advances in Large-Scale Nonlinear Optimization II - Part I of IV Grand Ballroom B/C/D, 2nd floor MS90 On Addressing Nonsmoothness, Hierarchy, and Uncertainty in Optimization and Games - Part I of IV Grand Ballroom A, 2nd floor MS91 On Decomposition Techniques for Nonlinear Optimization - Part I of IV Willow A, 2nd floor MS92 Advances in Combinatorial Optimization -Part I of III Willow B, 2nd floor MS93 Topics in Stochastic Programming - Part I of III Redwood A, 2nd floor MS94 Algebraic and Geometric Methods in Optimization - Part I of III Redwood B, 2nd floor MS95 Challenges in Inverse Problems with Massive Data - Part I of IV Cedar A, 2nd floor MS96 Bilevel Optimization - Part III of IV Cedar B, 2nd floor MS97 AWM Workshop: Women in Inverse Problems - Part I of III Boren, 4th floor MS98 Software for Optimization (SOOP) Columbia, 4th floor MS99 Data-Driven Decision-Making Under Uncertainty II - Part II of III Jefferson A, 4th floor MS100 Recent Advancements in Conic Optimization - Part I of III Jefferson B, 4th floor MS101 Scientific Machine Learning for PDE-Constrained Optimization - Part II of III Seneca, 4th floor MS102 Recent Advances in Operator Splitting and Fixed-Point Algorithms - Part I of IV University, 4th floor MS103 Recent Advancements in Optimization Methods for Machine Learning - Part I of IV Virginia, 4th floor MS104 Applications of Optimization for Causal Structure Learning - Part I of III Diamond A, 1st floor

# Thursday, June 1

MS105 Iteratively Reweighted Algorithms in Data Science: From Convexity to Nonconvexity - Part I of II Diamond B, 1st floor MS106 First-Order Methods and O-Minimal Structures - Part I of III Ballard, 3rd floor MS107 Polynomial and Tensor Optimization - Part II of III Kirkland, 3rd floor MS108 Robust Learning in Static and Dynamic Environments - Part I of IV Leschi, 3rd floor MS109 Methods and Applications in Optimization of Supply Chain Operations - Part I of III Medina, 3rd floor MS110 Modern Acceleration Methods in Optimization - Part I of II Ravena A, 3rd floor MS111 Optimization in Control - Algorithms, Applications, and Software - Part I of III Ravena B, 3rd floor MS112 Quantum Linear Algebra and Optimization -Part I of II Ravena C, 3rd floor

**9:30 a.m. – 4:30 p.m.** Exhibits *Grand Ballroom Foyer, 2nd floor* 

10:45 a.m. – 11:15 a.m. Coffee Break Grand Ballroom Foyer, 2nd floor



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**Concurrent Sessions** MS113 Recent Advances in Large-Scale Nonlinear Optimization II - Part II of IV Grand Ballroom B/C/D, 2nd floor MS114 On Addressing Nonsmoothness, Hierarchy, and Uncertainty in Optimization and Games - Part II of IV Grand Ballroom A, 2nd floor MS115 On Decomposition Techniques for Nonlinear Optimization - Part II of IV Willow A, 2nd floor MS116 Advances in Combinatorial Optimization -Part II of III Willow B, 2nd floor MS117 Topics in Stochastic Programming - Part II of III Redwood A, 2nd floor MS118 Algebraic and Geometric Methods in Optimization - Part II of III Redwood B, 2nd floor MS119 Challenges in Inverse Problems with Massive Data - Part II of IV Cedar A, 2nd floor MS120 Bilevel Optimization - Part IV of IV Cedar B, 2nd floor

# Thursday, June 1

MS121 AWM Workshop: Women in Inverse Problems - Part II of III Boren, 4th floor MS122 JuMP and Julia for Computational Optimization - Part I of III - JuMP and Extensions Columbia, 4th floor MS123 Data-Driven Decision-Making Under Uncertainty II - Part III of III Jefferson A, 4th floor MS124 Recent Advancements in Conic Optimization - Part II of III Jefferson B, 4th floor MS125 Scientific Machine Learning for PDE-Constrained Optimization - Part III of III Seneca, 4th floor MS126 Recent Advances in Operator Splitting and Fixed-Point Algorithms - Part II of IV University, 4th floor MS127 Recent Advancements in Optimization Methods for Machine Learning - Part II of IV Virginia, 4th floor MS128 Applications of Optimization for Causal Structure Learning - Part II of III Diamond A, 1st floor MS129 Iteratively Reweighted Algorithms in Data Science: From Convexity to Nonconvexity - Part II of II Diamond B, 1st floor MS130 First-Order Methods and O-Minimal Structures - Part II of III Ballard, 3rd floor MS131 Polynomial and Tensor Optimization - Part III of III Kirkland, 3rd floor MS132 Robust Learning in Static and Dynamic Environments - Part II of IV Leschi, 3rd floor MS133 Methods and Applications in Optimization of Supply Chain Operations - Part II of III Medina, 3rd floor MS134 Modern Acceleration Methods in Optimization - Part II of II Ravena A, 3rd floor MS135 Optimization in Control - Algorithms, Applications, and Software - Part II of III Ravena B, 3rd floor MS136 Quantum Linear Algebra and Optimization -Part II of II Ravena C, 3rd floor

# 12:45 p.m. – 1:45 p.m.

Lunch Break attendees on their own

AWM Lunch (by invitation only) *Madrona, 2nd floor* 



Thursday, June 1

# Thursday, June 1

### 1:45 p.m. - 2:45 p.m.

IP3 Towards a Taxonomy of All Pivot Rules for the Simplex Method Jesús A. De Loera, University of California, Davis, U.S. Grand Ballroom B/C/D, 2nd floor

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### 2:45 p.m. – 3:15 p.m. Coffee Break

Grand Ballroom Foyer, 2nd floor

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3:15 p.m. – 4:45 p.m. **Concurrent Sessions** MS137 Recent Advances in Large-Scale Nonlinear Optimization II - Part III of IV Grand Ballroom B/C/D, 2nd floor MS138 On Addressing Nonsmoothness, Hierarchy, and Uncertainty in Optimization and Games - Part III of IV Grand Ballroom A, 2nd floor MS139 On Decomposition Techniques for Π Nonlinear Optimization - Part III of IV Willow A, 2nd floor MS140 Advances in Combinatorial Optimization -Part III of III Willow B, 2nd floor MS141 Topics in Stochastic Programming - Part III of III Redwood A, 2nd floor MS142 Algebraic and Geometric Methods in Optimization - Part III of III ..... Redwood B, 2nd floor MS143 Challenges in Inverse Problems with Massive Data - Part III of IV Cedar A, 2nd floor MS144 Bilevel Optimization and Minimax Problems: Theory, Algorithms, and Applications -Part I of II Cedar B, 2nd floor MS145 AWM Workshop: Women in Inverse Problems - Part III of III Boren, 4th floor MS146 JuMP and Julia for Computational Optimization - Part II of III - Conic Solvers Columbia, 4th floor MS147 Recent Advancements in Conic Optimization - Part III of III Jefferson B, 4th floor MS148 Global Optimization Under Uncertainty in Science and Engineering - Part I of III Seneca, 4th floor MS149 Recent Advances in Operator Splitting and Fixed-Point Algorithms - Part III of IV University, 4th floor MS150 Recent Advancements in Optimization Methods for Machine Learning - Part III of IV Virginia, 4th floor MS151 Applications of Optimization for Causal Structure Learning - Part III of III Diamond A, 1st floor

# Thursday, June 1

MS152 First-Order Methods and O-Minimal Structures - Part III of III Ballard, 3rd floor MS153 Numerical Techniques in Polynomial Optimization - Part I of II Kirkland, 3rd floor MS154 Robust Learning in Static and Dynamic Environments - Part III of IV Leschi, 3rd floor MS155 Methods and Applications in Optimization of Supply Chain Operations - Part III of III Medina, 3rd floor MS156 Advances in Numerical Optimization, Control and Applications - Part I of II Ravena A, 3rd floor MS157 Optimization in Control - Algorithms, Applications, and Software - Part III of III Ravena B, 3rd floor MS158 ML, NonNewtonian Geometry, Operator Splitting, Multiprecision, and QCQP with Applications to Combinatorial Problems - Part I of Ravena C, 3rd floor **CP9** Robust Optimization Jefferson A, 4th floor CP10 Game Theory II Diamond B, 1st floor .....

4:45 p.m. – 5:00 p.m. Intermission

5:00 p.m. – 6:30 p.m. **Concurrent Sessions** MS15 Optimization Methods for Constrained Machine Learning Problems - Part I of II Diamond B, 1st floor MS159 Recent Advances in Large-Scale Nonlinear Optimization II - Part IV of IV *Grand Ballroom B/C/D, 2nd floor* MS160 On Addressing Nonsmoothness, Hierarchy, and Uncertainty in Optimization and Games - Part IV of IV Grand Ballroom A, 2nd floor MS161 On Decomposition Techniques for Nonlinear Optimization - Part IV of IV Willow A. 2nd floor MS162 Convexification of Discrete and Nonconvex Optimization with Application to Machine Learning Willow B, 2nd floor MS163 Risk Models in Stochastic Optimization Redwood A, 2nd floor MS164 Challenges in Inverse Problems with Massive Data - Part IV of IV Cedar A, 2nd floor MS165 Bilevel Optimization and Minimax Problems: Theory, Algorithms, and Applications -Part II of II Cedar B. 2nd floor MS166 JuMP and Julia for Computational Optimization - Part III of III - Applications Columbia, 4th floor

MS167 Algorithms for Large Scale Optimization Problems in Machine Learning Jefferson B, 4th floor MS168 Global Optimization Under Uncertainty in Science and Engineering - Part II of III Seneca, 4th floor MS169 Recent Advances in Operator Splitting and Fixed-Point Algorithms - Part IV of IV University, 4th floor MS170 Recent Advancements in Optimization Methods for Machine Learning - Part IV of IV Virginia, 4th floor MS171 Optimization in Statistical Learning Diamond A, 1st floor MS172 Numerical Techniques in Polynomial Optimization - Part II of II Kirkland, 3rd floor MS173 Robust Learning in Static and Dynamic Environments - Part IV of IV Leschi, 3rd floor MS174 Maritime Inventory Routing of Liquefied Natural Gas Medina, 3rd floor MS175 Advances in Numerical Optimization, Control and Applications - Part II of II Ravena A, 3rd floor MS176 ML, NonNewtonian Geometry, Operator Splitting, Multiprecision, and QCQP with Applications to Combinatorial Problems - Part II of Π Ravena C, 3rd floor **CP11** Structured and Geometric Optimization Redwood B, 2nd floor CP12 Machine Learning I Jefferson A, 4th floor CP13 Games Theory I Ballard, 3rd floor CP14 PDE-Constrained Optimization and Applications Ravena B, 3rd floor

..... ..... 7:30 p.m. – 10:00 p.m. SIOPT Editorial Board Meeting and Dinner (by invitation only) Cirrus Ballroom, 35th floor, Pike Street Tower

# Friday, June 2

7:30 a.m. – 5:15 p.m. Registration Desk Spruce, 2nd floor

### 8:00 a.m. - 9:00 a.m.

IP4 Exactness in Semidefinite Program Relaxations and Its Implications Fatma Kilinc-Karzan, Carnegie Mellon University, U.S. Grand Ballroom B/C/D, 2nd floor

# Friday, June 2

### **9:00 a.m. – 9:15 a.m.** Intermission

# 9:15 a.m. – 10:45 a.m.

### **Concurrent Sessions**

**SP1** SIAM Prize Session: 2023 SIAG/OPT Best Paper Prize Lecture: Stochastic Model-Based Minimization of Weakly Convex Functions Damek Davis, Cornell University, U.S. Grand Ballroom B/C/D, 2nd floor MS177 Adaptivity and Universality: First-Order Methods and Beyond Willow A, 2nd floor MS178 Mixed-Integer Nonlinear Programming, Algorithms and Software Willow B. 2nd floor MS179 Stochastic Optimization for Reinforcement Learning - Part I of II Redwood A, 2nd floor MS180 Algebro-Geometric Aspects of Optimization - Part I of II Redwood B, 2nd floor MS181 Optimization for Image Reconstruction -Part I of II Cedar A, 2nd floor MS182 Bilevel Optimization Problems: Algorithms and Applications - Part I of III Cedar B, 2nd floor MS183 Learning to Solve Optimization Problems with Deep Learning - Part I of III Boren, 4th floor MS184 Stochastic Combinatorial Optimization -Part I of III Columbia, 4th floor MS185 Advances at the Interface of Robust Optimization and Machine Learning Jefferson A, 4th floor MS186 Low-Rank Models and Algorithms for Matrix Optimization - Part I of II Jefferson B, 4th floor MS187 Global Optimization Under Uncertainty in Science and Engineering - Part III of III Seneca, 4th floor MS188 Splitting Methods for Nonsmooth Optimization and Beyond - Part I of III University. 4th floor MS189 Advances in First-Order Methods - Part I of Π Virginia, 4th floor MS190 Recent Advances in Stochastic Optimization Methods for Machine Learning - Part I of II Diamond A. 1st floor MS191 Applications in Dynamic Optimization and Games - Part I of IV Diamond B, 1st floor MS192 Variational Analysis: Theory and Applications - Part I of IV Ballard, 3rd floor

MS193 Nonlinear Optimization and Applications *Kirkland, 3rd floor* 

# Friday, June 2

MS194 Communication-Efficient Federated Optimization - Part I of IV Leschi, 3rd floor MS195 Modeling and Optimization in Global Health Medina, 3rd floor MS196 Recent Advances in Nonconvex Optimization Ravena A, 3rd floor MS197 Optimization of Time-Dependent Systems -Part I of II Ravena B, 3rd floor MS198 Quantum Relative Entropy Optimization and its Applications Ravena C, 3rd floor **CP15** Linear Programming and Applications Grand Ballroom A, 2nd floor

9:30 a.m. – 4:30 p.m. Exhibits Grand Ballroom Foyer, 2nd floor

## 10:00 a.m. – 10:45 a.m.

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**SP2** SIAM Prize Session: 2023 SIAG/OPT Test of Time Award Lecture: Two Decades of Low-Rank Optimization Samuel Burer, University of Iowa, U.S. *Grand Ballroom B/C/D, 2nd floor* 

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**10:45 a.m.** – **11:15 a.m.** Coffee Break *Grand Ballroom Foyer, 2nd floor* 

11:15 a.m. – 12:45 p.m. **Concurrent Sessions** MS199 Kurt-Fest! - Part I of III Grand Ballroom B/C/D, 2nd floor MS200 Efficient Algorithms for Large-Scale Nonsmooth Optimization Problems and Applications - Part I of III Grand Ballroom A, 2nd floor MS201 Adaptive Optimization Methods - Part I of III Willow A, 2nd floor MS202 Recent Developments in Integer Programming - Part I of III Willow B, 2nd floor MS203 Stochastic Optimization for Reinforcement Learning - Part II of II Redwood A, 2nd floor MS204 Algebro-Geometric Aspects of Optimization - Part II of II Redwood B, 2nd floor MS205 Optimization for Image Reconstruction -Part II of II Cedar A, 2nd floor MS206 Bilevel Optimization Problems: Algorithms and Applications - Part II of III Cedar B, 2nd floor

# Friday, June 2

MS207 Learning to Solve Optimization Problems with Deep Learning - Part II of III Boren, 4th floor MS208 Stochastic Combinatorial Optimization -Part II of III Columbia, 4th floor MS209 Computationally Efficient Approaches for Distributionally Robust Optimization Jefferson A, 4th floor MS210 Low-Rank Models and Algorithms for Matrix Optimization - Part II of II Jefferson B, 4th floor MS211 Blackbox Optimization and Derivative-Free Algorithms I - Part I of IV Seneca, 4th floor MS212 Splitting Methods for Nonsmooth Optimization and Beyond - Part II of III University, 4th floor MS213 Advances in First-Order Methods - Part II of Π Virginia, 4th floor MS214 Recent Advances in Stochastic Optimization Methods for Machine Learning - Part II of II Diamond A, 1st floor MS215 Applications in Dynamic Optimization and Games - Part II of IV Diamond B, 1st floor MS216 Variational Analysis: Theory and Applications - Part II of IV Ballard, 3rd floor MS217 New Algorithmic Techniques for Global Optimization Kirkland, 3rd floor MS218 Communication-Efficient Federated Optimization - Part II of IV Leschi, 3rd floor MS219 Modeling and Optimization in Global Health II Medina, 3rd floor MS220 Recent Advances in Nonconvex Optimization: Methodology, Theory, Application Ravena A, 3rd floor MS221 Optimization of Time-Dependent Systems -Part II of II Ravena B, 3rd floor MS222 Semidefinite Programming for Discrete Optimization - Part I of III Ravena C, 3rd floor

12:45 p.m. – 1:45 p.m. Lunch Break *attendees on their own* 

# 1:45 p.m. – 2:45 p.m.

**IP5** Optimization Over Probability Distributions Tong Zhang, The Hong Kong University of Science and Technology, Hong Kong *Grand Ballroom B/C/D, 2nd floor* 

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# Friday, June 2

# Friday, June 2

**2:45 p.m. – 3:15 p.m.** Coffee Break *Grand Ballroom Foyer, 2nd floor* 

### ..... 3:15 p.m. – 4:45 p.m. **Concurrent Sessions** MT1 On the Role of Circuits in Linear Programming - Part I of II Grand Ballroom A, 2nd floor MS223 Kurt-Fest! - Part II of III Grand Ballroom B/C/D, 2nd floor MS224 Adaptive Optimization Methods - Part II of III Willow A, 2nd floor MS225 Recent Developments in Integer Programming - Part II of III Willow B, 2nd floor MS226 Optimization with Rare Events - Part I of II Redwood A, 2nd floor MS227 Geometric Perspectives in Optimization -Part I of II Redwood B. 2nd floor MS228 The £0 Pseudonorm: Theory and Algorithms: Theory and Algorithms - Part I of II Cedar A, 2nd floor MS229 Bilevel Optimization Problems: Algorithms and Applications - Part III of III Cedar B. 2nd floor MS230 Learning to Solve Optimization Problems with Deep Learning - Part III of III Boren, 4th floor MS231 Stochastic Combinatorial Optimization -Part III of III Columbia. 4th floor MS232 Modeling Frontier and Algorithmic Foundation of Robust Optimization - Part I of II Jefferson A, 4th floor MS233 Memory Efficient Algorithms for Semidefinite Programs with Low-Rank Solutions Jefferson B. 4th floor MS234 Blackbox Optimization and Derivative-Free Algorithms I - Part II of IV Seneca, 4th floor MS235 Splitting Methods for Nonsmooth Optimization and Beyond - Part III of III University, 4th floor MS236 Optimization in Data Science Virginia, 4th floor MS237 Recent Advances at the Intersection of Optimization and Machine Learning - Part I of II Diamond A, 1st floor MS238 Applications in Dynamic Optimization and Games Diamond B, 1st floor MS239 Variational Analysis: Theory and Applications - Part III of IV Ballard, 3rd floor MS240 New Methods For Global Optimization Kirkland, 3rd floor

### MS241 Communication-Efficient Federated Optimization - Part III of IV Leschi, 3rd floor MS242 Optimization in Biological Sciences - Part I of II Medina, 3rd floor MS243 Some Recent Advances in First-Order Methods Ravena A, 3rd floor MS244 Decision and Control Blending Combinatorial and Continuous Optimization - Part I of II Ravena B, 3rd floor MS245 Semidefinite Programming for Discrete Optimization - Part II of III Ravena C, 3rd floor .....

Friday, June 2

**4:45 p.m.** – **5:00 p.m.** Intermission

Seneca, 4th floor

..... 5:00 p.m. – 6:30 p.m. **Concurrent Sessions** MT2 On the Role of Circuits in Linear Programming - Part II of II Grand Ballroom A, 2nd floor MS37 Optimization Methods for Constrained Machine Learning Problems - Part II of II Diamond B. 1st floor MS246 Kurt-Fest! - Part III of III Grand Ballroom B/C/D, 2nd floor MS247 Adaptive Optimization Methods - Part III of III Willow A, 2nd floor MS248 Recent Developments in Integer Programming - Part III of III Willow B, 2nd floor MS249 Optimization with Rare Events - Part II of II Redwood A, 2nd floor MS250 Geometric Perspectives in Optimization -Part II of II Redwood B, 2nd floor MS251 The £0 Pseudonorm: Theory and Algorithms - Part II of II Cedar A, 2nd floor MS252 Advances in Operator Splitting Techniques and Computational Game Theory - Part I of III Cedar B, 2nd floor MS253 Game Theory and Mathematical Programming Boren, 4th floor MS254 Methods for Constrained Non-smooth Optimization with Application to Machine Learning Columbia, 4th floor MS255 Modeling Frontier and Algorithmic Foundation of Robust Optimization - Part II of II Jefferson A, 4th floor MS256 Applications of Semidefinite Programming Jefferson B, 4th floor MS257 Blackbox Optimization and Derivative-Free Algorithms I - Part III of IV

MS258 Advances in Frugal Splitting Methods for Sums of Monotone Operators University, 4th floor MS259 Recent Advances in Continuous-Time Dynamics for Optimization\* Virginia, 4th floor MS260 Recent Advances at the Intersection of Optimization and Machine Learning - Part II of II Diamond A, 1st floor MS261 Variational Analysis: Theory and Applications - Part IV of IV Ballard, 3rd floor MS262 Communication-Efficient Federated Optimization - Part IV of IV Leschi, 3rd floor MS263 Optimization in Biological Sciences - Part II of II Medina, 3rd floor MS264 Advances in Multiplicative Update Algorithms Ravena A, 3rd floor MS265 Decision and Control Blending Combinatorial and Continuous Optimization - Part II of II Ravena B, 3rd floor MS266 Semidefinite Programming for Discrete Optimization - Part III of III Ravena C, 3rd floor CP16 Multi-Objective Optimization and Applications Kirkland, 3rd floor

# Saturday, June 3

7:30 a.m. – 5:00 p.m. Registration Desk Spruce, 2nd floor

8:00 a.m. – 9:00 a.m. IP6 Large-Scale and Data-Driven Markov Decision Processes Wolfram Wiesemann, Imperial College London, United Kingdom *Grand Ballroom B/C/D, 2nd floor* 

.....

9:00 a.m. – 9:15 a.m. Intermission

9:15 a.m. – 10:45 a.m. Concurrent Sessions MT3 Optimization on Manifolds - Part I of II *Grand Ballroom A, 2nd floor* MS18 Policy Optimization Methods for Reinforcement Learning and Control - Part I of IV Diamond A, 1st floor

.....

# Saturday, June 3

MS267 The Interplay Between Learning and

# Saturday, June 3

MT4 Optimization on Manifolds - Part II of II

MS287 Nonlinear Optimization Methods with

MS288 Algorithms for Nonlinear Optimization -

MS289 Algorithms and Relaxations for Discrete

MS290 Stochastic Optimization and Non-Euclidean

MS291 Riemannian Optimization - Part II of III

MS292 Recent Advances in Variational and Data-

Driven Methods for Inverse Problems - Part II of III

MS293 Advances in Operator Splitting Techniques

and Computational Game Theory - Part III of III

MS294 Collective Decisions and Entropy in Data-

MS295 Advances in Matroid Optimization - Part II

MS296 Recent Advances in Robust Decision Rules:

MS298 Blackbox Optimization and Derivative-Free

MS299 Randomized Methods for Linear Systems:

Row-Action and Coordinate Descent - Part II of III

MS302 Variational Analysis and Applications - Part

MS301 Structured Optimization: Trends and

MS303 Recent Algorithmic Advances in

Multiobjective Optimization - Part II of IV

MS305 Optimization for Decarbonization

CP18 Nonsmooth Optimization II

MS304 Recent Advances in Federated Learning

MS297 Constrained Tensor Methods and

Multilinear Optimization - Part II of III

Driven Optimization Landscapes - Part II of III

Reinforcement Learning and Control - Part II of IV

MS40 Policy Optimization Methods for

# Saturday, June 3

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**CP19** Topics in Control Diamond B, 1st floor

12:45 p.m. – 1:45 p.m. Lunch Break attendees on their own

### ..... 1:45 p.m. – 2:45 p.m.

IP7 Optimization Applications and Challenges across Amazon Operations Russell Allgor, Amazon, U.S. *Grand Ballroom B/C/D, 2nd floor* 

..... 2:45 p.m. – 3:15 p.m. Coffee Break Grand Ballroom Foyer, 2nd floor



..... 3:15 p.m. - 4:45 p.m. **Concurrent Sessions** MS62 Policy Optimization Methods for Reinforcement Learning and Control - Part III of IV Diamond A, 1st floor MS306 Next Generation Algorithms for Nonlinear Optimization - Part I of II Grand Ballroom B/C/D, 2nd floor MS307 Efficient Algorithms for Large-Scale Nonsmooth Optimization Problems and Applications - Part II of III Grand Ballroom A, 2nd floor MS308 Algorithms for Nonlinear Optimization -Part II of III Willow A, 2nd floor MS309 Mathematical Optimization Methods in Explainable Machine Learning Willow B, 2nd floor MS310 Stochastic Optimization and Non-Euclidean Settings - Part III of III Redwood A, 2nd floor MS311 Riemannian Optimization - Part III of III Redwood B, 2nd floor MS312 Recent Advances in Variational and Data-Driven Methods for Inverse Problems - Part III of III Cedar A. 2nd floor MS313 AI and Optimization to Enhance Power Grid Reliability and Flexibility - Part I of II Cedar B, 2nd floor MS314 Collective Decisions and Entropy in Data-Driven Optimization Landscapes - Part III of III Boren, 4th floor MS315 Robust Optimization: Bounds and Applications Jefferson A, 4th floor MS316 Constrained Tensor Methods and Multilinear Optimization - Part III of III Jefferson B, 4th floor MS317 Blackbox Optimization and Derivative-Free Algorithms II - Part II of III Seneca, 4th floor

Grand Ballroom B/C/D, 2nd floor MS268 Adaptivity in Stochastic Optimization Willow A, 2nd floor MS269 Algorithms and Relaxations for Discrete Optimization - Part I of II Willow B, 2nd floor MS270 Stochastic Optimization and Non-Euclidean Settings - Part I of III Redwood A, 2nd floor MS271 Riemannian Optimization - Part I of III Redwood B, 2nd floor MS272 Recent Advances in Variational and Data-Driven Methods for Inverse Problems - Part I of III Cedar A, 2nd floor MS273 Advances in Operator Splitting Techniques and Computational Game Theory - Part II of III Cedar B, 2nd floor MS274 Collective Decisions and Entropy in Data-Driven Optimization Landscapes - Part I of III Boren, 4th floor MS275 Advances in Matroid Optimization - Part I of II Columbia, 4th floor MS276 Recent Advances in Data-Driven Optimization and Learning Jefferson A, 4th floor MS277 Constrained Tensor Methods and Multilinear Optimization - Part I of III Jefferson B, 4th floor MS278 Blackbox Optimization and Derivative-Free Algorithms I - Part IV of IV Seneca, 4th floor MS279 Randomized Methods for Linear Systems: Row-Action and Coordinate Descent - Part I of III Virginia, 4th floor MS281 Applications in Dynamic Optimization and Games - Part IV of IV Diamond B, 1st floor MS282 Structured Optimization: Trends and Frontiers - Part I of III Aspen, 2nd floor MS283 Variational Analysis and Applications - Part I of IV Ballard, 3rd floor MS284 Recent Algorithmic Advances in Multiobjective Optimization - Part I of IV Kirkland, 3rd floor MS285 Recent Advances in Federated Learning Algorithms - Part I of II Leschi, 3rd floor MS286 Optimization in Healthcare Medina, 3rd floor CP17 Nonsmooth Optimization I University, 4th floor 

10:45 a.m. - 11:15 a.m. Coffee Break Grand Ballroom Foyer, 2nd floor



11:15 a.m. - 12:45 p.m.

Grand Ballroom A, 2nd floor

Grand Ballroom B/C/D, 2nd floor

**Concurrent Sessions** 

Diamond A. 1st floor

Convergence Rates

Willow A. 2nd floor

Willow B, 2nd floor

Settings - Part II of III

Redwood A, 2nd floor

Redwood B, 2nd floor

Cedar A, 2nd floor

Cedar B, 2nd floor

Boren, 4th floor

Columbia, 4th floor

Jefferson A, 4th floor

Jefferson B, 4th floor

Seneca, 4th floor

Virginia, 4th floor

Aspen, 2nd floor

Ballard, 3rd floor

Kirkland, 3rd floor

Leschi, 3rd floor

Medina, 3rd floor

University, 4th floor

Algorithms - Part II of II

II of IV

Frontiers - Part II of III

Algorithms II - Part I of III

Theory and Applications

of II

Optimization - Part II of II

Part I of III

Optimization

# Saturday, June 3

MS318 Randomized Methods for Linear Systems: Row-Action and Coordinate Descent - Part III of III Virginia, 4th floor MS320 Structured Optimization: Trends and Frontiers - Part III of III Aspen, 2nd floor MS321 Variational Analysis and Applications - Part III of IV Ballard, 3rd floor MS322 Recent Algorithmic Advances in Multiobjective Optimization - Part III of IV Kirkland, 3rd floor MS323 Tradeoffs of Federated Learning: Communication, Data Heterogeneity, and Privacy Leschi, 3rd floor MS324 Optimization for Social Good Medina, 3rd floor CP20 Integer Programming I Columbia, 4th floor CP21 Theoretical Advances in Nonlinear Optimization University, 4th floor .....

4:45 p.m. – 5:00 p.m. Intermission

# 5:00 p.m. – 6:30 p.m.

Concurrent Sessions MS84 Policy Optimization Methods for Reinforcement Learning and Control - Part IV of IV Diamond A, 1st floor

# Saturday, June 3

MS85 Innovations in Continuous Approximation Analysis Virginia, 4th floor MS325 Next Generation Algorithms for Nonlinear Optimization - Part II of II Grand Ballroom B/C/D, 2nd floor MS326 Efficient Algorithms for Large-Scale Nonsmooth Optimization Problems and Applications - Part III of III Grand Ballroom A, 2nd floor MS327 Algorithms for Nonlinear Optimization -Part III of III Willow A, 2nd floor MS328 Structured Nonconvex Optimization and Applications Redwood B, 2nd floor MS329 AI and Optimization to Enhance Power Grid Reliability and Flexibility - Part II of II Cedar B, 2nd floor MS330 Data-Driven Optimization: Algorithms and Theoretical Guarantees Jefferson A, 4th floor MS331 Algorithms and Applications of Large-Scale **SDPs** Jefferson B, 4th floor MS332 Blackbox Optimization and Derivative-Free Algorithms II - Part III of III Seneca, 4th floor MS333 Variational Analysis and Applications - Part IV of IV Ballard, 3rd floor

# Saturday, June 3

MS334 Recent Algorithmic Advances in Multiobjective Optimization - Part IV of IV Kirkland, 3rd floor MS335 Advances in Risk-Sensitive and Robust Markov Decision Processes Leschi, 3rd floor MS336 Oil & Gas Value Chain Optimization Medina, 3rd floor CP22 Applications (OR) Willow B, 2nd floor CP23 Stochastic Optimization Redwood A, 2nd floor **CP24** Inverse Problems and Applications Cedar A, 2nd floor CP25 Machine Learning III Boren, 4th floor CP26 Integer Programming II Columbia, 4th floor CP27 Nonlinear Optimization, Dynamics and Control II University, 4th floor CP28 Machine Learning II Diamond B, 1st floor

2023 SIAM Conference on Applied and Computational Discrete Algorithms (ACDA23) (see page 11)

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# Key to abbreviations and symbols Image: symbol = Business Meeting Image: symbol = Coffee Break Image: symbol = Coffee Break Image: symbol = Refreshments Served Image: symbol = Contributed Presentation Session

- P = Invited Plenary Speaker
- MS = Minisymposium
- MT = Minitutorial
- **PP** = Poster Session
- **SP** = Special Lecture
- ★ = Extended Session

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Society for Industrial and Applied Mathematics

# Tuesday, May 30

3:00 p.m. - 7:00 p.m. Registration Desk Spruce, 2nd floor

5:00 p.m. – 7:00 p.m. Welcome Reception Grand Ballroom Foyer, 2nd floor



# Wednesday, May 31

7:00 a.m. - 5:30 p.m. Registration Desk Spruce, 2nd floor

### ..... 7:45 a.m. – 9:00 a.m.

JP1 Welcome Remarks and Joint Plenary with OP23 - On the Optimization of Nonsmooth Problem Without Generalized Derivatives Andrea Walther, Humboldt University Berlin, Germany Grand Ballroom B/C/D, 2nd floor

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9:00 a.m. – 9:15 a.m. Intermission

9:15 a.m. – 9:45 a.m. SP1 Session 1 - 2023 SIAG/ACDA Early Career Prize: Generalized Hypergraph Cut Algorithms and Their Applications Nate Veldt, Texas A&M University, U.S. Aspen, 2nd floor

.....

..... 9:45 a.m. - 10:45 a.m.

CP1 Session 1 Aspen, 2nd floor

10:45 a.m. – 11:15 a.m. Coffee Break Grand Ballroom Foyer, 2nd floor

..... 11:15 a.m. – 12:45 p.m. CP2 Session 2 Aspen, 2nd floor

..... 12:45 p.m. – 1:45 p.m. Lunch Break (attendees on their own)

..... 1:45 p.m. – 2:45 p.m. IP2 Bigger Is Better: Why Wafer-Size Chips Matter Rob Schreiber, Cerebras, U.S. Grand Ballroom A, 2nd floor

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2:45 p.m. – 3:15 p.m. Coffee Break Grand Ballroom Foyer, 2nd floor

3:15 p.m. – 4:15 p.m. CP3 Session 3 Aspen, 2nd floor

# Wednesday, May 31

..... 4:15 p.m. – 4:30 p.m. Intermission

..... 4:30 p.m. – 6:30 p.m. CP4 Invited Minitutorial 1 - Sergei Vassilvitskii; Beyond Worst Case Analysis Aspen, 2nd floor

..... ..... 6:30 p.m. – 7:30 p.m. PP1 ACDA23 Poster Session Grand Ballroom Foyer, 2nd floor



# Thursday, June 1

7:30 a.m. - 5:15 p.m. Registration Desk Spruce, 2nd floor

### . . . . . . . . . . . . . . 8:00 a.m. – 9:00 a.m.

IP3 Political Apportionment Through the Lens of Combinatorial Optimization Jose Correa, Universidad de Chile, Chile Grand Ballroom A, 2nd floor

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9:00 a.m. – 9:15 a.m. Intermission

9:15 a.m. – 10:45 a.m. CP5 Session 5 Aspen, 2nd floor

..... 10:45 a.m. – 11:15 a.m. Coffee Break Grand Ballroom Foyer, 2nd floor

..... 11:15 a.m. – 12:45 p.m. **CP6** Session 6 Aspen, 2nd floor

..... 12:45 p.m. – 1:45 p.m. Lunch Break (attendees on their own)

..... 1:45 p.m. – 2:45 p.m. IP4 New Local Differentially Private Protocols for Frequency and Mean Estimation Jelani Nelson, University of California, Berkeley, U.S.

Grand Ballroom A, 2nd floor

..... 2:45 p.m. – 3:15 p.m. Coffee Break Grand Ballroom Foyer, 2nd floor

..... 3:15 p.m. – 4:15 p.m. CP7 Session 7 Aspen, 2nd floor

# Thursday, June 1

4:15 p.m. – 4:30 p.m. Intermission

..... 4:30 p.m. – 6:00 p.m. CP8 Session 8 Aspen, 2nd floor

..... 6:00 p.m. – 6:30 p.m. Intermission

6:30 p.m. – 7:30 p.m. SIAG/ACDA Business Meeting Aspen, 2nd floor Complimentary beer and wine will be served

# Friday, June 2

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7:15 a.m. - 5:15 p.m. Registration Desk Spruce, 2nd floor

8:00 a.m. - 9:00 a.m. **IP5** Where the Wild Things Are Sivan A. Toledo, Tel Aviv University, Israel Grand Ballroom A, 2nd floor

..... 9:00 a.m. – 9:15 a.m. Intermission

9:15 a.m. - 10:45 a.m. CP9 Session 9 Aspen, 2nd floor

10:45 a.m. – 11:15 a.m. Coffee Break Grand Ballroom Foyer, 2nd floor

11:15 a.m. - 12:45 p.m. CP10 Session 10 Aspen, 2nd floor

12:45 p.m. – 1:45 p.m. Lunch Break (attendees on their own)

1:45 p.m. – 2:45 p.m. IP6 Not Too Sparse, Not Too Dense ... Blair D. Sullivan, University of Utah, U.S. Grand Ballroom A, 2nd floor

.....

2:45 p.m. – 3:15 p.m. Coffee Break Grand Ballroom Foyer, 2nd floor

3:15 p.m. – 4:45 p.m. CP11 Session 11 Aspen, 2nd floor



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# Fourth Floor – Union Street Tower



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**Second Floor** 





