At-A-Glance

2018 SIAM Annual Meeting
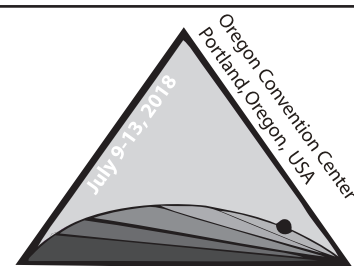
Annual Meeting

July 9–13, 2018
Oregon Convention Center (OCC)
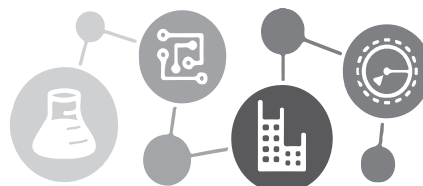Portland, Oregon, USA

SIAM Workshop on
Network Science
July 12-13, 2018
Oregon Convention Center
Portland, Oregon, USA

J. J. Potterat et al, Sexually Transmitted Infections, 780 (20 2), Pp. I159-I163

SIAM Conference on
**Mathematical Aspects
of Materials Science**

Oregon Convention Center
Portland, Oregon, USA

July 9-13, 2018

**SIAM Conference on
Applied Mathematics Education (ED18)
July 9-11, 2018
Oregon Convention Center
Portland, Oregon, USA**

SIAM Events Mobile App

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Society for Industrial and Applied Mathematics
3600 Market Street, 6th Floor
Philadelphia, PA 19104-2688 USA
Telephone: +1-215-382-9800 Fax: +1-215-386-7999
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2018 SIAM Annual Meeting At-A-Glance

Sunday, July 8

2:00 PM - 8:00 PM
Registration
Holladay Lobby

5:00 PM - 6:00 PM
Student Orientation
B116

6:00 PM - 8:00 PM
Welcome Reception
Prefunction Lobby A

Monday, July 9

7:00 AM - 8:30 PM
Committee on Committees & Appointments
Doubletree Hotel - Jefferson

7:15 AM - 4:30 PM
Registration
Holladay Lobby

8:30 AM - 10:30 AM
Concurrent Sessions
MS1 Current Topics in Cardiovascular Modeling and Simulation
Oregon Ballroom 202/203

MS2 Applications of Dynamical Systems Methods to Emergent Dynamics and Patterns - Part I of II
Oregon Ballroom 204

MS3 Geometry of Tensors
A105

MS4 Control and Estimation of Distributed Systems
A106

MS5 Algebraic Statistics: Data Analysis
A107

MS6 Recent Advances in Integral Equation Methods - Part I of II
A109

MS7 Polytopal Discretization Methods for Partial Differential Equations - Part I of II
B110

MS8 Highly Effective Numerical Methods for Systems of Partial Differential Equations - Part I of II
B111

MS9 System Identification and Uncertainty Quantification for Biological Systems
B112

MS10 Coupled Scales, Processes, and Data in Geosciences - Part I of III
B113

Monday, July 9

MS11 Student Days: Undergraduate Research Presentations - Part I of II
B115

MS12 AWM Workshop: Shape Analysis and Modeling - Part I of II
B116

MS13 Recent Advances in Eigenvalue Solvers - Part I of II
B117

MS14 Numerical Algorithms with Guaranteed Accuracy and Computational Cost
B118

MS15 Applications in Optimization
B119

CP1 UQ, Data Assimilation and Dimension Reduction
C123

CP2 Life Sciences and Bio Medicine*
C122

8:30 AM - 11:00 AM
Career Fair: Careers in Business, Industry, and Government
Oregon Ballroom 201

9:30 AM - 4:30 PM
Exhibit Hall Open
Oregon Ballroom Lobby

10:30 AM - 11:00 AM
Coffee Break
Oregon Ballroom Lobby

10:50 AM - 11:00 AM
Opening Remarks
Oregon Ballroom 202/203

11:00 AM - 11:45 AM
IP1 Bridging Scales
Martin Hairer, Imperial College of London, United Kingdom
Oregon Ballroom 202/203

11:45 AM - 12:30 PM
IP2 Algebraic Vision
Rekha Thomas, University of Washington, USA
Oregon Ballroom 202/203

12:30 PM - 2:00 PM
Lunch Break
Attendees on their own

Major Awards Committee
Doubletree Hotel - Jefferson

MMS Editorial Board Meeting
Doubletree Hotel - Roosevelt

Monday, July 9

2:00 PM - 2:45 PM
JP1 The Mathematics of Wrinkles and Folds
Robert V. Kohn, Courant Institute of Mathematical Sciences, New York University, USA
Oregon Ballroom 202/203

2:45 PM - 3:30 PM
SP1 The AWM-SIAM Sonia Kovalevsky Lecture: Learning and Efficiency of Outcomes in Games
Eva Tardos, Cornell University, USA
Oregon Ballroom 202/203

3:30 PM - 5:30 PM
Career Fair: Careers in Business, Industry, and Government
Oregon Ballroom 201

4:00 PM - 6:00 PM
Concurrent Sessions
MS16 Algebraic Statistics: Graphical and Network Models
Oregon Ballroom 202/203

MS17 Applications of Dynamical Systems Methods to Emergent Dynamics and Patterns - Part II of II
Oregon Ballroom 204

MS18 Numerical Algebraic Geometry - Part I of II
A105

MS19 PinT - Parallel-in-Time Methods for Large Scale Problems
A106

MS20 Tutorials for Students: Accessible Introductions to Active Research Areas – Part I of II
A107

MS21 Recent Advances in Integral Equation Methods - Part II of II
A109

MS22 Polytopal Discretization Methods for Partial Differential Equations - Part II of II
B110

MS23 Highly Effective Numerical Methods for Systems of Partial Differential Equations - Part II of II
B111

MS24 Stochastic Dynamics on Graphs - Part I of II
B112

MS25 Coupled Scales, Processes, and Data in Geosciences - Part II of III
B113

MS26 Numerical Methods for Photonics, Optics, and Metamaterials - Part I of II
B114

2018 SIAM Annual Meeting At-A-Glance

Monday, July 9

MS27 Student Days: Undergraduate Research Presentations - Part II of II
B115

MS28 AWM Workshop: Shape Analysis and Modeling - Part II of II
B116

MS29 Recent Advances in Eigenvalue Solvers - Part II of II
B117

MS30 Difficult Dialogues Workshop: How to Be a Better Ally
B118

MS31 Unstructured Meshing and Simulations
B119

CP3 Imaging Science
C122

CP4 PDEs and Financial Mathematics
C123

6:00 PM - 6:15 PM
Intermission

6:15 PM - 7:15 PM
PD1 Industry Panel
Oregon Ballroom 202/203

7:15 PM - 9:15 PM
Graduate Student Reception and Industry Reception
Prefunction Lobby A

7:30 PM - 9:15 PM
SIAM EIC Meeting
Doubletree Hotel - Roosevelt

CSE Book Series Editorial Board Meeting
Doubletree Hotel - Washington

Tuesday, July 10

7:00 AM - 8:15 AM
Student Days: Chapter Breakfast with SIAM Leadership (by invitation)
Portland Ballroom

7:00 AM - 8:30 AM
Book Committee
Doubletree Hotel – Washington

7:30 AM - 4:30 PM
Registration
Holladay Lobby

Tuesday, July 10

8:30 AM - 10:30 AM
Concurrent Sessions
MT1 Simulation-based Statistics
Oregon Ballroom 202/203

MS32 Innovative Pedagogical Practices, Curricular Reforms and Teaching Resources in Applied Mathematics Education - Part I of II
Oregon Ballroom 204

MS33 Numerical Algebraic Geometry - Part II of II
A105

MS34 Machine Learning for Scientific Computing - Part I of II
A106

MS35 Tutorials for Students: Accessible Introductions to Active Research Areas – Part II of II
A107

MS36 Recent Trends in Discretization for Linear and Nonlinear Problems - Part I of II
A109

MS37 Modeling and Uncertainty Quantification: Algorithms and Applications - Part I of II
B110

MS38 Coupled Scales, Processes, and Data in Geosciences - Part III of III
B111

MS39 DOE High-performance Mathematical Software - Part I of II
B113

MS40 Stochastic Dynamics on Graphs - Part II of II
B114

MS41 Student Days: Student Chapter Presentations - Part I of II
B115

MS42 Mathematical Advances in Motility and Collective Behavior in Living Systems
B116

MS43 Low-rank Tensors and High-dimensional Problems - Part I of II
B117

MS44 Data-driven Modeling and Control of Complex Systems - Part I of II
B118

MS45 Numerical Discretizations of Nonlinear Hyperbolic and Parabolic Partial Differential Equations - Part I of II
B119

MS46 Numerical Methods for Photonics, Optics, and Metamaterials - Part II of II
C124

CP5 Life Sciences and Medicine II
C122

CP6 Inverse Problems
C123

Tuesday, July 10

9:30 AM - 4:30 PM
Exhibit Hall Open
Oregon Ballroom Lobby

10:30 AM - 11:00 AM
Coffee Break
Oregon Ballroom Lobby

11:00 AM - 11:45 AM
IP3 Structure and Randomness in Encrypted Computation
Craig Gentry, IBM T.J. Watson Research Center, USA
Oregon Ballroom 202/203

11:45 AM - 12:30 PM
IP4 Automatic Behavioral Analysis for Computational Psychiatry at Home
Guillermo Sapiro, Duke University, USA
Oregon Ballroom 202/203

12:30 PM - 2:30 PM
Lunch Break
Attendees on their own

Prizes and Awards Luncheon
(separate fee applies)
Portland Ballroom

2:30 PM - 3:30 PM
SP2 The John Von Neumann Lecture: Untangling Random Polygons and Other Things
Charles F. Van Loan, Cornell University, USA
Oregon Ballroom 202/203

3:30 PM - 4:00 PM
Coffee Break
Oregon Ballroom Lobby

3:30 PM - 5:00 PM
SIAM Publications Coffee Break
(Visit the SIAM Booth to chat about publications.)
Oregon Ballroom Lobby

4:00 PM - 6:00 PM
Concurrent Sessions
MS47 Advances in Data Assimilation for Geosciences - Part I of II
Oregon Ballroom 202/203

MS48 Innovative Pedagogical Practices, Curricular Reforms and Teaching Resources in Applied Mathematics Education - Part II of II
Oregon Ballroom 204

2018 SIAM Annual Meeting At-A-Glance

Tuesday, July 10

MS49 Algebraic Statistics: Hidden Variable Models
A105

MS50 Machine Learning for Scientific Computing - Part II of II
A106

MS51 Financial Risk after the Crisis
A107

MS52 Recent Trends in Discretization for Linear and Nonlinear Problems - Part II of II
A109

MS53 Modeling and Uncertainty Quantification: Algorithms and Applications -- Part II of II
B110

MS54 Poro-mechanics and Multi-physics Phenomena - Part I of III
B111

MS55 Improving Convergence of Stochastic Gradient Descent Methods
B112

MS56 DOE High-performance Mathematical Software - Part II of II
B113

MS57 Nonlinear Dynamics and Complex Systems
B114

MS58 Student Days: Student Chapter Presentations - Part II of II
B115

MS59 AWM Workshop Panel: Perspectives and Advice from Women in Research
B116

MS60 Low-rank Tensors and High-dimensional Problems - Part II of II
B117

MS61 Data-driven Modeling and Control of Complex Systems - Part II of II
B118

MS62 Numerical Discretizations of Nonlinear Hyperbolic and Parabolic Partial Differential Equations - Part II of II
B119

CP7 Life Sciences and Bio Medicine III
C122

CP8 Topics in Applied Mathematics
C124

CP9 Dynamical Systems*
C123

6:00 PM - 6:15 PM
Intermission

Tuesday, July 10

6:15 PM - 7:00 PM
SIAM Business Meeting and 2018 Fellows Recognition
Oregon Ballroom 202/203

Complimentary beer and wine will be served.

7:00 PM - 7:30 PM
Fellows Reception
Oregon Ballroom 202/203

8:00 PM - 10:00 PM
PP1 Poster Session and Dessert Reception
Exhibit Hall A

PP2 Minisymposterium: Association for Women in Mathematics (AWM)
Exhibit Hall A

PP3 Minisymposterium: Current Trends in Mathematical Modeling and Simulation of Problems in Cardiovascular Medicine
Exhibit Hall A

PP4 Minisymposterium: DOE High-Performance Mathematical Software
Exhibit Hall A

PP5 Minisymposterium: Numerical Methods for Graph and Matrix Algorithms Using Kokkos
Exhibit Hall A

PP6 Minisymposterium: Student Days Student Chapter Posters
Exhibit Hall A

PP7 Minisymposterium: Student Days Undergraduate Posters
Exhibit Hall A

PP8 Minisymposterium: Software for Numerical Linear Algebra
Exhibit Hall A

Wednesday, July 11

7:00 AM - 8:30 AM
Membership Committee
Doubletree Hotel - Washington

Education Committee
Doubletree Hotel - Jefferson

8:00 AM - 4:30 PM
Registration
Holladay Lobby

8:30 AM - 10:30 AM
Concurrent Sessions
MS63 Advances in Data Assimilation for Geosciences - Part II of II
Oregon Ballroom 202/203

Wednesday, July 11

MS64 Financial Tech - Part I of II
Oregon Ballroom 204

MS65 Numerical Differential Geometry Meets Numerical Algebraic Geometry
A105

MS66 Recent Advances in Optimization Modeling and Algorithms
A106

MS67 Modern Aspects of Bound States and Resonance - Part I of II
A107

MS68 Advances in Computational Methods for Hyperbolic and Other Time Dependent Problems - Part I of II
A108

MS69 Expansion Complexes: From Finite Subdivision Rules to Circle Packing - Part I of II
A109

MS70 ***Session Cancelled***

MS71 Poro-mechanics and Multi-physics Phenomena - Part II of III
B111

MS72 Network Dynamics
B112

MS73 Methods and Algorithms in Complex Systems
B114

MS74 Student Days: Student Paper Prize Winner Presentations
B115

MS75 Recent Advances in Development and Application of Circadian Pacemaker Models
B116

MS76 Linear Algebra in Network Computations - Part I of II
B117

MS77 Recent Advances in Numerical Methods for Maxwell's Equations in Complex Media - Part I of II
B118

MS78 Matrices, Moments and Quadrature with Applications - Part I of II
B119

CP10 Life Sciences and Bio Medicine IV
C122

CP11 PDEs I*
C123

9:30 AM - 4:30 PM
Exhibit Hall Open
Oregon Ballroom Lobby

10:30 AM - 11:00 AM
Coffee Break
Oregon Ballroom Lobby

2018 SIAM Annual Meeting At-A-Glance

Wednesday, July 11

11:00 AM - 11:45 AM
JP2 Applied and Computational Mathematics: A New Curriculum for 21st Century Discovery and Innovation
Jeffrey Humpherys, Brigham Young University, USA
Oregon Ballroom 202/203

11:45 AM - 12:30 PM
IP5 Challenges for Numerical Analysis in Large-Scale Simulation
Barbara Wohlmuth, Technische Universität München, Germany
Oregon Ballroom 202/203

12:30 PM - 2:00 PM
Industry Committee
Doubletree Hotel - Jefferson

Journal Committee
Doubletree Hotel - Roosevelt

Lunch Break
Attendees on their own

Workshop Celebrating Diversity (WCD) Luncheon (by invitation)
B113

2:00 PM - 3:00 PM
SP3 Julian Cole Lectureship: Modeling of Complex Fluids: Wormlike Micellar Solutions, Polymers and Mucins
L. Pamela Cook, University of Delaware, USA
Oregon Ballroom 202/203

3:00 PM - 3:30 PM
SP4 W.T. and Idalia Reid Prize Lecture: Modeling, Simulation, and Control of Differential-Algebraic Port-Hamiltonian Systems
Volker Mehrmann, Technische Universität Berlin, Germany
Oregon Ballroom 202/203

3:30 PM - 4:00 PM
Coffee Break
Oregon Ballroom Lobby

3:30 PM - 5:00 PM
SIAM Publications Coffee Break
(Visit the SIAM Booth to chat about publications.)
Oregon Ballroom Lobby

Wednesday, July 11

4:00 PM - 6:00 PM
Concurrent Sessions
MS79 Theoretical Challenges of Tensor Decomposition - Part I of II
Oregon Ballroom 202/203

MS80 Financial Tech - Part II of II
Oregon Ballroom 204

MS81 New Methodologies for Uncertainty Quantification and Applications to the Geosciences
A105

MS82 Model Validation for Image Guided Therapy Response Prediction
A106

MS83 Analysis, Design, and Control of Neural Systems
A107

MS84 Advances in Computational Methods for Hyperbolic and Other Time Dependent Problems - Part II of II
A108

MS85 Expansion Complexes: From Finite Subdivision Rules to Circle Packing - Part II of II
A109

MS86 Large-scale Data Analytics and Predictive Simulation of Complex Systems
B110

MS87 Poro-mechanics and Multi-physics Phenomena - Part III of III
B111

MS88 Defects and Inhomogeneities in Pattern Forming Systems - Part I of II
B112

MS89 Analysis, Algorithms, and Simulations for the Study of Physical Phenomena
B114

MS90 Student Days: An Informal Meeting with the Co-chairs and Invited Speakers
B115

MS91 Nonsmooth Optimization
B116

MS92 Advances in Preconditioned Iterative Methods for Linear Systems - Part I of II
B117

MS93 Recent Advances in Numerical Methods for Maxwell's Equations in Complex Media - Part II of II
B118

MS94 Matrices, Moments and Quadrature with Applications - Part II of II
B119

CP12 Fluid Structure Interactions
C122

CP13 Geometry and Graph Theory
C123

Wednesday, July 11

CP14 Probability and Statistics
C124

6:00 PM - 6:15 PM
Intermission

6:15 PM - 7:15 PM
SP5 I.E. Block Community Lecture: How Paradoxes Shape Mathematics and Give Us Self-Verifying Computer Programs
Thomas Hales, University of Pittsburgh, USA
Oregon Ballroom 202/203

7:15 PM - 8:15 PM
Community Reception
Prefunction Lobby A

8:00 PM - 9:30 PM
PD2 The Women Behind the Space Program
Oregon Ballroom 202/203

8:15 PM - 9:15 PM
The NOGLSTP-SPECTRA (Association for LGBTQA Mathematicians) Reception
B113

Thursday, July 12

7:00 AM - 8:30 AM
Programs & Conferences Committee
Doubletree Hotel - Jefferson

8:00 AM - 4:30 PM
Registration
Holladay Lobby

8:15 AM - 5:00 PM
SIAM Workshop on Network Science (NS18)
Oregon Ballroom 201

8:30 AM - 10:30 AM
Concurrent Sessions
MT2 Geometric Deep Learning on Graphs and Manifolds Going Beyond Euclidean Data - Part I of II
Oregon Ballroom 202/203

MS95 Theoretical Challenges of Tensor Decomposition - Part II of II
Oregon Ballroom 204

MS96 Data-driven Identification of Infectious Disease Dynamics - Part I of II
A105

Thursday, July 12

MS97 Operations Research Meets Data Science: A Growing Tread for Enterprises
A106

MS98 Modern Aspects of Bound States and Resonance - Part II of II
A107

MS99 Algorithmic Trading: Modeling, Trading Strategies and Regulation
A109

MS100 Risk-averse Optimization and Applications
B110

MS101 Multiscale Analysis and Simulation of Heterogeneous Media
B111

MS102 Defects and Inhomogeneities in Pattern Forming Systems - Part II of II
B112

MS103 Machine Learning for Geoscience Applications
B113

MS104 Education, Inclusiveness and Outreach
B114

MS105 Automated Finite Element Analysis
B115

MS106 Enabling Scientific Discovery through Data Analysis and Compression
B116

MS107 Numerical Range, Numerical Radius and K-spectral Sets - Part I of II
B117

MS108 Numerical Methods for Mesoscale Modeling of Complex Fluids and Soft Matter - Part I of III
B118

Panel: Understanding How and Where Applied Math and Federal Government Intersect
B119

MS110 Recent Advances in Finite Element Methods for Multi-physics Problems
D136

MS111 Graph-enabled Science Applications at Scale - Part I of II
D139

MS112 Fast Algorithms for Integral Equations and their Applications - Part I of II
D140

CP15 Linear Algebra I
D137

CP16 Numerical Methods for PDEs
D138

CP17 Control Theory I
C122

CP18 Optimization and Machine Learning
C123

Thursday, July 12

8:30 AM - 10:50 AM
CP19 Flow through Porous Media *
C124

9:30 AM - 4:30 PM
Exhibit Hall Open
Oregon Ballroom Lobby

10:30 AM - 11:00 AM
Coffee Break
Oregon Ballroom Lobby

11:00 AM - 11:45 AM
IP6 Recent Advances in Dimensionality Reduction with Provable Guarantees
Jelani Nelson, Harvard University, USA
Oregon Ballroom 202/203

11:45 AM - 12:30 PM
IP7 Nonlinear Patterns and Waves: From Spectra to Stability and Dynamics
Bjorn Sandstede, Brown University, USA
Oregon Ballroom 202/203

12:30 PM - 2:00 PM
Lunch Break
Attendees on their own

Diversity Advisory Committee
Doubletree Hotel - Jefferson

Career Opportunities Committee
Doubletree Hotel - Adams

SIAP Editorial Board Meeting
Doubletree Hotel - Roosevelt

FA Book Series Editorial Board Meeting
Doubletree Hotel - Washington

2:00 PM - 2:45 PM
IP8 Understanding Network Structure and Function in the Human Brain
Danielle S. Bassett, University of Pennsylvania, USA
Oregon Ballroom 202/203

2:45 PM - 3:30 PM
Concurrent Sessions
MS113 Meet the Editors: The New SIAM Journal on Mathematics of Data Science
A106

MS109 SIAM in Washington Townhall
B119

Thursday, July 12

3:30 PM - 4:00 PM
Coffee Break
Oregon Ballroom Lobby

4:00 PM - 6:00 PM
Concurrent Sessions
MT3 Geometric Deep Learning on Graphs and Manifolds Going Beyond Euclidean Data - Part II of II
Oregon Ballroom 202/203

MS114 Transport, Mixing, and Optimality in Fluids - Part I of II
Oregon Ballroom 204

MS115 Optimization and Algebraic Geometry - Part I of III
A105

MS116 Mathematical Policy: Overview of the National Academies' Board on Mathematical Sciences and Analytics
A106

MS117 Stochastic Control and Optimal Portfolio Choice
A107

MS118 Advances in HPC Technology and Their Applications to NASA Missions
A109

MS119 Uncertainty Quantification and Data - Part I of III
B110

MS120 Quantum Dynamics - Part I of II
B111

MS121 Nonlinear Waves, Long-time Dynamics, and Stability - Part I of II
B112

MS122 Geophysical Flow Modeling in Natural Hazards - Part I of II
B113

MS123 Recent Advances in Mathematical Biology by Early Career Mathematicians
B114

MS124 Tensor Advances in Many Directions - Part I of II
B115

MS125 Linear Algebra in Network Computations - Part II of II
B116

MS126 Numerical Range, Numerical Radius and K-spectral Sets - Part II of II
B117

MS127 Numerical Methods for Mesoscale Modeling of Complex Fluids and Soft Matter - Part II of III
B118

MS128 Data Science with Tools from Applied Geometry and Algebra - Part I of II
B119

Thursday, July 12	Friday, July 13	Friday, July 13

MS129 Graph-enabled Science Applications at Scale - Part II of II
D139

MS130 Fast Algorithms for Integral Equations and their Applications - Part II of II
D140

CP20 Linear Algebra II
C122

CP21 PDEs II
C123

CP22 Optimization and Operations Research*
C124

4:00 PM - 11:00 PM
SIAM Council Meeting
Doubletree Hotel - Oregon

4:30 PM - 4:30 PM
Exhibit Hall Closes

6:00 PM - 6:15 PM
Intermission

6:15 PM - 9:15 PM
Professional Development Evening
D136

7:00 PM - 8:00 PM
Council Dinner
Doubletree - Alaska/Idaho

Friday, July 13

8:00 AM - 4:30 PM
Registration
Holladay Lobby

8:30 AM - 4:30 PM
SIAM Workshop on Network Science (NS18)
Oregon Ballroom 201

8:30 AM - 10:30 AM
Concurrent Sessions
MS131 Acquisition, Reconstruction, Processing, Learning and Analysis of Low Dimensional Manifolds
Oregon Ballroom 202/203

MS132 Transport, Mixing, and Optimality in Fluids - Part II of II
Oregon Ballroom 204

MS133 Optimization and Algebraic Geometry - Part II of III
A105

MS134 Data-driven Identification of Infectious Disease Dynamics - Part II of II
A106

MS135 Mean Field Games - Part I of II
A107

MS136 Uncertainty Quantification and Data - Part II of III
B110

MS137 Quantum Dynamics - Part II of II
B111

MS138 Nonlinear Waves, Long-time Dynamics, and Stability - Part II of II
B112

MS139 Geophysical Flow Modeling in Natural Hazards - Part II of II
B113

MS140 Women Advancing Mathematical Biology - Understanding Complex Biological Systems with Mathematics - Part I of II
B114

MS141 Tensor Advances in Many Directions - Part II of II
B115

MS142 Mathematics of Signal Processing, Optimization and Inverse Problems - Part I of II
B116

MS143 Advances in Preconditioned Iterative Methods for Linear Systems - Part II of II
B117

MS144 Numerical Methods for Mesoscale Modeling of Complex Fluids and Soft Matter – Part III of III
B118

MS145 Innovations in Linear & Eigen Solvers: From Algorithm to HPC
B119

MS146 Harmonic Analysis in Imaging and Signal Processing - Part I of II
D136

MS147 The Generalised Langevin Equation: Analysis, Applications, Numerical Algorithms - Part I of II
D137

MS148 Recent Advances in Numerical Methods for Electrostatics and Structural Biology - Part I of II
D138

MS149 Numerical Methods in Clifford Algebras- Part I of II
D139

MS150 Low Precision Arithmetic for Dense Numerical Linear Algebra
D140

CP23 Control Theory II
A108

CP24 Fluids
C123

CP25 Materials Science
C124

CP26 Geosciences*
C122

9:00 AM - 11:00 AM
Compensation Committee
Doubletree Hotel - Madison

10:30 AM - 11:00 AM
Coffee Break
Oregon Ballroom Lobby

11:00 AM - 11:45 AM
IP9 American Mathematical Society (AMS) Invited Address -- Snow Business: Computational Elastoplasticity in the Movies and Beyond
Joseph Teran, University of California, Los Angeles, USA
Oregon Ballroom 202/203

11:00 AM - 12:00 PM
Systems Oversight Committee
Doubletree Hotel - Roosevelt

11:45 AM - 12:30 PM
IP10 Connections and Reconnections: A Link Between Mathematics, Physics and DNA
Mariel Vazquez, University of California, Davis, USA
Oregon Ballroom 202/203

12:00 PM - 1:00 PM
SOC/FMC Lunch Meeting
Doubletree Hotel - Alaska/Idaho

12:30 PM - 2:00 PM
Math in Industry Book Series Ed Board Meeting
Doubletree Hotel - Madison

Lunch Break
Attendees on their own

1:00 PM - 4:00 PM
Financial Management Committee
Doubletree Hotel - Roosevelt

2:00 PM - 2:45 PM
IP11 The Future of Scientific Computation
Bruce Hendrickson, Lawrence Livermore National Laboratory, USA
Oregon Ballroom 202/203

Friday, July 13

2:45 PM - 3:30 PM
IP12 Seeing Through Rock: Mathematics of Inverse Wave Propagation
William Symes, Rice University, USA
Oregon Ballroom 202/203

3:30 PM - 4:00 PM
Coffee Break
Oregon Ballroom Lobby

4:00 PM - 6:00 PM
Concurrent Sessions
MS151 Recent Advances in Seismic Inversion
Oregon Ballroom 202/203

MS152 Randomized Numerical Algorithms: Foundations and Practice
Oregon Ballroom 204

MS153 Optimization and Algebraic Geometry - Part III of III
A105

MS154 Math Tools for Optimization, Uncertainty Quantification, and Sensitivity Analysis in Numerical Simulations
A106

MS155 Mean Field Games - Part II of II
A107

MS156 Uncertainty Quantification and Data - Part III of III
B110

MS157 Developments in WENO and Discontinuous Galerkin Methods for Gas Dynamics
B111

MS158 New Perspectives on Model Inversion Enabled by Model Reduction and Machine Learning Algorithms
B112

MS159 Lessons from Early Applications Success on Quantum Computers
B113

MS160 Women Advancing Mathematical Biology - Understanding Complex Biological Systems with Mathematics - Part II of II
B114

MS161 From Gene to Migration in Cancer and Stem Cell Differentiation
B115

MS162 Mathematics of Signal Processing, Optimization and Inverse Problems - Part II of II
B116

MS163 Distance Geometry
B117

MS164 Joining Algorithmic Differentiation with Automatic Simulation
B118

Friday, July 13

MS165 Data Science with Tools from Applied Geometry and Algebra- Part II of II
B119

MS166 Harmonic Analysis in Imaging and Signal Processing - Part II of II
D136

MS167 The Generalised Langevin Equation: Analysis, Applications, Numerical Algorithms- Part II of II
D137

MS168 Recent Advances in Numerical Methods for Electrostatics and Structural Biology - Part II of II
D138

MS169 Numerical Methods in Clifford Algebras- Part II of II
D139

CP27 Fluids, CFD, and Heat Transfer
A108

CP28 Simulation and Modeling
A109

4:00 PM - 7:00 PM
Board of Trustees Executive Session
Doubletree Hotel - Oregon

Saturday, July 14

8:30 AM - 4:00 PM
Board of Trustees Regular Session
Doubletree Hotel - Oregon

VISIT THE EXHIBITS!

OREGON CONVENTION CENTER
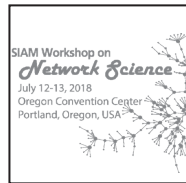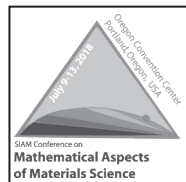## PORTLAND, OREGON, USA
OREGON BALLROOM LOBBY—UPPER LEVEL

EXHIBIT HALL HOURS

Monday 7/9
9:30 AM—4:30 PM

Tuesday 7/10
9:30 AM—4:30 PM

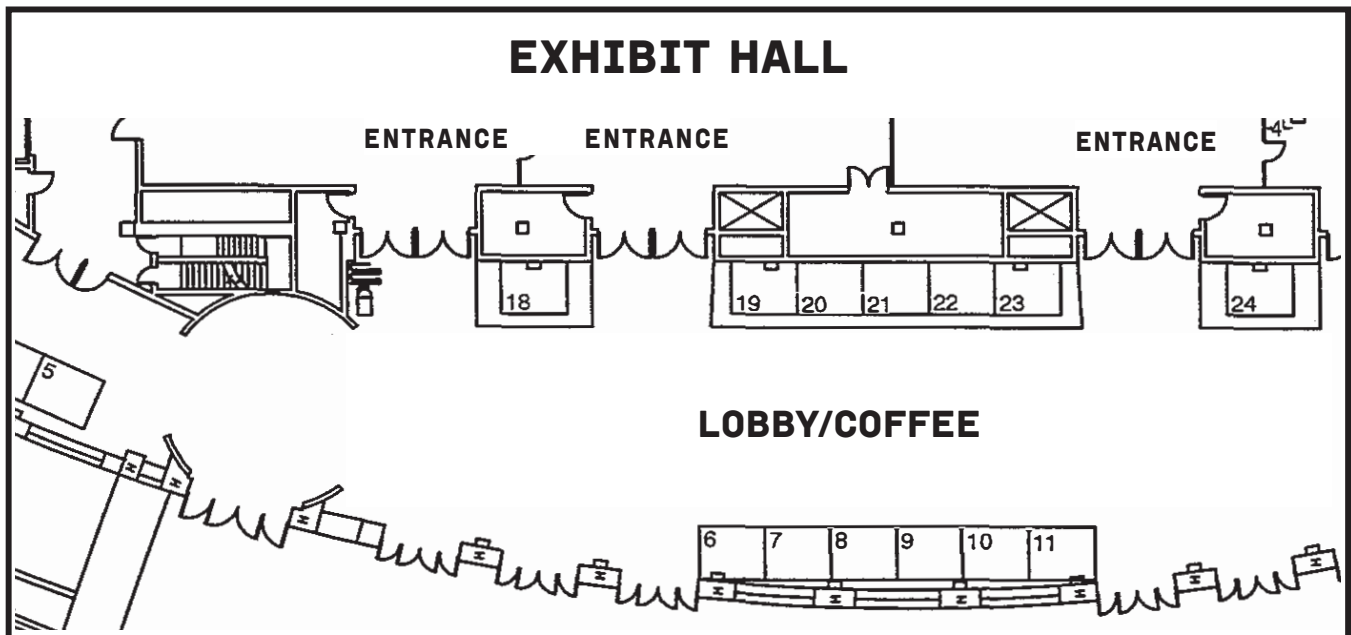Wednesday 7/11
9:30 AM—4:30 PM

Thursday 7/12
9:30 AM—4:30 PM

SIAM Conference on
Applied Mathematics Education
July 9-11, 2018
Oregon Convention Center
Portland, Oregon, USA

Oregon Convention Center
Portland, Oregon, USA
July 9-13, 2018
SIAM Conference on
Mathematical Aspects of Materials Science

SIAM Workshop on
Network Science
July 12-13, 2018
Oregon Convention Center
Portland, Oregon, USA

BOOTH EXHIBITORS	BOOTH #
Association for Women in Mathematics	24
American Mathematical Society	7, 8
MathWorks	10
Oxford University Press	11
Princeton University Press	9
Springer	6
SIAM	5, 18–23

TABLETOP EXHIBITORS

ICIAM 2019

This exhibitor list is current at press time.

EXHIBIT HALL

ENTRANCE   ENTRANCE   ENTRANCE

18   19 20 21 22 23   24

5

LOBBY/COFFEE

6 7 8 9 10 11

Coffee breaks will be served in the exhibit hall.

SIAM Conference on Mathematical Aspects of Materials Science - At-A-Glance

Sunday, July 8

2:00 PM - 8:00 PM
Registration
Holladay Lobby

5:00 PM - 6:00 PM
Student Orientation
B116

6:00 PM - 8:00 PM
Welcome Reception
Prefunction Lobby A

Monday, July 9

7:15 AM - 4:30 PM
Registration
Holladay Lobby

8:30 AM - 10:30 AM
Concurrent Sessions
MS1 Coarsening in Microstructure - Part I of II
C120

MS2 Modeling, Analysis and Simulations in Nanomagnetism - Part I of III
D132

MS3 Thin Structures: Defects, Pattern and Bifurcations - Part I of IV
D135

MS4 Variational Methods in Material Sciences - Part I of III
D130

MS5 Hydrodynamics at Small Scales: Passive and Active Fluctuations - Part I of III
C121

MS6 Computational Techniques for Additive Manufacturing Modeling - Part I of II
D131

MS7 Models and Mechanisms for Nanoscale Crystal Growth - Part I of IV
C125

MS8 Mathematical Aspects of Programmable Self-assembly - Part I of IV
D129

MS9 Nonlocal Differential Operators - Analysis and Applications - Part I of Part II
D133

MS10 Data-driven Modeling in Multiscale Materials Physics - Part I of IV
C126

MS11 Aggregation, Growth, and Coarsening Phenomena - Part I of II
D134

Monday, July 9

10:30 AM - 11:00 AM
Coffee Break
Oregon Ballroom Lobby

11:00 AM - 11:45 AM
IT1 Symmetry Matters: Machine-learning of Scalar and Tensorial Atomic-Scale Properties
Michele Ceriotti, EPFL, Switzerland
Oregon Ballroom 204

11:45 AM - 12:30 PM
IT2 Equations of Motion for Grain Boundaries in Polycrystalline Materials
David J. Srolovitz, University of Pennsylvania, USA
Oregon Ballroom 204

12:30 PM - 2:00 PM
Lunch Break
Attendees on their own

2:00 PM - 2:45 PM
JP1 The Mathematics of Wrinkles and Folds
Robert V. Kohn, Courant Institute of Mathematical Sciences, New York University, USA
Oregon Ballroom 202/203

2:45 PM - 3:30 PM
SP1 The AWM-SIAM Sonia Kovalevsky Lecture: Learning and Efficiency of Outcomes in Games
Eva Tardos, Cornell University, USA
Oregon Ballroom 202/203

3:30 PM - 4:00 PM
Coffee Break
Oregon Ballroom Lobby

3:30 PM - 5:30 PM
Career Fair: Careers in Business, Industry, and Government
Oregon Ballroom 201

4:00 PM - 6:00 PM
Concurrent Sessions
MS12 Coarsening in Microstructure - Part II of II
C120

MS13 Modeling, Analysis and Simulations in Nanomagnetism - Part II of III
D132

MS14 Thin Structures: Defects, Pattern and Bifurcations - Part II of IV
D135

Monday, July 9

MS15 Variational Methods in Material Sciences - Part II of III
D130

MS16 Hydrodynamics at Small Scales: Passive and Active Fluctuations - Part II of III
C121

MS17 Computational Techniques for Additive Manufacturing Modeling - Part II of II
D131

MS18 Models and Mechanisms for Nanoscale Crystal Growth - Part II of IV
C125

MS19 Mathematical Aspects of Programmable Self-assembly - Part II of IV
D129

MS20 Nonlocal Differential Operators - Analysis and Applications - Part II of II
D133

MS21 Data-driven Modeling in Multiscale Materials Physics - Part II of IV
C126

MS22 Aggregation, Growth, and Coarsening Phenomena - Part II of II
D134

6:00 PM - 6:15 PM
Intermission

6:15 PM - 7:15 PM
Industry Panel
Oregon Ballroom 202/203

7:15 PM - 9:15 PM
Graduate Student Reception and Industry Reception
Prefunction Lobby A

Tuesday, July 10

7:30 AM - 4:30 PM
Registration
Holladay Lobby

8:30 AM - 10:30 AM
Concurrent Sessions
MT1 Minitutorial on Mathematical Aspects of Computational Quantum Chemistry - Part I of II
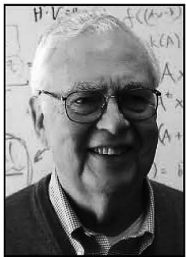*D131*

MS23 Modeling, Analysis and Simulations in Nanomagnetism - Part III of III
D132

MS24 Thin Structures: Defects, Pattern and Bifurcations - Part III of IV
D135

Gene Golub g2s3 2019

June 17-28, 2019
Aussois, France

SIAM Summer School

HIGH PERFORMANCE DATA ANALYTICS

The tenth Gene Golub SIAM Summer School will take place in France, at the Paul Langevin conference center in Aussois, in the French Alps.

The focus of the school will be on large-scale data analytics, which lies at the intersections of data analytics algorithms and high performance computing. Students will be introduced to problems in data analytics arising from both the machine learning and the scientific computing communities. The school will include perspectives from industry, such as Amazon, Google, and IBM, as well as from academic instructors.

Students will be exposed to "end-to-end" multidisciplinary topics, which span several traditionally disparate areas. The series of lectures will develop background on methods and algorithms for data analytics, approximation algorithms to deal with large volumes of data, languages and tools for implementing those algorithms on large scale computers, and data-driven applications from scientific computing and machine learning.

The summer school is being organized by Laura Grigori (Inria and Sorbonne University), Matthew Knepley (University at Buffalo) Olaf Schenk (Università della Svizzera Italiana), and Rich Vuduc (Georgia Institute of Technology).

The intended audience is intermediate graduate students (students with a Master's degree, 2nd-3rd year Ph.D. students without an MS, or equivalent). Applicants selected to participate pay no registration fee. Funding for local accommodations and meal expenses will be available for all participants.

Application deadline: February 1, 2019

As information becomes available on how to apply, it will be posted at:

http://www.siam.org/students/g2s3/

SIAM Conference on Mathematical Aspects of Materials Science - At-A-Glance

MS25 Variational Methods in Material Sciences - Part III of III
D130

MS26 Hydrodynamics at Small Scales: Passive and Active Fluctuations - Part III of III
C120

MS27 Mathematical Aspects of Programmable Self-assembly - Part III of IV
D129

MS28 NSF-SIAM Minisymposium on the NSF DMREF Program - Part I of II
D133

MS29 Soft Matter and its Applications to Industrial and Biological Systems - Part I of III
D134

MS30 Data-driven Modeling in Multiscale Materials Physics - Part III of IV
C126

MS31 Models and Mechanisms for Nanoscale Crystal Growth - Part III of IV
C125

MS32 Variational Problems from Materials Science - Part I of IV
C121

10:30 AM - 11:00 AM
Coffee Break
Oregon Ballroom Lobby

11:00 AM - 11:40 AM
IT3 Dynamics in Models of Coagulation and Fragmentation
Robert Pego, Carnegie Mellon University, USA
Oregon Ballroom 204

11:45 AM - 12:30 PM
IT4 Microstructure Evolution in Heterogeneous Systems: From Tin Whiskers to Anisotropic Grain Growth
Carol Handwerker, Purdue University, USA
Oregon Ballroom 204

12:30 PM - 2:30 PM
Prizes and Awards Luncheon
(separate fee applies)
Portland Ballroom

Lunch Break
Attendees on their own

2:30 PM - 3:30 PM
SP2 The John Von Neumann Lecture: Untangling Random Polygons and Other Things
Charles F. Van Loan, Cornell University, USA
Oregon Ballroom 202/203

3:30 PM - 4:00 PM
Coffee Break
Oregon Ballroom Lobby

4:00 PM - 6:00 PM
Concurrent Sessions
MT2 Minitutorial on Mathematical Aspects of Computational Quantum Chemistry - Part II of II
D131

MS33 Thin Structures: Defects, Pattern and Bifurcations - Part IV of IV
D135

MS34 Variational Approaches to Pattern Formations in Nonconvex and Nonlocal Models - Part I of III
C120

MS35 Modeling, Analysis and Numerical Computation for 2D Materials - Part I of III
D130

MS36 Mathematical Aspects of Programmable Self-assembly - Part IV of IV
D129

MS37 NSF-SIAM Minisymposium on the NSF DMREF Program - Part II of II
D133

MS38 Soft Matter and its Applications to Industrial and Biological Systems - Part II of III
D134

MS39 Grain Boundaries and Interfaces from Atomistic Structures to Continuum Modeling - Part I of IV
D132

MS40 Data-driven Modeling in Multiscale Materials Physics - Part IV of IV
C126

MS41 Models and Mechanisms for Nanoscale Crystal Growth - Part IV of IV
C125

MS42 Variational Problems from Materials Science - Part II of IV
C121

6:00 PM - 6:15 PM
Intermission

6:15 PM - 7:00 PM
SIAM Business Meeting
and 2018 Fellows Recognition
Oregon Ballroom 202/203

Complimentary beer and wine will be served.

7:00 PM - 7:30 PM
Fellows Reception
Oregon Ballroom 202/203

7:30 PM - 8:00 PM
SIAG/MS Business Meeting
Oregon Ballroom 204
Complimentary beer and wine will be served.

8:00 PM - 10:00 PM
PP1 Poster Session and Dessert Reception
Exhibit Hall A

Wednesday, July 11

7:30 AM - 4:30 PM
Registration
Holladay Lobby

8:30 AM - 10:30 AM
Concurrent Sessions
MS43 Geometry and Elasticity - Part I of IV
D131

MS44 Variational Approaches to Pattern Formations in Nonconvex and Nonlocal Models - Part II of III
C120

MS45 The Interaction of Light with Materials - Part I of IV
D135

MS46 Electronic Structure of Materials - Part I of IV
C125

MS47 Modeling, Analysis and Numerical Computation for 2D Materials - Part II of III
D130

MS48 Mathematics and Mechanics of Composite and Phase Change Materials - Part I of V
D133

MS49 Grain Boundaries and Interfaces from Atomistic Structures to Continuum Modeling - Part II of IV
D132

MS50 Soft Matter and its Applications to Industrial and Biological Systems - Part III of III
D134

SIAM Conference on Mathematical Aspects of Materials Science - At-A-Glance

Wednesday, July 11	Wednesday, July 11	Thursday, July 12

MS51 Analytical Methods for Singular Phenomena in Materials Science - Part I of IV
C126

MS52 Numerical Methods in Multiscale Materials Modelling - Part I of IV
D129

MS53 Variational Problems from Materials Science - Part III of IV
C121

10:30 AM - 11:00 AM
Coffee Break
Oregon Ballroom Lobby

11:00 AM - 11:45 AM
IT5 Modeling Microstructure and Defects with Peridynamics
Stewart Silling, Sandia National Laboratories, USA
Oregon Ballroom 204

11:45 AM - 12:30 PM
IT6 Atomistic Simulation of Crystalline Defects [A Numerical Analysis Perspective]
Christoph Ortner, University of Warwick, United Kingdom
Oregon Ballroom 204

12:30 PM - 2:00 PM
Lunch Break
Attendees on their own

2:00 PM - 3:00 PM
SP3 Julian Cole Lectureship: Modeling of Complex Fluids: Wormlike Micellar Solutions, Polymers and Mucins
L. Pamela Cook, University of Delaware, USA
Oregon Ballroom 202/203

3:00 PM - 3:30 PM
SP4 W.T. and Idalia Reid Prize Lecture: Modeling, Simulation, and Control of Differential-Algebraic Port-Hamiltonian Systems
Volker Mehrmann, Technische Universitaet Berlin, Germany
Oregon Ballroom 202/203

3:30 PM - 4:00 PM
Coffee Break
Oregon Ballroom Lobby

4:00 PM - 6:00 PM
Concurrent Sessions
MS54 Recent Advances in Phase-field Modeling and Analysis of Microstructural Evolution - Part I of V
D134

MS55 Geometry and Elasticity - Part II of IV
D131

MS56 Variational Approaches to Pattern Formations in Nonconvex and Nonlocal Models - Part III of III
C120

MS57 Electronic Structure of Materials - Part II of IV
C125

MS58 The Interaction of Light with Materials - Part II of IV
D135

MS59 Modeling, Analysis and Numerical Computation for 2D Materials - Part III of III
D130

MS60 Mathematics and Mechanics of Composite and Phase Change Materials - Part II of V
D133

MS61 Grain Boundaries and Interfaces from Atomistic Structures to Continuum Modeling - Part III of IV
D132

MS62 Analytical Methods for Singular Phenomena in Materials Science - Part II of IV
C126

MS63 Numerical Methods in Multiscale Materials Modelling - Part II of IV
D129

MS64 Variational Problems from Materials Science - Part IV of IV
C121

6:00 PM - 6:15 PM
Intermission

6:15 PM - 7:15 PM
SP5 I.E. Block Community Lecture: How Paradoxes Shape Mathematics and Give Us Self-Verifying Computer Programs
Thomas Hales, University of Pittsburgh, USA
Oregon Ballroom 202/203

7:15 PM - 8:15 PM
Community Reception
Prefunction Lobby A

8:00 AM - 4:30 PM
Registration
Holladay Lobby

8:30 AM - 10:30 AM
Concurrent Sessions
MS65 Recent Advances in Phase-field Modeling and Analysis of Microstructural Evolution - Part II of V
D134

MS66 Geometry and Elasticity - Part III of IV
D131

MS67 Statistical Descriptors of Materials at Multiple Length Scales - Part I of III
C120

MS68 Advances in CALPHAD Methods - Part I of II
C121

MS69 Analytical Methods for Singular Phenomena in Materials Science - Part III of IV
C126

MS70 Electronic Structure of Materials - Part III of IV
C125

MS71 The Interaction of Light with Materials - Part III of IV
D135

MS72 Mathematics and Mechanics of Composite and Phase Change Materials - Part III of V
D133

MS73 Grain Boundaries and Interfaces from Atomistic Structures to Continuum Modeling - Part IV of IV
D132

MS74 Dislocation Mechanics: Continuum Versus Discrete Approach - Part I of III
D130

MS75 Numerical Methods in Multiscale Materials Modelling - Part III of IV
D129

10:30 AM - 11:00 AM
Coffee Break
Oregon Ballroom Lobby

11:00 AM - 11:45 AM
IT7 From Atoms to Macroscopic Laws: The Case of Epitaxial Growth
Dionisios Margetis, University of Maryland, College Park, USA
Oregon Ballroom 204

SIAM Conference on Mathematical Aspects of Materials Science - At-A-Glance

Thursday, July 12	Thursday, July 12	Friday, July 13

11:45 AM - 12:30 PM
IT8 An Emerging Mechanistic Paradigm for Self-organization and Functional Properties of Biological Materials: The Power of Weak Binding
M. Gregory Forest, University of North Carolina at Chapel Hill, USA
Oregon Ballroom 204

12:30 PM - 2:00 PM
Lunch Break
Attendees on their own

2:00 PM - 2:45 PM
IT9 Models for Thin Prestrained Structures
Annie Raoult, Université Paris Descartes, France
Oregon Ballroom 204

2:45 PM - 3:30 PM
IT10 Cornered: Anisotropic Fluids in Confined Geometries
Nigel Mottram, University of Strathclyde, United Kingdom
Oregon Ballroom 204

3:30 PM - 4:00 PM
Coffee Break
Oregon Ballroom Lobby

4:00 PM - 6:00 PM
Concurrent Sessions
MS76 Recent Advances in Phase-field Modeling and Analysis of Microstructural Evolution - Part III of V
D134

MS77 Geometrical Aspects of Defects in Solids - Part I of III
D132

MS78 Statistical Descriptors of Materials at Multiple Length Scales - Part II of III
C120

MS79 Geometry and Elasticity - Part IV of IV
D131

MS80 Advances in CALPHAD Methods - Part II of II
C121

MS81 The Interaction of Light with Materials - Part IV of IV
D135

MS82 Electronic Structure of Materials - Part IV of IV
C125

MS83 Mathematics and Mechanics of Composite and Phase Change Materials - Part IV of V
D133

MS84 Dislocation Mechanics: Continuum Versus Discrete Approach - Part II of III
D130

MS85 Analytical Methods for Singular Phenomena in Materials Science - Part IV of IV
C126

MS86 Numerical Methods in Multiscale Materials Modelling - Part IV of IV
D129

6:00 PM - 6:15 PM
Intermission

6:15 PM - 9:15 PM
Professional Developmen Evening
D136

Friday, July 13

8:00 AM - 4:30 PM
Registration
Holladay Lobby

8:30 AM - 10:30 AM
Concurrent Sessions
MS87 Machine Learning for Predictive Atomistic Simulation of Materials - Part I of II
D135

MS88 Recent Advances in Phase-field Modeling and Analysis of Microstructural Evolution - Part IV of V
D134

MS89 Geometrical Aspects of Defects in Solids - Part II of III
D132

MS90 Statistical Descriptors of Materials at Multiple Length Scales - Part III of III
C120

MS91 Mathematics and Mechanics of Composite and Phase Change Materials - Part V of V
D133

MS92 Dislocation Mechanics: Continuum Versus Discrete Approach - Part III of III
D130

MS93 Applications of Herglotz-Nevanlinna Function Theory to Electromagnetics, Composites, and Dirichlet-to-Neumann Maps - Part I of II
D131

10:30 AM - 11:00 AM
Coffee Break
Oregon Ballroom Lobby

11:00 AM - 11:45 AM
IT11 Materials Discovery and Scientific Design By Computation: What Does It Take?
Giulia Galli, University of Chicago and Argonne National Laboratory, USA
Oregon Ballroom 204

11:45 AM - 12:30 PM
IT12 Modeling the Next Generation of Photonics Materials
Michal Lipson, Columbia University, USA
Oregon Ballroom 204

12:30 PM - 2:00 PM
Lunch Break
Attendees on their own

2:00 PM - 2:45 PM
IT13 Spinning Top-ology: Order, Disorder and Topology in Mechanical Gyro-materials and Fluids
William Thomas M. Irvine, University of Chicago, USA
Oregon Ballroom 204

2:45 PM - 3:30 PM
Intermission

3:30 PM - 4:00 PM
Coffee Break
Oregon Ballroom Lobby

4:00 PM - 6:00 PM
Concurrent Sessions
MS94 Machine Learning for Predictive Atomistic Simulation of Materials - Part II of II
D135

**MS95** Geometrical Aspects of Defects in Solids - Part III of III
D132

MS96 Recent Advances in Phase-field Modeling and Analysis of Microstructural Evolution - Part V of V
D134

MS97 Applications of Herglotz-Nevanlinna Function Theory to Electromagnetics, Composites, and Dirichlet-to-Neumann Maps - Part II of II
D131

Featured Lectures and Clips from SIAM Conferences

SIAM PRESENTS IS AN AUDIO-VISUAL ARCHIVE
COMPRISED OF MORE THAN 2,000 PRESENTATIONS
POSTED IN OVER 40 SEARCHABLE TOPICS, INCLUDING:
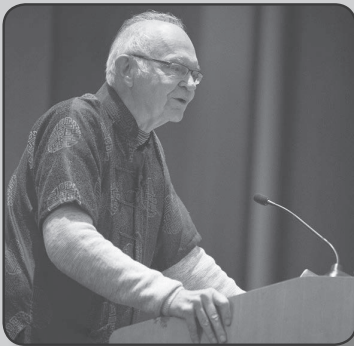
- algebraic geometry
- atmospheric and oceanographic science
- computational science
- data mining
- geophysical science
- optimization
- uncertainty quantification and more...

The collection, *Featured Lectures from our Archives*, includes audio and slides from more than 30 conferences since 2008, including talks by invited and prize speakers, select minisymposia, and minitutorials. Presentations from SIAM meetings are being added throughout the year.

In addition you can view short video clips of speaker interviews from sessions at Annual Meetings starting in 2010.

Plans for adding more content are on the horizon. Keep an eye out!

The audio, slide, and video presentations are part of SIAM's outreach activities to increase the public's awareness of mathematics and computational science in the real world, and to bring attention to exciting and valuable work being done in the field. Funding from SIAM, the National Science Foundation, and the Department of Energy was used to partially support this project.

New presentations are posted every few months as the program expands with sessions from additional SIAM meetings. Users can search for presentations by category, speaker name, and/or key words.

www.siam.org/meetings/presents.php

5/18

SIAM Conference on Applied Mathematics Education - At-A-Glance

Sunday, July 8

2:00 PM - 8:00 PM
Registration
Holladay Lobby

5:00 PM - 6:00 PM
Student Orientation
B116

6:00 PM - 8:00 PM
Welcome Reception
Prefunction Lobby A

Monday, July 9

7:15 AM - 4:30 PM
Registration
Holladay Lobby

8:30 AM - 10:30 AM
Concurrent Sessions
MS1 Mathematical Modeling: Practice and Education
D136

MS2 Exploring the Nature and Practices of Mathematical Modeling in the Early Grades - Part I of II
D137

MS3 Incorporating Real-world Data into the Undergraduate Mathematics Curriculum
D138

MS4 Mathematics and Social Justice in the Classroom
D139

10:30 AM - 11:00 AM
Coffee Break
Oregon Ballroom Lobby

11:00 AM - 11:45 AM
IT1 Mathematical Modeling from Kindergarten to Industry
Rachel Levy, Harvey Mudd College, USA
D136

11:45 AM - 12:30 PM
IT2 Toward a Mathematics of Opportunity
Pamela Burdman, Just Equations Project, USA
D136

12:30 PM - 2:00 PM
Lunch Break
Attendees on their own

Monday, July 9

2:00 PM - 2:45 PM
JP1 The Mathematics of Wrinkles and Folds
Robert V. Kohn, Courant Institute of Mathematical Sciences, New York University, USA
Oregon Ballroom 202/203

2:45 PM - 3:30 PM
SP1 The AWM-SIAM Sonia Kovalevsky Lecture: Learning and Efficiency of Outcomes in Games
Eva Tardos, Cornell University, USA
Oregon Ballroom 202/203

3:30 PM - 4:00 PM
Coffee Break
Oregon Ballroom Lobby

3:30 PM - 5:30 PM
Career Fair: Careers in Business, Industry, and Government
Oregon Ballroom 201

4:00 PM - 6:00 PM
Concurrent Sessions
MS5 Communities of Practice for Math Modeling Education
D136

MS6 Exploring the Nature and Practices of Mathematical Modeling in the Early Grades - Part II of II
D137

MS7 Mathematical Modeling in Graduate Education
D138

MS8 Modeling in Differential Equations Courses – SIMIODE Resources and Community
D139

6:00 PM - 6:15 PM
Intermission

6:15 PM - 7:15 PM
Industry Panel
Oregon Ballroom 202/203

Monday, July 9

7:15 PM - 9:15 PM
Graduate Student Reception and Industry Reception
Prefunction Lobby A

Tuesday, July 10

7:30 AM - 4:30 PM
Registration
Holladay Lobby

8:30 AM - 10:30 AM
Concurrent Sessions
MS9 Best Practices in Promoting Diversity and Inclusiveness in and Outside the Applied Mathematics Classroom - Part I of II
D136

MS10 Deep Learning and Deep Teaching
D137

MS11 Rethinking Calculus Education in the 21st Century - Part I of II
D138

CP1
D139

10:30 AM - 11:00 AM
Coffee Break
Oregon Ballroom Lobby

11:00 AM - 11:45 AM
IT3 Fostering and Promoting Mathematics of Planet Earth Education: Community Dialogue to Multi-level Research
Kathleen Kavanagh, Clarkson University, USA
D136

11:45 AM - 12:30 PM
IT4 Teaching About Learning
Gilbert Strang, Massachusetts Institute of Technology, USA
D136

12:30 PM - 2:30 PM
Prizes and Awards Luncheon (separate fee applies)
Portland Ballroom

Lunch Break
Attendees on their own

SIAM Conference on Applied Mathematics Education - At-A-Glance

Tuesday, July 10	Wednesday, July 11	Wednesday, July 11

Tuesday, July 10

2:30 PM - 3:30 PM
SP2 The John Von Neumann Lecture: Untangling Random Polygons and Other Things
Charles F. Van Loan, Cornell University, USA
Oregon Ballroom 202/203

3:30 PM - 4:00 PM
Coffee Break
Oregon Ballroom Lobby

4:00 PM - 6:00 PM
Concurrent Sessions
MS12 Best Practices in Promoting Diversity and Inclusiveness in and Outside the Applied Mathematics Classroom - Part II of II
D136
MS13 Mathematics of Planet Earth Education
D137
MS14 Rethinking Calculus Education in the 21st Century - Part II of II
D138
MS15 Mathematical Modeling and Career Readiness
D139
CP2
D140

6:00 PM - 6:15 PM
Intermission

6:15 PM - 7:00 PM
SIAM Business Meeting and 2018 Fellows Recognition
Oregon Ballroom 202/203

Complimentary beer and wine will be served.

7:00 PM - 7:30 PM
Fellows Reception
Oregon Ballroom 202/203

7:30 PM - 8:00 PM
SIAG/ED Business Meeting
D136

Complimentary beer and wine will be served.

8:00 PM - 10:00 PM
Poster Session and Dessert Reception
Exhibit Hall A

Wednesday, July 11

7:30 AM - 4:30 PM
Registration
Holladay Lobby

8:30 AM - 10:30 AM
Concurrent Sessions
MS16 Industry and University Working Together to Prepare Students for Careers - Part I of II
D136
MS17 Challenging Our Definition of 'Mathematician': A New Approach to Inclusion
D137
MS18 Some Fundamental Ideas Not Appearing in the Standard Curriculum
D138
MS19 An Integrated Cohort Approach to Design and Technology Education: One School's Story
D139

10:30 AM - 11:00 AM
Coffee Break
Oregon Ballroom Lobby

11:00 AM - 11:45 AM
JP2 Applied and Computational Mathematics: A New Curriculum for 21st Century Discovery and Innovation
Jeffrey Humpherys, Brigham Young University, USA
Oregon Ballroom 202/203

11:45 AM - 12:30 PM
IT5 Lessons in Mathematical Modeling: From Research Practice to Mathematics Education Collaboration
Ricardo Cortez, Tulane University, USA
D136

12:30 PM - 2:00 PM
Lunch Break
Attendees on their own

2:00 PM - 3:00 PM
SP3 Julian Cole Lectureship: Modeling of Complex Fluids: Wormlike Micellar Solutions, Polymers and Mucins
L. Pamela Cook, University of Delaware, USA
Oregon Ballroom 202/203

Wednesday, July 11

3:00 PM - 3:30 PM
SP4 W.T. and Idalia Reid Prize Lecture: Modeling, Simulation, and Control of Differential-Algebraic Port-Hamiltonian Systems
Volker Mehrmann, Technische Universitaet Berlin, Germany
Oregon Ballroom 202/203

3:30 PM - 4:00 PM
Coffee Break
Oregon Ballroom Lobby

4:00 PM - 6:00 PM
Concurrent Sessions
MS20 Industry and University Working Together to Prepare Students for Careers - Part II of II
D136
MS21 Ethics Education as Part of the Math Undergraduate Curriculum
D137
MS22 Bridging Network Science and Graph Theory
D138
CP3
D139

6:15 PM - 7:15 PM
SP5 I.E. Block Community Lecture: How Paradoxes Shape Mathematics and Give Us Self-Verifying Computer Programs
Thomas Hales, University of Pittsburgh, USA
Oregon Ballroom 202/203

7:15 PM - 8:15 PM
Community Reception
Prefunction Lobby A

Thursday, July 12

8:15-8:45
Coffee break ☕
Oregon Ballroom 201

8:45-8:50
Welcome
Oregon Ballroom 201

8:50-9:40
Invited Plenary
Raissa D'Souza
Oregon Ballroom 201

9:40-10:30
Contributed Session 1
Oregon Ballroom 201

11:00-12:15
Contributed Session 2
Oregon Ballroom 201

12:15-12:30
Short Talk Session 1
Oregon Ballroom 201

12:30-2:00
Lunch Break
Attendees on their own

2:00-2:45
Danielle S. Bassett, University of
Pennsylvania, USA (AN18 IP18)
Oregon Ballroom 202/203

2:45-3:30
Tammy Kolda, SIMODS (AN18, MS113)
A106

3:30-4:00
Coffee Break ☕
Oregon Ballroom Lobby

4:00-4:50
Contributed Session 3
Oregon Ballroom 201

4:50-5:15
Short Talk Session 2
Oregon Ballroom 201

Friday, July 13

8:30-9:00
Coffee break ☕
Oregon Ballroom 201

9:00 AM- 9:50 AM
Invited Plenary 2
David Bindel
Oregon Ballroom 201

9:50 - 10:15
Short Talk Session 3
Oregon Ballroom 201

10:15-11:40
Poster Session and coffee break ☕
Oregon Ballroom 201

11:40-12:30
Contributed Session 4
Oregon Ballroom 201

12:30-2:00
Lunch Break
Attendees on their own

2:00-2:20
Short Talk Session 4
Oregon Ballroom 201

2:20-3:35
Contributed Session 5
Oregon Ballroom 201

3:35-3:50
Closing Remarks
Oregon Ballroom 201

4:00-4:30
Coffee break ☕
Oregon Ballroom 201

KEY TO ABBREVIATIONS AND SYMBOLS

CP	=	Contributed Lecture
PP	=	Poster Presentation
IT, IP	=	Invited Presentation
MS	=	Minisymposium
MT	=	Invited Minitutorial
SP	=	Special Lecture
*	=	Extended Session
☕	=	Coffee Break
▯	=	Business Meeting
🍷	=	Refreshments Served
🖼	=	Poster Session
🍴	=	Meal Provided

SIAM ACTIVITY GROUP ON
APPLIED MATHEMATICS EDUCATION (SIAG/ED)

SIAM Conference on
Applied Mathematics Education
July 9-11, 2018
Oregon Convention Center
Portland, Oregon, USA

WWW.SIAM.ORG/ACTIVITY/ED

SIAG/ED advances the development and practice of educational programs, courses, and resources in applied mathematics.

ACTIVITIES INCLUDE:
- Special sessions at SIAM meetings
- Biennial conference

BENEFITS OF SIAG/ED MEMBERSHIP
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- Electronic communications about recent developments in your specialty
- Eligibility for candidacy for SIAG/ED office
- Participation in the selection of SIAG/ED officers

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Vice Chair: Rosalie Belanger-Rioux, Harvard University

Program Director: Eric Kostelich, Arizona State University

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SIAM ACTIVITY GROUP ON
MATHEMATICAL ASPECTS OF MATERIALS SCIENCE

Oregon Convention Center
Portland, Oregon, USA
July 9-13, 2018

SIAM Conference on
Mathematical Aspects
of Materials Science

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- Participation in the selection of SIAG/MS officers

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- $15 per year
- Student members can join 2 activity groups for free!

Oregon Convention Center Floor Plan

Upper Level

Roof Below

⌐ = Overhead Door
— = Entrance Interior
▪ = Freight Elevator
● = All-Gender Restroom

CityView Terrace

Service Corridor

Portland Ballroom
Ballroom 256
Ballroom 257
Ballroom 258
Ballroom 259
Ballroom 255
Ballroom 254
Ballroom 253
Ballroom 251
Ballroom 252

Ballroom Lobby Level 2

VIP Suite D

Administration and Catering Offices Level 2

Balcony

Ticket Office

Visitor Info.

M.L. King Jr. Lobby

Stair

Entrance

Entrance

Registration

Holladay Lobby

Holladay Suites

Entrance

VIP Suite B

Skyview Terrace

Career Fair NS18

Oregon Ballroom
Ballroom 201
Ballroom 202
Ballroom 203
Ballroom 204

General Sessions

Ballroom Lobby Level 2

Exhibits

Entrance

Entrance

Lower Level

Ramp

Loading Docks 1-9

Loading Docks 10-19

Ramp

Security

⌐ = Rollup Door
— = Entrance Interior
-- = Air Wall Doors
▪ = Freight Elevator

B

D

North Loading Dock

A

Poster Sessions Exhibit Hall A

Exhibit Hall A1

Service Corridor

Service Corridor

Service Corridor

Column

Column

First Aid

Food Court

Exhibit Hall E

Pre-function E

Break out Sessions

Exhibit Hall D

Exhibit Hall C

Exhibit Hall B

Pre-function D

Ticket Office

Food Court

Food Court

Food Court

Pre-function A

First Aid

Pre-function C

Food Court

Portland Roasting Coffee

Lobby A
A109
A108
A107
A106
A105
A103
A104
A102
A101

B110
B111
B112
B119
B118
B117
B116 B115 B114 B113

Lobby B

Meeting Rooms A

Service Corridor

Meeting Rooms B

Kitchen

Lobby C
C120
C121
C122
C126
C125
C123
C124
C127
C128

Meeting Rooms C

Service Corridor

E148
E147
E146
E145
E141
E142
E143
E144
Lobby E

Meeting Rms E

Service Corridor

E152
E151
E150
E149

Lobby F

Meeting Rms F

D140
D139
D138
D137
D136
D135
D134
D133

Meeting Rms D

Lobby D

Portland Roasting Coffee

D132
D131
D130
D129

Ginkoberry Concourse

Entrance   Portland Streetcar

N.E. Martin Luther King Jr. Blvd.

N.E. Holladay St.

"MAX" Metropolitan Area Rapid Transit

Service Corridor