

At-A-Glance

2017 SIAM Annual Meeting

2017 SIAM

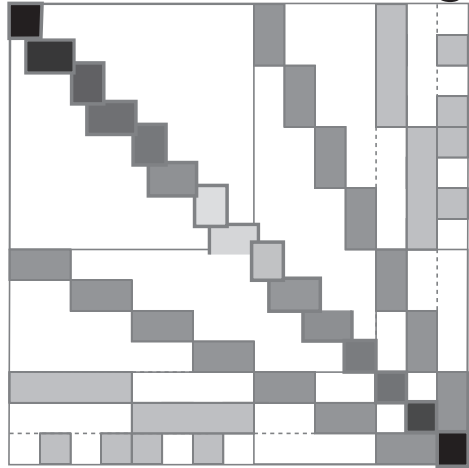


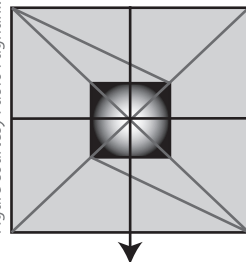
Figure courtesy Yuanzhe Xi, Ruipeng Li and Yousef Saad

July 10-14, 2017

David Lawrence Convention Center
Pittsburgh, Pennsylvania, USA

SIAM Conference on

Figure courtesy Fabio Fagnani.



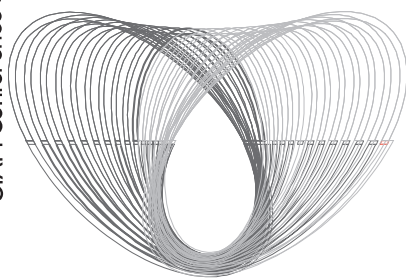
**CONTROL &
Its APPLICATIONS**

July 10-12, 2017

David Lawrence Convention Center (DLCC)
Pittsburgh, Pennsylvania, USA

SIAM Conference on Industrial and Applied Geometry

SIAM Conference on



July 10-12, 2017

David Lawrence Convention Center (DLCC)
Pittsburgh, Pennsylvania, USA

SIAM 2017 Events Mobile App

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siam

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
Conference E-mail: meetings@siam.org
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2017 SIAM Annual Meeting At-A-Glance

Sunday, July 9

2:00 PM - 8:00 PM

Registration
Ballroom Gallery - 3rd Floor

5:00 PM - 6:00 PM

Student Orientation
306 & 307

6:00 PM - 8:00 PM

Welcome Reception
South Terrace - 3rd Floor



Monday, July 10

7:00 AM - 8:30 AM

Committee on Committees & Appointments Meeting
Westin Hotel - Cambria West

Diversity Advisory Committee Meeting
Westin Hotel - Cambria East

7:15 AM - 4:30 PM

Registration
Ballroom Gallery - 3rd Floor

8:15 AM - 8:30 AM

Opening Remarks
Spirit of Pittsburgh A - 3rd Floor

8:30 AM - 9:15 AM

IT1 Nonlinear Models for Matrix Completion
Rebecca Willett, University of Wisconsin, Madison, USA
Spirit of Pittsburgh A - 3rd Floor

9:15 AM - 10:00 AM

IT2 Connections in Extremal Combinatorics: Ramsey Theory
Po-Shen Loh, Carnegie Mellon University, USA
Spirit of Pittsburgh A - 3rd Floor

9:30 AM - 4:30 PM

Exhibit Hall Open
Ballroom Gallery - 3rd Floor

10:00 AM - 10:30 AM

Coffee Break
Ballroom Gallery - 3rd Floor



10:30 AM - 12:30 PM

Concurrent Sessions

MS1 Adapting Our Departments to Learn About and Support Diversity in Mathematics
319

MS2 Advances Approaches for PDE-Constrained Bayesian Inverse Problems - Part I of II
318

MS3 AWM Workshop: Recent Advances in Numerical Analysis and Scientific Computing -- Part I of II
305

MS4 Career Fair: Alternatives to Academia
302-304

MS5 High-Dimensional Dynamical System Inference - Part I of II
Spirit of Pittsburgh A - 3rd Floor

Monday, July 10

MS6 Lie and Non-Lie Symmetries: Theory and Applications - Part I of II
317

MS7 New Algorithms for Scientific Computing at Exascale - Part I of II
Spirit of Pittsburgh B - 3rd Floor

MS8 Novel Numerical Methods for PDEs - Part I of II
316

MS9 Student Days: Undergraduate Research Presentations - Part I of II
310

CP1 Life Sciences - Part I of V
306

CP2 Fluids - Part I of III
307

12:30 PM - 2:00 PM

Lunch Break
Attendees on their own

Major Awards Committee Meeting
Westin Hotel - Cambria West

2:00 PM - 2:45 PM

JP1 Bio-Inspired Dynamics for Multi-Agent Decision-Making
Naomi E. Leonard, Princeton University, USA
Spirit of Pittsburgh A - 3rd Floor

2:45 PM - 3:30 PM

SP1 AWM-SIAM Sonia Kovalevsky Lecture: Mitigating Uncertainty in Inverse Wave Scattering
Liliana Borcea, University of Michigan, USA
Spirit of Pittsburgh A - 3rd Floor

3:30 PM - 4:00 PM

Coffee Break
Ballroom Gallery - 3rd Floor



4:00 PM - 6:00 PM

Concurrent Sessions

MS10 Advances Approaches for PDE-constrained Bayesian Inverse Problems - Part II of II
318

MS11 AWM Workshop: Recent Advances in Numerical Analysis and Scientific Computing -- Part II of II
305

MS12 Career Fair: Alternatives to Academia
302-304

MS13 Discrete Active Systems Sharing Dynamic Media
319

MS14 High-Dimensional Dynamical System Inference - Part II of II
Spirit of Pittsburgh A - 3rd Floor

KEY TO ABBREVIATIONS AND SYMBOLS

CP, PP	=	Contributed 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

2017 SIAM Annual Meeting At-A-Glance

Monday, July 10

MS15 Lie and Non-Lie Symmetries: Theory and Applications - Part II of II
317

MS16 New Algorithms for Scientific Computing at Exascale - Part II of II
Spirit of Pittsburgh B - 3rd Floor

MS17 Novel Numerical Methods for PDEs - Part II of II
316

MS18 Panel: Celebrating Diversity in Mathematical Sciences
406

MS19 Student Days: Undergraduate Research Presentations - Part II of II
310

CP3 Life Sciences - Part II of V
306

CP4 Numerical PDE - Part I of III
307

6:00 PM - 6:15 PM
Intermission

6:15 PM - 7:15 PM

Concurrent Sessions

PD1 Student Careers in Business, Industry and Government (BIG)
Spirit of Pittsburgh A - 3rd Floor

Workshop Celebrating Diversity (WCD)
Meet-and-Greet
South Terrace

7:15 PM - 9:15 PM

Communication Doctors
302-304

Career Fair, Graduate Student and Industry Reception
302-304




Membership Committee Meeting
Westin Hotel - Cambria West

7:30 PM - 9:30 PM

SIREV Editorial Board Dinner Meeting
Westin Hotel - Westmoreland Central

Tuesday, July 11

7:00 AM - 8:15 AM

Student Days: Chapter Breakfast with SIAM Leadership (by invitation) 
Westin Hotel - Allegheny I

Mathematics in Industry Book Series
Editorial Board meeting
Westin Hotel - Butler East

7:30 AM - 4:30 PM

Registration
Ballroom Gallery - 3rd Floor

8:20 AM - 8:30 AM

Remarks
Spirit of Pittsburgh A - 3rd Floor

8:30 AM - 9:15 AM

IT3 Model-Based Learning in Imaging
Carola Bibiane Schoenlieb, University of Cambridge, United Kingdom
Spirit of Pittsburgh A - 3rd Floor

9:15 AM - 10:00 AM

IT4 Homogenization for Sea Ice and the Climate System
Kenneth M. Golden, University of Utah, USA
Spirit of Pittsburgh A - 3rd Floor

9:30 AM - 4:30 PM

Exhibit Hall Open
Ballroom Gallery - 3rd Floor

10:00 AM - 10:30 AM

Coffee Break 
Ballroom Gallery - 3rd Floor

10:30 AM - 12:30 PM

Concurrent Sessions

MT1 Practical Ideas to Connect Academic Departments with Business, Industry and Government
317

MS20 A Mathematical View of the Different Biological Scales: From the Genomic Level to the Human Interaction Level
304

MS21 Data Assimilation and Nonlinear Filtering - Part I of II
Spirit of Pittsburgh A - 3rd Floor

MS22 Fractional Partial Differential Equations: Modeling, Simulation, Application, and Analysis - Part I of II
302

MS23 Geometry and Computational Challenges in Data Science - Part I of II
Spirit of Pittsburgh B - 3rd Floor

Tuesday, July 11

MS24 High Performance Computing and Data Science in Molecular Engineering - Part I of II
319

MS25 Mathematical Advances in Electrical Impedance Tomography - Part I of II
301

MS26 New Developments in Population Dynamics and Epidemiology - Part I of II
303

MS27 Sentiment and Stability: Mathematical Modeling of Financial Markets
315

MS28 Student Days: Student Chapter Presentations - Part I of II
310

MS29 Applications and Analysis of Piecewise Smooth Dynamical Systems - Part I of II
316

CP5 Computer Science - Part I of II
306

CP6 Fluids - Part II of III
307

CP7 Materials Science - Part I of II
311

12:30 PM - 2:30 PM

Prizes and Awards Luncheon
(Offsite at the connected Westin Hotel)
Westin Hotel - Allegheny Ballroom

2:30 PM - 3:30 PM

SP2 The John von Neumann Lecture: Singular Perturbations in Noisy Dynamical Systems
Bernard Matkowsky, Northwestern University, USA
Spirit of Pittsburgh A - 3rd Floor

3:30 PM - 4:00 PM

Coffee Break 
Ballroom Gallery - 3rd Floor

4:00 PM - 6:00 PM

Concurrent Sessions

MS30 Applications and Analysis of Piecewise Smooth Dynamical Systems - Part II of II
316

MS31 AWM Workshop: Career Panel: Perspectives from Women in Research
305

MS32 Contributions of Black Mathematicians to Current Research Problems
304

MS33 Data Assimilation and Nonlinear Filtering - Part II of II
Spirit of Pittsburgh A - 3rd Floor

MS34 Fractional Partial Differential Equations: Modeling, Simulation, Application, and Analysis - Part II of II
302

2017 SIAM Annual Meeting At-A-Glance

Tuesday, July 11

MS35 Geometry and Computational Challenges in Data Science - Part II of II
Spirit of Pittsburgh B - 3rd Floor

MS36 High Performance Computing and Data Science in Molecular Engineering - Part II of II
319

MS37 Mathematical Advances in Electrical Impedance Tomography - Part II of II
301

MS38 New Developments in Population Dynamics and Epidemiology - Part II of II
303

MS39 Phylogenetic Trees: Theory and Algorithms
315

MS40 Resilient Computation in Large Scale Scientific Computing, Part I of II
320

MS41 Student Days: Student Chapter Presentations - Part II of II
310

CP8 Computer Science - Part II of II
306

CP9 Fluids - Part III of III
307

CP10 Materials Science - Part II of II
311

6:00 PM - 6:15 PM

Intermission

6:15 PM - 7:00 PM

SIAM Business Meeting and 2017 Fellows Recognition
Spirit of Pittsburgh A - 3rd Floor



Complimentary beer and wine will be served.

7:00 PM - 7:30 PM

Fellows Reception
South Terrace - 3rd Floor



7:00 PM - 8:00 PM

PD2 Hidden Figures
406

8:00 PM - 10:00 PM

Poster and Dessert Reception



PP1 General Posters
PP2 Minisymposium: AWM Posters
PP3 Minisymposium: Active Subspaces
PP4 Minisymposium: Student Chapter Presentations
PP5 Minisymposium: Undergraduate Student Presentations
West Atrium - 3rd Floor

Wednesday, July 12

7:00 AM - 8:15 AM

Book Committee Meeting
Westin Hotel - Butler East

7:00 AM - 8:30 AM

Programs & Conferences Committee Meeting
Westin Hotel - Cambria East

8:00 AM - 4:30 PM

Registration
Ballroom Gallery - 3rd Floor

8:20 AM - 8:30 AM

Remarks
Spirit of Pittsburgh A - 3rd Floor

8:30 AM - 9:15 AM

IT5 Connecting Model-Based Predictions to Reality
David M. Higdon, Virginia Tech, USA
Spirit of Pittsburgh A - 3rd Floor

9:15 AM - 10:00 AM

IT6 Computational Methods for Personalized Medicine in Cardiovascular Disease
Alison Marsden, Stanford University, USA
Spirit of Pittsburgh A - 3rd Floor

9:30 AM - 4:30 PM

Exhibit Hall Open
Ballroom Gallery - 3rd Floor

10:00 AM - 10:30 AM

Coffee Break
Ballroom Gallery - 3rd Floor



10:30 AM - 12:30 PM

Concurrent Sessions
MT2 Mathematics for Crime Prediction and Prevention
Spirit of Pittsburgh A - 3rd Floor

MS42 Discrete Methods in Molecular Biology - Part I of II
Spirit of Pittsburgh B - 3rd Floor

MS43 Identifying Computational Methods for Early Benefit from Quantum Computing
305

MS44 Interface Dynamics and Microstructural Evolution: Emergent Topology, Geometry & Symmetries
302

MS45 Kinetic Models with Applications in Biology
315

MS46 Matrix Computations for Image Processing and Inverse Problems
303

Wednesday, July 12

MS47 Modeling and Simulation of Nanostructures and 2D Materials - Part I of II
301

MS48 Numerical Algorithms for Data Assimilation and Nonlinear Filtering
318

MS49 Optimal Control and Applications
304

MS50 Panel: MSC Codes
406

MS51 Resilient Computation in Large Scale Scientific Computing, Part II of II
320

MS52 Stochastic Models in Mathematical Biology - Part I of II
317

MS53 Student Days: Student Paper Prize Winner Presentations
310

CP11 Geophysical Science - Part I of II
311

CP12 Life Sciences - Part III of V
306

CP13* Simulation, Modeling and Applications
307

12:30 PM - 2:00 PM

Lunch Break
Attendees on their own

Workshop Celebrating Diversity (WCD)
Luncheon (by invitation only)
316

Fundamentals of Algorithms Book Series
Editorial Board Meeting
Westin Hotel - Butler East

Industry Committee Meeting
Westin Hotel - Cambria East

Journal Committee Meeting
Westin Hotel - Cambria West

2:00 PM - 3:00 PM

SP3 Past President's Address: The Future of SIAM: Looking to the Mathematicians of Tomorrow
Irene Fonseca, Carnegie Mellon University, USA
Spirit of Pittsburgh A - 3rd Floor

3:00 PM - 3:30 PM

SP4 James H. Wilkinson Numerical Analysis and Scientific Computing Prize Lecture: Tensors in Computational Mathematics
Lek-Heng Lim, University of Chicago, USA
Spirit of Pittsburgh A - 3rd Floor

2017 SIAM Annual Meeting At-A-Glance

Wednesday, July 12

3:30 PM - 4:00 PM

Coffee Break
Ballroom Gallery - 3rd Floor



4:00 PM - 6:00 PM

Concurrent Sessions

MS54 Advances in Mathematics of Large-scale and Higher-order Networks - Part I of II
302

MS55 Discrete Methods in Molecular Biology - Part II of II
Spirit of Pittsburgh B - 3rd Floor

MS56 Fractional Models: Computation and Applications
304

MS57 High Performance Simulations of Cardiac and Other Mathematical Models in Real-Time using Graphic Cards
303

MS58 High Performance Tensor Computations - Part I of II
319

MS59 Model Error Quantification in Computational Physical Models
318

MS60 Modeling and Simulation of Nanostructures and 2D Materials - Part II of II
301

MS61 Numerical Libraries: Foundations of Community Software Ecosystems
305

MS62 Panel: Implicit Bias, Stereotyping and Prejudice in STEM
406

MS63 Stochastic Models in Mathematical Biology - Part II of II
317

MS64 Student Days: An Informal Meeting with the Co-chairs and Invited Speakers
310

MS65 Variational Methods and Optimization for Image and Data Analysis
Spirit of Pittsburgh A - 3rd Floor

CP14 Geophysical Science - Part II of II
311

CP15 Life Sciences - Part IV of V
306

CP16 Ordinary Differential Equations
315

6:15 PM - 7:15 PM

SP5 I.E. Block Community Lecture: From Flatland to Our Land: A Mathematician's Journey through Our Changing Planet
Emily Shuckburgh, British Antarctic Survey, United Kingdom
Spirit of Pittsburgh A - 3rd Floor

7:15 PM - 8:15 PM

Community Reception
North Terrace - 4th Floor



Thursday, July 13

7:00 AM - 8:30 AM

Education Committee Meeting
Westin Hotel - Cambria East

8:00 AM - 4:30 PM

Registration
Ballroom Gallery - 3rd Floor

8:20 AM - 8:30 AM

Remarks
Spirit of Pittsburgh A - 3rd Floor

8:30 AM - 9:15 AM

Concurrent Sessions

IT7 Creating New Sources of Data and Embedded Systems to Understand Cities
Charlie Catlett, Argonne National Laboratory, USA
Spirit of Pittsburgh A - 3rd Floor

IT8 Highly Accurate Numerical Methods and Error Estimates for Evaluation of Nearly Singular Integrals in Integral Equations
Anna-Karin Tornberg, KTH Royal Institute of Technology, Sweden
Spirit of Pittsburgh B - 3rd Floor

9:15 AM - 10:00 AM

IP1 Genetic Consequences of Range Expansion Under Climate Change
Mark Lewis, University of Alberta, Canada
Spirit of Pittsburgh A - 3rd Floor

9:30 AM - 4:30 PM

Exhibit Hall Open
Ballroom Gallery - 3rd Floor

10:00 AM - 10:30 AM

Coffee Break
Ballroom Gallery - 3rd Floor



10:30 AM - 12:30 PM

Concurrent Sessions

MS66 Advances in Mathematics of Large-scale and Higher-order Networks - Part II of II
302

MS67 Boosting and Learning in Mathematical Imaging Algorithms - Part I of II
Spirit of Pittsburgh A - 3rd Floor

MS68 Efficient Graph Algorithms
Spirit of Pittsburgh B - 3rd Floor

MS69 High Performance Tensor Computations - Part II of II
319

MS70 Mathematical Modeling of Nano-Composites - Part I of II
301

Thursday, July 13

MS71 Modeling and Computation with Fractional PDEs
303

MS72 Multifidelity Approaches in Uncertainty Quantification - Part I of II
318

MS73 Nonlinear Dynamics in Mathematical Biology
304

MS74 Panel: How Changing Implementations of National Priorities Might Affect Mathematical Funding
406

MS87 Parallel-in-time Integration of Differential Equations - Part I of II
320

CP17 Dynamical Systems and Nonlinear Analysis
310

CP18 Large-Scale Computation
311

CP19 Life Sciences - Part V of V
306

CP20 Numerical PDE - Part II of III
307

12:30 PM - 2:00 PM

Lunch Break
Attendees on their own

2:00 PM - 2:45 PM

IP2 Pattern Formation in the Drylands: Self Organization in Semi-Arid Ecosystems
Mary Silber, Northwestern University, USA
Spirit of Pittsburgh A - 3rd Floor

3:00 PM - 3:30 PM

SP6 W. T. and Idalia Reid Prize in Mathematics Lecture: Feedback Stabilization of Control Systems
Jean-Michel Coron, Université Pierre et Marie Curie, France
Spirit of Pittsburgh A - 3rd Floor

3:30 PM - 4:00 PM

Coffee Break
Ballroom Gallery - 3rd Floor



4:00 PM - 6:00 PM

Concurrent Sessions

MS75 Boosting and Learning in Mathematical Imaging Algorithms - Part II of II
Spirit of Pittsburgh A - 3rd Floor

MS76 Communication-Avoiding Algorithms - Part I of II
Spirit of Pittsburgh B - 3rd Floor

MS77 Higher Order Numerical Methods for PDEs
302

2017 SIAM Annual Meeting At-A-Glance

Thursday, July 13

MS78 Mathematical Modeling of Nano-Composites - Part II of II
301

MS79 Multifidelity Approaches in Uncertainty Quantification - Part II of II
318

MS80 Panel: Data Science in the Applied and Computational Mathematics Curriculum
406

MS81 Random Walks and Metrics
371

MS82 Topics in Applied Mathematics in Modeling and Numerical Analysis
304

CP21 Numerical Analysis - Part I of II
306

CP22 Optimization - Part I of III
310

CP23 PDE - Part I of II
307

4:00 PM - 11:00 PM
SIAM Council Meeting
Westin Hotel - Butler

4:30 PM
Exhibit Hall Closes

6:00 PM - 6:15 PM
Intermission

6:15 PM - 9:30 PM
Professional Development Evening
Spirit of Pittsburgh B - 3rd Floor

7:00 PM - 8:00 PM
Council Dinner
Westin Hotel - Cambria

8:00 AM - 4:30 PM
Registration
Ballroom Gallery - 3rd Floor

8:20 AM - 8:30 AM
Closing Remarks
Spirit of Pittsburgh A - 3rd Floor

8:30 AM - 9:15 AM
Concurrent Sessions
IT9 Mathematical Opportunities and Challenges in Sustainable Energies
Barbara Wagner, Weierstrass Institute, Germany
Spirit of Pittsburgh A - 3rd Floor

Friday, July 14

IT10 Transforming Combustion Science and Technology with Exascale Simulation
Jacqueline Chen, Sandia National Laboratories, USA
Spirit of Pittsburgh B - 3rd Floor

9:00 AM - 11:00 AM
Compensation Committee Meeting
Westin Hotel - Cambria East

9:15 AM - 10:00 AM
IP3 Predicting Travel Time on Road Networks
Dawn Woodard, Uber, USA
Spirit of Pittsburgh A - 3rd Floor

10:00 AM - 10:30 AM
Coffee Break
Ballroom Gallery - 3rd Floor

10:30 AM - 12:30 PM
Concurrent Sessions
MT3 Compressed Sensing/Dimension Reduction
Spirit of Pittsburgh A - 3rd Floor
MS83 Approximation of High-dimensional Systems – Theory and Numerical Aspects - Part I of II
318
MS84 Modeling Transmission Dynamics, Vector-Host Ecologies for Controlling Tropical Vector-borne Infectious Diseases
304
MS85 Numerical Linear Algebra in Data Science - Part I of II
302
MS86 Panel: The GAIMME Report on Mathematical Modeling in K-16
406
MS88 Random Structures
317
MS89 Recent Advances in Solving Large-scale Turbulent Flow Problems
301
MS90 Recent Advances in Theoretical and Computational Shape Analysis, Applications to Biomedical Imaging- Part I of II
Spirit of Pittsburgh B - 3rd Floor
MS91 Recent Development on Fractional Diffusion Equation: Analysis and Computation - Part I of II
303
MS98 Parallel-in-time Integration of Differential Equations - Part II of II
320

Friday, July 14

CP24 Imaging Science
311

CP25 Numerical PDE - Part III of III
306

CP26 Optimization - Part II of III
310

CP27* PDE - Part II of II
307

11:00 AM - 12:00 PM
Systems Oversight Committee (SOC) Meeting
Westin Hotel - Cambria West

12:00 PM - 1:00 PM
SOC/FMC Lunch Meeting
Westin Hotel - Westmoreland Central

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

1:00 PM - 4:00 PM
Financial Management Committee (FMC) Meeting
Westin Hotel - Cambria West

2:00 PM - 2:45 PM
IP4 Chaos and Learning in Spiking Neural Networks
Carson C. Chow, National Institutes of Health, USA
Spirit of Pittsburgh A - 3rd Floor

2:45 PM - 3:30 PM
IP5 Laplacian Matrices of Graphs: Algorithms and Applications
Daniel Spielman, Yale University, USA
Spirit of Pittsburgh A - 3rd Floor

3:30 PM - 4:00 PM
Coffee Break
Ballroom Gallery - 3rd Floor

4:00 PM - 6:00 PM
Concurrent Sessions
MS92 Approximation of High-dimensional Systems – Theory and Numerical Aspects - Part II of II
318
MS93 Communication-Avoiding Algorithms - Part II of II
Spirit of Pittsburgh B - 3rd Floor
MS94 High Performance Spectral Algorithms
315



2017 SIAM Annual Meeting At-A-Glance

Friday, July 14

MS95 Lagrangian Traffic Flow Control and Autonomous Vehicles

Spirit of Pittsburgh A - 3rd Floor

MS96 New Models of Fracture with Surface Elasticity

304

MS97 Numerical Linear Algebra in Data Science - Part II of II

302

MS98 see Friday at 10:30 AM

MS99 Recent Advances in Theoretical and Computational Shape Analysis, Applications to Biomedical

Imaging - Part II of II

301

MS100 Recent Development on Fractional Diffusion Equation: Analysis and

Computation - Part II of II

303

MS101 Synergy of Design, Analysis, and Computations in Fluid Flow Dynamics

305

CP28 Numerical Analysis - Part II of II

306

CP29 Optimization - Part III of III

310

.....
4:00 PM - 7:00 PM

Board of Trustees Executive Session

Westin Hotel - Butler West

.....
6:00 PM

Conference Adjourns

Saturday, July 15

.....
8:30 AM - 4:00 PM

Board of Trustees Regular Session

Westin Hotel - Butler

.....
12:00 PM - 1:00 PM

Board Lunch

Westin Hotel - Cambria

VISIT THE EXHIBITS!

DAVID LAWRENCE CONVENTION CENTER (DLCC)
 PITTSBURGH, PENNSYLVANIA, USA
 BALLROOM GALLERY—3RD FLOOR

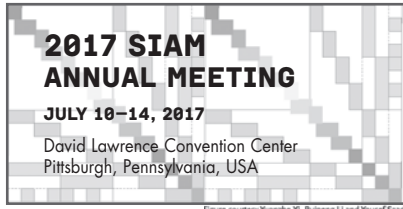


EXHIBIT HALL HOURS

Monday 7/10
 9:30 AM—4:30 PM

Tuesday 7/11
 9:30 AM—4:30 PM

Wednesday 7/12
 9:30 AM—4:30 PM

Thursday 7/13
 9:30 AM—4:30 PM

BOOTH EXHIBITORS

BOOTH

American Mathematical Society	130, 109
Kadon Enterprises, Inc.....	100
MathWorks.....	108
Oxford University Press	106
Princeton University Press.....	124
SIAM.....	112,114, 116, 118, 120
Springer	102
World Scientific Publishing Company	126

TABLETOP EXHIBITORS

Association for Women in Mathematics
 The Royal Society

This exhibitor list is current at press time.

EXHIBIT HALL

ENTRANCE

COFFEE

100 102 104 106 108

ENTRANCE

COFFEE

112 114 116 118 120

ENTRANCE

COFFEE

124 126 128 130 109



Coffee breaks will be served in the exhibit hall.

Sunday, July 9

Monday, July 10

Monday, July 10

2:00 PM - 8:00 PM

Registration
Ballroom Gallery - 3rd Floor

5:00 PM - 6:00 PM

Student Orientation
306 & 307

6:00 PM - 8:00 PM

Welcome Reception
South Terrace - 3rd Floor



7:15 AM - 4:30 PM

Registration
Ballroom Gallery - 3rd Floor

8:15 AM - 8:30 AM

Welcome Remarks
Spirit of Pittsburgh B - 3rd Floor

8:30 AM - 9:15 AM

IT1 Optimal Mass Transport and the Robustness of Complex Networks
Allen Tannenbaum, Stony Brook University, USA
Spirit of Pittsburgh B - 3rd Floor

9:15 AM - 10:00 AM

IT2 The Moment-SOS Approach in Optimization and Control
Jean-Bernard Lasserre, LAAS-CNRS, Toulouse, France
Spirit of Pittsburgh B - 3rd Floor

10:00 AM - 10:30 AM

Coffee Break
Ballroom Gallery - 3rd Floor



10:30 AM - 12:30 PM

Concurrent Sessions

MS1 Control Problems in Nonlinear PDE Systems
403

MS2 Overcoming the Curse of Dimensionality for Optimal Control and PDEs - Part I of II
404

MS3 Nonlinear Optimization in Control Theory - Part I of III
405

MS4 Computational Challenges in Stochastic Control and Optimization of High Dimensional Systems - Part I of III
408

MS5 Stochastic Control and Applications - Part I of III
409

MS6 Applications of Stochastic Systems in Finance and Energy
410

MS7 Applications of Control in Medicine and Biology - Part I of II
411

MS8 Smart Grid Problems
412

MS9 New Trends in Optimal Control
413

MS10 Modeling and Control of Markov Processes
414

12:30 PM - 2:00 PM

Lunch Break
Attendees on their own

2:00 PM - 2:45 PM

JP1 Bio-Inspired Dynamics for Multi-Agent Decision-Making
Naomi E. Leonard, Princeton University, USA
Spirit of Pittsburgh A - 3rd Floor

2:45 PM - 3:30 PM

SP1 AWM-SIAM Sonia Kovalevsky Lecture: Mitigating Uncertainty in Inverse Wave Scattering
Liliana Borcea, University of Michigan, USA
Spirit of Pittsburgh A - 3rd Floor

3:30 PM - 4:00 PM

Coffee Break
Ballroom Gallery - 3rd Floor



4:00 PM - 6:00 PM

Concurrent Sessions

MS11 Recent Results in Optimal Control of Partial Differential Equations and Applications - Part I of II
403

MS12 Overcoming the Curse of Dimensionality for Optimal Control and PDEs - Part II of II
404

MS13 Nonlinear Optimization in Control Theory - Part II of III
405

MS14 Computational Challenges in Stochastic Control and Optimization of High Dimensional Systems - Part II of III
408

MS15 Stochastic Control and Applications - Part II of III
409

MS16 Stochastic Control and its Applications in Economics and Finance
410

MS17 Applications of Control in Medicine and Biology - Part II of II
411

MS18 Lithium-Ion Battery Modeling and State-of-Charge Estimation
412

MS19 Computational Techniques in Optimal Control
413

MS20 Risk-Averse Control of Markov Systems
414

Monday, July 10

6:00 PM - 6:15 PM

Intermission

6:15 PM - 7:15 PM

CT17 Forward Looking Panel
Spirit of Pittsburgh B - 3rd Floor

7:15 PM - 9:15 PM

Career Fair, Graduate Student
and Industry Reception
302-304



Tuesday, July 11

7:30 AM - 4:30 PM

Registration
Ballroom Gallery - 3rd Floor

8:20 AM - 8:30 AM

Remarks
Spirit of Pittsburgh B - 3rd Floor

8:30 AM - 9:15 AM

IT3 Mathematical Challenges in Control of
Large-Scale Complex Systems
Andrew Sparks, United Technologies Research
Center, USA
Spirit of Pittsburgh B - 3rd Floor

9:15 AM - 9:20 AM

Intermission

9:20 AM - 9:40 AM

IT4 2015 SICON Paper Prize Lecture #1
408

IT5 2017 SICON Paper Prize Lecture #1
409

9:40 AM - 9:45 AM

Intermission

9:45 AM - 10:05 AM

IT6 2015 SICON Paper Prize Lecture #2
408

IT7 2017 SICON Paper Prize Lecture #2
409

10:00 AM - 10:30 AM

Coffee Break
Ballroom Gallery - 3rd Floor



Tuesday, July 11

10:30 AM - 12:30 PM

Concurrent Sessions

MS21 Recent Results in Optimal Control
of Partial Differential Equations and
Applications - Part II of II
403

MS22 Qualitative and Asymptotic
Properties of Solutions to Hamilton-Jacobi
Equations
404

MS23 Nonlinear Optimization in Control
Theory - Part III of III
405

MS24 Computational Challenges in
Stochastic Control and Optimization of
High Dimensional Systems - Part III of III
408

MS25 Stochastic Control and Applications
- Part III of III
409


MS26 New Developments in Stochastic
Analysis, Control, Games, and Their
Applications - Part I of III
410

MS27 Control of Neural Systems
411

MS28 Exploiting Koopman Operator
Theory for Control and Estimation
412

MS29 Direct Nonlinear Programming
Strategies for Dynamic Optimization - Part
I of III
413

12:30 PM - 2:30 PM

Prizes and Awards Luncheon 
(Offsite at the connected Westin Hotel)
*Westin Hotel - Allegheny Ballroom - 3rd
Floor*

2:30 PM - 3:30 PM

SP2 The John von Neumann Lecture:
Singular Perturbations in Noisy Dynamical
Systems
Bernard Matkowsky, Northwestern
University, USA
Spirit of Pittsburgh A - 3rd Floor

3:30 PM - 4:00 PM

Coffee Break
Ballroom Gallery - 3rd Floor



Tuesday, July 11

4:00 PM - 6:00 PM

Concurrent Sessions

MS30 Optimality Conditions in Optimal
Control - Part I of III
405

CP1 Systems Control and Applications
403

CP2 Computational Methods and Applications
404

CP3 System Stability and Applications
408

CP4 Applications in Finance
410

CP5 Applications in Biology and Medicine
411

CP6 Controlled Networks and System
Controllability
412


CP7 Applications in Robotic Control,
Chemical Engineering and Data Mining
413

CP8 Estimation, Identification, and Input-
output Mapping
409

6:00 PM - 6:15 PM

Intermission


6:15 PM - 7:00 PM

SIAM Business Meeting 
and 2017 Fellows Recognition
Spirit of Pittsburgh A - 3rd Floor
Comlimentary beer and wine will be served

7:00 PM - 7:30 PM

Intermission

7:30 PM - 8:00 PM

SIAG/CST Business Meeting 
Spirit of Pittsburgh B - 3rd Floor
Complimentary beer and wine will be served.

8:00 PM - 10:00 PM

PP1 Poster Session and Dessert Reception
West Atrium - 3rd Floor



Wednesday, July 12

Wednesday, July 12

Wednesday, July 12

8:00 AM - 4:30 PM

Registration
Ballroom Gallery - 3rd Floor

8:20 AM - 8:30 AM

Closing Remarks
Spirit of Pittsburgh B - 3rd Floor

8:30 AM - 9:15 AM

IT8 On the Dynamics of Influence and Appraisal Networks
Francesco Bullo, University of California, Santa Barbara, USA
Spirit of Pittsburgh B - 3rd Floor

9:15 AM - 10:00 AM

IT9 SIAG/CST Prize Lecture
Javad Lavaei, University of California, Berkeley, USA
Spirit of Pittsburgh B - 3rd Floor

10:00 AM - 10:30 AM

Coffee Break
Ballroom Gallery - 3rd Floor



10:30 AM - 12:30 PM

Concurrent Sessions

MS31 Control and Estimation of PDE systems
403

MS32 Boundary Stabilization for Hyperbolic Equations
404

MS33 Optimality Conditions in Optimal Control - Part II of III
405

MS34 Data Assimilation and Large-Scale Estimation for Fluid Dynamics Problems - Part I of II
408

MS35 Stochastic and Uncertain Systems and Applications
409

MS36 New Developments in Stochastic Analysis, Control, Games, and Their Applications - Part II of III
410

MS37 Optimal Control of Biological Systems
411

MS38 Novel Approaches for Modeling, Abstraction, Composition, and Analysis of Systems of Systems (SoS) - Part I of II
412

MS39 Direct Nonlinear Programming Strategies for Dynamic Optimization - Part II of III
413

12:30 PM - 2:00 PM

Lunch Break
Attendees on their own

2:00 PM - 3:00 PM

SP3 Past President's Address:
The Future of SIAM: Looking to the Mathematicians of Tomorrow
Irene Fonseca, Carnegie Mellon University, USA
Spirit of Pittsburgh A - 3rd Floor

3:00 PM - 3:30 PM

SP4 James H. Wilkinson Numerical Analysis and Scientific Computing Prize Lecture:
Tensors in Computational Mathematics
Lek-Heng Lim, University of Chicago, USA
Spirit of Pittsburgh A - 3rd Floor

3:30 PM - 4:00 PM

Coffee Break
Ballroom Gallery - 3rd Floor



4:00 PM - 6:00 PM

Concurrent Sessions

MS40 Closed-Loop Control for Infinite Dimensional Systems and Applications
403

MS41 Control and Identification for Nonlocal Systems
404

MS42 Optimality Conditions in Optimal Control - Part III of III
405

MS43 Data Assimilation and Large-Scale Estimation for Fluid Dynamics Problems - Part II of II
408

MS44 Optimal Control of Stochastic Systems and Related Fields
409

MS45 New Developments in Stochastic Analysis, Control, Games, and Their Applications - Part III of III
410

MS46 Optimal Control and Applications
411

MS47 Novel Approaches for Modeling, Abstraction, Composition, and Analysis of Systems of Systems (SoS) - Part II of II
412

MS48 Direct Nonlinear Programming Strategies for Dynamic Optimization - Part III of III
413

6:00 PM - 6:15 PM

Intermission

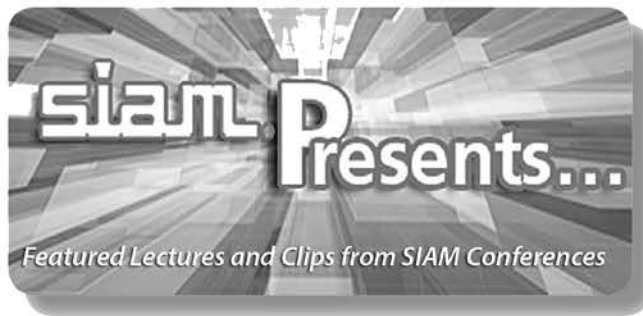
6:15 PM - 7:15 PM

SP5 I.E. Block Community Lecture:
From Flatland to Our Land: A Mathematician's Journey through Our Changing Planet
Emily Shuckburgh, British Antarctic Survey, United Kingdom
Spirit of Pittsburgh A - 3rd Floor

7:15 PM - 8:15 PM

Community Reception
North Terrace - 4th Floor





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



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2017 SIAM Conference on Industrial and Applied Geometry (GD17) At-A-Glance

Sunday, July 9

Monday, July 10

Monday, July 10

2:00 PM - 8:00 PM

Registration

Ballroom Gallery - 3rd Floor

5:00 PM - 6:00 PM

Student Orientation

306 & 307

6:00 PM - 8:00 PM

Welcome Reception

South Terrace - 3rd Floor



7:15 AM - 4:30 PM

Registration

Ballroom Gallery - 3rd Floor

8:15 AM - 8:30 AM

Welcoming Remarks

407

8:30 AM - 9:15 AM

IT1 Computational Design Tools for Physical Surfaces

Bernhard Thomaszewski, Disney Research
Zurich, Switzerland

407

9:15 AM - 10:00 AM

IT2 Computational Physics at Pixar

Tony Derose, Pixar Animation Studios,
USA

407

10:00 AM - 10:30 AM

Coffee Break

Ballroom Gallery - 3rd Floor



10:30 AM - 12:30 PM

MS1 Honoring the Life of the Late Gerald Farin

407

12:30 PM - 2:00 PM

Lunch Break

Attendees on their own

2:00 PM - 2:45 PM

JP1 AN17 and CT17 Joint Plenary
Speaker - Bio-Inspired Dynamics for
Multi-Agent Decision-Making

Naomi E. Leonard, Princeton University,
USA

Spirit of Pittsburgh A - 3rd Floor

2:45 PM - 3:30 PM

SP1 AWM-SIAM Sonia Kovalevsky

Lecture:

Mitigating Uncertainty in Inverse Wave
Scattering

Liliana Borcea, University of Michigan,
USA

Spirit of Pittsburgh A - 3rd Floor

3:30 PM - 4:00 PM

Coffee Break

Ballroom Gallery - 3rd Floor



4:00 PM - 6:00 PM

Concurrent Sessions

MS2 TAG = Topology Applied to Geometry
407

MS3 Scripted Process Engineering
402

CP1 Geometric Data Interpolation
401

6:00 PM - 6:15 PM

Intermission

6:15 PM - 7:15 PM

PD1 The Ewald Quak Forward Looking Panel
Discussion

407

7:15 PM - 9:15 PM

Career Fair, Graduate Student and Industry
Reception

302-304



2017 SIAM Conference on Industrial and Applied Geometry (GD17) At-A-Glance

Tuesday, July 11

Tuesday, July 11

Wednesday, July 12

7:30 AM - 4:30 PM

Registration
Ballroom Gallery - 3rd Floor

8:25 AM - 8:30 AM

Remarks
407


8:30 AM - 9:15 AM

IT3 Design of 3D Printed Mathematical Art
Henry Segerman, Oklahoma State University, USA
407

9:15 AM - 10:00 AM

IT4 Shape Control in Curve Design
Carla Manni, University of Rome II, Tor Vergata, Italy
407

10:00 AM - 10:30 AM

Coffee Break
Ballroom Gallery - 3rd Floor 

10:30 AM - 12:30 PM


Concurrent Sessions

MS4 3D-Printing: geometric design implementations, tools and experiments
401

MS5 Computational Geometry Issues in Monte Methods for Partial Differential Equations
402

MS6 Splines for Surfaces of Arbitrary Topology - Part I of II
407


12:30 PM - 2:30 PM

Prizes and Awards Luncheon
(Offsite at the connected Westin Hotel)
Westin Hotel - Allegheny Ballroom - 3rd Floor 

2:30 PM - 3:30 PM

SP2 The John von Neumann Lecture: Singular Perturbations in Noisy Dynamical Systems
Bernard Matkowsky, Northwestern University, USA
Spirit of Pittsburgh A - 3rd Floor

3:30 PM - 4:00 PM

Coffee Break
Ballroom Gallery - 3rd Floor 

4:00 PM - 6:00 PM

Concurrent Sessions

MS7 Splines for Surfaces of Arbitrary Topology - Part II of II
407


MS8 Parameterization techniques: from modeling to simulation
402

CP2 Applied Geometry
401

6:00 PM - 6:15 PM

Intermission


6:15 PM - 7:00 PM

SIAM Business Meeting and 2017 Fellows Recognition 
Spirit of Pittsburgh A - 3rd Floor
Complimentary beer and wine will be served.


7:00 PM - 7:30 PM

Intermission

7:30 PM - 8:00 PM

SIAG/GD Business Meeting 
407
Complimentary beer and wine will be served.

8:00 PM - 10:00 PM

PP1 Poster Session and Dessert Reception
West Atrium - 3rd Floor 

Wednesday, July 12

8:00 AM - 4:30 PM

Registration
Ballroom Gallery 3rd Floor

8:25 AM - 8:30 AM

Remarks
407


8:30 AM - 9:15 AM

IT5 Simulating Cloth, Paper, and Other Thin Shells Using Discrete Differential Geometry
Etienne Vouga, University of Texas at Austin, USA
407

9:15 AM - 10:00 AM

IT6 Efficient Developable Surface Modeling: From Garment Design, to Paper Animation
Damien Rohmer, Inria and ENS Lyon, France
407

10:00 AM - 10:30 AM

Coffee Break
Ballroom Gallery - 3rd Floor 

10:30 AM - 12:30 PM

Concurrent Sessions

MS9 Discrete Vector Field Analysis and Applications
402

MS10 New Trends in Generalized Barycentric Coordinates
407

CP3 Geometry in Finite Elements and Optimization
401

12:30 PM - 2:00 PM

Lunch Break
Attendees on their own


2:00 PM - 3:00 PM

SP3 Past President's Address: The Future of SIAM: Looking to the Mathematicians of Tomorrow
Irene Fonseca, Carnegie Mellon University, USA
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3:00 PM - 3:30 PM

SP4 James H. Wilkinson Numerical Analysis and Scientific Computing Prize Lecture: Tensors in Computational Mathematics
Lek-Heng Lim, University of Chicago, USA
Spirit of Pittsburgh A - 3rd Floor

3:30 PM - 4:00 PM

Coffee Break
Ballroom Gallery - 3rd Floor 

Wednesday, July 12

4:00 PM - 6:00 PM

Concurrent Sessions

MS11 Subdivision Schemes in Geometric Design - Recent Advances and New Trends

401

MS12 Architectural Geometry

402

MS13 Isogeometric Design and Analysis

407

6:00 PM - 6:15 PM

Intermission

6:15 PM - 7:15 PM

SP5 I.E. Block Community Lecture:

From Flatland to Our Land: A Mathematician's Journey through Our Changing Planet

Emily Shuckburgh, British Antarctic Survey, United Kingdom

Spirit of Pittsburgh A - 3rd Floor






7:15 PM - 8:15 PM

Community Reception

North Terrace- 4th Floor

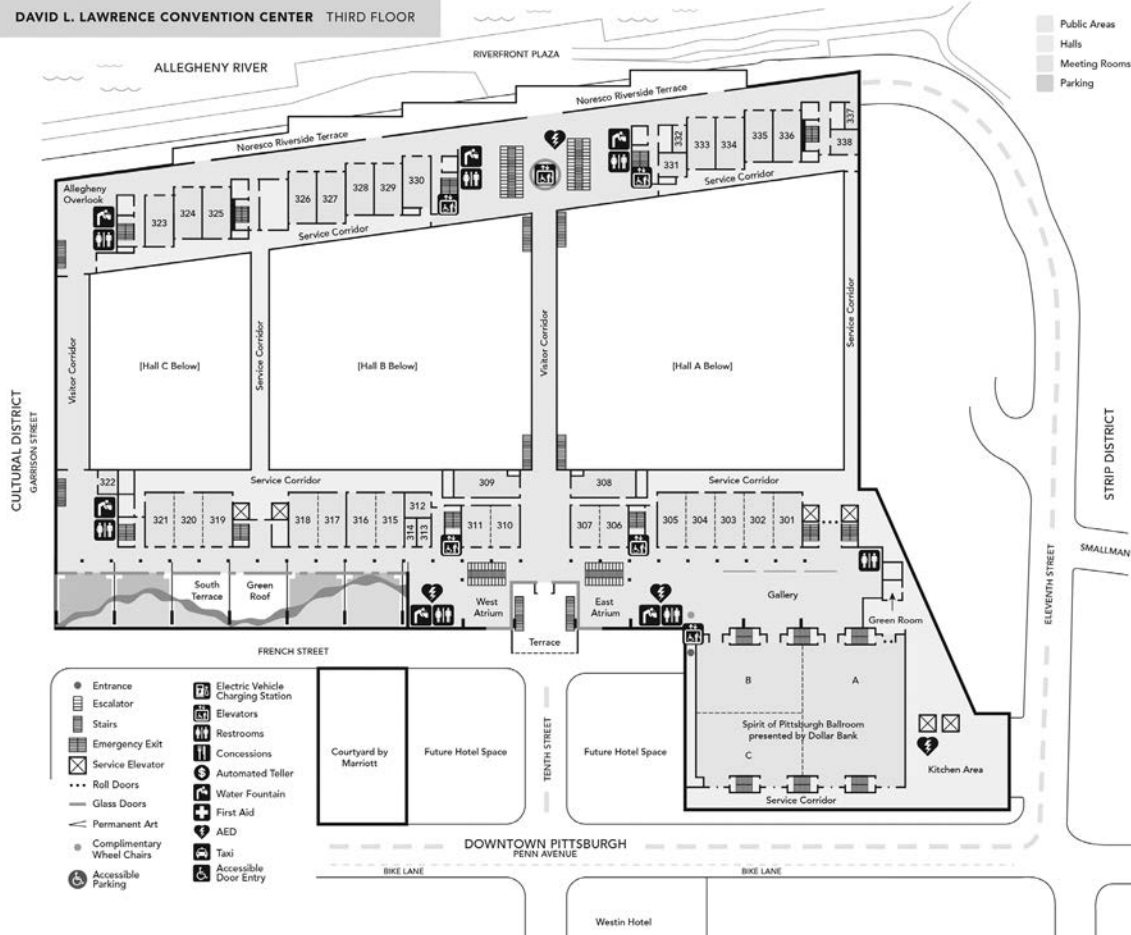


KEY TO ABBREVIATIONS AND SYMBOLS

CP, PP	=	Contributed 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

David Lawrence Convention Center Floor Plan

DAVID L. LAWRENCE CONVENTION CENTER THIRD FLOOR



DAVID L. LAWRENCE CONVENTION CENTER FOURTH FLOOR

