



Conference on Analysis of Partial Differential Equations

November 17–20, 2025
Sheraton Pittsburgh Hotel at Station Square
Pittsburgh, Pennsylvania, U.S.

Online Program and Mobile App

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Sunday, November 16**5:00 p.m. – 8:00 p.m.**Registration
*Grand Station Ballroom III Foyer***6:00 p.m. – 8:00 p.m.**Welcome Reception
*Reflections/Waterfront/Admiral***Monday, November 17****7:30 a.m. – 4:00 p.m.**Registration
*Grand Station Ballroom III Foyer***8:30 a.m. – 10:30 a.m.****Concurrent Sessions****MS1** Advances in Dispersive PDE - Part I of II*Grand Station II-V***MS2** Advances in the Analysis and Computation of Materials - Part I of III*Edenburg***MS3** Forward and Inverse Problems for Kinetic and Wave Models - Part I of III*Brighton IV***MS4** Hyperbolic and Mixed-type Problems in Conservation Laws and Related Applications - Part I of III*Ellwood II***MS5** Mean Field Games and Control - Part I of III*Haselton I***MS6** Recent Advances in Mathematical and Computational Fluid Dynamics - Part I of III*Brighton II***MS7** Recent Developments in Analysis and Computation of Fluid Mechanics*Woodlawn***MS8** Stability and Periodicity in PDE Systems - Part I of III*Grand Station I***MS9** Structure-Preserving Methods in Learning, Inference, and Discretizations for PDEs*Ellwood I***MS10** Wave Phenomena in Complex Media: Advances and Challenges Part I of II*Brighton I***MS11** What are Good Solution Concepts for the PDEs of Fluid Mechanics? - Part I of II*Brighton III***CP1** Contributed Presentation Session 1*Pointsvew***CP2** Contributed Presentation Session 2*Stoopsferry***10:30 a.m. – 10:50 a.m.**Coffee Break
*Reflections/Waterfront/Admiral***Monday, November 17****10:50 a.m. – 11:00 a.m.**Welcome Remarks
*Grand Station II-V***11:00 a.m. – 11:45 a.m.****IP1** Overhanging Water Waves in Incompressible, Constant Vorticity Fluids
Manuel del Pino, University of Bath, United Kingdom
*Grand Station II-V***11:45 a.m. – 12:30 p.m.****IP2** The Study of Wave Turbulence: A Meeting Ground for Mathematical Techniques
Gigliola Staffilani, Massachusetts Institute of Technology, U.S.
*Grand Station II-V***12:30 p.m. – 2:30 p.m.**

Lunch Break

2:30 p.m. – 4:30 p.m.**Concurrent Sessions****MS12** Advances in Dispersive PDE - Part II of II
*Grand Station II-V***MS13** Advances in the Analysis and Computation of Materials - Part II of III*Edenburg***MS14** Forward and Inverse Problems for Kinetic and Wave Models - Part II of III*Brighton IV***MS15** Hyperbolic and Mixed-type Problems in Conservation Laws and Related Applications - Part II of III*Ellwood II***MS16** Kernel-Based Surrogate Models for Solving PDEs Part I of II*Woodlawn***MS17** Mean Field Games and Control - Part II of III*Haselton I***MS18** Non-local Equations: Classical and Novel Applications*Ellwood I***MS19** Recent Advances in Mathematical and Computational Fluid Dynamics - Part II of III*Brighton II***MS20** Wave Phenomena in Complex Media: Advances and Challenges Part II of II*Brighton I***MS21** What are Good Solution Concepts for the PDEs of Fluid Mechanics? - Part II of II*Brighton III***CP3** Contributed Presentation Session 3*Pointsvew***CP4** Contributed Presentation Session 4*Stoopsferry***4:30 p.m. – 6:30 p.m.****PP1** Poster Session
*Reflections/Waterfront/Admiral***Tuesday, November 18****8:00 a.m. – 4:00 p.m.**Registration
*Grand Station Ballroom III Foyer***8:30 a.m. – 10:30 a.m.****Concurrent Sessions****MS22** Advances in the Analysis and Computation of Materials - Part III of III*Edenburg***MS23** Advances in the Spectral Analysis of Schrödinger Operators in Complex Materials - Part I of III*Grand Station II-V***MS24** Forward and Inverse Problems for Kinetic and Wave Models - Part III of III*Brighton IV***MS25** Hyperbolic and Mixed-type Problems in Conservation Laws and Related Applications - Part III of III*Ellwood II***MS26** Inverse Problems for PDEs: Inverse Scattering and Non-scattering - Part I of III*Brighton III***MS27** Kernel-Based Surrogate Models for Solving PDEs Part II of II*Woodlawn***MS28** Mathematical Analysis Related to Wave Propagation Near Exotic Interfaces - Part I of II**MS29** Mean Field Games and Control - Part III of III*Haselton I***MS30** Recent Advances in Mathematical and Computational Fluid Dynamics - Part III of III*Brighton II***MS31** Recent Developments in Interactive PDE Systems of Mixed Type: Analysis, Control and Numerical Approximation - Part I of III*Brighton I***MS32** Stability and Periodicity in PDE Systems - Part II of III*Grand Station I***CP5** Contributed Presentation Session 5*Pointsvew***10:30 a.m. – 10:55 a.m.**Coffee Break
*Reflections/Waterfront/Admiral***10:55 a.m. – 11:00 a.m.**Announcements
*Grand Station II-V**Grand Station II-V***11:00 a.m. – 11:45 a.m.****IP3** On the Vanishing Viscosity Limit and Boundary Layers in Incompressible Fluids

Anna Mazzucato, Pennsylvania State University, U.S.

Grand Station II-V

Tuesday, November 18**11:45 a.m. – 12:30 p.m.****IP4** Vortex Reconnection in 3d Critical Abelian Higgs ModelsRobert Jerrard, University of Toronto, Canada
*Grand Station II-V***12:30 p.m. – 2:30 p.m.**

Lunch Break

2:30 p.m. – 4:30 p.m.**Concurrent Sessions****MT1** Nonlocal Phase Transitions, Minimal Surfaces, and Crystal Dislocations*Grand Station II-V***MS33** Advances in PDE Modeling and Analysis for Life and Social Sciences - Part I of II*Edenburg***MS34** Advances in the Spectral Analysis of Schrödinger Operators in Complex Materials - Part II of III*Brighton I***MS35** Insights From PDEs into Machine Learning - Part I of II*Woodlawn***MS36** Inverse Problems for PDEs: Inverse Scattering and Non-scattering - Part II of III*Brighton IV***MS37** Mathematical Analysis Related to Wave Propagation Near Exotic Interfaces - Part II of II*Ellwood I***MS38** Mathematical Frontiers in Reaction-diffusion Models Arising from Biology - Part I of II*Haselton I***MS39** Nonlinear Partial Differential Equations from Fluid Mechanics and Material Science - Part I of III*Brighton II***MS40** Recent Developments in Interactive PDE Systems of Mixed Type: Analysis, Control and Numerical Approximation - Part II of III*Brighton III***MS41** CANCELLED: Stability and Periodicity in PDE Systems - Part III of III*Grand Station I***MS42** Theoretical and Computational Perspectives on Singular Limits in PDEs - Part I of II*Ellwood II***CP6** Contributed Presentation Session 6*Pointsvew***Wednesday, November 19****8:00 a.m. – 4:00 p.m.**

Registration

*Grand Station Ballroom III Foyer***8:30 a.m. – 10:30 a.m.****Concurrent Sessions****MS43** Advances in PDE Modeling and Analysis for Life and Social Sciences - Part II of II*Edenburg***MS44** Advances in the Spectral Analysis of Schrödinger Operators in Complex Materials - Part III of III*Brighton I***MS45** Asymptotic Models for Nonlinear Waves in Fluids and Solids - Part I of II*Grand Station II-V***MS46** Insights From PDEs into Machine Learning - Part II of II*Woodlawn***MS47** Inverse Problems for PDEs: Inverse Scattering and Non-scattering - Part III of III*Brighton IV***MS48** Mathematical Frontiers in Reaction-diffusion Models Arising from Biology - Part II of II*Haselton I***MS49** Nonlinear Partial Differential Equations from Fluid Mechanics and Material Science - Part II of III*Brighton II***MS50** Nonlinear Waves and Interfacial Dynamics - Part I of III*Grand Station I***MS51** Recent Advances on Geometric Methods for Dynamical Systems - Part I of II*Ellwood I***MS52** Recent Developments in Interactive PDE Systems of Mixed Type: Analysis, Control and Numerical Approximation - Part III of III*Brighton III***MS53** Theoretical and Computational Perspectives on Singular Limits in PDEs - Part II of II*Ellwood II***CP7** Contributed Presentation Session 7*Pointsvew***10:30 a.m. – 10:55 a.m.**

Coffee Break

*Reflections/Waterfront/Admiral***10:55 a.m. – 11:00 a.m.**

Announcements

*Grand Station II-V***11:00 a.m. – 11:45 a.m.****IP5** SIAG/APDE Early Career Prize Lecture Regularity in Nonuniformly Elliptic ProblemsCristiana De Filippis, University of Parma, Italy
*Grand Station II-V***Wednesday, November 19****11:45 a.m. – 1:15 p.m.**

Lunch Break

1:15 p.m. – 2:00 p.m.**SP1** SIAG/APDE Best Paper Prize Lecture-Curvature-Driven Wrinkling of Thin Elastic ShellsIan Tobasco, University of Michigan, U.S.
*Grand Station II-V***2:00 p.m. – 2:30 p.m.**

Coffee Break

*Reflections/Waterfront/Admiral***2:30 p.m. – 4:30 p.m.****Concurrent Sessions****MT2** Dynamics for Sampling: From Markov Chains to Gradient Flows and Interacting Particles*Grand Station II-V***MS54** Analytical Methods in Kinetic Theory and Fluid Mechanics - Part I of III*Brighton III***MS55** Collective Behavior and Related Phenomena - Part I of II*Ellwood II***MS56** Existence and Stability of Nonlinear Waves and Patterns - Part I of III*Grand Station I***MS57** Many-body Systems and Their Effective Equations - Part I of III*Edenburg***MS58** Nonlinear Partial Differential Equations from Fluid Mechanics and Material Science - Part III of III*Brighton II***MS59** Nonlinear Waves and Interfacial Dynamics - Part II of III*Brighton I***MS60** Recent Advances in Data Assimilation, Inverse Problems, and Machine Learning - Part I of III*Woodlawn***MS61** Recent Advances on Geometric Methods for Dynamical Systems - Part II of II*Ellwood I***MS62** Statistical Approaches to PDE Inverse Problems - Part I of III*Brighton IV***CP8** Contributed Presentation Session 8*Haselton I***CP9** Contributed Presentation Session 9*Stoopsferry***4:30 p.m. – 4:45 p.m.**

Intermission

4:45 p.m. – 5:45 p.m.SIAG/APDE Business Meeting
*Complimentary wine and beer**Grand Station II-V*

Thursday, November 20**Thursday, November 20****8:00 a.m. – 3:00 p.m.**

Registration

*Grand Station Ballroom III Foyer***8:30 a.m. – 10:30 a.m.****Concurrent Sessions****MS63** Analysis of PDEs Arising from Multi-physics Systems - Part I of II*Edenburg***MS64** Analytical Methods in Kinetic Theory and Fluid Mechanics - Part II of III*Brighton II***MS65** Asymptotic Models for Nonlinear Waves in Fluids and Solids - Part II of III*Grand Station II-V***MS66** Collective Behavior and Related Phenomena - Part II of II*Ellwood II***MS67** Existence and Stability of Nonlinear Waves and Patterns - Part II of III*Grand Station I***MS68** Inverse and Control Problems for Transport-type Equations*Brighton III***MS69** Many-body Systems and Their Effective Equations - Part II of III*Ellwood I***MS70** Recent Advances in Data Assimilation, Inverse Problems, and Machine Learning - Part II of III*Woodlawn***MS71** Recent Advances in Modeling and Numerical Methods for Inverse Problems for Partial Differential Equations*Brighton I***MS72** Statistical Approaches to PDE Inverse Problems - Part II of III*Brighton IV***CP10** Contributed Presentation Session 10*Stoopsferry***CP11** Contributed Presentation Session 11*Poinstview***10:30 a.m. – 10:55 a.m.**

Coffee Break

*Reflections/Waterfront/Admiral***10:55 a.m. – 11:00 a.m.**

Announcements

*Grand Station II-V***11:00 a.m. – 11:45 a.m.****IP6** Title TBA

Luis Silvestre, University of Chicago, U.S.

*Grand Station II-V***11:45 a.m. – 12:30 p.m.****IP7** Stability and Growth for 2D Euler Equation

Yao Yao, National University of Singapore, Singapore

*Grand Station II-V***12:30 p.m. – 2:30 p.m.**

Lunch Break

2:30 p.m. – 4:30 p.m.**Concurrent Sessions****MS73** Analysis of PDEs Arising From Multi-physics Systems - Part II of II*Edenburg***MS74** Analytical Methods in Kinetic Theory and Fluid Mechanics - Part III of III*Brighton II***MS75** Existence and Stability of Nonlinear Waves and Patterns - Part III of III*Grand Station I***MS76** Inverse and Control Problems for Transport-type Equations-Part II*Brighton III***MS77** Many-body Systems and Their Effective Equations - Part III of III*Ellwood I***MS78** Nonlinear Waves and Interfacial Dynamics - Part III of III*Brighton I***MS79** Recent Advances in Data Assimilation, Inverse Problems, and Machine Learning - Part III of III*Woodlawn***MS80** Statistical Approaches to PDE Inverse Problems - Part III of III*Brighton IV***CP12** Contributed Presentation Session 12*Haselton***CP13** Contributed Presentation Session 13*Stoopsferry***Abbreviation Key**

CP = Contributed Presentation Session

IP = Invited Plenary Speaker

MS = Minisymposium

MT = Minitutorial

PP = Poster Session

SP = Special Lecture

To Our Funding Agency, *Thank You!*

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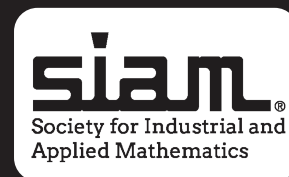
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— Jed Brown, SIAM Member, University of Colorado



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