



Scientific Program 2024

Workshops

Participants of the Workshops at Oberwolfach are invited personally by the Director of the Institute. Participation is subject to such an invitation. Interested researchers, in particular junior scientists, can contact the administration of the Institute. Since the number of participants is restricted, not all inquiries can be considered.

07.01. – 12.01.2024 (ID: 2402)
Fracture as an Emergent Phenomenon
Patrick Diehl, Baton Rouge
Robert Lipton, Baton Rouge
Anna Pandolfi, Milano
Thomas Wick, Hannover

14.01. – 19.01.2024 (ID: 2403)
Cluster Algebras and Its Applications
Karin Baur, Leeds
Bethany Marsh, Leeds
Ralf Schiffler, Storrs
Sibylle Schroll, Köln

21.01. – 26.01.2024 (ID: 2404)
Discrete Geometry
Karim Adiprasito, Jerusalem
Xavier Goaoc, Villers-les-Nancy
Zuzana Patáková, Praha

04.02. – 09.02.2024 (ID: 2406)
Applications of Optimal Transportation
Guillaume Carlier, Paris
Maria Colombo, Lausanne
Virginie Ehrlacher, Marne de la Vallée
Daniel Matthes, Garching

11.02. – 16.02.2024 (ID: 2407)
Interfaces, Free Boundaries and Geometric Partial Differential Equations
Charlie Elliott, Coventry
Harald Garcke, Regensburg
Barbara Niethammer, Bonn
Gieri Simonett, Nashville

18.02. – 23.02.2024 (ID: 2408)
Analysis, Geometry and Topology of Positive Scalar Curvature Metrics
Bernd Ammann, Regensburg
Bernhard Hanke, Augsburg
Anna Sakovich, Uppsala

25.02. – 01.03.2024 (ID: 2409)
Hyperbolic Balance Laws: Interplay between Scales and Randomness
Remi Abgrall, Zürich
Mauro Garavello, Milano
Mária Lukáčová-Medvidová, Mainz
Konstantina Trivisa, College Park

03.03. – 08.03.2024 (ID: 2410)
Mechanics of Materials: Multiscale Design of Advanced Materials and Structures
Samuel Forest, Evry
David McDowell, Atlanta
Stefan Müller, Bonn
Ewald Werner, München

10.03. – 15.03.2024 (ID: 2411a)
Combinatorial *-algebras
Guillermo Cortiñas, Buenos Aires
Søren Eilers, Copenhagen
Elizabeth Gillaspy, Missoula
Roozbeh Hazrat, Sydney

10.03. – 15.03.2024 (ID: 2411b)
Nonlinear Optics: Physics, Analysis, and Numerics
Kurt Busch, Berlin
Ramy El-Ganainy, Houghton
Marlis Hochbruck, Karlsruhe

17.03. – 22.03.2024 (ID: 2412)
K-Stability, Birational Geometry and Mirror Symmetry
Thibaut Delcroix, Montpellier
Liana Heuberger, Bath
Susanna Zimmermann, Orsay

24.03. – 29.03.2024 (ID: 2413)
Proof Complexity and Beyond
Albert Atserias, Barcelona
Meena Mahajan, Chennai
Jakob Nordström, Copenhagen/Lund
Alexander Razborov, Chicago

14.04. – 19.04.2024 (ID: 2416)
Hochschild (Co)Homology and Applications
Bernhard Keller, Paris
Henning Krause, Bielefeld
Wendy Lowen, Antwerpen
Andrea Solotar, Buenos Aires

21.04. – 26.04.2024 (ID: 2417)
Applied Harmonic Analysis and Data Science
Ingrid Daubechies, Durham
Gitta Kutyniok, München
Holger Rauhut, Aachen

28.04. – 03.05.2024 (ID: 2418)
Non-commutative Function Theory and Free Probability
Kelly Bickel, Lewisburg
Michael Hartz, Saarbrücken
John E. McCarthy, Saint Louis
Roland Speicher, Saarbrücken

05.05. – 10.05.2024 (ID: 2419a)
Real and Logarithmic Enumerative Geometry
Dan Abramovich, Providence
Penka Georgieva, Paris
Helge Ruddat, Mainz

05.05. – 10.05.2024 (ID: 2419b)
Game-theoretic Statistical Inference: Optional Sampling, Universal Inference, and Multiple Testing Based on E-values
Peter Grünwald, Amsterdam/Leiden
Aaditya Ramdas, Pittsburgh
Ruodu Wang, Waterloo
Johanna Ziegel, Bern

12.05. – 17.05.2024 (ID: 2420)
Statistical Physics and Random Surfaces
Christophe Garban, Villeurbanne
Jason Miller, Cambridge UK
Scott Sheffield, Cambridge MA

26.05. – 31.05.2024 (ID: 2422)
Constrained Dynamics, Stochastic Numerical Methods and the Modeling of Complex Systems
Benedict Leimkuhler, Edinburgh
Richard Tsai, Austin
Gilles Vilmart, Geneva
Rachel Ward, Austin

02.06. – 07.06.2024 (ID: 2423)
Complexity Theory
Peter Bürgisser, Berlin
Irit Dinur, Rehovot
Salil Vadhan, Cambridge MA

09.06. – 14.06.2024 (ID: 2424)
Geometrie
Aaron Naber, Evanston
André Neves, Chicago
Eleonora Di Nezza, Palaiseau
Burkhard Wilking, Münster

16.06. – 21.06.2024 (ID: 2425)
Arrangements, Matroids and Logarithmic Vector Fields
Takuro Abe, Fukuoka
Graham Denham, London CA
Eva-Maria Feichtner, Bremen
Gerhard Röhrle, Bochum

23.06. – 28.06.2024 (ID: 2426)
Statistics and Learning Theory in the Era of Artificial Intelligence
Florentina Bunea, Ithaca
Arnak Dalalyan, Palaiseau
Robert Nowak, Madison
Sara van de Geer, Zürich

30.06. – 05.07.2024 (ID: 2427)
Model Hierarchies in Atmosphere, Ocean, and Climate Sciences
Paola Cessi, San Diego
Rupert Klein, Berlin
Samuel N. Stechmann, Madison
Bjorn Stevens, Hamburg

07.07. – 12.07.2024 (ID: 2428)
Algebraic Geometry: Wall Crossing and Moduli Spaces, Varieties and Derived Categories
Daniel Huybrechts, Bonn
Giulia Saccà, New York
Richard Thomas, London
Chenyang Xu, Princeton

14.07. – 19.07.2024 (ID: 2429)
Arithmetic Geometry
Bhargav Bhatt, Princeton
Ana Caraiani, London
Gerd Faltings, Bonn
Peter Scholze, Bonn

21.07. – 26.07.2024 (ID: 2430)
Topologie
Mark Behrens, Notre Dame
Ruth Charney, Waltham
Oscar Randal-Williams, Cambridge UK
András Stipsicz, Budapest

28.07. – 02.08.2024 (ID: 2431)
Polynomial Optimization for Nonlinear Dynamics: Theory, Algorithms, and Applications
Giovanni Fantuzzi, London
David Goluskin, Victoria
Jean-Bernard Lasserre, Toulouse

04.08. – 09.08.2024 (ID: 2432)
Mathematical Aspects of General Relativity
Carla Cederbaum, Tübingen
Mihalis Dafermos, Princeton
Jim Isenberg, Eugene
Hans Ringström, Stockholm

11.08. – 16.08.2024 (ID: 2433)
Calculus of Variation
Lia Bronsard, Hamilton
Maria Colombo, Lausanne
László Székelyhidi, Leipzig
Yoshihiro Tonegawa, Tokyo

Miniworkshops

28.01. – 02.02.2024 (2405a/b/c), deadline for appl.: 30 June 2023
07.04. – 12.04.2024 (2415a/b/c), deadline for appl.: 30 June 2023
17.11. – 22.11.2024 (2447a/b/c), deadline for appl.: 15 March 2024
08.12. – 13.12.2024 (2450a/b/c), deadline for appl.: 15 March 2024

Tandem- or Miniworkshops

22.09. – 27.09.2024 (2439a/b) deadline for appl.: 31 July 2023

Arbeitsgemeinschaft (study group)

31.03. – 05.04.2024 (2414), to be announced in summer 2023
06.10. – 11.10.2024 (2441), to be announced in winter 2023
13.10. – 18.10.2024 (2442), to be announced in winter 2023

Oberwolfach Seminars

19.05. – 24.05.2024 (2421a/b), to be announced in winter 2023
20.10. – 25.10.2024 (2443a/b), to be announced in winter 2023
24.11. – 29.11.2024 (2448a/b), to be announced in winter 2023

18.08. – 23.08.2024 (ID: 2434)
Mathematics, Statistics, and Geometry of Extreme Events in High Dimensions
Richard Davis, New York
Rafal Kulik, Ottawa
Anne Sabourin, Palaiseau
Stilian Stoev, Ann Arbor

25.08. – 30.08.2024 (ID: 2435)
Homotopical Algebra and Higher Structures
Michael Batanin, Prague
Andrey Lazarev, Lancaster
Muriel Livernet, Paris
Martin Markl, Prague

01.09. – 06.09.2024 (ID: 2436)
Explicit Methods in Number Theory
Karim Belabas, Talence
Bjorn Poonen, Cambridge MA
Fernando Rodriguez-Villegas, Trieste

08.09. – 13.09.2024 (ID: 2437)
Riemann Surfaces: Random, Flat, and Hyperbolic Geometry
Gaëtan Borot, Berlin
Samuel Grushevsky, Stony Brook
Martin Möller, Frankfurt

15.09. – 20.09.2024 (ID: 2438)
Recent Developments in Dirichlet Form Theory and Related Fields
Zhen-Qing Chen, Seattle
Michael Röckner, Bielefeld
Masayoshi Takeda, Osaka
Anita Winter, Duisburg

29.09. – 04.10.2024 (ID: 2440)
Anabelian Geometry and Representations of Fundamental Groups
Anna Cadoret, Paris
Florian Pop, Philadelphia
Jakob Stix, Frankfurt
Adam Topaz, Edmonton

27.10. – 01.11.2024 (ID: 2444)
Deep Learning for PDE-based Inverse Problems
Simon Arridge, London
Peter Maass, Bremen
Carola-Bibiane Schönlieb, Cambridge UK

03.11. – 08.11.2024 (ID: 2445)
Directions in Rough Analysis
Thomas Cass, London
Christa Cuchiero, Vienna
Peter Friz, Berlin

10.11. – 15.11.2024 (ID: 2446)
Combinatorial Optimization
Thomas Rothvoss, Seattle
Laura Sanità, Milano
Robert Weismantel, Zürich

01.12. – 06.12.2024 (ID: 2449)
Representations of p-adic Groups
Jessica Fintzen, Bonn
David Schwein, Bonn
Maarten Solleveld, Nijmegen

15.12. – 20.12.2024 (ID: 2451)
Convex Geometry and its Applications
Shiri Artstein-Avidan, Tel Aviv
Daniel Hug, Karlsruhe
Elisabeth Werner, Cleveland