

Scientific Program 2021

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 excellent junior scientists working in the topic of a workshop, can contact the administration of the Institute. Since the number of participants is restricted, not all inquiries can be considered.

03.01. - 09.01.2021 (ID: 2101a)

**Homogeneous Structures:
Model Theory meets Universal Algebra**

Manuel Bodirsky, Dresden
Joanna Ochremiak, Talence
Michael Pinsker, Wien/Prague

03.01. - 09.01.2021 (ID: 2101b)

**Geometry, Dynamics and Spectrum of Operators
on Discrete Spaces**

David Damanik, Houston
Matthias Keller, Potsdam
Tatiana Nagnibeda, Geneva
Felix Pogorzelski, Leipzig

10.01. - 16.01.2021 (ID: 2102)

Nonstandard Finite Element Methods

Daniele Boffi, Pavia
Carsten Carstensen, Berlin
Alexandre Ern, Paris
Jun Hu, Peking

17.01. - 23.01.2021 (ID: 2103)

Spatial Networks and Percolation

Nina Gantert, München
Julia Komjathy, Eindhoven
Peter Mörters, Köln
Vincent Tassion, Zürich

24.01. - 30.01.2021 (ID: 2104)

**Logarithmic Vector Fields and Freeness of Divisors
and Arrangements: New perspectives and applications**

Takuro Abe, Fukuoka
Alexandru Dimca, Nice
Eva-Maria Feichtner, Bremen
Gerhard Röhrle, Bochum

31.01. - 06.02.2021 (ID: 2105)

Moduli spaces and Modular forms

Jan Hendrik Bruinier, Darmstadt
Gerard van der Geer, Amsterdam
Valery Gritsenko, Villeneuve d'Ascq

07.02. - 13.02.2021 (ID: 2106a/b/c)

Mini-Workshops (deadline for applications: September 1st, 2020)

14.02. - 20.02.2021 (ID: 2107)

Challenges in Optimization with Complex PDE-Systems

Michael Hintermüller, Berlin
Karl Kunisch, Graz
Günter Leugering, Erlangen
Elisabetta Rocca, Pavia

21.02. - 27.02.2021 (ID: 2108)

Applications of Optimal Transportation in the Natural Sciences

Jean-David Benamou, Le Chesnay
Virginie Ehrlacher, Champs sur Marne
Daniel Matthes, Garching

28.02. - 06.03.2021 (ID: 2109)

Hyperbolic Balance Laws: Modeling, Analysis, and Numerics

Remi Abgrall, Zürich
Mauro Garavello, Milano
Maria Lukacova, Mainz
Konstantina Trivisa, College Park

07.03. - 13.03.2021 (ID: 2110a)

Homotopic and Geometric Galois Theory

Benjamin Collas, Bayreuth
Pierre Dèbes, Villeneuve d'Ascq
Hiroaki Nakamura, Osaka

07.03. - 13.03.2021 (ID: 2110b)

Deep Learning for Inverse Problems

Simon Arridge, London
Peter Maaß, Bremen
Carola Schönlieb, Cambridge UK

14.03. - 20.03.2021 (ID: 2111)

Homogenization Theory: Periodic and Beyond

Anne-Laure Dalibard, Paris
Claude Le Bris, Marne La Vallee
Panagiotis E. Souganidis, Chicago

21.03. - 27.03.2021 (ID: 2112)

Mathematical Foundations of Machine Learning

Peter Bartlett, Berkeley
Cristina Butucea, Palaiseau
Johannes Schmidt-Hieber, Enschede

28.03. - 03.04.2021 (ID: 2113)

Geometric Numerical Integration

Marlis Hochbruck, Karlsruhe
Christian Lubich, Tübingen
Robert McLachlan, Palmerston North
Jesús María Sanz-Serna, Madrid

04.04. - 10.04.2021 (ID: 2114)

Arbeitsgemeinschaft (subject tba in summer 2020)

11.04. - 17.04.2021 (ID: 2115)

Mathematical Foundations of Biological Organization

Jean-Pierre Eckmann, Genève
Karsten Kruse, Genève
Lai-Sang Young, New York

18.04. - 24.04.2021 (ID: 2116)

Algebraic Groups

Corrado De Concini, Rome
Philippe Gille, Villeurbanne,
Peter Littelmann, Köln

25.04. - 01.05.2021 (ID: 2117)

Computability Theory

Vasco Brattka, Neubiberg
Noam Greenberg, Wellington
Iskander Kalimullin, Kazan
Mariya Soskova, Madison

02.05. - 08.05.2021 (ID: 2118)

Foundations of Bayesian Inference for

Complex Statistical Models

Richard Nickl, Cambridge UK
Judith Rousseau, Oxford
Aad van der Vaart, Leiden

09.05. - 15.05.2021 (ID: 2119a/b/c)

Mini-Workshops (deadline for applications: September 1st, 2020)

16.05. - 22.05.2021 (ID: 2120)

Geometric Methods of Complex Analysis

Bo Berndtsson, Göteborg
John Erik Fornæss, Trondheim
Nikolay Shcherbina, Wuppertal

23.05. - 29.05.2021 (ID: 2121a/b)

Oberwolfach Seminars (subjects tba in winter 2020)

30.05. - 05.06.2021 (ID: 2122)

Mathematics and its Ancient Classics Worldwide:

Translations, Appropriations, Reconstructions, Roles

Karine Chemla, Paris
Vincenzo De Risi, Berlin
Antoni Malet, Barcelona

06.06. - 12.06.2021 (ID: 2123)

Analysis, Geometry and Topology of Singular PDE

Claire Debord, Paris
Rafe Mazzeo, Stanford
Paolo Piazza, Roma
Boris Vertman, Oldenburg

- 13.06. - 19.06.2021 (ID: 2124)
Enumerative Geometry of Surfaces
 Gaëtan Borot, Bonn
 Samuel Grushevsky, Stony Brook
 Martin Möller, Frankfurt
- 20.06. - 26.06.2021 (ID: 2125)
Classical Algebraic Geometry
 Olivier Debarre, Paris
 David Eisenbud, Berkeley
 Gavril Farkas, Berlin
 Ravi Vakil, Stanford
- 27.06. - 03.07.2021 (ID: 2126a)
Analysis, Geometry and Topology of Positive Scalar Curvature Metrics
 Bernd Ammann, Regensburg
 Bernhard Hanke, Augsburg
 Anna Sakovich, Uppsala
- 27.06. - 03.07.2021 (ID: 2126b)
Numerical Methods for Fully Nonlinear and Related PDEs
 Sören Bartels, Freiburg
 Susanne C. Brenner, Baton Rouge
 Xiaobing Feng, Knoxville
 Michael Neilan, Pittsburgh
- 04.07. - 10.07.2021 (ID: 2127)
Differentialgeometrie im Grossen
 Richard Bamler, Berkeley
 Ursula Hamenstädt, Bonn
 Urs Lang, Zürich
 Ben Weinkove, Evanston
- 11.07. - 18.07.2021 (ID: 2128)
Dynamische Systeme
 Marie-Claude Arnaud, Paris
 Helmut Hofer, Princeton
 Michael Hutchings, Berkeley
 Vadim Kaloshin, College Park
- 18.07. - 24.07.2021 (ID: 2129)
Explicit Methods in Number Theory
 Karim Belabas, Talence
 Bjorn Poonen, Cambridge MA
 Fernando Rodriguez-Villegas, Trieste
- 25.07. - 31.07.2021 (ID: 2130)
Partial Differential Equations
 Guido De Philippis, Trieste
 Richard Schoen, Irvine
 Felix Schulze, London
- 01.08. - 07.08.2021 (ID: 2131)
Computation and Learning in High Dimensions
 Albert Cohen, Paris
 Wolfgang Dahmen, Columbia
 Ronald A. DeVore, College Station
 Angela Kunoth, Köln
- 08.08. - 14.08.2021 (ID: 2132)
Dynamics of Waves and Patterns
 Margaret Beck, Boston
 Martina Chirilus-Brukner, Leiden
 Christian Kühn, Garching
 Jens Rademacher, Bremen
- 15.08. - 21.08.2021 (ID: 2133)
Computational Group Theory
 Bettina Eick, Braunschweig
 Derek Holt, Warwick
 Gabriele Nebe, Aachen
 Eamonn O'Brien, Auckland
- 22.08. - 28.08.2021 (ID: 2134)
Automorphic Forms, Geometry and Arithmetic
 Gaetan Chenevier, Orsay
 Tasho Kaletha, Ann Arbor
 Stephen Kudla, Toronto
 Sophie Morel, Princeton
- 29.08. - 04.09.2021 (ID: 2135)
Mathematical Aspects of General Relativity
 Carla Cederbaum, Tübingen
 Mihalis Dafermos, Princeton
 Jim Isenberg, Eugene
 Hans Ringström, Stockholm
- 05.09. - 11.09.2021 (ID: 2136a/b/c)
Mini-Workshops (deadline for applications: March 1st, 2021)
- 12.09. - 18.09.2021 (ID: 2137)
Quantum Groups – Algebra, Analysis and Category Theory
 Masaki Izumi, Kyoto
 Sergey Neshveyev, Oslo
 Dmitri Nikshych, Durham
 Adam Skalski, Warsaw
- 19.09. - 25.09.2021 (ID: 2138)
Homotopical Algebra and Higher Structures
 Michael Batanin, Sydney
 Andrey Lazarev, Lancaster
 Muriel Livernet, Paris
 Martin Markl, Prague
- 26.09. - 02.10.2021 (ID: 2139)
Singularities
 Javier Fernandez de Bobadilla, Bilbao
 Francois Loeser, Paris
 András Némethi, Budapest
 Duco van Straten, Mainz
- 03.10. - 09.10.2021 (ID: 2140a)
Statistics of Stochastic Differential Equations on Manifolds and Stratified Spaces
 Stephan Huckemann, Göttingen
 Xue-Mei Li, London
 Yvo Pokern, London
 Anja Sturm, Göttingen
- 03.10. - 09.10.2021 (ID: 2140b)
Geometry and Optimization in Quantum Information
 Hamza Fawzi, Cambridge UK
 Omar Fawzi, Lyon
 Aram Harrow, Cambridge MA
 Monique Laurent, Amsterdam
- 10.10. - 16.10.2021 (ID: 2141)
Arbeitsgemeinschaft (subject tba in winter 2020)
- 17.10. - 23.10.2021 (ID: 2142)
Arbeitsgemeinschaft (subject tba in winter 2020)
- 24.10. - 30.10.2021 (ID: 2143a/b)
Oberwolfach Seminars (subjects tba in winter 2020)
- 31.10. - 06.11.2021 (ID: 2144)
Enveloping Algebras and Geometric Representation Theory
 Iain Gordon, Edinburgh
 Bernard Leclerc, Caen
 Michaela Varagnolo, Cergy-Pontoise
- 07.11. - 13.11.2021 (ID: 2145)
Combinatorial Optimization
 Karen Aardal, Delft
 Satoru Iwata, Tokyo
 Volker Kaibel, Magdeburg
 Ola Svensson, Lausanne
- 14.11. - 20.11.2021 (ID: 2146)
Complexity Theory
 Peter Bürgisser, Berlin
 Irit Dinur, Rehovot
 Salil Vadhan, Cambridge MA
- 21.11. - 27.11.2021 (ID: 2147a/b)
Oberwolfach Seminars (subjects tba in winter 2020)
- 28.11. - 04.12.2021 (ID: 2148)
Applied Harmonic Analysis and Data Science
 Ingrid Daubechies, Durham
 Gitta Kutyniok, Berlin
 Holger Rauhut, Aachen
 Thomas Strohmer, Davis
- 05.12. - 11.12.2021 (ID: 2149a/b/c)
Mini-Workshops (deadline for applications: March 1st, 2021)
- 12.12. - 18.12.2021 (ID: 2150)
Convex Geometry and its Applications
 Shiri Artstein-Avidan, Tel Aviv
 Franck Barthe, Toulouse
 Monika Ludwig, Vienna