



hcm NEWS 1/2020



Congratulation!

Daniel Huybrechts and three Parisian scientists receive ERC Synergy Grant

The European Research Council (ERC) established the Synergy Grant to promote progress in pushing back the boundaries of human knowledge. Daniel Huybrechts, as coordinator, Olivier Debarre (Université Paris-Diderot), Emanuele Macri (Université Paris Sud, former BJC at HCM) and Claire Voisin (Collège de France) received this highly coveted ERC Synergy Grant. In the following six years they will be supported with 8.5 million euro and they want to use it to crack unsolved problems in the area of algebraic geometry. Congratulations from the HCM team!

[Link](#) to the press release of the University of Bonn

HAUSDORFF PEOPLE



Great honor for Don Zagier

The London Mathematical Society affiliated Don Zagier as honorary member. The official statement says: "Don Zagier is an outstanding mathematician who has made major contributions in number theory, particularly to the theory of modular forms, and in its interactions with other areas of mathematics and mathematical physics."

Icosahedron handover at MPIM

Gerd Faltings assumed the office of managing director at Max Planck Institute for Mathematics after his predecessor Peter Teichner. The office was transferred following tradition, symbolically by the passing on of a crystalline icosahedron.



Ada-Lovelace-Award for Karen Fischhuber and Vera Weber

The Institute for Numerical Simulation honors the best female scientists' results with the Ada-Lovelace-Award for the tenth time. This year, Karen Fischhuber and Vera Weber were recipients of this honor. Karen Fischhuber's master thesis „An adaptive Sparse Grid Approach for Many-Body Systems“ written under Michael Griebel's supervision deals with the development of a regression procedure for energy hyper surfaces of molecules. The procedure is based on the adaptive sparse grid approach and serves the efficient prediction of material properties. Vera Weber examines in her bachelor thesis „Optimal Control of the Heat Transfer Equation with point-wise, secondary Conditions“, supervised by Ira Neitzel, during numerical experiments the influence of various control structures. Congratulations!



Amrita Ghosh joined the Hausdorff Center for Mathematics as a postdoctoral fellow in January. Before joining HCM, she was a postdoc at the Czech Academy of Science, Prague, working in the group of Sarka Neasova. Amrita Ghosh obtained her Ph.D. from University of Pau, France in 2018. Her research interests are fluid dynamics and fluid-structure interaction systems.



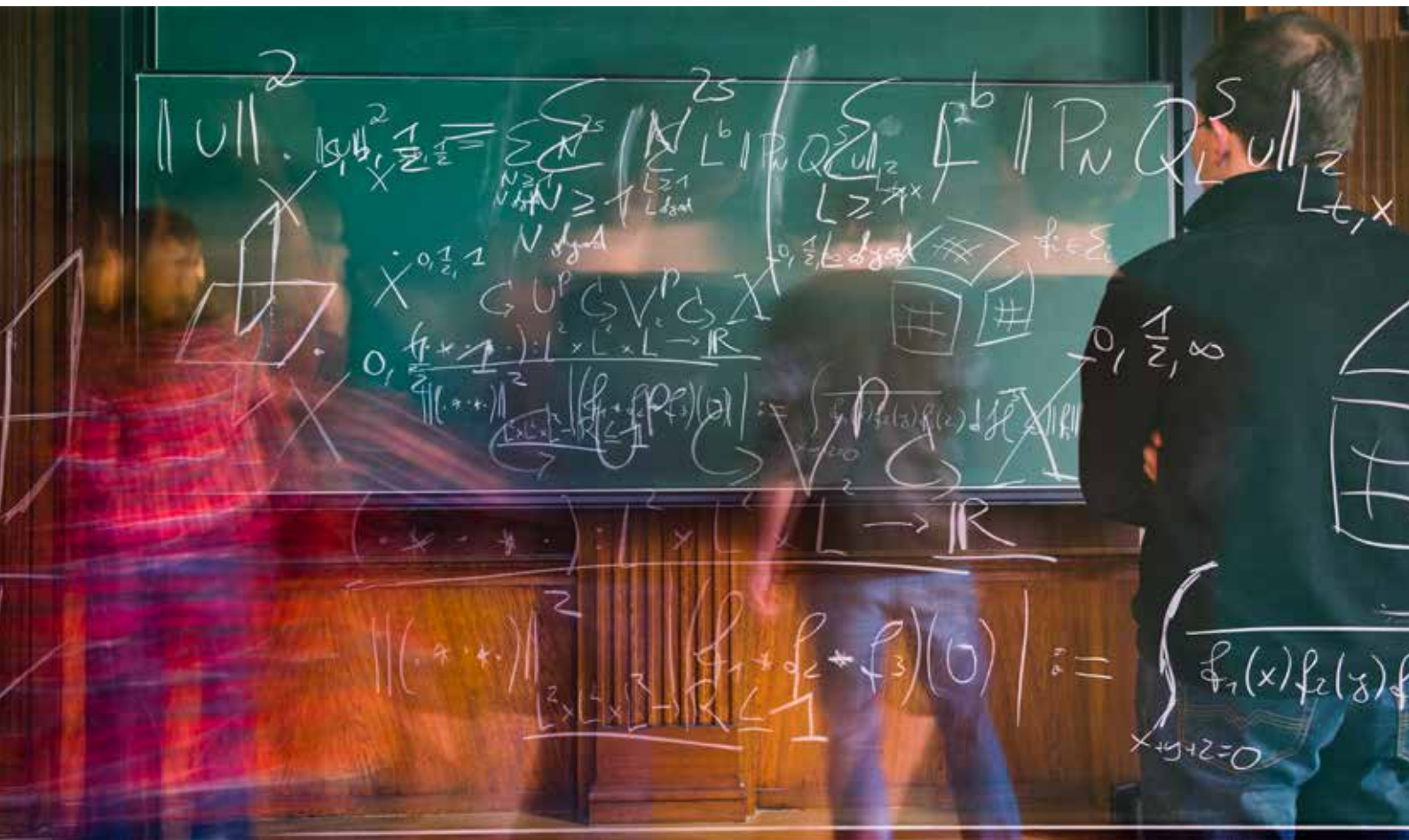
Tim Laux joined the Hausdorff Center as a Bonn Junior Fellow in January. He obtained his PhD from the Max Planck Institute for Mathematics in the Sciences and the University of Leipzig in 2017. From 2017 to 2019 he was a Morrey Visiting Assistant Professor at the University of California at Berkeley. His research areas are nonlinear partial differential equations, calculus of variations, and applied analysis. In particular, he has been working on geometric evolution equations.



Birgit Sonntag supports the HCM administration team since the beginning of January. In her new office in the Villa Maria she, as business economist from Bonn, took over tasks concerning application and accounting for business trips as well as catering and room booking for HCM events happening in the Mathematics Center.

Herzlich Willkommen!

HAUSDORFF CALENDAR



Trimester program

Dynamics: Topology and Numbers

06.01.-24.04.2020

School within trimester program

Winter School on Dynamics: Topology and Numbers

13.-17.01.2020

Colloquium

3rd Colloquium of Research Area C3

17.01.2020

Analyse des équations aux dérivées partielles

11th Itinerant Workshop in PDEs

22.-24.01.2020

Toeplitz Colloquium

„Woran scheitert mathematische Bildung?

Plädoyer für einen bewussten Standpunktwechsel“

27.01.2020

Hausdorff Colloquium

**Lectures by Patricia Gonçalves (Lissabon)
and Philippe Michel (Lausanne)**

29.01.2020

HCM Workshop with a colloquium to honor Peter Koepke

Mathematical Language and Practical Type Theory

31.01.-04.02.2020

Conference within trimester program

Transfer operators in number theory and quantum chaos

03.-07.02.2020

Hausdorff School

Perverse Sheaves in Enumerative Geometry

10.-14.02.2020

Conference within trimester program

Dynamics on homogeneous spaces

16.-20.03.2020

Girls' Day

Mehr als Zahlen – Die Berufswelt der Mathematikerinnen

26.03.2020

Hausdorff School

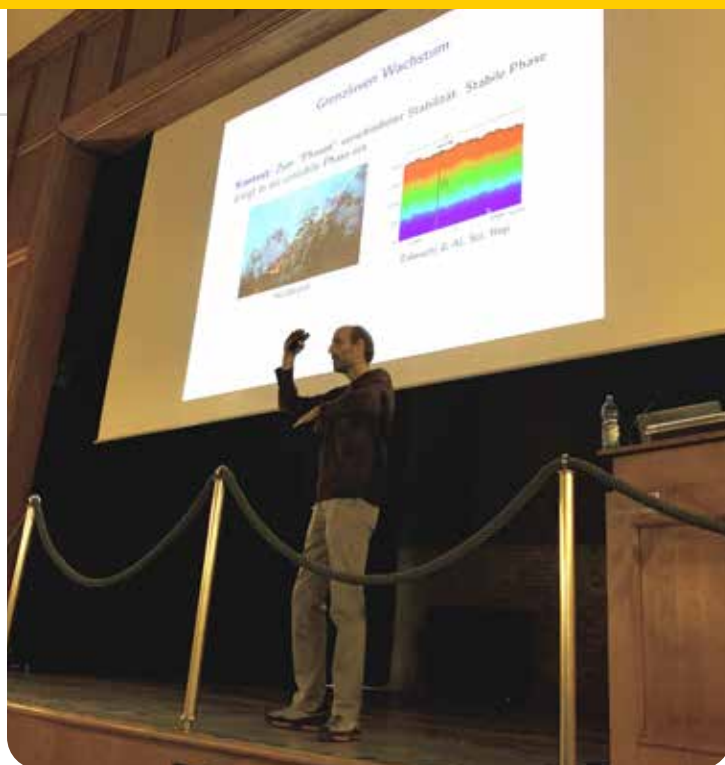
MCMC: Recent developments and new connections

30.03.-03.04.2020

HAUSDORFF EVENTS

Public Lecture by Martin Hairer

Whenever mathematical celebrities like Martin Hairer visit in Bonn, we naturally use this opportunity. Our lecture series to which we invited HIM visiting scientists for public lectures to the University's main building, was very popular. Hence around 100 visitors came to listen to the lecture "Fluke and Probabilities on a small and on a large Scale" held by the only Austrian Fields medall recipient.



Hausdorff Center at the Bonnfest

We were similarly as in 2017 together with our Hausdorff school team present at the Bonnfest - in the middle of the market place. Hundreds of families and visitors of the Bonnfest, partly those who do not have a primary interest in mathematics, stood quite a while at our stand trying to solve the mathematical puzzles or informing themselves about the Bonn's mathematics. Children loved especially our yellow balloons, that soon covered half of Bonn.

Many Mathematics Lectures at the Dies Academicus

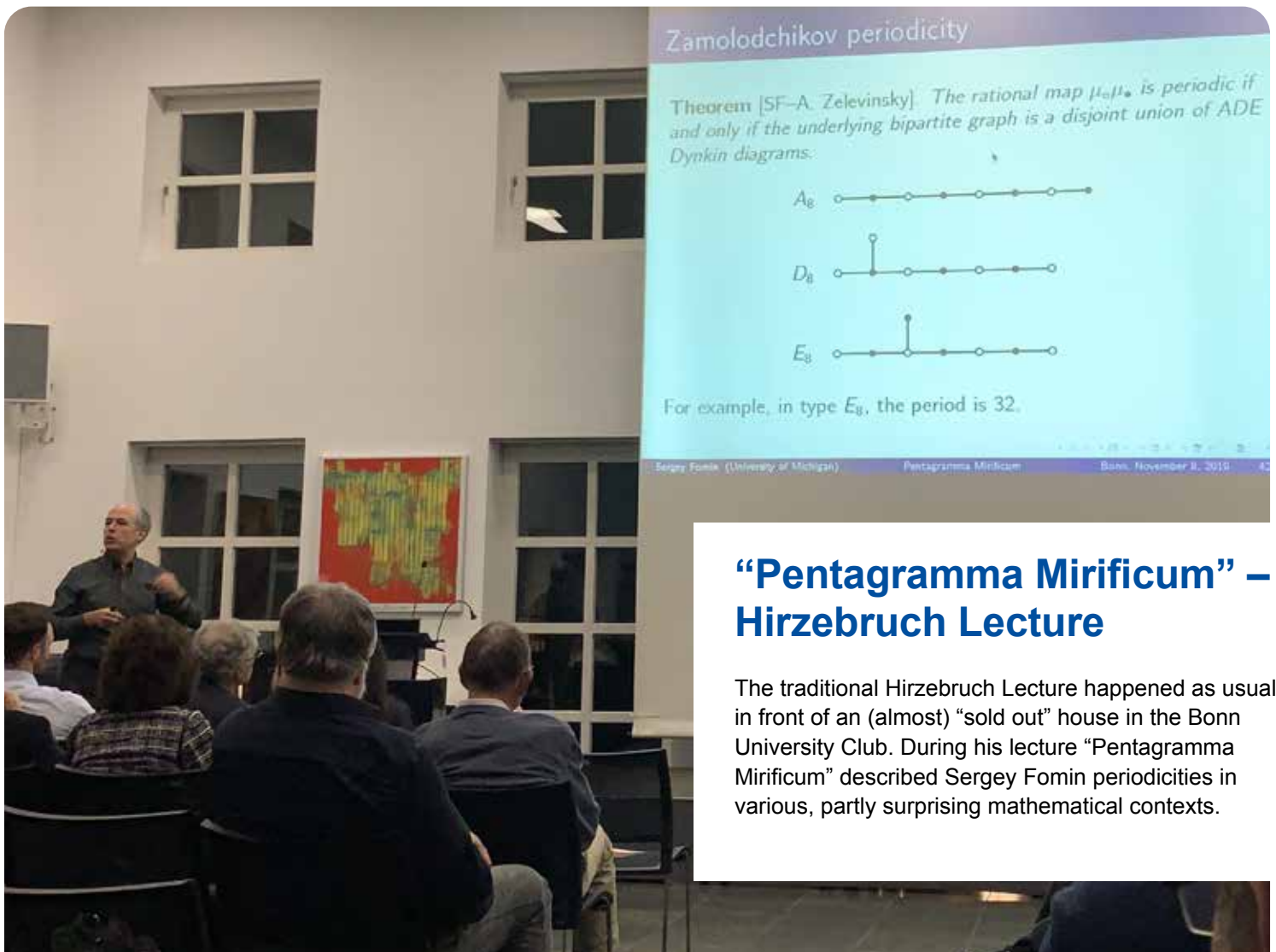
Five young HCM mathematicians held lectures at the previous Dies Academicus: Jan Peter Hasenauer, Peter Holy, Georg Oberdieck, Alexey Bufetov und Anne Driemel. The asymptotic behavior and random domino tilings presented by Alexey Bufetov probably surprised some of the auditors especially. Jan Peter Hasenauer presented a large range of topics ranging from naturally occurring, mathematical aesthetics in ecological systems up to the meaning of mathematical models for medical research.



HAUSDORFF EVENTS

No Mathematics Tournament without the HCM

The Hausdorff Center organized the program for two mathematics tournament award ceremonies: The Mathematical Olympiad regional round award ceremony was enhanced through the lectures “How a Can of Coke crinkles? - the Mathematics of Bending and Folding” held by Sergio Conti who presented the interested auditors various experiments. Thoralf Räsch inspired with his lecture “Calculating with Infinity: Topics in mathematical Logic” the award recipients from the Federal Tournament of Mathematics second round and advertised the Bonn mathematics studies.



“Pentagramma Mirificum” – Hirzebruch Lecture

The traditional Hirzebruch Lecture happened as usual in front of an (almost) “sold out” house in the Bonn University Club. During his lecture “Pentagramma Mirificum” described Sergey Fomin periodicities in various, partly surprising mathematical contexts.

HAUSDORFF EVENTS

Great Prominence at the Arithmeum Anniversary Celebration

The Arithmeum celebrated its 20th anniversary with a great ceremonial act to which great prominence such as NRW minister president Armin Laschet, Wolfgang Clement, Bonn's mayor Ashok Sridharan as well as Leon Stok, the IBM representative, who came especially for this occasion from the US. Leon Stok even brought a gift for his hosts: The Arithmeum exhibition will be expanded by 15 ancient and valuable calculators as permanent loans.



FFF-Conferral of Certificates

The Hausdorff Center is one of three supporters of the University Bonn Early Study program "Fördern, Fordern, Forschen" (supporting, exciting, researching) and conducts its organizational administration under the leadership of Thoralf Räsch. The certificates were conferred in December. During the school year 2018/2019, 20 pupils, some of them already for the fourth year, studied mathematics while following the regular school lessons.

HAUSDORFF MIXED

An unofficial Concert

It is well known that there are outstanding musicians among HCM members. Among them is the studied pianist Valentin Blomer who received the first prize and the audience award at the Hans-von-Bülow Competition in Meiningen in 2015. In November, Calentin Blomer gave together with Noémie Combe, Lory Aintablian Kadiyan and Matthias Kreck an unofficial concert including pieces from Mendelssohn, Haydn and Schubert for the Bonn mathematical community in the auditorium of the University's main building. Fantastic! We will hopefully get to hear some of these musicians again during the current Beethoven jubilee year 2020. We will keep you up to date.



Bonn Mathematics Tournament: Prize Journey to Bochum

The Hausdorff Center school team organized a spectacular journey to Bochum as prize for the Bonn Mathematics Tournament winners and the winners of the tournaments with the same tasks happening in Belgium and the Netherlands at the same time. The pupils visited among others the German Mining museum and the planetarium.



ECM 2020 – famous Advertiser

We are looking forward to the 8th European Congress of Mathematics (ECM) happening from the 5th-11th July in Portorož (Slovenia) to which our former HCM coordinator Karl Theodor Sturm has been invited as speaker. Considering the presence of famous advertisers such as Peter Scholze (next to him Marko Rajkovic, PhD student of Martin Rumpf) the organizers won't need to worry about a lack of attention.

HAUSDORFF MIXED

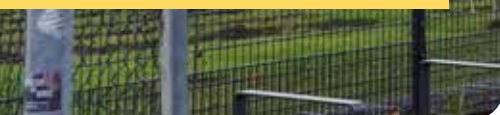
Teaching Award for Beate Doerffel

The mathematics-natural science faculty honored Beate Doerffel with a teaching award as was announced during the third session of the Mathematics Department of the WS 2019/20. We sincerely congratulate her to having received this honor.



Friedrich- Hirzebruch-Allee

HCM's long-lasting efforts have finally paid off: The street on the Campus Poppelsdorf was really named after Friedrich Hirzebruch. We are very proud of this posthumous honor.



IMPRESSUM

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Christmas Lecture

It is very rare to have lectures one day before Christmas eve. It seems like Thoralf Räsch thought of something very special. Or was it Santa Claus himself?



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