



INFOMAT

DESEMBER 2020

GODT NYTTÅR !



INFOMAT kommer ut med 11 nummer i året og gis ut av Norsk Matematisk Forening. Deadline for neste utgave er alltid den 15. i neste måned. Stoff til INFOMAT sendes til

arnebs at math.uio.no

Foreningen har hjemmeside <http://www.matematikkforeningen.no/>
Ansvarlig redaktør er Arne B. Sletsjøe, Universitetet i Oslo

Matematisk kalender

På grunn av den pågående situasjonen mht koronaviruset kan flere av arrangementene bli utsatt eller avlyst. Følg med på web-sidene.

Januar:

25.-5. februar. Winter School & Workshop Wisla 20-21, Online

<<http://www.baltinmat.com/winter-school-workshop-wisla-2021/>>

Juni:

7.-11. MEGA (effective methods in algebraic geometry), Tromsø

<<https://puremath.no/mega2021/>>

20.-26.. The 8th European Congress of Mathematics (8ECM), Portorož, Slovenia and Online <<https://www.8ecm.si/news/79>>

27.-3. juli. Seminar Sophus Lie,

Nordfjordeid <<https://www.mathematik.uni-marburg.de/agricola/SSL2021/>>

Nasjonalt matematikermøte, Trondheim
[UTSATT TIL SOMMEREN 2021]

<<https://www.ntnu.no/imf/matematikermote>>

September:

27.-28. Mathematics without Borders, IMU 100 år, Strasbourg

WINTER SCHOOL & WORKSHOP WISLA 20-21, Online, 25. januar -5. februar 2021

We would like to announce "Winter School & Workshop Wisla 20-21: Groups, invariants, integrals, and moving frames" which will be held ONLINE from January 25th to February 5th. We will appreciate if you could forward the announcement below to all potentially interested students and researchers. We appreciate your help.

Hosted by Baltic Institute of Mathematics "Winter School & Workshop Wisla 20-21: Groups, invariants, integrals, and moving frames" will be an online event. The goal of the forthcoming school is to present recent results in differential geometry

related to nonlinear PDEs, mathematical physics, and moving frames. The school will provide young researchers with an opportunity to interact with their colleagues and well-known researchers in the field. Selected materials of the school and workshop will be published by Springer Nature.

Please visit <http://www.baltinmat.com/winter-school-workshop-wisla-2021/> for full details about the event.

Plenary speakers:

Valentin Lychagin, Tromø

Peter J. Olver, Minnesota

Volodya Roubtsov, Angers

Eivind Schneider, Hradec Králové



MEGA, Tromsø, 7.-11. juni 2021

MEGA is the acronym for Effective Methods in Algebraic Geometry. This series of biennial international conferences, with the tradition dating back to 1990, is devoted to computational and application aspects of Algebraic Geometry and related topics, over any characteristics.

Plenary speakers:

Alicia Dickenstein, Universidad de Buenos Aires

Ana Romero Ibañez, Universidad de La Rioja

Gleb Pogudin, École Polytechnique

Greg Smith, Queen's University

Gretchen L. Matthews, Virginia Tech

Gunnar Fløystad, Universitetet i Bergen

Kathlén Kohn, KTH

Karin Baur, University of Leeds

Mohab Safey El Din, Sorbonne Universités

Ragni Piene, Universitetet i Oslo



SEMINAR SOPHUS LIE, Nordfjordeid, 27.juni -3. juli 2021

The aim of the workshop is to bring together in a casual and friendly atmosphere mathematicians working on all areas of analysis, geometry, algebra, and mathematical physics that are related to Sophus Lie's work.

Organizers:

Ilka Agricola, Marburg

Joachim Hilgert, Paderborn

Boris Kruglikov, Tromsø

Irina Markina, Bergen



Nye doktorgrader

Lorenzo Ciardo ved UiO forsvarte 8. desember 2020 sin avhandling *Spectral graph parameters and connectivity* for graden PhD.

Veiledere har vært Professor Geir Dahl og Professor Erik Bedos, begge UiO.

Sammendrag:

Connection is what makes molecules out of atoms, societies out of individuals, knowledge out of data. Complex entities and behaviours arise from their elementary components through the laws of connection. The main purpose of this work is to investigate the mathematics of these laws in the context of graphs - simple mathematical objects modelling discrete structures. In particular, the notions of algebraic connectivity and Kemeny's constant provide two distinct ways to understand connection for graphs. The former can be derived by comparing the shapes of substructures of a given graph; the latter comes from observing the behaviour of a random walker travelling in the graph. Like a guitar string or a star

in the sky, each graph emits information at some specific frequencies, which form the spectrum of the graph. Both the algebraic connectivity and Kemeny's constant are deeply linked to these frequencies. In this work, spectral methods are used to study the properties of connection and relate it to other graph-theoretical notions. Unexpected phenomena can be brought to the surface through the set of spectral tools. As an example, a paradoxical behaviour, apparently breaking the laws of connection, is shown to concern a surprisingly large class of graphs.

Nyheter

THE 8th EUROPEAN CONGRESS OF MATHEMATICS (8ECM), 20 - 26 June 2021 in Portorož, Slovenia and online

- Abstract submission: The deadline for submissions is 1 May 2021.

For more information visit:

<https://www.8ecm.si/news/79>

- Registration: Additional options for attending the 8ECM are enabled! One of the innovations at the 8ECM next year is an online streaming format, with the possibility for full and active E-participation, besides the regular format of the conference. Reduced registration fees for different options of E-participation are available, including Active Full E-participation, Passive Full E-participation and Passive E-participation for main talks. For more information on options and prices see: <https://www.8ecm.si/news/77>

- Calls to organize a Minisymposium (MS) and/or a Satellite Conference (SC) These calls are still open! There are over 60 accepted MS so far and incentives for MS and SC organizers are offered. The deadline for applications is 31 January 2021. To find out more about the calls and to apply, see: <<https://www.8ecm.si/open-calls/call-for-minisymposia>> for Minisymposia and <<https://www.8ecm.si/open-calls/call-for-satellite-conferences>> for Satellite Conferences.

MATHEMATICS FOR A BETTER WORLD POSTER CHALLENGE

In 2021 the theme of the IDM is Mathematics for a Better World. Create a poster that shows one way to make the world a little bit better using mathematics. Instead of words, use pictures combined with numbers, formulas, geometric shapes, and other mathematical elements to express your idea. Use mathematics so people worldwide can understand it, even if they don't speak your language.

You can send us your posters until February 15, 2021. We'll share the best ones we receive so you can use them to create an exhibition for your IDM events.

Everyone can participate. Share the challenge in your school or university. Team up!

<https://www.idm314.org/2021-poster-challenge.html>

4 NYE ÅR SOM INSTITUTELEDER



Geir Dahl er engasjert som instituttleder ved Matematisk institutt ved Universitetet i Oslo for en ny 4-års-periode, 1.1.2021-31.12.2024. Dahl har vært instituttleder ved instituttet siden 2017.

INDIA CELEBRATES THE NATIONAL MATHEMATICS DAY

Every year India celebrates the National Mathematics Day to encourage the practice and development of mathematics as a discipline. This day marks the birthday of legendary India mathematician Srinivasa Ramanujan.



Born on December 22, 1887, Ramanujan is considered to have contributed immensely to modern

mathematics. On the occasion of National Mathematics Day 2020, here are some interesting facts about Srinivasa Ramanujan:

1. Ramanujan was gifted in mathematics from a young age. He could ace advance mathematical problems from the tender age of 11.
2. The interest in the subject had been sparked by a book called *A Synopsis of Elementary Results in Pure and Applied Mathematics* by George Shoobridge Carr. Ramanujan had come across the book in 1903 when he was 15 years old and found himself engrossed in the world of theorems and proofs.
3. He was extremely talented in terms of maths but could not find any interest in other subjects. He received a scholarship for college which had to be nullified as Ramanujan had failed in all the subjects, except for maths.
4. The scholar lived his life in poverty until he was discovered by R Ramachandra Rao, the secretary of the Indian Mathematical Society, in 1910. Although he was sceptical about Ramanujan's genius at first, he agreed to financially support him.
5. He was advised by several people to go to England for better opportunities and exposure. Ramanujan began writing letters of introduction to professors at Cambridge but he faced failure. It was said that his letters were too unpolished.
6. His letter to well-known English mathematician GH Hardy hit the bull's eye as the professor recognized Ramanujan's talent. The duo began writing letters to and forth that led to Hardy inviting Ramanujan to the west.
7. Ramanujan kept his theories and mathematical ideas in his notebooks. In one of these was the new series to represent $\frac{1}{\pi}$ in a lot faster method than what was established then.
8. Hardy was greatly impressed with Ramanujan's abilities. He had formulated a scale of mathematical ability that labelled mathematicians on the scale of 0 to 100. While he gave himself only 25, Hardy had awarded Ramanujan a perfect 100.
9. Hardy and Ramanujan are also famous for their special number, known as the Hardy-Ramanujan number. It is 1729, the smallest number expressible as a sum of two cubes in two different ways.
10. Ramanujan was weak physically throughout his life, passing away only at the age of 32.

Kilde: <<https://www.news18.com/>>