



INFOMAT

FEBRUAR 2022

UTTALELSE FRA STYRET I NORSK MATEMATISK FORENING

Norske matematikere har sett fram til å feire matematikk i sommer sammen med mennesker fra hele verden i Sankt Petersburg, en by med lange og viktige matematiske tradisjoner. Vi fordømmer på det sterkeste den russiske regjeringens brutale invasjon av Ukraina og vi støtter IMUs avgjørelse om å ikke avholde den internasjonale matematikkongressen i Sankt Petersburg.

Våre tanker er med våre kolleger og det ukrainske folk som lider under den pågående krigen og også med våre kolleger og alle i Russland som protesterer mot disse ulovlige handlingene begått av deres styresmakter.

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

2022

Mars:

23. Abelpriskunngjøring, Oslo

<abelprisen.no>

Mai:

23.-25. Abelprisutdeling, Oslo

<abelprisen.no>

30.-1. juni Conference on Climate, Weather and Carbon Risk in Energy and Finance, Oslo

<<https://www.mn.uio.no/math/english/research/projects/spatus/events/conferences/conference-on-climate-weather-and-carbon-risk-in-e/index.html>>

Juni:

6.-10. Abelsymposiet 2022: Triangulated categories in representation theory and beyond, Ålesund

<<https://wiki.math.ntnu.no/abel2022/>>

7.-9. 14. Nordiske kombinatorik-konferanse, Tromsø

<<https://norcom2022.puremath.no/>>

12.-19. Seminar Sophus Lie, Nordfjordeid

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

20.-24. Topics in real and tropical algebraic geometry, Nordfjordeid

<<https://www.mn.uio.no/math/english/research/groups/algebra/events/conferences/nordfjordeid2022/index.html>>

September:

1.-2. Nasjonalt matematikermøte, Tromsø

<<https://nmm2022.puremath.no/>>

Nye doktorgrader

Cédric Le Texier ved Univ. i Oslo forsvarte 4. februar 2022 sin avhandling *Combinatorial Patchworking, Real Tropical Curves and Hyperbolic Varieties* for graden PhD.

Veiledere har vært Associate Professor Kris Shaw, UiO and Professor Frederic Bihan, Université Savoie Mont Blanc.

Sammendrag:

Real algebraic geometry is the study of geometric objects defined by polynomial equations with real coefficients. This domain has connections with many areas of mathematics, such as analytic geometry, algebraic topology and analysis, as well as many applications in interdisciplinary fields such as computer-aided design, optimisation, computer vision and robotics. One particularly interesting class of geometric objects for these fields are the hyperbolic varieties, which admits a set of real points/lines/etc where all real lines/planes/etc through this set intersect the variety in a maximal number of real points.

In this thesis, the so-called hyperbolic del Pezzo surfaces are classified by checking the hyperbolicity of some particular curves lying on those surfaces. Several properties of families of real curves are studied from the *logarithmic limit*, which is a particular unbounded graph with straight edges equipped with a *real structure*. We call those limits *real tropical curves*. Using this method, a combinatorial characterisation of the hyperbolicity loci of families of real curves is obtained, as well as several combinatorial criteria for a real curve to have some prescribed number of real components. Finally, some new counter-examples to a conjecture on the arrangement of those real components inside the plane are constructed.

Kunngjøringer

NYHETER FRA NMF

Viggo Brunprisen 2022

Viggo Brunprisen 2022 skal deles ut under Norsk Matematikermøte i Tromsø 1.-2. september.

Nominasjoner best sendt til <mailto:nmf@matematikkforeningen.no> innen 20. april 2022.

Statutter:

<https://web.matematikkforeningen.no/viggo-brun-prisen/>

Abelsymposium 2023

Vi ber om at alle som ønsker å avholde Abelsymposium 2023 sender en skisse til <mailto:nmf@matematikkforeningen.no> innen 20. april 2022.

Styret i NMF vil velge ut en av skissene og gi i oppgave å utarbeide en full søknad. Skissen bør inneholde: - Tema / tittel for symposiet
- Noen mulige foredragsholdere (det er ikke nødvendig med bekreftelse på dette tidspunkt)
- Mulige datoer
- Sted

TOPICS IN REAL AND TROPICAL ALGEBRAIC GEOMETRY

Sommerskole ved Sophus Lie Conference Center, Nordfjordeid, 20.-24. Juni 2022

Program: The aim of the summer school is to provide an introduction to recent advances in real and tropical algebraic geometry. The school is aimed at phd students (as well as advanced master students and early postdocs) with a general background in algebra, and with interests in algebra, geometry or topology. There will be three lecture series and extensive problem sessions.

Lecturers:

Antonio Lerario (SISSA, Trieste): Metric algebraic geometry

Felipe Rincon (Queen Mary, London): Tropical

ideals

Claus Scheiderer (Konstanz U): Sums of squares and applications

Organizing committee: Gunnar Fløystad (Bergen), Kristian Ranestad (Oslo), Petter A Bergh (Trondheim), Cordian Reiner (UiT)

Sponsors: Trond Mohn Stiftelse (TMS), University of Bergen, University of Oslo, University of Stavanger, NTNU, UiT The Arctic University of Norway

Registration deadline is **May 2nd 2022** For registration and further information check the web page:

<https://www.mn.uio.no/math/english/research/groups/algebra/events/conferences/nordfjordeid2022/index.html>

NASJONALT MATEMATIKERMØTE, TROMSØ

Det andre nasjonalt matematikermøte, neste etter Bergen 2018, vil bli organisert i Tromsø 1-2 september 2022, se <https://nmm2022.pure-math.no>.

Alle vitenskapelige ansatte og emeriti ved UiB, UiO, NTNU, UiT og UiS, inkludert PhD-stipendiater, er invitert. Møtet er sponset av Trond Mohn Stiftelse (TMS), Tromsø Forskning Stiftelse (TFS) og Norsk Matematisk Forening (NMF): reise og opphold til deltagere blir dekket fra TMS/TFS-prosjektet Ren matematikk i Norge <https://pure-math.no>. Registreringen blir åpen i løpet av neste måneder.

Møtet vil inneholde både plenumsforedrag og foredrag i tre parallelle seksjoner. PhD studenter inviteres til et ekstra møte onsdag 31 august 2022. Vi forventer mulighet for et helt fysisk møte i begynnelsen av høsten men kan bytte til hybridversjon ved behov.

Velkommen til oss!

På vegne av organisasjonskomite,
Boris Kruglikov.

ICM 2022 FLYTTES UT AV RUSSLAND

The Executive Committee of the International Mathematical Union (IMU) has decided that:

1. The International Congress of Mathematicians (ICM) 2022 will take place as a fully virtual event, hosted outside Russia but following the original time schedule planned for Saint Petersburg.
2. Participation in the virtual ICM event will be free of charge.
3. The IMU General Assembly (GA) will take place as an in-person event outside Russia.
4. A prize ceremony will be held the day after the IMU GA, at the same venue as the IMU GA, for the awarding of the 2022 IMU prizes.
5. The dates for the ICM and the GA will remain unaltered.
6. We will return with further practical information regarding the two events.

The 18th General Assembly of the IMU decided in 2018 to award the ICM 2022 to Russia, with the venue being Saint Petersburg. The preparations have been carried out with admirable dedication by our Russian colleagues, battling a global pandemic, and the plans were in place to host a successful ICM in July 2022. We are very thankful to them for this. Preceding the ICM, a meeting of the IMU GA had also been scheduled for Saint Petersburg in July. An ICM is a unique meeting place for mathematicians from all over the world to assemble, put political and cultural differences aside, and discuss mathematics. The IMU GA is the highest body of the IMU, and at the GA important decisions for the IMU are taken for the coming four years, including elections and budgets.

However, recent developments in Russia and Ukraine have changed the situation dramatically. The actions of Russia have been condemned worldwide, and have made an in-person event in Russia impossible. Indeed, the Secretary General of the

UN issued the following appeal directly to the Russian government on 23 Feb. 2022 "In the name of humanity bring your troops back to Russia. In the name of humanity do not allow to start in Europe what could be the worst war since the beginning of the century". This call has not been heeded.

We, the Executive Committee of the IMU, have analyzed the situation carefully. We strongly condemn the actions by Russia. Our deepest sympathy goes to our Ukrainian colleagues and the Ukrainian people.

Given this situation, it is impossible for the IMU to host the ICM and the GA as traditional in-person events in Russia. We have considered the possibility of postponing the ICM by one year, similar to what happened with the Warsaw ICM. However, it is unclear how the situation will evolve within a year, and thus this is not a feasible option. Another option discussed was to cancel the ICM completely. The IMU considered this option as unnecessarily drastic, and it would not serve the mathematical community. In this day and age, we have the option of carrying out a fully virtual ICM, following the original schedule of the ICM. Speakers can choose to submit recorded talks, or give live talks. We understand that different time zones will make this problematic for many, but an ICM has a tight program, and we see few alternatives. Participation in a virtual format will however be free of charge. As this requires substantial organizational work, we will return with further details as soon as they are available. As for the General Assembly, we consider it of vital importance to meet in person. However, as we cannot meet in Saint Petersburg, we will find an alternative venue outside Russia for the GA.

Berlin, 26 February 2022

The Executive Committee of the International
Mathematical Union
