



# INFOMAT

AUGUST 2022

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## STUDIESTART 2022



*FOTO: Jarli & Jordan/UiO*

**INFOMAT ønsker alle nye matematikkstudenter velkommen  
til våre utdanningsinstitusjoner over det ganske land!**

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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

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# Matematisk kalender

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**2022**

**September:**

**1.-2. Nasjonalt matematikermøte**, Tromsø  
<[https://nmm2022.puremath.no./](https://nmm2022.puremath.no/)>

**5.-8. STORM Workshop 2022**, Oslo  
<<https://www.mn.uio.no/math/english/research/projects/storm/events/conferences/STORM-workshop-september-2022/index.html>>

**November:**

**14.-15. Algebraic and Analytic Perspectives in the Theory of Rough Paths and Signatures**, Oslo

<<https://www.mn.uio.no/math/english/research/projects/storm/events/conferences/algebraic-and-analytic-perspectives-in-the-theory-of-algebraic-and-analytic-perspectives-in-the-theory-.html>>

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## Arrangementer

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### NASJONALT MATEMATIKERMØTE, TROMSØ, 1.-2. september 2022

Det andre nasjonale matematikermøte, neste etter Bergen 2018, vil bli organisert i Tromsø 1.-2. september 2022, se <https://nmm2022.puremath.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 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.

*På vegne av organisasjonskomite,  
Boris Kruglikov.*

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### STORM Workshop, Oslo, 5.-8. september 2022

A four-days workshop to appreciate and discuss advances in risk and stochastics with a close look into applications and numerical methods.

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### 29. NORDISKE MATEMATIKERKONGRESS – CALL FOR SESSIONS

Næste år afholder vi den 29. Nordiske Matematikerkongress i Aalborg, i samarbejde med European Mathematical Society. Jeg vil høre om du vil reklamere for kongressen i INFOMAT, spesielt skulle "call for sessions" proposal (deadline 1. september 2022) gerne spredes snarest.

<https://ncm29.math.aau.dk/>

*På forhånd tak og venlig hilsen  
Martin Raussen*

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 **Dansk Matematisk Forening**



**SUOMEN MATEMAATTINEN  
YHDISTYS RY**  
FINLANDS MATEMATISKA FÖRENING RF  
THE FINNISH MATHEMATICAL SOCIETY

**Íslenska stærðfræðafélagið**



**NORSK MATEMATISK FORENING**



**Svenska Matematikersamfundet**

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# Nyheter

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## FIELDS-MEDALJEN 2022



**Hugo Duminil-Copin**, Institut des Hautes Études Scientifiques, Frankrike og University of Geneva, Sveits

*For solving longstanding problems in the probabilistic theory of phase transitions in statistical physics, especially in dimensions three and four.*

**June Huh**, Princeton University, USA

*For bringing the ideas of Hodge theory to combinatorics, the proof of the Dowling–Wilson conjecture for geometric lattices, the proof of the Heron–Rota–Welsh conjecture for matroids, the development of the theory of Lorentzian polynomials, and the proof of the strong Mason conjecture.*

**James Maynard**, University of Oxford, UK

*For contributions to analytic number theory, which have led to major advances in the understanding of the structure of prime numbers and in Diophantine approximation.*

**Maryna Viazovska**, École Polytechnique Fédérale de Lausanne, Sveits

*For the proof that the  $E_8$  lattice provides the densest packing of identical spheres in 8 dimensions, and further contributions to related extremal problems and interpolation problems in Fourier analysis.*

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## KULEPAKKING



*Fra Wikipedia:* In geometry, a sphere packing is an arrangement of non-overlapping spheres within a containing space. The spheres considered are usually all of identical size, and the space is usually three-dimensional Euclidean space. However, sphere packing problems can be generalised to consider unequal spheres, spaces of other dimensions (where the problem becomes circle packing in two dimensions, or hypersphere packing in higher dimensions) or to non-Euclidean spaces such as hyperbolic space.

A typical sphere packing problem is to find an arrangement in which the spheres fill as much of the space as possible. The proportion of space filled by the spheres is called the packing density of the arrangement. As the local density of a packing in an infinite space can vary depending on the volume over which it is measured, the problem is usually to maximise the average or asymptotic density, measured over a large enough volume.

For equal spheres in three dimensions, the densest packing uses approximately 74% of the volume. A random packing of equal spheres generally has a density around 63.5%.



Maryna Viazovska