Presentation of CIMPA

Christophe Ritzenthaler

CIMPA Director

CIMPA: **International Center of Pure and Applied Mathematics**

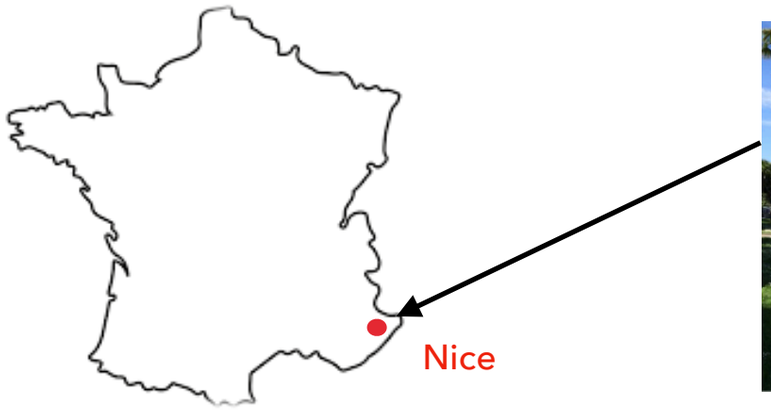
Mission: promote research in mathematics in developing countries

Founded in 1978

Unesco 2 center

Non profit French Association

www.cimpa.info



Campus Valrose of Université Côte d'Azur

Employees:

- Executive director
- Executive secretary
- Communication officer

Budget: ~800k€

~140 individual members and 28 institutional members

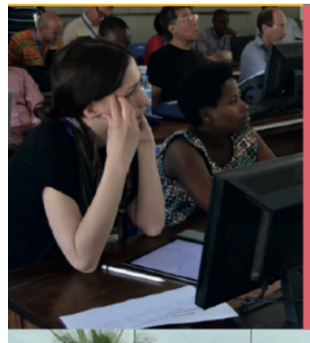
Financially supported by France, Germany, Norway, Spain, Switzerland

CIMPA activities

Target: students or colleagues based in a developing country according to IMU-CDC classification

CIMPA Schools

- ~400 schools in ~70 countries
- ~10 professors/ school
- Local and State member coordinators



Schools in Partnership

- Support ~20 schools/year
- Collaboration with 4 continental organizations

CIMPA Courses

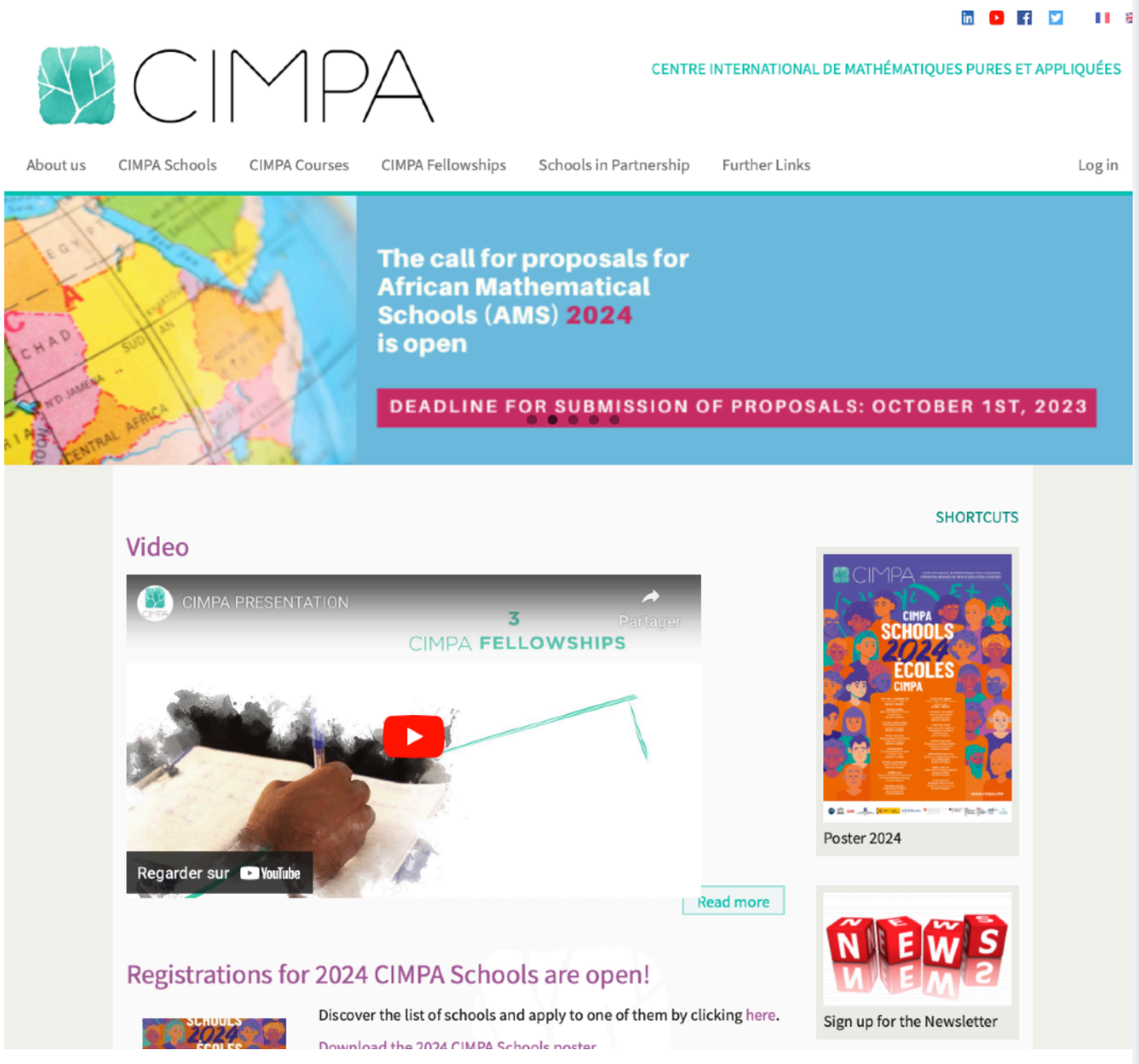
- ~30 courses every year
- 1 professor for ~30 participants

CIMPA - ICTP Research in Pairs

CIMPA Fellowships

- ~12 grants for advanced researchers for collaboration in Europe
- ~15 grants for young researchers for thematic semesters in Europe

Stay in touch through our networks (newsletter, Facebook CIMPA or CIMPA friends, instagram)



2025 CIMPA schools

Présentation

Les activités scientifiques prévues sont organisées sous forme de cours, travaux dirigés et travaux pratiques. On prévoit éventuellement des tables rondes (une ou deux) autour de la thématique de l'école le soir. La thématique s'articule autour de quelques outils mathématiques qui interviennent en intelligence artificielle. Il s'agit des statistiques, optimisation linéaire, analyse numérique. On souhaite que les participant.e.s apprécient le rôle de différentes branches de mathématiques en intelligence artificielle, ce qui, en l'espère, leurs ouvrirai des portes pour la suite de leurs carrières scientifique.

Coordinateurs administratifs et scientifiques

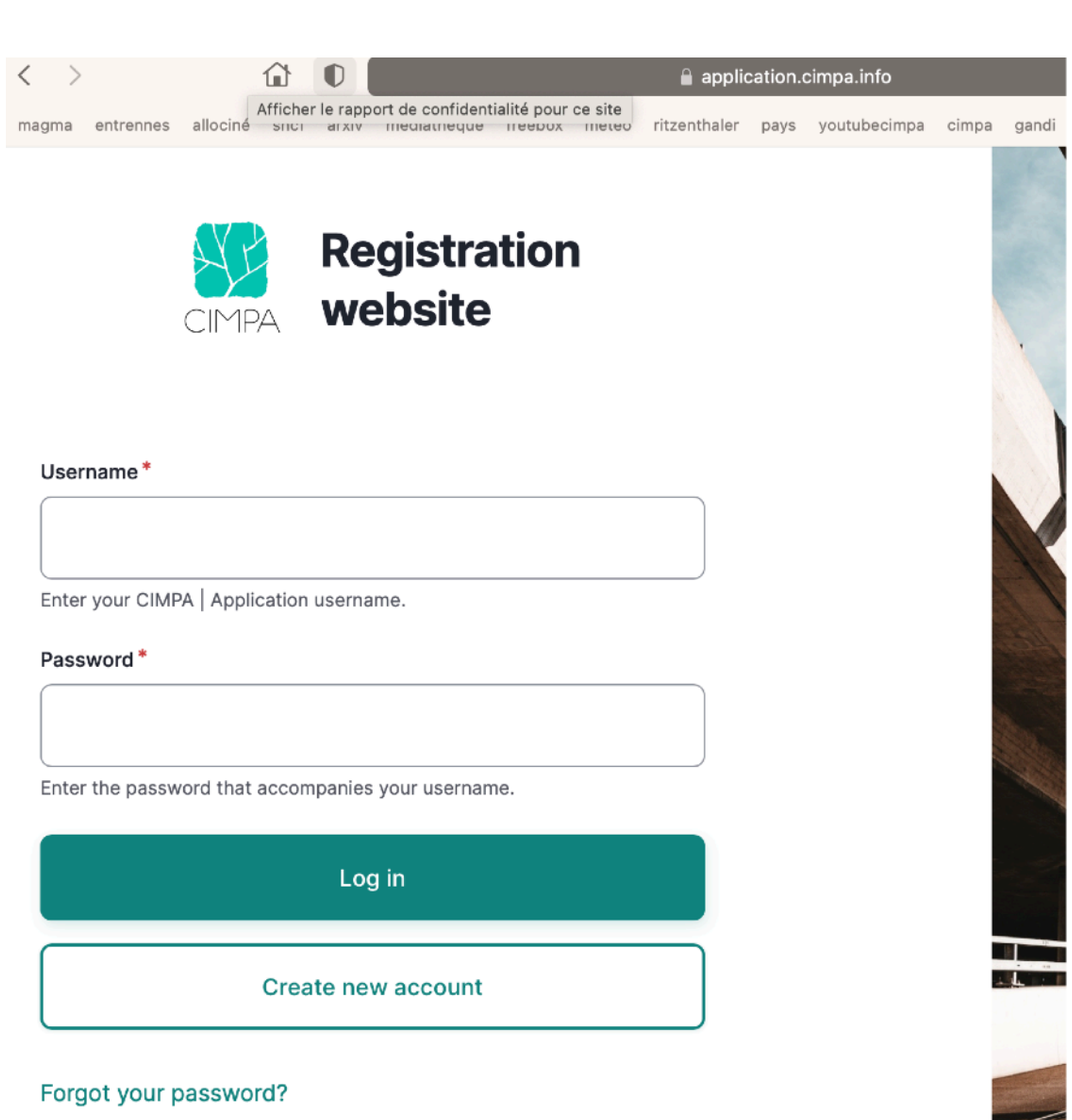
Tayeb Bahram (Université de Saida Dr Moulay Tahar , Algérie , cimpa2025@univ-saida.dz)
Hossam Afifi (Institut Mines Télécom/Télécom SudParis, France , hossam.afifi@telecom-sudparis.eu)

Site internet de l'école

https://www.univ-saida.dz/cimpa2025/

Comment participer

Pour s'inscrire et postuler à un financement CIMPA, suivre les instructions données ici https://www.cimpa.info/fr/node/40
Date limite d'inscription : novembre 3, 2024



CV

- Up-to-date
- Showing how your academic background is relevant for this school

Motivation letter

- ~~Since I've been a baby, I've always loved maths~~
- ~~Maths is the most important topic in the world~~
- Après avoir suivi l'école à Hammamet, je dois me spécialiser dans les méthodes d'optimisation à base de gradient stochastique. En effet dans ma thèse,…

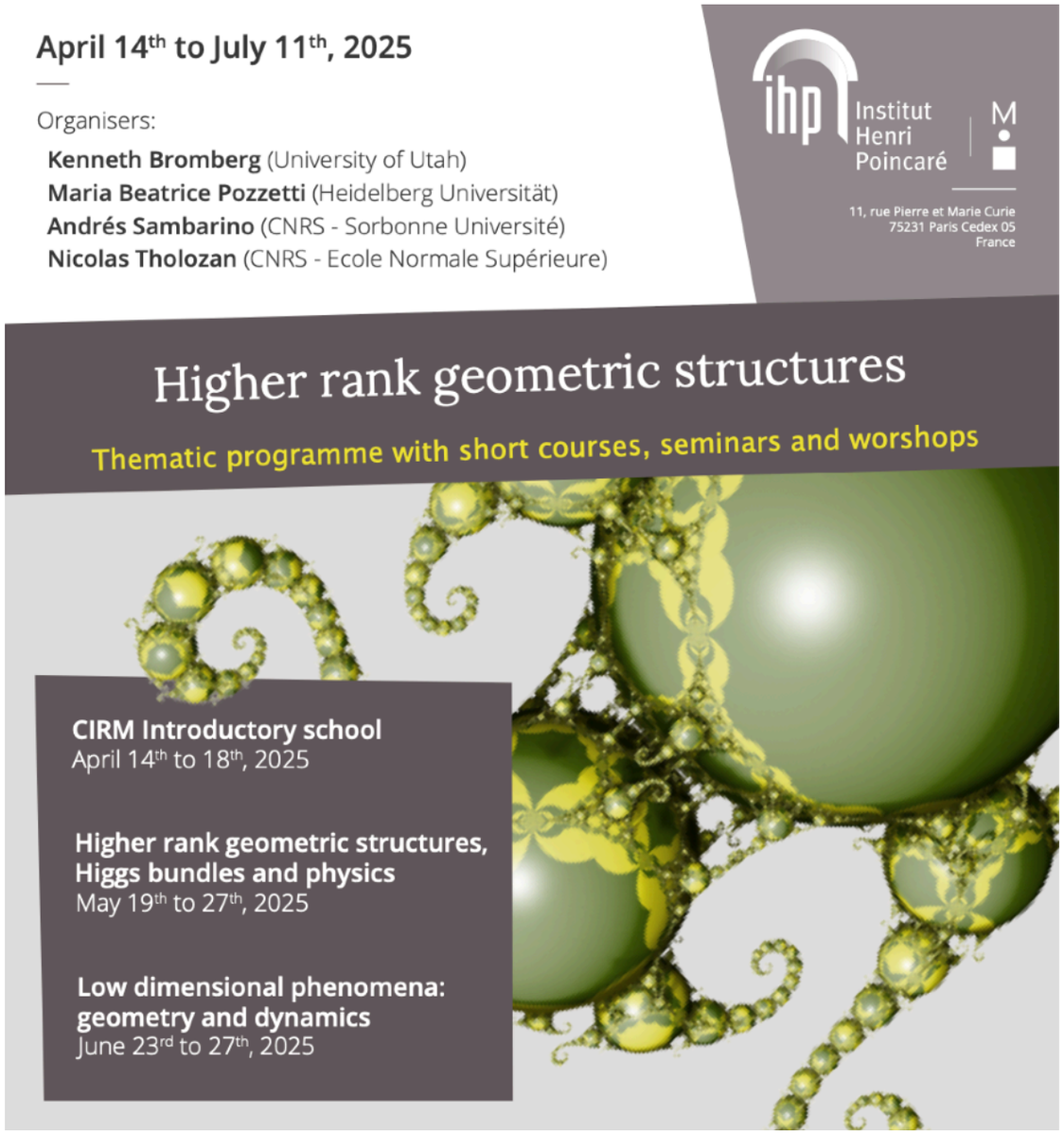
Recommandation letter(s)

- If you ask CIMPA for money, you need at least one recommendation letter (2 better).
- Write to the Professor first to ask her/his permission.
- Be careful that the request for letter can arrive in the SPAM of the professor.
- Don't do that at the last moment!

If you are selected by the organizers of the school

- You will receive an email from admin@cimpa.info
- your trip will be covered up to 1000 euros (except very exceptional cases), sometimes partially if it is too expensive
- your stay (accommodation, food for the full duration) will be fully covered

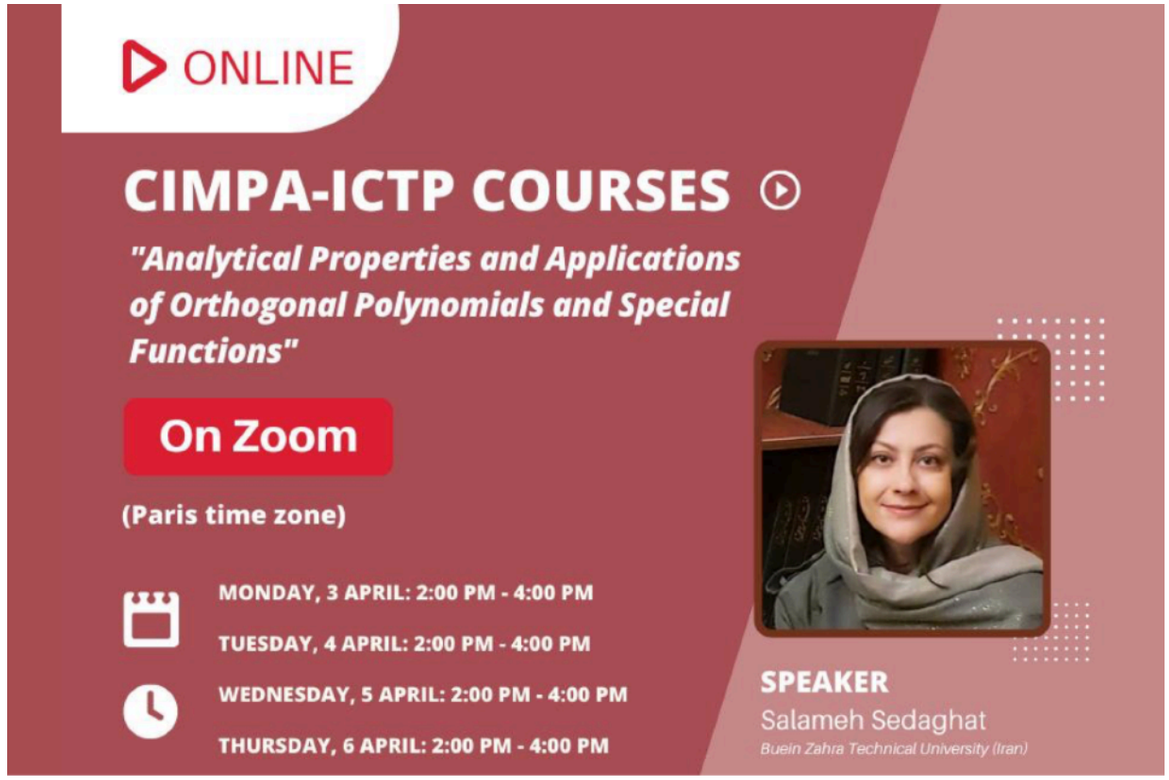
CIMPA Fellowships



but also in Marseille (CIRM), Barcelona (CRM), Tromso (LSC), Bernoulli Center (Lausanne) and next year in Berlin

- For who? PhD students, post-docs, young professors
- CV, motivation letter, recommendation letter(s)

CIMPA - ICTP Research in Pairs



- Come for at least 6 weeks to collaborate with a colleague in some countries in Europe
- Record/broadcast a mini-course
- 2025 **edition**: 63/34/12 applications/ admissible applications/laureates

2026 call: January - 25 April 2025

- For who? PhD+3 years
- colleagues who have heavy administration / teaching load
- colleagues who didn't get the chance to travel abroad (a lot) during the last 5 years

Check the platform carmin.tv

LES VIDÉOS DE CIMPA

VOIR +

PUBLIÉE LE 7 JUILLET 2022

Lattice path matroids, polytopes and permutations (4/4)

De Benedetti Velasquez Carolina

PUBLIÉE LE 6 JUILLET 2022

Lattice path matroids, polytopes and permutations (3/4)

De Benedetti Velasquez Carolina

PUBLIÉE LE 5 JUILLET 2022

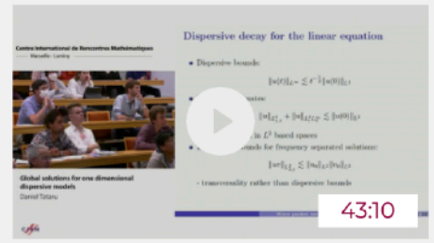
Lattice path matroids, polytopes and permutations (2/4)

De Benedetti Velasquez Carolina

PUBLIÉE LE 4 JUILLET 2022

Lattice path matroids, polytopes and permutations (1/4)

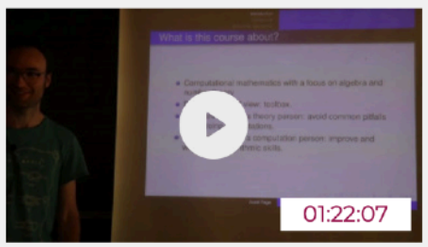
De Benedetti Velasquez Carolina



PUBLIÉE LE 13 JUIN 2022

Global solutions for one dimensional dispersive models

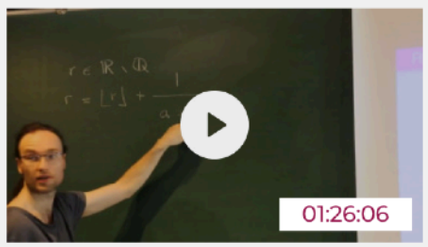
De Daniel Tataru



PUBLIÉE LE 6 JUIN 2022

Introduction, Complexity, Arithmetic Operations (Part 1/4)

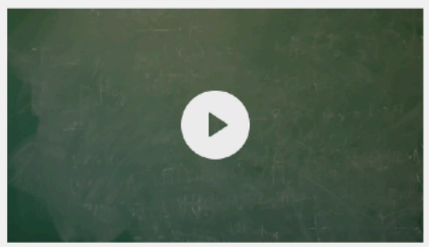
De Page Aurel



PUBLIÉE LE 6 JUIN 2022

Introduction, Complexity, Arithmetic Operations (Part 2/4)

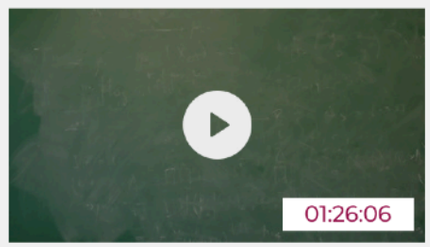
De Page Aurel



PUBLIÉE LE 6 JUIN 2022

Introduction, Complexity, Arithmetic Operations (Part 3/4)

De Page Aurel



PUBLIÉE LE 6 JUIN 2022

Reconstruction, Algebraic Number Theory

De Page Aurel

PUBLIÉE LE 6 JUIN 2022

Introduction, Complexity, Arithmetic Operations (Part 4/4)

De Page Aurel

COLLECTION Diophantine Geometry

In this course we present a short introduction to Diophantine Geometry. The main object of study are heights: we study their properties, their constructions and their applications. We start by introducing absolute values and valuations to define heights on projective spaces and later on on varieties, more precisely on abelian varieties via the Weil heights machinery. We revisite Mordell-Weil theorem on the group of rational points on abelian varieties and Falting's theorem on the finitness of rational points on curves of genus greater or equal than 2. We finish the course by discussing some open problems on Diophantine Geometry, as the abc conjecture.

TOUTES LES VIDÉOS DE LA COLLECTION (6)

PUBLIÉE LE 12 AVRIL 2021

Absolute Values on Number Fields and the Product Formula (part 1/6)

De Elisa Lorenzo García

PUBLIÉE LE 12 AVRIL 2021

Heights in Projective Spaces (part 2/6)

De Elisa Lorenzo García

PUBLIÉE LE 12 AVRIL 2021

Some Results on the Geometry of Curves and Abelian Varieties (part 3/6)

De Elisa Lorenzo García

PUBLIÉE LE 12 AVRIL 2021

The Néron-Tate height on Abelian Varieties (part 4/6)

De Elisa Lorenzo García

PUBLIÉE LE 12 AVRIL 2021

The (weak) Mordell-Weil Theorem (part 5/6)

De Elisa Lorenzo García

Introduction to Transcendental Number Theory (part 1/8)

De Michel Waldschmidt

DIOPHANTINE APPROXIMATION

HEIGHT

TRANSCENDENTAL NUMBERS

	CIMPA	ICTP	CIRM	EMS-CDC	IMU-CDC	ISP	LMS ICMS
Long educ. >1m.		- **International master in mathematics (M)** - *year at ICTP (M)* - *PhD grants* - ***Sandwich program (PhD)***		- Simons for Africa (PhD)	- ***GRAID (M, PhD)*** - **Breakout (PhD)**		
Short educ.	- **school (M, PhD, PD, YR)** - **course (M, PhD, PD)** - *Fellowship (PhD, PD, YR)*	- *School (M, PhD, PD, YR)*		- Individual	- **volunteer program (M)**		**MFH: school (PD, YR)**
Long resear. >1m.	- *CIMPA-ICTP Research in Pairs (AR)*	- *grants (PD)* - *Associates (YR, AR)*	*Chair South*	- Simons for Africa (YR, AR)	- Abel (PD) - Simons for Africa (PD) - Individual (PD, YR, AR)	- online research group (PhD, PD, YR, AR)	***MFH: Research in groups, seminar (YR,AR)***
Short resear.		- *Visiting fellowships (AR)*	- *Visiting research (YR, AR)*	- Individual			
event Institut	- **school in partnership (M, PhD)**	- **International Master in Mathematics**		- **ERCE center** - conf./school support	- conf./school support	- PhD - Sandwich PhD (restricted to the networks) - conf., schools arrangements	***MARM: full package support (joint PhD, individual, material, consulting)***

Bold: taking place in developing countries Straight: taking place anywhere
Bold-italic: taking place part of the time in north country, part in south country Italic: taking place in north country only
*: call open all year around
M: master level; PhD: PhD level; PD: postdoctoral level; YR: young researcher; AR: advanced researcher
MFH: https://www.icms.org.uk/funding-opportunities/mathematics-humanity (ICMS)
MARM: https://www.lms.ac.uk/grants/marm (LMS)
ISP (International Science Program); LMS (London Mathematical Society), ICMS (International Center for Mathematical Sciences)

THANKS!

I'd love to hear/read your thoughts, questions and comments.

CIMPA

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