

SOCIÉTÉ MATHÉMATIQUE DE TUNISIE

NEWSLETTER MAI 2021



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Nouvelles Notifications

Leaders



- **Nader Masmoudi, Mathématicien d'exception, élu membre de "American Academy of Arts and Sciences" pour l'année 2021:** Par Ali Baklouti - Après la participation de Mohamed Abid cette année à une mission vers Mars, au sein de l'agence spatiale NASA, la Tunisie vient d'être honorée encore une fois, par l'élection du jeune et brillant mathématicien Nader Masmoudi comme membre de l'Académie Américaine des Arts et des Sciences pour l'année 2021. Cette distinction prestigieuse met en évidence le rayonnement et l'excellence des chercheurs tunisiens dans le monde de la science et du savoir.

L'American Academy of Arts and Sciences est l'une des plus anciennes et peut-être la plus prestigieuse des sociétés savantes aux États-Unis. Fondée en 1780 pendant la Révolution américaine, l'Académie est à la fois une société honorifique, qui reconnaît et récompense l'excellence de ses membres, et un centre de recherche indépendant réunissant des leaders de toutes disciplines, professions et perspectives pour relever des défis de demain.

Lire la suite: <https://www.leaders.com.tn/article/31780>

- **Prolongation du délai de dépôt des candidatures « Prix jeune chercheur » 2021 -2021 au 31 Mai 2021 :**

Vu la situation sanitaire par laquelle passe la Tunisie, il a été décidé la prolongation du délai de dépôt des candidatures au « Prix Jeune Chercheur » **au 31 mai 2021.**

<https://www.beitalhikma.tn/fr/la-prolongation-du-delai-de-depot-des-candidaturesbr-au-prix-jeune-chercheur-2021/>

- **Nouveau Numéro du journal "Advanced in Pure and Applied Mathematics" : Vol 12 - Issue 2 (Mai 2021) est disponible sur le site du journal:**

<https://www.openscience.fr/Issue-2-May-2021>

- **Séminaire Modélisation Stochastique LAMSIN-MIMS-IRA: 5 mai à 11h30 heure Tunis :**

Location : **ONLINE 11H30-12H30**

Séminaire Périodique LAMSIN-MIMS-IRA

Huyên Pham (Université de Paris)

Title: [Solving man-field PDEs with symmetric neural networks](#)





- **Abstract:** We propose numerical methods for solving non-linear partial differential equations (PDEs) in the Wasserstein space of probability measures, which arise notably in the optimal control of mean-field dynamics, and are motivated by models of large population of interacting agents. The method relies first on the approximation of the PDE in infinite dimension by a backward stochastic differential equation (BSDE) with a forward system of N interacting particles. We provide the rate of convergence of this finite-dimensional probabilistic approximation for the solution to the PDE and its L-derivative. Next, by exploiting the symmetry of the particles system, we design a machine learning algorithm based on certain types of neural networks, named PointNet and DeepSet, for computing simultaneously the pair solution to the BSDE by backward induction through sequential minimization of loss functions. We illustrate the efficiency of the PointNet/DeepSet networks compared to classical feedforward ones, and provide some numerical results of our algorithm for the examples of a mean-field systemic risk and a mean-variance problem.

Le séminaire se fera à distance, sur la plateforme ZOOM.

Le lien : <https://us02web.zoom.us/j/2616756988>

Time: May 5, 2021 11:30 PM Tunis

[IRA](#) = Institute du Risque et de l'Assurance du Mans



- **Journées de Statistique Mathématique et Data Science JSMDs2021, 25-28 Novembre 2021 à Hammamet.**

[Annonce1](#)

[Annonce2](#)



- **Invitation to the Abel Prize online celebrations :** The Norwegian Academy of Science and Letters has the pleasure of inviting you and your members to The Abel Prize celebrations 2021.

Due to the COVID-19 pandemic, we will celebrate the awarding of the Abel Prize digitally.

The online events will honour both the 2020-winners, Hillel Furstenberg and Gregory Margulis, and the 2021-winners, Avi Wigderson and László Lovász.

Online events

- [Abel Prize award ceremony](#), May 25 at 3 pm CEST
- [Online reception](#), May 25 at 6 pm CEST
- [The Abel lectures](#), May 26 at 3 pm - 5 pm and 6 pm - 8 pm CEST

Click on each event to register. Read more about the events on the [Abel Prize website](#).

- **Call for themes for the International Day of Mathematics 2022 :** Despite the pandemic, the second International Day of Mathematics (IDM) on March 14, aroused worldwide enthusiasm with more than 700 celebrations announced in at least 95 countries. The 48 hours live coverage of the IDM attracted 17,000 unique users on March 14, 2021. A Global Virtual Live Celebration on the theme Mathematics for a Better World also took place with sessions in English, French, and German attracting 3300, 1300, and 2700 views, respectively.

It is now time to decide the theme for IDM 2022. Please send your proposal for the theme of IDM 2022, including a short justification, by email to idm@mathunion.org. The deadline for submissions is **15 June 2021**. Let me remind you that the IDM 2020 and 2021 themes were *Mathematics is Everywhere* and *Mathematics for a Better World*.

We would like to inform you that IMU is one of the founding partners of the [International Year of Basic Sciences for Sustainable Development 2022](#) (IYBSSD 2022), which has been adopted by UNESCO and has a high probability of being approved by the General Assembly of the United Nations next fall. Hence a theme related to IYBSSD 2022 would be welcome



Evènements à Venir

Applied Mathematics Webinar Jeddah - Riadh - Dammam - Tunis



Title : Revisited model and recent results in shell theory
Speaker: [Adel Blouza](#). Rouens University. France
Date: May 11, 2021
[Link](#)

THE FIRST INTERNATIONAL E-CONFERENCE ON PURE AND APPLIED MATHEMATICAL SCIENCES



ICPAMS-2021

Date: 7-9 June 2021
Lieu: ZOOM video
[Link](#)

HARMONIC ANALYSIS ON LIE GROUPS AND RELATED TOPICS



Date: September 6 to 9 2021
Lieu: [Beit Al-Hikma](#) – Carthage.
[Link](#)

The IMU centennial conference "Mathematics without Borders"



Date: 27-28 September 2021
Lieu: Strasbourg.
[Link](#)

"Analyse Appliquée et Modélisation" en mémoire d'Ezzedine Zahrouni



Date : 14-19 octobre 2021

International Congress of Mathematicians, the ICM 2022:



ICM : Date: 6-4 juillet 2022
Lieu : St. Petersburg, Russia
IMU : Date : 3-4 juillet 2022
Lieu : St. Petersburg, Russia
[Link](#)

Notifications en Cours

- **Travel grants for ICM 2022:** It has been a longstanding tradition that the organizers of the ICM offer support in order that mathematicians from developing countries can participate at the ICM. For the ICM 2022 in Saint Petersburg, Russia, the organizers have generously announced two different grant programs:

The Chebyshev Grants: The Chebyshev Grants program provides full support (including airfare and local expenses in Saint Petersburg) to 1000 participants from developing countries. Priority will be given to applications received by **31 March 2021**.

The Kovalevskaya Grants: will cover the congress fee and local expenses for up to 1,000 early career mathematicians from developed countries, on the condition that their home country undertakes the selection of recipients and covers their travel. Specifically, the grants cover the registration fee, accommodation, and meals for the duration of the congress. Several mathematical societies have already confirmed their participation. We encourage you as Adhering Organizations to contact the local organizers at funding@icm2022.org about organizing this in your country.

Finally, please note that the organizers have extended the deadline for applications for the Chebyshev Grants (targeted for developing countries) to 31 May 2021, with applications received before this date being given priority.

Please refer to the website <https://icm2022.org/grants> where the latest information will appear regarding the procedure for all grants available for the ICM 2022.





- **A statement from the International Mathematical Union:** The IMU has been approached by several groups and individuals regarding recent events in Russia, events that are of considerable concern to the IMU. As you know, the International Congress of Mathematicians will take place in St Petersburg 6–14 July 2022.

We have discussed the matter with several international organizations, including the International Science Council.

The Executive Committee of the IMU has decided to issue the attached public statement regarding the situation.

https://www.mathunion.org/fileadmin/IMU/Publications/CircularLetters/2021/IMU%20AO%20CL%203_2021_IMU_statement.pdf

AMS and ICM 2022

- **The challenge of fundamental human rights at the next International Congress of Mathematicians in St. Petersburg, Russia, in July 2022:** a [letter](#) by Prof. Ilya Kapovich that will appear in the May 2021 issue of the Notices of the American Mathematical Society

<https://caseazatmiftakhov.org/2021/03/06/ams-and-icm-2022/>



- **New call of the Breakout Graduate Fellowship Program in Mathematics of the Commission for Developing Countries (CDC):** Thanks to a generous donation by the winners of the [Breakthrough Prize in Mathematics](#)—Ian Agol, Jean Bourgain, Simon Donaldson, Alex Eskin, Christopher Hacon, Martin Hairer, Maxim Kontsevich, Vincent Lafforgue, Jacob Lurie, James McKernan, Terence Tao and Richard Taylor—IMU with the assistance of [FIMU](#) is opening a new call of the [IMU Breakout Graduate Fellowship Program](#) to support postgraduate studies, in a developing country, leading to a PhD degree in the mathematical sciences. The *IMU Breakout Graduate Fellowships* offer a limited number of complete grants, with duration of up to four years, for excellent students from developing countries.

Professional mathematicians are invited to nominate highly motivated and mathematically talented students from developing countries who plan to complete a doctoral degree in a developing country, including their own home country. Nominees must have a consistently good academic record and must be seriously interested in pursuing a career of research and teaching in mathematics.

For a nomination to be eligible, the country of citizenship of the student, the country of residence and the country where the study will take place must be on the list of [Developing Countries](#), as defined by IMU for the period 2019–2022.

The 2021 call will be open from **February 1 to May 30, 2021**. For more information, visit [this webpage](#).



- **2021 Fields Undergraduate Summer Research Program :** July 2 - August 27, 2021

<http://www.fields.utoronto.ca/activities/21-22/2021-FUSR>



- **Education for everyone :** Le coursera travaille en partenariat avec plusieurs universités pour dispenser des cours en ligne et propose des cours tels que la physique, l'ingénierie, la médecine, la biologie, les mathématiques, le commerce, l'informatique, etc.

<https://www.coursera.org/programs/university-of-sfax-on-coursera-baeuu>



- **Mathematical Summer in Paris:** The “Mathematical Summer in Paris” summer school, **July 5-9, 2021**, will bring together young people who are passionate about mathematics and allow them to discover some of its many facets. Lectures by famous mathematicians will cover a wide range of topics. There will also be problem-solving activities. If you are between 16 and 20 years of age, or between two years before and two years after your high school degree, and if you love mathematics, then this school is for you!

<https://www.mathematicalsummerinparis.fr/>



- **Formations doctorales à l'intégrité scientifique:** L'Ofis (Office français de l'intégrité scientifique) a mis en ligne le 17 décembre 2020 un [annuaire](#) des formations doctorales à l'intégrité scientifique".



- **The 8th Heidelberg Laureate Forum is postponed until 2021:** With reference to Circular Letter 2/2020 regarding the 8th Heidelberg Laureate Forum, scheduled to take place in Heidelberg, Germany between 20–25 September 2020. With much regret the organizers have decided to postpone the 8th Heidelberg Laureate Forum to **19–24 September 2021** due to the global COVID-19 pandemic. Further details can be found at [link](#)



- **IMU Abacus Medal:** The IMU Executive Committee decided to accept the joint bid from the University of Helsinki and the Simons Foundation for the funding of the IMU Abacus Medal. The newly designed gold medal as well as the statutes for the IMU Abacus Medal can be found on [the website](#)

Divers

- **Bulletin d'information « Recherche&jobs »:** L'employabilité des docteurs est devenue cruciale en Tunisie ces dernières années. La situation économique du pays ne permet actuellement pas de recruter tous les diplômés. La recherche d'emploi des diplômés est devenue un problème socio-économique dont la résolution est de plus en plus difficile. Le recours à la création de valeur devient une nécessité pour amortir la crise par le lancement de projets innovants reposant essentiellement sur la valorisation des travaux de recherche, et qui conduisent à la création de start-up, voire à la mise en place de services R&D au sein des institutions et entreprises publiques ou privées. L'Université de Sfax prend l'initiative de publier cette newsletter mensuelle (Research & Jobs), qui facilite l'accès des docteurs et doctorants aux informations aux niveaux national et international dans le monde de la recherche et de l'innovation: stages, formations, bourses, postdocs, startups news, Jobs ... Ces informations aideront

les jeunes diplômés à conquérir de réelles opportunités d'emploi dans leurs domaines de compétence.

Par Ali Baklouti: <https://jobs-usf.info/>

- **Ranking of mathematical journals by Chinese Mathematical Society:** The Chinese Mathematical Society had ranked mathematical journals into 4 categories.
<http://www.cms.org.cn/upload/editor/file/20210124/24192108968.pdf>
- **On human rights and the 2022 ICM in Russia, a response to the Executive Committee of the International Mathematical Union:**
<https://caseazatmiftakhov.org/2021/03/07/on-human-rights-and-the-2022-icm-in-russia-a-response-to-the-executive-committee-of-the-international-mathematical-union/>
- **Learning and teaching reimagined: a new dawn for higher education?**

<https://www.jisc.ac.uk/reports/learning-and-teaching-reimagined-a-new-dawn-for-higher-education#>

- **The [Call for Laila Soueif](#) just appeared in the March issue of the Notices of the American Mathematical Society (page 318) :**

<https://www.ams.org/journals/notices/202103/rno-ti-p318.pdf>

The full issue is accessible [here](#)

- **Rapport de la mission IGESR sur le doctorat en France:** Le rapport de la mission IGESR sur "Le doctorat en France : du choix à la poursuite de carrière", vient d'être mis en ligne. Ce rapport a été réalisé après avoir audité un grand nombre d'acteurs divers du doctorat (Nous avons aussi été audités dans le cadre de cette mission). Il aborde de nombreuses questions et pourrait intéresser certains d'entre vous.
[Cliquez ici](#)

- **Appel à soutenir la mathématicienne Laila Soueif et sa famille :** Mathématicienne égyptienne, professeure d'Université au Caire, est victime depuis de nombreuses années de la répression politique égyptienne envers elle et sa famille. À cet effet, les membres du Bureau Exécutif de la SMT expriment unanimement leur soutien indéfectible à l'égard de Leila SOUEIF, soumise à divers harcèlements dont la privation du droit de visiter ses enfants emprisonnés.

La SMT souhaite faire parvenir la voix de la collègue opprimée à l'opinion publique locale et internationale, et exhorte l'ensemble des associations de mathématiciens à travers le monde à faire pression pour rétablir les droits de Leila SOUEIF et l'ensemble des victimes de la liberté d'expression partout dans le monde.
[Lettre](#)

- **Luke Hodgkin, 1938-2020: Son of Nobel laureate and radical historian who forged his own path as a mathematician and activist remembered:** Luke Hodgkin was born in Norfolk in 1938, the son of Dorothy Hodgkin – only the third woman to receive a Nobel Prize in Chemistry – and the pioneering

Marxist historian of Africa Thomas Hodgkin. Both were committed socialists and internationalists, and he was taken, for example, at the age of 17 to the Congress of Black Writers and Artists in Paris, where the speakers included major figures in the movement for decolonisation such as Frantz Fanon and Aimé Césaire. After securing a scholarship to Eton College, which he hated, Dr Hodgkin studied mathematics at Balliol College, Oxford and went on to a doctorate in algebraic topology at St John's College, Oxford (1964). He taught at the University of Algiers (1964-65) shortly after the country gained independence from France, and then at the new [University of Warwick](#) (1965-70). In 1970, Dr Hodgkin joined the department of mathematics at [King's College London](#) for the best part of five decades, initially as senior lecturer and from 1971 as reader, until he eventually retired in 2017. His main research interests were in topology and applications of geometry to physics. Yet he was anything but a narrow specialist.

[His website](#) ranged widely across science, art, poetry, music and even "mathematical rap songs". He produced a celebrated overview titled *A History of Mathematics: From Mesopotamia to Modernity* (2005) and lectured to a broad public at Gresham College on "Money and Mathematics" (2011). He also had plans for a book called *Mathematics, Money, Drugs and War* designed to "demonstrate how mathematics, with its claim to exact results, has become a central instrument of control" used, for example, not only to design drones for military purposes but to "prove that their workings are effective – and in particular to deny the existence of civilian casualties". Although this book was never completed, Dr Hodgkin found many other outlets for his political convictions, notably a commitment to refugee and Palestinian rights. He studied for a part-time master's in human rights at [Birkbeck, University of London](#) (2009-11), volunteered at both the [An-Najah National University](#) in Nablus and legal advice centres in London, and made several visits to the "jungle" camp in Calais to offer support. He also worked with the non-governmental organisation Phone Credit for Refugees to help people stuck in camps in Greece and Lebanon. Dr Hodgkin died of cancer on 6 October and is survived by his wife, Jean Radford, and their two children, three children from an earlier marriage, seven grandchildren and one great-grandchild.

- **Mathématiques :** Les élèves français derniers du classement dans l'Union européenne.
- **Maths en liberté:** Ce site web, destiné à tous les pays francophones, propose des livres, et quelques textes courts, vidéos, jeux et BD, pour des élèves de tous âges intéressés par les mathématiques, en supplément des cours scolaires. Ce n'est pas un site de soutien scolaire. Les contenus sont classés par âge, par difficulté et par type afin que tous (et en particulier des parents ne connaissant pas les mathématiques) puissent utiliser ce site. Le classement par âge est seulement indicatif et les livres proposés peuvent contenir des sujets en dehors des programmes scolaires. Nous espérons que chaque élève y trouve les mathématiques qui lui plaisent.
- <https://maths-en-liberte.fr/home> Ce site web est administré par 5 mathématiciens universitaires.
- **Nature journals reveal terms of landmark open-access option:** The journals will charge authors up to €9,500 to make research papers free to read, in a long-awaited alternative to subscription-only publishing.
- **Académie Tunisienne des Sciences, des Lettres et des Arts *Beit al Hikma*, Département des Sciences Mathématiques et Naturelles:** Rapport d'activités 2013 - 2020.
- **Convention de partenariat entre la *Société Mathématique de Tunisie*, *ATSM*, *France-IOI* et *Animath* :** Le concours Alkindi a été créé en 2015 par *France-IOI* et *Animath*. Ces deux organisations sont co-organisatrices et copropriétaires du concours, indissociables. *France-IOI* et *Animath* organisent l'ensemble du concours en France, mais souhaitent permettre le développement du concours à l'international.
 Dans chaque pays, elles choisissent ensemble une ou plusieurs organisations qui auront la responsabilité d'organiser une version du concours Alkindi de ce pays, sur la base du format et des contenus et outils du concours français, sous le nom de "Concours Alkindi". L'organisation du concours Alkindi en Tunisie va se réaliser conjointement entre la [SMT](#) et [L'ATSM](#).

- **Nouveau accord de réciprocité SMT-SMF:** Les accords de réciprocité passés entre la SMF et la SMT permettent aux d'adhérents de la SMT, à adhérer avec un tarif préférentiel, à la SMF et à plusieurs sociétés mathématiques internationales.
- **La base de données nationale des titulaires du diplôme de doctorat:**
<http://www.theses.rnu.tn/jd/>
- **Les mathématiques en Tunisie - un fleuron de la recherche scientifique:** Acquis du présent et défis d'avenir : Par Ali Baklouti et Sadok Kallel, Leaders 12-11-2019.
<https://bit.ly/32Z11BR>
- **Système national du Doctorat:** L'Académie tunisienne des sciences, des lettres et des arts *Beit al-Hikma* vient d'achever le rapport final sur « l'Etude sur le Système National du Doctorat ». Pour lecture et téléchargement, prière vous référer au [lien](#).
- **Renforcement d'action d'échange et de partenariat entre le Palais des Sciences de Monastir et des Universités nationales:**
 Le PSM lance une première série d'actions qui visent à valoriser la recherche scientifique nationale et à booster l'ouverture des universités et des chercheurs sur leur environnement socio-économique. À cette fin:
 - des journées LABO pourraient être organisées gratuitement dans les locaux du PSM,
 - des ateliers, des séminaires ou des congrès à différentes échelles pourraient être organisés en partenariat au PSM,
 - possibilité de participation rémunérée universitaires au programme "Conférences scientifiques grand public".

**Le Responsable du Bulletin
de la SMT**

