

LETTERS TO THE EDITOR



AMS and ICM 2022

The next International Congress of Mathematicians is scheduled to take place in Saint Petersburg, Russia in July 2022. The upcoming ICM represents unique challenges for the American Mathematical Society in terms of its commitments to upholding fundamental human rights, promoting free, open, tolerant and democratic society as well as ensuring free exchange of scientific information and free scientific collaborations across borders and cultures. For the last twenty years Russia labored under the increasingly oppressive and authoritarian regime of Vladimir Putin. Internal opposition has been suppressed and effectively purged from political representation. The government controls most mass media and, increasingly, the internet as well. Opposition leaders, such as Alexei Navalny, have been subjected to persecution, murder and assassination attempts by government agents, both at home and abroad. The state exercises increasingly repressive and discriminatory anti-LGBT policies, including the infamous 2013 “gay propaganda” law.

The case of Azat Miftakhov exemplifies Russia’s human rights problems. Miftakhov, a mathematics PhD student at the Moscow State University, was arrested in February 2019 in Moscow on a putative vandalism charge related to a political protest action. The only physical damage during that protest was a broken window. Miftakhov, who pleaded not guilty to the charges, was held in pretrial confinement for almost two years and subjected to significant mistreatment and possible torture by the authorities. Numerous mathematical and scientific organizations, including the AMS, and other groups of academics, both internationally and within Russia, spoke in support of Miftakhov. Nevertheless, on January 18, 2021 a court in Moscow found Miftakhov guilty of hooliganism and handed him a grossly excessive sentence of six years in prison.

During the ongoing Navalny protests in Moscow and other cities across Russia, numerous scientists, including mathematicians, have been arrested, fined and given jail sentences. The case of Alexander Kuznetsov, an eminent Russian algebraic geometer, an ICM speaker and a corresponding member of the Russian Academy of Sciences, who was arrested at a protest in Moscow on January 31, 2021,

gained particular attention of mathematicians around the world.

All these issues raise the question of how the AMS and the US mathematical community should respond to the upcoming ICM 2022. There have already been public calls for a boycott of the ICM. Personally, I hope that a boycott will not become necessary. However, an open discussion of the matter in the AMS is certainly needed. In my view, the situation cannot be treated as a logistical issue but rather should be approached primarily as a question of values and principles.

In a January 2021 letter to the International Science Council, the Executive Committee of the International Mathematical Union wrote: “The IMU rejects all boycotts of scientific events (as does the ISC) and all attempts to link scientific activities to political and societal issues.” I believe the AMS cannot adopt such an absolutist approach. The details matter and the circumstances matter.

We need to find a way to balance the desire for free and unencumbered exchange of scientific information with our commitments to human rights and free and democratic society. Ultimately, the former requires the latter, as truly free exchange of scientific knowledge is impossible under an authoritarian rule. We also need to guard against the possibility that the Russian government intends to use the ICM as a major propaganda vehicle. Several signs already point in that direction. Dmitry Chernyshenko, Deputy Prime Minister of Russia, co-chairs the Executive Organizing Committee of the ICM. The EOC features several other members of Putin’s government, including a high-ranking FSB official, Dmitry Derevyashkin. This level of involvement by prominent government figures in the ICM organization is unprecedented in the ICM history.

At a minimum, I believe that the AMS will need to publicly acknowledge valid concerns raised by the mathematical community about the situation in Russia in relation to ICM 2022. The AMS will also need to provide some guidance for those American mathematicians who decide to attend the ICM regarding how they could support human rights and pro-democracy causes, especially as related to academia, while in Russia, if they so choose. If the Russian government continues to jail its bright young mathematical minds like Azat Miftakhov and its preeminent mathematical figures like Alexander Kuznetsov, it will become harder and harder for the AMS and the international mathematical community to accept holding ICM 2022 in Russia.

**We invite readers to submit letters to the editor at notices-letters@ams.org.*

I am unsure how exactly a public AMS discussion about ICM 2022 should be organized. But I am certain that this conversation is worth having.

—*Ilya Kapovich*,¹ Professor,
Department of Mathematics and Statistics
of the Hunter College of CUNY

The End of Pure Mathematics in Leicester

I write to share the outrageous news that pure mathematics at the University of Leicester is in the process of being completely dismantled, effective April 28th. All eight permanent members of pure mathematics staff have been threatened to be laid off and replaced by three teaching-only staff. Ten members of the School of Informatics (Computer Science) with a focus on theoretical or foundational topics face the same threat. Administrators point to demand for teaching, research, and industrial partnerships in AI and data science, to justify dismantling theoretical research.

This unprecedented move to dead-end the careers of eighteen successful and active mid-career researchers—in the midst of a global pandemic and nearly universal hiring freezes—is cruel and despicable in a sense that requires no elucidation from me. Instead I will focus this letter on the broken logic, extreme shortsightedness, and complete misunderstanding of academic ecosystems behind these heartless moves. I will focus my attention on the case of Mathematics; however my points apply equally well to Informatics.

First, this dismantlement is a live grenade thrown into a thriving and successful research ecosystem. The pure and applied groups within the School of Mathematics are uniquely tightly woven, both to one another and to their counterparts in Informatics. This is due in part to the already small size of the School of Maths—with 23 faculty across both pure and applied groups—and in part to numerous successful collaborations and shared grants, primarily *already* in the direction of AI and data science. Recent successful proposals for Research Council funding have explicitly highlighted the depth of fundamental mathematics and informatics research as a core strength, and this is also a fundamental element the School brings to the table when securing industrial partnerships.

Second, this dismantlement is a betrayal to all students in the College of Science and Engineering. Ten PhD students will lose their supervisor effective in May—the University proposes simply to reallocate each to one of the three full-time teaching staff. Said staff are yet to be recruited, and will have zero research hours in their contract; the circulated job description for these new positions does not mention the ability to supervise PhD-level research. The University also insists it will continue the Mathematics

BSc. and MSc. programs. However, there is no credible or detailed proposal for how three (presumably overworked and under-qualified) teaching staff can possibly form the foundational core of undergraduate and postgraduate taught degree programs in mathematics.

Third, this dismantlement will make irreparable damage to the University's reputation, which has already been shaken by the plan's mere circulation. The University wishes to supercharge research and teaching recruitment in AI and data science, but what are they signaling to this would-be cohort of new hires? That they can move their families and their lives to Leicester, give their careers in service to the University, and can then expect a pink slip if the winds blow the wrong way. That they can strive to become world-class researchers, respected teachers, valued mentors, and then be laid off, at the anonymous whims of a hapless bureaucrat. They are telling the next generation of students that coming to Leicester means being taught by overworked and unqualified classroom attendants with no professional stake in mathematics research.

Finally—and make no mistake—this dismantlement is a shot across the bow at job security and simple self-determination, for all academics in the UK. Academics in Britain do not enjoy the protections of tenure bestowed on our US counterparts. When I moved to Edinburgh from the US, the chorus of assurance I received was that statutory employee protections, concern for institutional reputation, and simple human decency were what stood in place of tenure in the UK. The case in Leicester underscores that none of these protections can any longer be taken for granted.

I urge you to sign this petition, stating in the comments your academic affiliation <https://www.ipetitions.com/petition/mathematics-is-not-redundant>

I further urge you to leverage not only the mathematical societies, but scientific societies, government contacts and industrial partners, to bombard the misguided administration in Leicester with the simple truth that pure and applied mathematics sit in a healthy symbiosis, and that their future lies together. Finally, I urge you to keep in touch with our accomplished and deserving colleagues in Leicester, and offer them your professional support in the difficult months ahead.

Sincerely,
David Jordan
University of Edinburgh

Mathematics at the University of Leicester

The London Mathematical Society has been informed that the University of Leicester is consulting over a proposal to reduce the size of its Pure Mathematics Group to be teaching only, in order to “meet the rising market demand of artificial intelligence, computational modelling, digitalisation and data science.” The Society strongly opposes

¹Former chair of the AMS Committee on the Human Rights of Mathematicians, 02/01/2020–01/31/2021

this proposal and believes it to be seriously flawed for the following reasons.

1. Mathematics is a continuum; what used to be called pure mathematics and applied mathematics are these days so closely intertwined as to be inseparable. One cannot engage in cutting edge applications of mathematics in isolation from people working on foundational problems, and vice versa. Having a research-active group in fundamental mathematics is key to attracting the most promising academics and students in artificial intelligence, computational modelling, etc.—areas in which there is an extremely competitive market for both.

2. We consider it to be essential that, in research intensive universities, teaching in fundamental mathematics should involve mathematicians who do research in that area. We believe that this is what students at such universities want. We are not aware of a research intensive university where core teaching in fundamental mathematics is done solely by staff on teaching-only contracts.

3. Fundamental mathematics is central to many of the most active and important areas of science and technology. In most universities it is considered essential, a key part of the STEM ecosystem. It lies at the heart of national strategies in several areas. For example, it is at the core of work being done at the Alan Turing Institute, and at the Heilbronn Institute for Mathematical Research.

4. The importance of fundamental mathematics at the moment is hard to overstate. UKRI recently increased funding to mathematics very substantially, by £300 million over five years. The reason for the funding uplift was precisely because fundamental mathematics is considered to be central to the UK's long-term strategy in science and technology, and because it underpins so many other priority research programmes.

5. The intellectual case for maintaining both research and teaching in fundamental mathematics is compelling. Not only does the subject form the foundation of many areas of science and technology, its applications to the social sciences have also been of the highest significance. It has been considered essential in higher education for over 2,000 years and is widely viewed as a pinnacle of human thought. It has never been more prominent in popular intellectual culture, especially among young people. For a university to cut itself off from this tradition would seem to us to be a significant step away from what it means to be a seat of academic learning and scholarship, and so to risk severe reputational damage.

6. We fully appreciate the difficult situation many universities are experiencing. However, there are other routes through the current situation, both intellectually and financially, as other universities are demonstrating.

—*The London Mathematical Society*
(Originally published on the London Mathematical Society website at <https://tinyurl.com/1dg50rb6>.
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Institut Mittag-Leffler in *Notices of the AMS*

Notices of the American Mathematical Society published in March 2021 a letter to the editor that gives a distorted and incorrect image of Institut Mittag-Leffler. Institut Mittag-Leffler is the oldest mathematical research institute in the world. Its long history as a central part of the sciences is the foundation for its present and future important role for the development of mathematics internationally, and in particular in the Nordic countries. The institute invests in both current mathematical research and in preserving its unique character and historical resources. Since 2018 the institute has a new lecture hall on its premises with a basement under it for storing older books properly (right humidity and air quality, etc.). We are currently developing the modern part of the library and, involving professional historians of science, making sure our historically interesting material is properly preserved and available for the future. Institut Mittag-Leffler will continue as a successful hub for mathematical research in a unique historical environment, led by mathematicians, for the foreseeable future.

—*Tobias Ekholm, Director IML*
Kurt Johansson, Chairman of the IML board

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