

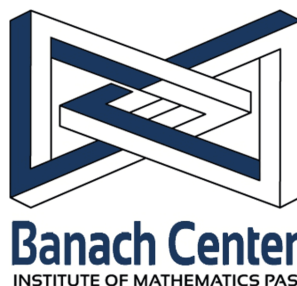
Banach Center and its mother institution, IMPAN (Institute of Mathematics of the Polish Academy of Sciences)

Adam Skalski

Stefan Banach International Mathematical Center, traditionally known as the Banach Center, forms an integral part of the Institute of Mathematics of the Polish Academy of Sciences (IMPAN). The institute was established in 1948, as the independent State Mathematical Institute, and in fact predates its umbrella institution, the Polish Academy of Sciences, created in 1952. IMPAN has originated in plans put forward by the leading figures of the world-famous pre-war Polish school of mathematics, such as Kazimierz Kuratowski, who was in fact the first director of the institute. Since its inception, IMPAN has continuously remained a top mathematical institution in Poland and one of the most important research centers in Central and Eastern Europe. Currently, it employs over 20 permanent research faculty, around 20 mathematicians on long term (tenure-track type) contracts, and almost 40 short-term researchers, mostly postdoctoral students, but also visiting professors. It continually hosts several national and international grants; notably, the only three individual ERC grants in mathematics in Poland were awarded to researchers based at IMPAN. The institute is also a partner in two doctoral schools, one joint with the University of Warsaw, the other, smaller and focused on applied mathematics, with the Institute of Geophysics of the Polish Academy of Sciences. The Warsaw headquarters of IMPAN is located in a historical building in the city center, which pre-1939 used to belong to the Warsaw Scientific Society, and hosted the Radiological Laboratory formally led by Maria Skłodowska-Curie, and the laboratory of Edward Flatau, the father of Polish neurology. Here also one can find the Central Mathematical Library, one of the biggest mathematical libraries in Eastern Europe, and the Publishing House of IMPAN, issuing nine international journals, including the 'golden three' of the Polish mathematical tradition, all established in the 1920s: "Fundamenta Mathematica," "Studia Mathematica" and "Acta Arithmetica," but also the series Banach Center Publications devoted to research produced by the visitors of the Banach Center.

History of the Banach Center and its Scientific Council

Since 1972 a particular role in the institute's activities has been played by the Stefan Banach International Mathematical Center,



founded within IMPAN for the purpose of promotion and intensification of international cooperation. It was a way of realizing a dream of Polish mathematicians concerning the building of a bridge between the scientists working in Central and Eastern Europe and the rest of the world. As one can imagine, obtaining the green light from the communist government for such an enterprise was not easy, but in the end, mostly due to efforts of the then director of IMPAN, Bogdan Bojarski, in 1972 the founding agreement was signed by the academies of sciences of Poland, Bulgaria, Czechoslovakia, GDR, Hungary, Romania and the Soviet Union. These partners were later joined by the academies of Vietnam, Cuba and North Korea. During the years 1972–1992 the Center gained a global reputation as the actual meeting point of mathematicians coming from all over the world. In that period, it hosted over 40 focused semesters, concerning practically all fields of mathematics.

In 1993 the original setup run its course, and it was replaced by a new agreement with the European Mathematical Society (the EMS itself having its roots at a meeting which took place in 1990 in Mađralin, near Warsaw), guaranteeing new perspectives of development of the Center. In particular, it was decided that the reinvigorated institution will organize intensive workshops, conferences and smaller research groups. The agreement with the EMS included a formation (or rather re-formation) of the Scientific Council of the Banach Center, which meets annually in Warsaw. The council includes nine members, which serve at most two four-year terms. Three of them are chosen by the EMS, three represent the original founding countries, and the remaining ones come from Poland. The chair of the council is elected by the members; for

many years this role was played by the President of the EMS. Here is the full list of the mathematicians who acted as chairs of the council:

- Lubomir Iliev (Bulgaria) 1972–1976
- Ákos Császár (Hungary) 1977–1980
- Klaus Matthes (East Germany) 1981–1982
- Kazimierz Urbanik (Poland) 1983–1986
- Romulus Cristescu (Romania) 1987–1989
- Sergeĭ M. Nikol'skiĭ (USSR) 1990–1992
- Friedrich Hirzebruch (Germany) 1993–2001
- Rolf Jeltsch (Switzerland) 2002–2005
- Ari Laptev (Sweden) 2006–2013
- Marta Sanz-Sole (Spain) 2013–2014
- Pavel Exner (Czech Republic) 2014–2021
- Gert-Martin Greuel (Germany) 2022–2023
- Šárka Nečasová (Czech Republic) 2023–

The daily activities of the Center are supervised by the director of IMPAN or one of his deputies; apart from the team working in the Będlewo center, which will be introduced below, the Center employs two secretaries located in Warsaw.

Locations

For many years, the main building of the Banach Center was a 19th century palace (Pałac Cukrowników) in Warsaw, situated not far from the IMPAN headquarters mentioned above. When in the 1990s it had to be returned to the pre-World War II owners, the efforts of the then directors of IMPAN led to acquiring from the Polish Academy of Sciences another 19th century palace, this time based in Będlewo, a small village near Poznań in western Poland. The Mathematical Research and Conference Center in Będlewo, as it is now called, includes a neo-Gothic palace, service buildings, a hotel and a large (with an area of almost nine hectares) park. It can host scientific meetings of up to 120 participants as well as support research in smaller groups. In 2021, it gained a separate modern, purpose-built lecture hall with 120 places.

Some of the Banach Center events take place in the Warsaw headquarters of IMPAN, which includes several lecture halls. The main auditorium there has 100 seats and recently installed high-quality audio-video equipment, allowing for efficient live streaming of lectures. The Warsaw building has also 20 guest rooms, in which the participants in the activities can be conveniently accommodated.

Current activities, collaborations

In recent years (apart from the pandemic slowdown) the Banach Center has been organizing annually around 50 events, with approximately 1000 Polish and 1500 foreign participants. As



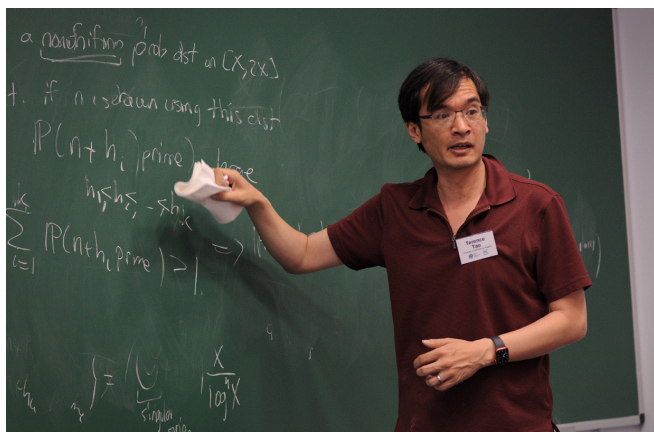
Będlewo Center. (© IMPAN)



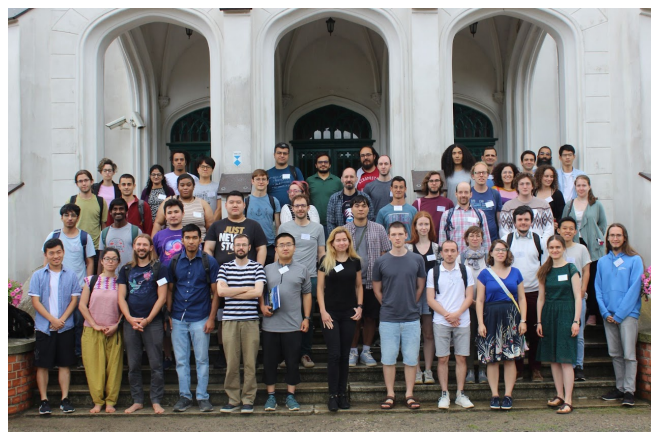
The main lecture hall. (© IMPAN)

mentioned above, some of the conference proceedings are published in the series Banach Center Publications, which already counts over 130 volumes. Typical events range from big, general mathematics conferences, through smaller workshops and graduate schools, to working groups based on the “research in pairs” model. A sample list of recently organized events is as follows.

- “Numbers in the Universe,” a number theory conference organized in summer 2023 jointly in Warsaw and Kyiv by the Banach Center and the International Centre for Mathematics in Ukraine (ICMU), with Maryna Viazovska, Vitaly Bergelson and Terence Tao as main speakers.
- Regular nationwide meetings, involving international contributors such as “Polish Combinatorics Meeting,” “Polish Probability Conference” or “Forum of the PDEs.”
- Graduate schools: for example, the Summer School in Algebraic, Asymptotic and Enumerative Combinatorics, organized in July 2023 in Będlewo.



Terence Tao at the conference "Numbers in the Universe," Warsaw.
(Photo © by Michał Kotowski)



Participants of the Summer School in Algebraic, Asymptotic and Enumerative Combinatorics, Będlewo, July 2023. (© IMPAN)

The Banach Center is one of the founding members of ERCOM (European Research Centres on Mathematics), a committee of the EMS gathering the top mathematical research institutes and conference centers in Europe. It is also involved in formal collaborations with several other mathematical institutions. Since 2015, it has been organizing Simons Semesters in Banach Center, a program of focused longer activities, supported by the Simons Foundation within the Targeted Grants for Institutes framework. This year marks the beginning of the already third edition of the program, called "Simons Semesters in Banach Center – New Energies."

Since 2019, the Będlewo Center hosts also each autumn a graduate school co-organized with the Mathematisches Forschungsinstitut Oberwolfach, within the scheme called MFO-Banach Center Graduate Seminars. Some other joint activities, such as events organized together with the International Centre for Mathematics in Ukraine, were already mentioned above.

Procedures and invitation to apply for organizing events

Despite running a very successful program of events for more than 50 years now, the Banach Center does not have an independent, stable long-term funding, and it is supported mostly from the budget of IMPAN, and occasionally from some short-term grants from the Ministry of Science and Higher Education. Due to these constraints, it only offers partial support to its workshops. In practice the procedure is as follows: a call is made at the beginning of the year X (usually with the deadline in early May), for events to take place in autumn of the year X and in the year $X + 1$. The applications are discussed at a meeting of the Scientific Council, where the organizers are given a chance to present their proposals. The council decides about the acceptance of the events and proposes a ranking, which is then converted by the board of IMPAN directors

to the actual support level, which traditionally, depending on the ranking, reaches between 20% and 50% of local costs. The results are announced by the end of June. Potential organizers may also apply outside the dates of the annual competition directly to the Banach Center office; in this case, however, the support offered is significantly smaller.

The applicants are supposed to propose some dates for their meeting and are encouraged to discuss it in advance with the Banach Center office (at office@impan.pl). As expected, the summer months are most popular, and the Center is especially keen to receive more proposals for events taking place in the period between November and March – this is not quite the right time for swimming in the lakes near Będlewo, but the park looks beautiful also in winter. Although the organizers have to find a way to complement the support offered by the Center, using conference fees or personal/institutional grants, the full cost remains rather low, with roughly 500 Euro per person being at the time of the writing an approximate price for a five-day meeting in Będlewo (including accommodation, food, access to all facilities and transport from/to Poznań).

You are very strongly encouraged to apply; more information can be found at <https://www.impan.pl/en/activities/banach-center>.

Adam Skalski completed his PhD in Nottingham in 2006. Later he worked in the UK, Japan and France, before returning to his native Poland in 2010. He has been the deputy director of IMPAN, responsible for the Banach Center, since 2015. During the term 2022–2024 he was the chair of ERCOM, and since 2025 has served on the Executive Committee of the EMS.

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