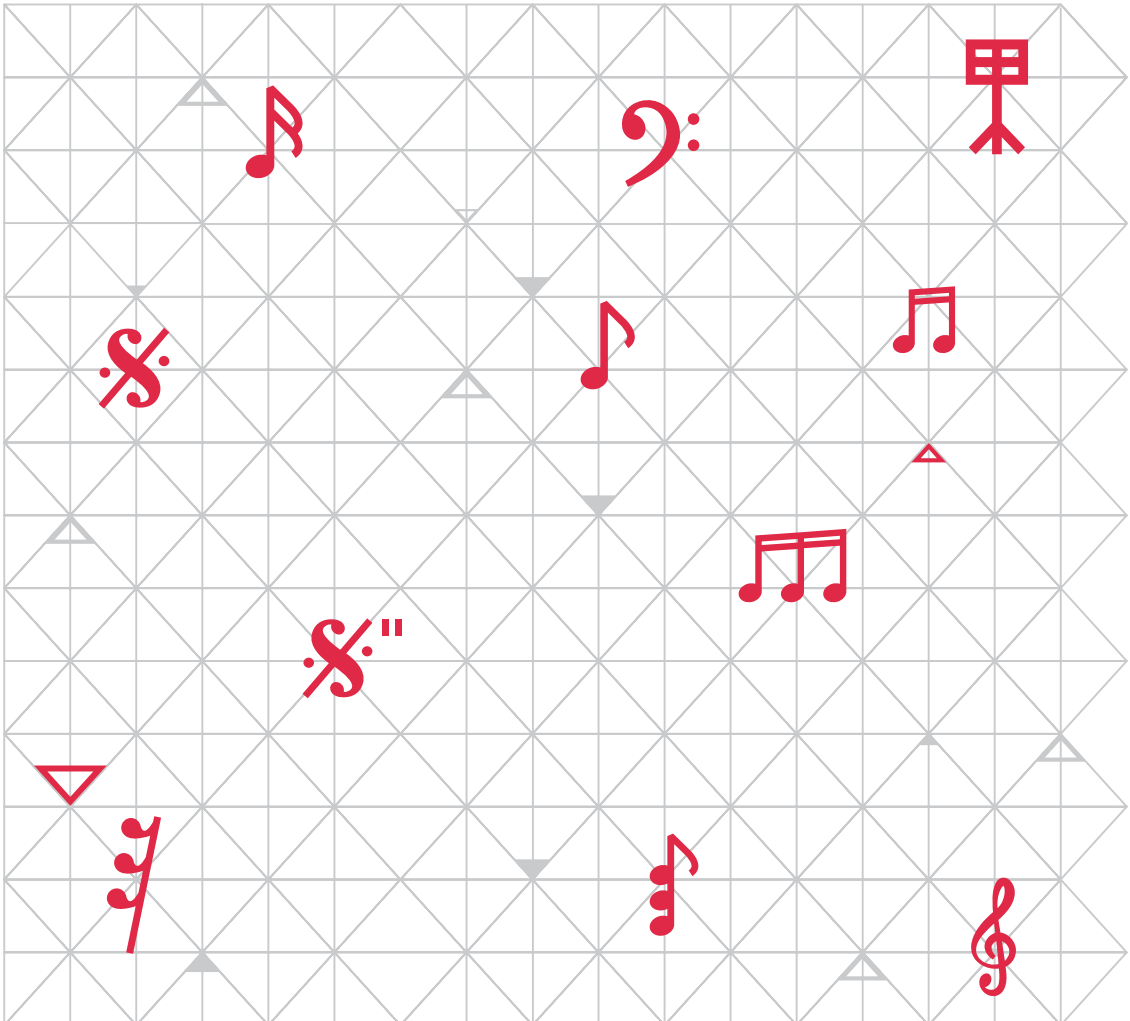
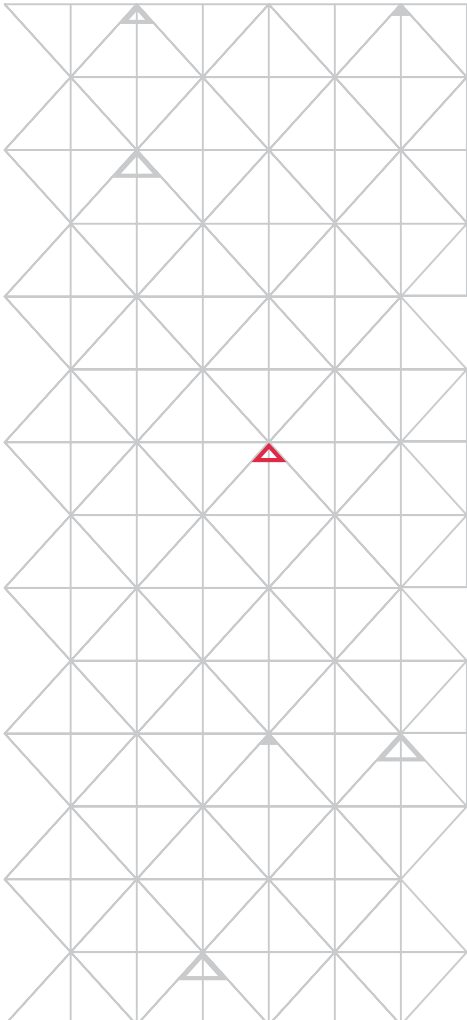
INFORMATION BROCHURE

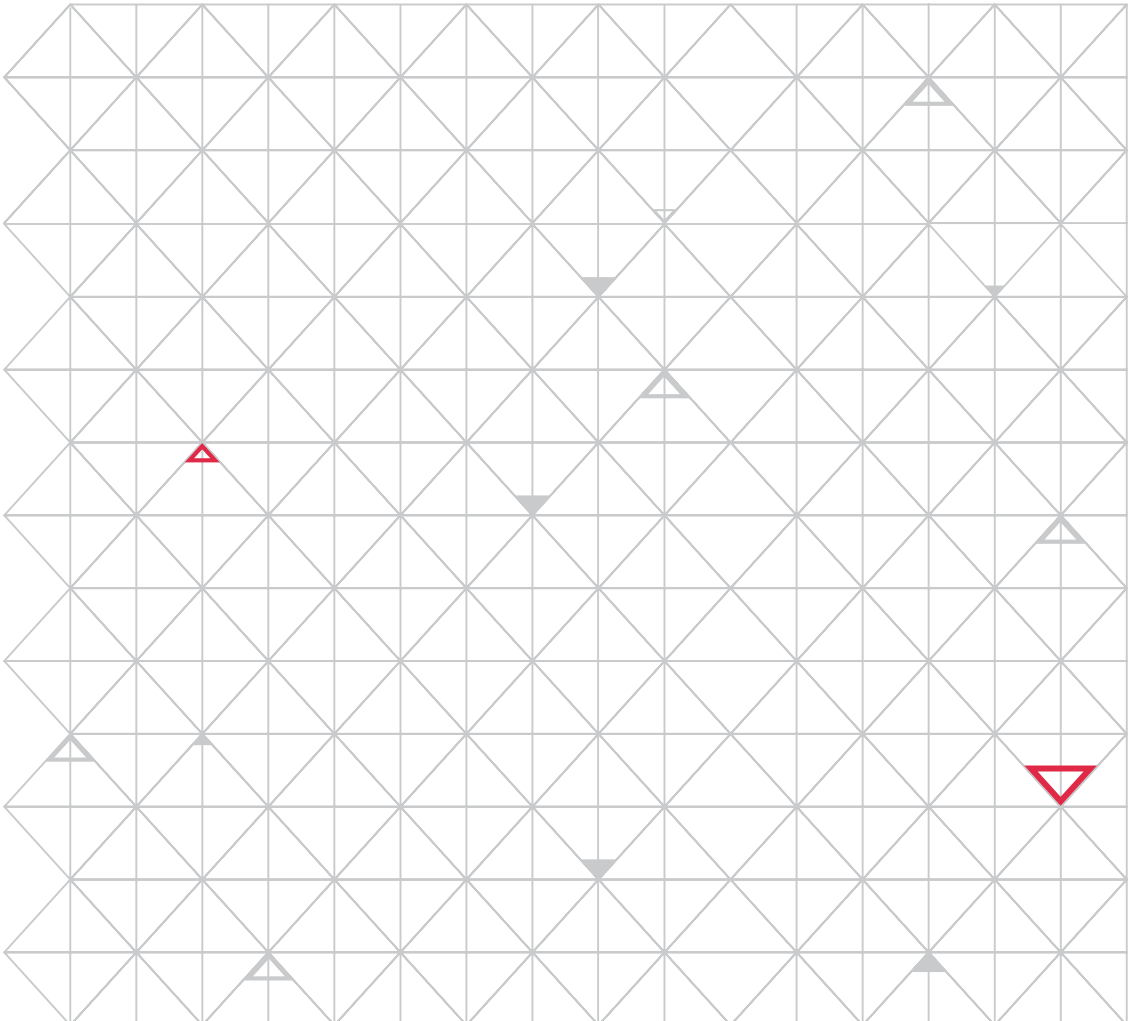
NATIONAL SCIENCE CENTRE
POLAND





ABOUT THE NCN

The National Science Centre (Narodowe Centrum Nauki, NCN) is a government executive agency set up to fund basic research. Thanks to this institution, researchers themselves can now decide how a substantial portion of research funds is allocated from the state budget. Basic research is original experimental or theoretical research work that strives to expand knowledge of the fundamentals of phenomena and observable facts. It is not intended to have any direct commercial application or use.



NCN in numbers

(March 2011 – February 2015)

REGULAR CALLS

51

CALLS ANNOUNCED

44

CONCLUDED CALLS

8733

PROJECTS AWARDED FUNDING

828

M EUR

ALLOCATED FOR RESEARCH PROJECTS

INTERNATIONAL CALLS

13

CALLS ANNOUNCED

10

CONCLUDED CALLS

9

PROJECTS AWARDED FUNDING

1.7

M EUR

ALLOCATED FOR RESEARCH PROJECTS

THE STRUCTURE OF RESEARCH FUNDING IN POLAND

National budget for research 2015: PLN 7.3 bln (€1.7 bln) (including EU structural funds)

Strategic & executive level

MINISTRY OF SCIENCE AND HIGHER EDUCATION (MNISW)

MINISTRY'S PROGRAMMES AND AWARDS

Executive agency level

BASIC RESEARCH

NATIONAL SCIENCE CENTRE

Budget 2015: PLN 915 M (€216.6 M)

APPLIED RESEARCH

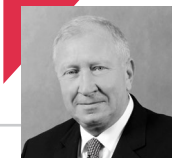
NATIONAL CENTRE FOR RESEARCH AND DEVELOPMENT

MANAGEMENT

Zbigniew Błocki

is a professor at the Faculty of Mathematics and Computer Science of Jagiellonian University in Krakow. His main research areas are complex analyses of several variables and partial differential equations. He has worked in research centres all over the world, for example in the USA (as a recipient of the Fulbright senior grant), Sweden and Germany, also giving invited lectures and conducting courses. In the years 2010-2015 he was a member of the Council of the National Science Centre (NCN). In the years 2011-2012 he held the office of the director of the Institute of Mathematics, Jagiellonian University; he was also a Vice Chair of the Executive Organising Committee of the 6th European Congress of Mathematics in Krakow, in 2012. He received the Zaremba Prize of the Polish Mathematical Society in 2007, the Polish Prime Minister Award for exceptional scientific achievements in 2008 and the Jagiellonian Laurel in 2014.

Michał Karoński



is the Chair of the NCN Council as well as a professor and head of the Department of Discrete Mathematics in the Faculty of Mathematics and Computer Science at Adam Mickiewicz University in Poznań. His research interests include discrete mathematics and theoretical informatics. He is the author of almost 60 publications and has delivered over 30 plenary lectures and guest speaker talks at international conferences. During his academic career he has held several positions including a postdoctoral fellowship at the University of Florida and visiting professorships at Southern Methodist University, Purdue University and The Johns Hopkins University. Since 1992 he has been a visiting professor at Emory University in Atlanta. He has also conducted research in many academic centres abroad, including universities in Moscow, Lund, Bielefeld and Pittsburgh, as well as at research centres in the USA, Denmark, South Korea, England, Singapore and Sweden. He is the editor-in-chief of *Random Structures and Algorithms* (Wiley).

ORGANISATION CHART

D

THE NCN DIRECTOR

The National Science Centre is managed by a director selected in an open competition process. The Director acts as NCN's representative, oversees the completion of NCN tasks and its financial management. The Director is authorised to act as an independent legal representative on behalf of NCN.

C

THE NCN COUNCIL

The National Science Centre Council consists of distinguished researchers representing different academic fields. The Council sets out priority basic research areas that match the Polish state development strategy, specifies call regulations, allocates funding, publishes calls for doctoral scholarships and post-doctoral internships. The Council also selects members of the Expert Teams who are responsible for research proposal evaluations.

CS

THE NCN COORDINATORS

NCN Coordinators are scientific officers responsible for launching calls for proposals for research projects and project evaluation process management. Their responsibilities also include evaluation of the impartiality of the peer review process. In particular cases, the Coordinator, following consultation with the opinions of the Expert Teams, may change the order of research proposals on the ranking list.

O

NCN OFFICE

The NCN Office is a structure combining the efforts of a number of the NCN's departments and teams. On a day-to-day basis, the Office is responsible for processing calls for proposals and organising meetings for experts at the peer review evaluation stage. The Office also provides support to the applicants and answers their queries. Furthermore, its major responsibilities include administrative and financial management of grant agreements and fostering international cooperation.

GRANTS

The National Science Centre finances basic research carried out in the form of research projects, PhD scholarships and postdoctoral internships. One of the priorities of the Centre is to support and develop the scientific careers of pre-doctoral and doctoral researchers about to embark on a career in research (maximum 7 years since PhD award). The Centre allocates more than 20% of its budget towards grants for this group of researchers.

The NCN offers eleven funding schemes which take into account the varied needs of academia ranging from researchers at the outset of their career to the most prominent academics. Furthermore, the NCN, in cooperation with foreign partners, jointly announces international calls.

The NCN finances some research equipment, however large-scale research infrastructure is financed by the Ministry of Science and Higher Education. The funding programmes are open to a wide range of applicants and the proposals must be written both in Polish and English. Although parties signing contracts with the NCN are required to be Polish institutions, their research teams may include foreign researchers.

NCN SUBJECT AREAS

HS – ARTS, HUMANITIES AND SOCIAL SCIENCES

HS1 Fundamental questions of human existence and the nature of reality

HS2 Cultures and cultural creativity

HS3 The study of the human past

HS4 Individuals, institutions and markets

HS5 Norms and governance

HS6 Human nature and human society

ST – PHYSICAL SCIENCES AND ENGINEERING

ST1 Mathematics

ST2 Fundamental constituents of matter

ST3 Condensed matter physics

ST4 Physical and analytical chemical sciences

ST5 Materials and synthesis

ST6 Computer science and informatics

ST7 Systems and telecommunications engineering

ST8 Products and processes engineering

ST9 Astronomy and space research

ST10 Earth system science

NZ – LIFE SCIENCES

NZ1 Molecular biology, structural biology, biotechnology

NZ2 Genetics, genomics

NZ3 Cellular and developmental biology

NZ4 Biology of tissues, organs and organisms

NZ5 Human and animal noninfectious diseases

NZ6 Human and animal immunology and infection

NZ7 Diagnostic tools, therapies and public health

NZ8 Evolutionary and environmental biology

NZ9 Applied life sciences and biotechnology

FUNDING SCHEMES

PRELUDIUM

Aimed at pre-doctoral researchers starting their career in research. Projects carried out within the PRELUDIUM scheme last from one to three years and are executed with the assistance of a supervisor. Research financed under this scheme does not have to be related to the applicant's PhD dissertation.

ETIUDA

This funding opportunity is addressed to doctoral candidates. Awardees receive a scholarship covering the time needed to prepare their PhD dissertation, i.e. from six to twelve months. They should also plan a research stay abroad lasting from three to six months which will be funded solely by the NCN. The awardee is obliged to obtain their doctoral degree within twelve months of completing the scholarship, but not earlier than six months since the commencement of the funding.

SONATA

Targeted at emerging researchers with a doctoral degree. This funding opportunity hopes to support Principal Investigators to embark on an innovative basic research project using modern research facilities and/or methodology. Researchers within seven years of the award of their doctoral degree are eligible to apply.

SONATA BIS

This funding scheme gives researchers the incentive to build a new research team run by academics with a doctoral degree or academic title within two to twelve years since their PhD award. This scheme is primarily addressed to associate professors and professors. SONATA BIS supports the creation of teams which conduct the most innovative research projects.

FUGA

This postdoctoral research opportunity is targeted at individuals at the outset of their academic careers who are within seven years of the award of their PhDs or who will have been awarded one by the end of June of the given year. The scheme hopes to facilitate mobility of Polish researchers between different institutions in Poland and encourage the exchange of scientific ideas. The scholarships are financed by the NCN and need to be conducted outside the region where the researchers have been employed or have actually worked in the last two years and, at the same time, outside the province of their home institution.

SYMFONIA

Funding opportunity for cross-domain research projects targeted at outstanding academics whose work is of the highest quality and boldly go beyond current frontiers of knowledge and open new perspectives in research. Projects submitted under this funding scheme are expected to carry out basic research in collaboration with teams or individual partners. Proposals aiming to make progress in more than one discipline and not only tap into the achievements of one discipline will be given preference.

TANGO

Open to projects that plan to put into economic and social application the results of basic research showing significant innovative potential. Eligible to apply are Principal Investigators or investigators in projects in basic research awarded funding under national or international calls, or researchers who have acted as main researchers/supervisors/scientific tutors upon the consent of the Principal Investigator. TANGO is a joint initiative of the National Science Centre and the National Centre for Research and Development (NCBR), designed to support research institutions and universities in commercialising their research output such as innovative technologies, products and services and foster cooperation between academia and industry.

HARMONIA

Aimed at applicants – Polish research performing institutions – wanting to carry out international projects in which the Polish team is not co financed from foreign sources. Research proposals may include projects conducted directly in cooperation with foreign partners as part of international programmes/initiatives or using large-scale international research infrastructure. The purchase of research equipment is not allowed under this scheme.

MAESTRO

Designed for advanced researchers wanting to conduct pioneering research, including interdisciplinary research important for the development of science. Projects within this funding scheme should surpass the current state of knowledge, lead to the creation of new paradigms, or forge pathways to new frontiers in the field. Researchers with at least a doctoral degree, at least five publications in renowned academic journals in the past ten years and those who have managed to complete at least two research projects selected through a call for proposals procedure are eligible to apply.

OPUS

This funding scheme is intended for a wide range of applicants, irrespective of their research experience. Research proposals may include the purchase or construction of necessary research equipment. Projects are carried out individually by a Principal Investigator or a research team composed of a Principal Investigator and any number of researchers.

POLONEZ

A funding scheme addressed to incoming researchers who may apply for 12-24-month fellowships in host institutions in Poland. Applicants may apply on the condition that they hold a doctoral degree or have at least four years of full-time research experience and that they have not resided or carried out their main activity (work, studies, etc.) in Poland for more than 12 months in the period of 3 years preceding the call announcement.

This scheme has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 665778

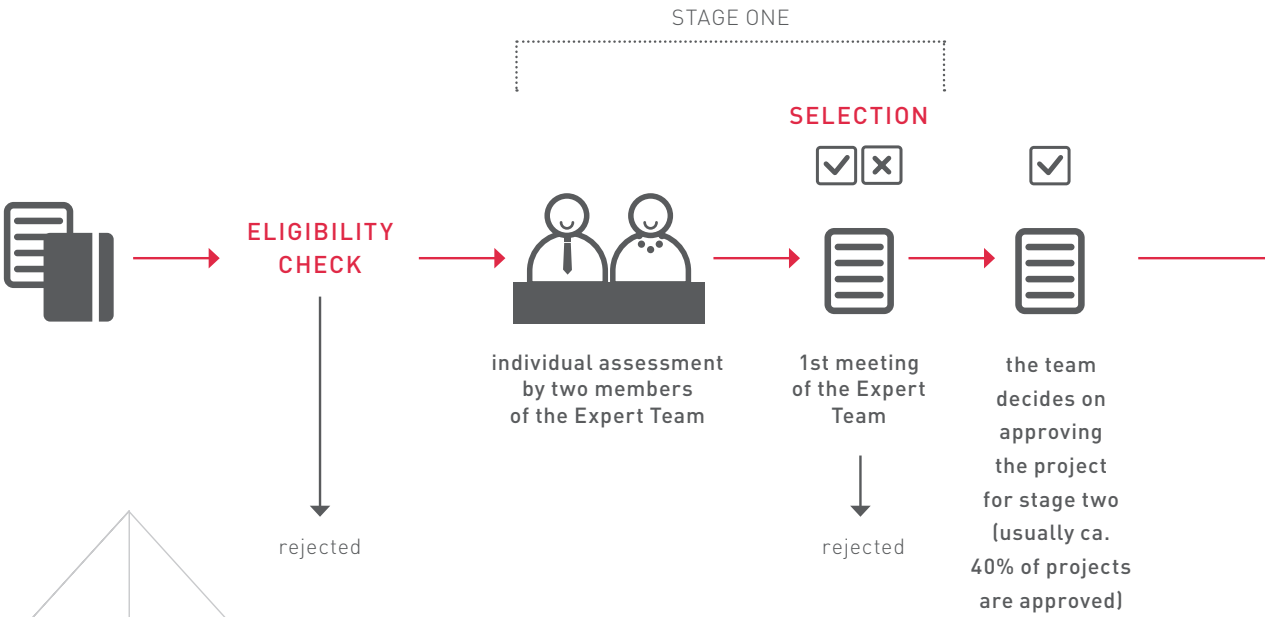
PROPOSAL EVALUATION PROCESS

In order to select the very best proposals, the NCN employs an evaluation procedure based on a two-stage peer review procedure. The NCN Council adopted a general rule of taking into account, in carefully considered proportion, both the quality of the proposal and the achievements of the researchers. The evaluation procedure starts with an admissibility and eligibility check performed by the NCN Coordinators which covers assessing the proposal for completeness and accuracy of submission. The projects are afterwards peer reviewed by members of the NCN Expert Teams (groups of experts selected by the NCN Council among distinguished academics appointed by the NCN Director for the purpose of proposal evaluation) and consists of two stages.

STAGE ONE – the members of the Expert Teams prepare individual assessments of the proposals. Their assessments are a starting point for discussion of the proposals during the first panel session. The decision to reject or approve a proposal for stage two is taken collectively by the team, preceded by a discussion. The Expert Teams prepare a shortlist of proposals to be sent to stage two of the evaluation.

STAGE TWO – proposals are evaluated by External Reviewers, including foreign-based ones, whose reviews are discussed by the Expert Teams during the second panel session. External Reviewers are selected by Coordinators, based on the recommendations of the Expert Teams. The final evaluation score for individual proposals and drawing up a final ranking list of projects approved for funding is in the hands of the Expert Teams. In some calls, an interview is organised at the second stage of evaluation.

PROPOSAL EVALUATION PROCESS



STAGE TWO

ETIUDA, FUGA,
SYMFONIA, POLONEZ
interview

OPUS, PRELUDIUM,
SONATA, SONATA BIS,
MAESTRO, HARMONIA,
SYMFONIA, POLONEZ

individual assessment
by External Reviewers,
including foreign-based
reviewers

FINAL LIST OF QUALIFIED PROPOSALS

2nd meeting
of the Expert Team

rejected

ca. 16% qualified
for funding

SIGNING OF THE GRANT AGREEMENT

RESULTS

STATISTICS

Under the calls concluded in 2014, excluding TANGO, 11,432 applications were submitted totalling ca. € 1.16 billion, out of which 1,804 were awarded funding ca. € 180 million.

Chart: Number of proposals submitted and grants awarded* in calls concluded in 2014 by research domain, including success rate**

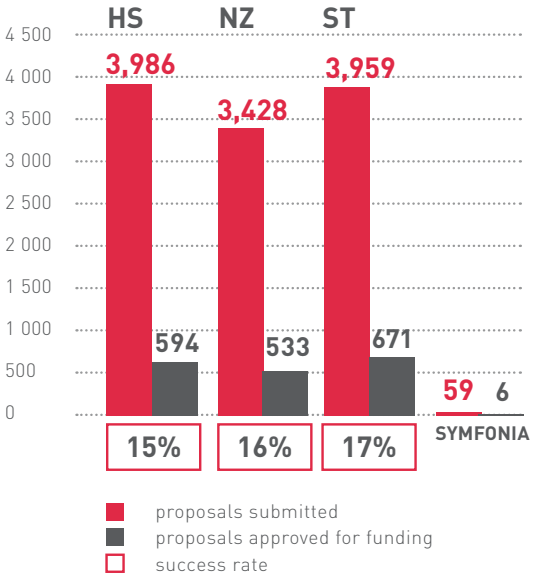


Chart: Resources awarded under funding schemes concluded in 2014, by research area*

* Data does not include the TANGO funding scheme.

** Success rate is the percentage of proposals that were awarded funding; it is calculated as the ratio of the number of proposals awarded to the number of proposals submitted.

INTERNATIONAL COOPERATION

It is one of the foremost objectives of the National Science Centre to significantly support research conducted by Polish researchers in cooperation with partners from abroad. In order to enable the exchange of Polish scholars and encourage them to cooperate with their peers from abroad, the NCN takes part in the ERA-NET consortia and Joint Programming Initiatives (JPI). Networks such as ERA-NET and JPI, combining the efforts of European national funding agencies, launch calls for proposals for international research projects carried out by teams of researchers from at least three different countries involved in the network. Furthermore, NCN initiates bi-lateral cooperation with research funding agencies in Europe and beyond.

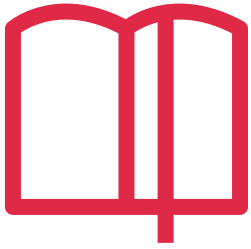
The NCN's international cooperation (2014/2015)

NAME	Scope
HERA (Humanities in the European Research Area)	Humanities
NORFACE (New Opportunities for Research Funding Agency Co-operation in Europe)	Social Sciences
BEETHOVEN call for proposals for Polish-German teams	Arts, Humanities and Social Sciences
ERA-NET on Smart Urban Futures	Urban Studies
Infect-ERA (ERA-NET on human infectious diseases)	Infectious Diseases
BiodivERsA (Consolidating the European Research Area on biodiversity and ecosystem services)	Biodiversity
JPND (EU Joint Programme – Neurodegenerative Disease Research)	Neurodegenerative Diseases
JPI HDHL (Joint Programming Initiative: A Healthy Diet for a Healthy Life)	Healthy Nutrition
JPI-EC- AMR: ERA-NET COFUND on Antimicrobial Resistance	Antimicrobial Resistance
CHIST-ERA (European Coordinated Research on Long-term Challenges in Information and Communication Sciences & Technologies)	Information and Communication Technologies
Quant-ERA (ERA-NET COFUND on Quantum Technologies) coordinated by the NCN	Quantum Technologies

2015 NCN AWARD

On 7th October 2015, for the third time, the NCN Award for young researchers was granted in the following three categories: Arts, Humanities and Social Sciences (HS), Life Sciences (NZ) and Physical Sciences and Engineering (ST). The distinction recognises outstanding academic achievements in basic research carried out within a Polish research centre. The awardees achievements should be endorsed by publications affiliated in a Polish research centre as well.

The Award is granted by the National Science Centre and is funded by enterprises involved in supporting research. The 2015 NCN Award in the HS research domain was funded by FBN Poland: Colian, ENEL-MED SA, Grupa Bemo Motors, Grupa Nowy Styl, Netbox PL Sp. z o.o. and Yes. In the ST research domain the Award was funded by EDF Polska S.A., while in NZ – Celon Pharma S.A.



ARTS,
HUMANITIES
AND SOCIAL
SCIENCES

PHYSICAL
SCIENCES
AND ENGINEERING

LIFE SCIENCES

ARTS, HUMANITIES AND SOCIAL SCIENCES

DR HAB. MICHAŁ BILEWICZ

Research achievement: *Presentation of the three-factorial structure of contemporary anti-Semitism and its psychological consequences*

When studying the structure of anti-Semitism in contemporary Poland, Michał Bilewicz (born in 1980) revealed that it consists of three types of beliefs (religious anti-Judaism, secondary anti-Semitism and belief in a Jewish conspiracy), which vary in terms of dissemination, forms of manifestation and consequences. The belief in a Jewish conspiracy turned out to be the strongest predicator for the discrimination of Jews, as it exemplifies the stereotype of a foreign group with hostile intentions and high levels of competence. The author assumes that foreign groups perceived in this way are particularly prone to becoming an ideological scapegoat in times of crisis. Bilewicz's current work aims at developing a more general concept of inter-group prejudice and dehumanisation, going beyond the scope of anti-Semitism alone.


Nauki humanistyczne,
społeczne i o sztuce

LIFE SCIENCES

DR HAB. WIESŁAW BABIK

Scientific achievement: *A study of the adaptive evolution of animals with special emphasis on the MHC gene variability.*

The adaptive importance of MHC gene variability and the role of selection and drift in shaping that variability form one of the key topics of research carried out by dr hab. Wiesław Babik. A major achievement of his team includes the development of methodology for the genotyping of a major histocompatibility complex with the use of large-scale sequencing.

Wiesław Babik has written a number of excellent articles on evolutionary biology published in reputable journals which have been characterised by high citation rates (more than 200 citations per year in the last 5 year period).

PHYSICAL SCIENCES AND ENGINEERING

PROF. DR HAB. PIOTR ŚNIADY

Research achievement: *Examination of probability structures in the asymptotic theory of permutation groups representation and their application in quantum algorithms theory*

Representation theory examines how abstract symmetry groups may be realised in a concrete manner. Prof. Śniady's work focuses on asymptotic aspects of that theory, and on the closely related theory of random matrices. One of the most interesting results of Prof. Śniady's work (published in the *Annals of Mathematics*, one of the two most prestigious mathematical journals) concerns the asymptotics of the so-called characters of permutation groups; to put it in plain language, the results show that the representations of large permutation groups behave in a similar way to random torques. What is more, Prof. Śniady has examined random combinatory structures related to representation theory. The results of this research were published in the *Annals of Probability* and combine, in a surprising manner, the large-scale shape of an avalanche of falling stones, the theory of representation of an infinite permutation group and the dynamics of traffic jams.


mutacji

PERFORMING FOR POLISH RESEARCH

2015

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