

**Press release****Rheinische Friedrich-Wilhelms-Universität Bonn****Johannes Seiler**

05/22/2025

<http://idw-online.de/en/news852657>Contests / awards, Science policy  
interdisciplinary  
transregional, national**Jubilation at the University of Bonn: Most successful, having received eight Clusters of Excellence**

**A huge success for the University of Bonn: today, all six of the University of Bonn's existing Clusters of Excellence were selected for further funding in the nationwide Excellence Competition. In addition, both newly applied Bonn cluster initiatives will receive funding from the federal and state governments. This means that Bonn will be represented by a total of eight clusters in the coming funding period - more than at any other university in Germany.**

This decision by the Excellence Commission, consisting of international researchers and the federal and state science ministers, was announced late this afternoon in Bonn. Funding will start at the beginning of 2026.

With this outstanding result, the University of Bonn is consolidating its role as a leading research university in the competition: it was the only university in Germany to be successful with six Clusters of Excellence back in 2018 and was awarded the status of a University of Excellence in 2019. Since then, it has continuously ranked among the strongest research universities in Europe and the world.

**Milestone in the history of the University**

Rector Prof. Dr. Dr. h.c. Michael Hoch says: "This is a historic milestone for our University. It is absolutely outstanding that we have once again topped our sensational result from the last round. I would like to sincerely thank everyone who made this great success possible. First and foremost, of course, I would like to thank the researchers and their teams. But also our state government, in particular Minister Ina Brandes, who has been very supportive of the cluster activities of all NRW universities. Our eight Clusters of Excellence are already globally visible centers of cutting-edge research and demonstrate our scientific performance across the board. They also give us an enormous boost for our future strategy as a globally networked University of Excellence."

These are the eight Clusters of Excellence at the University of Bonn:

Profile of the Clusters of Excellence that continue to receive funding (in alphabetical order):

**Bonn Center for Dependency and Slavery Studies (BCDSS)**

Since 2019, the Bonn Centre for Dependency and Slavery Studies (BCDSS) has offered new perspectives on slavery and dependency research with the key concept of 'Strong Asymmetrical Dependency'. It examines deep-rooted social dependencies from different historical periods and geographical regions – from Roman, transatlantic and Mamluk

slavery, as well as forced labour, to debt bondage and human trafficking and serfdom. While considering all shades between 'free' and 'unfree', researchers from 43 disciplines collaborate with 24 international partner institutions in a transdisciplinary manner. "Strong Asymmetrical Dependency" provides an analytical framework for understanding how power relations have historically shaped societies – and continue to do so today. In the face of global challenges such as forced migration, inequality, and environmental destruction, this research provides key insights into the persistence of dependency relationships.

Speaker:

Prof. Dr. Stephan Conermann, Islamic Studies, Universität Bonn

Institutions involved:

Max Planck Institute for Legal History and Legal Theory, Frankfurt am Main, Bonn International Center for Conflict Studies (BICC), Bonn German Institute of Development and Sustainability (IDOS), Bonn Rautenstrauch-Joest Museum, Cologne Ruhr University Bochum

Website: <https://www.dependency.uni-bonn.de/en>

#### ECONtribute: Markets & Public Policy

The Cluster of Excellence ECONtribute: Markets & Public Policy addresses pressing societal and technological challenges such as global financial crises, rising inequality, political polarization, digitalization and climate change. Approximately 150 researchers from economics and related disciplines work on innovative approaches to analyze markets and public policy and develop responses to such challenges. At the heart of the research is human thinking and acting, including notions of fairness, beliefs and expectations – crucial factors for better understanding markets and deriving well-founded recommendations for policy and market design. In the second funding phase, the Clusters' researchers will increasingly focus on the conditions under which policy proposals attract support in society.

Spokespersons:

Prof. Dr. Thomas Dohmen, Professor of Applied Microeconomics, University of Bonn

Prof. Dr. Matthias Heinz, Professor for Strategy, University of Cologne

Prof. Dr. Pia Pinger, Professor for Design and Behavior, University of Cologne

Universities involved:

University of Bonn, University of Cologne

Institutions involved:

Max Planck Institute for Research on Collective Goods, Bonn

Website: <https://econtribute.de/>

#### Hausdorff Center for Mathematics (HCM)

The Hausdorff Center for Mathematics (HCM) was founded in 2006 as the first-ever Cluster of Excellence for mathematics in Germany. It has evolved into an internationally significant center for mathematical research and teaching and for academic dialogue. The HCM produces a host of world-renowned award winners every year. Its research interests range from pure and applied mathematics and questions of economics through to interdisciplinary projects involving colleagues from fields such as materials research and the life sciences.

Speaker:

Prof. Dr. Valentin Blomer, Mathematical Institute, University of Bonn

Institutions involved:

Max Planck Institute for Mathematics

Website: <https://www.mathematics.uni-bonn.de/hcm>

#### ImmunoSensation3

ImmunoSensation has done much to advance our understanding of the immune system ever since it was established in 2012. It involves over 80 research groups from the fields of immunology, neuroscience, system biology, bioinformatics,

mathematics and clinical research working closely together. Through their joint efforts, they have made a major contribution to the identification and characterization of key innate immune system sensors, decoded new immune activation mechanisms and elevated the concept of immune sensing to international prominence. Essentially, this views the immune system as an immune sensory system—as a “sensory organ,” in other words. The cluster’s aim for the next funding period onward, when it will bear the new name of ImmunoSensation3, is to use these foundations to tackle the next scientific challenge on its agenda. This will be to conduct systematic research into immune diversity, i.e. the structural, functional and dynamic variety present in the immune system.

**Speakers:**

Professor Gunther Hartmann, MD, Institute of Clinical Chemistry and Clinical Pharmacology, University Hospital Bonn, University of Bonn

Professor Anja Schneider, MD, German Center for Neurodegenerative Diseases, University of Bonn

Professor Andreas Schlitzer, PhD, Life and Medical Sciences Institute (LIMES), University of Bonn

**Institutions involved:**

German Center for Neurodegenerative Diseases (DZNE)

Website: <https://www.immunosensation.de/>

### ML4Q—Matter and Light for Quantum Computing

Quantum computers lie at the heart of the ML4Q Cluster of Excellence, which was founded in 2019 by the University of Bonn, the University of Cologne and RWTH Aachen University together with Forschungszentrum Jülich.

The cluster aims to lay the foundations for new computer and network architectures that are based on the principles of quantum mechanics and are more powerful than conventional computers. To this end, it works to analyze and optimize the quantum materials required to create various qubit platforms such as semiconductor qubits, superconducting qubits, topological qubits and Rydberg atoms. The cluster’s researchers are also devising algorithms for fault-tolerant quantum computing and strategies for quantum error correction.

**Speaker:**

Prof. Yoichi Ando, Solid State Physics, University of Cologne

**Speaker in Bonn:**

Prof. Dr. Simon Stellmer, Quantum Metrology, University of Bonn

**Universities involved:**

University of Cologne, RWTH Aachen University

**Other institutions involved:**

Forschungszentrum Jülich

Website: <https://ml4q.de/>

### PhenoRob

PhenoRob stands for a sustainable and technology-driven transformation of agriculture – an issue of global importance and high relevance for Germany. The Cluster of Excellence focuses on developing innovative and sustainable cropping systems as well as new technologies, such as robotics, artificial intelligence and sensor-based phenotyping, for the resource-efficient production of crops. Interdisciplinary teams are researching new approaches to reduce the environmental impact, exploit automation potential in the field, and identify forward-looking solutions for agricultural systems in Germany.

Embedded within the Faculty of Agricultural, Nutritional and Engineering Sciences at the University of Bonn, PhenoRob is Germany’s only Cluster of Excellence in the field of Agriculture 4.0. Since the first funding period, it has been internationally visible as a center of excellent research in robotics and phenotyping for sustainable crop production. It has delivered significant contributions toward sustainable agriculture – also through the successful spin-off of start-up companies.

**Speakers:**

Prof. Dr. Cyrill Stachniss, Photogrammetry and Robotics, University of Bonn

Prof. Dr. Heiner Kuhlmann, Geodesy, University of Bonn

## Institutions involved:

Forschungszentrum Jülich

Website: <https://www.phenorob.de/>

## New Clusters:

## “Color meets Flavor”— Search for new phenomena in strong and weak interactions

The existence of dark matter and the matter-antimatter asymmetry in the Universe point to gaps in our understanding of the world around us. Even though virtually all the measurements that we can make in particle physics can already be described in detail by the Standard Model, deciphering the structure of subatomic matter is one of the most pressing questions in fundamental physics. Specifically, researchers are wondering where new phenomena of fundamental physics might be hiding.

Some of the most intriguing measurements in recent years have involved interplay between the strong (“color”) and weak (“flavor”) interaction. It is this interplay that the researchers in the Cluster of Excellence being proposed together with TU Dortmund University, the University of Siegen and Forschungszentrum Jülich now want to investigate in more detail in a close partnership between theory and experimentation. They will focus on the physics of quarks and the question of how these fundamental building blocks of matter form complex bonding states and are also intending to explore the properties of the Higgs boson and continue the hunt for the axion. With the masses of the six known quarks spanning several orders of magnitude, the experimental infrastructure needed to study them ranges from experiments at low-to-medium energy levels at the ELSA particle accelerator in Bonn all the way through to ultra-high-energy experiments using the Large Hadron Collider (LHC) at CERN in Geneva, which will also offer an opportunity to investigate the Higgs boson. The Cluster will start January 2026.

## Speaker:

Prof. Dr. Jochen Dingfelder, Elementary Particle Physics, Institute of Physics, University of Bonn; Speaker for the Research and Technology Center for Detector Physics

## Universities involved:

TU Dortmund University, University of Siegen

## Institutions involved:

Forschungszentrum Jülich

Website: <https://www.color-meets-flavor.de/>

## Our Dynamic Universe

The structure and development of our Universe is shaped by countless phenomena that follow some very different timescales, ranging from fractions of a second to billions of years. This Cluster of Excellence, which is being proposed in partnership with the University of Cologne, brings the various processes of astrophysics together through a combination of observations using new instruments, theory backed by innovative simulation and data science methods, and laboratory astrophysics. The aim is to come up with a complete description of the evolution of matter and energy flows over time. Within the Bonn/Cologne region, the cluster initiative is based in a internationally acclaimed center of expertise for radio astronomy, underpinned by four main pillars:

(1) building state-of-the-art detectors and instruments for international telescopes; (2) leading large-scale observation programs; (3) running a world-class laboratory for astrophysics; and (4) simulating the dynamic evolution of planets, stars and galaxies on high-performance computers.

The Cluster will start January 2026.

## Speaker:

Prof. Dr. Stefanie Walch-Gassner, Astrophysics, University of Cologne

## Speaker in Bonn:

Prof. Dr. Cristiano Porciani, Astrophysics, University of Bonn

Universities involved:

University of Cologne (applicant)

Institutions involved:

Max Planck Institute for Radioastronomy, Bonn Forschungszentrum Jülich German Aerospace Center (DLR), Bonn

Website: <https://dynaverse.astro.uni-koeln.de/>

URL for press release: <https://www.uni-bonn.de/en>

**Addendum dated 05/22/2025:**

Please do not use the attached picture! We will upload photos on the topic to our website [www.uni-bonn.de](http://www.uni-bonn.de) in the course of the evening.



Great success: The eight Clusters of Excellence of the University of Bonn.  
Photo: Gregor Hübl/University of Bonn