PRESS RELEASE

MAX PLANCK INSTITUTE
FOR THE SCIENCE OF LIGHT

The bridge connecting physics and medicine now has a name: The Jochen-Guck Bridge has been inaugurated

ERLANGEN, 24 SEPTEMBER 2026

The bridge connecting the Max-Planck-Zentrum für Physik und Medizin (MPZPM) and the Center for Personalized Medicine and Research (CESAR) on the North Campus of the Universitätsklinikum Erlangen (UKER) has been named the Jochen-Guck Bridge since September 22, 2026. It is named after the Max Planck director, who passed away in October 2025 and played a key role in establishing the center. The inauguration ceremony took place as part of the "How do you feel" symposium, which brought over a hundred participants from the field of biophysics to Erlangen.

In September 2024, MPZPM was officially opened. This collaborative center of the Max Planck Institute for the Science of Light (MPL), Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), and UKER fosters a new kind of research culture: physicists and medical scientists conduct joint research to better understand fundamental medical questions from a physical perspective. Prof. Jochen Guck, Director at MPL, headed the "Cell Physics" division at MPZPM. A commemorative plaque inside the building on the MPZPM side, as well as a timeline chronicling the development of this flagship Erlangen project in cross-disciplinary research, honor his scientific legacy. As a globally recognized pioneer in the field of cell mechanics, he played a key role in establishing the center and enhancing its international reputation.

The bridge's inauguration ceremony featured welcoming remarks from the spokespersons of MPZPM, the president of FAU, and UKER hospital administration. The bridge symbolizes the close connection between physics and medicine, as well as the three collaborating partners.

In his welcoming speech, Prof. Vahid Sandoghdar, Managing Director of MPL and spokesperson for MPZPM, emphasized how pleased they had been to attract Jochen Guck to Erlangen – precisely because of his exceptional personality. "Unfortunately, Jochen was already very ill at the time of this building's inauguration. But I think he was very happy that we had come this far. He was a great advocate for bringing biophysics closer to medical research – not only seeking answers at the molecular level, but also exploring fundamental questions from a physical perspective. That's why he was the right person for our center and its mission. Over the years, I recognized that this was not just a scientific vision, but that it also reflected his love for humanity."

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Bridge's inauguration ceremony. From left to right: Vahid Sandoghdar, Dorothe Burggraf, Heinrich Iro, Markus F. Neurath, Joachim Hornegger, Jürgen Winkler, Albrecht Bender und Vasily Zaburdaev.

Prof. Vasily Zaburdaev, head of the "Immunophysics" division and also spokesperson for the MPZPM, added:

"What remains is Jochen's vision: his scientific and personal legacy. We encounter it throughout this entire conference. That is why MPZPM was founded, and Jochen had fully dedicated himself to this mission in his final years. It feels right that this bridge now bears his name. Personally, I am glad to be reminded every morning, as I walk past the memorial plaque, of what we created together, what we had set out to do, and what we now wish to complete without him."

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Prof. Joachim Hornegger, President of FAU, recalled Jochen Guck:
"When I heard that this bridge will carry Jochen Guck's name, I thought to myself: Yes, that's right. Jochen Guck built bridges long before this bridge here was built. He brought physics and medicine together and combined physical thinking and methodology with those of medicine and biology. He was the link between the Max Planck Society and our university as well as the University Hospital. Above all, however, he brought people together – researchers."

Prof. Markus Neurath, Dean of the FAU School of Medicine and Director of Medical Clinic 1 at the UKER, said:
"Jochen Guck was a physicist, but a physicist with an extraordinary instinct for clinical and biological questions. He did not look at medicine from a distance. Rather, he asked with genuine curiosity: What are the problems that concern physicians? Where do established diagnostic and therapeutic approaches reach their limits? And how can a physics-based approach help push those boundaries? For us as a university hospital, this was of particular importance. Jochen Guck did not see fundamental research and clinical applicability as opposites, but rather as parts of a continuum."

"How do you feel" – Symposium in Memory of Jochen Guck
Prof. Kristian Franze, head of the "Neuronal Mechanics" division, explained in his opening remarks what had brought leading international scientists from the field of cell physics to Erlangen. Together, they aim to honor Jochen Guck's scientific and personal legacy. His ideas, he said, remain an essential part of their own work and have had a lasting impact on the entire field.

Comments from the Speakers
Prof. Simone Reber, Max Planck Institute for Infection Biology, Berlin
"Jochen and I conducted joint research on the cell nucleus and made a conceptually surprising observation: The cell nucleus

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Symposium participants

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is less dense than the surrounding cytoplasm. While the work on this was still in the process of being published, we already wanted to take our thinking further and ask what functional consequences a low nuclear density has for the cell. In particular, we were interested in whether the altered nuclear size in cancer cells could be viewed from a new perspective – namely, as a question of density homeostasis. Our shared goal was to translate these new ideas into concrete, experimentally testable research questions. Our time working together has reinforced my belief that interdisciplinary collaboration is the right approach to solving complex problems. This is especially true for questions that, on the one hand, touch on very fundamental principles of cell biology and, on the other hand, also affect people in clinical settings. It was precisely this connection that defined my collaboration with Jochen."

Prof. Claudia Fischbach-Teschl, Cornell University, Ithaca, USA
"Cancer is regulated by the normal tissue microenvironment. My research focuses on the physical and mechanical regulatory mechanisms at the microenvironment level: How does the tissue surrounding a tumor influence whether cancer develops and how it progresses? We investigate these questions from a fundamental science perspective but also with an eye toward translational applications: both are topics we shared with Jochen. Just as important as research for our field is the task of educating the next generation of scientists so that they are able to communicate across boundaries and appreciate each other's perspectives."

Prof. Josef Käs, University of Leipzig, Leipzig, Germany
"Jochen was my Ph.D. student. So, we've been connected for ages. We've traveled much of our scientific journey together. The unifying idea was cell mechanics. For a cancer cell to reach a specific location in the body, it must move through the body, pass through narrow passages, and squeeze its way through. That is a mechanical process. Building on this, we developed our first joint diagnostic approach. Afterward, we pursued different paths. Jochen developed the high-throughput method of real-time deformability cytometry (RT-DC), which, by the way, also gave its name to the symposium "How do you feel" and that works wonderfully. By contrast, I examine histological sections with my research group. Rather than using a finger to feel whether a cell is soft or hard – as an indicator of physiological change – we look to see if it's elongated. Because if a cell is elongated – meaning it can squeeze through the tissue – then it's soft."

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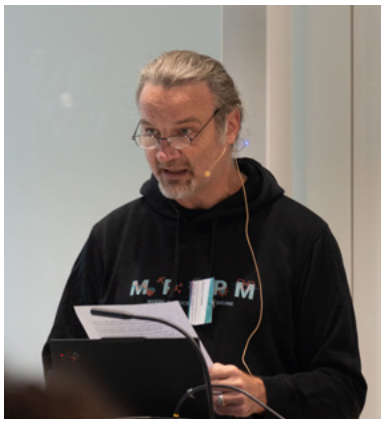
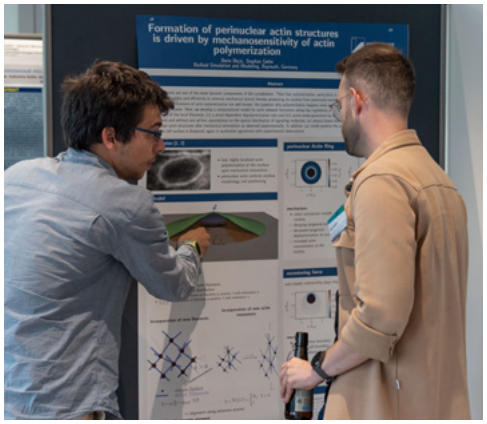
Impressions

Link to the photo gallery: https://mpl.canto.global/b/PJC70





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*The **Max-Planck-Zentrum für Physik und Medizin** is conceived as a joint effort between the Max-Planck-Institute for the Science of Light (MPL), the Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU) and the Universitätsklinikum Erlangen (UKER). The new scientific center aims to apply advanced methods from experimental physics and mathematics to basic biomedical research with an emphasis on the intercellular microenvironment.*

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