

Honorary Doctorate Degree from Sofia University for Klaas Bergmann

Prestigious Award for Emeritus Professor of Physics Klaas Bergmann

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With Prof. Dr. Klaas Bergmann, an exceptionally creative experimental physicist was honored, who has already drawn attention to himself through pioneering work in the field of laser spectroscopy.

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Prof. Dr. Dr. h.c. mult. Klaas Bergmann after the ceremony with Vice-Rector

Prof. Dr. Nikolay V. Vitanov (left) and Dean Prof. Dr. Georgi Rainovski (right).

Photo: Sofia University St. Kliment Ohridski

With this award, Sofia University not only honored Bergmann's research achievements, but his commitment to the integration of colleagues from Eastern Europe into the European research landscape.

With Prof. Dr. Nikolay. V. Vitanov, Vice-Rector of the University of St. Kliment Ohridski, Sofia/Bulgaria, there has been a close partnership for many years, which is also supported by the German Research Foundation (DFG). Further active and productive collaborations exist with colleagues from Yerevan (Armenia), Riga (Latvia) and Kiev (Ukraine). Not only from this circle, many visiting scientists and students came to TU Kaiserslautern every year to collaborate experimentally and theoretically on the research projects.

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Klaas Bergmann received his doctorate from the University of Freiburg in 1972 and, after an extended stay at the University of California at Berkeley, moved to the University of Kaiserslautern in 1975, where he habilitated in 1980. In the mid-1990s, Professor Klaas Bergmann pushed the international networking of his research work, which until then had been focused on the USA, in the direction of Eastern Europe.

In a special way, the STIRAP (Stimulated Raman Adiabatic Passage) method developed and analyzed by Bergmann is today associated with his name worldwide. With this method, he achieved an important breakthrough in the optical control of molecular quantum states about thirty years ago: Namely, the STIRAP method allows the targeted and, most importantly, complete transfer of a population from one quantum state to another. It has quickly found numerous imitators and users wherever controlled quantum processes play an important role - from atomic physics and quantum optics to chemical reaction dynamics and even ultrafast solid-state processes.

Professor Bergmann was active in the physics department at University of Kaiserslautern until 2007, and then held a senior research professorship until the end of 2015. Since 2017, he has been working in industry in the field of laser measurement technology for TOPTICA at the subsidiary TOPTICA Projects.

The Senate of Sofia University had already decided in December 2019 to award Bergmann an honorary doctorate. Due to Corona, the ceremony to present the certificate was postponed several times. Now it took place on May 27.

About TOPTICA

TOPTICA has been developing and manufacturing high-end laser systems for scientific and industrial applications for more than 20 years. Our portfolio includes diode lasers, ultrafast fiber lasers, terahertz systems and optical frequency combs. TOPTICA today has 450 employees in 6 commercial entities with a consolidated group revenue of 100 Mio € (about 107 Mio \$).

To serve high complexity laser projects more efficiently TOPTICA Photonics AG has founded TOPTICA Projects GmbH in 2016. TOPTICA Projects offers state-of-the-art guide star lasers for astronomical adaptive optics. These lasers deliver more than 20 W of single-frequency output at the sodium resonance of 589 nm and already provide outstanding performance at most of the major ground-based observatories worldwide. In addition, it is the home of TOPTICA's award-winning Guide Star laser activities.