

Personalia

Making science for the future and studying its past. To the 80th Birthday of Reinhard Folk



Professor Reinhard Folk, a renowned scholar in the field of statistical and condensed matter physics, recognized for his works in the field of phase transitions and cooperative phenomena and history of natural sciences, an active member of the Editorial Board of the Condensed Matter Physics journal marks his 80th Birthday.

Reinhard Folk was born on April 29th, 1945 in Neuendettelsau, Germany. He studied at the University of Vienna, where he defended his doctoral thesis *Hydrodynamic Equations of Dielectric Crystals* under the supervision of Franz Schwabl in 1973. The same year Reinhard Folk got an assistant position at the Institute for Theoretical Physics in the then-youngest Austrian university in Linz. He continued to work in this university (from 1975 — the Johannes Kepler University Linz) until his retirement in 2009 as the Director of the research group *Phase Transitions and Critical Phenomena* and an extraordinary professor. In 1979–1980 he was a Scientific visitor at the Institute of Solid State Physics, Forschungszentrum Jülich; in 1982–1983 he was an Assistant and in 1986–1987 — Visiting Associate Professor at the Physics Department of the Technical University Munich, Germany.

Reinhard Folk's scientific work challenged hot topics of condensed matter physics: theory of ferro-electrics, superconductors, superfluids, regular and structurally disordered magnets, spin and quantum liquids, and neural networks. Results of his research deepened our understanding of static and dynamic features of phase transitions and critical phenomena in these systems and laid the foundation for future developments in these fields. Computing algorithms and resummation methods of asymptotic perturbation series proposed by Reinhard Folk and his collaborators cover a wide range of applications. His important contribution to physics was recognised by the academic community. In 1982, the year of his Habilitation, Reinhard Folk together with Volker Dohm was awarded the Walter Schottky Prize of the German Physical Society for their studies of the critical dynamics of helium-4. His work was recognized by his Alma mater with *Goldenes Doktordiplom der Universität Wien* in March 2023.

Continuing his research in the field of statistical and condensed matter physics, Reinhard Folk became increasingly interested in the history of culture and in the history of natural sciences in particular. This interest has also led to significant professional work in these fields. It is worth to mention his works on the history of astronomy and astrology, analysis of the emergence and evolution of scientific cooperation networks (from the time of the Habsburg monarchy to the present day), and research on the formation of statistical physics. He is the author of a large illustrated catalog of the Kremsmünster Abby Observatory — a unique research institution founded in Upper Austria in the 18th century (R. Folk. *Catalogus Bibliothecae Observatorii Cremifanensis. Die Sternwartebibliothek des Stifts Kremsmünster im 18. Jahrhundert*. Linz, 2018). This book, in particular, demonstrates, in the author's apt expression, the 'battle' of books that accompanied the change of geocentric and heliocentric paradigms. A book about the Ising model against the background of the history of science and world history should be published this year (R. Folk, B. Berche, R. Kenna, Yu. Holovatch. *Ernst Ising's Doctoral Thesis One Hundred Years On*. World Scientific, Singapore, 2025, to appear).

Reinhard Folk is also known for his scientific organizational and social activities. With his openness and readiness for discussion, he developed and strengthened wide networks of his collaborators in many countries. Belonging to the tradition of the *Vienna School of Statistical Thought*, he took part in the organizing annual conferences MECO (Middle European Cooperation in Statistical Physics), aimed at establishing and strengthening the links between scientists from different parts of Europe and the world. In 1995 he became a member of the advisory board of these conferences. In particular, thanks to his efforts they have now been established as important and prestigious European forums in statistical physics. Reinhard Folk was an active member of the Austrian organization BUKO (Bundeskonferenz des Wissenschaftlichen und Künstlerischen Personals der Österreichischen Universitäten und Kunsthochschulen). He was member of the Presidium of the organization in 1997–1999 and its Chairman in 1999–2003. He was also an Austrian delegate at the European Cooperation in Science and Technology (COST).

Lively interest in scientific work, participation in various programs of European scientific cooperation, deep concern about the future of science led Reinhard Folk to organizing and participating in projects with the aim to establish and strengthen links with Central and Eastern Europe. Here, we wish to emphasize his long and fruitful links with Ukraine. Since 1990 he was the initiator of cooperation projects under which many Ukrainian physicists from Lviv, Kyiv and Uzhgorod visited the Institute for Theoretical Physics, Johannes Kepler University in Linz. Further, he was an active participant and co-organizer of many international conferences that took place in Ukraine. In cooperation with Ukrainian scientists he wrote more than 70 scientific papers and one monograph. In 2009 he was conferred the title of Doctor honoris causa of the Institute for Condensed Matter Physics of the National Academy of Sciences of Ukraine and now he is a member of the Supervisory Board of this institute. Since February 24th, 2022 — the start of the full-scale invasion of Russia into Ukraine — he has spread his support for Ukraine and condemns the Russian war in actions on different platforms. He was the first to appear in public on the platform *WORLD SCIENTISTS about the war in Ukraine*.

Very optimistic and enthusiastic, Reinhard motivated his collaborators and students to expand their scientific horizons, working in new fields and learning new methods, offering his brilliant erudition as a help and support. His kindness and sense of humor create a charming atmosphere of positive and pleasant communication with him, from which one can learn a lot. Cheerful and hospitable, Reinhard has a permanent interest in people and concern for their problems, being very responsible for his students and colleagues. On the occasion of his birthday, the CMP Editorial Board, colleagues and friends warmly congratulate Reinhard wishing him robust health and new interesting findings in his research and wishing us to enjoy learning from him for many years to come.