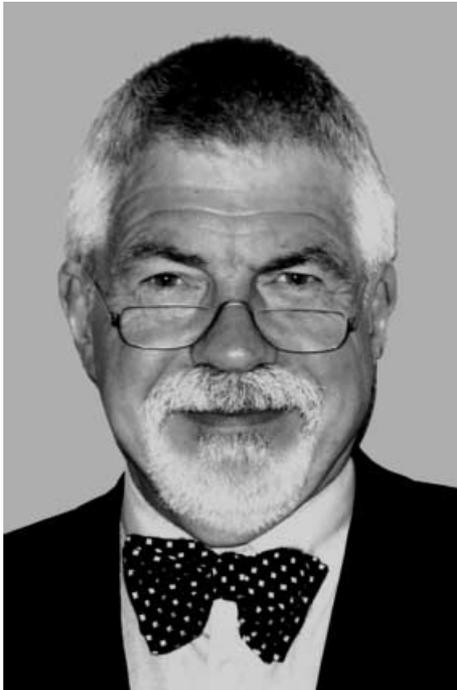


## Klaus Meerkötter

*on the occasion of his 60th birthday*



On December 5th, 2003, Professor Klaus Meerkötter completed the 60th year of his life.

Born and raised in Herne, Germany, Klaus Meerkötter started his engineering career as a telecommunication technician with Funke & Huster in Herne and Telefonbau- & Normalzeit in Essen, Germany. Simultaneously taken evening classes in Herne as well as a 6 months industrial internship with Stahlwerke Bochum, Germany, entitled him to continue education by attending, from 1965 till 1968, the Federal School of Engineering at Dortmund, Germany. There, he graduated in communications technologies with extraordinary performance, herewith achieving the entitlement to enroll at university.

In 1968, Meerkötter started studies at the newly founded Faculty of Electrical Engineering at Ruhr University, Bochum, during which he was partly supported by the Studienstiftung des deutschen Volkes (German National Academic Foundation), one of the most renowned German foundations for the sponsorship of students. First, he showed strong interest in control systems theory before focussing on what should become his major field of interest throughout his later research activities, namely digital signal processing. At that time, the Chair of Communication Engineering was held by Professor Alfred

Fettweis who had, inspired by investigations in classical network theory, introduced the concept of wave digital filters only a few years earlier. These filters exhibit a lot of desirable sensitivity and stability properties due to their close relationship with passive classical filter networks. In his diploma thesis “Aufbau und Untersuchung eines Wellendigitalfilters mit echter Abzweigstruktur”, Meerkötter investigated finite wordlength effects in wave digital filters. Herewith, he obtained the Dipl.-Ing. degree in 1973, being among the first students of the aforementioned faculty to do so.

In 1973, Meerkötter became a scientific staff member of the Communication Engineering Group. He continued working on the field of wave digital filters with contributions to development and improvement of the concept. This included special adaptor structures as well as strategies for the suppression of parasitic oscillations. In particular, he introduced the notion of incremental passivity into the wave digital concept. With Professor Fettweis as a doctoral advisor, Meerkötter received the Dr.-Ing. degree in 1979, his doctoral thesis being entitled “Beiträge zur Theorie der Wellendigitalfilter”. He stayed at Bochum for some more years, doing further research (e.g. on complex wave digital structures for the realization of antimetric filters) and giving lectures in digital signal processing.

Since 1983, Klaus Meerkötter has been holding a professorship for Communications Engineering at the University of Paderborn, Paderborn, Germany. Here, he has shown a strong commitment for the concerns of the Department of Electrical Engineering (now part of the Faculty of Computer Science, Electrical Engineering, and Mathematics) and “his” university as well as more general areas. His many dedicated activities cannot be completely listed at this point, but it should be mentioned that he was Dean of the department from 1991 till 1993 as well as Prorector for Research and Young Scientists from 1995 till 1999 and that he is currently managing the section Algorithms for Signal Processing of the Information Technology Society (ITG).

Professor Meerkötter’s research activities in Paderborn covered various fields, ranging from general topics like, e.g., the relation between duration and bandwidth of discrete-time signals to development and application of real, complex, and hypercomplex wave digital structures e.g. for demodulation purposes or for usage in filterbanks. He also focussed on modeling and simulation of linear and nonlinear physical systems. For example, a wave digital model for Chua’s circuit (which comprises a nonlinear resistance) is to be mentioned as are respective models for the mathematical pendulum, nonlinear transmission lines, or for electrodynamic loudspeakers (where all network representations contain nonlinear ideal transform-

ers). In connection with his research activities, Professor Meerkötter has supervised nine doctoral dissertations and one habilitation.

In his research, Professor Meerkötter has at all times put strong emphasis on a thorough and well-founded derivation of his results. But, to him it has always been at least as important to be a good teacher, for the benefit of both his scientific staff as well as his students. Meerkötter has been lecturing fundamentals in signals, systems, and networks and has been giving advanced lectures in communications engineering, digital signal processing, and statistical description of signals in Paderborn. For some time, he also was a guest lecturer in Bochum with courses on wave digital filters. Despite the fact that his lectures have usually been perceived by his students as rather demanding, they have mostly been rated as well presented and vital for further understanding in electrical engineering (although the latter judgements sometimes expressed

by his students in retrospect only). His doctoral candidates have been enjoying his interest in their work by a lot of valuable hints and fruitful discussions (not limited to technical or scientific topics), but also his willingness to give them enough freedom to build up their own scientific identity and profile.

Several papers within this issue of the AEÜ International Journal of Electronics and Communications are dedicated to Professor Meerkötter on the occasion of his 60th birthday. These papers are authored or coauthored by people who have accompanied him on different stages of his hitherto life in one way or the other. This includes mentors, teachers, and students as well as colleagues and friends. They all want to congratulate him on his birthday and like to express their best wishes for his further life.

Dietrich Fränken, Paderborn/Germany  
Karlheinz Ochs, Bochum/Germany