

In Memoriam

Manfred Krause died of cancer on August 9, 2003, at the age of 70. We have lost an important scientist, teacher and advocate of audio technology.

Krause was born on October 17, 1933, in Dresden, Saxony/Germany. He studied electrical engineering at the technical university in Berlin-Charlottenburg from 1953 until 1961. After earning his diploma he became scientific assistant to Professor Winkel, the father of musical electroacoustics at Berlin University, a professor of music history. When Krause later succeeded him, the institute was renamed the institute for communication, media and music science. Krause studied moving, rotating loudspeakers in cooperation with such renowned composers as Luigi Nono, Boris Blacher and Karlheinz Stockhausen. In addition he took care of the electric acoustical requirements in the seminars of Professor Hans Heinz Stuckenschmidt and Wilhelm Langener.

Krause graduated in 1971 with a doctoral thesis on the subject "Sprachsynthese (speech synthesis) with gauss pulses." In 1975 he became an assistant professor (Privatdozent), teaching in the field of communication science. When Professor Winkel withdrew from his position at the Technical University, Krause chaired the department for 20 years (1979 until 1999) as a professor and institute director. He added the faculties of media and music science. Room acoustics and psychoacoustics, as well as information theory and cybernetics are part of research and teaching at the institute.

With Winkel and more so with Krause all activities in teaching were characterized by an interfaculty method, which was evident in close cooperation with composers and sound engineers of the arts faculty, as well as future engineers in telecommunications, technical acoustics, and information science at the university. The basis of his educational instruction was the course of communication science (scientific fundamentals of language and music). From 1979 he extended

this course of study through research and educational instruction. By combining this field with other areas, a course of study became possible, combining technology and the arts.

In his teaching program he also included communication techniques, information theory, cybernetics, speech processing, nonnumerical data processing, and electronic sound synthesis. He further worked on topics such as the automation of sound studios for the production of radio broadcast programs, electronic control for operating tape recorders, electronic editing, computer-aided multichannel mixing, Vocoder systems, acoustical interfaces for the human being-machine-communication, automatic information production, computer control of sound synthesizers, computer-generated sounds and sound follow-ups, as well experimental music.

In addition to his studies at the university in the arts, Krause took over the technical part of the Tonmeister curriculum. Engineering students studied communication techniques and information theory. Music scientists, psychologists and linguists extended their understanding through his lectures on the interaction between technical/scientific and artistic questions. All subjects inevitably led to artistic responsibility in the application of the engineered performance of the art, especially electronic music.

During his career as a professor he had a productive influence on hundreds of students. These students can be found in every possible branch and position in the sound and music industry. Even after his retirement as academic chair in 1999 until his serious illness, he was active in the teaching profession. The enthusiasm with which he imparted his knowledge made students eager listeners. He advised many students on their theses, which ultimately resulted in new industrial products.

In research it was above all the psychological perception especially on psycho- and electroacoustics that Krause was studying. He spent many hours finding difficult solutions to sci-

entific and artistic questions.

In a longstanding project involving room recordings and reproduction of sound sources he and his assistants invented the Orthophonie. The Orthophonie is a system comparable to the Ambisonic system of Michael Gerzon for orthogonal analyzing of the sound field.

In numerous studies and dissertations the technology of microphones, loudspeakers, mixer units and sound generators became further developed. Many of these developments were used directly in his electronic studio. Other results influenced the industrial development, as, for example, investigations for Georg Neumann Berlin and Sennheiser electronics.

Krause was a cyberneticist who saw the world from the point of view of professional studio technology. His research has appeared in numerous publications, i.e. at the DAGA, the VDT Tonmeistertagung and at AES Conventions as well as a directory in "impulses and answers, festschrift for Manfred Krause," published by W&T, Berlin, 1999.

He was an active member of the German society for acoustics (DEGA), the society for information technology (ITG) of the VDE, the German society for electric acoustical music (DEGEM) and the AES. At the 94th AES Convention in Berlin (1993) he was workshops chair. Even after his retirement from the academic chair until his death, he was responsible for the archives for studio technology (Thiele archives) of the AES.

Krause was the man we think of as friend, researcher, and teacher. He will always be held in the highest esteem and remembered with gratitude. We shall never forget him. He will be sadly missed. His ideas and inspiration, his comprehensive knowledge, and his vast experience are no longer accessible. We have not only lost the researcher, but also the sympathetic teacher, who through his kindness and alert nature, formed very close relationships with his students.

Bernhard Feiten and
Reinhard O. Sahr