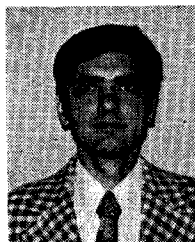


Contributors



Larry W. Hinderks received the Ph.D. degree from the University of Kansas, Lawrence, in 1970.

In 1970 he joined Bell Laboratories, Inc., Murray Hill, N. J., where he has since been engaged in waveguide research with emphasis in the area of test set development.



Norbert Knoppik was born in Henzegrund, Germany, on December 28, 1944. He received the Dipl.Ing. degree in electrical engineering from the Technical University of Aachen, Aachen, Germany, in 1969.

Since 1969 he has been an Assistant at the High Frequency Institute, the Technical University of Aachen, where he has been engaged in teaching and research on microstrip and where he is now working toward the Dr.Ing. degree.

Mr. Knoppik is a member of Nachrichtentechnische Gesellschaft and Verein Deutscher Elektrotechniker.



Yoshihiro Konishi (A'61-SM'65) was born in Nara, Japan, on September 24, 1928. He received the B.Eng. and Dr.Eng. degrees, both from Kyoto University, Kyoto, Japan, in 1951 and 1961, respectively.

He joined Nippon Hoso Kyokai (NHK, Japan Broadcasting Corporation), Tokyo, in 1951. Since 1952 he has worked at their Technical Research Laboratories, where he has been engaged in research and development of VHF and UHF circuits and components.

From 1962 to 1963 he was with the Microwave Research Institute, Polytechnic Institute of Brooklyn, Brooklyn, N. Y. Currently, he is a Senior Staff Member at NHK Technical Research Laboratories, working on ferrimagnetic and solid-state circuits and low-noise amplifiers.

Dr. Konishi is a member of the Institute of Electrical Communication Engineering of Japan (IECEJ), and a consultant for IECEJ. He is also a member of the Institute of Television Engineering of Japan.



Fred J. Rosenbaum (S'57-M'63-SM'70) was born in Chicago, Ill., on February 15, 1937. He received the B.S., M.S., and Ph.D. degrees in electrical engineering from the University of Illinois, Urbana, in 1959, 1960, and 1963, respectively.

While at the university he conducted research on ferrites and Cerenkov radiation. In 1963 he joined the Research Division of McDonnell Aircraft Corp., St. Louis, Mo., where he worked on masers and dielectric

resonators. In 1965 he became a member of the faculty of Washington University, St. Louis, Mo., where he is now Professor of Electrical Engineering. At the university he directs graduate research in the areas of microwave circuit design, Gunn effect, integrated optics, microwave ferrites, microwave integrated circuits, and low-cost microwave receivers.



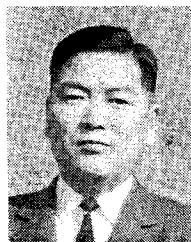
Burkhard Schiek was born in Elbing, Germany, on October 14, 1938. He received the Diplom-Ingenieur and the Doktor-Ingenieur degrees in electrical engineering, both from the Technische Universität Braunschweig, Braunschweig, Germany, in 1964 and 1966, respectively.

From 1964 to 1969 he was an Assistant at the Institut für Hochfrequenztechnik of the Technische Universität Braunschweig, where he worked on frequency multipliers, parametric amplifiers, and varactor phase shifters. From 1966 to 1969 he was involved in MIS interface physics and in the development of MIS varactors. Since 1969 he has been with the Microwave Application Group of the Philips Forschungslaboratorium Hamburg GmbH, where he has mainly been concerned with the stabilization of solid-state oscillators, oscillator noise, microwave integration, and microwave systems.



Barry S. Seip received the Associate degree in engineering from Pennsylvania State University, University Park, in 1969, and is currently pursuing the B.S.E.E. degree at Newark College of Engineering, Newark, N. J.

Since 1969 he has been with Bell Laboratories, Inc., Murray Hill, N. J., where he is involved in the development of test sets to characterize millimeter waveguide components needed in a waveguide transmission system.



Katsuaki Uenakada (M'74) was born in Okayama, Japan, on June 30, 1931. He received the Dr.Eng. degree from the Tokyo Institute of Technology, Tokyo, Japan, in 1973.

He joined Nippon Hoso Kyokai (NHK, Japan Broadcasting Corporation), Tokyo, in 1950. Since 1963 he has worked at their Technical Research Laboratories and has engaged in research and development of microwave components and circuits, such as reentrant cavities, parametric amplifiers, down converters, filters, and antennas. Currently, he is a Senior Research Engineer at NHK Technical Research Laboratories.

Dr. Uenakada is a member of the Institute of Electronics and Communication Engineers of Japan.



Ingo Wolff was born in Köslin, Germany, on September 27, 1938. He received the Dipl.Ing. degree in electrical engineering, the Dr.Ing. degree, and the Habilitation, all from the Technical University of Aachen, Aachen, Germany, in 1964, 1967, and 1970, respectively.

In 1973 he became a Professor of High-Frequency Techniques at the Technical University of Aachen. Since 1974 he has been a Full Professor with the Department of Theoretical Electrotechnique, University of Duisburg, Duisburg, Germany. His main areas of research interest are millimeter wave techniques, ferrite materials at millimeter waves, theory of electromagnetic fields in anisotropic materials, and microstrip technique and theory.

Dr. Wolff is a member of NTG and VDE.



Y. S. Wu (S'70-M'73) was born in Kiang-Su, China, on August 27, 1944. He received the B.S. degree in electrical engineering from National Taiwan University, Taiwan, in 1967, and the M.S. and D.Sc. degrees from Washington University, St. Louis, Mo., in 1970 and 1972, respectively.

From 1968 to 1972 he was a Research Assistant at Washington University, doing research on Gunn diodes and microwave ferrite devices. From 1972 to 1973 he was a Research Associate at the School of Electrical Engineering, Cornell University, Ithaca, N. Y., working on network theory and low intermodulation amplifiers. Since November 1973 he has been a member of the technical staff of the Central Research Laboratories, Texas Instruments Incorporated, Dallas, where he is engaged in research concerning amplifiers and oscillators.