



**Kaneyuki Kurokawa** received a B.S. degree in electrical engineering in 1951 and a Ph.D. degree in 1958, both from the University of Tokyo, Japan. In 1957, he became Assistant Professor at the University of Tokyo.

From 1959 to 1961, he worked on parametric amplifiers at Bell Laboratories, Murray Hill, USA, on leave of absence from the University of Tokyo. In 1963, he joined Bell Laboratories as a Member of Technical Staff and was later promoted to a supervisor. At Bell Laboratories, he developed microwave balanced transistor amplifiers, millimeter wave path-length modulators, the theory of microwave solid-state oscillators, and initiated the development of optical fiber transmission systems. Classical papers from this period are, e.g.,

K. Kurokawa, "Injection locking of microwave solid state oscillators," Proc. of IEEE, Vol. 61, pp. 1386-1410, Oct. 1973.

K. Kurokawa, "Power waves and the scattering matrix," IEEE Trans. Microwave Theory Tech., vol. MTT-13, pp. 194-202, Mar. 1965.

K. Kurokawa, "Some basic characteristics of broadband negative resistance oscillator circuits," Bell Syst. Tech. J., vol. 48, pp. 1937-1955, July-Aug. 1969.

K. Kurokawa, "Noise in synchronized oscillators," IEEE Trans. Microwave Theory Tech., vol. MTT-16, pp. 234-240, April 1968.

Dr. Kurokawa is the author of *An Introduction to the Theory of Microwave Circuits*, Academic Press, New York, 1969.

In 1975, Dr. Kurokawa left Bell Laboratories to join Fujitsu, Kawasaki, Japan. From 1985 to 1989, he was in charge of Fujitsu's Atsugi Laboratories, where HEMT devices and distributed feedback lasers were successfully developed. From 1986 to 1989, he also served as a Visiting Professor of the University of Tokyo. In addition, he clarified the head crash mechanism of hard disk drives.

Dr. Kurokawa became Vice President of Fujitsu Laboratories in 1992 and Fujitsu Fellow in 1994. In 2000, he retired from Fujitsu.

Since retirement from Fujitsu, Dr. Kurokawa has been working hard to rectify the following misconception: A divergence-free vector field is the curl of another vector field. This is what the Feynman Lectures on Physics, Vol. 2, p. 2-10 and many other textbooks claim.

Dr. Kurokawa has served several professional societies and committees in different capacities, e.g.,:  
IEEE: 1982 – 1984 Member, Fellow Committee  
1979 – 1980 Secretary, Tokyo Section

1981 – 1982 Chairman, Far East Program Committee of IEEE International Solid-State Circuits Conference

IEICE (The Institute of Electronics, Information and Communication Engineers of Japan):

1993 – 1995 Vice President

1989 – 1991 Auditor

1980 – 1982 Director, International Coordination and Publicity

1976 – 1978 Director, Journal and Transactions

Dr. Kurokawa is an IEEE Life Fellow and honorary member of the Institute of Electronics, Information and Communication Engineers. He received the Certificate of Appreciation from the International Solid-State Circuits Conference in 1965, IEEE MTT-S Pioneer Award in 1996, IEEE Third Millennium Medal in 2000, and IEEE MTT-S Microwave Career Award in 2009.