

## Contributors



**Shunichiro Egami** (M'69) was born in Kurume City, Fukuoka, Japan, on September 5, 1941. He received the B.E.E. and M.E.E. degrees from the University of Kyushu, Fukuoka, Japan, in 1964 and 1966, respectively.

In 1966 he joined the Electrical Communication Laboratories, Nippon Telegraph and Telephone Public Corporation, Tokyo, Japan. For the first three years he worked on the development of the low-noise mixers and microwave integrated circuits for the 7-GHz-2700-channel and 11-GHz short-haul radio relay system. From 1969 to 1972 he worked for the design of 20-GHz wide-band parametric amplifiers. Now he is engaged in the design of the earth station for lower millimeter-wave satellite communication.



**Claude Fray** was born in Limoges, France, on June 14, 1942. He passed the Doctorat de Troisième Cycle from the University of Poitiers, Poitiers, France, in 1970.

Since 1970, he has been an Assistant Professor at the University of Limoges Institute of Technology, Limoges, France. At present, he studies low-loss transmission lines for vehicular communications.

Mr. Fray is a member of the Société Française des Electriciens et des Electroniciens (SEE).



**Otozo Fukumitsu** was born in Fukuoka, Japan, on December 29, 1926. He received the B.S., M.S., and Dr. Eng. degrees, all from Kyushu University, Fukuoka, Japan, in 1953, 1955, and 1963, respectively.

From 1958 to 1964 he was an Assistant Professor at Kumamoto University, Kumamoto, Japan, and from 1964 to 1971 an Assistant Professor at Kyushu University. Since 1971 he has been a Professor at Kyushu University. His main areas of interest are microwave transmission lines, beam waveguides, and integrated optics.

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



**Yves Garault** was born in Selles sur Cher, France, on August 11, 1932. He received the Licence en Sciences Physiques from the University of Paris (Sorbonne), Paris, France, in 1958, and his Doctoral thesis from the University of Orsay, Orsay, France, in 1964.

From 1958 to 1964, he was a Research Physicist at the Centre National de la Recherche Scientifique, working at the Fundamental Electronic Institute of the Orsay Faculty of Sciences (Prof. P. Grivet). In collaboration with the Accelerator Research Group of the CERN, he studied periodic waveguides for RF particle separators. He has written several publications on the use and applications of hybrid waves to the separation of fast particles. Since 1965 he has been Professor of Electricity and Electronics on the Faculty of Sciences, University of Limoges, Limoges, France, where he has installed a

research laboratory. In this microwave laboratory periodic structures and minimicrowaves circuits are studied. He has been Director of the University of Limoges Institute of Technology since its opening in 1968.

Dr. Garault is a member and the local representative of the Société Française des Electriciens et des Electroniciens (SEE).



**Tatsuo Itoh** (S'69-M'69) was born in Tokyo, Japan, on May 5, 1940. He received the B.S. and M.S. degrees in electrical engineering from the Yokohama National University, Yokohama, Japan, in 1964 and 1966, respectively, and the Ph.D. degree in electrical engineering from the University of Illinois, Urbana, in 1969.

Since September 1966 he has been with the Electromagnetics Laboratory (formerly the Antenna Laboratory), University of Illinois, where he is now a Research Assistant Professor. During the academic year 1972-1973, he was appointed as a Fellow of the Center for Advanced Study, University of Illinois. His research has been on electromagnetic theory, microwave techniques, optical communication, and numerical techniques.

Dr. Itoh is a member of the Institute of Electronics and Communication Engineers of Japan, Sigma Xi, and an associate member of Commission VI of URSI.



**Nobuaki Kumagai** (M'59-SM'71) was born in Ryojun, Japan, on May 19, 1929. He received the B.Eng. and D.Eng. degrees from Osaka University, Osaka, Japan, in 1953 and 1959, respectively.

From 1958 to 1960 he was a visiting Senior Research Engineer at the Electronics Research Laboratory of the University of California, Berkeley, where he was engaged in research on electromagnetic wave scattering and parametric amplifiers. From 1960 to 1970, he was an Associate Professor of Communication Engineering at Osaka University. In 1966, he was invited to the 11th G-MTT International Symposium held at Palo Alto, Calif., as an invited speaker. Since 1971, he has been a Professor of Communication Engineering at Osaka University, Osaka, Japan, where he is engaged in research and education in electromagnetic theory, microwave and millimeter-wave engineering, optical circuits and devices, and lasers and their applications.

Dr. Kumagai is a member of the Institute of Electronics and Communication Engineers of Japan, the Institute of Electrical Engineers of Japan, the Japan Society of Applied Physics, and the Physical Society of Japan.



**Neville A. Mathews** was born in Mahanipeta, India, on April 17, 1943. He graduated as a gold medalist from Faraday House Engineering College, London, England, in 1964. In 1965 he finished with distinction the M.Sc. course in electronics at the University of Southampton, Southampton, England, and in 1967 received the Ph.D. degree for research on millimetric waves from the same university.

In 1967 he joined the Scientific Staff at

the Hirst Research Center of the General Electric Company, Ltd., Wembley, England, where for three and a half years he worked on Gunn-effect oscillators and injection-locked IMPATT amplifiers. In July 1971 he became a Research Fellow in the Department of Electronics, University of Southampton. His main interests are microwave antennas and propagation.



**Sadakuni Shimada** (M'62) was born in Fukuoka Prefecture, Japan, on March 12, 1938. He received the B.S. degree in electrical engineering in 1960 and the Ph.D. degree in 1967, both from the Tokyo Institute of Technology, Tokyo, Japan.

From 1960 to 1966 he was engaged in research on waveguide components at millimeter wavelengths at the Central Research Laboratory, Hitachi, Ltd., Tokyo. In March 1966 he joined the Electrical Communication

Laboratories, Nippon Telegraph and Telephone Public Corporation, Tokyo, Japan, as a Staff Engineer and did research on multiplexing networks and waveguide components for a guided-millimeter-wave communication system, a satellite communication system, and a short-hop radio system using frequencies above 10 GHz.

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**Masanori Matsuhara** was born in Fukui, Japan, on February 14, 1941. He received the B.E. degree in electrical engineering from Fukui University, Fukui, Japan, in 1963, and the M.E. and Ph.D. degrees in electrical communication engineering from Osaka University, Osaka, Japan, in 1965 and 1968, respectively.

He was a Research Associate from 1968 to 1972, and since 1972 he has been an Associate Professor of Electrical Communication Engineering at Osaka University, Osaka, Japan. He is engaged in studies of optical transmission lines and optical integrated circuits.

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**Raj Mittra** (S'54-M'57-SM'69-F'71) is a Professor of Electrical Engineering and Associate Director of the Electromagnetics Laboratory at the University of Illinois, Urbana, Ill. He is widely recognized for his contributions in microwave theory, coherent optics, and electromagnetics.



**John A. Morrison** was born in Beckenham, Kent, England, on June 10, 1927. He received the B.Sc. degree in mathematics from King's College, University of London, London, England, in 1952, and the Sc.M. and Ph.D. degrees in applied mathematics from Brown University, Providence, R.I., in 1954 and 1956, respectively.

He has been a member of the technical staff at Bell Laboratories, Murray Hill, N.J., since 1956, where he has been doing research on a variety of problems in applied mathematics and mathematical physics. He held a concurrent appointment as a Visiting Professor of Mechanics at Lehigh University during the fall semester of 1968.

Dr. Morrison is a member of the American Mathematical Society, the Society for Industrial and Applied Mathematics, and Sigma Xi.

**Henryk Stachera** was born in Czestochowa, Poland, in 1920. In 1938 he passed a competitive entrance examination at the Warsaw Technical University, Faculty of Mechanical Engineering. He was on active military service from 1938 until 1946, then resumed University studies in London, England, and received an external B.Sc. degree in electrical engineering in 1950.

For several years he worked on control systems and voltage stabilizers in industry. In 1955 he began postgraduate research in microwaves at the University College, London, England, and received the Ph.D. degree in telecommunications in 1958. He became a Lecturer, first at a technical college, then, since 1960, at the University of Southampton, Southampton, England.



**Nobuo Suzuki** (S'72) was born in Tokyo, Japan, on March 11, 1942. He received the B.S. degree in electrical engineering from the Tokyo Electrical Engineering College, Tokyo, Japan, in 1965.

He joined the Electrical Communication Laboratories, Nippon Telegraph and Telephone Public Corporation, Tokyo, Japan, in 1960 and has been engaged in research of waveguide line and multiplexing networks for a guided-millimeter-wave communication system.

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**Kazumasa Tanaka** was born in Fukuoka, Japan, on September 27, 1941. He received the B.S. and M.S. degrees in communication engineering from Kyushu University, Fukuoka, Japan, in 1965 and 1967, respectively.

From 1967 to 1969 he was a Research Assistant at Kyushu University. From 1969 to 1971 he was a Lecturer in the Department of Electrical Engineering, Nagasaki University, Nagasaki, Japan. He is presently an Assistant Professor at Nagasaki University.

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**Yutaka Satomura** was born in Osaka, Japan, on May 4, 1947. He received the B.E. and M.E. degrees in electrical communication engineering from Osaka University, Osaka, Japan, in 1971 and 1973, respectively. Presently, he is working for the Ph.D. degree, studying the problem of optical integrated circuits, at the graduate school of Osaka University.

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