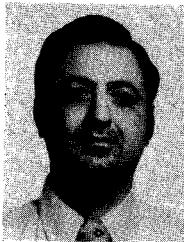


# Contributors



**Ezekiel Bahar** (S'63-M'64-SM'72) received the B.Sc. and M.Sc. degrees in electrical engineering from the Technion-Israel Institute of Technology, Haifa, Israel, in 1958 and 1960, respectively, and the Ph.D. degree from the University of Colorado, Boulder, in 1964.

From 1958 to 1962 he was a Research Assistant and an Instructor at the Technion. In 1962 he joined the Department of Electrical Engineering, University of Colorado, as a Research Associate and from 1964 to 1967 was an Assistant Professor. In 1967 he joined the Department of Electrical Engineering, University of Nebraska, Lincoln, as an Associate Professor and in 1971 became Professor of Electrical Engineering. His field of research is electromagnetic theory, propagation, and microwave theory. He has employed EM model studies to investigate the problem of propagation in nonuniform terrestrial waveguides. He has developed transform techniques to obtain full-wave solution to problems of depolarization, diffraction, and scattering of radio waves in nonuniform layered structures, and derived generalized WKB techniques to solve problems of propagation in inhomogeneous media.

Dr. Bahar is a member of Commissions B, C, and F of the International Union of Radio Science and a member in the IEEE Society on Antennas and Propagation and the Society on Microwave Theory and Techniques.



**Charles A. Cain** (M'72) was born in Tampa, FL, on March 3, 1943. He received the B.E.E. degree (with highest honors) from the University of Florida, Gainesville, in 1965, the M.S.E.E. degree from Massachusetts Institute of Technology, Cambridge, in 1966, and the Ph.D. degree in electrical engineering from the University of Michigan, Ann Arbor, in 1972.

During 1965-1968 he was a Member of the Technical Staff at Bell Telephone Laboratories, Inc., Naperville, IL, where he worked in the electronic switching systems development area. Since 1972, he has been with the Department of Electrical Engineering, University of Illinois, Urbana-Champaign, where he is currently an Assistant Professor. He has been involved with research on the biological effects and medical applications of nonionizing electromagnetic radiation.

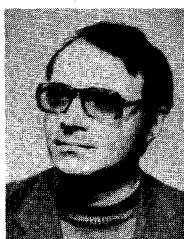
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**Giuseppe Caruso** was born in Palermo, Italy, in 1948. He received the Ph.D. degree in electronic engineering from the University of Palermo, Palermo, Italy, in 1973.

Since completing his military service, he has been working at the University of Palermo as a Researcher. At present he is interested in noise characterization and measurements of solid-state microwave components.

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**Michel Besse** was born in Limoges, France, on January 25, 1944. He passed the Doctorat de Troisième Cycle at the University of Poitiers, Poitiers, France in 1971.

Since 1970, he has been an Assistant Professor at the University of Limoges, Institute of Technology, Limoges, France. His main area of interest is microwave transmission dielectric lines for centimeter and millimeter waves.



**Gabriele Cicconi** received the B.Sc. degree in Physics from Bologna University, Bologna, Italy.

Formerly he worked as a specialist in microwave components for communication systems in laboratories of the telecommunication industry. Now he is an Assistant Professor at Genoa University, Genoa, Italy.

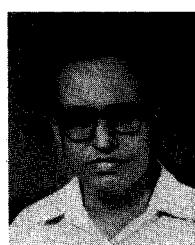
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**David E. Borth** (S'70-M'75) was born in Hinsdale, IL, on June 17, 1952. He received the B.S. (with highest honors) and M.S. degrees in electrical engineering from the University of Illinois, Urbana-Champaign, in 1974 and 1975, respectively.

From January 1974 to May 1975 he was a Research and Teaching Assistant in the Department of Electrical Engineering, University of Illinois at Urbana-Champaign. He joined Watkins-Johnson Company, Palo Alto, CA, in 1975, where he is currently a Member of the Technical Staff in the ESM Department, working on Computer-controlled microwave receiving systems.

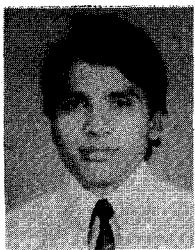
Mr. Borth is a member of Tau Beta Pi, Eta Kappa Nu, Phi Eta Sigma, and Phi Kappa Phi.



**B. N. Das** received the M.Sc.(Tech.) degree from the Institute of Radio Physics and Electronics, University of Calcutta, Calcutta, India, in 1956 and the Ph.D. degree from the Indian Institute of Technology, Kharagpur, India, in 1967.

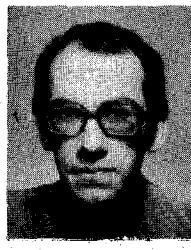
He joined the Department of Electronics and Electrical Communication Engineering of the Indian Institute of Technology in 1958. At present he holds the position of Professor in the same department.

Dr. Das is a member of the Institute of Electrical Engineers, U.K.



**M. D. Deshpande (S'74)** was born in Lohgaon, a village in Maharashtra, India in 1948. He received the B.E. degree in electrical engineering from Nagpur University, India, in 1970 and the M. Tech. degree from the Indian Institute of Technology, Kharagpur, India, in 1972.

In 1973 he joined the Department of Electronics and Electrical Communication Engineering of the Indian Institute of Technology, where he is now working toward the Ph.D. degree.

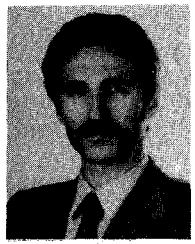


**P. Guillon** was born in La Coquille, France, on May 4, 1947. He received the Ph.D. degree in electrical engineering from the University of Limoges, Limoges, France, in 1973.

Since 1971 he has been a Research Assistant at the microwave laboratory of the University of Limoges.

Dr. Guillon is a member of the French electrical society S.E.E.

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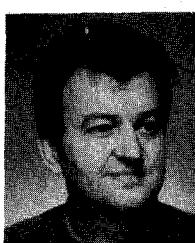
**Gabriele Falciasecca** was born in Bologna, Italy, in 1945. He received the Dr.Ing. degree in electronic engineering from the University of Bologna, Bologna, Italy, in 1969.

In 1969, he joined the Centro Onde Millimetriche (C.O.M.) of Fondazione Ugo Bordoni at Pontecchio Marconi, Bologna, and was involved in the Italian research program on millimeter waveguide communication systems. His work has been mainly on theoretical and experimental analysis of the transmission me-

dium. Since 1973 he has been with the University of Bologna, as Associate Professor and Lecturer of microwave techniques. His main research interest is related to the programs on millimeter waveguides, and other transmission media, of C.O.M., for which he is at present responsible.

Dr. Falciasecca is member of the Italian Electrical Association.

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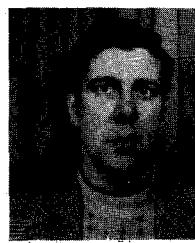


**Yves Garault** was born in Selles-sur-Cher, France, on August 11, 1932. He received the M.Sc. degree from the University of Paris, Sorbonne, France, in 1958 and the Ph.D. degree from the University of Orsay, Paris, France, in 1964.

Since 1965, he has been Director of the Microwave Electronics Laboratory, which is associated with the French National Research Center (CNRS), University of Limoges.

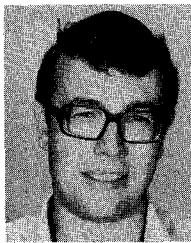
Dr. Garault is a member of the Société Française des Electriciens et Electroniciens (S.E.E.)

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**Francis Gauthier** was born in Perigueux, France, on March 14, 1947. He passed the Doctorat de Troisième Cycle at the University of Limoges, Limoges, France, in 1973.

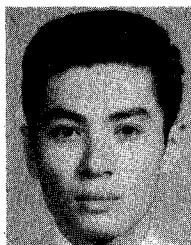
Since 1971, he has been an Assistant Professor at the University of Limoges, Institute of Technology, Limoges, France. He is now studying microwave transmission dielectric lines and is interested in computation techniques.



**P. H. Ladbrooke** received the Ph.D. degree from the University of Cambridge, Cambridge, England, in 1971 for work on nonuniformities in Gunn and Schottky GaAs devices.

He spent eight years altogether with International Computers Limited, where he worked on optical character recognition systems and on methods for magnetooptic readout from magnetic disk stores. From 1971 to 1973 he held a British Government Senior Research Fellowship at the Royal Military College of Science, Shrivenham, working on microwave integrated circuits and metal-semiconductor contacts. In 1973-1974 he worked as a Principal Engineer, involved in environmental studies, at the Plessey Radar Research Centre, U.K. Since January 1975 he has been a Lecturer in the Department of Solid-State Electronics, University of New South Wales, Australia, with interests primarily in electron transport effects in transistors and integrated circuits, and the technology of these devices.

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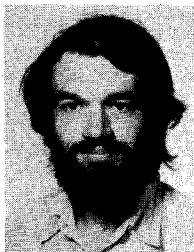


**Chun C. Lee** was born in Chunking, China, on August 15, 1944. He received the B.S. degree from National Taiwan University, Taiwan, China, in 1966, the M.S. degree from the University of Tulsa, Tulsa, OK, in 1971, and the Ph.D. degree from the University of Houston, Houston, TX, in 1976, all in electrical engineering.

He was a Research Assistant in the Department of Electrical Engineering, University of Tulsa, from 1970 to 1971, in the area of electronics and digital communication, and then at the University of Houston, from 1972 to 1976, in the area of antennas and electromagnetic theory. He joined the Airtron Division, Litton System, Inc., Morris Plains, NJ, as a Project Engineer in 1976. He is currently doing work on overmoded waveguide, waveguide components, antennas, and strip-line devices.

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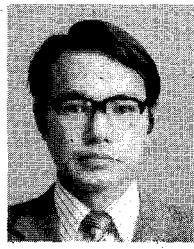
**James C. Lin (S'67-M'71-SM'77)**, for a photograph and biography please see page 626 of the July 1977 issue of this TRANSACTIONS.



**Nicolas J. Moll** (M'76) studied electrical engineering at the University of Louvain, Belgium, and received the B.S., M.S., and Ph.D. degrees from Stanford University, Stanford, CA, in 1968, 1969, and 1977, respectively.

He has worked on various material and application aspects of GaAs negative resistance devices, and on microwave acoustics. His present work is on material and device problems associated with epitaxial YIG.

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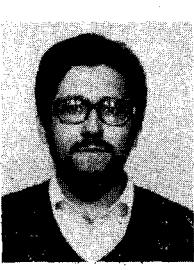


**Kazuhiko Ogasu** (M'76) was born in Hamamatsu, Japan, on June 25, 1947. He received the B.Eng. and M.Eng. degrees in electrical engineering from Shizuoka University, Hamamatsu, Japan, in 1970 and 1972, respectively.

Since 1972 he has been a Research Associate in the Faculty of Engineering, Shizuoka University, where he has been engaged in the research of microwave circuits such as filters, baluns, power dividers, and dielectric waveguides.

Mr. Ogasu is a member of the Institute of Electronics and Communication Engineers of Japan.

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**Sergio Rogai** (M'74) was born in Florence, Italy, in 1950. He received the Dr.Ing. degree in electronic engineering from the University of Bologna, Bologna, Italy, in 1974.

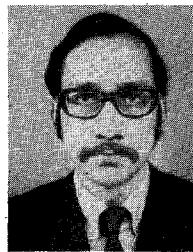
In December 1974 he joined the Centro Onde Millimetriche of Fondazione Ugo Bordoni of Pontecchio Marconi, Bologna, and was engaged in the Italian research program on the millimeter waveguide communication systems. From April 1976 to April 1977 he carried out his compulsory military service.

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**Carlo Rosatelli** graduated in electrical engineering from the University of Rome, Rome, Italy, in 1950.

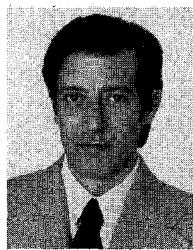
Formerly engaged in laboratories of the telecommunication industry, he joined C.N.E.N. in 1958, where he did research on particle accelerators and radioastronomy. Since 1969 he has been with the University of Genoa, Genoa, Italy, where he is a Full Professor. His interests are in microwave scattering and plasma diagnostics.



**P. K. Saha** was born in Calcutta, India, on July 15, 1943. He received the B.Sc.(hons.) degree in physics and the M.Tech. degree in radio physics and electronics from the University of Calcutta, Calcutta, India, in 1963 and 1966, respectively, and the Ph.D. degree from the University of Leeds, England, in 1970.

During 1970 he was a Post Doctoral Fellow at Queen Mary College, University of London and since 1971 had been a Lecturer at the Institute of Radio Physics and Electronics, University of Calcutta. He worked in the area of microwave antenna systems and is currently engaged in the field of microwave semiconductor devices and microwave integrated circuits.

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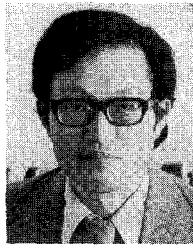


**Mario Sannino** was born in Cannobio (Novara), Italy, in 1940. He received the Ph.D. degree in electronic engineering and the "libera docenza" in applied electronics from the University of Palermo, Palermo, Italy in 1964 and 1972, respectively.

He has been Assistant Professor of Applied Electronics at the University of Palermo since 1965. At present he is interested in noise characterization and measurements of solid-state microwave components, and mathematical methods of nonlinear oscillation analysis.

Dr. Sannino is a member of the Associazione Elettrotecnica ed Elettronica Italiana (AEI).

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**Liang C. Shen** (S'65-M'67-SM'77) was born in China on March 17, 1939. He received the B.S.E.E. degree from the National Taiwan University, Taipei, Taiwan, in 1961, and the S.M. and Ph.D. degrees in applied physics from Harvard University, Cambridge, MA, in 1963 and 1967, respectively.

He served as a Research Assistant and Teaching Fellow at Harvard from 1963 to 1966, and in 1967 became a Research Fellow at Gordon McKay Laboratory, Harvard University. He joined the faculty of the University of Houston, Houston, TX, in September 1967, and is now Professor and Associate Chairman of the Electrical Engineering Department.

Dr. Shen is a member of AAUP, ASEE, AAAS, Sigma Xi, Phi Tau Phi, New York Academy of Sciences, and URSI/USNC Commission B.