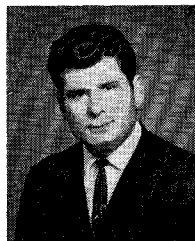


ment in the above comment that the AM noise spectrum and the AM-FM cross spectrum do not (or only weakly) depend on the load angle θ . The noise behavior of Gunn oscillators cannot in general be described by the simplified formulas (16b), (17b), and (18b) of our paper¹ as there are usually present large modulation noise contributions.

The calculations of Schiek and Schünemann seem to be based on rather special tuning conditions which are neither specified exactly in the above comment nor in the references quoted. Their results are quite similar to those given in our paper,¹ if $\theta = 90^\circ$ is assumed. This condition is usually fulfilled in oscillators tuned for maximum power output.

Contributors

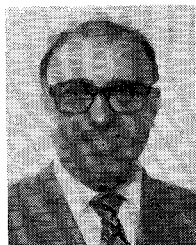
John W. Bandler (S'66-M'66), for a photograph and biography please see page 195 of the February 1972 issue of this TRANSACTIONS.



Christakis Charalambous was born in Peristeronari, Nicosia, Cyprus, on July 6, 1945. He received the B.Sc. degree in electronics and electrical engineering from the University of Surrey, Surrey, England, in 1969.

Since 1970 he has been with the Department of Electrical Engineering, McMaster University, Hamilton, Ont., Canada, where he is working toward the Ph.D. degree. He currently holds a scholarship from the National Research Council of Canada. His main research interests are

in the area of optimization theory and approximation theory and their application in computer-aided circuit and system design.



Pier Francesco Checcacci was born in Florence, Italy, on December 4, 1927. He received a degree from the Technical Institute of Florence, Florence, Italy, in 1947, and received the Ph.D. degree in electromagnetic waves from the University of Florence, Florence, Italy, in 1964.

Since 1948 he has been a Researcher at the Istituto di Ricerca sulle Onde Elettromagnetiche (formerly Centro Microonde) of the Consiglio Nazionale delle Ricerche

where, currently as Research Director, his activities have been primarily concerned with microwave optics, antennas, ionospheric propagation, and space electronics. He also teaches Radiophysics at the University of Florence.

Dr. Checcacci is a member of the Italian Physical Society and the COSPAR WGI Panel in Real Time Telemetry and is a National Official Member of URSI Commission III.



Riccardo Falciai was born in Florence, Italy, on March 2, 1942. He received a degree in physics at the University of Florence, Florence, Italy, in 1969.

Since 1969 he has been with the Istituto di Ricerca sulle Onde Elettromagnetiche (formerly Centro Microonde) of the Consiglio Nazionale delle Ricerche, Florence, Italy, working both theoretically and experimentally in the field of electromagnetic waves diffraction.

Mr. Falciai is a member of the Italian Physical Society.



Robert L. Gunshor (S'57-M'60) was born in New York, N. Y., in 1935. He received the B.E.E. degree from New York University, New York, N. Y., in 1958, the M.S.E. degree in 1962 from Union College, Schenectady, N. Y., on a graduate program with the General Electric Power Tube Department, and the Ph.D. from Rensselaer Polytechnic Institute, Troy, N. Y., in 1965.

He has industrial experience with the General Electric Company and Microwave Associates and has taught at Union College, Rensselaer Polytechnic Institute, and Cornell University. He is currently Associate Professor of Electrical Engineering at Purdue University, Lafayette, Ind. He has worked on RF properties of electron beams, plasma waves, Gunn devices, and surface acoustic waves.

Dr. Gunshor is a member of the American Physical Society and Sigma Xi.

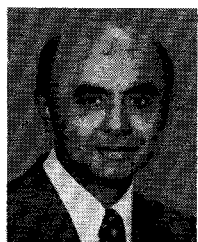


Roger F. Harrington (S'48-A'53-M'57-SM'62-F'68) was born in Buffalo, N. Y., on December 24, 1925. He received the B.E.E. and M.E.E. degrees from Syracuse University, Syracuse, N. Y., in 1948 and 1950, respectively, and the Ph.D. degree from Ohio State University, Columbus, in 1952.

From 1945 to 1946 he served as an Instructor at the U. S. Naval Radio Material School, Dearborn, Mich., and from 1948 to 1950 he was employed as an Instructor and

Research Assistant at Syracuse University. While studying at Ohio State University, he served as a Research Fellow in the Antenna Laboratory. Since 1952 he has been on the faculty of Syracuse University, where he is presently Professor of Electrical Engineering. During 1959-1960 he was Visiting Associate Professor at the University of Illinois, Urbana, in 1964 he was Visiting Professor at the University of California, Berkeley, and in 1969 he was Guest Professor at the Technical University of Denmark, Lyngby.

Dr. Harrington is a member of Tau Beta Pi, Sigma Xi, and the American Association of University Professors.



C. P. Jethwa (S'59-M'65-S'68) was born in India. He received the B.E.E. degree from Maharaja Sayajirao University of Baroda, Baroda, India, in 1958, the M.S. degree in electrical engineering from the University of Illinois, Urbana, in 1960, and the Ph.D. degree, also in electrical engineering, from Purdue University, Lafayette, Ind., in 1972. He is also a graduate of the Communication Development Training Program of Bell Telephone Laboratories, Murray Hill, N. J.

He has been associated with Jyoti-Electrics, Baroda, India, with Honeywell EDP Research and Engineering Division, Waltham, Mass., and with Bell Telephone Laboratories, Whippany, N. J. While enrolled in the doctoral program in the School of Electrical Engineering at Purdue University, he was a Teaching and Research Instructor and a Consultant to Kelly Scientific Corporation, Washington, D. C. Currently, he is a Post-Doctoral Research Associate in the Echocardiography Research Division of the Medical Engineering Project of the School of Electrical Engineering at Purdue University.

Dr. Jethwa is a member of Eta Kappa Nu and Sigma Pi Sigma.



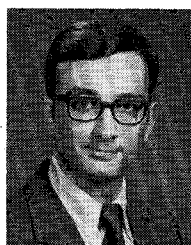
Bengt L. Lennartsson (S'70) was born in Älmehöda, Sweden, on January 24, 1943. He received the Civilingenjör (M.Sc.) degree in electrical engineering in 1967 and the Teknologie Licentiatexamen (Ph.D.) degree in 1972, both from Chalmers University of Technology, Gothenburg, Sweden.

Since 1967 he has been an Assistant at Chalmers University of Technology, from 1967 to 1970 at the Institute for Theoretical Electricity, and since 1971 in the Division of

Network Theory, where he has been engaged in teaching and research on microwave components.



Leonard Lewin (A'69), for a photograph and biography please see page 346 of the May 1972 issue of this TRANSACTIONS.



Vahagn Nalbandian (S'68-M'71) was born in Aleppo, Syria, on May 24, 1941. He received the B.S. degree in physics from Rensselaer Polytechnic Institute, Troy, N. Y., in 1963, the M.S. degree in electrical engineering from Carnegie Institute of Technology, Pittsburgh, Pa., in 1965, and the Ph.D. degree, also in electrical engineering, from Rensselaer Polytechnic Institute, in 1971.

He served as a Teaching Assistant in the Department of Physics, Carnegie Institute of Technology, from 1963 to 1964, and in the Departments of Physics and Electrical Engineering, Rensselaer Polytechnic Institute, from 1966 to 1968. He was a recipient of an NDEA Fellowship in 1968. From 1969 to 1971 he was a Research Assistant in the Systems Engineering Division of Rensselaer. In September 1971, he joined the U. S. Army Electronics Command, Fort Monmouth, N. J., where he is currently engaged in the development of tactical millimeter wave communication systems.

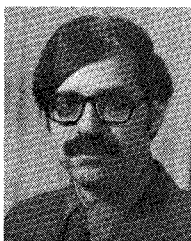
Dr. Nalbandian is a member of Eta Kappa Nu.



Annamaria Scheggi was born in Florence, Italy, on September 30, 1929. She received a degree with a major in mathematics and physics in 1953, and received the Ph.D. degree in electromagnetic waves in 1968, both from the University of Florence, Florence, Italy.

Since 1954 she has been with the Istituto di Ricerca sulle Onde Elettromagnetiche (formerly Centro Microonde) of the Consiglio Nazionale delle Ricerche where her work has been primarily concerned with microwave optics, laser application, antennas, and propagation. She became an Assistant of Electromagnetic Waves at the University of Florence in 1967 where, since the academic year 1970-1971, she has taught experimental physics.

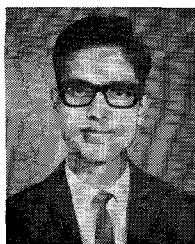
Dr. Scheggi is a member of the Sixth Italian URSI Commission and the Italian Physical Society. She is also the Italian National Contact for COSPAR publications.



Barry E. Spielman (M'71) was born in Chicago, Ill., on October 29, 1942. He received the B.S.E.E. degree from the Illinois Institute of Technology, Chicago, in 1964, the M.S.E.E. degree from Pennsylvania State University, University Park, in 1967, and the Ph.D. degree from Syracuse University, Syracuse, N. Y., in 1971.

From 1964 to 1967 he served as a Research Assistant in the Ionosphere Research Laboratory of the Pennsylvania State University.

While studying at Syracuse University he was employed as an instructor and Research Assistant. Since 1970 he has been employed as a Research Electronics Engineer at the Naval Research Laboratory, Washington, D. C.



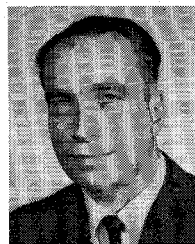
Thandangorai V. Srinivasan was born in Cuddalore, Tamil Nadu, India, on July 25, 1946. He received the B.Tech. (Hons.) and M.E. degrees in electrical engineering from the Indian Institute of Technology, Kharagpur, India, and the Birla Institute of Technology and Science, Pilani, India, in 1967 and 1969, respectively. His master's thesis was on the application of the theory of stationary point processes to linear interpolators.

Since 1970 he has been working toward the Ph.D. degree in the Department of Electrical Engineering, McMaster University, Hamilton, Ont., Canada. His research interests are in the areas of approximation theory; computer-aided optimization of circuits and systems; nonlinear, stochastic, and optimal control theory; reliability; and system modeling.



Willeam Steenaart (A'55-M'57-SM'70) was born in Djakarta, Indonesia, on March 24, 1928. He received the B.E.E. degree in 1953 and the Ph.D. degree in 1965, both from the Technological University of Delft, Delft, The Netherlands.

From 1953 to 1958 he worked at the Philips Research Laboratories, Eindhoven, The Netherlands, at the Northern Electric Co., Montreal, Que., Canada, and at Computing Devices of Canada, Ottawa, Ont., Canada. In 1958 he joined the staff of Bell Telephone



Laboratories, Murray Hill, N. J., where he was engaged in exploratory development work on transmission systems, mostly in the field of data transmission, and where his emphasis was on the approximation, synthesis, and realization of linear networks using computer-aided design techniques. From 1963 to 1965 he was a Research Associate at the Technological University of Eindhoven, Eindhoven, The Netherlands, where he did research on microwave circuits. From 1965 to early 1972

he was an Associate Professor at Rensselaer Polytechnic Institute, Troy, N. Y. He is currently with the Department of Electrical Engineering, University of Ottawa, Ottawa, Ont., Canada. His current interests include microwave circuit techniques, communication systems and techniques, and digital signal processing.

Dr. Steenaart served as Chairman for the IEEE Microwave Theory and Techniques Group, Schenectady, N. Y.



Yoichiro Takayama, for a photograph and biography please see page 296 of the April 1972 issue of this TRANSACTIONS.