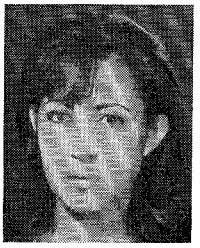
Contributors



Esmat A. F. Abdallah (S'70) was born in Cairo, Egypt, on July 29, 1946. She received the B.Sc. and the M.Sc. degrees both in communication and electronics engineering from Cairo University, Cairo, Egypt, in 1968 and 1972, respectively.

She worked as an Electronic Engineer in the Egyptian Broadcast and Television Establishment from January 1969 to November 1969. Since December 1969 she has been with the Electrical and Electronic Engineering Laboratory, National Research Centre, Cairo, as a Research Assistant. She is now working towards the Ph.D. degree.

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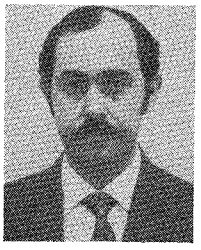

Alfredo Anuff (S'66–M'66) received the diploma in petroleum engineering from the Industrial University of Santander, Bucaramanga, Colombia, in 1959, and the M.S.E.E. degree from Columbia University, New York, N. Y., in 1966.

From 1959 to 1964 he worked in drilling, production, and reservoir engineering with Texas Petroleum Co., Bogotá, Colombia. Since 1966 he has been with Bell Laboratories, North Andover, Mass., working in transmission studies, hybrid computer simulation, and computer applications to design.

Mr. Anuff is a member of the Simulation Councils.

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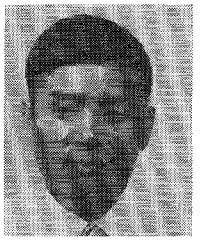

C. T. M. Chang (S'62–M'72) was born in Nanking, China, on April 2, 1936. He received the B.S. degree in engineering from the National Taiwan University, Taipei, Taiwan, China, in 1957, and the M.S. and Ph.D. degrees in electrical engineering from the University of Southern California, Los Angeles, Calif., in 1962 and 1968, respectively.

In 1962, he was with the Applied Research Laboratory, Glendale, Calif., where he was engaged in the development and design of the first ARL computer console for on-line spectrochemical analysis. From 1963 to 1968 he was a Research Assistant in the Electrical Engineering department at the University of Southern California, where his research interest was in the study of nonideal type II superconductors. He joined Argonne National Laboratory, Argonne, Ill., in 1968, and is currently involved in the development of several microwave devices for high-energy-physics experiments.

Dr. Chang is a member of the American Physical Society and the Scientific Research Society of America.

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Walter R. Curtice (M'58–SM'69) was born in Rochester, N. Y., on September 14, 1935. He received the B.E.E. degree, the M.S. degree for research on the ruby Maser, and the Ph.D. degree for research on noise in linear beam microwave devices, all from Cornell University, Ithaca, N. Y., in 1958, 1960, and 1962, respectively.

In September 1962 he joined the Microwave and Power Tube Division of Raytheon Co. as a Senior Research and Development Engineer. At Raytheon he participated in programs for microwave tube development and performed experimental and theoretical research on linear beam and cross-field devices. In August 1967 he became Visiting Assistant Professor of Electrical Engineering at the University of Michigan, Ann Arbor. He was appointed Associate Professor in August 1969. In addition to teaching courses on physical electronics and microwave measurements, he was engaged in sponsored research on microwave semiconductors with emphasis on transferred electron devices, as a member of the Electron Physics Laboratory. He became a member of the Microwave Technology Center in January 1973 and is participating in programs on transferred electron devices and pulsed TRAPATT devices. Currently he is with RCA, David Sarnoff Research Center, Princeton, N. J. He has authored over 20 technical papers.

Dr. Curtice is a member of Tau Beta Pi, Eta Kappa Nu, and Sigma Xi. He was chairman of the Boston section on the Electron Devices Group from 1966 to 1967 and was chairman of the Southeastern Michigan section of the combined MTT, ED, and AP Groups for 1972.

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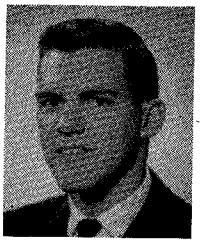

W. Alan Davis (S'60–M'69) was born in Evanston, Ill., on July 1, 1941. He received the B.S.E. degrees in engineering mathematics and electrical engineering, both in 1963, and the M.S.E. and Ph.D. degrees in 1964 and 1972, respectively, all from the University of Michigan, Ann Arbor.

In 1964 and 1965 he was a Teaching Fellow in the Department of Electrical Engineering, University of Michigan, and from 1967 to 1971 he did research on parametric circuits at the Cooley Electronics Laboratory of the same university. In 1972 he joined the Communications Research Laboratory at McMaster University in Hamilton, Ont., Canada. His research interests include microwave filters, microwave solid-state devices, parametric amplifiers, digital phase shifters, and satellite communication.

Dr. Davis is a member of Eta Kappa Nu and Tau Beta Pi.

M. Ezzat El-Shandwily (S'63–M'66) was born in Shandwil, Egypt, on September 5, 1934. He received the B.Sc. degree in electrical engineering with honors from Cairo University, Cairo, Egypt, in 1957, and the M.Sc. degree in electrical engineering, the M.Sc. degree in physics, and the Ph.D. degree in electrical engineering all from the University of Michigan, Ann Arbor, in 1961, 1964, and 1965, respectively.

From 1957 to 1960 he was an Instructor in the Faculty of Engineering, Cairo University. During the same period he was a student in the Faculty of Science, where he was studying pure and applied mathematics in the Mathematics Department for five semesters. During the summer of 1962 he worked as a Research Assistant on microwave antennas at Cooley Electronic Laboratory, University of Michigan. He worked as a Research Associate in the Electron Physics Laboratory at University of Michigan from 1963 to 1965, where he was engaged in research on microwave devices. In 1965 he joined the Electrical and Electronic Engineering Laboratory, National Research Centre, Cairo, Egypt, as an Assistant Professor. He is presently an Associate Professor. He also works as a part time lecturer in the Egyptian Universities and Institutes. He is currently engaged in research on microwave tubes, microwave acoustics, and ferrite applications in microwave devices.

Dr. El-Shandwily is a member of Sigma Xi.

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A. Gopinath (S'64–M'65) received the B.E. (Electrical) degree from Madras University, Madras, India, the M.Tech. degree from the Indian Institute of Technology, Kharappur, India, and the Ph.D. degree from the University of Sheffield, Sheffield, England.

He served as a Graduate Apprentice with A.E.I. Manchester Ltd. from 1958 to 1960; as an Engineering Assistant on traction and crane control systems with Jessop & Co. Ltd., Calcutta, India, from 1960 to 1962; and as a Research Assistant on noise in electron beams at Sheffield University from 1965 to 1966. He was a Visiting Research Fellow at McGill University, Montreal, Que., Canada, during 1971. He is presently Lecturer in electronics at the University College of North Wales, Bangor, Caerns, U.K. His research interests are in theoretical electromagnetics and in the physics of microwave semiconductor devices, which are studied using a scanning electron microscope.

Dr. Gopinath is a member of Sigma Xi and the Institution of Electrical Engineers (London), and is a graduate member of the Institution of Mechanical Engineers (London).

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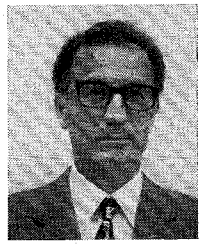

Rudolf P. Hecken (M'69) received the diploma in electrical engineering and the Ph.D. degree, both from Technische Hochschule, Aachen, Germany, in 1959 and 1964, respectively.

At the High-Frequency Institute in Aachen he was engaged in teaching and research on pulse techniques from 1959 to 1962. From 1962 to 1965 he worked there on He–Ne gas lasers. From 1965 to 1968 he was Research and Development Engineer on RF accelerating structures for a synchrocyclotron at the European Center for Nuclear Research (CERN) in Geneva, Switzerland. In 1968 he joined Bell Laboratories in North Andover, Mass., as a Member of the Technical Staff doing development work on microwave networks and components for a millimeter waveguide transmission system. Since May 1971 he has been Supervisor of a transmission networks group.

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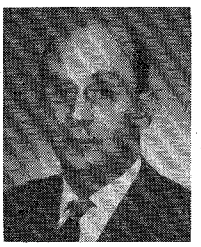

Ahmad A. Kamal (M'65) was born in Cairo Egypt, on October 4, 1928. He received the B.Sc. degree in electrical egnineering from Cairo University, Cairo, Egypt, in 1951, and the M.Sc. and Ph.D. degrees in electrical engineering from the University of Pennsylvania, Philadelphia, in 1953 and 1956, respectively.

Since graduation he has been working with the Cairo University Department of Electronic and Communication Engineering, where he is now a Professor. During the academic year 1962–1963 he worked at the Moore School of Electrical Engineering, University of Pennsylvania, as a Visiting Lecturer. His current research interests include microelectronics.

Dr. Kamal is a member of Eta Kappa Nu.

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Peter J. Khan (M'61) was born in Bowral, Australia, on November 12, 1936. He received the B.S. degree in mathematics and physics, and the B.E. and Ph.D. degrees in electrical engineering, all from the University of Sydney, Sydney, Australia, in 1957, 1959, and 1963, respectively.

From 1953 to 1959 he was employed by the Weapons Research Establishment at Salisbury, South Australia, carrying out research and development in electronic circuits. After completion of his doctoral studies in parametric amplification, he came to the University of Michigan, Ann Arbor, in 1963 as a Fulbright Postdoctoral Fellow. He is now an Associate Professor in the Department of Electrical and Computer Engineering, and head of the Microwave Solid-State Circuits Group at the Cooley Electronics Laboratory. His research interests include solid-state oscillators, field analysis of microwave structures, varactors, and biological effects of microwave radiation.

Dr. Khan is a member of Sigma Xi.

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P. Silvester (S'60–M'64), for a photograph and biography please see page 120 of the February 1973 issue of this TRANSACTIONS.