

1989 Microwave Career Award

Alexander L. Cullen

The *Microwave Career Award* is presented to an individual "for a career of meritorious achievement and outstanding technical contributions in the field of microwave theory and techniques." It is the highest award given by the Microwave Theory and Techniques Society. The 1989 Microwave Career Award recipient is Dr. Alex L. Cullen.



Alex Cullen (M'56, SM'60, F'67) was born in Wood Green, London, in 1920. He was educated at Lincoln School and Imperial College London. Imperial College had at that time an excellent option in Communications Engineering. One of the lecturers on that course, David Tomba, gave a special lecture one day on the Klystron; this was hot-off-the-press stuff since the classical Varians and Webster papers had only just been published, so it was tremendously exciting, and was the start of an enduring love of microwave engineering in all its varied aspects. In July 1940, Cullen joined the staff of the Royal Aircraft Establishment in Farnborough, where he worked on radar. After a brief period touring the original "CH" chain of ground radar stations with a small team responsible for phasing the "aerials", as they were always known in the UK at that time, he returned to base at Farnborough to work on the newer 1.5 m wavelength "GCI" (ground control interception) radars which he found more to his taste than the 5 to 10 m wavelengths used in the "CH" stations. Microwaves were coming nearer! At last he was put onto real microwave work in an antenna group working on shaping radiation patterns. The need to measure the result of theoretical design work held an interest for him as strong as the design work itself and his subsequent research work has been largely in the two fields of microwave antennas and microwave measurements. In 1946 he joined the staff of the Electrical Engineering Department at University College London at the invitation of Professor Harold Barlow, who had been Head of Radio Department at RAE, Farnborough and had taken an interest in Cullen's work during that period. Cullen helped Professor Barlow to establish a research school in microwaves at UCL and collaborated with him in writing a book "Microwave Measurements". In 1955 he was appointed to the first Chair in Electrical Engineering at Sheffield University, building up another microwave research group there. In 1967 he was invited to return to UCL as Pender Professor of Electrical Engineering on the retirement of Professor Barlow, who, however, remained in the Department as an Honorary Research Associate.

In 1980 Cullen was awarded a Senior Fellowship, tenable at UCL, which enabled him to concentrate wholly on research. He is currently an Honorary Research Associate in the Department of Electronic and Electrical Engineering at UCL, where he continues his research in antennas and measurements at microwave and millimetre wave frequencies.