

# The Arthur C. Clarke 2018 Lifetime Achievement Award

## Irwin M. Jacobs



Irwin M. Jacobs is an electrical engineer, a co-founder and former chairman of Qualcomm, and chair of the board of trustees of the Salk Institute.

He earned his B.S. degree in electrical engineering from Cornell University in 1956, and his S.M. and Sc.D. degrees in Electrical Engineering and Computer Science (EECS) from the Massachusetts Institute of Technology (MIT) in 1957 and 1959, respectively.

Jacobs was Assistant and Associate Professor of Electrical Engineering at MIT from 1959 to 1966 and Professor of Computer Science and Engineering at University of California San Diego from 1966 to 1972. He co-authored a

textbook entitled Principles of Communication Engineering in 1965, which is still in use today. UCSD's Jacobs School of Engineering is named for him and his wife.

In 1968, Jacobs co-founded Linkabit Corporation with Andrew Viterbi to develop satellite encryption devices. That company merged with M/A-COM in 1980, becoming M/A-COM Linkabit.

In 1985, Jacobs went on to co-found Qualcomm. Qualcomm developed the OmniTRACS system was deemed one of the world's most "technologically advanced two-way mobile satellite communications and tracking systems". He pioneered these systems which use the communication bandwidth more efficiently than the older fixed time-sliced TDMA technology. Its Code Division Multiple Access (CDMA) has been adopted as one of two digital standards (the other being GSM) used in the next generation of cellular telephones in North America at the time.

Awards: Marconi Prize, IEEE Alexander Graham Bell Medal, National Medal of Technology & Innovation, Franklin Institute Award, IEEE/RSE Wolfson James Clerk Maxwell Medal, IEEE Medal of Honor, IEEE Milestone Award.