Robert M. Haralick is a distinguished professor in Computer Science at Graduate Center of the City University of New York (CUNY). In 2014 he was appointed as Executive Officer of the Computer Science PhD program at the Graduate Center.

Professor Haralick has been one of the leading figures in computer vision, pattern recognition, and image analysis. He is a Fellow of the Institute of Electrical and Electronics Engineers (IEEE) and a Fellow and past president of the International Association of Pattern Recognition.

Professor Haralick received a B.A. degree in mathematics from the University of Kansas in 1964, a B.S. degree in electrical engineering in 1966, and a M.S. degree in electrical engineering in 1967. In 1969, after completing his Ph.D. at the University of Kansas, he joined the faculty of the electrical engineering department, serving as professor from 1975 to 1978. In 1979 Haralick joined the electrical engineering department at Virginia Polytechnic Institute and State University, where he was a professor and director of the Spatial Data Analysis Laboratory.

From 1984 to 1986 Haralick served as vice president of research at Machine Vision International, Ann Arbor, MI. Haralick occupied the Boeing Clairmont Egtvedt Professorship in the department of electrical engineering at the University of Washington from 1986 through 2000. At UW, Haralick was an adjunct professor in the computer science department and the bioengineering department.

In 2000 Professor Haralick accepted a Distinguished Professorship position at the computer science department of the Graduate Center, City University of New York.

Professor Haralick began his research as one of the principal investigators of the NASA ERTS satellite data doing remote sensing image analysis with multi-channel spectral imagery and synthetic aperture radar imagery. He has made a series of contributions in the field of computer vision. In the high-level vision area, he has worked on inferring 3D geometry from one or more perspective projection views. He has also identified a variety of vision problems which are special cases of the consistent labeling problem. His papers on consistent labeling, arrangements, relation homomorphism, matching, and tree search translate some specific computer vision problems to the more general combinatorial consistent labeling problem and then discuss the theory of the look-ahead operators that speed up the tree search. The most basic of these is called Forward Checking and is the basis of more efficient tree searches in constraint satisfaction problems. It also gives a framework for the control structure required in high-level vision problems. He has also extended the forward-checking tree search technique to propositional logic theorem proving.

In the low-and mid-level areas, Professor Haralick has worked in image texture analysis using spatial gray tone co-occurrence texture features. These features have been used with success on biological cell images, x-ray images, satellite images, aerial images and many other kinds of images taken at small and large scales. With the increase in processor speed and the variety of different kinds of images available from microscopes to body scanners, the co-occurrence texture features are being used in the automatic delineation of possible problematic abnormal regions.

In the feature detection area, Professor Haralick has developed the facet model for image processing. The facet model states that many low-level image processing operations can be interpreted relative to what the processing does to the estimated underlying gray tone intensity surface of which the given image is a sampled noisy version. The facet papers develop techniques for edge detection, line detection, noise removal, peak and pit detection, as well as a variety of other topographic gray tone surface features such as ridges, valleys, saddle points and regions, peaks, pits, and hillsides.

Professor Haralick's work in shape analysis and extraction uses the techniques of mathematical morphology. His early mathematical morphology papers brought the mathematics and its applications to the attention of the image processing and the computer vision communities. He developed the morphological sampling theorem which establishes a sound shape/size basis for the focus of attention mechanisms which can process image data in a multiresolution mode, thereby making some of the image feature extraction processes execute more efficiently. He has also developed recursive morphological algorithms for the computation of opening and closing transforms. The recursive algorithms permit all possible sized openings or closings for a given structuring element to be computed in constant time per pixel. He also developed statistical morphological methodologies for image analysis and noise removal.

In the area of document image understanding, he is responsible for the development of comprehensive ground-truthed databases consisting of over 1500 document images, most in English and some in Japanese. The databases are issued on CD-ROMs and are used all around the world by people developing character recognition methodologies and techniques for document image structural decomposition. He has developed algorithms for document image structural decomposition, document image skew angle estimation, zone delineation, and word and text line bounding box delineation.

In a series of papers, he has helped influence the computer vision community to be more sensitive to the needs of computer vision performance characterization and covariance propagation for without this kind of analysis Computer Vision has no robust theory. In his performance characterization papers, he showed how it is possible to propagate the random perturbations on the input data structure to a vision module to the random perturbations on the output data structure when the input and output data structures and different.

Professor Haralick has contributed to the medical image analysis area particularly working with X-ray ventriculargrams and echocardiography. These papers developed techniques to identify and delineate anatomically accurate boundaries for the left ventricle of the heart. The accuracy of the these automatically delineated boundaries was on the same order of errors from Gold standard boundaries drawn by expert radiologists.

His most recent work is in the pattern recognition area, particularly in the manifold clustering of high dimensional data sets, the application of pattern recognition to mathematical combinatorial problems, and relation join decompositions.

Haralick is a Fellow of IEEE for his contributions in computer vision and image processing and a Fellow of the International Association for Pattern Recognition (IAPR) for his contributions in pattern recognition, image processing, and for service to IAPR. He served as president of IAPR from 1996 to 1998. He has served on the editorial board of "IEEE Transactions on Pattern Analysis and Machine Intelligence" and has been the computer vision area editor for Communications of the ACM and as an associate editor for Computer Vision, Graphics, and Image Processing, The IEEE Transactions on Image Processing and Pattern Recognition. He served on the editorial board of Real Time Imaging and the editorial board of Electronic Imaging. His publications include about 750 archival papers, book chapters, conference proceedings, books and technical reports. He has coauthored papers with over 265 people.

In 2017, Google Scholar lists the number of citations to his papers to be over 55,000 with an h-index of 72 and an I10 index of 306. He has been recognized for his academic research in the Marquis Who's Who books. He is listed in the current editions for Marquis Who's Who in the East and Who's Who in America.

Professor Haralick received the King-Sun Fu Price at the the ICPR conference in Cancun Mexico in December 2016. The award is given to only one person every two years by the International Association for Pattern Recognition. Professor Haralick is the 15th recipient. The citation of the award is:

For contributions in image analysis including remote sensing, texture analysis, mathematical morphology, consistent labeling, and system performance evaluation.