

## University of Haifa

The Senate of the University of Haifa, by virtue of the authority vested in it by the constitution of the University and in accordance with the recommendations of the President and the Executive Committee

hereby confers upon

**Harvey Scher**

the degree of

## Doctor of Philosophy, Honoris Causa

In recognition of his many research achievements which have had far-reaching significance in solid state physics and geohydrology; for his breakthrough discovery of anomalous transport, which has been fundamental for the understanding of transport and diffusion in a diverse array of disordered media; for his further contributions to diverse areas of investigation that include percolation theory, the mechanical properties of brittle solids, electron interactions in metals, and fractal physics; for his unique contribution to science in Israel as a researcher at the Weizmann Institute of Science; and for having been a source of inspiration in research and teaching alike for generations of scientists and engineers.

Conferred on 12 Sivan 5777/June 6, 2017  
Haifa, Israel



**Mooly Eden**

Chairman of the Executive Committee



**Prof. Ron Robin**

President



**Prof. Gustavo Mesch**

Rector

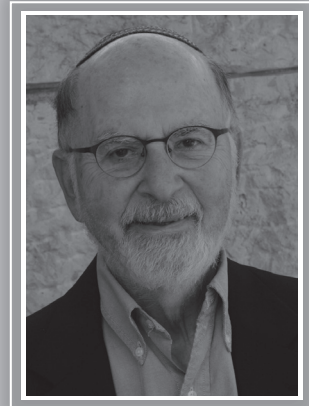


photo: Debbi Cooper

## DOCTOR HARVEY SCHER

American-born physicist Harvey Scher studied physics for all three of his degrees, receiving his PhD from Syracuse University in 1964.

Over almost three decades, Dr. Scher held research positions at a trio of world-leading laboratories. After serving as a Fellow at Bell Telephone Laboratories (1965-1967), he went on to become one of the pioneers of research at Xerox Webster Research Center in New York (1967-1983), where he rose to the position of Principal Scientist. During his next career move, as a Senior Research Associate and Branch Manager at British Petroleum in Ohio (1983-1993), Dr. Scher also served for most of that period as an adjunct professor in the Department of Physics at Case Western Reserve University (1984-1993).

Dr. Scher's early research focused on many body effects due to strong electron-phonon interactions in metals. He then used stochastic theory and a novel formalism of continuous time random walk to develop a new fundamental theory of electron transport in disordered solids. This new approach has contributed to our understanding of many topics including diffusion-limited aggregation (fractal), electron-ion recombination, glass transitions and turbulent flow. He has also made major contributions to percolation theory.

Another of Dr. Scher's major contributions concerns how chemical particles move in fluid flow in heterogeneous porous material. Once again, the outcome of his research went beyond its original reach and has been applied to other areas of disordered media, such as cells.

Following his Aliya to Israel in 1994, Dr. Scher joined the Weizmann Institute of Science as a Special Contract Professor. Since 2001 he has also served as a special consultant at the Institute, where he has collaborated in developing the application of new theoretical tools for modelling key processes in hydrology and rock deformation.