

Hanoch Gutfreund Biography

February 8, 2021. Patrick Charbonneau

Hanoch Gutfreund (October 5, 1935-) was born in Kraków, Poland, the son of Dr. Abraham (Adolf) Gutfreund, a lawyer, and of Ida Gutfreund. Following the German invasion of Poland in 1939, his family fled East (reaching Lwów, now Lviv in Ukraine). The Russians then evacuated them to the Ural mountains, and later to Kazakhstan. After the war they spent a couple of years as Displaced Persons in Augsburg, Germany, before emigrating to Israel in December 1948, where they settled in Tel Aviv.

Gutfreund studied physics at the Hebrew University, in Jerusalem, obtaining a MSc in 1962, and a PhD in Theoretical Physics in 1966 for a thesis entitled מכניזם של ריאקציה של נוקלאונים באנרגיות בינוניות ("Mechanisms of the radiative capture reaction for intermediate energy nucleons"), under the supervision of Gideon Rakavy. He was then a postdoc at Stanford (1966-1968), initially with Felix Bloch, and later working closely with William (Bill) Little on organic superconductivity. Upon his return to Israel, Gutfreund climbed through the faculty ranks at the Hebrew University, obtaining a professorship in 1978 and the André Aisenstadt Chair in Theoretical Physics in 1985. He later took a number of administrative positions, first as Chairman of the Racah Institute of Physics, then director of the Israel Institute of Advanced Studies (1988-1989), and later as rector (1990-1991) and president (1992-1997) of the Hebrew University. He became emeritus in 2006, and in 2010 became the Academic Director of the Einstein Archives at the university, also serving as the Hebrew University's appointee responsible for promoting Albert Einstein's intellectual legacy worldwide.

Gutfreund first became interested in neural networks during his 1974 sabbatical in Stanford, with Bill Little. Following the formulation of the Hopfield model in 1982, he embarked on a landmark collaboration with Daniel Amit and Haim Sompolinsky that led to the solution of that model. This work played a key role in the cementing the field of neurophysics. His scientific leadership further led to the organization of a year-long workshop on the statistical physics of neural networks at the Israel Institute of Advanced Studies in 1987. This international gathering notably led to his co-founding of the Interdisciplinary Center for Neural Computations (ICNC) in 1988 (now the Edmond & Lily Safra Center for Brain Sciences).

In retirement, Gutfreund has become a renown historian of relativistic gravitation.