

Prof. Michal Irani – Short Bio

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Michal Irani is a Professor in the Faculty of Mathematics & Computer Science at the Weizmann Institute of Science, and is currently the Dean of the faculty. She has previously chaired the Scientific-Council of the Weizmann Institute, the Promotions and Appointments Committee, and the Postdoctoral Fellowship Program of the Institute. She received her PhD in Computer Science from The Hebrew University of Jerusalem in 1994. During 1993-1996 she was a member of the Vision Technologies Laboratory at the Sarnoff Research Center (Princeton). She joined the Weizmann Institute in 1997.

Michal's research interests include Computer-Vision, Image & Video Processing, Artificial-Intelligence, Deep-Learning, and Decoding of visual data from brain activity. Especially known are her contributions in Super-Resolution (in space and time), and her integrated space-time approach to video analysis. She was the first to analyze and quantify the internal self-similarity of visual data, namely – that any image is composed of tiny pieces (“image atoms”), which repeat many times inside the same image, at multiple scales. This observation enabled solving many fundamental problems in computer vision, and further gave rise to a new approach in Deep-Learning, named “*Deep Internal Learning*”. This approach allows to successfully train deep neural networks on as little as a single example (in contrast to the huge number of examples required by standard Deep-Learning methods).

Michal's prizes and honors include the Sarnoff Technical Achievement Award (1994), the Alon Fellowship for Outstanding Young Scientists (1998), the Maria Petrou Prize (awarded by IAPR) for outstanding contributions in Computer Vision & Pattern Recognition (2016), the Landau Prize in Artificial Intelligence (2019), and the Rothschild Prize in Mathematics and Computer Science (2020). In 2023 Michal was elected member of the Israel Academy of Sciences and Humanities. She has received many paper awards, including the Helmholtz Test-of-Time Award (2017). She has more than 20 approved US patents.

Michal was born in 1962. She is married to Dror and is the proud mother of Ido and Merav.