

IEEE Computational Intelligence Society Neural Networks Pioneers Award Winners



1991
Stephen Grossberg
For dynamic models of learning and memory.



1991
Teuvo Kohonen
For the development of fundamental theories of distributed associative memory, optimal associative mappings, and the self-organizing feature map (SOM).



1991
Bernie Widrow
For the development of adaptive filters, the ADALINE neuron, and (with M.E. Hoff Jr.) the invention of the LMS algorithm.



1992
Walter Freeman
For 50 years of experimental correlation of the electrical activity of the brain with intentional behavior in animals and humans and the development of heuristic models of mesoscopic nonlinear brain dynamics and field theory to explain the mechanisms and activity patterns that are sustained by immense populations of neurons.



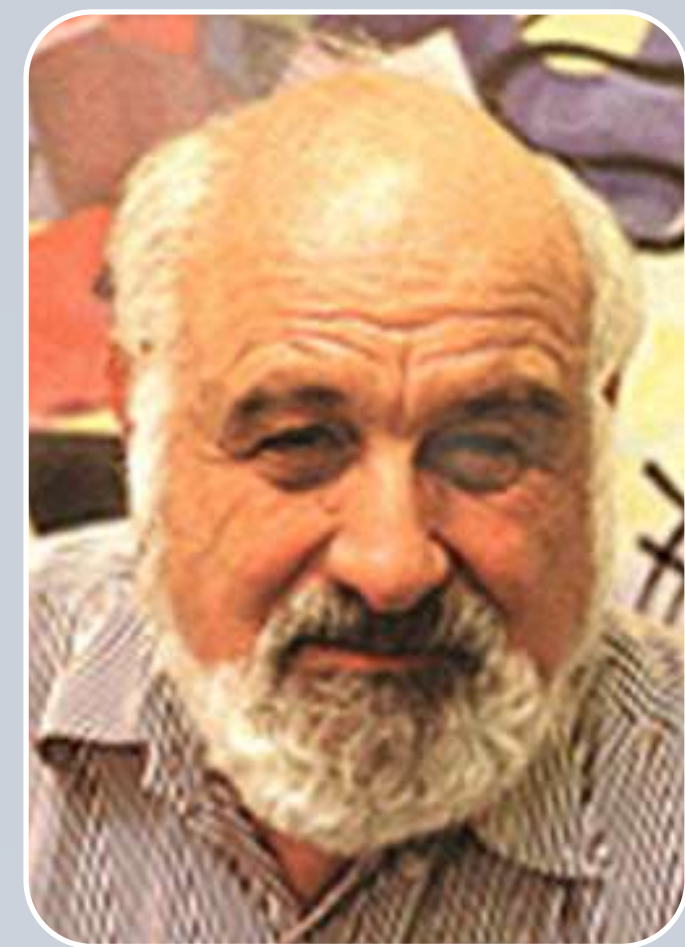
1992
Shun-ichi Amari
For pioneering contributions to the mathematical foundations of neural networks.



1993
Thomas M. Cover



1994
Christoph von der Malsburg



1995
Michael A. Arbib
He has been a most influential researcher in the field of neural networks from the sixties until now. He has contributed to the neural networks community 1) by his original researches closely connected with biology, 2) by his establishing the concept of brain theory and its methodology, and 3) by his leadership in the brain theory community which prepared the rise of neural networks research in the eighties.



1995
Nils J. Nilsson
For contributions to the theory of perceptrons and learning machines. His pioneering book "Learning Machines" (McGraw-Hill, 1965) was the definitive book on the subject during that decade. The book treated learning algorithms, capacity, and multilayer perceptrons in an accessible manner, which influenced a whole decade of research in the area of neural networks.



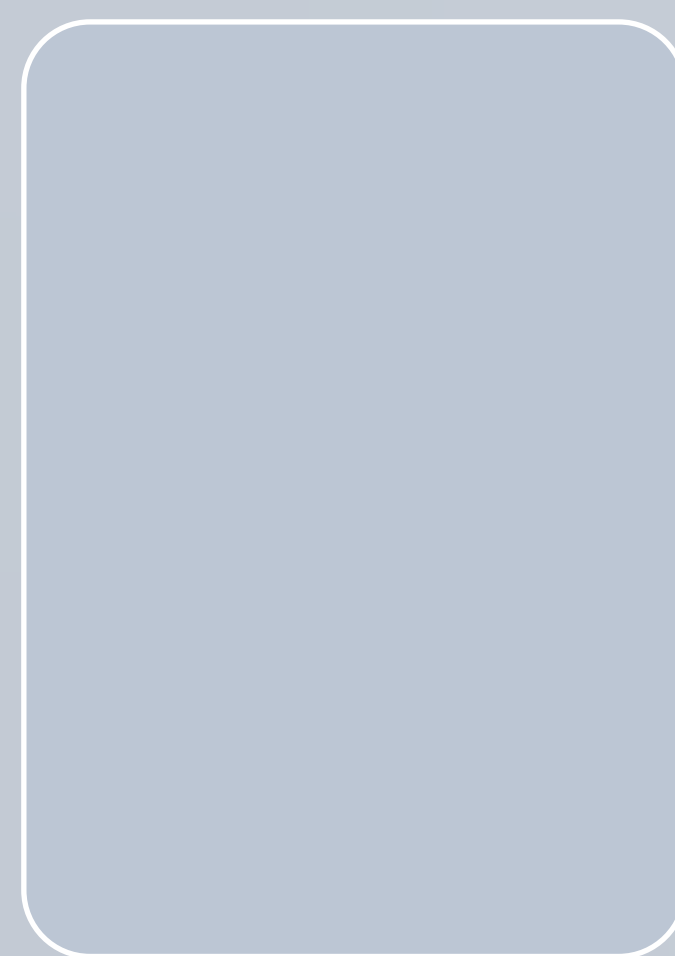
1995
Paul J. Werbos
For the original discovery of backpropagation (the use of the chain rule for ordered derivatives in neural network systems) and of adaptive critic architectures based on the approximation of dynamic programming (adaptive dynamic programming).



1997
John J. Hopfield



1998
Geoffrey E. Hinton



1999
Robert Hecht-Nielsen



2000
Leon Chua



2001
James McClelland
For his work with David Rumelhart developing the Parallel Distributed Processing approach to modeling human cognitive processes, based on interactive activation, distributed representation, and back-propagation learning.



2001
David E. Rumelhart
For his work with James McClelland developing the Parallel Distributed Processing approach to modeling human cognitive processes, based on interactive activation, distributed representation, and back-propagation learning.



2002
Terrence J. Sejnowski



2003
Kunihiko Fukushima



2004
Andrew Barto
For fundamental work on reinforcement learning.



2005
Carver Mead



2006
Erkki Oja
For significant contributions in developing neural Principal Component Analysis (PCA) and subspace methods.



2006
Donald Specht
For the invention of Probabilistic Neural Networks (PNN's) and General Regression Neural Networks (GRNN).



2007
Michael Jordan
For significant contributions to algorithms, architectures, and theory for learning in neural networks.