Robert Kozma INNS BOG Nomination 2026

Brief CV (max 2 pages)

Dr. Robert Kozma (Fellow IEEE, Fellow INNS). He served as President of the International Neural Networks Society (INNS) (2017-2018). He has been on the INNS Board of Governors (2007-2012), Fellow of INNS (since 2012), Senior INNS Fellow (since 2023). He has been Chair of INNS Special Interest Groups (SIG) (2005-2008), Co-Editor of INNS-JNNS-ENNS Newsletters with Harold Szu, Carlo Morabito, and Soo-Young Lee (2005-2007), General Chair of IJCNN2009, Atlanta, GA, USA. Additional INNS-related conference leadership activities include Program Co-Chair at IJCNN2012, Brisbane, Australia, and Panel Chair at IJCNN2017 (Anchorage, AK), IJCNN2019 (Budapest, Hungary), and WCCI2020 (Glasgow, UK). He has been elected to serve as INNS Editor-in-Chief from 2026, and he serves as Elsevier-appointed Co-EIC of *Neural Networks* (2026 -). He is Associate Editor of numerous prestigious journals, including *Wiley Interdisciplinary Reviews (WIREs) Data Mining & Knowledge Discovery*, *IEEE Transactions on Cybernetics, Cognitive Neurodynamics (Springer),* Editor-in-Chief of *Acta Polytechica Hungarica.* He recently completed his 6-year stint as Editor-In-Chief of *IEEE Transactions of Systems, Man, and Cybernetics – Systems (SMC-Systems,* 2020-2025). His broad international leadership is demonstrated by him serving in leadership of sister organizations, such as the AdCom of the IEEE CIS (2009-2012), and has been elected to the Board of Governors of IEEE Systems, Man, and Cybernetics Society (SMCS, 2016-2018, 2020-2022, 2026-2028).

Dr. Kozma received PhD in Applied Physics (1992) from Delft University of Technology, Delft, The Netherlands. He worked as Associate Professor of Quantum Science and Engineering, Tohoku University, Sendai, Japan (1993-1996); Lecturer in Information Sciences, Otago University, Dunedin, New Zealand (1996-1998); Associate Research Fellow at the Division of Neurobiology and Division of Computer Science, Dept. EECS, University of California at Berkeley with W.J. Freeman (1998-2000). Since 2000, he has been Professor at the University of Memphis, TN, USA, including Computer Science and Mathematics, presently Professor Emeritus. He is the founding Director of the Center for Large-Scale Integrated Optimization and Networks (CLION), FedEx Institute of Technology, University of Memphis, TN. Visiting Professor appointments include Obuda University, Budapest, Hungary (2022-); College of Information and Computer Sciences, University of Massachusetts Amherst (2016-2020); Sensors Directorate, US Air Force Research Lab, Hanscom Air Force Base MA, and Wright Patterson Air Force Base, Dayton, OH (2007-2011, and 2012-2013); NASA Jet Propulsion Laboratory, Robotics Division, Caltech, Pasadena, CA (2006); Lawrence Berkeley Lab (2005), and Sarnoff Co., Princeton, NJ. (2005). He secured research support of total $7M+ includes funding from National Aeronautics and Space Agency (NASA), US Defense Advanced Research Program Agency (DARPA), Air Force Research Laboratory (AFRL), Air Force Office of Scientific Research (AFOSR), National Research

Foundation (NSF), National Research Council (NRC), Office of Naval Research (ONR), FedEx, and others.

Dr Kozma has over 40 years of experience in conducting leading research in intelligent signal processing, the design, analysis, and control of artificial and biological intelligent systems, computational neurodynamics, cognitive computing, large-scale graphs and networks, robot autonomy and navigation, and brain-computer interfaces. His pioneering work on complex spatio-temporal oscillatory brain dynamics led to the development of the neuropercolation model, based on para/ferromagnetic phase transitions, modeled by random graphs and percolation theory over lattice arrays. His decades-long collaboration with the late Walter J. Freeman, UC Berkeley, produced the mathematical and computational model of the cinematic theory of cognition. Dr. Kozma's work in the past decade extends to higher cognition and consciousness, by linking the cinematic theory and cortical phase transitions with Global Workspace Theory (GWT) and the postulated conscious broadcast. His work addresses critical societal and ethical issues towards intelligent technologies and sustainable AI. He published 9 books/edited volumes, over 400 papers, with over 10K cites (google scholar index h=52); at top 2% scientists worldwide in AI related areas (Stanford metrics); has 3 patents. Gave over 200 presentations at conferences worldwide, about half of them are plenary, keynote, and invited talks. The book *"Artificial Intelligence in the Age of Neural Networks and Brain Computing,"* co-edited by R. Kozma, C. Alippi, Y. Choe, and C. Morabito (Eds), Academic Press, is based on the IJCNN2017 sessions commemorating the 30th Anniversary of INNS, and it is now in its 2nd edition (2018/2023).

He received various awards, including the INNS Dennis Gabor Award (2011), First Tennessee University Professorship (2012), Distinguished Research Achievement Award by University of Memphis Alumni Association (2010), IEEE SMCS Meritorious Service Award (2024), among others.