Ali A. Minai (INNS Member No. 365)
Professor
Department of Electrical & Computer Engineering
University of Cincinnati
Cincinnati, OH 45221-0030
Ali.minai@uc.edu **(513) 556-4783**

Appointments:

• University of Cincinnati	Assistant/Associate/Full Professor	1993 – present
• University of Cincinnati	Graduate Program in Neuroscience	2006 – present
• University of Virginia	Research Associate, Neuroscience	1991 – 1993

Education:

• University of Virginia	Electrical Engineering	Ph.D. 1991
• University of Virginia	Electrical Engineering	M.S. 1987

Professional Activities (INNS-Related in Red)

• **President**	International Neural Network Society	2015-2016
• **VP for Conferences**	International Neural Network Society	2012-2014
• **Member - Board of Governors**	International Neural Network Society	2010-2019, 2020 -
• **Secretary**	International Neural Network Society	2006-2010
• **General Chair**	IJCNN'2011, San Jose	2011
• **Special Sessions Chair**	IJCNN'2025, Rome	2025
• **Workshops Chair**	IJCNN'2020, Glasgow	2020
• **Tutorials Chair**	IJCNN'2009, Atlanta	2009
• **Workshops Chair**	IJCNN'2007, Orlando	2007
• **General Chair/Co-Chair**	International Conf. on Complex Systems	2011, 2018, 2020
• **Neural Networks Tech Comm.**	IEEE-Computational Intelligence Society	2004-2005, 2009-2018
• **Action Editor**	Neural Networks	2009-present
• **Associate Editor**	IEEE Trans. Neural Net & Learning Sys	2016-2020
• **Associate Editor**	IEEE Trans. on Neural Networks	2001-2008
• **Action Editor**	Cognitive Systems Research	2016-2019
• **Series Editor**	Springer/NECSI Series on Complex Sys	2011-2020

Current Research Interests:

Neural models of navigation; Representation analysis of AI models; NeuroAI; AI risk and safety.

Selected Publications

- Nerurkar, M. and Minai, A.A. (2026) HiRA-CAM: Preserving Fine-Grained Spatial Relevance in Gradient-Based Visual Explanations, Proceedings of the World Congress of Computational Intelligence, Maastricht, Netherlands, June 2026.
- Johnson, A., Ghizawi, O. and Minai, A.A. (2026) The Role of Grid Cells in Reducing Spatial Aliasing in Hippocampal Place Representations, Proceedings of the World Congress of Computational Intelligence, Maastricht, Netherlands, June 2026.
- Wendelken, D., Ervin, B., Arya, R. and Minai, A.A. (2026) Graph-Based Approaches to Learning Epileptogenic Zone Localization Using Stereo-EEG Recordings, Proceedings of the World Congress of Computational Intelligence, Maastricht, Netherlands, June 2026.

- Wendelken, D. et al (2026) Intracranial High-Frequency Oscillations and Epileptogenic Zone: Incorporating Neuroanatomic Variation. *Journal of Clinical Neurophysiology* 43: 129-138.
- Minai, A.A. (2025) Position Paper: Bounded Alignment: What (Not) To Expect from AGI Agents. Proceedings of the IEEE/INNS International Joint Conference on Neural Networks, Rome, Italy, July 2025.
- Minai, A.A. (2024) Deep Intelligence: What AI Should Learn from Nature's Imagination, *Cognitive Computing* 16: 2389-2404 https://doi.org/10.1007/s12559-023-10124-9
- Alabi, A., Vanderelst, D. and Minai, A.A. (2023) Rapid Learning of Spatial Representations for Goal-Directed Navigation Based on a Novel Model of Hippocampal Place Fields, *Neural Networks* 161: 116-128. https://doi.org/10.1016/j.neunet.2023.01.010
- Deshpande, A.M., Hurd, E., Minai, A.A. and Kumar, M. (2023) DeepCPG Policies for Robot Locomotion, *IEEE Transactions on Cognitive and Developmental Systems* https://doi.org/10.1109/TCDS.2023.3250393
- Kenworthy, J.B., Doboli, S., Alsayed, O., Choudhary, R., Jaed, A., Minai, A.A. and Paulus, P.B. (2022) Toward the Development of a Computer-Assisted, Real-Time Assessment of Ideational Dynamics in Collaborative Creative Groups, *Creativity Research Journal* https://doi.org/10.1080/10400419.2022.2157589
- DiCesare, C.A., Minai, A.A., Riley, M.A., Ford, K.R., Hewitt, T.E., Myer, G.D. (2020) Emergence of Distinct Coordination Strategies Associated with the Drop Vertical Jump, *Medicine and Science in Sports & Exercise* 52: 1088-1098. https://doi.org/10.1249/MSS.0000000000002235
- Lamb, M., Nalepka, P., Kallen, R., Lorenz, T., Harrison, S., Minai, A.A., and Richardson, M. (2019) A Hierarchical Behavioral Dynamic Approach for Naturally Adaptive Human-Agent Pick-and-Place Interactions, *Complexity*: Article ID 5964632, https://doi.org/10.1155/2019/5964632
- Guo, X., Dominick, K.C., Minai, A.A., Li, H., Erickson, C.A. and Lu, L.J. (2017) Diagnosing Autism Spectrum Disorder from Brain Resting-State Functional Connectivity Patterns Using a Deep Neural Network with a Novel Feature Selection Method. *Frontiers in Neuroscience* 11:460. doi: 10.3389/fnins.2017.00460
- Lamb, M., Kallen, R.W., Harrison, S.J., Di Bernardo, M., Minai, A. and Richardson, M.J. (2017) To Pass or Not to Pass: Modeling the Movement and Affordance Dynamics of a Pick and Place Task. *Frontiers in Psychology* 8:1061. doi: 10.3389/fpsyg.2017.01061
- Sarim, M., Kumar, M., Jha, R. and, Minai, A.A. (2017) Memristive Device Based Learning for Navigation in Robots, *Bioinspiration and Biomimetics* 12: 066011 https://doi.org/10.1088/1748-3190/aa7eab
- Ali A. Minai (2015) Computational Models of Cognitive and Motor Control. In **Springer Handbook of Computational Intelligence**, J. Kacprzyk and W. Pedrycz (Eds.), Springer.
- Marupaka, N., Iyer, L.R. and Minai, A.A. (2012) Connectivity and thought: The influence of semantic network structure in a neurodynamical model of thinking. *Neural Networks* **32**: 147-158.
- Byadarhaly, K.V., Perdoor, M.C. and Mina, A.A. (2012) A Modular Neural Model of Motor Synergies, *Neural* Networks 32: 96-108.
- Iyer, L.R., Doboli, S., Minai, A.A., Brown, V.R., Levine, D.S. and Paulus, P.B. (2009) Neural Dynamics of Idea Generation and the Effects of Priming, *Neural Networks*, **22**: 674-686.
- Jin, Y. Liao, Y., Minai, A.A. and Polycarpou, M.M. (2006) Balancing Search and Target Response in Cooperative Unmanned Aerial Vehicle (UAV) Teams, *IEEE Transactions on Systems, Man, and Cybernetics B* 36: 571-587.
- Zhang, X. and Minai, A.A. (2004) Temporally-Sequenced Intelligent Block-Matching and Motion-Segmentation using Locally Coupled Neural Networks, *IEEE Transactions on Neural Networks* 15: 1202-1214.
- Best, P.J., White, A.M. and Minai, A.A. (2001) Spatial Processing in the Brain: The Activity of Hippocampal Place Cells, *Annual Reviews of Neuroscience* 24: 459-486.

Public Outreach on AI: LinkedIn, Bounded Alignment @Substack

Professional Memberships: INNS (Life Member), IEEE (Life Member), Tau Beta Pi, Eta Kappa Nu