Ladislau Bölöni

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Education

2000	PhD Computer Science	**Purdue University**
1999	MSc Computer Science	**Purdue University**
1993	BSc Computer Engineering	**Technical University of Cluj-Napoca**

Research Interests

- **Robotics:** deep reinforcement learning, deep learning from demonstration, vision-based end-to-end learning, human-robot interaction
- **Artificial intelligence:** deep learning, autonomous agents, human-agent-robot teamwork
- **Social behavior modeling:** modeling social and cultural behavior
- **Networking and distributed systems:** sensor networks, cloud computing, task scheduling and resource allocation.
- **Artificial General Intelligence:** cognitive architectures, narrative reasoning

Work Experience

Professor, Dept. of Computer Science, University of Central Florida	August 2017 - present
Visiting Researcher, Université de Toulouse / ENSEEIHT, Toulouse, France	June 2019
Visiting Researcher, KTH Royal Institute of Technology, Stockholm, Sweden	August 2018 - June 2019
Associate Professor, Dept. of Computer Science, University of Central Florida	August 2008 - August 2017
Chief Software Architect, Composure.ai (formerly MosaixSoft)	February 2015 - December 2017
Visiting Researcher, University of Rome "La Sapientia", Rome, Italy	April 2012 - July 2012
Visiting Researcher, Imperial College, London, England	April 2011 - December 2011
Assistant Professor, School of EECS, University of Central Florida	August 2002 - August 2008
Product Lead for Network Traffic Engineering, CPlane Inc.	August 2002 - August 2008

Professional societies

- Senior Member of the Institute of Electrical and Electronics Engineers (IEEE) since 2005, member since 1998.
- Member of the IEEE Computer Society.
- Member of the Technical Committee on Distributed Intelligent Systems of the IEEE Systems, Man and Cybernetics Society.
- Senior member of the Association of Computing Machinery (ACM).
- Member of the American Association for Artificial Intelligence (AAAI).

Awards

- University of Central Florida Scroll & Quill Society (October 2021).
- Best Abstract Award, The 2nd Annual Women in IoT (WiT) (Virtual) Workshop: AI on the Edge Warren B. Nelms Institute for the Connected World, University of Florida for "A Privacy-Preserving Approach for Human Daily Activities Prediction", by S. Zehtabian, S. Khodadadeh, L. Bölöni and D. Turgut.
- Finalist in the XPrize Pandemic Response Challenge with the team Pandemic Wave Predictor - PAWP (S. Zehtabian, S. Khodadadeh and L. Bölöni). Highest daily ranking: 5th out of 336 registered teams.
- University of Central Florida Research Incentive Award, 2019.
- Kurzweil Best AGI Idea Prize 2014 for the paper "Autobiography based prediction in a situated AGI agent", by L. Bölöni at the Seventh Conf. of Artificial General Intelligence (AGI-2014).
- Best Paper Award for the paper "IVE: improving the value of information in energy-constrained intruder tracking sensor networks", by D. Turgut and L. Bölöni at the IEEE Int. Conf. on Communications (ICC-2013).
- NASA Software Award, August 2006 for the NASA Engineering Shuttle Telemetry Agent - NESTA.
- AAAI Deployed Application Award for the paper "NESTA: NASA Engineering Shuttle Telemetry Agent" by G.S. Semmel,

S.R. Davis, K.W. Leucht, D.A. Rowe, K.E. Smith, and L. Bölöni at the AAAI-2005 conference, July 2005.
- Member of the Upsilon Pi Epsilon Computer Sciences Honor Society, Beta Chapter of Indiana.
- Scholarship offered by Lucent Technologies for the university year 1998-99.
- Scholarship of the Hungarian Academy of Science the university year 1994-95, spent at the Analogical and Neural Computing Laboratory at the Computers and Automation Institute of Hungarian Academy of Science, working in the domain of cellular neural networks.
- Romanian Republican Scholarship in university year 1992-93 (awarded for one student in the department).
- First prize at the Romanian National Programming Contest of the students in 1990 (individual competition) and the third prize in 1991 and 1992 (with the team of the university).

Publications

Citations: 8275 (according to Google Scholar)

h-index: 39, **i10-index**: 102

Books

[1] L. Bölöni and S. Kinebuchi, *Programming KDE 3.0 (in Japanese)*. SE Shoeisha, 2002.
[2] L. Bölöni, *Programming KDE 2.0*. CMP Books, 2000.

Book Chapters

[1] I. Kulbaka, A. Duta, L. Bölöni, O. P. Kreidl, and S. Roy, "Cnn-lstm-based deep recurrent q-learning for robotic gas source localization," in *to be published in Deep Learning and Applications (extended papers from ICMLA-2024)*, Tentatively accepted, Taylor and Francis, 2024.
[2] T. Bhatia, S. Khan, and L. Bölöni, "Modeling the propagation of public perception across repeated social interactions," in *Multi-Agent-Based Simulation XIII, LNCS 7838*, 2013, pp. 13–26.
[3] D. J. Kaup, R. Oleson, T. L. Clarke, L. Malone, and L. Bölöni, "Social potential models for modeling traffic and transportation," in *Multi-Agent Systems for Traffic and Transportation*, A. L. C. Bazzan and F. Klügl, Eds., Information Science Reference, 2009, pp. 155–175.
[4] L. Luotsinen, J. Ekblad, T. Fitz-Gibbon, C. Houchin, J. Key, M. Khan, J. Lyu, J. Nguyen, R. Oleson, G. Stein, S. V. Weide, V. Trinh, and L. Bölöni, "Comparing apples with oranges: Evaluating twelve paradigms of agency," in *LNAI 4411 - Programming Multi-Agent Systems*, R. Bordini, M. Dastani, J. Dix, and A. Segrouchni, Eds. Springer LNAI, 2007, pp. 93–112.
[5] L. Bölöni, "Foreword," in *Architectural Design of Multi-Agent Systems: Technologies and Techniques*, H. Lin, Ed., Idea Group, 2006.
[6] G. S. Semmel, K. E. Smith, and L. Bölöni, "NASA engineering shuttle telemetry agent," in *John F. Kennedy Space Center 2005 Annual Report*, National Aeronautics and Space Administration, 2006.
[7] G. Semmel, S. Davis, K. Leucht, D. Rowe, K. Smith, and L. Bölöni, "Monitoring agents for assisting NASA engineers with shuttle ground processing," in *Integrated Intelligent Systems for Engineering Design*, IOS Press, 2006, pp. 305–324, ISBN: 1-58603-675-0.
[8] G. Wang, Y. Ji, D. Marinescu, D. Turgut, and L. Bölöni, "Location- and power-aware protocols for wireless networks with asymmetric links," in *Computer System Performance Modeling in Perspective: A Tribute to the Work of Prof. Kenneth C. Sevcik (Advances in Computer Science and Engineering: Texts)*, E. Gelenbe, Ed., Imperial College Press, 2006, ISBN: 1860946615.
[9] X. Bai, H. Yu, G. Wang, Y. Ji, D. Marinescu, and L. Bölöni, "Intelligent grids," in *Grid Computing: Software Environments and Tools*, Springer, 2005, pp. 45–74, ISBN: 1-85233-998-5.
[10] S. Ali, T. Braun, H. Siegel, A. Maciejewski, N. Beck, L. Bölöni, M. Maheswaran, A. Reuther, J. Robertson, M. Theys, and B. Yao, "Characterizing resource allocation heuristics for heterogeneous computing systems," in *Advances in Computers: Volume 63: Parallel, Distributed, and Pervasive Computing*, Elsevier, 2005, pp. 93–129.
[11] L. Bölöni and D. Marinescu, "Adaptation and mutation in multi-agent systems and beyond," in *Design of Intelligent Multi-Agent Systems - Human Centeredness, Architectures, Learning and Adaptation*, Springer, Dec. 2004, pp. 315–354.
[12] L. Bölöni, M. Khan, X. Bai, G. Wang, Y. Ji, and D. Marinescu, "Software engineering challenges for mutable agent systems," in *Software Engineering for Multi-Agent Systems II, Lecture Notes in Computer Science Vol 2940*, Springer, 2004, pp. 149–167.
[13] D. Marinescu and L. Bölöni, "A component-based architecture for problem solving environments," in *Computational science, mathematics and software*, R. Boisvert and E. Houstis, Eds., West Lafayette, IN, USA: Purdue University Press, 2002, ISBN: 1-55753-250-8.

[14] L. Bölöni and D. C. Marinescu, "An object-oriented framework for building collaborative network agents," in *Intelligent Systems and Interfaces*, ser. International Series in Intelligent Technologies, H. Teodorescu, D. Mlynek, A. Kandel, and H.-J. Zimmerman, Eds., Kluwer Publising House, 2000, ch. 3, pp. 31–64, ISBN: 0-7923-7763-X.

[15] L. Bölöni, K. Jun, K. Palacz, R. Sion, and D. Marinescu, "The Bond agent system and applications," in *Agent Systems, Mobile Agents, and Applications, Lecture Notes on Computer Science, vol. 1882*, D. Kotz and F. Mattern, Eds., Springer Verlag, 2000, pp. 99–112.

Journal articles

[1] J. Szőts, Z. Gyenes, E. G. Szádeczky-Kardoss, L. Bölöni, and I. Harmati, "The emergency braking game - a game theoretic approach for manuevering in a dense crowd of pedestrians," *ROBOMECH Journal (Springer)*, vol. 11, no. 2, 2024. DOI: 10.1186/s40648-023-00266-8.

[2] Z. Gyenes, B. Pajkos, L. Bölöni, and E. G. Szádeczky-Kardoss, "Motion planning for mobile robots using uncertain obstacle estimation," *IEEE Access*, vol. 12, pp. 16 856–16 867, 2024. DOI: 10.1109/ACCESS.2024.3359156.

[3] C. E. Castellon, T. Khatib, S. Roy, A. Dutta, O. P. Kreidl, and L. Bölöni, "Energy-efficient blockchain-enabled multi-robot coordination for information gathering: Theory and experiments," *Electronics, Special Issue on Special Issue Security, Privacy, Confidentiality and Trust in Blockchain*, vol. 12, no. 20, 2023. DOI: https://doi.org/10.3390/electronics12204239.

[4] Z. Gyenes, L. Bölöni, and E. G. Szádeczky-Kardoss, "Exploring the use of particle and kalman filters for obstacle detection in mobile robots," *Periodica Polytechnica Electrical Engineering and Computer Science*, 2023. DOI: 10.3311/PPee.21969.

[5] C. Castellon, S. Roy, O. P. Kreidl, A. Dutta, and L. Bölöni, "Towards a green blockchain: Engineering Merkle tree and proof of work for energy optimization," *IEEE Trans. on Network and Service Mgmt.*, pp. 3847–3857, 2022. DOI: 10.1109/TNSM.2022.3219494.

[6] Z. Gyenes, L. Bölöni, and E. G. Szádeczky-Kardoss, "Can genetic algorithms be used for real-time obstacle avoidance for LiDAR-equipped mobile robots?" *Sensors*, vol. 23, no. 6, 2023. DOI: 10.3390/s23063039. [Online]. Available: https://www.mdpi.com/1424-8220/23/6/3039.

[7] A. Dutta, S. Roy, O. P. Kreidl, and L. Bölöni, "Multi-robot information gathering for precision agriculture: Current state, scope, and challenges," *IEEE Access*, vol. 9, pp. 161 416–161 430, 2021. DOI: 10.1109/ACCESS.2021.3130900.

[8] N. Mostofa, C. Feltner, K. Fullin, J. Guilbe, S. Zehtabian, S. S. Bacanli, L. Bölöni, and D. Turgut, "A smart walker for people with both visual and mobility impairment," *Sensors, special issue on Wearable and BAN Sensors for Physical Rehabilitation and eHealth Architectures*, vol. 21, no. 10, 2021. DOI: https://doi.org/10.3390/s21103488.

[9] T. J. Burns, G. Fichthorn, J. Ling, S. Zehtabian, S. Bacanli, L. Bölöni, and D. Turgut, "Exploring the predictability of temperatures in a scaled model of a smarthome," *Sensors*, vol. 21, no. 18, p. 6052, 2021. DOI: https://doi.org/10.3390/s21186052.

[10] J. Xu, R. Rahmatizadeh, L. Bölöni, and D. Turgut, "A taxi dispatch system based on prediction of demand and destination," *Journal of Parallel and Distributed Computing*, vol. 157, no. 11, pp. 269–279, 2021. DOI: https://doi.org/10.1016/j.jpdc.2021.07.002.

[11] S. Zehtabian, S. Khodadadeh, L. Bölöni, and D. Turgut, "Modeling an intelligent controller for predictive caching in AR/VR-enabled home scenarios," *Pervasive and Mobile Computing (PMC)*, p. 101 334, Feb. 2021. DOI: https://doi.org/10.1016/j.pmcj.2021.101334.

[12] J. Xu, R. Rahmatizadeh, L. Bölöni, and D. Turgut, "Real-time prediction of taxi demand using recurrent neural networks," *IEEE Transactions on Intelligent Transportation Systems*, vol. 19, pp. 2572–2581, 8 Aug. 2018. DOI: doi:10.1109/TITS.2017.2755684.

[13] P. Gjanci, C. Petrioli, S. Basagni, C. Phillips, L. Bölöni, and D. Turgut, "Path finding for maximum the value of sensed information in multi-modal underwater wireless sensor networks," *IEEE Transactions on Mobile Computing*, vol. 17, pp. 404–418, 2 Feb. 2018.

[14] L. Bölöni, T. S. Bhatia, S. A. Khan, J. Streater, and S. M. Fiore, "Towards a computational model of social norms," *PLOS ONE*, vol. 13, no. 4, e0195331, 2018. DOI: 10.1371/journal.pone.0195331.

[15] F. Khan, S. Butt, S. Khan, D. Turgut, and L. Bölöni, "Value of information based data retrieval in UWSNs," *Sensors*, Oct. 2018. DOI: 10.3390/s18103414.

[16] L. Bölöni and D. Turgut, "Value of information based scheduling of cloud computing resources," *Future Generation Computer Systems*, vol. 71, pp. 212–220, Jun. 2017. DOI: 10.1016/j.future.2016.10.024.

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[18] J. C. Bricout, B. B. Sharma, P. M. Baker, A. Behal, and L. Bölöni, "Learning futures with mixed sentience," *Futures*, vol. 87, pp. 91–105, 2017. DOI: http://dx.doi.org/10.1016/j.futures.2016.10.001.

[19] G. Bulumelle and L. Bölöni, "Reducing side-sweep accidents with vehicle-to-vehicle communication," *Journal of Sensor and Actuator Networks*, vol. 5, no. 4, 2016. DOI: doi:10.3390/jsan5040019.

[20] S. A. Khan, D. Turgut, and L. Bölöni, "Bridge protection algorithms - a technique for fault-tolerance in sensor networks," *Ad Hoc Networks*, vol. 24, pp. 186–199, Jan. 2015. DOI: 10.1016/j.adhoc.2014.08.016.

[21] Y. Luo, D. Turgut, and L. Bölöni, "Modeling the strategic behavior of drivers for multi-lane highway driving," *Journal of Intelligent Transportation Systems*, vol. 19, no. 1, pp. 45–62, 2015. DOI: 10.1080/15472450.2014.889964.

[22] L. Bölöni, "Integrating perception, narrative, premonition and confabulatory continuation," *Biologically Inspired Cognitive Architectures*, vol. 8, pp. 118–129, Apr. 2014. DOI: 10.1016/j.bica.2014.03.008.

[23] S. Khan, V. Thakore, A. Behal, L. Bölöni, and J. J. Hickman, "Comparative analysis of system identification techniques for nonlinear modeling of the neuron-microelectrode junction," *Journal of Computational and Theoretical Nanoscience*, vol. 10, no. 3, pp. 573–580, Mar. 2013. DOI: 10.1166/jctn.2013.2736.

[24] M. A. Khan, D. Turgut, and L. Bölöni, "Optimizing coalition formation for tasks with dynamically evolving rewards and nondeterministic action effects," *Journal of Autonomous Agents and Multi-Agent Systems*, vol. 22, no. 3, pp. 415–438, 2011.

[25] A. Boukerche, B. Turgut, N. Aydin, M. Ahmad, L. Bölöni, and D. Turgut, "Routing protocols in ad hoc networks: A survey," *Computer Networks*, vol. 55, no. 13, pp. 3032–3080, Sep. 2011.

[26] D. Turgut and L. Bölöni, "Heuristic approaches for transmission scheduling in sensor networks with multiple mobile sinks," *The Computer Journal*, vol. 54, no. 3, pp. 332–344, Mar. 2011.

[27] V. Pryyma, L. Bölöni, and D. Turgut, "Active time scheduling for rechargeable sensor networks," *Computer Networks (Elsevier)*, vol. 54, no. 4, pp. 631–640, Mar. 2010.

[28] Y. Luo and L. Bölöni, "Analyzing and exploiting the competitiveness of scenarios for negotiating convoy formation under time constraints," *Multiagent and Grid Systems - an International Journal*, vol. 6, no. 5,6, pp. 415–435, Dec. 2010, Special Issue of Advances in Agent-mediated Automated Negotiations, ISSN: 1574-1702.

[29] G. Wang, D. Turgut, L. Bölöni, and D. Marinescu, "Time-parallel simulation of wireless ad hoc networks," *ACM/Springer Journal of Wireless Networks (WINET)*, vol. 15, no. 4, pp. 463–480, 2009.

[30] G. Wang, L. Bölöni, D. Turgut, and D. Marinescu, "Time-parallel simulation of wireless ad hoc networks with compressed history," *Journal of Parallel and Distributed Computing (JPDC)*, vol. 69, no. 2, pp. 168–179, Feb. 2009.

[31] J. Secretan, M. Lawson, and L. Bölöni, "Efficient allocation and composition of distributed storage," *Journal of Supercomputing*, vol. 47, no. 3, pp. 286–310, Mar. 2009.

[32] X. Bai, L. Bölöni, D. C. Marinescu, H. J. Siegel, R. A. Daley, and I.-J. Wang, "Utility and price based resource allocation models for large-scale distributed systems," *Journal of Parallel and Distributed Computing*, vol. 68, no. 2, pp. 182–199, 2008.

[33] G. Wang, D. Turgut, L. Bölöni, Y. Ji, and D. Marinescu, "A MAC layer protocol for wireless networks with asymmetric links," *Ad Hoc Networks*, vol. 6, no. 3, pp. 424–440, May 2008.

[34] L. Bölöni, L. J. Luotsinen, J. N. Ekblad, T. R. Fitz-Gibbon, C. Houchin, J. Key, M. A. Khan, J. Lyu, J. Nguyen, R. Oleson, G. Stein, S. V. Weide, and V. Trinh, "A comparison study of 12 paradigms for developing embodied agents," *Software: Practice and Experience*, vol. 38, no. 3, pp. 259–305, 2008.

[35] G. Wang, D. Turgut, L. Bölöni, Y. Ji, and D. Marinescu, "Improving routing performance through m-limited forwarding in power-constrained wireless networks," *Journal of Parallel and Distributed Computing (JPDC)*, vol. 68, pp. 501–514, 4 2008.

[36] L. Bölöni and D. Turgut, "Should I send now or send later? A decision-theoretic approach to transmission scheduling in sensor networks with mobile sinks," *Wireless Communications and Mobile Computing Journal (WCMC)*, vol. 8, no. 3, pp. 385–403, 2008.

[37] L. Bölöni, M. Khan, and D. Turgut, "Agent-based coalition formation in disaster response applications," *International Journal of Intelligent Control and Systems*, vol. 12, no. 2, pp. 107–117, 2007.

[38] X. Bai, K. Sivoncik, D. Turgut, and L. Bölöni, "Grid coordination with marketmaker agents," *International Journal of Computational Intelligence*, vol. 3, no. 2, pp. 153–160, 2006.

[39] G. Semmel, S. Davis, K. Leucht, D. Rowe, K. Smith, and L. Bölöni, "NESTA: NASA engineering shuttle telemetry agent," *AI Magazine*, vol. 27, no. 3, pp. 25–35, 2006.

[40] G. Semmel, S. Davis, K. Leucht, D. Rowe, K. Smith, and L. Bölöni, "Space shuttle ground processing with monitoring agents," *IEEE Intelligent Systems*, vol. 21, no. 1, pp. 68–73, Jan. 2006.

[41] L. Bölöni, D. Turgut, and D. C. Marinescu, "Task distribution with a random overlay network," *Future Generation Computer Systems (Elsevier)*, vol. 22, no. 6, pp. 676–687, 2006.

[42] X. Bai, G. Wang, Y. Ji, G. Marinescu, D. Marinescu, and L. Bölöni, "Coordination in intelligent grid environments," *Proceedings of the IEEE*, vol. 93, no. 3, pp. 613–630, 2005.

[43] M. Khan, S. Vaithianathan, K. Sivoncik, and L. Bölöni, "Towards an agent framework for grid computing," *International Scientific Journal of Computing*, vol. 2, no. 3, 2003.

[44] L. Bölöni and D. Marinescu, "Robust scheduling of metaprograms," *Journal of Scheduling*, vol. 5, no. 5, pp. 395–412, Sep. 2002.

[45] D. Marinescu and L. Bölöni, "Biological metaphors in the design of complex software systems," *Journal of Future Generation Computer Systems*, vol. 17, no. 4, pp. 345–360, 2001.

[46] T. Braun, H. Siegel, N. Beck, L. Bölöni, M. Maheswaran, A. Reuther, J. Robertson, M. Theys, B. Yao, D. Hensgen, and R. Freund, "A comparison of eleven static heuristics for mapping a class of independent tasks onto heterogeneous distributed computing systems," *Journal of Parallel and Distributed Computing*, vol. 6, no. 61, pp. 810–837, Jun. 2001.
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[51] L. Bölöni, "Neural dynamics of the Kohonen feature map applied in speech recognition," *Journal of Automation, Computers and Applied Mathematics*, vol. 3, no. 1, 1994.

Conference papers

[1] I. Kulbaka, A. Dutta, O. P. Kreidl, L. Bölöni, and S. Roy, "GDM-Net: Gas distribution mapping with a mobile robot using deep reinforcement learning and gaussian process regression," in *Proc. of the 2024 IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (IROS-2024)*, Abu Dhabi, Oct. 2024.
[2] S. Almohaimeed, S. Almohaimeed, and L. Bölöni, "Transfer learning and lexicon-based approaches for implicit hate speech detection: A comparative study of human and GPT-4 annotation," in *Proc. of 18th IEEE International Conference on Semantic Computing (ICSC-2024)*, Feb. 2024. DOI: 10.1109/ICSC59802.2024.00028.
[3] T. Khatib, P. Kreidl, A. Dutta, L. Bölöni, and S. Roy, "On GAN-based data integrity attacks against robotic spatial sensing," in *Proc. of the 37th International FLAIRS Conference (FLAIRS-2024)*, Feb. 2024.
[4] J. Sutton, A. Dutta, O. P. Kreidl, L. Bölöni, and S. Roy, "Disease spread monitoring in agriculture fields with robots using neural network-based prediction and weighted path planning," in *submitted to IEEE Int. Conf. on Systems, Man and Cybernetics (SMC-2024)*, Oct. 2024.
[5] S. Matloob, A. Dutta, O. P. Kreidl, S. Roy, and L. Bölöni, "LAIP: Learned adaptive inspection paths using offline reinforcement learning," in *to be published in Proc. of 23rd IEEE/WIC Int. Conf. on Web Intelligence and Intelligent Agent Technology (WI-IAT-2024)*, Dec. 2024.
[6] T. Khatib, O. P. Kreidl, A. Dutta, L. Bölöni, and S. Roy, "Robotic information gathering via deep generative inpainting," in *Proc. of IEEE Conf. on Systems, Man and Cybernetics (SMC-2023)*, 2023, pp. 3130–3137. DOI: 10.1109/SMC53992.2023.10394444.
[7] D. Turgut, O. P. Kreidl, A. Dutta, and L. Bölöni, "Confidence-guided path planning for mobile sensors," in *Proc. of IEEE Global Communications Conference (GlobeCom-2023)*, Kuala Lumpur, Malaysia, Dec. 2023, pp. 5925–5930. DOI: 10.1109/GLOBECOM54140.2023.10437189.
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[10] J. Xue, Y. Liu, M. Zheng, T. Hua, Y. Shen, L. Bölöni, and Q. Lou, "TrojPrompt: A black-box trojan attack on pre-trained language models," in *37th Conf. on Neural Information Processing Systems (NeurIPS-2023)*, Dec. 2023.
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[12] S. Khodadadeh, S. Ghadar, S. Motiian, W.-A. Lin, and L. Bölöni, "Latent to latent: A learned mapper for identity preserving editing of multiple face attributes in StyleGAN-generated images," in *Proc. of Winter Conference on Applications of Computer Vision (WACV-2022)*, Waikoloa, HI, Jan. 2022, pp. 3184–3192.
[13] S. Zehtabian, S. Khodadadeh, D. Turgut, and L. Bölöni, "Predicting infections in the Covid-19 pandemic - lessons learned," in *Proc. of 5th International Workshop on Health Intelligence (W3PHIAI)*, Feb. 2022.
[14] H. Sheikh, M. Phielipp, and L. Bölöni, "Maximizing ensemble diversity in deep reinforcement learning," in *Proc. of International Conference on Learning Representations (ICLR-2022)*, Apr. 2022.
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[145] L. Bölöni and D. Marinescu, "Robust scheduling of metaprograms," in *Proceedings of 8-th Heterogeneous Computing Workshop HCW'99*, San Juan, Puerto Rico: IEEE Computer Society, Apr. 1999, pp. 146–155.

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[147] T. Braun, H. Siegel, N. Beck, L. Bölöni, R. F. Freund, D. Hensgen, M. Maheshwaran, A. Reuther, J. Robertson, M. Theys, and B. Yao, "A taxonomy for describing matching and scheduling heuristics for mixed-machine heterogeneous computing systems," in *Proceedings of the 17th IEEE Symposium on Reliable Distributed Systems*, West Lafayette, USA, Oct. 1998, p. 330.

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Talks

- Guest seminar: "Perspectives on AI and LLMs in Computer Science undergraduate education", Department of Computer Science, Technical University of Cluj-Napoca, Romania, June 18, 2024.
- Guest seminar: "Applications of AI in exploratory path planning for agricultural robots", Department of Automation, Technical University of Cluj-Napoca, Romania, June 17, 2024.
- Guest seminar: "Balancing learning paradigms with real world data constraints", Polytechnique Montréal, November 2, 2023
- Guest seminar: "Deep learning without big data", Adobe Applied Machine Learning, September 28, 2020
- Guest seminar: "Deep learning without big data", Université de Toulouse / ENSEEIHT, Toulouse, France, June 14, 2019
- Guest seminar: "Deep learning without big data", FOI Swedish Defense Institute, Stockholm, Sweden, April 23, 2019
- Guest seminar: "Apply AI in your field of choice for fun and profit", University of Darmstadt, Germany, March 22, 2019
- Guest seminar: "Apply AI in your field of choice for fun and profit", NEC Labs, Heidelberg, Germany, March 22, 2019
- Guest seminar: "End-to-end learning in robotics", ETH Zürich, Switzerland, March 1, 2019.
- Guest seminar: "Apply AI in your field of choice for fun and profit", University of Bern, Switzerland, February 27, 2019.
- Guest seminar: "Apply AI in your field of choice for fun and profit", IMDEA Networks Research Institute, Madrid, Spain, November 30, 2018.
- Guest seminar: "Apply AI in your field of choice for fun and profit", KTH Royal Institute of Technology, Stockholm, Sweden, October 4, 2018.
- Guest seminar: "Apply AI in your field of choice for fun and profit", "University of New South Wales, Sydney, Australia, May 28, 2018.
- IEEE I2CE/IoTDI 2018 Joint Panel with the theme "Implications of AI on IoT and Cloud Systems", Wednesday, April 18, 2018.
- Guest seminar: "Autobiographical reasoning, the Xapagy cognitive architecture and implications for the Global Brain", Oct 24, 2014, Vrije Universiteit Brussel, Global Brain Institute (part 1: `https://www.youtube.com/watch?v=hOdAEMODkjQ`, part 2: `https://www.youtube.com/watch?v=uBp1iq0i62U`).
- Panel participant at the Conference of Artificial General Intelligence AGI-2014 - `https://www.youtube.com/watch?v=kVE4slsIP`
- Guest seminar: "A pragmatic value of information approach to intruder tracking sensor networks", May 16, 2012, University of Perugia, Italy.
- Guest seminar: "Try and bounce: a stealthy dissemination protocol for intruder tracking sensor networks", May 22, 2012 University of Bologna, Italy.
- Guest seminar: " A pragmatic value-of-information approach for intruder tracking sensor networks", May 23, 2012, University of Rome Tor Vergata, Italy.
- Guest seminar: " Making in-network data processing decisions based on pragmatic value of information", June 11, 2012, GENESI consortium, Catania, Italy.
- Guest seminar: "Xapagy: a cognitive architecture for narrative reasoning", University of East London, England, November 2011.
- Guest seminar: "Xapagy: a cognitive architecture for narrative reasoning", King's College, London, England, November 2011.
- Guest seminar: "Xapagy: a cognitive architecture for narrative reasoning", Imperial College, London, England, October 2011.
- Guest seminar: "Agent-based modeling of a complex social interactions", FOI Swedish Institute of Defense, Stockholm, Sweden, September 2011.
- Guest seminar: "The utility perspective on wireless sensor networks", at Naval Research Laboratory (NRL), Washington DC, October 2008.
- Guest seminar: "Role-Based Teamwork Activity Recognition in Observations of Embodied Agent Actions," at Kadir Has University, Turkey, June 2008.
- Guest seminar: "Role-Based Teamwork Activity Recognition in Observations of Embodied Agent Actions," at Technical University of Cluj-Napoca, Romania, June 2008.
- Invited presentation: "Creating a set of sample documents for the OpenDocument specification", aKademy-2006 - Shaping

the future of the free desktop, Trinity College Dublin, September 2006.
- The present and future of multi-agent architectures. Panel Discussion - Software Engineering for Large-Scale Multi-Agent Systems (SELMAS-2005).

Teaching

Fall 2024

CAP 5636 - Advanced Artifial Intelligence

Fall 2023

CAP 5636 - Advanced Artifial Intelligence

CAP 4611 - Algorithms for Machine Learning

CAP 5610 - Introduction to Machine Learning

Fall 2022

CAP 5636 - Advanced Artifial Intelligence

CNT 5008 - Computer Networks

CAP 4611 - Algorithms for Machine Learning

Spring 2022

COP 4600 - Operating Systems

Fall 2021

CAP 5636 - Advanced Artifial Intelligence

CNT 5008 - Computer Networks

Spring 2021

COP 4600 - Operating Systems

Fall 2020

COP 4600 - Operating Systems

CAP 5636 - Advanced Artificial Intelligence

CNT 5008 - Computer Communications Networks Architecture

Spring 2020

COP 4600 - Operating Systems

Fall 2019

CAP 5636 - Advanced Artificial Intelligence

CNT 5008 - Computer Communications Networks Architecture

Fall 2017

CAP 5636 - Advanced Artificial Intelligence

CDA 5106 - Computer Architecture

Fall 2016

CAP 5636 - Advanced Artificial Intelligence

CDA 5106 - Computer Architecture

Fall 2015

COP 4600 - Operating Systems

Fall 2014

COP 4600 - Operating Systems

Spring 2014

COP 4600 - Operating Systems

Fall 2013

COP 4600 - Operating Systems

Spring 2013

COP 4600 - Operating Systems

Fall 2012

COP 4600 - Operating Systems

8.1 Spring 2011

EEL 4781 - Computer Communication Networks

Fall 2010

EEL 4781 - Computer Communication Networks

EEL 6785 - Computer Network Design

Spring 2010

EEL 6788 - Advanced topics in wireless networks (focus on urban computing)

Fall 2009

EEL 4781: Computer Communication Networks

Spring 2009

COP 4600: Operating systems

Fall 2008

EEL 4781: Computer Communication Networks

Spring 2008

EEL 6788 - Advanced topics in wireless networks - Wireless sensor networks, a multi-agent perspective

Spring 2008

COP 5611 - Operating systems

Fall 2007

EEL 6897 - Software Development for Real-Time Engineering Systems

Spring 2007

EEL 4851 - Data Structures

EEL 6938 - Engineering applications of autonomous agents

Fall 2006

EEL 5708 - High Performance Computer Architectures

Summer 2006

EEL 3801C - Introduction to Computer Engineering

Spring 2006

EEL 5937 - ST: Multi agent systems

Fall 2005

EEL 4851 - Data Structures

Fall 2005

EEL 5708 - High Performance Computer Architectures

Summer 2005

EEL 4882 - Engineering Systems Software

Spring 2005

EEL 6938 - Engineering Applications of Autonomous Agents

Fall 2004

EEL 5708 - High Performance Computer Architectures

Summer 2004

EEL 3801C - Introduction to Computer Engineering

EEL 4882 - Engineering Systems Software

Spring 2004

EEL 3801C - Introduction to Computer Engineering

Fall 2003

EEL 5708 - High Performance Computer Architectures

Spring 2003

EEL 5937 Special topics: Multi agent systems

Fall 2002

EEL 5708 - High Performance Computer Architectures

Students

PhD Students

- **Samuel Matloob**
  PhD CS, since August 2021, topic: Multi-robot informative path planning
- **Sahar Sheikholeslami**
  PhD CS, since August 2023, topic: Deep learning techniques in robotics
- **Garvit Banga**
  PhD CS, since August 2025, topic: Gradient compression and metalearning, co-advised with Aritra Dutta
- **Anthony Bilic**
  PhD CS, since June 2025, topic: Computer vision for robotics, co-advised with Chen Chen

PhD Alumni

- **Saad Almohaimeed**
  PhD CS, Spring 2025
  Title: *Advanced Large Language Model approaches and natural language processing techniques to improve hate speech detection using AI*
- **Siavash Khodadadeh**
  PhD CS, Summer 2021
  Title: *Unsupervised meta-learning*
  Currently at: DeepMind.
- **Sharare Zehtabian**
  PhD CS, Fall 2021
  Title: *Human behavior in domestic environments: prediction and applications* - co-advised with Damla Turgut.
  Currently at: Pinterest.
- **Hassam Ullah Sheikh**
  PhD CS, Fall 2020
  Title: *Multi-agent reinforcement learning for defensive escort teams*
  Currently at: Intel Research.
- **Pooya Abolghasemi**
  PhD CS, Fall 2019
  Title: *Task focused robotic imitation learning*
  Currently at: Youtube.
- **Rouhollah Rahmatizadeh**
  PhD CS, Fall 2017
  Title: *Learning robotic manipulation from user demonstrations.*
  Currently at: Ximpatico Robotics.
- **Gamini Bulumulle**
  PhD CpE, Spring 2017
  Title: *Reducing side-sweep accidents with vehicle-to-vehicle communications.*
- **Taranjeet Singh**
  PhD, Summer 2016
  Title: *A Quantitative Framework For Social Cultural Interactions.*
  Currently at: Oracle.
- **Saad Ahmad Khan**
  PhD, Spring 2016.
  Title: *Towards Improving Human-Robot Interaction For Social Robots*
  Currently at: Blue River.
- **Yi Luo**
  PhD, May 2011.
  Title: *Spatio-temporal negotiation in multi-agent systems*
  Currently at: Microsoft.

- **Majid Ali Khan**
  PhD, December 2007.
  Title: *Coalition formation and teamwork in embodied agents*
  Currently at Prince Mohammad Bin Fahd University, Saudi Arabia.
- **Linus Luotsinen**
  PhD, December 2007.
  Title: *Learning teamwork in embodied agents*
  Currently at: Saab.
- **Xin Bai**
  PhD., May 2006, coadvised with Dan C. Marinescu.
  Title: *Coordination, matchmaking, and resource allocation for large-scale distributed systems*

MSc Alumni

- **Rouhollah Rahmatizadeh**
  MSc., August 2014
  Title: *Energy efficient routing towards a mobile sink using virtual coordinates in a wireless sensor network*
  Currently: continuing for PhD.
- **Scott Vander Welde**
  MSc., August 2008
  Title: *Dynamic task allocation in mobile robot systems using utility functions*
- **Linus Luotsinen**
  MSc., June 2004
- **Paul DeJung**
  MSc., January 2005

PhD dissertation committee member

- **Han Yu**
  PhD., November 2005, advisor Dan C. Marinescu.
- **Guoqiang Wang**
  PhD., June 2007, advisors Damla Turgut and Dan C. Marinescu.
- **Victor Hung**
  PhD., May 2009, advisor Avelino Gonzalez.
- **Jimmy Secretan**
  PhD., Fall 2009, advisor Michael Georgiopoulos.
- **Cynthia Johnson**
  PhD., Spring 2011, advisor Avelino Gonzalez.
- **Kennard Laviers**
  PhD, June 2011, advisor Gita Sukthankar
- **Mike Curtis - (Applied Experimental & Human Factors Psychology)**
  PhD, October 2011, advisor Florian Jentsch
- **Zhao Wang**
  PhD, December 2011, advisor Aman Behal
- **Ghaith Haddad**
  PhD, Fall 2013, advisor Gary T. Leavens
- **Brent Horine**
  PhD, Fall 2013, advisor Damla Turgut
- **Keith Brawner**
  PhD, Summer 2013, advisor Avelino Gonzalez
- **Mustafa Ilhan Akbas**
  PhD, Fall 2013, advisor Damla Turgut

- **Bennie Lewis**
  PhD, Spring 2014, advisor Gita Sukthankar
- **Mahsa Maghami**
  PhD, Spring 2014, Dissertation title: "Identifying influential agents in social systems", advisor Gita Sukthankar
- **Rahmatollah Beheshti**
  PhD, UCF, Spring 2015, Dissertation: *Modeling Social Norms in Real-World Agent-based Simulations*, advisor Gita Sukthankar
- **Guang Shu**
  PhD, Computer Engineering, UCF, Fall 2014, Dissertation: *Human Detection and Tracking in Surveillance Video*, advisor Mubarak Shah
- **Kun Zhang**
  PhD, Electrical Engineering, UCF, Spring 2015, Dissertation: *Lyapunov-based Robust and Adaptive Control Design for Nonlinear Uncertain Systems*, advisor Aman Behal
- **Nicolas Paperno**
  PhD, Electrical Engineering, UCF, Summer 2016, Dissertation: *Modeling and Compensation for Efficient Human Robot Interaction*, advisor Aman Behal
- **Navid Kardan**
  PhD, Computer Science, UCF, Summer 2019, Dissertation: *Towards More Reliable Neural Network Models*, advisor Ken Stanley
- **Amir Jabalameli**
  PhD, Electrical Engineering, UCF, Spring 2019, Dissertation: *Autonomous Robotic Grasping*, advisor Aman Behal
- **Zhangchi Ding**
  PhD, Electrical Engineering, UCF, Fall 2019, Dissertation: *Nonlinear Control Synthesis for Facilitation of Human-Robotics Interaction*, advisor Aman Behal
- **Saif Mohammed Alabachi**
  PhD Computer Science, Fall 2019, Dissertation: *Guided Autonomy for Quadcopter Photography*, advisor Gita Sukthankar
- **Vera Kazakova**
  PhD Computer Science, Spring 2020, Dissertation: *Decentralized Adaptable Task Allocation for Ongoing Tasks*, advisor Annie S. Wu and Gita Sukthankar
- **Amir Mazaheri**
  PhD Computer Science, Spring 2020, Dissertation: *Video Content Understanding Using Text*, advisor Mubarak Shah
- **Samaneh Saadat**
  PhD Computer Science, Dissertation: *Analyzing User Behavior in Collaborative Environments*, advisor Gita Sukthankar
- **Yangdong Li**
  PhD Computer Science, Dissertation: *Learning accurate and robust deep visual models*, advisors Liqiang Wang and Boqing Gong
- **Sayyed Jaffar Ali Raza**
  PhD Computer Science, Fall 2021, Dissertation: *Reinforcement learning algorithms for high dimensional systems*, advisor Mingjie Lin
- **Zerong Xi**
  PhD Computer Science, Spring 2023, Dissertation: *Reinforcement learning and planning*, advisor Gita Sukthankar
- **Ramya Akula**
  PhD Computer Science, Fall 2022, Dissertation: *Toxic and figurative language detection and evaluation metric for abstractive and extractive summarization in social media content*, advisor: Ivan Garibay.
- **Shengnan Hu**
  PhD Computer Science, Fall 2023, Dissertation: *Using graph convolutional networks to analyze coordinated behavior*, advisor Gita Sukthankar.
- **Abduljaleel Al Rubaye**
  PhD Computer Science, Spring 2024, Dissertation: Github uncovered: revealing the social fabric of software development communities", advisor Gita Sukthankar.

- **Astrid Jackson**
  Topic: Robotics, reinforcement learning, learning from demonstration, advisor Gita Sukthankar
- **Krishna Regmi**
  Topic: Cross-view images (aerial and ground) for synthesis and matching/geo-localization, advisor Mubarak Shah
- **Yifan Huang**
  Topic: Modeling Online Social Behavior with A Deep Network Learning Framework
- **Sina Masnadi**
  Topic: Using affordances to define object's behaviors, advisor: Joe LaViola.
- **Daniel (Dongdong) Wang**
  Topic: knowledge distillation and transfer learning with deep neural network, advisor Liqiang Wang.
- **Muhammad Hasan Maqbool**
  Topic: NLP/CV, advisor: Hassan Foroosh
- **Muhammad Junaid Khan**
  Topic: Deep learning and multi-agent systems, advisor: Gita Sukthankar
- **Alexander Goponenko**
  Topic: scheduling HPC clusters, advisor: Damian Dechev
- **Marc Jean**
  Topic: Q-learning algorithms for angle of arrival detection in milimeter wave, advisor: Murat Yuksel
- **Rohit Gupta**
  Topic: Contrastive learning for robust video understanding, advisor: Mubarak Shah
- **Mehdi Yazdani-Jahromi**
  Topic: Deep learning, transformers etc, advisor: Özlem Garibay
- **Babak Ebrahimi Soorchaei**
  Topic: Machine vision applied to connected vehicle technologies, advisor Yaser Fallah.
- **Saleh Almohaimeed**
  Topic: Semantic parsing in text-to-code applications, advisor Liqiang Wang.
- **Mykola Maslych**
  Topic: Streamlining the user study collection process by generating synthetic participant data, advisor Joseph LaViola.
- **Matthew Kyle**
  PhD Mathematics, graph theory, advisor Yue Zhao
- **Syed Hammad Ahmed**
  A multimodal framework for automated content moderation of children's videos, advisor Gita Sukthankar
- **Elijah Cadenhead**
  Gradient compression to try to communicate less data between computers in distributed training while trying to maintain accuracy in the model, PhD student in Math, advisor Aritra Dutta
- **Jack Vice**
  Reinforcement learning for off-road robotic navigation, advisor Gita Sukthankar
- **Zaheen Syed** Optical wireless communication for mobile aerial platforms, advisor Murat Yuksel

Master's thesis committee member

- **Rohan Gudla**
  MSc. CS. planned Spring 2025, "Water treatment dataset processing with bilateral LSTM", advisor Ni-bin Chang
- **Shahzeb Mustafa**
  MSc. CpE. planned Spring 2022, "Optimizing Peer Selection among Internet Service Providers (ISPs)", advisor Murat Yuksel
- **Alexander Matasa**
  MSc. CS. planned Spring 2021, "Person identification using gait analysis", advisor Yogesh Rawat

- **Ammar Farooq**
  MSc. CS, planned Spring 2021, "Binary State Distance Vector Routing for Disconnection-Tolerant Networks", advisor Murat Yuksel
- **Reamonn Norat**
  MSc. CS, Spring 2020, "Improving Usability of Genetic Algorithms Through Self-Adaptation on Static and Dynamic Environments", advisor Annie S. Wu
- **Juncheng Pan**
  Statistical relationship prediction in social network analysis, advisor Gita Sukthankar.
- **Awrad Mohammed Ali**
  Social modeling in multi-agent systems
- **Md. Shahriar Iqbal**
  MSc., Fall 2014, Thesis title: "Learning to Grasp Unknown Objects Using Weighted Random Forest Algorithm From Selective Image and Point Cloud Feature", advisor Aman Behal.
- **Nicholas Paperno**
  MSc, Spring 2015, Thesis title: "Modified system design and implementation of an intelligent assistive robotic manipulator", advisor Aman Behal
- **Kiran Prakash**
  MSc, Spring 2016, Thesis title: "Smart Grasping using Laser and Tactile Array Sensors for UCF MANUS – An Intelligent Assistive Robotic Manipulator", advisor Aman Behal
- **Nicholas Califano**
  MSc, Fall 2020 Thesis title: "Using drones for visual inspection of facilities at NASA", advisor Gita Sukthankar

Service

Journal editorial activity

- Associate editor, The Visual Computer (Springer) (2020-2021)
- Member of the editorial board, International Journal of Ad Hoc and Ubiquitous Computing (IJAHUC), Inderscience Publishers (2010-2021)
- Member of the editorial board, EAI Endorsed Transactions on Collaborative Computing (TCC) (2010-2015)
- Associate editor, International Journal of Parallel, Emergent and Distributed Systems (IJPEDS), Taylor and Francis (2006-2015)
- Senior Editor, ACM Transactions on Human-Robot Interaction (THRI), prior name Journal of Human-Robot Interaction (2010-2014)

Journal reviewer

- IEEE Transactions on Parallel and Distributed Systems (2006, 2007, 2008, 2010, 2013).
- Journal of Parallel and Distributed Computing - JPDC (2005, 2007).
- IEEE Transactions on Systems, Man and Cybernetics, Part A (2004, 2006, 2007, 2008, 2009, 2011, 2013).
- IEEE Transactions on Systems, Man and Cybernetics, Part B (2006, 2007).
- IEEE Transactions on Computers (2009, 2010, 2013, 2016)
- IEEE Transactions on Sustainable Computing (2018)
- Ad Hoc Networks Journal, Elsevier (2007).
- Pervasive and Mobile Computing, Elsevier (2009)
- Distributed and Parallel Databases Journal (2006).
- Software Practice and Experience (2005).
- The Computer Journal (2016)

- Journal of Computers and Electrical Engineering (2005).
- International Journal of Knowledge-Based & Intelligent Engineering Systems (KES Journal) (2005, 2008, 2009, 2012).
- Future Generation Computer Systems Journal (2008, 2009, 2010).
- International Journal of Agent Oriented Software Engineering (IJAOSE) (2009)
- International Journal of Computer Communications (2012)
- International Journal of Communication Systems (2012, 2013)
- International Journal of Ad Hoc and Ubiquitous Computing (IJAHUC) (2012-2020)
- SENSORS Journal (MDPI) (2009, 2018-2020)
- Mobile Networks and Applications (2011)
- Computer Communications (2012)
- Journal of Artificial Societies and Social Simulation (2012)
- Marine Technology Society (MTS) Journal (2013)
- Security and Communication Networks (SCN) Journal (Wiley) (2013)
- Computers and Security (Elsevier) (2013)
- Journal of Zhejiang University Science C (Computers & Electronics) (2014)
- AEÜ International Journal of Electronics and Communications (Elsevier) (2014)
- Computational & Mathematical Organization Theory (CMOT) (Elsevier) (2014)
- Electronics and Telecommunications Research Institute (ETRI) Journal of South Korea (2014)
- Entropy Journal (2015).
- International Journal of Artificial Intelligence Tools (2018)
- Accident Analysis and Prevention (2018)
- IEEE Internet of Things Journal (2018)
- IEEE Vehicular Technology Magazine (2020)
- IEEE Transactions on Vehicular Technology (2020)
- IEEE Transactions on Intelligent Transportation Systems (2020)
- SN Applied Sciences (2020)
- Pervasive and Mobile Computing (2021)
- Pattern Recognition Letters (2020, 2024)
- Pattern Recognition (2020)
- PLOS One (2020)
- The Visual Computer (2020, 2021)
- IEEE Transactions on Systems, Man and Cybernetics: Systems (2020).
- Journal of Cleaner Production (2020)
- MDPI Applied Sciences (2020)
- MDPI Sensors (2020-24)

Conferences

All service activities are memberships in Program Committee, unless otherwise noted.

- Local arrangements chair, First International Conference on Multimedia Services Access Networks, Orlando FL, June 13-15, 2005.
- Third International Workshop on Software Engineering for Large-scale Multi-agent Systems (SELMAS-2004) included in the International Conference on Software Engineering (ICSE-2004), Edinburgh, Scotland, May 23-28, 2004.
- Workshop co-chair: Special Session: Knowledge Management for the Intelligent Grid KES'2004 8th International Conference on Knowledge-Based Intelligent Information & Engineering Systems
- 3rd Workshop on Ambient intelligence at the Fourth International Joint Conference on Autonomous Agents & Multi-Agent Systems (AAMAS 2005) Ultrecht, The Netherlands, July 25-26, 2005
- Applied Computing 2006 conference.
- Workshop co-chair: Special Session: Knowledge Management for the Intelligent Grid 10th International Conference on Knowledge-Based Intelligent Information & Engineering Systems (KES-2006), Bournemouth, United Kingdom, October 9-11, 2006.
- 2nd International Conference on Intelligent Computer Communication and Processing (ICCP-2006), Cluj-Napoca, Romania, September 1-2, 2006.
- IADIS International Conference of Wireless Applications and Computing 2007 Lisbon, Portugal, July 6-8, 2007.
- Special track on Contextual Reasoning at the 2007 FLAIRS Conference, Key West, Florida, May 7-9, 2007.
- 3nd International Conference on Intelligent Computer Communication and Processing (ICCP-2007), Cluj-Napoca, Romania, September 6-8, 2007.
- First International Workshop on Mobile and Ubiquituous Context Aware Systems and Applications (MUBICA 2007), In conjunction with the 4th Annual Int. Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services, Philadelphia, August 6, 2007.
- International Conference on Complex Open Distributed Systems (CODS-2007).
- IEEE SMC International Conference on Distributed Human-Machine Systems (DHMS-2008).
- 2nd International Conference on Bio-Inspired Models of Network, Information, and Computing Systems (BIONETICS-2007), Budapest, Hungary, December 10-12, 2007.
- International Joint Conference on Biomedical Engineering Systems and Technologies (BIOSTEC-2008).
- International Instrumentation & Measurement Technology Conference (I2MTC-2008), May 12-15, 2008, Victoria, BC, Canada.
- 4-th International Workshop on Sensor Networks and Systems for Pervasive Computing, in conjunction with IEEE Percom 2008, March 17-21, 2008, Hong Kong.
- 2008 IEEE International Conference on Systems, Man, and Cybernetics (SMC 2008), Oct. 2008, Singapore.
- 4th International Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom2008), November 13 - 16, 2008, Orlando, Florida, USA.
- Local Arrangements Chair of the 4th International Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom2008), November 13 - 16, 2008, Orlando, Florida, USA.
- Third International Conference on Bio-Inspired Models of Network, Information, and Computing Systems (BIONETICS 2008), Nov 25-28th, 2008, Awaji Island, Japan.
- 2008 IEEE International Conference on Intelligent Computer Communication and Processing (ICCP'08), August 28-30, 2008, Cluj-Napoca, Romania.
- 5-th International Workshop on Sensor Networks and Systems for Pervasive Computing (PerSens'2009) in conjunction with PERCOM 2009 March 9-13, 2009 Galveston, Texas.
- International Instrumentation and Measurement Technology Conference (I2MTC 2009).
- 2nd International Workshop on Agent-mediated, Complex Automated Negotiation (ACAN'09), part of AAMAS'09, Budapest, May 2009.

- 30th IEEE Real-Time Systems Symposium (RTSS 2009), December 1 - 4, 2009 Washington, D.C., USA
- The 5th International Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom 2009), Crystal City, Washington D.C., USA, November 11-14, 2009
- 2009 International Conference on Intelligent Computer Communication and Processing (ICCP-2009), Cluj-Napoca, Romania, August 27-29, 2009.
- Sixth IEEE International Workshop on Sensor Networks and Systems for Pervasive Computing (PerSeNS 2010), Mannheim, Germany, March 29-April 2, 2010.
- 12th International Conference onPrinciples of Practice in Multi-Agent Systems, Nagoya, Japan, Dec 13 - 16, 2009.
- 8th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA), Hammamet, Tunisia, May 16-19th, 2010.
- International Instrumentation and Measurement Technology Conference (I2MTC 2010).
- 7th International Symposium "From Agent Theory to Agent Implementation" (AT2AI-7).
- 2010 Wireless Applications and Computing (WAC 2010) Conference.
- 2010 Workshop on Optimization in Multi-Agent Systems (OptMAS-10)
- 2010 International Conference on Intelligent Computer Communication and Processing (ICCP-2010), Cluj-Napoca, Romania, August 26 - 28, 2010.
- IEEE International Workshop on Sensor Networks and Systems for Pervasive Computing (PerSeNS 2011), Seattle, March 21-25, 2011.
- IEEE International Conference on Systems, Man and Cybernetics - SMC-2011, Anchorage, Alaska, Oct 9-12, 2011.
- Wireless Sensor Networks: theory and practice - WSN-2011, Paris - France, February 7-10, 2011.
- Workshop on Challenges in Resource Constrained Systems, in conjunction with the CTS 2011 Conference (Philadephia, May 23-27, 2011).
- Program Committee member and workshop co-chair, 7th International Conference on Collaborative Computing: Networking, Applications and Worksharing - CollaborateCom 2011 (Orlando, October 2011).
- Fourth International Workshop on Optimisation in Multi-Agent Systems (OptMas-2011).
- Local arrangements chair, The 14th ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWIM 2011), October 31- November 4, 2011 Miami Beach, FL, USA.
- 2011 International Conference on Intelligent Computer Communication and Processing (ICCP-2011), Cluj-Napoca, Romania, August 25 - 27, 2011.
- 17th IEEE International Conference on Networks (ICON-2011), Singapore, December 14-16, 2011.
- 8th IEEE International Workshop on Sensor Networks and Systems for Pervasive Computing (PerSeNS 2012), Lugano, Switzerland, March 19-23, 2012.
- 5th Agent-based Complex Automated Negotiations Workshop (ACAN 2012), Valencia, Spain, June 2012.
- Workshop on Wireless Sensor Networks: Architectures, Deployments, and Trends (WSN-ADT), as part of NTMS-2012, Istanbul, Turkey, May 7-10, 2012.
- IEEE Globecom 2012, Ad Hoc and Sensor Networking Symposium (AHSN-2012), Anaheim, California, December 2012.
- Local Computer Networks Conference (LCN-2012), Clearwater Beach, Florida, December 2012.
- 8th International Conference on Collaborative Computing: Networking, Applications and Worksharing - CollaborateCom 2012 (Pittsburgh, October 2012).
- 18th IEEE International Conference on Networks (ICON-12), (Singapore, December 2012).
- Reviewer Committee member, 2012 IEEE International Conference on Systems, Man, and Cybernetics (SMC 2012), Seoul, Korea, October 2012.
- IEEE ICC 2013 - Ad-hoc and Sensor Networking Symposium, Budapest, Hungary, June 2013.
- Reviewer, 8th Annual Cyber Security and Information Intelligence Research Workshop, Oak Ridge National Laboratory, October 2013

- IEEE CCNC Smart Spaces and Sensor Networks, Las Vegas, January 2013.
- IEEE Globecom 2013, Ad Hoc and Sensor Networking Symposium (AHSN-2013), December 9-13, 2013, in Atlanta, Georgia, USA.
- BRIMS 2013, 22-nd International Conference in Behavior Representation in Modeling Simulation, March 11-14, San Antonio, Texas.
- The Tenth IEEE International Conference on Mobile Ad-hoc and Sensor Systems (IEEE MASS 2013), Hangzhou, China, during October 14-16, 2013.
- The Sixth International Workshop on Agent-based Complex Automated Negotiations (ACAN2013), May 5-6, 2013, Saint Paul, Minnesota.
- The twenty-seventh AAAI conference, Bellevue, Washington, July 2013, AAAI-2013.
- 9th International Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom2013), in Austin, TX, on Oct 13 - 16, 2013. USA.
- IEEE 38th IEEE Conference on Local Computer Networks (LCN-2013), Oct 21-24, 2013, Sydney, Australia.
- 2013 International Conference on Intelligent Computer Communication and Processing (ICCP-2013), Cluj-Napoca, Romania, September 5 - 7, 2013.
- IEEE International Conference on Systems, Man and Cybernetics (SMC-2013), Manchester UK, October 13-16, 2013.
- 9th IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob 2013), Lyon, France, October 7-9, 2013.
- NTMS Workshop on Wireless Sensor Networks: Architectures, Deployments, and Trends (WSN-ADT), Dubai, United Emirates, March 30 - April 2, 2013.
- 2013 International Conference on Connected Vehicles & Expo (ICCVE 2013), Las Vegas, December 2013.
- Thirteenth International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS-2014).
- IEEE CCNC Smart Spaces and Sensor Networks, Las Vegas, January 2014.
- 2014 International Conference on Selected Topics in Mobile and Wireless Networking (MoWNet-2014).
- Eight International Workshop on Agents in Traffic and Transportation (ATT-2014) at AAMAS-2014.
- 7th International Workshop on Agent-based Complex Automated Negotiations (ACAN-2014) at AAMAS-2014.
- 23rd Annual Conference on Behavior Representation in Modeling & Simulation (BRIMS-2014), Washington DC, 2014.
- 2014 IEEE International Conference on Systems, Man, and Cybernetics (SMC 2014), Oct. 5-8, 2014, San Diego, California.
- Senior TPC member, IEEE 39th IEEE Conference on Local Computer Networks (LCN-2014), Sep. 8-11, 2014, Edmonton, Canada.
- 10th IEEE International Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom-2014), Miami, Florida, United States, October 20-22, 2014.
- 10th IEEE International Conference on Intelligent Computer Communication and Processing (ICCP-2014), Cluj-Napoca, Romania, October 2014.
- 15th IEEE International Conference on Information Reuse and Integration (IRI-2014), August 13-15, 2014, San Francisco.
- 2015 IEEE International Conference on Communications (ICC-2015)
- Fourteenth International Conference on Autonomous Agents and Multiagent Systems (AAMAS-2015)
- Senior TPC member, IEEE 40h IEEE Conference on Local Computer Networks (LCN-2015), October 26-29, 2015, Clearwater Beach, Florida.
- Fourth International Workshop on Human-Agent Interaction Design and Models (HAIDM 2015), Istanbul, May 4-8, 2015.
- Eighth International Workshop on Agent-based Complex Automated Negotiation (ACAN 2015), Istanbul, May 4-8, 2015.
- IEEE International Conference on Information Reuse and Integration (IRI 2015), San Francisco, CA, August 13-15, 2015.
- IEEE Local Computer Networks Conference (LCN 2015), Clearwater Beach, FL, October 26-29, 2015.
- IEEE Global Communications Conference (GlobeCom 2015), San Diego CA, December 6-10, 2015

- 11th IEEE International Conference on Intelligent Computer Communication and Processing (ICCP-2015), Cluj-Napoca, Romania, September 2015.
- 1st IEEE International Conference on Collaboration and Internet Computing, Hangzhou, China, October 27 - October 30, 2015.
- IEEE ICC 2016 Ad-hoc and Sensor Networking Symposium, Kuala Lumpur, Malaysia, May 23-27, 2016.
- IEEE ICC 2016 Mobile and Wireless Networking Symposium, Kuala Lumpur, Malaysia, May 23-27, 2016.
- Ninth International Workshop on Agents in Traffic and Transportation (ATT-2016), held at the 25th International Joint Conference on Artificial Intelligence, New York, July 9-11, 2016.
- 17th IEEE International Conference on Information Reuse and Integration (IRI-2016), Pittsburgh, Pennsylvania, USA, July 28-30, 2016.
- 2016 IEEE Global Communications Conference: Communications Software, Services and Multimedia Apps (Globecom CSSMA-16), Dec 4-8, 2016, Washington DC, USA.
- ACAN 2016 : The Ninth International Workshop on Agent-based Complex Automated Negotiations (ACAN-2016).
- IEEE 2nd International Conference on Collaboration and Internet Computing (CIC-2016).
- Global Communications Conference: Mobile and Wireless Networks (Globecom-2016), December 4-8, 2016, Washington, DC.
- Fifth International Workshop on Human-Agent Interaction Design and Models (HAIDM-16) co-located with IJCAI 2016, July 9-11 2016.
- IEEE ICC 2017 Ad-Hoc and Sensor Networking Symposium, Paris, France, May 21-25, 2017.
- IEEE ICC 2017 Mobile and Wireless Networking Symposium, Paris, France, May 21-25, 2017.
- 2016 IEEE International Conference on Intelligent Computer Communication and Processing (ICCP-2016), Cluj-Napoca, Romania, September 8 - 10, 2016.
- The Tenth International Workshop on Agent-based Complex Automated Negotiations, held at AAMAS-2017, May 8-9, 2017.
- International Joint Conference on Artificial Intelligence 2017, Melbourne Australia, August 2017.
- Senior TPC member, IEEE Local Computer Networks Conference (LCN 2017), 42nd IEEE Conference on Local Computer Networks (LCN), October 9-12, 2017, Singapore
- 2017 IEEE Global Communications Conference: Ad Hoc and Sensor Networks, December 4-8, 2017, Singapore.
- 13th IEEE International Conference on Intelligent Computer Communication and Processing (ICCP-2017), Cluj-Napoca, Romania, September 7-9, 2017.
- IEEE ICC-2018 Ad-Hoc and Sensor Networking Symposium, May 20-24, 2018, Kansas City.
- Seventeenth International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2018).
- International Workshop on Agents in Traffic and Transportation 2018 (ATT-2018).
- 2019 IEEE Global Communications Conference: Ad Hoc and Sensor Networks, December 8-12, 2019, Waikoloa, Hawaii.
- 2018 IEEE 14th International Conference on Intelligent Computer Communication and Processing (ICCP-2018) - Cluj-Napoca, Romania Sept 6-8, 2018.
- IEEE ICC-2019 Ad-Hoc and Sensor Networking Symposium, May 20-24, 2019, Shanghai, China.
- Eighteenth International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2019), May 13-17, 2019, Montreal, Canada.
- 28th International Joint Conference on Artificial Intelligence (IJCAI-2019), Macao, China.
- IEEE Conference on Computers, Software and Applications (COMPSAC-2019), ASYS: Autonomous Systems symposium.
- 3rd Workshop on AI for Aging, Rehabilitation and Independent Assisted Living (ARIAL@IJCAI 2019)
- 2019 IEEE 15th International Conference on Intelligent Computer Communication and Processing (ICCP 2019)
- IEEE ICC-2020 Ad-Hoc and Sensor Networking Symposium, June 7-11, 2020, Dublin, Ireland.

- International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS-2020), May 9-13, 2020, Auckland, New Zealand.
- 29th International Joint Conference on Artificial Intelligence (IJCAI-2020) and the 17th Pacific Rim International Conference on Artificial Intelligence (PRICAI-2020), Yokohama, Japan, July 11-17, 2020.
- 11th International Workshop on Agents in Traffic and Transportation, held in conjunction with 24th European Conference on Artificial Intelligence, Santiago de Compostela, Spain, June 8-12, 2020.
- 2020 IEEE Global Communications Conference: Ad Hoc and Sensor Networks Symposium, Xinyi District, Taipei City, Taiwan, December 7-11, 2020.
- 2020 IEEE Global Communications Conference: Communication Software, Services & Multimedia Apps. Symposium, Xinyi District, Taipei City, Taiwan, December 7-11, 2020.
- IEEE ICC-2021 IoT and Sensor Networks Symposium, June 7-11, 2020, (Virtual Conference).
- IEEE ICCP 16th International Conference on Intelligent Computer Communication and Processing, September 3-5, 2020, Cluj Napoca, Romania.
- 20th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2021) 3-7 May 2021, London-UK
- Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI 2021) - virtual conference.
- Winter Conference on Applications of Computer Vision 2021 (WACV-2021) - virtual conference.
- International Conference on Machine Learning 2021 (ICML-2021) - virtual conference July 18-24, 2021.
- 2021 IEEE Global Communications Conference: IoT and Sensor Networks symposium
- Thirty-Fifth Conference on Neural Information Processing Systems (NeurIPS 2021)
- Workshop on AI for Aging, Rehabilitation and Independent Assisted Living (ARIAL@IJCAI 2021)
- 2021 IEEE Global Communications Conference: Communications Software, Services and Multimedia Apps (Globecom CSSMA-21), Dec 7-11, 2021, Madrid, Spain.
- WACV 2022, Waikoloa, Hawaii, January 4-8, 2022.
- 2021 IEEE 17th International Conference on Intelligent Computer Communication and Processing, luj-Napoca, Romania, October 28-30, 2021
- International Conference on Machine Learning 2022 (ICML-2022) - Baltimore, MD, July 17-23, 2022.
- Senior Program Committee (SPC) Member for the Thirty-Sixth AAAI Conference on Artificial Intelligence (AAAI-22), Vancouver, BC, Canada, February 22-March 1, 2022
- 2022 IEEE Global Communications Conference: IoT and Sensor Networks Symposium, December 4-8, 2022, Rio de Janeiro, Brazil.
- 2022 IEEE Global Communications Conference: Communications Software and Multimedia Symposium, December 4-8, 2022, Rio de Janeiro, Brazil.
- Neural Information Processing Systems (NeurIPS 2022), New Orleans Nov 28-Dec 9, 2022.
- Vehicular Technology Conference (VTC2022) Spring Recent Results and Workshops, Helsinki, Finland, June 19-22, 2022.
- 5th Workshop on AI for Aging, Rehabilitation, and Intelligent Assisted Living (ARIAL-2022) at IEEE International Conference on Data Mining (ICDM-2022), Orlando, Florida from November 30- December 3, 2022.
- 2022 IEEE 18th International Conference on Intelligent Computer Communication and Processing, Cluj-Napoca, Romania, September 22-24, 2022.
- 2023 IEEE International Conference on Communications (ICC-2023): IoT and Sensor Networks Symposium May 28-June 1, 2023, Rome, Italy.
- International Conference on Learning Representations (ICLR-2023), Kigali Rwanda, May 1-5, 2023.
- 33rd British Machine Vision Conference. 21st - 24th November 2022, London, UK.
- International Conference on Autonomous Agents and Multiagent Systems 2023 (AAMAS-2023)
- Fortieth International Conference on Machine Learning (ICML-2023)

- 26th European Conference on Artificial Intelligence (ECAI-2023)
- Global Communications Conference: Mobile and Wireless Networks Symposium(Globecom-2023), December 4-8, 2023, Kuala Lumpur, Malaysia.
- Global Communications Conference: Communications Software and Multimedia (Globecom-2023), December 4-8, 2023, Kuala Lumpur, Malaysia.
- Neural Information Processing Systems (NeurIPS 2023), New Orleans, Dec 10-Dec 16, 2023.
- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS-2023), Detroit October 1-5, 2023.
- 6th Workshop on AI for Aging, Rehabilitation, and Intelligent Assisted Living (ARIAL-2023) in conjunction with ECML-2023.
- IEEE/CVF Winter Conference on Applications of Computer Vision (WACV-2024), Waikoloa, HI, January 3-7, 2024.
- IEEE 19th International Conference on Intelligent Computer Communication and Processing, Cluj-Napoca, Romania, October 26-28, 2023.
- 22nd IEEE International Conference on Machine Learning and Applications (ICMLA-2023)
- 2024 IEEE International Conference on Communications (ICC-2024): IoT and Sensor Networks Symposium June 9-13, 2024, Denver, CO.
- The 23rd International Conference on Autonomous Agents and Multi-Agent Systems, May 6-10, 2024. Aucland, New Zealand.
- 23nd IEEE International Conference on Machine Learning and Applications (ICMLA-2024)
- Forty-first International Conference on Machine Learning (ICML-2024)
- European Conference on Computer Vision (ECCV-2024)
- 2024 IEEE Global Communications Conference: Communications Software and Multimedia (Globecom 2024 CSM)
- 2024 IEEE Global Communications Conference: IoT and Sensor Networks (Globecom 2024 IoTSN)
- The Thirty-eighth Annual Conference on Neural Information Processing Systems (NeurIPS-2024)
- 2024 IEEE 20th International Conference on Intelligent Computer Communication and Processing, (ICCP-2024), Cluj Napoca, Romania.
- IEEE/CVF Winter Conference on Applications of Computer Vision (WACV-2025), February 28 - March 4, 2025, Tucson, Arizona.
- 24th International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS-2025)
- Thirty-Ninth AAAI Conference on Artificial Intelligence (AAAI-2025)
- The Thirteenth Int. Conference on Learning Representations (ICLR-2025)
- The 28th International Conference on Artificial Intelligence and Statistics (AISTATS-2025)
- The IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR-2025)
- 2025 IEEE International Conference on Communications (ICC-2025): IoT and Sensor Networks Symposium. Montreal, Canada June 8-12, 2025.
- Forty-second International Conference on Machine Learning (ICML-2025). Vancouver July 13-19, 2025.
- The 34th International Joint Conference on Artificial Intelligence (IJCAI-25). Montreal Canada, August 2025. (Senior PC member)
- The 2025 International Conference on Computer Vision (ICCV-2025), Honolulu, Hawaii October, 2025.
- The Thirty-ninth Annual Conference on Neural Information Processing Systems (NeurIPS-2025), San Diego, December 2025.
- European Conference on Artificial Intelligence (ECAI-2025)
- Conference on Robot Learning (CORL-2025)

Panel discussions

- SELMAS-2005 panel on the present and future of multi-agent architectures.
- AGI-2014, panel 6 - `https://www.youtube.com/watch?v=kVE4slsIP_s`
- IEEE I2CE/IoTDI 2018 Joint Panel with the theme "Implications of AI on IoT and Cloud Systems", Wednesday, April 18, 2018

Department and college level commitees

- Member, teaching incentive (TIP) award commitee, College of Engineering and Computer Science, 2002-2003.
- Member, graduate committee, Electrical and Computer Engineering Dept., University of Central Florida, 2002-2003 and 2003-2004.
- Member, faculty search committee, Electrical and Computer Engineering Dept, University of Central Florida, 2004-2005.
- Member, faculty search committee, School of Electrical Engineering and Computer Science, University of Central Florida, 2006-2007.
- Member, Curriculum Oversight and Review Committee (CORC) for the EE program 2006-2007.
- Chair, Technical Reports Committee, School of Electrical Engineering and Computer Science, University of Central Florida, 2009-2010.
- Member, Strategic Planning Committee, School of Electrical Engineering and Computer Science, University of Central Florida, 2009-2010.
- Member, Dept of EECS Computer Science Curriculum Oversight and Review Committee, 2010-2014.
- Member, Lecturer Promotion Committee, 2013-2014.
- Member, Visiting Lecturer / Instructor Search Committee, 2013-2014.
- Chair, Faculty Search Committee for the positions of Information Technology, Digital Forensics, Security and Human-Computer Interaction, 2014-2015.
- Member, Faculty Search Committee, 2015-2016.
- Chair, Lecturer Promotion Committee, 2019-2020, 2020-2021
- Member, Computer Science representative on the CECS Sabbatical Committee, 2020-2023
- Member, Curriculum Oversight and Review Committee (CORC) for the Computer Engineering program.
- Member, Curriculum Oversight and Review Committee (CORC) for the Computer Science program.
- Member, Executive Committee for the Computer Science department.
- Member, promotion to full professor subcommittee for Dr. Annie Wu. (2023)
- Member and chair, promotion and tenure subcommittee for Dr. Chen Chen. (2023)
- Chair, Promotion and Tenure Committee for the Computer Science Department (2023-2024)
- Member, Annual Evaluation Standards and Procedures Review Committee, 2024.

University level commitees

- Member, UCF Faculty Senate, 2014-2018.
- Faculty Senate's Graduate Program Review and Awards Committee (2014-2016)
- Member, search committee at Institute for Simulation and Training for a Robotics Research Assistant Professor. (2015)
- Member, UCF doctoral fellowships committee (2015-2017)
- Member, Faculty Search Committee for Disability, Aging, and Technology cluster (2018-2019)
- Member, Faculty Search Committee for Disability, Aging, and Technology cluster (2019-2020)
- Member, COVID-19 App for UCF Workgroup (2019)
- Member, UCF Faculty Senate, 2021-2024

- Member, Faculty Senate's Health and Safety Crisis Response Ad Hoc Committee, 2021-2022
- Member, University Master Planning Committee, 2022-2025
- Chair, Artificial Intelligence Initiative, Faculty Search Committee 2022-2023

Advisory boards

- Member of the advisory board, SUNRISE project, an international project between University La Sapienza Rome, The Centre for Maritime Research and Experimentation, University of Porto, Evologics, Suasis Underwater Systems and University of Twente. The project aims to set up permanent testbeds remotely accessible for experimenting in heterogeneous underwater domains (2012-2016)