

# Thomas C Eskridge

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## EDUCATION

- Ph.D.     Philosophy: Philosophy, Computers, and Cognitive Science  
           Binghamton University, 2012.  
           Dissertation: Continuous Flow Analogical Reasoning
- M.S.     Computer Science  
           Southern Illinois University, Carbondale, 1987.  
           Thesis: Analogical Problem Solving
- B.S.     Computer Science  
           Southern Illinois University, Carbondale, 1986.

## APPOINTMENTS

- 2024–     Florida Institute of Technology  
           Professor, Department of Computer Science and Human-Centered Design and  
           L3Harris Institute for Assured Information and  
           Florida Tech Research Institute (FTRI)
- 2015–24   Florida Institute of Technology  
           Associate Professor, Department of Computer Science and Human-Centered Design and  
           L3Harris Institute for Assured Information
- 2014–15   Florida Institute of Technology  
           Research Associate Professor, L3Harris Institute for Assured Information

## PROFESSIONAL EXPERIENCE

- 2012–15   Institute for Human and Machine Cognition  
           Research Scientist, Human-centered computing and visualization
- 2001–12   Institute for Human and Machine Cognition  
           Research Associate, Human-centered computing and visualization
- 1992–01   Intelligent Reasoning Systems, Inc.  
           Founder, Chief Scientist, Automated Visual Inspection
- 1990–92   Computing Research Laboratory, New Mexico State University  
           Computing Specialist II, Model-based Reasoning
- 1989–90   Lockheed Missiles and Space Corporation  
           Senior Scientific Programmer, Spatial Computing and Organizational Movement

## RESEARCH AREAS

Human-centered, human-aware artificial intelligence

Visualization for explainability and human performance enhancement

Human-automation teamwork

## PUBLICATIONS

### CONFERENCES

- 2024 F. Yaman, T. C. Eskridge, R. Scott, L. Lin, J. Miller, and D. Carpenter. “Nudging automated planners with learned user preferences.” In: *invited submission to 16th International Conference on Agents and Artificial Intelligence*. ICAART 2024. 2024.
- 2023 K. Momose, T. Weekes, T. Eskridge, and D. Kidwell. “Trust and Reliance in Compositional Control Teams.” In: *Workshop on Trust and Reliance in AI-Human Teams (TRAIT)*. CHI EA ’23. Hamburg, Germany: Association for Computing Machinery, 2023.
- K. Momose, T. Weekes, and T. C. Eskridge. “Simulation of Human Input Devices in a Variable Gravity Environment for Commercial Space Transportation, *Best Paper Award*.” In: *14th International Conference on Applied Human Factors and Ergonomics (AHFE 2023)*. 2023.
- K. Momose, T. Weekes, R. Mehta, C. Wright, J. Moukpe, and T. Eskridge. “Patterns of Effective Human-Agent Teams.” In: *Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems*. CHI EA ’23. Hamburg, Germany: Association for Computing Machinery, 2023. ISBN: 9781450394222. DOI: 10.1145/3544549.3585608. URL: <https://doi.org/10.1145/3544549.3585608>.
- T. Weekes, K. Momose, and T. C. Eskridge. “Neuroergonomics of Control Input Devices in Spaceship Cockpits for Spaceflight Participants.” In: *14th International Conference on Applied Human Factors and Ergonomics (AHFE 2023)*. 2023.
- 2022 H. Ghunaim, T. R. Weekes, and T. C. Eskridge. “Designing an AI Assistant for Student Telehealth: A Case Study Using Human-Centered Design.” In: *2022 IEEE 3rd International Conference on Human-Machine Systems (ICHMS)*. 2022, pp. 1–6. DOI: 10.1109/ICHMS56717.2022.9980800.
- K. Momose, T. Weekes, and T. C. Eskridge. “Preliminary Insights into Enhancing Human-Robot Teamwork.” In: *presented at FCRAR 2022*. 2022.
- T. Weekes and T. C. Eskridge. “Design Thinking the Human-AI Experience of Neurotechnology for Knowledge Workers.” In: *HCI International 2022 Late Breaking Work - Papers Proceedings*. Springer, 2022.
- T. Weekes and T. C. Eskridge. “Responsible Human-Centered Artificial Intelligence for the Cognitive Enhancement of Knowledge Workers.” In: *HCI International 2022 Late Breaking Work - Papers Proceedings*. Springer, 2022.
- 2021 T. Weekes and T. C. Eskridge. “Personal Flow and Effortless Attention in Knowledge Work using Active Inference.” In: *accepted for presentation at COGNITO 2021: Active Inference and Collective Intelligence*. 2021.

- 2020 T. C. Eskridge and T. R. Weekes. "Opportunities for Case-based Reasoning in Personal Flow and Productivity Management." In: *Proceedings of the 28th International Conference on Case-based Reasoning (ICCBR-2020)*. Ed. by I. Watson and R. Weber. 2020.
- T. R. Weekes and T. C. Eskridge. "A Neurofeedback-Driven Humanoid to support Deep Work." In: *Proceedings of the 33rd Florida Conference on Recent Advances in Robotics*. May 2020.
- T. R. Weekes and T. C. Eskridge. "Policy-based Recommendations in a Flow Choice Architecture." In: *Cognitive Economics Virtual Conference (CES2020)*. Cognitive Economics Society. 2020.
- F. Yaman, T. C. Eskridge, A. Adler, M. Atighetchi, B. I. Simidchieva, S. Jeter, J. Cassetti, and J. DeMatteis. "An Autonomous Resiliency Toolkit for Cyber Defense Platforms." In: *Proceedings of the 12th International Conference on Agents and Artificial Intelligence, ICAART 2020, Volume 2, Valletta, Malta, February 22-24, 2020*. Ed. by A. P. Rocha, L. Steels, and H. J. van den Herik. SCITEPRESS, 2020, pp. 240–248. DOI: 10.5220/0009142702400248. URL: <https://doi.org/10.5220/0009142702400248>.
- 2019 T. Weekes and T. C. Eskridge. "Nudging into Flow: Optimizing Productivity with a Choice Architecture." In: *Cognitive Economics Workshop*. Cognitive Economics Society. London, UK, Nov. 2019.
- 2018 S. Bhattacharyya, T. C. Eskridge, N. A. Neogi, M. Carvalho, and M. Stafford. "Formal Assurance for Cooperative Intelligent Autonomous Agents." In: *NASA Formal Methods*. Ed. by A. Dutle, C. Muñoz, and A. Narkawicz. Cham: Springer International Publishing, 2018, pp. 20–36. ISBN: 978-3-319-77935-5.
- F. Nembhard, M. M. Carvalho, and T. C. Eskridge. "Extracting Knowledge from Open Source Projects to Improve Program Security." In: *2018 IEEE SoutheastCon*. Ed. by C. Pitts and J. Howard. 2018.
- 2017 S. Bhattacharyya, T. C. Eskridge, N. Neogi, and M. M. Carvalho. "Formal Assurance for Cognitive Architecture Based Autonomous Agent." In: *Proceedings of the 9th NASA Formal Methods (NFM 2017) Symposium*. Moffett Field, CA; United States, May 2017.
- T. C. Eskridge and M. Carvalho. "Federated Command and Control Infrastructure for Adaptive Computer Network Security." In: *2017 DHS S&T Cybersecurity Showcase*. 2017.
- F. Nembhard, M. M. Carvalho, and T. C. Eskridge. "A Hybrid Approach to Improving Program Security." In: *Proceedings of the 2017 IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2017)*. 2017.
- 2016 M. Atighetchi, B. Simidchieva, T. C. Eskridge, and N. Paltzer. "Using ontologies to quantify attack surfaces." In: *Proceedings of Semantic Technologies in Intelligence, Defense, and Security (STIDS 2016)*. 2016.
- M. Atighetchi, B. Benyo, T. C. Eskridge, and D. Last. "A decision engine for configuration of proactive defenses - challenges and concepts." In: *Proceedings of 2016 Resilience Week (RWS)*. 2016, pp. 8–12. DOI: 10.1109/RWEEK.2016.7573299.
- S. Bhattacharyya, T. C. Eskridge, and M. Carvalho. "Formal Verification of Intelligent Systems Modeled as Decision Procedures." In: *Proceedings of the Safe and Secure Systems and Software Symposium (S<sup>2</sup>-2016)*. 2016.

- S. Bhattacharyya, T. C. Eskridge, M. Carvalho, and J. Davis. "Verification of Decision Procedures Modeled in Intelligent Agents." In: *High Confidence Software and Systems 2016*. Annapolis, MD, May 2016.
- M. Carvalho, T. C. Eskridge, M. Atighetchi, and C. N. Paltzer. "Semi-automated wrapping of defenses (SAWD) for cyber command and control." In: *MILCOM 2016 - 2016 IEEE Military Communications Conference*. Nov. 2016, pp. 19–24. DOI: 10.1109/MILCOM.2016.7795295.
- M. Carvalho and T. C. Eskridge. "(FC2) A Federated Command and Control Infrastructure." In: *2016 DHS Cybersecurity Division R&D Showcase and Technical Workshop*. 2016.
- T. C. Eskridge, S. Bhattacharyya, and M. Carvalho. "Verification of Security Response." In: *Proceedings of the Safe and Secure Systems and Software Symposium (S5-2016)*. 2016.
- 2015 M. Carvalho, T. C. Eskridge, K. Ferguson-Walter, and N. Paltzer. "MIRA: A support infrastructure for cyber command and control operations." In: *Resilience Week (RWS), 2015*. IEEE. 2015, pp. 1–6.
- T. C. Eskridge, M. Carvalho, F. Nembhard, H. Thotempudi, and P. J. Polack. "Interactive Visualization of Netflow Traffic." In: *2015 European Intelligence and Security Informatics Conference (EISIC)*. Manchester, UK, 2015, pp. 188–188. DOI: 10.1109/EISIC.2015.51.
- T. C. Eskridge, M. M. Carvalho, E. Stoner, T. Toggweiler, and A. Granados. "VINE: A Cyber Emulation Environment for MTD Experimentation." In: *Proceedings of the Second ACM Workshop on Moving Target Defense*. MTD '15. ACM. Denver, Colorado, USA: Association for Computing Machinery, 2015, pp. 43–47. DOI: 10.1145/2808475.2808486. URL: <https://doi.org/10.1145/2808475.2808486>.
- 2014 K. C. W. Liang, M. Johnson, T. Eskridge, and B. Keller. "AOA: Ambient obstacle avoidance interface." In: *Robot and Human Interactive Communication, 2014 RO-MAN: The 23rd IEEE International Symposium on*. 2014, pp. 18–23. DOI: 10.1109/ROMAN.2014.6926224. URL: <http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6926224>.
- X. Zhou, M. Petrovic, T. C. Eskridge, M. M. Carvalho, and X. Tao. "Exploring Netflow Data using Hadoop." In: *Proceedings of the 2014 ASE BIGDATA/SOCIALCOM/CYBERSECURITY Conference*. Stanford University, May 2014.
- 2013 J. Bradshaw, M. Carvalho, L. Bunch, T. Eskridge, P. Feltovich, C. Forsythe, R. Hoffman, M. J. Johnson, D. Kidwell, and D. Woods. "Coactive emergence as a sensemaking strategy for cyber operations." In: *ICST (Institute for Computer Science, Social Informatics, and Telecommunications Engineering) Transactions on Security and Safety. Special section on The Cognitive Science of Cyber Defense Analysis*. 2013.
- J. M. Bradshaw, A. Uszok, M. Breedy, L. Bunch, T. Eskridge, P. Feltovich, M. Johnson, J. Lott, and M. Vignati. "The KAoS policy services framework." In: *Proc. 8th Cyber Security and Information Intelligence Research Workshop*. 2013.
- M. Carvalho, T. C. Eskridge, L. Bunch, A. Dalton, R. Hoffman, J. M. Bradshaw, P. J. Feltovich, D. Kidwell, and T. Shanklin. "MTC2: A command and control framework for moving target defense and cyber resilience." In: *Resilient Control Systems (ISRCS), 2013 6th International Symposium on*. IEEE. 2013, pp. 175–180.

- M. M. Carvalho, T. C. Eskridge, L. Bunch, J. M. Bradshaw, A. Dalton, P. Feltovich, J. Lott, and D. Kidwell. "A human-agent teamwork command and control framework for moving target defense (MTC2)." In: *Proceedings of the Eighth Annual Cyber Security and Information Intelligence Research Workshop*. ACM. 2013, p. 38.
- P. J. Polack Jr, M. Carvalho, and T. C. Eskridge. "Visualizing Multi-Agent Systems." In: *EEE/WIC/ACM International Conference on Web Intelligence*. 2013.
- 2012 L. Bunch, J. M. Bradshaw, M. Carvalho, T. Eskridge, P. J. Feltovich, J. Lott, and A. Uszok. "Human-agent teamwork in cyber operations: supporting co-evolution of tasks and artifacts with Luna." In: *German Conference on Multiagent System Technologies*. Springer. 2012, pp. 53–67.
- L. Bunch, J. M. Bradshaw, T. Eskridge, P. J. Feltovich, J. Lott, A. Uszok, and M. Carvalho. "Policy-Based Governance within Luna: Why We Developed Yet Another Agent Framework." In: *Web Intelligence and Intelligent Agent Technology (WI-IAT), 2012 IEEE/WIC/ACM International Conferences on*. Vol. 3. IEEE. 2012, pp. 250–256.
- M. Carvalho, J. Bradshaw, L. Bunch, T. Eskridge, P. Feltovich, R. Hoffman, J. Lott, and D. Kidwell. "A human-agent teamwork approach to moving target defense command and control." In: *Poster presented at the Moving Target Research Workshop, Washington, DC*. 2012.
- M. Carvalho, J. Bradshaw, L. Bunch, T. Eskridge, P. Feltovich, R. Hoffman, J. Lott, and D. Kidwell. "A human-agent teamwork approach to moving target defense command and control." In: *Poster presented at the Moving Target Research Workshop, Washington, DC*. 2012.
- 2010 A. Uszok, J. M. Bradshaw, T. Eskridge, and J. Hanna. "Rapid Creation and Deployment of Communities of Interest Using the CMap Ontology Editor and the KAoS Policy Services Framework." In: *Networked Digital Technologies*. Ed. by F. Zavoral, J. Yaghob, P. Pichappan, and E. El-Qawasmeh. Vol. 87. Communications in Computer and Information Science. Springer Berlin Heidelberg, 2010, pp. 451–466. ISBN: 978-3-642-14292-5. DOI: 10.1007/978-3-642-14292-5\_46. URL: [http://dx.doi.org/10.1007/978-3-642-14292-5\\_46](http://dx.doi.org/10.1007/978-3-642-14292-5_46) [http://link.springer.com/chapter/10.1007%2F978-3-642-14292-5\\_46](http://link.springer.com/chapter/10.1007%2F978-3-642-14292-5_46).
- 2009 T. C. Eskridge, D. Lecoutre, M. Johnson, and J. M. Bradshaw. "Network Situational Awareness: A Representative Study." In: *Software Engineering (Workshops)*. Ed. by J. Münch and P. Liggesmeyer. Lecture Notes in Computer Science. Gesellschaft für Informatik, Bonn, 2009, pp. 175–182.
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- 2006 A. J. Cañas, G. Hill, L. Bunch, R. Carff, T. Eskridge, and C. Pérez. "KEA: A Knowledge Exchange Architecture Based on Web Services, Concept Maps, and CmapTools." In: *Concept maps: theory, methodology, technology: Proceedings of the Second International Conference on Concept Mapping*. San José, Costa Rica: Universidad de Costa Rica, 2006.

- T. Eskridge, P. Hayes, R. Hoffman, and M. Warren. "Formalizing the informal: A confluence of concept mapping and the semantic web." In: *Concept maps: theory, methodology, technology. Proceedings of the second international conference on concept mapping*. Vol. 1. 2006, pp. 247–254.
- T. C. Eskridge, A. Granados, and A. J. Cañas. "Ranking concept map retrieval in the CmapTools network." In: *Concept maps: theory, methodology, technology. Proceedings of the Second International Conference on Concept Mapping*. Ed. by A. J. Cañas and J. Novak. Vol. 1. Universidad de Costa Rica, 2006, pp. 477–484.
- 2005 J. W. Coffey and T. Eskridge. "Knowledge Acquisition and Modeling in a Technical Knowledge Domain." In: *Proceedings of the 9th World MultiConference on Systemics, Cybernetics and Informatics (SCI2005)*. 2005.
- J. W. Coffey and T. Eskridge. "Knowledge Acquisition and Modeling in a Technical Knowledge Domain." In: *Proceedings of the 9th World MultiConference on Systemics, Cybernetics and Informatics (SCI2005)*. 2005.
- P. Hayes, T. C. Eskridge, M. Mehrotra, D. Bobrovnikoff, T. Reichherzer, and R. Saavedra. "COE: tools for collaborative ontology development and reuse." In: *Knowledge Capture Conference (K-CAP)* 2005. Banff, CA, 2005, pp. 1–6.
- P. Hayes, T. C. Eskridge, R. Saavedra, T. Reichherzer, M. Mehrotra, and D. Bobrovnikoff. "Collaborative knowledge capture in ontologies." In: *Proceedings of the 3rd International Conference on Knowledge Capture*. ACM. 2005, pp. 99–106.
- 2004 A. J. Cañas, G. Hill, R. Carff, N. Suri, J. Lott, T. Eskridge, G. Gómez, M. Arroyo, and R. Carvajal. "CmapTools: A knowledge modeling and sharing environment." In: *Concept maps: Theory, methodology, technology. Proceedings of the first international conference on concept mapping*. Ed. by A. Cañas, J. Novak, and F. González. Vol. 1. Universidad Pública de Navarra, 2004, pp. 125–133.
- J. W. Coffey, T. Eskridge, and D. P. Sanchez. "A case study in knowledge elicitation for institutional memory preservation using concept maps." In: *Concept Maps: Theory, Methodology, Technology: Proceedings of the First International Conference on Concept Mapping*. Servicio de Publicaciones de la Universidad Pública de Navarra. 2004, pp. 151–158.
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- D. L. Still, T. Eskridge, and L. Temme. "Interface for non-pilot UAV control." In: *Human factors of UAVs workshop, Mesa, AZ*. Ed. by N. J. Cooke. 2004.
- 2003 D. B. Leake, A. Maguitman, T. Reichherzer, A. J. Cañas, M. Carvalho, M. Arguedas, S. Brenes, and T. C. Eskridge. "Aiding knowledge capture by searching for extensions of knowledge models." In: *Proceedings of the Second International Conference on Knowledge Capture (K-CAP)*. Ed. by J. Gennari, B. Porter, and Y. Gil. ACM Press, 2003, pp. 44–53.
- 2001 W. K. Huffstutter and T. C. Eskridge. "Developing Return on Investment Criteria for AOI Equipment." In: *Proceedings of the APEX-2001 Technical Conference*. 2001.

- L. Schmitt and T. C. Eskridge. "Visual Test for High Density Interconnects." In: *Proceedings of the Pan Pacific Microelectronics Conference*. 2001.
- 2000 S. A. Dunn and T. C. Eskridge. "Gold Surface Inspection for Direct Chip Attach Technologies." In: *Proceedings of the NEPCON 2000 Technical Conference*. NEPCON, 2000.
- W. K. Huffstutter, H. Ortiz, and T. C. Eskridge. "Implementation Strategies for Automated Optical Inspection: Case Studies and Results." In: *Proceedings of the 2000 Nepcon Technical Conference*. Vol. 2. 2000, pp. 1138–1148.
- 1999 T. C. Eskridge. "Eliminating AOI Programming and Eliminating False Calls." In: *PCB '99*. 1999, pp. 27–32.
- T. C. Eskridge. "Eliminating AOI Programming and Minimizing False Calls with the AIMS Adaptive Knowledge-Based System." In: *Proceedings of the 1999 Nepcon Technical Conference*. 1999.
- 1997 T. C. Eskridge, M. DeYong, J. Grace, and J. Newberry. "Speeding populated board inspection: a new technology." In: *Twenty-First IEEE/CPMT International Electronics Manufacturing Technology Symposium*. IEEE. 1997, pp. 284–288.
- 1996 M. R. DeYong, T. C. Eskridge, J. W. Grace, J. E. Newberry, J. Jones, and B. Hart. "Automated visual inspection stations for next-generation semiconductor package quality control." In: *Optical Characterization Techniques for High-Performance Microelectronic Device Manufacturing III*. Ed. by D. DeBusk and R. Chen. International Society for Optics and Photonics. 1996, pp. 99–110.
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- 1992 M. De Yong, T. Eskridge, and A. Palmer. "A coupled-grid neural network retina for real-time visual processing." In: *Proceedings of the 35th Midwest Symposium on Circuits and Systems*. IEEE. 1992, pp. 1179–1182.
- M. R. DeYong, T. C. Eskridge, and A. Palmer. "Complex and emergent behavior from neural network pulse-stream filters." In: *Proceedings of the 35th IEEE Midwest Symposium on Circuits and Systems*. 1992, pp. 1183–1186.
- 1991 T. C. Eskridge. "Continuous Analogical Learning." In: *The First International Conference on the Learning Sciences*. 1991.
- T. C. Eskridge. "Integrated reasoning through associative retrieval." In: *Sixth International Symposium on Methodologies for Intelligent Systems*. Ed. by Z. Ras. Academic, 1991.
- T. C. Eskridge and J. A. Barnden. "Applications of Connectionism to Analogical Reasoning." In: *3rd Annual Midwest Artificial Intelligence and Cognitive Science Society Conference*. 1991.
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- 1989 T. C. Eskridge. "Continuous Analogical Reasoning and Learning." In: *ONR Workshop on Models of Complex Human Learning*. 1989.
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- T. C. Eskridge and C. A. Fields. "Investigating Dynamic Control in Symbolic Problem Solvers." In: *The 1st Annual IEEE Symposium on Parallel and Distributed Processing*. 1989, pp. 128–129.
- T. C. Eskridge and C. A. Fields. "Representing Strategic Knowledge in Continuous, Dynamic Control Functions." In: *International Symposium on Methodologies for Intelligent Systems*. 1989.
- C. Fields, M. Coombs, T. Eskridge, R. Hartley, H. Pfeiffer, C. Soderlund, G. McWilliams, and S. Kirby. "Architecture of the MERCURY mesoscale meteorological data fusion system." In: *Fifth International Conference on Interactive Information and Processing Systems for Meteorology, Oceanography, and Hydrology*. American Meteorological Society, 1989.
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- 1988 T. C. Eskridge. "A Continuous Approach to Analogical Reasoning." In: *Proceedings of the Third Rocky Mountain Conference on Artificial Intelligence*. US West, 1988.
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## JOURNALS

- 2025 V. S. Tummala, T. S. Burris-Melville, and T. C. Eskridge. "AI as a Team Member: Redefining Collaboration." In: *Journal of Leadership Studies* 18.4 (2025), pp. 67–80. DOI: <https://doi.org/10.1002/jls.70003>. URL: <https://onlinelibrary.wiley.com/doi/abs/10.1002/jls.70003>.
- 2024 G. Aikins, M. P. Dao, K. J. Moukpe, T. C. Eskridge, and K.-D. Nguyen. "LEVIOSA: Natural Language-Based Uncrewed Aerial Vehicle Trajectory Generation." In: *Electronics* 13.22 (2024). ISSN: 2079-9292. DOI: 10.3390/electronics13224508. URL: <https://www.mdpi.com/2079-9292/13/22/4508>.  
  
K. Momose, R. Mehta, J. Moukpe, T. R. Weekes, and T. C. Eskridge. "Human-AI Teamwork Interface Design Using Patterns of Interactions." In: *International Journal of Human-Computer Interaction* 0.0 (2024), pp. 1–24. DOI: 10.1080/10447318.2024.2389350. URL: <https://doi.org/10.1080/10447318.2024.2389350>.
- 2023 K. Momose, T. Weekes, and T. C. Eskridge. "Human-Centered Design for Spaceflight Participant Safety and Experience: A Case Study of Blue Origin Suborbital Flight." In: *New Space Journal* 11.1 (2023), pp. 44–57. DOI: 10.1089/space.2021.0029. URL: <https://doi.org/10.1089/space.2021.0029>.
- 2021 M. Stafford, S. Bhattacharyya, M. Clark, N. Neogi, and T. C. Eskridge. "Assurance for Integrating Advanced Algorithms in Autonomous Safety-Critical Systems." In: *IEEE Systems Journal* 15.4 (2021), pp. 4852–4863. DOI: 10.1109/JSYST.2020.3023286.
- 2019 F. Nembhard, M. M. Carvalho, and T. C. Eskridge. "Towards the application of recommender systems to secure coding." In: *EURASIP Journal on Information Security* 9.1 (2019).
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- 2009 R. R. Hoffman, T. Eskridge, and C. Shelley. "A naturalistic exploration of forms and functions of analogizing." In: *Metaphor and Symbol* 24.3 (2009). Place: United Kingdom Publisher: Taylor & Francis, pp. 125–154. ISSN: 1532-7868(Electronic),1092-6488(Print). DOI: 10.1080/10926480903028094.

- R. R. Hoffman, T. Eskridge, and C. Shelley. "A naturalistic exploration of forms and functions of analogizing." In: *Metaphor and Symbol* 24.3 (2009). Place: United Kingdom Publisher: Taylor & Francis, pp. 125–154. ISSN: 1532-7868(Electronic),1092-6488(Print). DOI: 10.1080/10926480903028094.
- 2008 J. Coffey and T. Eskridge. "Case Studies of Knowledge Modeling for Knowledge Preservation and Sharing in the U.S. Nuclear Power Industry." In: *Journal of Information and Knowledge Management* 7.3 (2008), pp. 173–195.
- 1992 M. R. DeYong, T. C. Eskridge, and C. A. Fields. "Temporal Signal Processing with High-Speed Hybrid Analog-Digital Neural Networks." In: *Journal of Analog Integrated Circuits and Signals* 2.4 (1992), pp. 367–388.
- 1991 C. A. Fields, H. D. Pfeiffer, and T. C. Eskridge. "Knowledge Representation and Control in "gmr", an Automated DNA Sequence Analysis System Based on the MGR Architecture." In: *International Journal of Man-Machine Studies* 34.4 (1991), pp. 549–573.
- 1989 T. Eskridge. "Principles of continuous analogical reasoning." In: *Journal of Experimental & Theoretical Artificial Intelligence* 1.3 (1989), pp. 179–194.

## INVITED JOURNALS

- 2024 E. Demirjian, T. C. Eskridge, A. Walton, D. L. Sandall, N. Shah, R. Bailey, and J. Henderson. "Superteams: The effect of adaptive AI systems on operational performance." In: *Naval Engineering Journal* 136.1&2 (2024), pp. 313–326.

## EDITED VOLUMES

- 1991 T. C. Eskridge. *Proceedings of the Second Workshop on Weather and Terrain for the Intelligence Preparation of the Battlefield (IPB)*. Las Cruces, NM: New Mexico State University, 1991.

## BOOK CHAPTERS

- 2023 N. Briscoombe, P. Bridgham, L. Burski, M. Carvalho, and T. C. Eskridge. "Human Interactions with Autonomous Intelligent Cyber-defense Agents (AICAs)." In: *Autonomous Intelligent Cyber Defense Agent (AICA): A Comprehensive Guide*. Ed. by A. Kott. Advances in Information Security (ADIS, volume 87). 2023.
- 2011 B. M. Moon, R. R. Hoffman, T. C. Eskridge, and J. W. Coffey. "Skills in applied concept mapping." In: *Applied concept mapping: capturing, analyzing, and organizing knowledge*. Ed. by B. M. Moon, R. Hoffman, J. Novak, and A. Cañas. Boca Raton, FL: CRC Press, 2011, pp. 23–46.
- 2009 J. M. Bradshaw, P. Feltovich, M. Johnson, M. Breedy, L. Bunch, T. Eskridge, H. Jung, J. Lott, A. Uszok, and J. Diggelen. "From Tools to Teammates: Joint Activity in Human-Agent-Robot Teams." In: *Human Centered Design: First International Conference*. Ed. by M. Kurosu. Vol. 5619. Lecture Notes in Computer Science. Berlin Heidelberg: Springer, 2009, pp. 935–944. ISBN: 978-3-642-02805-2. DOI: 10.1007/978-3-642-02806-9\_107. URL: [http://dx.doi.org/10.1007/978-3-642-02806-9\\_107](http://dx.doi.org/10.1007/978-3-642-02806-9_107) [http://download.springer.com/static/pdf/95/chp%253A10.1007%252F978-3-642-02806-9\\_107.pdf?auth66=1400776051\\_9dfa4bf06fa07f54cc74a0fdd14881a8&ext=.pdf](http://download.springer.com/static/pdf/95/chp%253A10.1007%252F978-3-642-02806-9_107.pdf?auth66=1400776051_9dfa4bf06fa07f54cc74a0fdd14881a8&ext=.pdf).

- 2005 A. J. Cañas, R. Carff, G. Hill, M. Carvalho, M. Arguedas, T. C. Eskridge, J. Lott, and R. Carvajal. “Concept Maps: Integrating Knowledge and Information Visualization.” In: *Knowledge and Information Visualization: Searching for Synergies*. Ed. by S.-O. Tergan and T. Keller. Berlin, Heidelberg: Springer, 2005, pp. 205–219. ISBN: 978-3-540-31962-7. DOI: 10.1007/11510154\_11. URL: [https://doi.org/10.1007/11510154\\_11](https://doi.org/10.1007/11510154_11).
- 1997 M. R. DeYong and T. Eskridge. “Properties of Optimality in Neural Networks.” In: *Optimality in Biological and Artificial Networks?* Ed. by D. S. Levine and W. R. Elsberry. Mahwah, NJ: Lawrence Erlbaum Associates, 1997, pp. 87–102.
- 1994 T. C. Eskridge. “A hybrid model of continuous analogical reasoning.” In: *Advances in Connectionist and Neural Computation Theory: Analogical Connections*. Ed. by K. Holyoak and J. Barnden. Vol. 2. Ablex, 1994, pp. 207–246.

## PATENTS

- 2025 L. Bunch, J. Bradshaw, M. Carvalho, T. Eskridge, P. Feltovich, J. Lott, A. Uszok, M. R. Breedy, and R. Carff. *Policy Governed Software Agent System and Method of Operation*. US Patent 12,445,342 B2. Oct. 2025.
- 2022 T. Eskridge, M. Carvalho, B. Benyo, M. Atighetchi, F. Yaman, and A. Adler. *User interface supporting an integrated decision engine for evolving defenses*. US Patent No 11,438,385 B2. Sept. 2022.
- 2021 T. Eskridge, M. Carvalho, B. Benyo, M. Atighetchi, F. Yaman, and A. Adler. *User interface supporting an integrated decision engine for evolving defenses*. US Patent No 11,082,450. Aug. 2021.
- 2020 B. Benyo, M. Atighetchi, F. Yaman, A. Adler, M. Carvalho, and T. Eskridge. *Multi-dimensional heuristic search as part of an integrated decision engine for evolving defenses*. US Patent No 10,862,918 B2. Dec. 2020.
- 2019 T. C. Eskridge, M. Johnson, and K. W. L. Chua. *User Display Providing Obstacle Avoidance*. US Patent 10,410,071. Sept. 2019.
- 2018 T. Eskridge, M. Carvalho, B. Benyo, M. Atighetchi, F. Yaman, and A. Adler. *User interface supporting an integrated decision engine for evolving defenses*. US Application No. 15/958,357. May 2018.
- 2017 M. Warren, P. Hayes, T. C. Eskridge, J. Lott, and M. Brunnbauer. *Device for construction of computable linked semantic annotations*. US Patent 9,720,895. Aug. 2017.
- 2016 L. Bunch, J. Bradshaw, M. Carvalho, T. Eskridge, P. Feltovich, J. Lott, A. Uszok, M. R. Breedy, and R. Carff. *Policy Governed Software Agent System & Method of Operation*. US Patent App. 14/801,018. Jan. 2016.
- T. Eskridge, M. Johnson, and C. W. L. Kenny. *User Display Providing Obstacle Avoidance*. US Patent 9,415,754. Aug. 2016.
- 2015 D. L. Still, T. C. Eskridge, and L. A. Temme. *Motion-resolving hover display*. US Patent 9,091,545. July 2015.

- 2014 J. M. Bradshaw, L. K. Bunch, M. M. Carvalho, T. C. Eskridge, P. J. Feltovich, and M. Johnson. *Patent: Event data visualization tool*. US Patent 8,803,884. Aug. 2014.
- 2005 T. C. Eskridge, J. E. Newberry, M. R. Deyong, S. A. Dunn, and W. K. Huffstutter. *User Interface For Automated Optical Inspection Systems*. Granted Patent. Taiwanese Patent TW I225984 B. Taiwan, Province of China, Jan. 1, 2005. URL: <https://lens.org/124-248-757-695-832>.
- 2004 M. R. DeYong, J. E. Newberry, J. W. Grace, and T. C. Eskridge. *System And Method For Dynamic Image Recognition*. Granted Patent. Taiwanese Patent TW 571246 B. Taiwan, Province of China, Jan. 11, 2004. URL: <https://lens.org/111-302-345-375-755>.  
M. R. DeYong, J. E. Newberry, J. W. Grace, and T. C. Eskridge. *System and method for dynamic image recognition*. US Patent 6,771,819. Aug. 2004.  
M. R. DeYong, J. E. Newberry, J. W. Grace, and T. C. Eskridge. *System and method for dynamic image recognition*. US Patent 6,687,397. 3 2004.
- 2003 M. R. DeYong, J. E. Newberry, J. W. Grace, and T. C. Eskridge. *System and method for creating a knowledge base*. US Patent 6,650,770. Nov. 2003.  
M. R. DeYong, J. E. Newberry, J. W. Grace, and T. C. Eskridge. *System and method for dynamic image recognition*. US Patent 6,577,757. June 2003.  
M. R. DeYong, J. E. Newberry, J. W. Grace, and T. C. Eskridge. *System and method for performing basic training*. US Patent 6,614,925. Sept. 2003.  
T. C. Eskridge, J. E. Newberry, M. R. DeYong, S. A. Dunn, W. K. Huffstutter, J. W. Grace, M. A. Lumeyer, M. A. Ellison, and J. R. Zoch. *User interface for automated optical inspection systems*. US Patent 6,597,381. July 2003.
- 1994 M. R. DeYong, R. L. Findley, T. C. Eskridge, and C. A. Fields. *Asynchronous temporal neural processing element*. US Patent 5,355,435. Oct. 1994.

## INVITED TALKS

- 2025 T. C. Eskridge. *Disruptive Teams: Recommender Systems as Teammates*. Invited Talk. Brasilia, Brazil (online): 5th International Colloquium on Information Architecture and Multimodality, 2025.
- 2024 T. C. Eskridge. *Generalized Nudging*. Invited Talk. Menlo Park, CA: 2024 Workshop on Computational Cybersecurity in Compromised Environments (C3E), 2024.
- 2023 T. C. Eskridge. *Nervous Data*. Invited Talk. Melbourne, FL: AFRL Nuclear Explosion Monitoring Technical Interchange Meetings, 2023.
- 2022 T. C. Eskridge. *Understanding Data*. Invited Talk. Melbourne, FL: AFRL Nuclear Explosion Monitoring Technical Interchange Meetings, 2022.  
T. C. Eskridge. *Virtual Infrastructure for Network Emulation – VINE*. Invited Talk. online with Albuquerque, NM: SANDIA Cybersecurity R&D, 2022.
- 2021 T. C. Eskridge. *Experimenting with C2*. Invited Talk. Melbourne, FL: CAE-R Workshop on the human element in autonomous cyber security, 2021.

- T. C. Eskridge. *Interactive Resilience for Cyber Systems*. Invited Talk. Oak Ridge, TN: Annual Meeting of the Oak Ridge Associated Universities, 2021.
- 2018 T. C. Eskridge. *Experimenting with C2 Implementations*. Invited Talk. Laurel, Md: 2018 Integrated Adaptive Cyber Defense (IACD) Workshop, Integrated Cyber, 2018.
- T. C. Eskridge. *Experimenting with C2 Implementations*. Invited Talk. Laurel, Md: 2018 Integrated Adaptive Cyber Defense (IACD) Workshop, Integrated Cyber, 2018.
- 2005 T. C. Eskridge. *Advanced Information Displays*. Invited Talk. Orlando, FL: 2005 Florida Technology Transfer Conference, 2005.
- 2000 T. C. Eskridge. *In Process Quality Control: The Route to Zero Defect Manufacture*. Invited Talk. Birmingham, UK: Nepcon UK, 2000.
- 1999 T. C. Eskridge. *Eliminating AOI Programming and Minimizing False Calls*. Invited Talk. Tel Aviv, Israel: PCB '99, 1999.

## CAMPUS TALKS

- 2024 T. C. Eskridge. *Ethics of Artificial Intelligence*. Guest Lecture. Melbourne, FL: HUM 3572 AI Ethics, 2024.
- T. C. Eskridge. *What is Artificial Intelligence?* Guest Lecture. Melbourne, FL: HON 2001 Honors Seminar, 2024.
- 2022 T. C. Eskridge. *Composing a Great Team*. Campus Talk. Melbourne, FL: FIT Computer Science Seminar, 2022.
- T. C. Eskridge. *Radically Human Centered Design*. Campus Talk. Melbourne, FL: FIT Computer Science Seminar, 2022.
- 2020 T. C. Eskridge. *Apprentice systems and AI*. Campus Talk. Melbourne, FL: FIT Computer Science Seminar, 2020.

## CONFERENCE ACTIVITY

### Program Committee

- 2025 9<sup>th</sup> International Conference on Computer-Human Interaction Research and Applications (CHIRA25)
- 2025 17<sup>th</sup> International Conference on Agents and Artificial Intelligence (ICAART25)
- 2025 9<sup>th</sup> International Conference on Human Computer Interaction Theory and Applications (HUCAPP25)
- 2024 8<sup>th</sup> International Conference on Computer-Human Interaction Research and Applications (CHIRA24)
- 2023-25 Senior Committee Florida Conference on Recent Advances in Robotics (FCRAR)
- 2020-22 Florida Conference on Recent Advances in Robotics (FCRAR)

|         |   |
|---------|---|
| 2022    | Association for the Advancement of Artificial Intelligence (AAAI) Conference on Artificial Intelligence |
| 2022    | Artificial Intelligence in Education  |
| 2014-23 | International Conference on Biologically Inspired Cognitive Architectures (BICA)                        |
| 2018    | International Conference on Case-Based Reasoning (ICCBR)  |
| 2004-14 | Conferences on Concept Mapping  |
| 2002-05 | Florida Artificial Intelligence Research Society FLAIRS Conference                                      |
| 1992    | Third Workshop on Battlefield Intelligence for AirLand Operations                                       |
| 1991    | The Second Workshop of Weather and Terrain for the Intelligence Preparation of the Battlefield          |

### **Tracks Chaired**

|      |   |
|------|---|
| 2018 | “Human-agent teamwork for cyber operations” Florida Artificial Intelligence Research Society Conference (FLAIRS-31) |
|------|---|

### **Sessions Chaired**

|      |  |
|------|--|
| 2021 | “Challenges in Teaming.” CAE-R Workshop on the human element in autonomous cyber security, Melbourne, FL |
|------|--|

### **Invited Panelist**

|      |   |
|------|---|
| 2023 | “The human element”, Adaptive Cyber Defense 2023, Melbourne, FL |
|------|---|

### **Peer Review**

|         |   |
|---------|---|
| 2012-21 | International Conference on Biologically Inspired Cognitive Architectures                               |
| 2004-14 | International Conference on Concept Mapping   |
| 2020-23 | Florida Conference on Recent Advances in Robotics (FCRAR)   |
| 2022-23 | Association for the Advancement of Artificial Intelligence (AAAI) Conference on Artificial Intelligence |
| 2018    | International Conference on Case-Based Reasoning (ICCBR)  |
| 2004-14 | Conferences on Concept Mapping  |
| 2002-05 | Florida Artificial Intelligence Research Society FLAIRS Conference                                      |

### **COURSES TAUGHT**

CSE5800 Interacting with Large Language Models (Created)

HCD6380 Creative and Design Thinking (Created)

HCD5802 Usability Engineering (Created)

HCD6701 Research Methods (Created)

CYB5800 Information Visualization (Created)

CSE5400 Introduction to Human-Centered Design (Created)

CSE5800 Deep Learning (Created)

CSE5290 Introduction to Artificial Intelligence (Created)

CSE5310 Management and Processing of Big Data (Created)

CYB5800 Network Security Reasoning (Created)

CYB5675 Data Mining for Cybersecurity (Created)

## **SERVICE**

### **Academic Journal Editorial Boards**

*Journal of Theoretical and Experimental Artificial Intelligence* 2016–2019

### **Academic Journal Peer Review**

*Journal of Theoretical and Experimental Artificial Intelligence*

*IEEE Transactions on Cybernetics*

*IEEE Transactions on Systems, Man, and Cybernetics*

*Sustainability*

*Applied Sciences*

*Multimodal Technologies and Interaction*

*Frontiers in Psychology*

*Electronics*

*Information*

*Biologically Inspired Cognitive Architectures (BICA) Journal*

### **Funding Agency Peer Review**

National Science Foundation

### **Service to University**

Served on the University Library Committee

Served on the University Research Council

### **Service to College**

COES Faculty Senator 2024 - current

Served as Co-Chair of the College Promotion and Tenure Committee

Served on the College Promotion and Tenure Committee

Served as Co-Chair of the COES Dean search committee

### **Service to Department**

Redeveloped Human Centered Design Master's and Ph.D. programs

Admissions for Human Centered Design Master's and Ph.D. programs

Assisted in creation and development of Data Science Certificate and Degree Program

Developed four of the five required HCD core classes (with support from graduate students)

Developed CYB 5675 Data mining for cybersecurity course for on campus and on line use

### **Doctoral Advisor (graduates in bold)**

**2024 Kazuhiko Momose, Compositional Human-Agent Teams, HCD PhD, Houston, TX**

**2022 Vijayanth Tummala, Advancing Human-Agent Teamwork, CS PhD, Assistant Professor, Embry-Riddle Aeronautical University, Daytona Beach, FL**

**2021 Troy Ricardo Weekes, Flow Choice Architecture: Cognitive Augmentation of Knowledge Workers, HCD PhD, Research Associate L3Harris Institute for Assured Information, Melbourne, FL**

*expected 2026* Waseem Samkari, CS PhD, Ph.D. Candidate

*expected 2026* Alita Regi, HCD PhD, Ph.D. Candidate

current Ali Mohammad K Almashtykh, CS PhD

current Hisham Ghunaim, HCD PhD

current Victor Kitmanyen, HCD PhD

current Warren Harrell, HCD PhD

### **Masters Advisor (graduates in bold)**

**2025 Anjali Majan, Designing a User-Centered Bias System to Enhance Media Literacy and Factual Accuracy, HCD MS**

**2025 Lalith Nadipalli, Improving Home Security Through User Centered Device Positioning, HCD MS**

**2025 Uditkumar Ajitkumar Nair, The Impact of System Transparency on Perceived System Reliability, Perceived System Usability, and Information Clarity in Self-Driving Car Systems, HCD MS**

**2025 Mahita Uppuluri, Effects of Reflective Journaling and Nudges on Academic Motivation and Engagement, HCD MS**

**2024 Andrew Biron, TAC-IT: An Affective Computing User Interface Design, HCD MS**

**2024 Bianca Ebanks, Breaking The Procrastination Barrier: Exploring the Efficacy of an Online Hybrid Intervention, HCD MS**

**2024 Rahul Mehta, Intent Visualization in Human-Agent Teams, CS MS**

**2024 Ruchir Gupta, Investigating the Impact of Human-Centered Interface Design on the User Experience of Mobile Device Users, HCD MS, Product Designer, Prototype Lab at Groundswell, Inc., Melbourne FL**

**2024 Srushti Nitin Ghadge, AI-Powered Information Retrieval in Meeting Records and Transcripts Enhancing Efficiency and User Experience, HCD MS, UX Researcher and UI**



### **Designer at Macmillan Learning**

**2022 Brad Thomas Costa, A Co-Evolutionary Approach to Test Case Generation for Safety-Critical Systems, CS MS, Directory of Engineering, Sentry View Systems, Melbourne, FL**

**2020 Kleanthis Zisis Tegos, Real-Time Action Classification using Intermediate Skeletal Pose Estimation, CS MS, Software Engineer, Microsoft, Miami, FL**

**2018 Daljeet Kaur Kaushal, Big Data Architectures for Deep Learning, CS MS, Software Associate, Goldman Sachs, Jersey City, New Jersey**

**2018 Tyler Culp, Infrastructure-based Access Policy Enforcement using Software-Defined Networks, CS MS, Software Engineer, Maxar Technologies, Melbourne FL**

current Shivanand Gujjari, HCD MS

current Justin Barnwell, HCD MS

current Likhitha Kammara, HCD MS

current Shane Rosenberg, HCD MS

### **External Committee Member**

current Clint Jacobs, Modeling the architecture and security of a System of Systems, Computer Science, PhD

current Akram Alghanmi, Toward Robust Perception Models in Robotics, Computer Science, PhD

current Neda Keivandarian, Enhancing Aspect-Based Sentiment Analysis with Aspect-Aware Attention Mechanism in BERT, Computer Science, PhD

current Kendall Carmody, Evaluating the Impact of Technological Immersion and Content Immersion on Presence, Engagement, Emotional State, and Stress in a Virtual Urban Air Mobility Piloting Context, Aviation Sciences, PhD

current Christopher Stricklan, Binary Diversity, Computer Science PhD

current Candice Chambers, Computer Science PhD

current Godwyll Aikins, Computer Science PhD

current James Riswick-Estelle, Behavior Analysis PhD

**2023 Eric Lawrence Demirjian, Artificial Intelligence Superteams & Augmentation Strategies: Increasing Performance of High-Functioning Virtual Team Members Via Human Machine Teaming Enhancements, Business PhD**

**2022 Kendall A Carmody, The Effect of Level of Immersion on Learning in a Virtual Maintenance Training Task, AHF MS External**

**2021 Haoruo Fu, Assessment of the Skeletonization and Motion Monitoring System for the Security Efficiency of the United States Airports, Applied Aviation Safety MS**

**2021 James Riswick-Estelle, Algorithms for Algorithms: Teaching Problem-Solving in Computer Science, ABA OBM MS External**

**2020 Mary Catherine (Kay) Michel, A Bio-inspired Classification System for Cyber-Physical-Human Identity Resolution, CS PhD**

**2019 Seyed Mohammad Mahdi Seyednezhad, A Network-Driven Approach for Characterizing Emoji Usage in Social Media, CS PhD**

2019 Sharon Sue Chinoy, Human-Centered Enterprise Resource Maintenance Management, HCD PhD  
2019 Milton Stafford, Applying Formal Methods for Integrating Advanced Algorithms in Safety Critical Systems, CS MS  
2018 Fitzroy Nembhard, A Recommender System for Improving Program Security Through Source Code Mining and Knowledge Extraction, CS PhD  
2018 Ondrej Doule, Adaptive Spaceship Cockpit Architecture, HCD PhD  
2018 Timothy A Davis, Illegitimate Tasks and Employee Silence: A Moderated Mediation Model, IOP MS External  
2018 Dhanish Mehta, On the Automation of Cyber Experimentation, CS MS  
2018 Ed Mathews, Non-thesis, Meteorology MS  
2018 Caleb Ryberg, Non-thesis, Meteorology MS  
2017 Samir Mammadov, High Fidelity Adaptive Cyber Emulation, IACyber MS  
2016 Punica Bhardwaj, Soteria: A Persuasive eSecurity Assistant, IACyber MS  
2015 Evan Lawrence Stoner, A Foundation for Cyber Experimentation CS MS

## **MEMBERSHIPS**

Association for the Advancement of Artificial Intelligence (AAAI)  
American Association for the Advancement of Science (AAAS)  
Sigma Xi  
Cognitive Science Society  
Institute of Electrical and Electronics Engineers (IEEE)

## **CONSULTING**

2020– HyLighter, LLC, Tallahassee, FL  
2024– Sentry View Systems, Melbourne, FL  
2021–21 Sentry View Systems, Melbourne, FL  
2016–17 Modus Operandi, Melbourne, FL