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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

- 2015– 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 E. Demirjian, T. C. Eskridge, B. Stringfield, and A. Walton. "Testing and Evaluating Human-Machine Teams for Cognitive Electronic Warfare." In: *submitted to Collaborative Electronic Warfare 2024*. CEW2024. 2024.
- K. Momose, R. Mehta, J. Moukpe, A. Almashaykh, W. Samkari, T. R. Weekes, T. C. Eskridge, and D. Kidwell. "Teamwork and Input Compositionality: UI Design for Taskwork or Teamwork?" In: *submitted to ACM Conference on Intelligent User Interfaces (IUI 2024)*. IUI 2024. 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. Casseti, 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.
- 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 (SS-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.
- 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.
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- 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.

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- 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.
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- 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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- 2008 J. M. Bradshaw, P. J. Feltovich, M. J. Johnson, L. Bunch, M. R. Breedy, T. Eskridge, J. Hyuckchul, J. Lott, and A. Uszok. "Coordination in Human-Agent-Robot Teamwork." In: *International Symposium on Collaborative Technologies and Systems, 2008. CTS 2008*. 2008, pp. 467–476. DOI: 10.1109/CTS.2008.4543966.
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- 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.
- D. B. Leake, A. Maguitman, T. Reichherzer, A. J. Cañas, M. Carvalho, M. Arguedas, and T. C. Eskridge. "Googling" from a Concept Map: Towards Automatic Concept-Map-based Query Formation." In: *Proceedings of the First International Conference on Concept Mapping*. Ed. by A. J. Cañas, J. Novak, and F. González. Vol. 1. Universidad Pública de Navarra, 2004, pp. 409–416.
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- 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.
- 1995 C. L. Bowman, M. R. DeYong, and T. C. Eskridge. "Role of neural networks for avionics." In: *SPIE's 1995 International Symposium on Optical Science, Engineering, and Instrumentation*. International Society for Optics and Photonics. 1995, pp. 96–106.
- 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.
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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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- G. McWilliams, C. Kirby, C. Fields, C. Cavendish, M. Coombs, T. Eskridge, R. Hartley, H. Pfeiffer, and C. Soderlund. "Army requirements for an intelligent interface to real-time meteorological databases." In: *Pre-prints of the Fifth International Conference on Interactive and Information Processing Systems for Meteorology, Oceanography and Hydrology*. 1989, pp. 1–2.
- 1988 T. C. Eskridge. "A Continuous Approach to Analogical Reasoning." In: *Proceedings of the Third Rocky Mountain Conference on Artificial Intelligence*. US West, 1988.
- T. C. Eskridge. "Access in Analogical Reasoning." In: *Proceedings of AI/CS-88*. 1988.

JOURNALS

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- 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).
- 2015 R. Hoffman, T. Eskridge, S. Henderson, J. Jenkins, and B. M. Moon. "Propositional Diagrams for Intelligence Sensemaking: Examples and Case Studies." In: *American Intelligence Journal* 32.1 (2015), pp. 122–135.
- 2014 T. C. Eskridge, D. Still, and R. R. Hoffman. "Principles for Human-Centered Interaction Design, Part 1: Performative Systems." In: *IEEE Intelligent Systems* 29.4 (2014), pp. 88–94. ISSN: 1541-1672. DOI: 10.1109/MIS.2014.68. URL: <http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6908967>.
- 2012 J. M. Bradshaw, M. Carvalho, L. Bunch, T. C. Eskridge, P. J. Feltovich, M. Johnson, and D. Kiddwell. "Sol: An agent-based framework for cyber situation awareness." In: *Kuenstliche Intelligenz* 26.2 (2012), pp. 127–140.
- M. Carvalho, J. Bradshaw, L. Bunch, T. Eskridge, P. Feltovich, R. H. Hoffman, and D. Kidwell. "Command and control requirements for moving target defense." In: *IEEE Intelligent Systems* 27.3 (2012), pp. 79–85.

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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.
- 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, A. Walton, T. C. Eskridge, N. Shah, and R. Bailey. "DOT&E and National Defense Strategy: The potential impact of high-functioning individuals and teams." In: *in preparation for Naval Engineering Journal* (2024).
- E. Demirjian, A. Walton, T. C. Eskridge, N. Shah, and R. Bailey. "Virtual teams as an analog model for evaluating the ROI of Human-AI team interactions: A comprehensive overview." In: *in preparation for Naval Engineering Journal* (2024).
- T. C. Eskridge, E. Demirjian, A. Walton, N. Shah, and R. Bailey. "Superteams: The effect of adaptive AI systems on operational performance." In: *in preparation for Naval Engineering Journal* (2024).

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: *Human Interactions with Autonomous Intelligent Cyber-defense Agents (AICAs)*. 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.
- 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.
- 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

- 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

- 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.

- 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

- 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

- 2023 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–

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

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)

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 Spring 2024 Kazuhiko Momose, Compositional Human-Agent Teams, HCD PhD Candidate

current Ali Mohammad K Almashykhi, CS PhD

current Alita Regi, HCD PhD

current Hisham Ghunaim, HCD PhD

current Victor Kitmanyen, HCD PhD

current Warren Harrell, HCD PhD

current Waseem Samkari, CS PhD

Masters Advisor (graduates in bold)

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 Andrew Biron, HCD MS

current Bianca Ebanks, HCD MS

current Lalith Nadipalli, HCD MS

current Rahul Mehta, CS MS

Ruchir Gupta, HCD MS, Product Designer, Prototype Lab at Groundswell, Inc., Melbourne FL

current Shivanand Gujjari, HCD MS

current Srushti Nitin Ghadge, HCD MS

current Uditkumar Ajitkumar Nair, HCD MS

Committee

current Natalie N Shah, Virtual Teams as an analog (or proxy) model for evaluating ROI of human-AI team interactions, Business PhD

current Christopher Stricklan, Binary Diversity, Computer Science PhD

current Candice Chambers, Computer Science 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
2021–21 Sentry View Systems, Melbourne, FL
2016–17 Modus Operandi, Melbourne, FL