Curriculum Vitae

Name

Thomas C. Eskridge
Associate Professor, Florida Institute of Technology

Address

Office
Harris Institute for Assured Information
Florida Institute of Technology
150 W. University Blvd
Melbourne, Fl 32901
email: teskridge@fit.edu

Education

Ph.D. Philosophy
Binghamton University, Binghamton, NY, 2012
Dissertation: Continuous Flow Analogical Reasoning, Advisor: Prof. Eric Dietrich

MS, Computer Science
Southern Illinois University, Carbondale, IL, 1987.
Thesis: Analogical Problem Solving, Advisors: Dr. John Dinsmore, Dr. Mark Johnson

BA, Computer Science and Mathematics
Southern Illinois University, Carbondale, IL, 1986.

Professional Experience

Associate Professor — **Florida Institute of Technology, Melbourne, FL** — **2015-**

Directed students supporting Institute research on 7 external research projects
Conducted research in rule-based behavior model generation
Conducted research in cyber-security command and control
Conducted research in ontologies for cyber-security
Conducted research on symbolic learning capabilities of deep learning networks
Developed ontology collaboration and editing tools
Developed reasoning tools for cybersecurity response

Research Professor — **Florida Institute of Technology, Melbourne, FL** — **2013-2015**

Member of the Graduate Faculty
Directed students supporting Institute research
Conducted research in rule-based behavior model generation
Conducted research in cyber-security command and control
Conducted research in ontologies for cyber-security

Research Scientist	**Institute for Human and Machine Cognition, Pensacola, FL**	**2012-2015**

Conducted research in performance oriented displays

Conducted research in human-agent systems

Conducted research in cyber-security

Developed symbology and interactions supporting piloting remote aircraft

Developed novel obstacle avoidance interface for ground robot operators

Developed software for cyber situation awareness, defense characteristics

Research Associate	**Institute for Human and Machine Cognition, Pensacola, FL**	**2001-2012**

Conducted research in knowledge elicitation and preservation, human centered computing, and formal knowledge representation.

Developed software supporting indexing and search in CmapTools.

Developed software for advanced flight instrument system for manned or remotely piloted vehicles.

Extended CmapTools software to include methodology for formally representing knowledge in ontologies.

Vice President & Director of Advanced Technologies	**Intelligent Reasoning Systems, Inc. Austin, TX**	**1998-2001**

Responsible for new product research and development, and new technology research and development.

Performed technical marketing, producing a number of articles that appeared in national trade publications and in industry conferences.

Assisted in the opening of satellite offices in Taiwan, England, Japan, and Mexico.

Vice President & Chief Scientist	**Intelligent Reasoning Systems, Inc. Austin, TX**	**1995-1998**

Developed relationship with Intel Corporation leading to a $600,000 visual defect detection and classification technology demonstration project.

Sought and obtained initial Venture Capital funding of approximately $25M to support development of visual defect detection and classification software as a commercial product.

Led and grew software development group from 6 to 23 programmers that took laboratory prototype and demonstration system to a commercialized product.

Vice President	**Intelligent Reasoning Systems, Inc. Las Cruces, NM**	**1992-1995**

Founded IRSI as a for-profit laboratory for the study of computational intelligence supported by government and industrial research contracts.

Won first company contract through Small Business Innovation Research contract from U.S. Naval Surface Warfare Laboratory, Dahlgren, VA.

Principal Investigator (PI) or Co-PI on 4 Phase I and 3 Phase II SBIR contracts totaling $2.625M

Computing Specialist II	**Computing Research Lab, New Mexico State University, Las Cruces, NM**	**1990-1992**

Responsible for the generation of proposals and management of contracts with Government agencies amounting to over $2.4 M.

Managed five person development team.

Developed a novel simulation environment for battlefield weather and weather effects analysis.

Organized and edited proceedings for two workshops on Weather and Terrain analysis for the Joint Armed Forces.

Sr. Scientific Programmer	**Lockheed Missiles and Space Corporation, Austin, TX**	**1989-1990**

Function Lead Engineer for the Threat Movement Estimate, which simulated threat on- and off-road movement through varied terrain. Responsible for the design, development, integration, and demonstration of the Threat Movement Estimate software.

Co-authored successful follow-on proposal for $2.8M.

Co-Principal Investigator for Lockheed Internal Development Project applying machine learning techniques to acquire information from signal intelligence reports.

Research Assistant	**Computing Research Lab, New Mexico State University, Las Cruces, NM**	**1987-1989**

Designed and developed architectural additions to Laboratory's main reasoning engine, providing a constraint layer to the model generation process of the Model Generative Reasoning engine.

Implemented experimental models of dynamical control of the MGR system.

Teaching Experience

Spring 2020 HCD 6380 Creative and Design Thinking

This course introduces students to the theory and practice of design thinking for human-centered design of new products, processes, and organizations. Students will apply principles of design thinking to problems in different domains and learn which design thinking techniques should be applied for different types of problems in order to address the needs of the users being designed for. This is a ”hands-on” course where students will be generating numerous designs and evaluating not only the quality of those designs, but the effectiveness of the design process that generated them.

Spring 2020 CYB5800 Information Visualization

This course introduces students to the process of developing visual information visualizations that assist users in reasoning about information, finding anomalies or patterns in data, and hypothesis creation or validation via data exploration. Additional focus this semester on developing persuasive graphics to convey information.

Fall 2019 CSE5400 Introduction to Human-Centered Design

This course is designed to be the first course incoming students in the Human-Centered Design program take to understand the discipline in general. This class explores the processes and principles of the Human-Centered Design (HCD) approach to the development of efficient, useful, satisfying and safe interactions between people and automation. These interactions will enhance the effectiveness of human performance while reducing the cognitive load of the user during operation.

Fall 2019 CSE5800 Deep Learning

This course surveys the broad area of deep learning and deep reinforcement learning. It introduces students to the process of developing and testing deep learning neural networks for use in classification, prediction, knowledge organization, and question answering. The course presents the theory and practice of deep learning networks by exploring both fundamental and current topics in deep learning research.

Spring 2019 CYB5675 Data Mining for Cyber Security

This course explores data mining and machine learning in cybersecurity environments. It includes a variety of data mining and machine learning algorithms and teaches students to use and assess their utility for cybersecurity tasks, such as the detection of signatures, anomalies, scans, and intrusions.

Spring 2019 CYB5800 Information Visualization

This course introduces students to the process of developing visual information visualizations that assist users in reasoning about information, finding anomalies or patterns in data, and hypothesis creation or validation via data exploration. Updated this semester to look at issues involving web-based front-end development for creating and working with ontologies.

Fall 2018 CSE5290 Introduction to Artificial Intelligence

This course provides students with theoretical knowledge and practical experience in knowledge representation, search and heuristics, reasoning with certainty and uncertainty, and learning techniques. Students conducted research projects covering many of these topics.

Spring 2018 CYB5800 Information Visualization

This course introduces students to the process of developing visual information visualizations that assist users in reasoning about information, finding anomalies or patterns in data, and hypothesis creation or validation via data exploration. Updated this semester to focus on performance-enhancing displays for users in highly-focused or safety-critical domains.

Fall 2017 CSE5310 Management and Processing of Big Data

This course provides students with theoretical knowledge and practical experience in data storage, management and retrieval for analysis or operations. Students will explore the transition from traditional data warehouse architectures to modern big-data architectures that robustly handle data variety, volumes and velocities.

Spring 2017 CYB5800 Information Visualization

This course introduces students to the process of developing visual information visualizations that assist users in reasoning about information, finding anomalies or patterns in data, and hypothesis creation or validation via data exploration. The course presents the theory and practice of information visualization by exploring both fundamental and current topics in information visualization, including data and process abstraction, design techniques to emphasize salient information characteristics, how perception informs visualization design, and how effective visualizations can be used to improve operator performance in a number of tasks. Students will work with real-world data and will use state-of-the-art programming frameworks to create visualizations directed to solve specific user problems and answer specific user questions.

Fall 2016 CYB5675 Data Mining for Cyber Security

This course explores data mining and machine learning in cybersecurity environments. It includes a variety of data mining and machine learning algorithms and teaches students to use and assess their utility for cybersecurity tasks, such as the detection of signatures, anomalies, scans, and intrusions.

Spring 2016 CYB5800 Network Security Reasoning

This course covers the use of knowledge representations for network operations and cybersecurity. Students will learn to use formal ontologies, markup languages, and specialized knowledge representations to reason about network security events. Additional topics to be covered include construction of normal and threat behavior models.

Fall 2014 CYB5675 Data Mining for Cybersecurity

This course explores data mining and machine learning in cybersecurity environments. It includes a variety of data mining and machine learning algorithms and teaches students to use and assess their utility for cybersecurity tasks, such as the detection of signatures, anomalies, scans, and intrusions.

Professional Service

2016-2018 Associate Editor, Journal of Experimental and Theoretical Artificial Intelligence

Program Committees

2020 Florida Conference on Recent Advances in Robotics (FCRAR)
2014, 2018, 2019 International Conference on Biologically Inspired Cognitive Architectures (BICA)
2018 International Conference on Case-Based Reasoning (ICCBR)
2004-2014 Conferences on Concept Mapping
2002-2005 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

Reviewer

Referee for 2012-2018 International Conference on Biologically Inspired Cognitive Architectures
Referee for Biologically Inspired Cognitive Architectures (BICA) Journal, Elsevier
Referee for 2004-2014 Conferences on Concept Mapping
Referee for Journal of Theoretical and Experimental Artificial Intelligence
Reviewer for IEEE Transactions on Cybernetics

Memberships

Sigma Xi
American Association for Artificial Intelligence (AAAI)
IEEE

Issued Patents

T. C. Eskridge, M. Johnson, and K. W. L. Chua, (September 10, 2019). "User display providing obstacle avoidance,". Patent #10,410,071.

Warren, M., Hayes, P., Eskridge, T. C., Lott, J., and Brunnbauer, M. (July 18, 2017). Device for construction of computable linked semantic annotations. Patent #9,720,895.

Eskridge, T.C, Johnson, M., Chua, K. (August 16, 2016) User display providing obstacle avoidance. Patent #9,415,754

Still, D.L, Eskridge, T.C., and Temme, L, (July 28, 2015) Motion-resolving hover display. Patent #9,091,545

Bradshaw, J.M., Bunch, L.K., Carvalho, M.M., Eskridge, T.C., Feltovich, P.J. (August 12, 2014) Event Data Visualization Tool. Patent #8,803,884.

Deyong, M.R., Newberry, J.E., Grace, J.W. and Eskridge, T.C. (Aug 3, 2004). System and Method for Dynamic Image Recognition. Patent # 6,771819

Deyong, M.R., Newberry, J.E., Grace, J.W. and Eskridge, T.C. (Feb 3, 2004). System and Method for Dynamic Image Recognition. Patent # 6,687,397

Deyong, M.R., Newberry, J.E., Grace, J.W. and Eskridge, T.C. (Nov 18, 2003). System and Method for Creating a Knowledge Base. Patent # 6,650,770

Deyong, M.R., Newberry, J.E., Grace, J.W. and Eskridge, T.C. (Sept 2, 2003). System and Method for Performing Basic Training. Patent # 6,614,925

Eskridge, T.C., Newberry, J.E., Deyong, M.R., Dunn, S.A., Huffstutter, W.K., Grace, J.W., Lumeyer, M.A., Ellison, M.A. and Zoch, J.R. (July 22, 2003). User Interface for Automated Optical Inspection Systems. Patent # US 6,597,381 B1

Deyong, M.R., Newberry, J.E., Grace, J.W. and Eskridge, T.C. (June 10, 2003). System and Method for Dynamic Image Recognition. Patent # 6,577,757

Deyong, M.R., Findley, R.L., Eskridge, T.C. and Fields, C.A. (October 11, 1994). Asynchronous Temporal Neural Processing Element. Patent # 5,355,435

Patent Applications

Eskridge, T., Carvalho, M., Benyo, B., Atighetchi, M., Yaman, F., and Adler, A. User interface supporting an integrated decision engine for evolving defenses, May 2018. US Application No. 15/958,357.

Benyo, B., Atigetchi, M., Yaman, F., Adler, A., Carvalho, M., and Eskridge, T. Multi- dimensional heuristic search as part of an integrated decision engine for evolving defenses, May 2018. US Application No. 15/958,359.

Publications

Journal Articles

Stafford, M, Bhattacharyya, S, Clark, M, Neogi, N and Eskridge, TC (2020). Assurance for Integrating Advanced Algorithms for Autonomous Safety Critical Systems. Submitted to *IEEE Systems Journal.* (4.463 Impact Factor).

Nembhard, F., Carvalho, M. M., and Eskridge, T. C. (2019), "Towards the application of recommender systems to secure coding," *EURASIP Journal on Information Security*, vol. 9. (2.37 Impact Factor)

Hoffman, R., Eskridge, T., Henderson, S., Jenkins, J., and Moon, B. M. (2015). Propositional diagrams for intelligence sensemaking: Examples and case studies. *American Intelligence Journal*, 32(1):122–135.

Eskridge, T.C., Still, D., and Hoffman, R.R. (2014). Principles for Human-Centered Interaction Design, Part 1: Performative Systems, *IEEE Intelligent Systems,* July/August.

Bradshaw, J.M., Marco Carvalho, Larry Bunch, Tom Eskridge, Paul Feltovich, Matt Johnson, and Dan Kidwell. (2012) Sol: An Agent-Based Framework for Cyber Situation Awareness. *Künstliche Intelligenz*: Volume 26, Issue 2, pp. 127-140.

Carvalho, Marco, J.M. Bradshaw, Larry Bunch, Tom Eskridge, Paul J. Feltovich, Robert H. Hoffman, and Daniel Kidwell. (2012). Command and Control Requirements for Moving Target Defense. *IEEE Intelligent Systems*, May/June (vol. 27 iss. 3), pp. 79-85.

Eskridge, T.C. and Hoffman, R.R. (2012). Ontology creation as a sensemaking activity. *IEEE Intelligent Systems,* pp. 58-65.

Moon, B.M., Hoffman, R.R., Eskridge, T.C., Coffey, J.W. (2011). Skills in Applied Concept Mapping. Applied concept mapping: capturing, analyzing, and organizing knowledge. CRC Press, Boca Raton, pp. 23-46.

Hoffman, R. R., Eskridge, T. & Shelly, C. (2009). A naturalistic exploration of the forms and functions of analogical reasoning. *Metaphor and Symbol*, *24*, 125-154.

Coffey, J.W. & Eskridge, T. (2008). Case Studies of Knowledge Modeling for Knowledge Preservation and Sharing in the U.S. Nuclear Power Industry. *Journal of Information and Knowledge Management.* 7(3). pp 173-185.

Deyong, M.R., Eskridge, T.C. and Fields, C.A. (1992). Temporal Signal Processing with High-Speed Hybrid Analog-Digital Neural Networks. *Journal of Analog Integrated Circuits and Signals 2(4)* pp 367-388.

Fields, C.A., Pfeiffer, H.D. and Eskridge, T.C. (1991). Knowledge Representation and Control in "Gm1", an Automated DNA Sequence Analysis System Based on the Mgr Architecture. *International Journal of Man-Machine Studies* **34**(4). 549--573.

Eskridge, T.C. (1989). Principles of Continuous Analogical Reasoning. *Journal of Theoretical and Experimental Artificial Intelligence* 1(3). 179-194.

Book Chapters

Uszok, A., J. M. Bradshaw, T. Eskridge and J. Hanna (2010). Rapid Creation and Deployment of Communities of Interest Using the CMap Ontology Editor and the KAoS Policy Services Framework. *Networked Digital Technologies*. F. Zavoral, J. Yaghob, P. Pichappan and E. El-Qawasmeh (Eds), Springer Berlin Heidelberg. 87: 451-466.

Bradshaw, J.M., P. Feltovich, M. Johnson, M. Breedy, L. Bunch, T. Eskridge, H. Jung, J. Lott, A. Uszok, J. van Diggelen. (2009). From tools to teammates: Joint activity in human-agent-robot teams. In Masaaki Kurosu (ed.) *Human Centered Design (HCD 2009). Lecture Notes in Computer Science* Volume 5619. Berlin, Germany: Springer, 2009, pp. 935-944.

Cañas, A. J., R. Carff, G. Hill, M. Carvalho, M. Arguedas, T. C. Eskridge, J. Lott, R. Carvajal, (2005). Concept Maps: Integrating Knowledge and Information Visualization, In:*Knowledge and Information Visualization: Searching for Synergies,* ed. S.-O. Tergan & T. Keller, Heidelberg/NY: Springer Lecture Notes in Computer Science, pp. 205-219.

Deyong, M.R. and Eskridge, T.C. (1994). Properties of Optimality in Neural Networks. In Levine, D.S. and Elsberry, W.R. *Optimality in Bilogical and Artifical Networks?* Lawrence Erlbaum Associates 87-102

Eskridge, T.C. (1994). A Hybrid Model of Continuous Analogical Reasoning. In Holyoak, K.J. and Barnden, J.A. *Advances in Connectionist and Neural Computation Theory: Analogical Connections* Ablex Publishing 207-246

Edited Volumes

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

Invited Papers

Eskridge, T.C. (1999). Requirements and Methodologies for HDI Automated Optical Inspection. *HDI MAGAZINE*.**2**(11) 30-34

Eskridge, T.C. (2000). SMT Step-by-Step: Test and Inspection. *SMT Magazine*.**14**(10) 76-88.

Invited Talks

T. C. Eskridge and M. Carvalho (2019). “A federated defense community and ecosystem in practice,” in *2019 S&T Cybersecurity and Innovation Showcase*.

Eskridge, T.C. (2005). Advanced Information Displays. Invited Talk. *2005 Florida Technology Transfer Conference* Orlando, FL.

Eskridge, T.C. (2000). "In Process Quality Control: The Route to Zero Defect Manufacture", Invited Talk, *Nepcon UK*, Birmingham, UK.

Eskridge, T.C. (1999). "Eliminating AOI Programming and Minimizing False Calls", Invited Talk, *PCB '99*, Tel Aviv, Israel. In Proceedings of PCB 99, pp. 27-32.

Refereed Papers

Weekes, T.R. and Eskridge,T.C. (2020) “A neurofeedback-driven humanoid to support deep work,” in Proceedings of the 33rd Florida Conference on Recent Advances in Robotics, May 14-16 2020.

Eskridge, T.C. and Weekes, T.R., (2020)“Opportunities for case-based reasoning in personal flow and productivity management,” submitted to Proceedings of the 28th International Conference on Case-based Reasoning (ICCBR-2020) (I. Watson and R. Weber, eds.), 2020.

Yaman, F., Atighetchi, M., Adler, A., Simidchieva, B, Jeter, S., Eskridge, T.C. and Carvalho, M. (2020). “Behavior-extracting autonomous resiliency toolkit (BART),” in Proceedings of the 12th International Conference on Agents and Artificial Intelligence (ICAART 2020) (J. van den Herik, ed.), February 22-25 2020.

Mehta, D., Eskridge, T.C. and Carvalho, M.M. (2019). “A framework for automated cyber experimentation,” submitted to *CSET 2019*.

Weekes, T.R. and Eskridge, T.C. (2019) “Nudging into flow: Optimizing productivity with a choice architecture,” in Cognitive Economics Workshop, (London, UK), Cognitive Economics Society, November 7-8.

Bhattacharyya, S., Eskridge, T. C., Neogi, N. A., Carvalho, M., and Stafford, M. Formal assurance for cooperative intelligent autonomous agents. In NASA Formal Methods (Cham, 2018), A. Dutle, C. Muñoz, and A. Narkawicz, Eds., Springer International Publishing, pp. 20–36.

Nembhard, F., Carvalho, M. M., and Eskridge, T. C. Extracting knowledge from open source projects to improve program security. In 2018 IEEE SoutheastCon (2018), C. Pitts and J. Howard, Eds.

Bhattacharyya, S., Eskridge, T. C., Neogi, N., and Carvalho, M. M. (2017). Formal assurance for cognitive architecture based autonomous agent. In *Proceedings of the 9th NASA Formal Methods (NFM 2017) Symposium*, Moffett Field, CA; United States.

Nembhard, F., Carvalho, M. M., and Eskridge, T. C. (2017). A hybrid approach to improving program security. In *Proceedings of the 2017 IEEE Symposium Series on Computational Intelligence* (IEEE SSCI 2017).

Atighetchi, M., Benyo, B., Eskridge, T. C., and Last, D. (2016). A decision engine for configuration of proactive defenses - challenges and concepts. In *Proceedings of 2016 Resilience Week (RWS)*, pages 8–12.

M. Atighetchi, B. Simidchieva, T. C. Eskridge, and N. Paltzer. (2016). Ontologies supporting quantification of attack surfaces. In *Proceedings of Semantic Technologies in Intelligence, Defense, and Security* (STIDS 2016).

S. Bhattacharyya, T. C. Eskridge, and M. Carvalho. (2016). Formal verification of intelligent systems modeled as decision procedures. In *Proceedings of the Safe and Secure Systems and Software Symposium* (S5-2016).

S. Bhattacharyya, T. C. Eskridge, M. Carvalho, and J. Davis. (2016). Verification of decision procedures modeled in intelligent agents. In *High Confidence Software and Systems 2016*, Annapolis, MD, May 10-12, 2016.

M. M. Carvalho, T. C. Eskridge, M. Atighetchi, and N. Paltzer. (2016). Semi-automated wrapping of defenses (SAWD) for cyber command and control. In *Proceedings of MILCOM 2016*.

T. C. Eskridge, S. Bhattacharyya, and M. Carvalho. (2016). Verification of security response. In *Proceedings of the Safe and Secure Systems and Software Symposium* (S5-2016).

Carvalho, M., Eskridge, T.C., Ferguson-Walter, K., Paltzer, N., Myers, D., and Last, D. (2015). MIRA: A Support Infrastructure for Cyber Command and Control Operations. *3rd International Symposium on Resilient Cyber Systems*, Philadelphia, PA, August 18-20, 2015.

Eskridge, T.C., Carvalho, M., Polack, P.J., Nembhard, F., and Thotempudi, H.K. (2015). Interactive Visualization of Netflow Traffic. *European Intelligence and Security Informatics Conference* (EISIC) 2015, September 07-09, 2015, Manchester, UK.

Eskridge, T.C., Carvalho, M., Stoner, E., Toggweiler, T., and Granados, A. (2015). VINE: A Cyber Emulation Environment for MTD Experimentation. *Second ACM Workshop on Moving Target Defense (MTD 2015)*, held in conjunction with the *22nd ACM Conference on Computer and Communications Security (CCS),* Denver, CO.

Polack, P.J., Carvalho, M.M., Eskridge, T.C. (2013). Visualizing Multi-Agent Systems. *2013 IEEE/WIC/ ACM International Conference on Web Intelligence*.

Carvalho, M.M., Eskridge, T.C., Bunch, L., Dalton, A., Hoffman, R., Bradshaw, J.M., Feltovich, P.J., Kidwell, D., Shanklin, T. (2013). MTC2: A Command and Control Framework for Moving Target Defense and Cyber Resilience. *6th International Symposium on Resilient Control Systems (ISRCS)*.

Carvalho, M.M., T. Eskridge, L. Bunch, J.M. Bradshaw, A. Dalton, P. Feltovich, and J. Lott.(2013). A human-agent teamwork command and control framework for moving target defense (MTC2). Poster

and paper for presentation at the *Eighth Cyber Security and Information Intelligence Research Workshop (CSIIRW 2013)*. Oak Ridge, TN: Oak Ridge National Labs, January 2013.

Bunch, L., J.M. Bradshaw, M. Carvalho, T. Eskridge, P. Feltovich, J. Lott and A. Uszok.(2012). Human-Agent Teamwork in Cyber Operations: Supporting Co-Evolution of Tasks and Artifacts with Luna. Invited Paper in Ingo J. Timm and Christian Guttmann (eds.), *Multiagent System Technologies: Proceedings of the Tenth German Conference on Multiagent System Technologies (MATES 2012),* Trier, Germany, 10-12 October 2012. Berlin, Germany: Springer, LNAI 7598, pp. 53-67.

Bunch, L., M. Carvalho, J.M. Bradshaw, T. Eskridge, P.J. Feltovich, J. Lott, and A. Uszok. (2012). Policy-Based Governance Within Luna: Why We Developed Yet Another Agent Framework. *Software Agent Teamwork for the Semantic Web 2012 Workshop in conjunction with the 2012 IEEE/WIC/ACM International Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT 2012)*, Macau, China, 4-7 December 2012.

Uszok,A., J.M. Bradshaw, T. Eskridge, J. Hanna. (2012). Rapid Creation and Deployment of Communities of Interest Using the CMap Ontology Editor and the KAoS Policy Services Framework. *Proceedings of the 2nd Networked Digital Technologies Conference (CCIS 87).* Berlin, Germany: Springer-Verlag. 2010.

Eskridge, T.C., Lecoutre, D., Johnson, M. and Bradshaw, J.M. (2009) Network Situational Awareness: A Representative Study, in *Proceedings of the 4th Human-Computer Interaction and Visualization (HCIV) Workshop* 2009.

Bradshaw, J. M., P. J. Feltovich, M. J. Johnson, L. Bunch, M. R. Breedy, T. Eskridge, J. Hyuckchul, J. Lott and A. Uszok (2008). *Coordination in Human-Agent-Robot Teamwork. International Symposium on Collaborative Technologies and Systems*, 2008. CTS 2008. pp. 467-476

Eskridge, T. C., Granados, A., & Cañas, A. J. (2006) Ranking Concept Map Retrieval. Paper presented at the *Proceedings of the Second International Conference on Concept Mapping*, San Jose, Costa Rica.

Eskridge, T. C., Hayes, P., Hoffman, R. R., & Warren, M. (2006) Formalizing the informal: A confluence of concept mapping and the semantic web. In A. J. Cañas, J. D. Novak (Eds.), *Concept Maps: Theory, Methodology, Technology, Proceedings of the Second International Conference on Concept Mapping,* San José, Costa Rica (September 5-8, 2006), Editorial Universidad de Costa Rica, pp. 304-310.

Cañas, A. J., G. Hill, L. Bunch, R. Carff, T. Eskridge, C. Pérez, (2006) *KEA: A Knowledge Exchange Architecture Based on Web Services, Concept Maps, and CmapTools*, In A. J. Cañas, J. D. Novak (Eds.), *Concept Maps: Theory, Methodology, Technology, Proceedings of the Second International Conference on Concept Mapping*, San José, Costa Rica (September 5-8, 2006), Editorial Universidad de Costa Rica, pp. 304-310.

Coffey, J. W., & Eskridge, T. C. (2005) *Knowledge Acquisition and Modeling in a Technical Knowledge Domain.* Paper presented at the *Proceedings of the 9th World MultiConference on Systemics, Cybernetics and Informatics (SCI2005)*, Orlando, FL.

Hayes, P., Eskridge, T. C., Saavedra, R., Reichherzer, T., Mehrotra, M., & Bobrovnikoff, D. (2005) Collaborative knowledge capture in ontologies, *Proceedings of the 3rd international conference on Knowledge capture*. Banff, Alberta, Canada: ACM Press.

Still, D. L., Eskridge, T. C., & Temme, L. A. (2004) Interface for Non-pilot UAV Control. Paper presented at the *Workshop on Human Factors of UAVs*, Mesa, AZ.

Canas, A.C., Hill, G., Carff, R., Suri, N., Lott, J., Eskridge, T.C., Arroyo, M. and Carvajal, R. (2004). Cmaptools: A Knowledge Modeling and Sharing Environment. *Proceedings of the First International Conference on Concept Mapping*.

Coffey, J.W., Eskridge, T.C. and Sanchez, D. (2004). A Case Study in Knowledge Elicitation for Institutional Memory Preservation Using Concept Maps. *Proceedings of the First International Conference on Concept Mapping.*

Leake, D.B., Maguitman, A., Reichherzer, T., Canas, A.C., Carvalho, M., Arguedas, M. and Eskridge, T.C. (2004). "Googling" from a Concept Map: Towards Automatic Concept-Map-Based Query Formation. *Proceedings of the First International Conference on Concept Mapping*.

Leake, D.B., Maguitman, A., Reichherzer, T., Canas, A.C., Carvalho, M., Arguedas, M., Brenes, S. and Eskridge, T.C. (2003). Aiding Knowledge Capture by Searching for Extensions of Knowledge Models. *Proceedings of the Second International Conference on Knowledge Capture (K-CAP)*. 44-53

Huffstutter, W and Eskridge, T.C. (2001). "Developing Return on Investment Criteria for AOI Equipment", In *Proceedings of the APEX-2001 Technical Conference,* Anaheim, CA.

Dunn, S. and Eskridge, T.C. (2000). "Gold Surface Inspection for Direct Chip Attach Technologies", In *Proceedings of the Nepcon 2000 Technical Conference*.

Huffstutter, W., Ortiz, H., and Eskridge, T.C. (2000). "Implementation Strategies for Automated Optical Inspection: Case Studies and Results", in *Proceedings of the Nepcon Technical Conference*.

Eskridge, T.C. (1999). "Eliminating AOI Programming and minimizing False Calls with the AIMS Adaptive Knowledge Based System", In *Proceedings of the 1999 Nepcon Technical Conference*.

DeYong, M.R., Eskridge, T.C., Grace, J.W., Newberry, J.E., Jones, J.H., and Hart, B.E. (1996) "Automated visual inspection stations for next-generation semiconductor package quality control", in DeBusk, D. and Chen, R.T. (Eds) *Optical Characterization Techniques for High-Performance Microelectronic Device Manufacturing III,* pp.99-110.

DeYong, M.R., Eskridge, T.C., and Palmer, A. (1992). "Complex and emergent behavior from neural network pulse-stream filters," *Proceedings of the 35th IEEE Midwest Symposium on Circuits and Systems*, Washington, D.C., pp. 1183-1186, 1992.

DeYong, M.R., Eskridge, T.C., and Palmer, A. (1992). "A coupled-grid neural network retina for real-time visual processing," P*roceedings of the 35th IEEE Midwest Symposium on Circuits and Systems*, Washington, D.C., pp. 1179-1182, 1992.

Eskridge, T.C., and J.A. Barnden (1991) Application of Connectionism to Analogical Reasoning, in *3rd Annual Midwest Artificial Intelligence and Cognitive Science Society Conference*, Carbondale, Il.

Eskridge, T.C., (1991) Integrated Reasoning through Associative Retrieval, in *Sixth International Symposium on Methodologies for Intelligent Systems*.

Eskridge, T.C., (1991) Continuous Analogical Learning, in *The First International Conference on the Learning Sciences*.

McWilliams, G., S. Kirby, T. Eskridge, J. Newberry, (1990) An Expert System for Integrating Weather and Doctrinal Information, in *The SPIE Applications of Artificial Intelligence IX*, pp. 417-428.

Eskridge, T.C., (1989) Continuous Analogical Reasoning: A Summary of Current Research, in *DARPA Workshop on Case-Based Reasoning*, pp. 253-257.

Eskridge, T.C., (1989) Continuous Analogical Reasoning and Learning, in *ONR Workshop on Models of Complex Human Learning*.

Eskridge, T.C., (1989) Representing Knowledge for Analogical Reasoning, in *The 1st Annual IEEE Symposium on Parallel and Distributed Processing*, pp. 130-131.

Eskridge, T.C., and Fields, C.A., (1989) Investigating Dynamic Control in Symbolic Problem Solvers, in *The 1st Annual IEEE Symposium on Parallel and Distributed Processing*, pp. 128-129.

Eskridge, T.C, Fields, C.A., (1989) Representing Strategic Knowledge in Continuous, Dynamic Control Functions, in *International Symposium on Methodologies for Intelligent Systems*.

Fields, C., Coombs, M., Eskridge, T., Hartley, R., Pfeiffer, H., Soderlund, C., McWilliams, G., Kirby, S., (1989) Architecture of MERCURY Mesoscale Met Data Fusion System, in Preprints *of the Fifth International Conference on Interactive Information and Processing Systems for Meteorology, Oceanography, and Hydrology*. American Meteorological Society.

Fields, C., Eskridge, T., Hartley, R., Coombs, M., (1989) Experimental Analysis of Dynamical Control Strategies for the MGR Architecture: Simulation Environment and Initial Results, in *Proceedings of the AISB89 Conference on Artificial Intelligence.*

McWilliams, G., Kirby, S., Fields, C., Coombs, M., Eskridge, T., Hartley, R., Pfeiffer, H., Soderlund, C., (1989) Army Requirements for an Intelligent Interface to a Real Time Meteorological Data Base, in *Preprints of the Fifth International Conference on Interactive Information and Processing Systems for Meteorology, Oceanography, and Hydrology*. American Meteorological Society.

Eskridge, T.C., (1988) Access in Analogical Reasoning, *Proceedings of AI/CS-88*, Dublin, Ireland. Also, in *Memoranda in Computer and Cognitive Science,* MCCS-88-136, New Mexico State University, Las Cruces, NM.

Eskridge, T.C., (1988) A Continuous Approach to Analogical Reasoning, in *Proceedings of the Third Rocky Mountain Conference on Artificial Intelligence*, Denver, CO: US West, (pp. 10-23). Also, in *Memoranda in Computer and Cognitive Science*, MCCS-88-135, New Mexico State University, Las Cruces, NM.

Non-refereed Papers and Technical Reports

T. C. Eskridge, M. M. Carvalho, A. V. Rodgers, and R. van Tassel (2019). “A case-based reasoning approach to cybersecurity reasoning,” Technical Report HIAI-2019-06-04, Harris Institute for Assured Information, Florida Institute of Technology.

T. C. Eskridge, D. Mehta, A. Granados, M. M. Carvalho, M. Atighetchi, P. Costa, and D. Myers (2019). “Using bayes networks to predict information gain on experiment trial,” Technical Report HIAI-2019-0603, Harris Institute for Assured Information, Florida Institute of Technology.

T. C. Eskridge, D. Mehta, A. Granados, M. M. Carvalho, M. Atighetchi, and D. Myers (2019). “Intelligent trial generation for cyber security experimentation,” Technical Report HIAI-2019-06-02, Harris Institute for Assured Information, Florida Institute of Technology.

T. C. Eskridge, W. Nyffenegger, S. Akerman, S. Ghaderpour Taleghani, D. Metha, and M. Carvalho, (2019). “Semantic composition of the user interface,” Technical Report HIAI-2019-0401, Harris Institute for Assured Information, Florida Institute of Technology.

Eskridge, T. C. (2012). Continuous Flow Analogical Reasoning, *PhD Dissertation*, Binghamton University, Binghamton, NY.

Eskridge, T. C. and P. Hayes (2010). Ontology-based Contextual Query Editor, *NAISIC Final Report*.

Coffey, J.W. & Eskridge, T.C. (2004). A Knowledge Retention Pilot Study in the Nuclear Power Industry: Activities, Achievements, and Challenges. T*echnical Report to the Electrical Power Research Institute (EPRI)*, Palo Alto, CA.

Eskridge, T.C., (1991) A Hybrid Connectionist Model of Human Analogical Reasoning, in *Memoranda in Computer and Cognitive Science,* MCCS-91-217, New Mexico State University, Las Cruces, NM.

Eskridge, T.C., (1991) ASTRA: A Computational Model of Continuous Analogical Reasoning, in *Memoranda in Computer and Cognitive Science*, MCCS-91-218, New Mexico State University, Las Cruces, NM.

Eskridge, T.C., (1990) WADIF: An Expert System for Fusing Weather and Doctrinal Information Used in the Intelligence Preparation of the Battlefield, Technical Report, U.S. Army Atmospheric Sciences Laboratory, White Sands Missile Range, NM. Also in *Memoranda in Computer and Cognitive Science*, MCCS-91-216, New Mexico State University, Las Cruces, NM.

McWilliams, G., and T. Eskridge, (1990) Analogical Reasoning in Decision Support Systems, T*echnical Report, U.S. Army Atmospheric Sciences Laboratory,* White Sands Missile Range, NM.

McWilliams, G., S. Kirby, T. Eskridge, J. Newberry, (1990) An Expert System for Integrating Weather and Doctrinal Information, *Technical Report, U.S. Army Atmospheric Sciences Laboratory*, White Sands Missile Range, NM.

Eskridge, T.C., (1987) Analogical Problem Solving, *Master's Thesis*, Southern Illinois University, Carbondale, IL.