William G. Kennedy
Ph.D., Captain, USN (Ret.)

Current Position Associate Professor (Term Teaching)
Senior Science Advisor, Center for Social Complexity
George Mason University, MS 6B2
Fairfax, VA 22030-4444

Contact wkennedy@gmu.edu
1-703-993-9291
Research Hall, room 378
http://socialcomplexity.gmu.edu/faculty/csc-faculty-dr-kennedy/
(personal website: http://www.MLLab.com)
ORC ID: 0000-0001-9238-1215
Web of Science ResearcherID: B-1697-2008
Scopus ID: 21739727700

Education

Ph.D., Information Technology, George Mason University, 2003
M.S., Computer Science, Naval Post-Graduate School, 1973
B.S., Mathematics, U.S. Naval Academy, 1972

Research Positions

2018-present	Associate Professor (Term Teaching) Computational and Data Sciences Department, College of Science, George Mason University
2008-2018	Research Assistant Professor, Krasnow Institute for Advanced Study, George Mason University
2015-present	Senior Scientific Advisor, Center for Social Complexity, George Mason University
2015	Naval Research Laboratory Summer Fellow through the Office of Naval Research (ONR) Summer Faculty Research Program
2013-2014	Faculty Research Participation Program appointment, Johns Hopkins University-Applied Physics Lab (APL)
2005-2008	National Research Council Associateship (postdoc) in the Navy Center for Applied Research in Artificial Intelligence at the Naval Research Laboratory, Washington, DC
2004-2008	External Research Professor, Krasnow Institute for Advanced Study, George Mason University
1980-2005	(non-research positions in U.S. Government Civil Service)
1979-1980	Computer Scientist, GS-11, Naval Research Laboratory, Washington, DC
1972-1978	Commissioned U.S. Naval Officer, active duty

Research Grants as Principal Investigator (PI)

2016-2019	A Framework for Modeling Society Following a Nuclear WMD Event, Defense Threat Reduction Agency (DTRA), HDTRA1-16-1-0043, $762K, 5 years.

Research Grants as Principal Investigator (PI) (continued)

2016-2017 Subcontractor to Logistics Management Institute (LMI) of Mclean, "Improving the Systems Engineering of Complex and Increasingly Autonomous Systems through the Development of Advanced Engineering, Language, Symbols, & Visualizations", National Aeronautics and Space Administration (NASA) contract: NNH16CT04C, $150K, 1 year.

Research Grants as Co-Principal Investigator (Co-PI)

2009-2012 MOD: Co-Evolution of Innovative Products by Purposive Agents and the Growth of Technological Complexity, NSF Award ID: 0915657, PI: Robert Axtell $398,460 over 3 years

Federal Civil Service (1979-2005)

Retired, 2005 (35+ years of Federal service (includes some active military service))
Department of Energy (15 years, 1990-2005)
Nuclear Regulatory Commission (10 years, 1980-1990)
Naval Research Laboratory (1 year, 1979-1980)
Highest level: Senior Level-1 (Senior Level-1) (like Senior Executive Service (SES))
Highest permanent level: GS-15 step 10
Graduate of Federal Executive Institute (FEI)'s 4-week residential program (1997)
Personal Awards: DOE Bronze Medal, several Quality Step Increases & Special Act Awards, and numerous performance awards

Military Service

U.S. Navy Captain (service: 6 yrs active & 24 yrs Reserves) retired 2002 (after 30 years)
Commanded 3 USNR Units (SUBRON8, NUWC, CNO N87) (submarine & sub support)
Competitively selected at national level for Naval Reserve senior officer billets 12 years
Active duty in the U.S. Submarine Service (Atlantic fleet during Cold War) (1974-1978)
Qualified in Submarines and authorized to operate nuclear power plants (1974-1978)
Personal Awards: Legion of Merit, Meritorious Service Medal (2 awards), Navy Commendation Medal (3 awards), Navy Achievement Medal

Industry

Co-Founder, Complex Systems Modeling, LLC. (2017-present) (consulting)
Founder, Systems and Solutions, Ltd. (1981-2008) (software development)
Founder, Trivestments, Inc. (1980-1990) (retail)
Technical Leader (professional staff), The BDM Corporation (1978-1979) (consulting)

Courses Taught as Associate Professor (Term Teaching) for George Mason University

Spring 2019: Cognitive Foundations of CSS (CSS-635/PSYC-768)
Spring 2019: Introduction to Computational Data Science (CDS-130)
Fall 2018: Principles of Knowledge Mining (CSI-777)
Fall 2018: Computing for Scientists (CDS-130)
Fall 2018: Directed Reading: Simple Heuristics and Cognition (CSS-796) (3hrs)

Courses Taught as Adjunct Professor for George Mason University

Summer 2018: Directed Reading: Probabilistic Topic Models (CSI-796) (3hrs)
Spring 2018: Cognitive Foundations of CSS (CSS-635/PSYC-768)
Spring 2018: Introduction to Computational Data Science (CDS-130)

Courses Taught as Adjunct Professor for George Mason University (continued)

Spring 2018: Directed Reading: Value Alignment in Humans & Sys. (PSYC-897) (3hrs)
Fall 2017: Principles of Knowledge Mining (CSI-777) **(developed syllabus)**
Fall 2017: Grant Writing (PSYC-897) (1hr)
Fall 2017: Directed Reading: Cognitive Patterns (CSS-796) (3hr)
Spring 2017: Computational Cognitive Modeling (PSYC-768/CSS-635)
Spring 2016: Cognitive Foundations of CSS (CSS-635/PSYC-768)
Spring 2016: Directed Reading: Stress and Crowd Behavior (CSS-796) (3hr)
Spring 2015: Cognitive Foundations of CSS (CSS-635/PSYC-768)
Fall 2014: Directed Reading: Modeling of Real-Time Strategy (CSS-796) (3hr)
Spring 2014: Cognitive Foundations of CSS (CSS-635/PSYC-768)
Spring 2013: Computational Cognitive Modeling (PSYC-768/CSS-635)
Spring 2012: Cognitive Foundations of CSS (CSS-635/PSYC-768)
Spring 2011: Cognitive Foundations of CSS (CSS-635/PSYC-768)
Spring 2010: Cognitive Foundations of CSS (CSS-635/PSYC-768) **(developed syllabus)**
Spring 2009: Computational Cognitive Modeling (PSYC-768/CSS-635) **(developed syllabus)**

for University of South Carolina (USC)

At sea 1977: College Math, Program for Afloat College Education (PACE) **(developed syllabus)**
At sea 1976: Introduction to Computer Science, PACE **(developed syllabus)**

Classes Taught as Guest Lecturer

Fall 2018: Introduction to Computational Social Science (CSS-600)
Fall 2017: Introduction to Computational Social Science (CSS-600)
Spring 2017: Modeling Cognition in ABMs, APL Strategic Education Program Course: Game Theory & Agent-Based Modeling, **Johns Hopkins University**, Applied Physics Laboratory
Fall 2016: Introduction to Computational Social Science (CSS-600)
Fall 2016: Agent-Based Modeling of Policy Options for combined classes of Public Policy Evaluation, Comparative Politics, and Public Policy Impact Evaluation, **National University of Colombia** at Medellín
Fall 2015: Introduction to Computational Social Science (CSS-600)
Fall 2014: Introduction to Computational Social Science (CSS-600)
Fall 2013: Applied Anthropology (ANTH-440)
Fall 2013: Introduction to Computational Social Science (CSS-600)
Fall 2013: Topics in Computational Social Science (CSS-739)
Fall 2012: Introduction to Computational Social Science (CSS-600)
Fall 2012: Issues in Anthropology (ANTH-399)
Fall 2011: Introduction to Computational Social Science (CSS-600)
Fall 2010: Introduction to Computational Social Science (CSS-600)
Fall 2009: Introduction to Computational Social Science (CSS-600)
Fall 2008: Machine Learning (CS-782)

Academic Awards

Nominated for Mason Career Connection Award, April, 2019.
Nominated for Mason Teaching Excellence Award, Oct. 2012.
Awarded the College of Humanities and Social Science Award for Scholarship for 2012, as part of the research faculty of the Center of Excellence in Neuroergonomics, Technology, and Cognition (CENTEC), Raja Parasuraman, PI.
Selected for Immediate Graduate Education from the U.S. Naval Academy 1972 resulting in being awarded the first Master Science in Computer Science for a USNA graduate.

Academic Service

Doctoral committee member for first 2 PhDs in Computational Social Science, 15 PhDs awarded in Computational Social Science (CSS), 2 in Neuroscience, and 1 in Psychology

Currently doctoral committee member for candidates: 12 in CSS, 3 in Computational Sciences and Informatics (CSI), 1 in Psychology-Human Factors and Applied Cognition, 1 in Computer Science, and 1 in Biodefense

Committee chair for 5 Masters of Arts in Interdisciplinary Studies (MAIS) with a focus in Computational Social Science.

Committee member for 7 completed MAIS with concentration in CSS

Comprehensive Examination contributor and evaluator for the Department of Computational Social Science, George Mason University (2009-2015, 2018).

PhD Committee Memberships (degrees awarded)

1. Thomas Pike (2019), *Standardizing Complexity: Doctrine and Computation for Integrated Campaigning*, (CSS)
2. Thomas Rosati (2019), *From Factors to Actors: Explaining Democratization Utilizing An Agent-Based Modeling Approach* (CSS)
3. Wendy L. Baccus (2019) *The Role of Spatial Position on Gait Synchronization in Group Movement* (Psychology-Human Factors & Applied Cognition)
4. E. Andre' L'Huillier (2019) *Blockbuster Emergence in Entertainment Platform Markets: Modeling the History of Video Game Industry in North America* (CSS)
5. John B. Nelson (2019) *A Computational Model of Belief System Construction and Expression with Applications to American Democracy* (CSS)
6. Gary Bogel (2019) *Polity Cycling in Great Zimbabwe via Agent-Based Modeling: The Effects of Timing and Magnitude of External Factors* (CSS)
7. Karl Selke (2017) *RealLand: A Wargaming Approach to Computational International Relations* (CSS)
8. Kevin T. Comer (2017) *Patients, Premiums, and Public Polity: Modeling Health Insurance Markets Using Agent Computing* (CSS)
9. Jonathan Goldstein (2017) *Rethinking Housing with Agent-Based Models: Models of the Housing Bubble and Crash in the Washington DC Area 1997-2009* (CSS)
10. Thomas J. Dover (2016) *Implementing a Complex Social Simulation of the Violent Offending Process: The Promise of a Synthetic Offender* (CSS)
11. David P. Masad (2016) *Agents in Conflict: Comparative Agent-Based Modeling of international Crisis and Conflicts* (CSS)
12. Sergey V. Chernyak (2016) *Neural Signatures of Trust in Reciprocity* (Neuroscience)
13. Kimberly S. Goodyear (2016) *The Neural Basis of Advice Utilization During Human and Machine Agent Interactions* (Neuroscience)
14. Jose Manuel Magallanes (2015) *Climate Change and the Potential for Conflict and Extreme Migration in the Andes: A Computational Approach for Interdisciplinary Modeling and Anticipatory Policy Making* (CSS)
15. Ovi Chris Rouly (2015) *Towards Emergent Social Complexity* (CSS)
16. Bianica Pint (2014) *When People Rebel: A Computational Approach to the Study of Violent Collective Action* (CSS)
17. Maciej Latek (2011) *On Bounded Rationality in Multi-Agent Environments* (CSS)
18. Mark Rouleau (2011) *A Computational Theory of Endogenous Norm Emergence: The Normsim Agent-based Model in Mason* (CSS)

PhD Committee, Co-Chair

CSS: Clarence Dillon, Niloofar Bagheri Jebelli, Naresh Verma
Computational Science and Informatics (CSI):
Thomas Jones, Emmanuel Essiaw
Psychology-Human Factors/Applied Cognition (HFAC): Stephanie Tulk

PhD Committees Member (*indicates candidates)

CSS: Brent Auble*, Thomas Briggs, Annetta Burger*, Paul Cummings, Trang Escobar*, Farzaneh Davari*, Brant Horio, Jacqueline Kazil, Sanjay Nayar*, Talha Oz*, Melanie Swartz*, and Xiaoyi Yuan*
CSI: John Leung*, William Lamberti, and Sze Wing
Computer Science: Eric O. Scott ("Siggy")*
Schar School of Policy and Government- Biodefense: Mary Sproull

Master of Arts in Interdisciplinary Studies (MAIS) Committee Chair/Director

1. Fahad Aloraini (2019 in progress)
2. Tung-Lin Liu (2018) *Understanding Power Law Behaviors in Surname Distribution: An Agent-Based Analysis* (CSS)
3. Marta Hansen (2017) *Positive Affect and Prospect Theory in Agent_Zero: A Model Extension* (CSS)
4. Craig Brown (2015) *Expressive Preference Falsification: Explaining Persistent Public Support for Social Security* (CSS)
5. Jessica Hughes (2014) *Reexamining Vowel Transmission and Diffusion In a Repeatable Modeling Environment: Advancing Computational Interpretation of Vowel Chain Shifts as an Approachable NetLogo Model with Simple Parameter Adjustments* (CSS)

MAIS (CSS) Committee Member (awarded)

1. Charlie Roe (2019) *An Application of Agent-Based Modeling to Maker-Taker Exchange Fee Pricing*
2. Niloofar Bagheri-Jebelli (2017) *Urban Development Through the Lens of Agent-Based Modelling*
3. Dale K. Brearcliffe (2017) *Parallelization of Entity-Based Models in Computational Social Science*
4. Eric L. Hansen (2017) *An Agent-Based Model of British and Boer Small Arms and Tactics During the Second Anglo-Boer War*
5. Brent D. Auble (2016) *Narrative Agents as a Reporting Mechanism for Agent-Based Models* (CSS)
6. Stefani Fournier (2015) *Strategic Options for Terrorist Network Disruption: Understanding the Structure and Complexity* (CSS)
7. Melanie Swartz (2015) *A Meso-Scale Model of Multi-Modal Transit and Commuter Decision-Making: An Agent-Based Model of Reston, VA*

Master of Science Committee member (Bioinformatics and Computational Biology) (Awarded, 2019):

Ko-Tsung Hsu and Fengying Ding

Scientific Community Service

Editorial Service:

- Special Issue editor for TopiCS: Topics in Cognitive Science **10**(1) 2018
- Editorial Board member for Oxford University Press series on Cognitive Models and Architectures (2014-**present**)
- Publications Officer for the Computational Social Science Society of the Americas (CSSSA) 2013-2016
- Special Issue editor of the Computational and Mathematical Organization Theory journal (CMOT), best papers from BRiMS conferences 2009-2013
- CMOT Area Editor journal (2012-**present**)

Conference Leadership Service:

- For International Conference on Cognitive Modeling (ICCM):
  - Co-Chair 2017
  - Tutorial Chair 2016
- Combined the International Conference on Social Computing, Behavioral-Cultural Modeling, and Prediction+ Behavior Representation in Modeling and Simulation (SBP+BRiMS):
  - Local Arrangements Chair (2015 & 2016)
  - Program Committee Lead Chair & lead proceedings editor (2014)
  - Program Committee Co-Chair (2013)
- For the BRiMS Society:
  - Society Co-Chair and annual conference Co-Chair, 2013-2015
  - Program Chair for BRiMS (Behavioral Representation in Modeling and Simulation) Conference, 5 years: 2009-2013
- Organizing Committee for AAAI 2013 Fall Symposium "Integrated Cognition"

Science Fair judge for the Washington Academy of Science, Fairfax County Regional Science & Engineering Fair, Thomas Jefferson High School for Science & Technology, Langley HS, Marshal HS, Montgomery Blair Magnet School, and other public schools (2008-**present**)

AAAS STEM Volunteer for Fairfax County Public Schools in two 7-8th grade science teachers' classes at Lake Braddock Secondary School (2011-2014) and Freedom Hill Elementary School STEM program (2014-2017)

Book reviewer for Oxford University Press, MIT Press, Elsevier, and Sage

Journal reviewer for AI Magazine, Cognitive Systems Review, Computational and Mathematical Organization Theory journal (CMOT), IEEE Transactions on Cognitive and Developmental Systems, IEEE Intelligent Systems, NeuroImaging, NeuroImage-Clinical, Psychophysiology, International African Conflict & Peacebuilding Review, International Journal of Industrial Ergonomics, the Journal of Artificial Societies and Social Simulation (JASSS), and the Royal Society.

Program Committee/conference paper reviewer/meta-reviewer for: AAAI, AAMAS, BICA, BRiMS, CogSIMA, CogSci, CSR, CSS, CSSSA, EAP, ESSA, HRI, ICCM, ICRA, IJCAI, MABS, SBP, SBP-BRiMS, SSC, & WSC

Research Interests

Cognition and behavior at the individual, small group, and societal levels; building computational cognitive models of social cognition and social interactions; Theory of Mind; trust; cognitive robotics; human-robot interactions; robotic autonomy; and long-term learning using ACT-R, MASON, NetLogo, and Soar.

Current Research Projects

Research characterizing a mega-city population's reaction to a nuclear WMD event (as PI) (2016-2021). This was originally a 3-year, basic research grant with Andrew Crooks as Co-PI and four graduate research assistants and several volunteer undergrads and high school students beginning in the summer of 2016. The objective of this research is to develop an understanding of a population's reaction to a nuclear WMD event through implementing computational models of verbal theories of individual behaviors and exercising them in a computer simulation of a mega-city area. The model shows how the population NYC might react to a nuclear event in the first hour, day, week, and month. In 2018, we won a 2-year, funded extension to improve model's fidelity.

Developing an Integrated Cognitive Architecture (2010-present): The primary research-focused cognitive architecture, ACT-R, represents only the rational origins of human behavior. It does not address other forms of cognition, specifically, physiological, emotional, and social. This research has been investigating the development of an integrated cognitive architecture combining these three "beyond rational" forms of cognition into both a research-focused architecture and a practical architecture for large-scale computational social science. So far, this effort has produced presentations at ACT-R workshops, ICCM and CogSci posters, a book chapter, and white papers. Teaming with social and neuro psychologists, efforts are now focused on obtaining funding.

Advancing the Understanding of Human Trust (2010-present): Developing computational cognitive models of human intuition and trust of other agents, human or advisory systems. This work began in collaboration with the Air Force Research Laboratory and the George Mason University's Center of Excellence in Neuroergonomics, Technology, and Cognition (CENTEC). Products include a paper on implicit learning and the organization of a symposium on "beyond rational" cognitive modeling at the International Conference on Cognitive Modeling (ICCM 2012) and a paper at ICCM 2010 on the interaction between the fast and slow cognitive processes. Recent activities include a collaborative effort with AFRL to model intuitive decision-making and Krasnow fMRI experiments on trust (NSF supported). Current activities include building a cognitive model of behavioral trust in advice from human, avatar, and computer advisors with individual differences to replicate human subject data.

Applying Agent-Based Modeling to Policy in Social Welfare (2014-present): Developing models to evaluate policy options for reducing social worker stress. Integrating a Systems Dynamics model of stress within agent-based models of individuals providing in-home care to older adults. The work has produced a paper presented at BRiMS-2015, a journal article on the methodology, and a book chapter.

Previous Research Projects

Design of an advanced engineering language (as PI): Lead Mason working with LMI on a NASA research contract (one year) "Improving the Systems Engineering Complex and Increasingly Autonomous Systems through the Development of Advanced Engineering Language, Symbols, and Visualizations". The goal of the research is to create new language and visualization methods that will create coherent and shared, explicit and implicit, mental models for the specification, design, development, management, and use of autonomous systems. The work produced two technical reports.

NSF Project on Social Impacts of Climate Change (2015-2016): Facilitated the final stages of this 3 year project. Developed agent-based models of the population's migration in Canada four different sources of weather data (last 150 years and next 100 years).

Human Supervision of the Military's Semi-Autonomous Robots (2015): Contributed to policy discussions on use of autonomous machines and man-machine systems at the Warfighter Human System Integration Laboratory and developed an expert system for the experimental operator interface (SCOUT) for controlling multiple unmanned aerial vehicles (UAVs). Presented work at the AAAI Fall Symposium on Autonomous Systems.

Enhancing the agent cognition in computational social science

- **(Oct 2013-Dec 2014):** Working with Johns Hopkins University, modeled human social cognition and decision-making concerning migration based on economic, violence, political issues, and social influences. This agent-based simulation project was done for the Air Force Research Lab and featured survey data integration and synthesis for statistically-driven decision trees used by millions of agents. Paper presented at BRiMS-2015.
- **(2008-2013):** Successfully led, as senior member, a 5-year, multi-disciplinary team developing agent-based models of societal conflict, humanitarian assistance, and disaster relief in East Africa. Developed cognitively plausible models of household decision-making for pastoralists and agriculturists using a rule-based cognitive architecture. This Mason-Yale MURI (Multidisciplinary University Research Initiative) was sponsored by ONR and produced many publications and presentations as the lead author.

Developed and applied experimental data on human judgments of task duration (2008-2011). Measured student performance and developed a model of how long it takes to perform a task involving walking. Also collected data on students' evaluation of someone leaving to perform the same task as the person took too long, too short, or about the right amount of time. The results were incorporated into a robot projecting the actual performance and human perception of the time to perform the task. Journal article on social robotics published in 2011.

"Like-Me" Simulations at a Robotic Theory of Mind (2005-2008). Modeled human and chimpanzee social behavior based on reasoning about another agent using a "like-me" based simulation. Journal article published in 2009. Developed a cognitive model that models other team members' decision-making to improve its own and the team's performance. Paper published and recognized as best in track at AAAI 2008. Built on the Naval Research Laboratory's experience in static spatial perspective taking, added the ability to model another agent's movement so that a robot would covertly approach the other mobile agent. Paper published recognized as best in track at AAAI 2007.

Publications

Dissertation

Kennedy, W.G. (2002) *Long-Term Learning in Soar and its Application to the Utility Problem*, Doctoral Dissertation, School of Information Technology and Engineering, George Mason University. Advisor: Kenneth A. De Jong.

Edited Books

1. M. K. van Vugt, M.K., Banks, A., & Kennedy, W. (Eds.), *Proceedings of the 15th International Conference on Cognitive Modeling.* Coventry, United Kingdom: University of Warwick. ISBN-10: 09985082-1-7, ISBN-13: 978-0-9985082-1-4
2. Kennedy, W.G., Argawal, N., and Yang, S.J. (Eds.) (2014) *Social Computing, Behavioral-Cultural Modeling and Prediction: 6th International Conference, SPB 2014*, Washington, DC, April 1-4, 2014, Proceedings. LNCS 8393. Springer-Verlag: Berlin.
3. Greenberg, A.M., Kennedy, W.G., and Bos, N.D. (Eds.) (2013) *Social Computing, Behavioral-Cultural Modeling and Prediction: 6th International Conference*, SPB 2013, Washington, DC, April 2-5, 2013, Proceedings. LNCS 7812. Springer-Verlag: Berlin.
4. Kennedy, W.G., and Gibson, F.L. (1972) *1972 Lucky Bag*: The Annual Publication of The Brigade of Midshipmen, United States Naval Academy, Annapolis, Maryland. Taylor Publishing: Dallas.

Book Chapters

1. Folke, Tomas, and Kennedy, William G, (under review 2019) Agent-Based Modelling as a bridge between Psychology and quantitative Social Science.
2. Wolf-Branigin, M., Kennedy, W., Ihara, E., & Tompkins, C. (2018) Applying Complex Adaptive Systems to Agent-Based Models for Social Programme Evaluation. In the Handbook of Research Methods in Complexity Science, E. Mitleton-Kelly, A. Paraskevas, & C. Day (Eds.) London: Edward Elgar.
3. Kennedy, W.G., Cotla, C.R., Gulden, T., Coletti, M, and Cioffi-Revilla, C. (2014) Towards Validating a Model of Households and Societies of East Africa. Advances in Computational Social Science: The Fourth World Congress, Chapter 20, pp 315-328, S.H. Chen, I. Terano, H. Yamamoto, C.C. Tai (Eds.) Springer.
4. Kennedy, W.G. (2012) Long-Term Learning in Soar. In Encyclopedia of the Sciences of Learning, Part 12, pp 2074-2075. Norbert M. Seel (Ed.) 1st Edition 2012. ISBN 978-1-4419-1427-9. Springer.
5. Kennedy, W.G. (2011) Modelling Human Behavior in Agent-Based Models. Agent-Based Models of Geographical Systems, Part 2, pp 167-179. M. Batty, A. Heppenstall, and A. Crooks (Eds.) Springer.

Peer Reviewed Journal Articles Under Review

1. Burger, A., Oz, T., Crooks, A., and Kennedy, W.G. (2019 under review) Organizing Theories for Disaster Study in a Model of Complex Adaptive Systems in Computational Social Science.
2. Juvina, I., Collins, M., Larue, O., Kennedy, W., De Visser, E., DeMelo, C. (under review 2018) Toward a Unified Theory of Learned Trust in Interpersonal and Human-Machine Interactions. Submitted to *ACM Transactions on Interactive Intelligent Systems*

Peer Reviewed Journal Articles (published)

1. Lee, M., Sankar, V.R., Hammer, A., Kennedy, W.G., Barb, J.J., McQueen, P.G., and Leggio, L. (2019 in press) Using Machine Learning to Classify Individuals with Alcohol Use Disorder based on Treatment Seeking Status. The Lancet.
2. Burger, A., Oz, T., Crooks, A., and Kennedy, W.G. (2019) Disasters Through the Lens of Computational Social Science. *Future Internet* **11**(5) 103.
3. Orr, M.G., Lebiere, C., Stocco, A., Pirolli, P., Pires, B., Kennedy, W.G. (2019) Multi-scale resolution of neural, cognitive and social systems. *Journal of Computational and Mathematical Organization Theory* **25**(1), pp 4-23. Springer. https://doi.org/10.1007/s10588-018-09291-0
4. Colletti, M., Hultquits, C., Kennedy, W.G., Cervone, G. (2017) Validating Safecast data by comparisons to a U. S. Department of Energy Fukushima Prefecture aerial survey. *Journal of Environmental Radioactivity* 171, pp 9-20.
5. Kennedy, W.G., Ihara, E.S., Tompkins, C.J., Wolf-Branigin, M.E. (2015) Computational Modeling of Caregiver Stress. *Journal of Policy Studies and Complex Systems* **2**(1), pp 31-44. DOI: 10.18278
6. Skoggard, I. and Kennedy, W.G. (2013) An Interdisciplinary Approach to Agent-Based Modeling of Conflict in Eastern Africa. *Practicing Anthropology* **35**(1), pp 29-33.
7. Andrei, A. and Kennedy, W.G. (2013) Agent-Based Models and Ethnography: Combining Qualitative and Computational Techniques with Complexity Theory. *Practicing Anthropology* **35**(1), pp 14-18. *(best paper incentive award: MITRE.)*
8. Kennedy, W.G. and Trafton, J.G. (2011) How long is a moment: The perception and reality of task-related absences. *International Journal of Social Robotics* **3**(3), pp 243-252. Springer.
9. Kennedy, W.G., Bugajska, M.D., Harrison, A.M., & Trafton, J.G. (2009). "Like-Me" Simulation as an Effective and Cognitively Plausible Basis for Social Robotics. *International Journal of Social Robotics* **1**, pp 181-194. Springer.
10. Kennedy, W.G., and Trafton, J.G. (2007). Long-Term Symbolic Learning. Cognitive Systems Research **8**(3), pp 237-247. Elsevier.

Journal Articles, Special Issue editorial, non-peer reviewed

1. Kennedy, W.G., van Vugt, M.K, Banks, A.P. (2018) Cognitive Modeling at ICCM: Advancing the State of the Art. *Topics in Cognitive Science* **10**(1), pp 140-143. Wiley. DOI 10.1111/(ISSN) 1756-8765/earlyview
2. Kennedy, W.G., St. Amant, R. Reitter, D. (2015) Behavioral representation in Modeling and Simulation: introduction to CMOT special issue—BRiMS 2013. *Journal of Computational and Mathematical Organization Theory* **22**(1), pp 1-3. Springer. DOI 10.1007/s10588-015-9194-9
3. Best, B.E., Kennedy, W.G., St. Amant, R. (2015) Behavioral representation in Modeling and Simulation: introduction to CMOT special issue—BRiMS 2012. *Journal of Computational and Mathematical Organization Theory* **21**(3), pp 243-246. Springer. DOI 10.1007/s10588-015-9183-z
4. Kennedy, W.G. (2015) Uncredited editorial preface to special section of JASSS that included four articles selected from the 2013 annual meeting of the Computational Social Science Society of the Americas. *Journal of Artificial Societies and Social Simulation* **18**(2).

Journal Articles, Special Issue editorial, non-peer reviewed (continued)

5. Ritter, F.E., Kennedy, W.G., and Best, B.E. (2013). The best papers from BRiMS 2011: models of users and teams interacting. *Journal of Computational and Mathematical Organization Theory* **19**(3), pp 283-287. Springer.
6. Kennedy, W.G., Ritter, F.E., and Best, B.E. (2011). Behavioral representation in modeling and simulation: Introduction to CMOT special issue-BRiMS 2010. *Journal of Computational and Mathematical Organization Theory* **17**(3), pp 225-228. Springer.
7. Kennedy, W.G., Ritter, F.E., and Best, B.E. (2010). Behavioral representation in modeling and simulation: Introduction to CMOT special issue-BRiMS 2009. *Journal of Computational and Mathematical Organization Theory* **16**(3), pp 217-219. Springer.

Technical Reports

1. Horio, B.M., Kennedy, W.G., Bachmann, K.L., Degler, D.R., Yuan, X., Kumar, V., Yaakobi, I., Stouffer, V.L., and Hasan, S. (2017) Improving the Systems Engineering of Complex and Increasingly Autonomous Systems through the Development of Advanced Engineering Language, Symbols, and Visualizations, Final Report NS603C4. LMI: August, 2017.
2. Horio, B.M., Degler, D.R., Bachmann, K.L., and Kennedy, W.G. (2017) Integrating Mental Model Concepts into the Systems Engineering of Complex Systems: Proceedings of a Workshop. LMI: September, 2017.

Invited Presentations

1. Kennedy, W.G., "Validation of Agent-Based Models", symposium at SBP-BRiMS 2019, Washington, DC, 10 July 2019.
2. Kennedy, W.G., "The Big Picture: Big Data, Big Theory, and Big Challenges" The 2018 Symposium on Data Science & Statistics, American Statistical Association, Reston, VA, 17 May 17 2018.
3. Kennedy, W.G., "How would the population of a mega-city react to a nuclear WMD event?" The Jacob Marschak Interdisciplinary Colloquium on Mathematics in the Behavioral Sciences at UCLA, October 25, 2017. (http://marschak.ucla.edu)
4. Kennedy, W.G. "The Challenge of Modeling Cognition for Computational Social Science", Krasnow Institute for Advanced Study symposium, George Mason University, Fairfax, VA, 30 March 2017.
5. Kennedy, W.G. "U.S. Energy, the Big Picture", NRL Post-Doctorial Symposium Lecture at the Naval Research Laboratory, Washington, DC, June 20, 2007.
6. Kennedy, W.G. "Survey of OECD Members on the Use of Computers in Control Rooms of Nuclear Power Plants", keynote paper presented by Dr. J. Roe, USNRC, at the International Conference on Man-Machine Interface in the Nuclear Industry organized by the IAEA, Tokyo, JP, 15-19 February 1988.

Refereed Conference Papers

1. Lieto, A., Kennedy, W.G., Lebiere, C., Romero, O.J., Taatgen, N., West, R.L. (2018) Higher-level Knowledge, Rational and Social Levels Constraints on the Common Model of the Mind, paper presented at the AAAI Fall Symposium, Arlington, VA (18-20 Oct. 2018) and published in Elsevier's Procedia Computer Science, Vol 145, pp 757-764.

Refereed Conference Papers (continued)

2. Tulk, S., Bagheri-Jebelli, N., Kennedy, W.G. (2018) Modeling the Impact of Fake News on Citizens. Paper presented at the International Conference on Cognitive Modeling (ICCM-MathPsyc), pp 187-192. Madison, WI. (21-24 July 2018)
3. Kennedy, W.G. & Thompson, J.C. (2018) Integrating Emotional and Rational Cognition. Two-page paper presented as a poster at the International Conference on Cognitive Modeling (ICCM), Madison, WI. (21-24 July 2018)
4. Burger, A., Oz, T., Yuan, X., Crooks, A., & Kennedy, W.G. (2018) Agent-Based Models for Megacities and Social Networks in Disasters. XIX ISA World Congress of Sociology, Toronto, CA (15-21 July 2018)
5. Orr, M.G., Lebiere, C., Stocco, A., Pirolli, P., Pires, B., Kennedy, W.G. (2018) Multi-Scale Resolution of Cognitive Architectures: A paradigm for Simulating Minds and Society. In Social, Cultural, and Behavioral Modeling, LNCS 10899, Proceedings of the 11th International Conference, SBP-BRiMS 2018, pp3-15. Washington, DC. (10-13 July 2018) (*winner of the Best Paper Award*)
6. Burger, A., Oz, T. Crooks., A, Kennedy, W.G. (2017). Generation of Realistic Mega-City Populations and Social Networks for Agent-Based Modeling. Proceedings of the Annual Conference of the Computational Social Science Society (CSSS), Tempe, AZ, (19-22 Oct. 2017)
7. Briggs, T.W., Jr., Kennedy, W.G. (2016) Active Shooter: An Agent-Based Model of Unarmed Resistance. *Proceedings of the 2016 Winter Simulation Conference (WSC)*. T.M.K. Roeder, P.I. Frazier, R. Szechtman, E.Zhou, T. Huschka, and S.E. Chick, eds. Arlington, VA. (11-14 Dec 2016).
8. Cioffi-Revilla, C., Rogers, J.D., Schopf, P., Luke, S., Bassett, J., Hailegiorgis, A., Kennedy, W.G., Revay, P., Mulkerin, M., Shaffer, M., Wei, E. (2016) MASON NorthLands: A Geospatial Agent-Based Model of Coupled Human- Artificial-Natural Systems in Boreal and Arctic Regions. Annual Meeting of the Computational Social Science Society of the Americas, Santa Fe, NM. (17-20 Nov 2016)
9. Kennedy, W.G. (2016) Intuitive Decision-Making Revisited: A Heuristic and the Feeling of Recognition. Two-page paper presented as a poster at the International Conference on Cognitive Modeling (ICCM), pp 254-255, State College, PA. (6-9 Aug 2016)
10. Nelson, J.B., Kennedy, W.G., Krueger, F. (2016) Exploratory Models of Trust with Empirically-Inferred Decision Trees. In Social, Cultural, and Behavioral Modeling, proceedings of the 2016 SBP-BRiMS conference. Washington, DC. (28 June – 1 July 2016).
11. Kennedy, W.G., Sibley, C., Coyne, J. (2015) Self-Confidence of Autonomous Systems in a Military Environment. Association for the Advancement of Artificial Intelligence (AAAI) Fall Symposium 2015. Washington, DC. (12-14 Nov 2015).
12. Cioffi-Revilla, C., Rogers, J.D., Schopf, P., Luke, S., Bassett, J. Hailegiorgis, A., Kennedy, W., Froncek, P., Mulkerin, M., Shaffer, M., Wei, E., MASON NorthLands: A Geospatial Agent-Based Model of Coupled Human-Artificial-Natural Systems in Boreal and Artic Regions. Proceedings of the Social Simulation Conference (SSC2015), Eleventh Conference of the European Social Simulation Association (ESSA), Groningen, The Netherlands. (14-18 Sep 2015).

Refereed Conference Papers (continued)

13. Ihara, E.S., Kennedy, W.G., Tompkins, C.J., Wolf-Branigin, M.E. (2015) Long-Term Dementia Care: Modeling the Decision Process. Behavior Representation in Modeling and Simulation Conference 2015 (BRiMS). Washington, DC. (31 Mar.-3 Apr. 2015).
14. Nelson, J.B., Kennedy, W.G., Greenberg, A.M. (2015) Agents and Decision Trees from Microdata. Behavior Representation in Modeling and Simulation Conference 2015 (BRiMS). Washington, DC. (31 Mar.-3 Apr. 2015)
15. Kennedy, W.G., and Harrison, J.F., (2013) Towards Representing Disasters in Computational Social Simulations. Computational Social Science Society of the Americas annual meeting. Santa Fe. (22-25 Aug 2013)
16. Kennedy, W.G., and Krueger, F. (2013) Towards Modeling Trust Behavior. *Proceedings of the 12th International Conference on Cognitive Modeling* (ICCM 2013). Ottawa. (11-14 July 2013)
17. Kennedy, W.G., and Krueger, F. (2013) Building a Cognitive Model of Trust Within ACT-R. Proceedings of the AAAI Spring Symposium 2013. Stanford, CA. (25-27 March 2013)
18. Kennedy, W.G., Cotla, C.R., Gulden, T., Coletti, M, and Cioffi-Revilla, C. (2012) Towards Validating a Model of Households and Societies of East Africa. Proceedings of the 4th World Congress on Social Simulation (WCSS2012) pp 1-6. Taipei. (4-7 September 2012)
19. Kennedy, W.G., Cotla, C.R., Gulden, T., Coletti, M, and Cioffi-Revilla, C. (2012) Validation of a Household Model of the Societies of East Africa. Proceedings of the 4th International Conference on Applied Human Factors and Ergonomics and 2nd International Conference on Cross-Cultural Decision Making (HSCB) pp 6612-6621. San Francisco. (21-25 July 2012)
20. Kennedy, W.G. and Patterson, R.E. (2012) Modeling Intuitive Decision Making in ACT-R. In N. Rußwinkel, U. Drewitz, & H. van Rijn (Eds.) *Proceedings of the 11th International Conference on Cognitive Modeling* (ICCM 2012), pp 1-6. Berlin. (12-15 April 2012)
21. Kennedy, W.G., Ritter, F.E, Lebiere, C., Juvina, I., Oltramari, A., Gratch, J. and Young, R.M. (2012) ICCM Symposium on Cognitive Modeling of Processes "Beyond Rational". In N. Rußwinkel, U. Drewitz, & H. van Rijn (Eds.) *Proceedings of the 11th International Conference on Cognitive Modeling* (ICCM 2012), pp 55-58. Berlin. (12-15 April 2012)
22. Kennedy, W.G. (2011) The Roots of Trust: Cognition Beyond Rational. In A.V. Samsonovich & K.R. Johannsodottir (Eds.) Biologically Inspired Cognitive Architectures 2011, pp 188-193. IOS Press.
23. Kennedy, W.G. and Bassett, J.K., (2011) Implementing a "Fast and Frugal" Cognitive Model within a Computational Social Simulation. Second Annual Meeting of the Computational Social Science Society of the Americas, Santa Fe, NM. (9-12 Oct. 2011)
24. Rouly, O.C., and Kennedy, W.G., (2011) Sexually differentiated philopatry and dispersal: A demonstration of the Baldwin effect and genetic drift. Second Annual Meeting of the Computational Social Science Society of the Americas, Santa Fe, NM. (9-12 Oct. 2011)
25. Tsvetovat, M., Guerrero, O., and Kennedy, W.G., (2011) Evolving Social Structure: From Neurons to Networks with Agent-Based Models. Second Annual Meeting of the Computational Social Science Society of the Americas, Santa Fe, NM. (9-12 Oct. 2011)

Refereed Conference Papers (continued)

26. Kennedy, W.G. (2010) Towards Understanding Trust Through Computational Cognitive Modeling. In A.V. Samsonovich, K.R. Johannsdottir, A. Chella, & B. Goertzel (Eds.) Biologically Inspired Cognitive Architectures 2010, pg 78. IOS Press.
27. Kennedy, W.G., Hailegiorgis, A.B., Rouleau, M., Bassett, J.K., Coletti, M., Balan, G.C., Gulden, T., and Cioffi-Revilla, C. (2010) MASON HerderLand: Modeling the Origins of Conflict in East Africa. Proceedings of the First Annual Conference of the Computational Social Science Society (CSSS), Tempe, AZ, (5-6 November 2010).
28. Kennedy, W.G., and Bugajska, M. (2010). Integrating Fast and Slow Cognitive Processes. In D.D. Salvucci & G. Gunzelmann (Eds.), *Proceedings of the International Conference on Cognitive Modeling (ICCM 2010)*, pp 121-126. Drexel University, Philadelphia, PA. (4-8 August 2010)
29. Kennedy, W.G., Gulden, T., Hailegiorgis, A.B., Bassett, J.K., Coletti, M., Balan, G.C., Clark, M, and Cioffi-Revilla, C. (2010) An Agent-Based Model of Conflict in East Africa and the Effect of the Privatization of Land. Third World Congress on Social Simulation, Kassel, Germany. (6-9 September 2010)
30. Hailegiorgis, A.B., Kennedy, W.G., Balan, G.C., Bassett, J.K., and Gulden, T. (2010) An Agent Based Model of Climate Change and Conflict among Pastoralists in East Africa. *Proceedings of the International Congress on Environmental Modeling and Software (IEMSS2010)*. Ottawa, Ontario, CN. (5-8 July 2010).
31. Kennedy, W.G., Hailegiorgis, Basset, J.K., A.B., Coletti, M., Balan, G.C., Rouleau, M., and Gulden, T. (2010) An Agent-Based Model of Conflict in East Africa and the Effects of Watering Holes. Behavior Representation in Modeling and Simulation Conference 2010 (BRiMS), pp 274-281. Charleston, SC (22-26 Mar. 2010)
32. Rouleau, M., Coletti, M., Basset, J.K., Hailegiorgis, A.B., Gulden, T., and Kennedy, W.G. (2009). Conflict and Complex Socio-Natural Systems: Using Agent-Based Modeling to Understand the Behavioral Roots of Social Unrest within the Mandera Triangle. In *Proceedings of the Human Behavior-Computational modeling and Interoperability Conference*. Oak Ridge, TN. (23-24 June 2009)
33. Kennedy, W.G., Rouleau, M., and Bassett, J.K, (2009) Multiple Levels of Cognitive Modeling within Agent-Based Modeling. *Proceedings of the Behavior Representation in Modeling and Simulation Conference 2009 (BRiMS)*, pp 143-144. Sundance, UT. (30 Mar.-2 Apr. 2009)
34. Kennedy, W.G., and Trafton, J.G., (2008). The Mathematics of Novelty as the Basis for the Exponential Law of Learning. In *Proceedings of the 41st Annual Meeting of the Mathematical Psychology Society*, Washington, DC. (27-29 July 2008)
35. Kennedy, W.G. (2008). The Cognitive Plausibility of the Use of Cognitive Maps and the Mental Simulation of Others. In *Proceedings of the 30th Annual Meeting of the Cognitive Science Society (CogSci2008)*, p 2266. Washington, DC. (23-26 July 2008)

Refereed Conference Papers (continued)

36. Kennedy, W.G., Bugajska, M., Adams, W., Schultz, A.C., and Trafton, J.G. (2008). Incorporating Simulation for a More Effective Robotic Teammate. Paper and poster presented. In the *Proceedings of the Twenty-Third Annual Conference of the Association for the Advancement of Artificial Intelligence*, pp 1300-1305. Washington, DC. (13-17 July 2008): AAAI Press.
37. Kennedy, W.G., and Trafton, J.G. (2007). Using Simulations to Model Shared Mental Models. In R.L. Lewis, T.A. Polk, & J.E. Laird (Eds). *Proceedings of the Eighth International Conference on Cognitive Modeling (ICCM 2007)* pp 253-254. Ann Arbor, MI. (27-29 July 2007) Tailor & Francis/Psychology Press.
38. Kennedy, W.G., Bugajska, M.D., Marge, M., Fransen, B.R., Adams, W., Perzanowski, D., Schultz, A.C., and Trafton, J.G. (2007). Spatial Representation and Reasoning for Human-Robot Collaboration. In *Proceedings of the Twenty-Second Annual Conference of the Association for the Advancement of Artificial Intelligence*, pp 1554-1559. Vancouver, BC. (22-27 July 2007): AAAI Press.
39. Kennedy, W.G. and Trafton, J.G. (2006) Long-term Learning in Soar and ACT-R, *Proceedings of the Seventh International Conference on Cognitive Modeling*, pp 162-168. Trieste, Italy (5-8 April 2006)
40. Lawless, W.F., Wood, J., Everett, S., and Kennedy, W. (2006). Organizational Case Study: Theory & mathematical specifications for an Agent Based Model (ABM). In D. Sallach, CM Macal, and MJ North (eds.), Proceedings of the Agent 2006 Conference on Social Agents: Results and Prospects, ANL/DIS-06-7, co-sponsored by Argonne National Laboratory and The University of Chicago, September 21–23, Chicago, IL. (21-23 Sep. 2006)
41. Kennedy, W.G. (2005) Different Levels of Performance Measures for Different Uses (The "PPP Proposal"), presentation at Evaluation 2005: Crossing Boarders, Crossing Boundaries, Joint Canadian Evaluation Society/American Evaluation Association Conference, Toronto, Canada. (26-29 Oct. 2005)
42. Kennedy, W.G. & De Jong, K.A. (2003) Characteristics of Long-Term Learning in Soar and its Application to the Utility Problem, *Proceedings of the Twentieth International Conference on Machine Learning*, pp 337-344. Washington, DC.
43. Kennedy, W.G. (1988) Use of Digital Computers in Control Rooms of OECD Member Countries, CSNI Report 150, July 1988. Report of survey presented and officially accepted at the Paris OECD meeting, September 1987. The report was also presented at an IAEA meeting on "Man-Machine Interface in the Nuclear Industry," in Tokyo, Japan, 15-19 February 1988 and Munich, Germany, 1990.
44. Kennedy, W.G. and Lanning, W.D. (1987) Feedback of Human Factors Contributions to Significant Events. Paper presented at the IAEA Specialists Meeting on "The Human Factor Information Feedback in Nuclear Power: Implications of Operating Experience on System Analysis, Design and Operation," Roskilde, Demark (25 May 1987)

Presentations based on peer-reviewed abstracts

1. Andrew Crooks, Annetta Burger[1,3], Na Jiang[1,3], Diana Guillen-Piazza[2], William G. Kennedy (2019) Decision-making in times of crisis: An Agent-Based Model of Disaster. (AAG 2019)
2. Kennedy, W.G., (2019) Operationalizing Theories of Resilience for Experimentation in Agent-Based 2019 Annual Meeting of the Society for Applied Anthropology, Portland, OR. (19-23 March 2019)
3. Kennedy, W.G., Burger, A., Crooks, A. (2018) "Poster Abstract: Generation of Realistic Routine Behavior in Mega-City Populations". Poster presented at the annual meeting of the Computational Social Science Society of the Americas (CSSSA) in Santa Fe, NM (25-28Oct. 2018)
4. Kennedy, W.G. & Thompson, J.C. (2018, July) Integrating Psychological, Emotional, Rational, and Social Cognition. Poster presented at the 40th Annual Conference of the Cognitive Science Society. Madison, Wisconsin, USA. (25-28 July 2018)
5. Burger, A, Yuan, X, Crooks, A., Kennedy, W.G. (2018) Agent-Based Models for Megacities and Social Networks in Disaster. XIX ISA World Congress of Sociology. Toronto, Canada (15-21 July 2018)
6. Crooks, A., Burger, A., Yuan, X., Kennedy, W.G. (2018) The Generation and Application of Large Scale Synthetic Populations for Disease Outbreaks and Disasters. Annual Meeting of the Association of American Geographers, New Orleans, LA, USA. (10-14 April 2018)
7. Crooks, A., Kennedy, W.G., Burger, A., Oz, T., Heppenstall, A. (2017) Megacities Through the Lens of Computational Social Science. Annual Meeting of the Association of American Geographers, Boston, MA (10-14 April 2017)
8. Kennedy, W.G. (2016) People are NOT Random. Abstract and poster presented at the Annual Meeting of the Cognitive Science Society, pp 2960: Philadelphia, PA. (10-14 Aug 2016)
9. Kennedy, W.G., (2016) Including Social and Emotional Cognitive Functionality. Presentation at the Post-Graduate Summer School of ACT-R, Lancaster, PA. (7-9 Aug 2016)
10. Ihara, E., Inoue, M., Tompkins, C., Kennedy, W.G., Wolf-Branigin, M.E. (2016) Is Incontinence the "breaking" point? Examining the decline in ADL functioning and caregiving stress. Proceedings of the Gerontological Society of America (GSA) 69th Annual Scientific Meeting, New Orleans, LA. (16-20 Nov. 2016)
11. Ihara, E., Tompkins, C., Kennedy, W.G., Wolf-Branigin, M.E. (2015) Using Agent-Based modeling to Test Community-Based Dementia Caregiving Options. Proceedings of the Annual Scientific Meeting of the Gerontological Society of America 2015, Orlando, FL. (18-22 Nov. 2015)
12. Kennedy, W.G. (2014) Applying Anthropologists' Knowledge and Theories to Models and Simulations of Civil Unrest and Migration. Abstract, paper, and presentation at the 2014 annual meeting of the American Association of Anthropologists (AAA), Washington, DC. (3-7 Dec. 2014)
13. Fuhs, B., Basset, J., Hailegiorgis, A.B., Magallanes, J.M., Harrison, J., Kennedy, W., Rogers, D., and Cioffi-Revilla, C. (2014) An Agent-Based Model of Human Migration in Response to Climate Change Impacts in Northern Latitudes. Abstract and presentation at the 61st Annual North American Meeting of the Regional Science Association International, Washington, DC. (12-15 Nov. 2014)

Presentations based on peer-reviewed abstracts (continued)

14. Kennedy, W.G. (2014) An Abstract Approach to Modeling Disasters in Geosimulation Models. Abstract and presentation at the 2014 Association of American Geographers (AAG) Meeting, Tampa, FL. (8-12 Apr. 2014)
15. Skoggard, I.A., and Kennedy, W.G. (2011) Under the Hood: Modeling Pastoralists Movement in A Multi-Scale Spatial Agent-Based Model in East Africa. Abstract and presentation at the American Anthropological Association annual meeting, Montreal, CN. (16-20 Nov. 2011)
16. Kennedy, W.G. (2011) Emotional, Intuitive, and Non-rational Reasoning within the ACT-R Architecture. Presentation at the ACT-R Post-Graduate Summer School, North Conway, VT. (17-19 July 2011)
17. Skoggard, I.A. and Kennedy, W.G. (2011) An Interdisciplinary Approach to Agent-Based Modeling of Conflict in East Africa. Abstract and presentation in the *Proceedings of the Society for Applied Anthropology annual meeting 2011*. Seattle, WA. (29 Mar.-2 Apr. 2011)
18. Kennedy, W. G., and Bassett, J.K. (2011) The "Fast and Frugal" Cognitive Architecture for Computational Social Simulations. Two-page abstract and poster presented at the Behavioral Representation in Modeling and Simulation (BRiMS) conference, Sundance, UT. (21-24 Mar. 2011)
19. Kennedy, W.G., Gulden, T., Hailegiorgis, A.B., Rouleau, M., Bassett, J.K., Coletti, M., Balan, G.C., and Cioffi-Revilla, C. (2011) Modeling Survival and Conflict in East Africa. Abstract and presentation at the Human Social-Cultural-Behavioral Focus (HSCB) 2011 Conference, Chantilly, VA. (8-10 Feb 2011)
20. Kennedy, W.G., and Bugajska, M. (2010) Integrating Fast and Slow Cognitive Processes. Abstract in *Proceedings of the 32nd Annual Meeting of the Cognitive Science Society (CogSci 2010)*, pp 672. Portland, OR. (11-14 August 2010)
21. Kennedy, W.G. (2010) Basing Computational Social Science on Cognitive Science Rather than Multivariate Functions or Probabilistic Representations. Presentation and abstract in Ron Sun (Ed.) *Proceedings of the Workshop on Cognitive Social Sciences: Grounding the Social Sciences in the Cognitive Sciences*. Technical Report 2010-RS-001, Rensselaer Polytechnic Institute, Troy, NY. (11 Aug. 2010)
22. Kennedy, W.G., Hailegiorgis, A.B., Rouleau, M., Bassett, J.K., Coletti, M., Balan, G.C., Gulden, T., and Cioffi-Revilla, C. (2010) MASON HerderLand: Modeling the Origins of Conflict in East Africa. Abstract and presentation at the First Annual meeting of the Computational Social Science Society, Tempe, AZ. (9-12 Oct. 2011)
23. Hendrey, M., Rouly, O., West, J., Kennedy, W., and Axtell, R. (2010) Social Decision-Making Processes in Tribal Afghanistan: an Agent-Based Model. Abstract and presentation at the First Annual meeting of the Computational Social Science Society, Tempe, AZ. (5-6 Nov. 2010)
24. Hendrey, M., Axtell, R., and Kennedy, W.G. (2010) Talibanization of Afghanistan. Abstract and Presentation at the 78th MORS Symposium (Military Operations Research Society), Quantico, VA. (22-24 June 2010)
25. Kennedy, W.G., (2009) "Cognitive Plausibility" in Cognitive Modeling, Artificial Intelligence, and Social Simulation. Abstract in A. Howes, D. Peebles, R. Cooper (Eds.), *Proceedings of the 9th International Conference on Cognitive Modeling - ICCM2009*. Manchester, UK. (24-26 July 2009)

Presentations based on peer-reviewed abstracts (continued)

26. Kennedy, W.G., and Trafton, J.G. (2007). Using Simulations to Model Shared Mental Models. Abstract in the *Proceedings of the Eighth International Conference on Cognitive Modeling (ICCM),* pp 253-254., Ann Arbor, MI. (27-29 July 2007): Tailor & Francis/Psychology Press.
27. Kennedy, W.G. (2006). Policy as a Separate Level for Performance Management. Abstract and poster presentation at The Atlanta International Conference on Science and Technology Policy. Atlanta, GA. (18-20 May 2006)
28. Dixon, J.K. Bouchard, S.A., Kennedy, W.G., and Slagle, J.R. (1981) Mark I Robot, film presented at the Seventh International Joint Conference on Artificial Intelligence, University of British Columbia, BC, CN. (24-28 Aug. 1981)

Workshops and other presentations

1. Kennedy, W.G., Tulk, S., Jebelli, N.B. (2017) Learning Political Bias with Exposure to Fake News: An example of long-term learning in ACT-R. ACT-R Workshop, part of the Annual Meeting of the Cognitive Science Society, London, UK. (26 July 2017)
2. Kennedy, W.G., (2017) An Introduction to Agent-Based Modeling for the Study of Organ Transplantation. Organs for Transplant: Expanding Sources and Ethical Considerations. Schar School of Policy & Government, George Mason University, Arlington, VA. (9 Mar 2017)
3. Kennedy, W.G., (2014) Social Cognition: ACT-R Models Talking to Each Other. Presentation at the 2014 ACT-R Workshop, part of the Annual Meeting of the Cognitive Science Society, Quebec City, CN. (July 2014)
4. Kennedy, W.G. (2010) Cognitive Architecture Lite for Computational Social Simulations. Presentation at the 30th Soar Workshop. Ann Arbor, MI. (May 2010)
5. Kennedy, W.G., and Trafton, J.G., (2008). "Like-Me" Simulation in ACT-R. Presentation at the 15th Annual ACT-R Workshop, Pittsburgh, PA. (July 2008)
6. Harrison, A., Kennedy, W., Fransen, B., and Tafton, G., (2008) Exploring Theory-of-Mind Components within Embodied Robotics. Presentation at the 15th Annual ACT-R Workshop, Carnegie Mellon University. (July 2008)
7. Trafton, J.G., Bugajska, M., Fransen, B., Harrison, A., Kennedy, W., and Ratwani, R., (2008) ACT-R/E: E for Embodied. Presentation at the 15th Annual ACT-R Workshop, Carnegie Mellon University. (July 2008)
8. Kennedy, W.G. (2008). Mental Simulation for a Robot Teammate. Presentation at the 28th Soar Workshop. Ann Arbor, MI. (May 2008)
9. Kennedy, W.G. and Trafton, J.G. (2007) Cognitive Science and Long-term Symbolic Learning. Presentation at the 27th Soar Workshop, University of Michigan. (May 2007)
10. Kennedy, W.G., and Trafton, J.G. (2006). Representing and Reasoning about Space. Presentation at the 13th Annual ACT-R Workshop. Pittsburgh, PA. (July 2006)
11. Kennedy, W.G., and Trafton, J.G. (2006). Cognitive Science and Long-term Symbolic Learning. 27th Soar Workshop. Ann Arbor, MI. (May 2006)
12. Kennedy, W.G. (2003) Status of Long-term learning in Soar. 23rd Soar Workshop, University of Michigan. (June 2003)
13. Kennedy, W.G. (2002) Long-term learning in Soar. 22nd Soar Workshop, University of Michigan. (June 2002)

Workshops and other presentations (continued)

14. Kennedy, W.G. (2001) The long-term use of chunks. 21st Soar Workshop, University of Michigan. (May 2001)
15. Kennedy W.G. and De Jong, K.A. (2001) Some insights into long-term learning in Soar. Workshop on Hierarchy and Memory in Reinforcement Learning, Eighteenth International Conference on Machine Learning, Williams College. (June 2001)
16. Kennedy, W.G. (1999) Manually excising chunks during long-term learning. 20th Soar Workshop, Fairfax, VA. (May 1999)
17. Kennedy, W.G. (1995) The nature of long-term learning. 16th Soar Workshop, Carnegie-Mellon University. (Sep. 1995)

Interviews by the Press

- Kennedy, W.G. (2017, July 12). Interview by K. LaPointe [recording]. Broadcast as "Evenings with Kirk LaPoint – William Kennedy (July 12, 2017)". Roundhouse Radio 98.3 FM. Vancouver, BC. http://bit.ly/2uHAuaq

- Waddell, K. (2017, March 15). What Happens If a Nuclear Bomb Goes Off in Manhattan? *The Atlantic*. https://www.theatlantic.com/technology/archive/2017/03/nuclear-bomb-manhattan-simulation/519585/

Federal Government and Government-Related Publications (1980-2005)

U.S. Department of Energy (1990-2005)

DOE lead responsible for the development of publications associated with Departmental plans and organizational performance prior to and in compliance with the Government Performance and Results Act of 1993 (GPRA). Represented DOE to IG, GAO, Congressional budget committees, and staff of the House Committee of Government Oversight.

DOE Strategic Plans

Strategic Plan, September 2003. (postponed retirement to complete)
Strategic Plan, DOE/CR-0070, September 2000.
Strategic Plan, September 1997.
Strategic Plan, DOE/S-0108, April 1994.

DOE Annual Performance Plans (submitted to Congress as part of federal budgets)

FY 2002, DOE/CR-0080, April 2001.
FY 2001, DOE/CR-0068-9, February 2000.
FY 2000, DOE/CR-0060, February 1999.
FY 1999, DOE/CR-0050, February 1998.
FY 1998, DOE/CR-0046, February 1997.

Performance Agreements between the President and the Secretary of Energy

- Signed by the President, the DOE Secretary, the Deputy Secretary, and all DOE Assistant Secretaries and the Director of Naval Reactors.
- Developed, designed, negotiated, and executed annually, FY 1995 through FY 2000.
- Developed the agency wide tracking system, "Solomon", or quarterly reporting to the Secretary, implemented and briefed to Vice President's team prior first signed agreement.

DOE Annual Reports

FY 2000 Performance and Accountability Report, DOE/CR-0071, March 2001.
FY 1999 Accountability Report, DOE/CR-0069, March 2000.
FY 1998 Annual Report, DOE/CR-0067, March 1999.
FY 1997 Consolidated Financial Statements, DOE/CR-0057, March 1998.
FY 1996 Consolidated Financial Statements, March 1997.
Annual Report for FY 1994/95, June 1996.

DOE Guidelines on Performance Measurement, DOE G 120.1-5, June 1996.

U.S. Nuclear Regulatory Commission (1980-1990)

Official liaison between NRC and General Accountability Office (GAO) and several Congressional investigations, 1988-1990.

As a member of the Commission's professional staff, contributed to investigations of reactor incidents and related task forces, regulatory oversight process, and official licensing documents:

- Kennedy, W.G. (1989) Lessons Learned in Process Control at the Halden Reactor Project, Technical Report **NUREG-1361**, U.S. Nuclear Regulatory Commission. (**sole author**)
- Survey of OECD Members on the Use of Computers in Control Rooms of Nuclear Power Plants. Paper published by the IAEA, Vienna as IAEA-CN-49/55, pp 193-200. 1988. (**sole author**)
- Analysis of French (Paluel) Pressurized Water Reactor Design Differences Compared to Current U.S. PWR Designs, Technical Report **NUREG-1206**, May 1986. (**co-author**)
- Loss of Power and Water Hammer Event at San Onofre, Unit 1, on November 21, 1985, Technical Report **NUREG-1190**, **Incident Investigation Team (IIT)** Member, January 1986. (**Team member, co-author**)
- NRC Presentation to the Advisory Committee on Reactor Safety (ACRS) on lessons learned from NASA's automation of the launch control room. Transcript of ACRS meeting, 28 Jan. 1986. (**presenter**)
- NRC Fact-Finding Task Force Report on the ATWS Events at Salem Nuclear Generating Station, Unit 1, on February 22 and 25, 1983. Technical report **NUREG-0977**, Member of first **Incident Investigation Team (IIT)** (similar to NTSB Accident Investigation Teams), March 1983. (Team member, **co-author**)
- Testimony before the Nuclear Regulatory Commission concerning operator actions during safety shutdown system failures (ATWS's) at Salem Nuclear Power Plant, February 1983. (**staff witness**)
- General Implications of ATWS Events at the Salem Nuclear Power Plant, **NUREG-1000**, April, 1983. (**Task Force member and co-author**)
- Guidelines for the Development of Emergency Operating Procedures, Technical Report **NUREG-0899**, August 1982. (**co-author**)
- Draft Criteria for Preparation of Emergency Operating Procedures, Technical Report **NUREG-0799**, July 1981. (**co-author**)
- **Safety Evaluation Reports**, published as NUREGs as part of the public licensing process, Section 13.5.2 on operating procedure programs for licensing of commercial nuclear power plants: Braidwood, Byron, Clinton, Clinch River, Farley, Midland, Millstone, Pilgrim, Riverbend, St. Lucie, Summer, Susquehanna, and Zimmer, March 1980-November 1985, and June 1987-June 1988. (**author**)