

CURRICULUM VITAE

Jim Davies

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Institute of Cognitive Science, 2202b Dunton Tower
Carleton University, Ottawa, Ontario, Canada K1S 5B6

Citizenship: American and Canadian (Dual Citizenship)

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[Google Scholar](https://scholar.google.com/citations?user=jimdavies); [Academia.edu](https://www.academia.edu/); [ResearchGate.net](https://www.researchgate.net/profile/Jim-Davies)

EDUCATION

Ph.D., Computer Science, with a certificate in Cognitive Science (2004)

Georgia Institute of Technology

Title: *Visual Analogical Problem Solving*

Advisors: Profs. Ashok K. Goel and Nancy J. Nersessian

Committee: Profs. Ronald W. Ferguson, Richard Catrambone

M.S., Psychology, focus on experimental psychology (1997)

Georgia Institute of Technology

Title: *Correlation and Consistent Contrast Biases Shown in Free Sort Categorization*

Advisor: Dr. Dorrit O. Billman

Committee: Dr. Tony J. Simon, Prof. Timothy A. Salthouse

B.A., Philosophy (1993)

State University of New York College at Oswego

EMPLOYMENT

Academic employment

(Effective July 1, 2017: Full Professor)

2010 – Present: Associate Professor

2006 – 2010: Assistant Professor

Carleton University, Institute of Cognitive Science (100% appointment)
and School of Computer Science (0% appointment as of July 1, 2016)

Fall 2004 – 2006

Queen's University, School of Computing

Postdoctoral Fellow

Supervisor: Prof. Janice Glasgow

Industrial employment

Summer 2011

Z2Live, Seattle, WA, USA

Consultant

Researched spending encouragement for freemium games

Summer 2000

Mitsubishi Electric Research Labs, Cambridge, MA

Research Intern

Designed a tutorial extension to the COLLAGEN collaborative agent software

Supervisor: Dr. Charles Rich

CURRENT RESEARCH INTERESTS

My current research focuses on regularities in human imagination. I approach cognitive science through artificial intelligence: I create computer models of visualization. My goal is to create a computer program that imagines visual scenes the same way people do, with the same content in the same places.

PUBLICATIONS

(Note on publications: in computer science, my primary discipline, the main venue for publication is the peer-reviewed conference proceedings paper, and it is common for the head of the laboratory to be last author.)

Books

Davies, J. (2014). [*Riveted: The science of why jokes make us laugh, movies make us cry, and religion makes us feel one with the universe.*](#) Palgrave Macmillan.

Galassi, M., **Davies, J.**, Theiler, J., Gough, B., Jungman, G., Booth, M., & Rossi, F. (2001, 2003) [*GNU Scientific Library Reference Manual*](#). First and Second Editions. Network Theory Ltd.

Chapters in peer-reviewed edited books

Davies, J. (under review). Visuospatial imagination and mental imagery.

Davies, J. (2014). [*Don't waste student work: Using classroom assignments to contribute to online resources.*](#) Chapter 19 in [*E-Learning systems, environments, and approaches: Theory and implementation.*](#) Edited by P. Isaias, J. Michael Spector, D. Ifenthaler and D. G. Sampson. Springer: New York. 277-285.

Nersessian, N. J., Kurz-Milcke, E. & **Davies, J.** (2005). [Ubiquitous computing in science and engineering labs: A case study of a biomedical engineering lab](#). In G. Kouzelis, M. Pournari, M. Stoeppler and V. Tselfes, (Eds.), *Knowledge in the New Technologies*. Peter Lang: Berlin: 167-195.

Articles in peer-reviewed journals

Davies, J. (under review). Why people find celebrities compelling.

Kapron, J. & **Davies, J.** (under review). The videogame is cheating! What makes players perceive cheating in videogames.

Vertolli, M.O., Kelly, M.A., & **Davies, J.** (under review). Coherence in the visual imagination.

Breault, V., Ouellet, S. & **Davies, J.** (under review). Let CONAN tell you a story: Procedural quest generation.

Murdoch, M. & **Davies, J.** (under review). Spiritual and affective responses to a physical church and corresponding virtual model.

Shalmon, N.D., Frankel, L. & **Davies, J.** (under review). The element of play in design.

Davies, J. & Michaelian, K. (2016). [Identifying and individuating cognitive systems: A task-based distributed cognition alternative to agent-based extended cognition](#). *Cognitive Processing*. 17(3), 307—319.

Davies, J. & Bicknell, J. (2016). [Imagination and belief: The microtheories model of hypothetical thinking](#). *Journal of Consciousness Studies*, 23(3-4), 31--49.

Chowdhury, W., Akkaoui, A., Burt, C. & **Davies, J.** (2015). [Quantity: An online game for eliciting the wisdom of the crowd](#). *Computers in Human Behavior*. 49, 213—219.

Cockbain, J., Vertolli, M. & **Davies, J.** (2013). [Creative imagination is stable across technological media: The Spore Creature Creator versus pencil and paper](#). *The Journal of Creative Behavior*, 48(1), 13—24.

Gagné, J. & **Davies, J.** (2013). [Visuo: A model of visuospatial instantiation of quantitative magnitudes](#). *Knowledge Engineering Review. Special Issue on Visual Reasoning*, 2(28). 1–20.

Davies, J., & Matheson, D. (2012). [The cognitive importance of testimony](#). *Principia: The International Journal of Epistemology*. 16(2), 297-318.

Davies, J., Atance, C. & Martin Ordas, G. (2011). [A framework and open questions on imagination in adults and children](#). *Imagination, Cognition, and Personality*, Special issue on mental imagery in children. 31:1-2, 143-157.

Davies, J., Goel, A. K., & Nersessian, N. J. (2009). [A Computational Model of Visual Analogies in Design](#). *Cognitive Systems Research: Special Issue on Analogies*, 10, 204-215.

Davies, J., Goel, A. K. & Yaner, P. W. (2008). [Proteus: Visuospatial analogy in problem-solving](#). *Knowledge-Based Systems*. 27(7), 636-654.

Davies, J., & Goel, A. K. (2008). [Visual representations and re-representation in analogical reasoning](#). *The Open Artificial Intelligence Journal*, 2, 11-20.

Davies, J., & Goel, A. K. (2007). [Transfer of Problem-Solving Strategy Using Covlan](#). *Journal of Visual Languages and Computing*: 18, 149-164.

Glasgow, J., Kuo, T. & **Davies, J.** (2006). Protein structure from contact maps: A case-based reasoning approach. *Information Science Frontiers, Special Issue on Knowledge Discovery in High-Throughput Biological Domains*. 8: 29-36

Davies, J., Glasgow, J. & Kuo, T. (2006). [Visio-spatial case-based reasoning: A case study in prediction of protein structure](#). *Computational Intelligence*, 22:3/4, 194-207.

Davies, J., Nersessian, N. J. & Goel, A. K. (2005). [Visual models in analogical problem solving](#). *Foundations of Science, Special Issue on Model-Based Reasoning: Visual, Analogical, Simulative*. L. Magnani & N. J. Nersessian (Eds.) 10, 133-152.

Billman, D. O. & **Davies, J.** (2005). [Consistent contrast and correlation in free sorting](#). *American Journal of Psychology*. 118(3) 353-383.

Articles in Peer-Reviewed Conference Proceedings

Davies, J. (in press). What is learning? A definition for cognitive science. *Proceedings of the 38th Annual Conference of the Cognitive Science Society*. London, UK: Cognitive Science Society.

Jennings, J. & **Davies, J.** (in press). The motor system does not use a curvilinear belief: Folk physics and embodied cognition. *Proceedings of the 38th Annual Conference of the Cognitive Science Society*. London, UK: Cognitive Science Society.

Kelly, D. & **Davies, J.** (2016). [The Charon model of moral judgment](#). In A. Papafragou, D. Grodner, D. Mirman, & J.C. Trueswell (Eds.) *Proceedings of the 38th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society. 1415—1420.

Stapleton, C., Mott, D., Whiteside, J., Vick, J., & **Davies, J.** (2014). [Transforming lives through story immersion: Innovation of aphasia rehabilitation through storytelling learning landscapes](#). *Immersive Media Experiences 2014*. Orlando, Florida. Nov 3-7.

Vertolli, M. O. & **Davies, J.** (2014). [Coherence Net: A new model of generative cognition](#). 6th International Conference on Evolutionary Computation Theory and Applications (ECTA-2014). Rome, Italy, IJCCI. 308—313.

Davies, J. & McManus, M. (2014). [How our desire for social information affects tastes in paintings and belief systems](#). In Kozbelt, A. (Ed.), *Proceedings of the Twenty-Third Biennial Congress of the International Association of Empirical Aesthetics*, (153—158). (IAEA-14) New York, NY: International Association of Empirical Aesthetics.

Vertolli, M. O., Kelly, M., & **Davies, J.** (2014). [Compression and decompression in cognition](#). *Artificial General Intelligence (AGI-2014)*. 262—265.

Vertolli, M. O., Breault, V., Ouellet, S., Somers, S. Gagné, J., & **Davies, J.** (2014). [Theoretical assessment of the SOILIE model of the human imagination](#). *Proceedings of the 36th Annual Meeting of the Cognitive Science Society (CogSci-2014)*. 3043—3048.

Vertolli, M. O. & **Davies, J.** (2014). [Coherence in the visual imagination: Local hill search outperforms Thagard's connectionist model](#). *Proceedings of the 36th Annual Meeting of the Cognitive Science Society (CogSci-2014)*. 1676—1681.

Davies, J. (2013). [Don't waste student work: Using classroom assignments to contribute to online resources](#). *Proceedings of the Cognition and Exploratory Learning in Digital Age conference (CELDA-13)*. Fort Worth, Texas. October 22-24, 2013. 1—4.

Breault, V., Ouellet, S., Somers, S. & **Davies, J.** (2013). [SOILIE: A computational model of 2D imagination](#). In R. West & T. Stewart (eds.), *Proceedings of the 12th International Conference on Cognitive Modeling*, Ottawa: Carleton University. 95—100.

Davies, J. & Francis, A. G. (2013). [The role of artificial intelligence research methods in cognitive science](#). In R. West & T. Stewart (eds.), *Proceedings of the 12th International Conference on Cognitive Modeling*, Ottawa: Carleton University. 439—444.

Ouellet, S., Somers, S., & **Davies, J.** (2013). [High-level representation of 3D models of buildings](#). In R. West & T. Stewart (eds.), *Proceedings of the 12th International Conference on Cognitive Modeling*, Ottawa: Carleton University. 408—413.

Ouellet, S. & **Davies, J.** (2013). [Using prepositions to describe three-dimensional scenes: A model of spatial relation apprehension and interference](#). In R. West & T. Stewart (eds.), *Proceedings of the 12th International Conference on Cognitive Modeling*, Ottawa: Carleton University. 209—214.

Vertolli, M. O. & **Davies, J.** (2013). [Visual imagination in context: Retrieving a coherent set of labels with Coherencer](#). In R. West & T. Stewart (eds.), *Proceedings of the 12th International Conference on Cognitive Modeling*, Ottawa: Carleton University. 263—268.

Li, H., Mould, D. & **Davies, J.** (2013): [Structure and aesthetics in non-photorealistic images](#). In *Proceedings of Graphics Interface 2013*, Regina, Saskatchewan, pp 181-188.

Davies, J. & Fortney, M. (2012). [The menton theory of boredom and engagement](#). *Proceedings of the First Annual Conference on Advances in Cognitive Systems*. 131–143.

Somers, S., Gagné, J., Astudillo, C., & **Davies, J.** (2011). [Using semantic similarity to predict angle and distance of objects in images](#). *The ACM Conference on Creativity & Cognition, 2011*. 217-222.

Stapleton, C., & **Davies, J.** (2011). [Imagination: The third reality to the virtuality continuum](#). *2011 IEEE International Symposium on Mixed and Augmented Reality*. (ISMAR-2011). 53-60. Basel, Switzerland.

Schoenherr, J., Thomson, R. & **Davies, J.** (2011). [What makes an explanation believable?: Mechanistic and anthropomorphic explanations of natural phenomena](#). in L. Carson (Ed.) *The Thirty-Third Annual Meeting of the Cognitive Science Society* (COGSCI-11), 1424-1429.

Davies, J. & Gagné, J. (2010). [Estimating quantitative magnitudes using semantic similarity](#). *Conference of the American Association for Artificial Intelligence workshop on Visual Representations and Reasoning (AAAI-10-VRR)* 14--19.

Davies, J. & Yaner, P. W. (2010). [Analogical mapping through visual abstraction](#). *The Annual Conference of the Cognitive Science Society* (CogSci 2010), 1553—1558.

Bell, J. & **Davies, J.** (2010). [Pixel graphs are better at representing large quantities of information than pie graphs](#). *Theory and Application of Diagrams* (Diagrams-2010), Printed in Volume 6170 Lecture Notes in Computer Science's *Diagrammatic Representation and Inference*, 288—291.

Smith, C., Van Bentham, K., Nuttall, J., Musca, J., MacDougall, K., Miller, X., Li, J., Fitzpatrick, J., Di Noia, N., Cybulskie, A., & **Davies, J.** (2010). [Modeling English spatial preposition detectors](#). *Theory and Application of Diagrams* (Diagrams-2010), 328—330.

Gagné, J. & **Davies, J.** (2009). [Analogical estimation of quantitative magnitudes](#). *New Frontiers of Analogy Research: Proceedings of Analogy 09*, 155-164, Sophia, Bulgaria.

Thomson, R. & **Davies, J.** (2009). [Distance estimation as a process of generating Ad-Hoc Metrical Systems](#). *Proceedings of the Thirty-First Annual Conference of the Cognitive Science Society*. 2932-2937.

Davies, J. (2009). [Experience-based reasoning as the basis of a general artificial intelligence architecture](#). *IJCAI Workshop on Grand Challenges for Reasoning from Experiences*. 1-6. Pasadena, California, July 11, 2009.

Davies, J., Glasgow, J. & Kuo, T. (2007). [Protein structure prediction with visuospatial analogy](#). In T. Barkowsky, C. Freksa, M. Klnauff, & B. Krieg-Bruckner (Eds.) *Proceedings of Spatial Cognition 2006*, 127-139, Bremen, Germany.

Davies, J., Goel, A. K. & Nersessian, N. J. (2005). [Transfer of problem-solving strategy using the Cognitive Visual Language](#). *Proceedings of the International Workshop on Visual Languages and Computing (VLC05)*. 293-298.

Davies, J., Goel, A. K. & Nersessian, N. J. (2005). [Transfer in visual case-based problem-solving](#). In H. Munoz-Avila & F. Ricci (Eds.) *Proceedings of the 6th International Conference on Case-Based Reasoning*. LNAI 3620. Springer-Verlag. Berlin Heidelberg. 163-176.

Davies, J., Goel, A. K. & Nersessian, N. J. (2005). [A Cognitive Model of visual analogical problem-solving transfer](#). In L. P. Kaelbling & A. Saffioti (Eds.) *Proceedings of the Nineteenth Annual International Joint Conference on Artificial Intelligence*. Professional Book Center, Denver, Colorado. 1556-1557.

Nersessian, N. J., Kurz-Milke, E., Newstetter, W. C. & **Davies, J.** (2004). [Research laboratories as evolving distributed cognitive systems](#). In A. Markman & L. Barsalou (Eds.) *Proceedings of the 25th Annual Conference of the Cognitive Science Society*. Erlbaum. Hillsdale, New Jersey. 857-862.

Davies, J. & Goel, A. K. (2003). [Representation Issues in visual analogy](#). In R. Alterman & D. Kirsh (Eds.) *Proceedings of the 25th Annual Conference of the Cognitive Science Society*. Erlbaum. Hillsdale, New Jersey. 300-305.

Davies, J., Goel, A. K., & Nersessian, N. J. (2003). [Visual re-representation in creative analogies](#). In A. Cardoso & J. Gero (Eds.) *The Third Workshop on Creative Systems, International Joint Conference on Artificial Intelligence*. 1-12.

Davies, J. & Goel, A. K. (2003). [Visual case-based reasoning I: Transfer and adaptation](#). *Proceedings of the First Indian International Conference on Artificial Intelligence*. Hyderabad, India.

Nersessian, N. J., Newstetter, W. C., Kurz-Milcke, E. & **Davies, J.** (2002). [A Mixed-method Approach to Studying Distributed Cognition in Evolving Environments](#). *Proceedings of the International Conference on Learning Sciences*. 307-314.

Davies, J., & Goel, A. K. (2001). [Visual analogy in problem solving](#). *Proceedings of the International Joint Conference on Artificial Intelligence*. 377-382. Morgan Kaufmann publishers.

Davies, J. R., Lesh, N., Rich, C., Sidner, C. L., Gertner, A. S., & Rickel, J. (2001). [Incorporating tutorial strategies into an intelligent assistant](#). *Proceedings of the 2001 International Conference on Intelligent User Interfaces*. 53-65.

Davies, J. R., Nersessian, N.J. & Goel, A.K. (2001). The role of visual analogy in scientific discovery. *Model-Based Reasoning: Scientific Discovery, Technological Innovation, Values*. Pavia Italy.

Murdock, W. J., Simina, M., **Davies, J.,** & Shippey, G. (1998). [Modeling Invention by Analogy in ACT-R](#). *Proceedings of the Twentieth Annual Conference of the Cognitive Science Society*, Madison, WI. 740-745.

Formally Peer-Reviewed Abstracts

Ouellet, S., Lang, H., MacQuarrie, L., McManus, M., & **Davies, J.** (2012). 3D SPACE: 3D spatial prepositions analysis and comprehension engine. *Psychology Outside the Box 2012*. Abstract 47.

Abelson, A., **Davies, J.,** Fraser, R., Kuo, T., Zuviria, E. & Glasgow, J. (2005). Protein structure from contact maps: An hierarchical approach. *Intelligent Systems for Molecular Biology (ISMB05)*.

Encyclopedia entries

Davies, J. (2017). Imagination. *Encyclopedia of Creativity, Invention, Innovation, and Entrepreneurship, second edition*.

Davies, J. (2013). Imagination. [Encyclopedia of Creativity, Invention, Innovation, and Entrepreneurship](#). 899—902.

Book Reviews

Davies, J. (2015). What good can we do? A review of *The Most Good You Can Do: How Effective Altruism Is Changing Ideas about Living Ethically* by Peter Singer. *Skeptic*, 20(3), 54—55.

Technical reports

Davies, J. (2009). [Don't waste student work: Using classroom assignments to contribute to online resources](#). Carleton University Cognitive Science Technical Report 2009-01, <http://www.carleton.ca/ics/TechReports>

Davies, J. (2004). [Constructive Adaptive Visual Analogy](#). Doctoral Dissertation. College of Computing, Georgia Institute of Technology. Technical Report Number: GIT-COGSCI-2004/3

Davies, J., Nersessian, N. J., & Goel, A. K. (2001). Visual models in analogical problem solving. Georgia Institute of Technology Cognitive Science technical report GIT-COGSCI-2001/03.

Davies, J. R., Lesh, N., Rich, C., Sidner, C. L., Gertner, A. S., & Rickel, J. (2000). Incorporating tutorial strategies into an intelligent assistant. Mitsubishi Electric Research Labs. Technical report TR-2000-30. Cambridge, MA.

Davies, J. R., Goel, A. K., Murdock, J. W., Simina, M., & Shippey, G. (2000). [Three Cognitive Models](#). Georgia Institute of Technology Cognitive Science Report Series GIT-COGSCI-2000/03. Atlanta, Georgia.

Davies, J. (1998) Correlation and consistent contrast biases shown in free sort categorization. Georgia Institute of Technology Cognitive Science Report Series GIT-COGSCI-98/02. Atlanta, Georgia.

Journalism Publications

Davies, J. (2017). [The moral importance of understanding consciousness](#). *Nautilus* May 21, blog entry.

Davies, J. (2017). [This could be a way to get the benefits of meditation without meditating](#). *Nautilus*, February 24, blog entry.

Davies, J. (2017). [Video games do guilt better than any other art](#). *Nautilus* February 7, blog entry.

Davies, J. (2017). [How considering false histories changes our moral judgments](#). *Nautilus* January 23, blog entry.

Davies, J. (2016). [You can have emotions you can't feel](#). *Nautilus* August 17, blog entry.

Davies, J. (2016). [Program good ethics into artificial intelligence](#). *Nature*, 538(7625), p291, October 20.

Davies, J. (2016). Just [imagining a workout can make you stronger](#). *Nautilus* August 17, blog entry.

Davies, J. (2016). [Your terrifying dreams could be rehearsal for real life](#). *Nautilus* July 20, blog entry.

Davies, J. (2016). [Be happier by knowing your future self](#). *Nautilus* June 6, blog entry.

Davies, J. (2016). [Your happiness is like a rocking chair](#). *Nautilus* March 23, blog entry.

Davies, J. (2016). [Our conflicted feelings for R2-D2](#). *Nautilus*, Feb 4.

Davies, J. (2016). [Who where you are or what you're doing alters your sense of time](#). *Nautilus* January 27, blog entry.

Davies, J. (2016). [Slide presentation tips for recorded courses](#). *Educational Development Centre Blog*, January 20.

Davies, J. (2015). [How black Friday got its name](#). *Nautilus* October 27, blog entry.

Davies, J. (2015). [How many real friends can you have at once?](#) *Nautilus* October 21 blog entry.

Davies, J. (2015). [Why you're biased about being biased](#). *Nautilus* August 19 blog entry.

Davies, J. (2015). [Why the dark side of the force had to be dark](#). *Nautilus* July 17 blog entry.

Davies, J. (2015). [Tinder charmers and movie heroes move the same way](#). *Nautilus* June 15 blog entry.

Davies, J. (2015). [Why is there so much hate for the word "moist?"](#). *Nautilus* June 8 blog entry.

Davies, J. (2015). [Why Facebook is the junk food of socializing](#). *Nautilus* June 1 blog entry.

Davies, J. (2015). [How science can learn from writing that is "not even wrong."](#) *Nautilus* May 25 blog entry.

Davies, J. (2015). [Some music is inherently bad—but people can be convinced otherwise](#). *Nautilus* April 15 blog entry.

Davies, J. (2015). [The death of hundreds is just a statistic—but it doesn't have to be](#). *Nautilus* March 2 blog entry.

Davies, J. (2015). [The perfect amount of creativity for cars and religion](#). *Nautilus* January 30 blog entry.

Davies, J. (2015). [Why are you so smart? Thank your mom & your difficult birth](#). *Nautilus* January 26 blog entry.

Davies, J. (2015). [New year's resolutions and the science of willpower](#). *Nautilus* January 21 blog entry.

Davies, J. (2014). [Is Santa Claus a god?](#) *Nautilus* December 24 blog entry.

Davies, J. (2014). [How your brain gaslights you—for your own good](#). *Nautilus*. 07, p52-53, also printed as a November 10 blog entry.

Davies, J. (2014). [Are you overthinking things?](#) *Wired Innovation Insights Blog*. October 27.

Davies, J. (2014). [San Francisco is smarter than you are](#). *Nautilus* 18. Magazine article.

Davies, J. (2014). [How a mental disorder can disappear from the world overnight](#). *Nautilus* August 25 blog entry.

Davies, J. (2014). When to think less about your choices. *Brain Blogger* blog entry August 18.

Davies, J. (2014). [What do blind people actually see?](#) *Nautilus* August 14 blog entry.
(*This post went viral on Reddit and was viewed several hundred thousand times*)

Davies, J. (2014). [Why books make us laugh](#). *Huffington Post*, August 5.

Davies, J. (2014). [Mutation helps create the most durable religions](#). *Nautilus* June 17 blog entry.

Davies, J. (2013). [Do your political opinions affect how far away you think Vancouver is?](#) *Carleton Now*, December.

Davies, J. (2013). [Iron curtain of the mind—Our tangles thoughts on geography](#). *Nautilus* December 6 blog entry.

Davies, J. (2013). [Explaining the Unexplainable: When Logic Fails, Stories and Superstitions Prevail](#). *Nautilus* Magazine Article.

Davies, J. (2013). [Education Is a Waste of Effort—But It Doesn't Have to Be](#). *Nautilus* November 26 blog entry.

Davies, J. (2013). [Informal Assessment and Asking Questions in Class](#). Guest blog post on the Carleton University Educational Development Blog. October 28.

Davies, J. (2013). [Fame is a magnet that reveals our weak hold on reality](#). *Nautilus*, September 5 blog entry.

Davies, J. (2013). [Why people get lost in good books](#). *Nautilus* July 15 blog entry.

Davies, J. (2013). [Why do we get transported by stories we know are false?](#) *Nautilus*, July 16 blog entry.

Davies, J. (2012). [Academic obfuscations: The psychological attraction of postmodern nonsense](#). *Skeptic* 17:4, 44-47.

Editor of *Cognitive Science Summaries* website:

URL: <http://www.jimdavies.org/summaries/>

Editor of *Brain Areas Mnemonics Wiki* website:

URL: <http://brainareas.pbwiki.com/>

EDITORIAL RESPONSIBILITIES

Reviewing for Journals

Journal of Cognitive Systems Research

Software Practice and Experience

Journal of Digital Information

Journal of Human-Computer Interaction

Conference on the Cognitive Science Society

IJCAI Workshop on Grand Challenges for Experience-Based Reasoning

Journal of Consciousness Studies

The Open Artificial Intelligence Journal

Reviewing For Conferences

8th Annual ACM Conference on Creativity & Cognition (2011)

International Symposium on Mixed and Augmented Reality (ISMAR 2014)

Annual Conference of the Cognitive Science Society 2001-present

Editorial Board Membership

Imagination, Cognition and Personality (2015-present)

The Open Artificial Intelligence Journal (until 2014)

The Open Computer Science Journal (2014-present)

Journal of Experimental and Theoretical Artificial Intelligence (2013-present)

Program committee membership

Annual Conference of the Cognitive Science Society 2017

Advances in Cognitive Systems 2017

8th Annual ACM Conference on Creativity & Cognition

Publicity Chair 2011

2017

Diagrams 2010

Graduate Symposium Chair

International Joint Conference on Artificial Intelligence Workshop on Visual Reasoning and Representations 2011

Organizing Committee

Diagrams 2010, 2012, 2017

Analogy 2009

Grant Reviewing

National Science Foundation, summer 2015.

INVITED PAPERS PRESENTED

Keynote Addresses

Davies, J. (2016). *Imagination and Imagery*. Keynote address at The 13th Biannual Conference of the German Cognitive Science Society. September 26-30, Bremen, Germany.

Davies, J. (2014). *The Science of Imagination*. Keynote address at Techfest 2014, Mumbai, India.

To learned societies

Kelly, D. & **Davies, J.** (forthcoming 2017). The morality of doctor who villains. The Conference on Canadian Content in Speculative Arts and Literature. (CAN-CON2017).

Davies, J. (2017). The Science of Imagination.
Duke University Emergence Lab talk. March 23.
North Carolina State University at Charlotte. March 24.

Davies, J. (2017). Quanty: A computer game for getting quantitative magnitudes. North Carolina State University at Charlotte. March 24.

Davies, J. (2017). *Compellingness Foundations Theory*.
Scholars and Storytelling talk series, Duke University, March 1.
North Carolina State University at Raleigh, March 23.

Davies, J. (2016) *Productivity Lessons*. Educational Development Centre “Welcome to My Classroom” talk series. September 7.

Davies, J. (2015). *Creativity and Imagination*.
Big Ideas Conference, Statistics Canada, July 21, 2015.
Carleton Spring Conference, April 29, 2016.

Davies, J. (2015). *The Music of Star Wars*. The Conference on Canadian Content in Speculative Arts and Literature. (CAN-CON2015). November 1.

Davies, J. (2015). *Droid Psychology*. The Conference on Canadian Content in Speculative Arts and Literature. (CAN-CON2015). October 30.

Davies, J. (2015). *Engaging Yourself to Engage Students*. Teaching Assistant Training Day Keynote Speech. September 12.

Davies, J. (2015). [*Imagining Your Future*](#). TEDxCarletonU, April 6.

Davies, J. (2014). *Do we appreciate religions for the same reasons we appreciate art?* University of Toronto Interdisciplinary Symposium of the Mind (UTism), October 26.

Davies, J. (2014). *Enhancing Creative Imagination*. The Conference on Canadian Content in Speculative Arts and Literature. (CAN-CON2013). October 4.

Davies, J. & Hellemans, K. (2014). *Creating Concept Questions to Increase Engagement and to Improve Learning*. Society for Teaching and Learning in Higher Education (STLHE-2014).

Davies, J. (2014). *Enhancing creative imagination*. Lunch & Learn Food For Thought Creativity and Design Thinking Series. MacOdrum Library, Carleton University, February 28.

Davies, J. (2013). *Imagination and Artificial Intelligence*. The Conference on Canadian Content in Speculative Arts and Literature. (CAN-CON2013). October 5.

Davies, J. (2013). *Metaphor in visualization and interaction design*. Canadian Visual Analytics Summer School (CANVAS2013), July 17.

Davies, J. (2013). *Don't Waste Student Work*. Teaching Showcase of the Fall 2013 Carleton Faculty Orientation.

Davies, J. & Hellemans, K. (2013). *Peer Instruction: Concept Questions Workshop*. Carleton University Educational Development Centre.

Davies, J. (2013). *Don't Waste Student Work*. *Canadian Network for Innovation in Education (CNIE-2013)*. May 1–3, Ottawa, Ontario.

Davies, J. (2012). *Riveted: Why We Love Art, Products, and Ideas*. Pecha Kucha Ottawa #5, June 12.

Davies, J. (2011). *Don't Waste Student Work*. TEDxOttawa, October 22.

Davies, J. (2010). *The Science of Imagination*.
Pacific Northwest National Laboratories, August 16.
[Google](#) (Mountain View Campus), August 3.
[TEDxCarletonU](#), March 30.

Davies, J. (2010). *A Vision for the Science of Imagination*. A. Louis Medin Modeling & Simulation Seminar Series and Cognitive Sciences Student Association at the University of Central Florida Visiting Scholar Series. Talk, panel discussion, student forum. February 16.

Davies, J., & Gagné, J. (2010). *Visuo: A Model of Visuospatial Instantiation of Quantitative Magnitudes*. National Research Council Canada Featured Speaker. January 22.

Davies, J. (2009). *Using Assignments for Web Educational Materials*. Part of the Carleton University Educational Development Centre Classroom Strategies: "One Cool Thing I'm Doing..." December 8.

Davies, J. (2009). [Don't waste student work: Using class assignments to further research and wider educational goals](#). Carleton University Educational Development Centre *Teaching Technology Roundtable*, September 25.

OTHER PAPERS PRESENTED

To learned societies

Mekik, C.S., Somers, S., Vertolli, M.O., Stewart, T.C., & **Davies, J. (2015).** Nimage: Using visible persistence to constrain a model of visual processing. Poster presentation at *The 25th Annual Meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science (CSBBCS-15)*.

Chowdhury, W., Burt, C., Aakkaoui, A., & **Davies, J. (2015).** Quany: An online computer game for eliciting the wisdom of the crowd. Poster presentation at *The 25th Annual Meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science (CSBBCS-15)*.

Kelly, D. & **Davies, J. (2015).** A dual process account of moral judgment: What psychopaths can tell us about morality. Poster presentation at *The 25th Annual Meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science (CSBBCS-15)*.

Davies, J. (2014). Aesthetics in Art and Religion. *Workshop on Cognition and the Arts, Annual Conference of the Cognitive Science Society*. July 23.

Schoenherr, J. R. & **Davies, J. (2009).** Complexity Effects in Judgments of Maps of Science. *The 12th International Conference on Scientometrics and Infometrics*. Rio de Janeiro, Brazil.

Schoenherr, J. R., **Davies, J.**, Burch, H., Thomson, R. (2009). The believability of anthropomorphic explanations. Poster presentation at the 31st Annual Conference of the *Societe Quebecoise Pour La Recherche En Psychologie (SQRP09)*. Ottawa, Ontario, March 22, p151.

Davies, J., Schoenherr, J. R., Thompson, R. & Burch, H. (2009). Visuospatial Imagination of Geometric Shape: Regularities and Inconsistencies. Poster and Member abstract in the *Proceedings of the Cognitive Science Society*.

Davies, J., Schoenherr, J. R., & Bell, J. (2009). Psychological Dimensions of Graphical Representation of Science. *2009 Annual Convention of the Canadian Psychological Association*, June 11 – 13, Montréal, Québec.

Schoenherr, J. R., **Davies, J.**, & Burch, H. (2009). [Regularities in Human Visuospatial Imagination](#). *2009 Annual Convention of the Canadian Psychological Association*, June 11 – 13, Montréal, Québec.

Burch, H., **Davies, J.**, & Schoenherr, J.R. (2009). The believability of anthropomorphic explanations. *2009 Annual Convention of the Canadian Psychological Association*, June 11 – 13, Montréal, Québec.

Davies, J., Nersessian, N. J. & Goel, A. K. (2001). Visual analogy in scientific discovery. *Cognitive Studies of Science and Technology Workshop*, University of Virginia, March 24-27.

Davies, J. R., Lesh, N., Rich, C., Sidner, C. L., Gertner, A. S., & Rickel, J. (2001). Demonstration of collaborative interface agents using COLLAGEN. The 2001 *International Conference on Intelligent User Interfaces*.

Davies, J. (1999). An evaluation of SIRRINE2 as a cognitive architecture based on a model of human arithmetic. Twenty-first Annual Conference of the Cognitive Science Society, Vancouver, BC.

Galassi, M., **Davies, J.**, Theiler, J., Gough, B., Priedhorsky, R., Jungman, G., & Booth, M. (1999). The GNU scientific library. October 1999, *Open Source/Open Science Conference*, Brookhaven National Laboratory.

Billman, D., Davila, D. & **Davies, J.** (1996). Hierarchy and consistent contrast aid supervised and unsupervised concept learning. November 1996, Accepted talk, *Conference of the Psychonomics Society*.

Davies, J. & Billman D. (1996) Hierarchical categorization and the effects of contrast inconsistency in an unsupervised learning task. *Proceedings of the Eighteenth Annual Conference of the Cognitive Science Society*. Lawrence Erlbaum, Mahwah, NJ. p.750.

Talks to Other Academic Bodies

Davies, J. (2016). *Learning: A definition for cognitive science*. Carleton University Cognitive Science Colloquium Series. December 1.

Davies, J. (2016). *Imagination and belief: The Microtheories model of hypothetical thinking*. Carleton University Philosophy Colloquium. October 7.

Davies, J. (2016). *Imagination and Imagery*. Carleton University Psychology Colloquium Talk. March 31.

Davies, J. (2016). *How cognitive science can help you get through school*. Carleton University Centre for Initiatives in Education Enriched Support Program. February 5.

Davies, J. (2015). *Star Wars psychology: Music and droids*. Carleton University Cognitive Science Colloquium Series. October 15.

Chowdhury, W., Burt, C., Aakkaoui, A., & **Davies, J.** (2014). *Quanty: A computer game for improving professional estimates*. Carleton University Cognitive Science Colloquium Series. November 6.

Davies, J. (2014). *Why people can find abstruse writing compelling*. Carleton University Cognitive Science Colloquium Series. October 2.

Davies, J. (2014). *The Role of Artificial Intelligence Methods in Cognitive Science*. Carleton University Cognitive Science Colloquium Series. February 6.

Davies, J. (2013). *The Cognitive Importance of Testimony*. Carleton University Cognitive Science Colloquium Series. September 26.

Davies, J. (2011). *Spatial Terms in Visual Imagination*. Cornell University, Cognitive Science Colloquium Series. October 14.

Davies, J. (2011). *Using data to drive imagination modeling*. Rensselaer Polytechnic Institute, Cognitive Science Issues Colloquium. August 31.

Davies, J., Stapleton, C. (2011). *Imagination: The Third Reality to the Virtuality Continuum*. Carleton University Cognitive Science Colloquium Series. September 15.

Davies, J. (2011). *Using Student Projects to Generate Educational Resources on the Web*. Teaching and Learning in a Networked Era (conference). Ottawa, Ontario, April 6.

Davies, J., Bicknell, J. (2010). *The Microtheory Model of Belief Quarantine*. Carleton University Cognitive Science Colloquium Series. January 21.

Davies, J., Matheson, D. (2010). *The Cognitive Importance of Testimony*. Carleton University Philosophy Department Public Lecture. January 15.

Schoenherr, J. & **Davies, J.** (2009). *Dissociating perceptual complexity in graphical representations of science*. Carleton University Cognitive Science Colloquium Series, October 22.

Davies, J., & Gagné, J. (2009). *Visuo: A Model of Visuospatial Instantiation of Quantitative Magnitudes*. Carleton University Cognitive Science Colloquium Series, October 8.

Davies, J. (2007). A.I. past and future. *Institute on Biotechnology and the Human Future's (IBHF) Conference, "The Spotless Mind? Policy, Ethics & the Future of Human Intelligence,"* February 16: The National Press Club, Washington, D.C.

Davies, J. (2006). *The role of visual reasoning in analogical problem solving*.
University of California at Merced. February 16.
Institute of Cognitive Science, Carleton University. February 13.

Abelson, A., **Davies, J.**, Fraser, R., Kuo, T., Zuviria, E. & Glasgow, J. (2006). Protein structure from contact maps: An hierarchical approach. Poster at First Canadian Student Conference on Biomedical Computing (CSCBC06). Kingston, Ontario.

Davies, J. (2006) Visualization in Human Imagination. HOT Lab presentation. Carleton University. December 1.

Davies, J. (2006) Visualization in Human Imagination. Carleton University Cognitive Science Colloquium Series. October 13.

Davies, J. (2004). *Constructive adaptive visual analogy*. Cognitive Science Student Conference. Georgia Institute of Technology. April 23.

Davies, J. (2004). *Constructive adaptive visual analogy*.
School of Information Science & Learning Technologies, U of Missouri. May 19.
School of Computing, Queen's University. May 13.
University College Dublin. April 27.
University of Wisconsin at Green Bay. March 24.

Nersessian, N. J., Newstetter, W. C., Kurz-Milcke, E., **Davies, J.** & Malone, K. (2003) *Laboratory learning: Cognition and learning in biomedical engineering labs*. National Science Foundation Presentation.

Newstetter, W. C., Nersessian, N. J., **Davies, J.**, Kurz-Milke, E. & Malone, K. (2002) *Biomedical Engineering Thinking and Learning: Phase 1--Reasoning in the lab*. National Science Foundation Presentation.

Public Speaking

Davies, J. (2016). The human element: Giving machines imagination. Data + Creativity OKC, Oklahoma City, OK, April 13.

Davies, J. (2016). *Creativity and Imagination*. Cannexus16 Spark! Presenter, January 26.

Davies, J. (2015). *Creativity and Imagination*. Healthy Workplace Initiative Lunchtime Session, Carleton University. December 9.

Davies, J. (2015). *Defending Stumbling on Happiness* by Daniel Gilbert. *Carleton Laughs*, September 7.

Davies, J. (2015). *The Science of Imagination*. Policy and Communications Professional Development Day. February 13.

Davies, J. (2015). *Productivity Lessons*. SOAR Conference, Carleton University, January 17.

Davies, J. (2014-2015) *Riveted: The Science of Why Jokes Make Us Laugh, Movies Make Us Cry, and Religion Makes Us Feel One with the Universe*.

Ottawa International Writer's Festival, Oct 25, 2014

Ottawa Book Launch, Nov 20, 2014

CU in the City, Ottawa, Nov 19, 2014

CU in the City, Toronto, May 21, 2015

Davies, J. *The Science of Imagination*

Shad Valley

July 26, 2012

July 8, 2013

July 19, 2014

July 13, 2015

July 6, 2016

Davies, J. *How Science Works*.

Shad Valley

July 2, 2013

July 20, 2015

Davies, J. *Productivity Lessons*.

Shad Valley

July 20, 2016

Conference Panel Participation

Davies, J. (2015). *Magic and Magical Systems*. Panel discussion with Leah Bobet, Leah Petersen, and Kate Heartfield (moderator). The Conference on Canadian Content in Speculative Arts and Literature. (CAN-CON2015). October 31.

Davies, J. (2015). *Improvisation: What skills do improve comedians import into their writing?* Panel discussion with Edward Willett, Matthew Johnson, and Hayden Trenholm. (moderator). The Conference on Canadian Content in Speculative Arts and

Literature. (CAN-CON2015). November 1.

Davies, J. (2014). *The Cognitive Science of Religion*. Panel discussion with Jordan Peterson, James Carse, Matthew Rossano, Brian Cantwell Smith, and Colleen Shantz. University of Toronto Interdisciplinary Symposium of the Mind (UTism). October 26.

Davies, J. (2014). *The foresight panel: What is futurism, and why should you care?* Panel discussion between Jim Davies, Madeline Ashby, and Pippa Wyson. The Conference on Canadian Content in Speculative Arts and Literature. (CAN-CON2014). October 4.

Davies, J. (2013). *AI in Science and in Fiction*. Panel discussion between me, Robert J. Sawyer, and David Hartwell. The Conference on Canadian Content in Speculative Arts and Literature. (CAN-CON2013). October 5.

Invited Book Chapters

Davies, J. (in press). Imagination, creativity, and aliens. In T. Langley (Ed.) *Star Trek psychology*.

Francis, A. & **Davies, J.** (in press). The measure of a machine: The psychology of Star Trek's artificial Intelligence. In T. Langley (Ed.) *Star Trek psychology*.

Davies, J. & Saunders, D. (2017). From human to machine: At what point do you lose your soul? In T. Langley (Ed.) *Doctor Who psychology*.

Kelly, D. & **Davies, J.** (2017). The moral foundations of Doctor Who. In T. Langley (Ed.) *Doctor Who psychology*.

Davies, J. & Kraemer, J. (2015). A symphony of psychology: The music of star wars. In T. Langley (Ed.) [*Star wars psychology: The dark side of the mind*](#).

Davies, J. (2015). Droids, minds, and why we care. In T. Langley (Ed.) [*Star wars psychology: The dark side of the mind*](#).

The above two chapters were translated into Spanish for [***Psicologia de Star Wars \(Spanish Edition\)***](#)

Goel, A. K. & **Davies, J.** (2011). [*Artificial Intelligence*](#). In S. B. Kaufman and R. Sternberg (Eds.) *The Cambridge Handbook of Intelligence* (3rd Edition).

Davies, J. R. (2001). Ocelots are endangered South American wild cats. In J. Ohler (Ed.) *Future Courses: A Compendium of Thought About the Future of Technology and Education*. Technos Press. 79-83.

Short Stories Published

Davies, J. (2013). [So Human, So Beautiful](#). *Nautilus* December 11 blog entry.

Poetry Published

Davies, J. (2007-2008) *This City Was Made For Us*. *Bywords* Quarterly Journal, Winter, 2007-2008.

Full-Length Plays Produced

Davies, J. (2017). *Cookiecrumble Cookie Toss*. The Oak Theatre, Atlanta, GA, February 16—March 12. Directed by Mary Claire Branton.

Davies, J. (2016) *Read it twice, it's real*. Paragon Play Festival, Otherworld Theatre Company, Chicago, IL, Oct 2. Directed by Makena Metz.

Davies, J. & Ji, X.G. (2004). *Medea: The fury*. VisionQuest Theater Company. Directed by Montica Pes.

RESEARCH GRANTS

Government or extra-university

Davies, J. (2011). *Spatial Relationship Detectors for Virtual Environments*. NSERC Engage Grant Program. Industry Partner: CAE Professional Services Canada. \$25,000 CAD.

Davies, J. (2009-2013). *Visuospatial Scene Generation*. National Science and Engineering Research Counsel (NSERC) Discovery Grant. \$95,000 CAD (\$19,000 per year for five years).

Davies, J. (2008). *Graphical Representations of Scientific Inter-relationships*. SciTech Strategies, Inc. grant. \$10,765 USD.

Ferres, L. & Davies, J. (2006). Interaction between Linguistic & Visual Cues During Graph Comprehension Tasks. Statistics Canada. \$18,000 CDN.

University

Davies, J. (2014). *Phenomenology of Virtual Spaces: Digital Archaeology and the Underground Cities of Cappadocia*. Carleton University Dean of Faculty of Arts and Social Sciences Research Fund. \$5,000 CAD. #13353

Davies, J. (2013). *Exploring Psychological Effects of Ancient Structures through Virtual Environments*. Carleton University Dean of Faculty of Arts and Social Sciences Research Fund. \$5,000 CAD. #101361

Davies, J. (2010). *Quanty Game*. Carleton University Foundry Program. \$5,000 CAD.

Davies, J. (2008). *Toward a Theory of Visual Instantiation*. Carleton University Internal Research Grant from the NSERC General Research Fund. \$7,000 CAD.

Davies, J. (2007). *Toward a Theory of Visual Instantiation*. Carleton University Internal Research Grant from the NSERC General Research Fund. \$5,000 CAD.

Davies, J., Essa, I., & Maple, T. (1998) The Primatech project: An interactive simulation of a signing orangutan. Seed Grant. GVU, Georgia Institute of Technology.

MEDIA APPEARANCES

Print and web appearances

Reid, R. (2016). [Thinking about exercise is basically a work-out](#). Marie Claire Digital Edition, August 17.

Kozicka, P. (2016). [Power of the mind: ‘Just imagining a workout can make you stronger.’](#) Global News, August 16.

Jochem, G. (2015). [Changing the World, One College Paper at a Time](#). *Innovation Hub blog*. September 3.

N. A. (2015). *Brain Games*. [Season 4, Episode 16: Imagination](#).
(An imagination exercise I designed was featured on a television program)

Sollinger, M. (2015). [Why jokes are funny](#). Innovation Hub, March 4.

Sollinger, M. (2015). [Why we: a\) laugh b\) love TV c\) have nightmares](#). *Public Radio International*, March 6.

Reno, D. (2015). [An interview with Jim Davies](#). *Washington Independent Review of Books*. January 29.

Fulford, R. (2014). [My two brains; Jim Davies dissects why we like what we like](#). *National Post*, December 3, pB5.

Weinstein, J. (2014). Research brings mind’s eye to virtual reality. *Forbes/Wolfe Emerging Tech Report*. 13(11), pp. 1, 6-7.

Miller, J. (2014). [4 completely scientific ways to know if your content is compelling](#).

Davies, J., Carleton University CV

Fast Company co.create. September 24, 2014

McKinnon, A. (2014). [What are you laughing at?](#) *The Charlatan*. September 4.

Dickerson, K. (2014). [Stopped in your tracks: One scientist takes the measure of our amazement](#). *Psychology Today*. July 1, 2014.

Brean, J. (2014). [Your mind's in on the joke](#). *National Post*, 16(227), page A6 August 2.

(no author) (2014). [An interview with cognitive science prof. Jim Davies on the cognitive impact of celebrity worship and fame](#). FASSinate. Carleton University's Faculty of Arts and Social Sciences Magazine, 40-42.

(no author) (2014). Rewire your habits. *Top Sante Magazine*, May, p9.

(no author) (2013). [Jim Davies—Professor Profile](#). *Online Focus*. Carleton University Online XIII(2). October. p1.

Television appearances

[Imagination and Sports](#). CTV Morning News, August 18, 2016.

Radio appearances

[Our year of unexpected outcomes](#). WNPR, May 2, 2017. (starts at time 21:10)

[Developing artificial intelligence – boon or bane?](#). *Radio Canada International*. Interview by Marc Montgomery. December 6, 2016. (12:21 minutes)

[AI and consciousness](#). *Ottawa Morning*. Interview by Robyn Bresnahan. November 29, 2016. (7 minutes)

[A.I. is not consciousness](#). *The John Batchelor Show*. Interview by John Batchelor, November 18, 2016.

[If we love a robot can we also hurt one?](#) Ontario Today, CBC Radio One, interview by Rita Celli, October 14, 2016.

Why are horoscopes still a thing? Radio noon, CBC Radio Montreal, February 2, 2016.

[Why are horoscopes still a thing?](#) Ontario Today interview with Rita Celli, January 29, 2016.

Star Wars Music. BBC Ireland. Interview with Joe Kraemer. December, 2015.

Star Wars Music. All in a Day. CBC 1. Interview with Joe Kraemer. December 21, 2015.

[Riveted Interview](#). Innovation Hub with Kara Miller. WGBH, Public Radio International, March 7, 2015.

[Imagine](#). *Digital Human*. Interview with Jim Davies. BBC. November 16, 2015.

[Riveted Interview](#). Marcus Smith. BYU Radio, October 20, 2014.

[Riveted Interview](#). The Matt Townsend Show. BYU Radio, September 17, 2014.

[Riveted Interview](#). Inquiry with Mark Lynch. WICN. September 10, 2014.

[Riveted Interview](#). Ottawa Morning on CBC 1 with Rita Celli. September 9, 2014.

[Riveted Interview](#). Ottawa Morning on CBC 1 with Robyn Bresnahan. August 11, 2014.

[Riveted Interview](#). On Point with Jane Clayson. National Public Radio August 11, 2014.

[Riveted Interview](#). In Depth Interview with Sue Ford. WWSC. August 8, 2014.

[Meditation](#). Geek On with Suzette Schmiedel. July 31, 2014.

[Book Panel](#). All In a Day on CBC 1 with Alan Neal, July 28, 2014.

[Advice for Students](#). CBC 1 with Meg Wilcox. September 5, 2013.

[The Psychology of Willpower and New Year's Resolutions](#). Ottawa Morning on CBC 1 with Robyn Bresnahan. January 7, 2013.

[Bicycle Helmets](#). Ottawa Morning on CBC 1 with Robyn Bresnahan. June, 2012.

[Science of Imagination](#). Peer Review Radio on CUHO 89.1FM in Ottawa. February, 2012.

[Calligraphy](#). In Town and Out on CBC 1 with Giacomo Panico. September, 2010.

[Pac-Man art](#). All In a Day on CBC 1 with Alan Neal. June 17, 2010.

Chinatown Remixed. Friday Special Blend. CKCU 93.1 with Vanessa Davies, May 2010.

[Science of Imagination TEDxCarletonU talk](#). All In a Day on CBC 1 with Alan Neal. March 29, 2010.

Podcast appearances

[Programming Ethics into AI](#). *The Reality Check* podcast, December 27, 2016.

[The Science of Imagination and Fascination](#). Spark My Muse with Lisa DeLay. 2016.

[Droid Psychology](#). The Reality Check. April, 2016.

[The Power of Imagination](#) Youniversity Podcast Episode 10. March 28, 2016.

[Mutual Dependence & Effective Altruism – Dr. Jim Davies](#). *Positivity Effect Podcast* with Thomas Recher. Episode 010, January 6, 2016.

[Riveted and Droid Psychology Interview](#). Dr. Ted podcast with Ted Lougheed. November 9, 2015.

[Riveted](#). The Reality Check. Episode 371. October 16, 2015.

Lopez, T. (2015). [The Battle For People's Attention: Riveted With Jim Davies \(Book-of-the-Day\)](#). *Tai Lopez*, October 14.

Jochem, G. (2015). [Wasted Effort in the Classroom](#). Innovation Hub podcast. September 3.

[Why You Like What You Like](#). Gluckradio.com Episode 119. with Errol Gluck November 4, 2014.

[Riveted Interview](#). *The Gist*. Episode 93 with Mike Pesca. September 16, 2014.

[Riveted Interview](#). Dr. Alvin Podcast with Alvin Augustus Jones. August 13, 2014.

[How to Be Compelling with Jim Davies](#). Brainfluence podcast, Episode 18, With Roger Dooley. August 6, 2014.

[Cycling Helmets and Risk](#). The Reality Check. Episode 221. With Darren McKee. December 2, 2012.

SERVICE TO THE PROFESSION

Awards

Carleton University Provost's Fellowship in Teaching Award (2015) – This award recognizes faculty and contract instructors dedicated to sustained excellence in teaching, scholarship of teaching and continual development of teaching. There are three awards presented annually in the amount of \$2,500 each.

Faculty of Arts and Social Sciences Research Achievement Award (2015)

Faculty of Arts and Social Sciences Teaching Innovation Award (2014) – This award recognizes instructional excellence in the Faculty of Arts and Social Sciences. A maximum of three awards are presented annually. Each award winner receives an honorarium of \$1,000 and a certificate of recognition.

Excellence in Teaching with Technology Award (2012) - Established by Carleton University's Teaching and Learning Services, this award is awarded to faculty members who thoughtfully and meaningfully incorporate educational technology into their teaching and learning practices. Two awards of \$750 each are presented annually.

Best Reviewer Award. *The ACM Conference on Creativity & Cognition*, 2011.

Adjudication

Judge for Excellence in Teaching with Technology Awards, Carleton University, 2013 – 2016.

ACADEMIC RESPONSIBILITIES

Graduate courses taught

- [CGSC 5102] Computational Methods
Carleton University
Instructor
Fall 2010, 2011, 2013
- [CGSC 6800] Proseminar in Cognitive Science
Carleton University
Instructor
Winter 2007, 2008, Fall 2008, 2009, 2010
- [CGSC 5001] Artificial Intelligence for Cognitive Science
Carleton University
Instructor
Fall, 2008, 2009
- [CGSC 4001,5001] Artificial Intelligence for Cognitive Science
Carleton University
Instructor
Fall 2006, 2007, Winter 2011, 2012, 2014

Undergraduate courses taught

- [CGSC 1001] Mysteries of the Mind
Carleton University
Instructor
Fall 2011, 2013, 2014, 2015, 2016
Winter 2015

[CGSC 3001] Honours Seminar in Cognitive Science I

Carleton University

Instructor (one half)

Fall 2009, 2010, 2011

[CGSC 4001] Artificial Intelligence for Cognitive Science

Carleton University

Instructor

Winter 2009, 2010, 2014

[CGSC 2002]

Theories and Methods in Cognitive Science

Carleton University

Instructor

Winter 2007, 2008, 2009, 2010, 2011, 2012, 2015

[CISC 453] Advanced Artificial Intelligence

Queen's University

Instructor (one-third)

Spring 2006

Teaching Record

<i>Year</i>	Undergraduate	Graduate
2016—2017	CGSC1001b,v	
2014—2016	CGSC1001a,t; CGSC1001b,v; CGSC2002b; CGSC4001a	CGSC5001a
2013—2014	CGSC 1001, CGSC4001/5001	CGSC 5102
2012—2013	(sabbatical)	
2011 – 2012	CGSC 1001, CGSC 3001**, CGSC 4001/5001, CGSC 2002	CGSC 5102
2010 – 2011	CGSC 3001**, CGSC 2002, CGSC 4001/5001	CGSC 5102
2009 – 2010	CGSC 4001, CGSC 3001**, CGSC 2002	CGSC 6800*, CGSC 5001
2008 – 2009	CGSC 4001, CGSC 2002	CGSC 6800*, CGSC 5001
2007 – 2008	CGSC 4001/5001, CGSC 2002	CGSC 6800*
2006 - 2007	CGSC 4001/5001, CGSC 2002	CGSC 6800*

*Taught for 1 term (two term course).

** Shared course with another instructor

Supervision

Years	Student	<i>Thesis/Project Title</i>
Ph.D. Dissertation Supervision		
2014-present	Michael O. Vertolli	<i>In progress</i>

2016	Sterling Somers	<i>A cognitive affordance model of shoulder rotation in ACT-R 3D</i>
Master's Supervision		
2016-present	Sean Riley	<i>In progress</i>
2016-present	Pratik Tiwari	<i>In progress</i>
2015-present	Claudie St. Arnauld	<i>In progress (MDes. in Industrial Design)</i>
2016	Can Mekik	<i>MCogSc. An automated evaluation procedure for artificial imagination systems</i>
2015	Vincent Breault	<i>MCogSc. Multi-agent Planning for Interactive Emergent Narrative Systems</i>
2014	Michael O. Vertolli	<i>MCogSc. Masters in Cognitive Science- Contextual Coherence in the Visual Imagination: An Interdisciplinary Analysis</i>
2013	Natalie Daphne Shalmon	<i>MDes. in Industrial Design- The Element of Play in Design</i>
Honours Thesis Supervision		
2017	Sydney Lockhart	<i>Adaptive Memory Errors</i>
2017	Mackenzie Ostler	<i>A menton pool production system</i>
2016	Alex Salgo	<i>A Simulated Neuron for Learning Action Potentials</i>
2015	Felix Yisa	<i>The Ability of System 1 to Unconsciously Recognize Valence in Blurry Words</i>
2015	Jay Jennings	<i>Curvilinear Impetus Belief and Embodied Cognition: The Impact of Psychomotor Reactions on Folk Physics Beliefs^[1-3]_{SEP}</i>
2014	Maryanna Guillet	<i>Enhancing Creative Design With Infrequently-Used Attributes</i>
2014	Gorkem Guduk	<i>Genetic Distance and Perception of Cuteness in Primates</i>
2014	Branden Lynch	<i>An Information Processing Account of Metaphor</i>
2013	Meaghan McManus	<i>The Effects of Specific Physical Features on Perceived Intelligence</i>
2013	Sebastien Ouellet	<i>Automated and Cognitively Plausible Descriptions of Three-Dimensional Scenes</i>
2012	Marcel Campbell	<i>Analogy and Case-Based Reasoning: A Comparison</i>
10-11	Josh Wilson	<i>How humans predict spatial magnitudes of an inexperienced object by using spatial knowledge of a similar object (co-supervised with Amedeo D'Angiulli)</i>
09-10	Peter Welch	<i>Developing an understanding of the biological emergence of mind; an analysis of the distributed information processing of the superorganism</i>
09-10	Geoffrey Johnson	<i>The Expansion of Galatea to Include L12, L11, and L13</i>
09-10	Connor Smith	<i>The Retrieval of Images Using Spatial Relationship Detectors</i>
09-10	Jessica Cockbain	<i>What if Da Vinci Had A Computer? Investigating the Influence of Technology On Creativity</i>
08-10	Nicolas Di Noia	<i>The Categorical Similarity Mapping Engine (CSME), The Abstract Relation Mapping Engine (ARME), and the Direct</i>

		<i>Structure Mapping Engine (DSME): Investigating Category-based Approaches To Analogy Mapping</i>
08-09	Alexander Miller	<i>Rethinking Machine Ethics: Functionally Defined Artificial Intelligent Agent Ethics</i>
07-08	Jonathan Gagné	<i>Analogical Inference of Visual Properties</i>
07-08	Tyler Mair	<i>Finding Fun: Examining the Source of Fun in Games</i>

Master's Theses Examined at Carleton University

Date	Department	Student	Title
2015, June 30	Psychology	Eve-Marie Blouin-Hudon	<i>Nurturing the Temporally Extended Self: Mental Imagery as an Intervention to Increase Future Self-Continuity and Reduce Academic Procrastination</i>
2015, February 6	School of Industrial Design	Jessie Thavonekham	<i>Changing the Context of Experience: Applying Sensory Elements Towards Mindful Eating</i>
2014, July 17	Psychology	Matthew G. Heubner	<i>Selection of Procedures in Mental Division: Relations Between Self-Reports and Eye-Movement Patterns</i>
2013, December 12	School of Industrial Design	Xinchu Zhang	<i>Examining Sensorial Interfaces as the Stimuli for Remote Affective Communication</i>
2013, September 5	Neuroscience	Matthew Runge	<i>Validating Phenomenological Aspects of the Mental Imagery Experience through MetaAnalysis: Beyond Global Assessment of Imagery Ability</i>
2012, September 4	English	Thomas Sorensen	<i>Mimesis, Metarepresentation, and the Transformation of the Mental Object in the Aesthetic Attitude.</i>
2010, September 3	Film Studies	Jake Dole	<i>The Curious Eye: Symmetry, Neo-Baroque Aesthetics and the Hollywood Spectacle</i>
2008, January 28	Psychology	Michael Henighan	<i>Working Memory and Arithmetic</i>
2008, January 9	Psychology	Jordan Schoenherr	<i>The Dependency of Confidence Processing on Working Memory</i>
2008, May 20	Psychology	Joey Theberge	<i>A Distributional Analysis of Reaction Times in Mental Rotation</i>

Ph.D. Dissertations Examined at Carleton University

Date	Department	Student	Title
2016	Cognitive Science	Matthew Kelly	<i>The memory tesseract: Developing a unified framework for modelling</i>

			<i>memory and cognition</i>
2016	Cognitive Science	Deirdre Kelly	<i>A dual-process account of moral judgment: What psychopaths can teach us about morality</i>
2015	Cognitive Science	Kam Kwok	<i>Complex Fan Analysis, the Extension of ACT-R Fan Effect Model</i>
2013	Computer Science	Hua Li	<i>Perception-Assisted High-Quality Stylization</i>

ADMINISTRATIVE RESPONSIBILITIES

Departmental Service

Cognitive Science Distinguished Lecture Series, coordinator,
(Fall 2006 – Summer, 2009; September 2015-Winter 2016)

Technical Report Manager (2009-Present)

Undergraduate Committee (Fall 2015-Present)

Graduate Committee (2009-2015)

Ontario Graduate Scholarship Appraisal Committee (2009)

Member, Institute of Cognitive Science Faculty Hiring Committee (2008-2009, 2014)

Member, Institute of Cognitive Science Graduate Admissions Committee (2009-2015)

Faculty calls to high school students (2008-present)

Cognitive Science / Psychology Promotion Committee (2008-2009)

Cognitive Science / Linguistics Promotion Committee (2008-2009)

Member, Faculty of Arts and Social Sciences Tenure Review Committee
(2007)

Member, Institute of Cognitive Science Director Search Committee
(2007)

Faculty of Arts and Social Sciences Service

Member, Faculty of Arts and Social Sciences Promotion Review Committee (2008)

Other

Director, Science of Imagination Laboratory, Carleton University
Member, Ottawa-Carleton Institute for Computer Science (since 2016)
Co-Founder, VSIM Computational Cognitive Science Laboratory (with R. West)
Member, Carleton University Scholarly Communications Committee (2015-2018)

Membership in Professional Societies

[Cognitive Science Society](#) (since 1996)
[Association for the Advancement of Artificial Intelligence](#) (lifetime member, since 2006)
[Canadian Network for Innovation in Education](#) (2012-2015)
[American Psychological Association](#) (since 2013)
[International Association for the Cognitive Science of Religion](#) (since 2013)
Science Writers and Communicators of Canada (formerly the [Canadian Science Writers' Association](#))(since 2013)
[International Association for Empirical Aesthetics](#) (since 2014)
[Society for Teaching and Learning in Higher Education](#) (STLHE) (since Sept 2014)
[Virtual World Society](#) (since 2015)