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Dav Clark
Curriculum Vitae

Academics / Education

2007–present *PhD in Psychology, UC Berkeley (expected Spring 2013)*
Supervised by Michael Ranney and Rich Ivry
RCME Fellow (Full support / stipend for 2 years)
Thesis: Climate change and conceptual change
Qualifying exam topics: Automaticity, Skill Learning, Brain Imaging Methods

1999–2002 *MSc in Cognitive Neuroscience, MIT*
Supervised by Anthony Wagner
Thesis: Neurocognitive circuitry supporting neoword learning
NSF Graduate Student Fellowship
Jacob Javits Fellowship (declined)

1995–1999 *Bachelor's degrees at U of MD, College Park*
BA with honors in Linguistics
BS in Computer Science
BS with high honors in Mathematics
Thesis: Modeling Language Change with Markov Models
Magna Cum Laude
Banneker/Key Scholarship (Full support / stipend for 4 years)
Arts and Humanities Senior Scholar
University Honors Citation
Omicron Delta Kappa leadership honors fraternity

Articles

Gorgolewski, K., Burns, C. D., Madison, C., **Clark, D.**, Halchenko, Y. O., Waskom, M. L., & Ghosh, S. S. (2011). *Nipype: a flexible, lightweight and extensible neuroimaging data processing framework in python.* Frontiers in Neuroinformatics, 5, 13. doi:10.3389/fninf.2011.00013

Articles (continued)

Clark, D., & Ranney, M. A. (2010). *Known knowns and unknown knowns: Multiple memory routes to improved numerical estimation.* In K. Gomez, L. Lyons, & J. Randinsky (Eds.), Learning in the Disciplines: Proceedings of the Ninth International Conference of the Learning Sciences, Vol. 1-Full Papers (pp. 460-467). International Society of the Learning Sciences, Inc.

Clark, D., & Ivry, R. B. (2010). *Multiple systems for motor skill learning.* Wiley Interdisciplinary Reviews: Cognitive Science, 1(4), 461-467. doi:10.1002/wcs.56

Hasson, U., Furman, O., **Clark, D.**, Dudai, Y., and Davachi, L. (2008). Enhanced intersubject correlations during movie viewing correlate with successful episodic encoding. Neuron, 57(3):452-462. *Note: First 3 authors contributed equally*

Kahn, I., Pascual-Leone, A., Theoret, H., Fregni, F., **Clark, D.**, & Wagner, A. D. (2005). *Transient disruption of ventrolateral prefrontal cortex during verbal encoding affects subsequent memory performance.* Journal of Neurophysiology, 94, 688-698.

Clark, D., & Wagner, A. D. (2003). *Assembling and encoding word representations: fMRI subsequent memory effects implicate a role for phonological control.* Neuropsychologia, 41, 304-317.

Conferences & Talks

Reinholz, D., **Clark, D.** & Ranney, M. A. (2012) *Conceptual Change in Climate Change: The Positive Effects of Learning Global Warmings MechanismAERA.* Paper to be presented at the annual meeting of the American Educational Research Association.

Clark, D., Reinholz, D., Cohen, S., Walket, B., & Ranney, M. A. (2011, August). *Overcoming Climate Change Biases by Teaching the Goldilocks Asymmetry of Energy Transfer Rates: A Cognitive-Strategy Attempt to Save Us Organisms.* Paper presented at the Eighteenth Annual Meeting of the Cognitive Science Association for Interdisciplinary Learning, Hood River, OR.

Clark, D., Reinholz, D., Felipe, J., Cain, A., Beale, M., Lazaris, A., Qi, H., Fong, J., Farjadi, R., & Ranney, M. A. (2011, April). *The Goldilocks Asymmetry of Energy Transfer Rates: An Experimental Intervention Toward Saving Us from Global Warming.* Invited colloquium, Research in Cognition and Mathematics Education (RCME), University of California, Berkeley.

Conferences & Talks (continued)

Clark, D., Reinholz, D., Goldwasser, L., Ranney, M. A. (2011, April) *Can Teaching the "Goldilocks Asymmetry" About Energy Transfer Rates Save Us Organisms? An Experiment on Climate Change Instruction.* Graduate School of Education (GSE) Research Day.

Ghosh, S., Burns, C., **Clark, D.**, Gorgolewski, K., Halchenko, Y., Madison, C., Tungaraza R., Millman J. (2010). *Nipype: Opensource platform for unified and replicable interaction with existing neuroimaging tools.* 16th Annual Meeting of the Organization for Human Brain Mapping.

Clark, D. (2010, April). *Surprising Feedback And Fallible Metacognition: Beliefs Versus Facts in Real-World Numerical Estimation and Recall.* Graduate School of Eduction (GSE) Research Day.

Clark, D., Ivry, R.B. (2009). *Hemispheric Asymmetry in fMRI Activation with Direct or Indirect Cueing of Sequential Movements.* 19th Annual Meeting of the Neural Control of Movement Abstracts.

Furman, O., Hasson, U., **Clark, D.**, Dudai, Y., Davachi, L. (2006). *Neural correlates of long-term memory formation under continuous real-life viewing conditions.* 12th Annual Meeting of the Organization for Human Brain Mapping.

O'Kane, G., **Clark, D.**, Insler, R., & Wagner, A. D. (2003). *Generalized semantic repetition priming in left inferior prefrontal cortex.* Abstracts of the Cognitive Neuroscience Society, 10, 73.

Clark, D., Rhee, J., & Wagner, A. D. (2001). *Prefrontal activation during phonological encoding predicts subsequent memory.* Abstracts of the Cognitive Neuroscience Society, 8, 58.

Rhee, J., **Clark, D.**, Casasanto, D., Ullman, M., Wagner, A., & Pinker, S. (2001). *Neural substrates of English past tense generation.* Abstracts of the Cognitive Neuroscience Society, 8, 131.

Clark, D., & Wagner, A. D. (2001). *A role for phonological working memory: Building representations for novel word stimuli.* Society for Neuroscience Abstracts, 27.

Invited Seminars

UC Berkeley DeCal: Behavioral Change + Technology (with Michael Ranney and Daniel Reinholz), Oct 2011, *Title TBA*

UC Berkeley Institute for Cognitive and Brain Sciences (ICBS) colloquium (with Michael Ranney and Daniel Reinholz), Oct 2011, *Title TBA*

Invited Seminars (continued)

UC Berkeley Cognitive Coalition (CoCoa) talk, Sept 2011, *Towards an informed populace: two approaches for addressing faulty prior knowledge.*

USF Undergraduate Neuroscience Seminar, April 2009, Learning numerical information: A memory systems approach to educational strategy.

MIT Speech Communication Group Seminar Series, April 2001, More is better: Predicting word memory with prefrontal activation.

Technical Seminars

UC Berkeley Python 4 Science, October 2009, *Python data discussion (HDF5, R, Numpy)*

Reviewing Service

- Cognition and Instruction
- Journal of Cognitive Neuroscience

Skillset

Professional-level programming competence

- R (a free dialect of the S language for Statistics, similar to S-Plus)
- Python, including many scientific libraries

Brain Imaging Packages

- SPM
- FSL
- NiPype (co-author)

Other

- Statistics: including classical, non-parametric, SEM, Monte Carlo methods
- Data visualization
- Reproducible research
- Revision control (Subversion and Git)

Skillset (continued)

- Zope / Silva (python-based web content management system)

Other Experience

2007–present *Feldenkrais Teacher, self-employed / YMCA*
Hands-on and verbal instruction to improve students' ability to move. Completed 4-year training.

2004–present *Web Service Developer, Freelance / KeepOpen.com*
Using technologies like HDF5, Zope and Google Maps to implement services for community events management, small businesses, resource sharing, etc. Patent development.

2006–2007 *Principal Scientist, Entrieva*
Developed multiple reporting frameworks using relational database and hierarchical HDF5 design. Analysis and reduction of code to basic mathematical notation. Domain expert in computational linguistics and semantic web technology. Primary responsibility: "Do good stuff."

2006 *Programmer, Wandell Lab / Stanford*
Developing a brain imaging repository from scratch using REST design and HDF5 data storage using PyTables. Clients include a Matlab / Java program, a web browser and mounting via WebDAV. Server written using mod_python. NumPy used for matrix operations.

2005–2006 *Programmer/Analyst, Davachi Lab / NYU*
Variety of novel analyses of subsequent memory fMRI data collected during free viewing of a movie. Working with an undergraduate researcher in developing analysis of associated eye-tracking data. Duties also include development, automation and technical support of other analyses being done in the lab.

Other Experience (continued)

2003–2004 *Various Independent Activities*
Business plan competitions: MIT Sloan (semi-finalist) and Harvard (runner up, $4000 as in-kind services). Tech Director for Lowell House Opera. Real estate agent. Extensive travel. Organizer and attendee for various holistic bodywork training sessions. Organic farming. Straw bale and mud brick house construction. Performance art.

2002 *Programmer/Analyst, Massachusetts General Hospital*
Supported complex analyses in a flagship brain imaging research center. Included implementing novel techniques for statistics and visualization, integrating fMRI, sMRI and MEG.

Service and Extracurricular

2004 *Producer, Advanced Feldenkrais Training with Paul Doron-Doroftei*
Working with children with severe cases of spastic paralysis (e.g. CP).

2003 *Brewmaster, Oni Gallery Collective*
Organized all or part of various artistic events. 10 Gal Beer / week.

2001-2003 *Producer, The Voice Institute*
Various workshops and retreats - styles ranging from Gypsy to Modern Chamber.

2003 *Technical director & cast, Harvard's Lowell House Opera*
Managed large, untrained teams of actors in building the entire stage.

At UC Berkeley

2007 Teaching Assistant for Cognitive Neuroscience

At MIT

2001–2002 President, Graduate Student Volunteer Corps
2001–2002 The Ptolemy Players (Bass vocals)
2001 Graduate Student Council Departmental Representative
2000 Teaching Assistant for Introduction to Psychology

Service and Extracurricular (continued)

At U of MD

1996–1999 President & Founder, Juggling Club
1996–1997 Aaron Strauss Teaching Assistant for Calculus I & II

Undergraduates Supervised

Jimmy Zhang
Naomi Sulzer
Janice Chen (now a graduate student with Anthony Wagner)
Benjamin Miron
Konstantin Tomashevsky
Tawny Tsang
Jeff Lai
Si Wang
Benjamin Walklet (Post-bac RA)

References

UC Berkeley - Michael Ranney (ranney@berkeley.edu)
UC Berkeley - Rich Ivry (ivry@berkeley.edu)
NYU - Lila Davachi (lila.davachi@nyu.edu)
NYU / Weizmann - Yadin Dudai (yadin.dudai@weizmann.ac.il)
Stanford / MIT - Anthony Wagner (wagner@psych.stanford.edu)