

# DIY Tools for Grad Program Assessment

An Approach and Some Examples

Rick Dale

CIS Grad Chair

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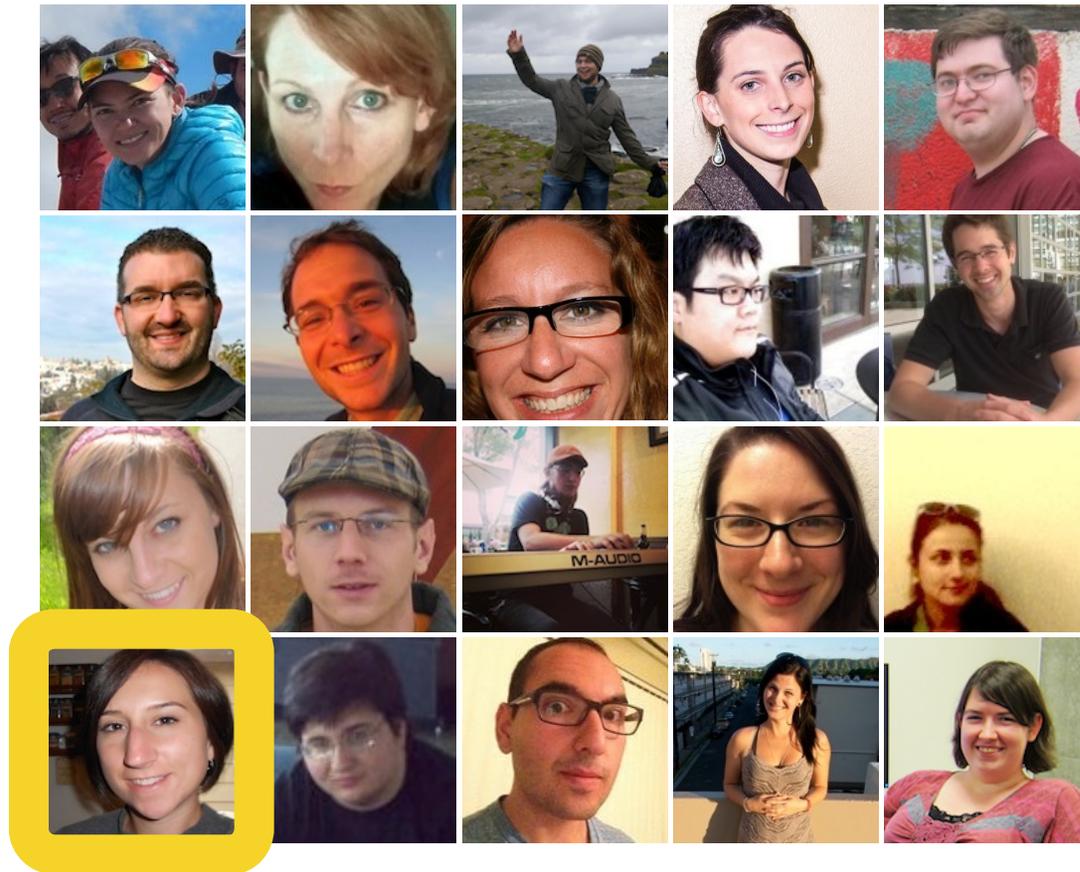
*program*

# Graduate<sup>v</sup> Assessment

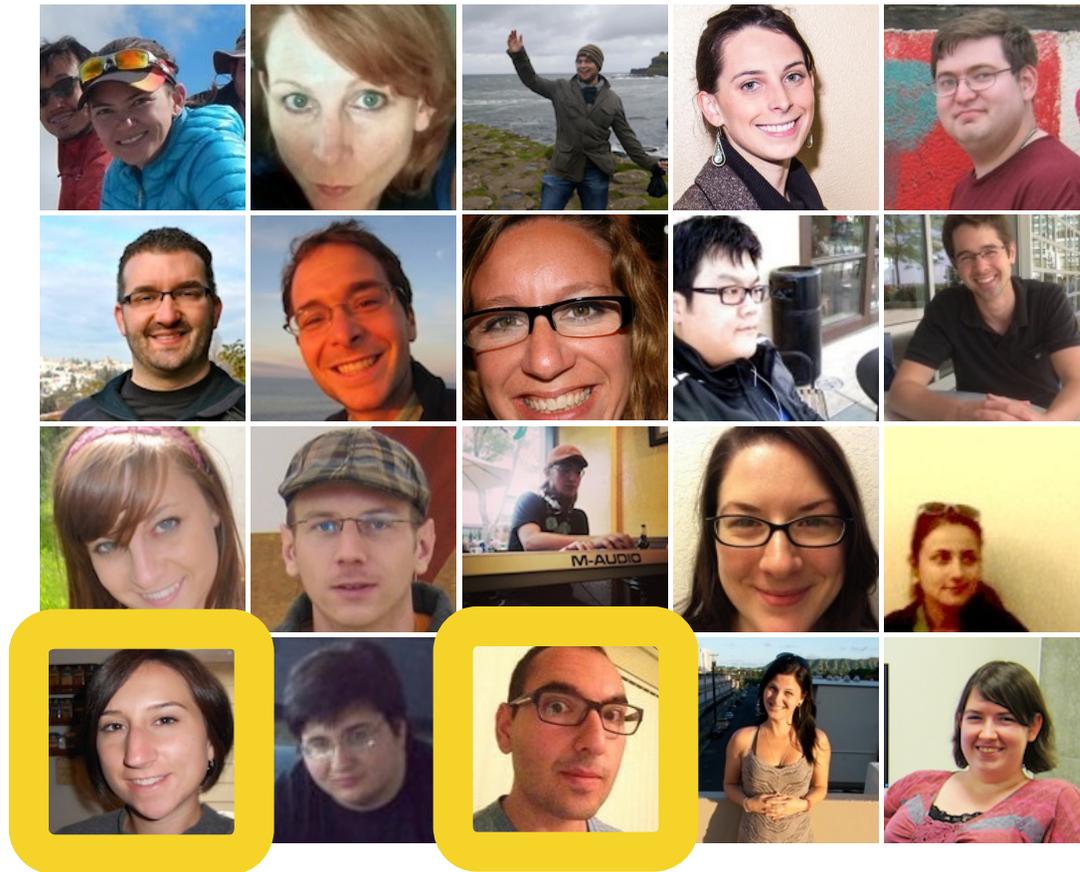
*program*  
Graduate<sup>v</sup> Assessment



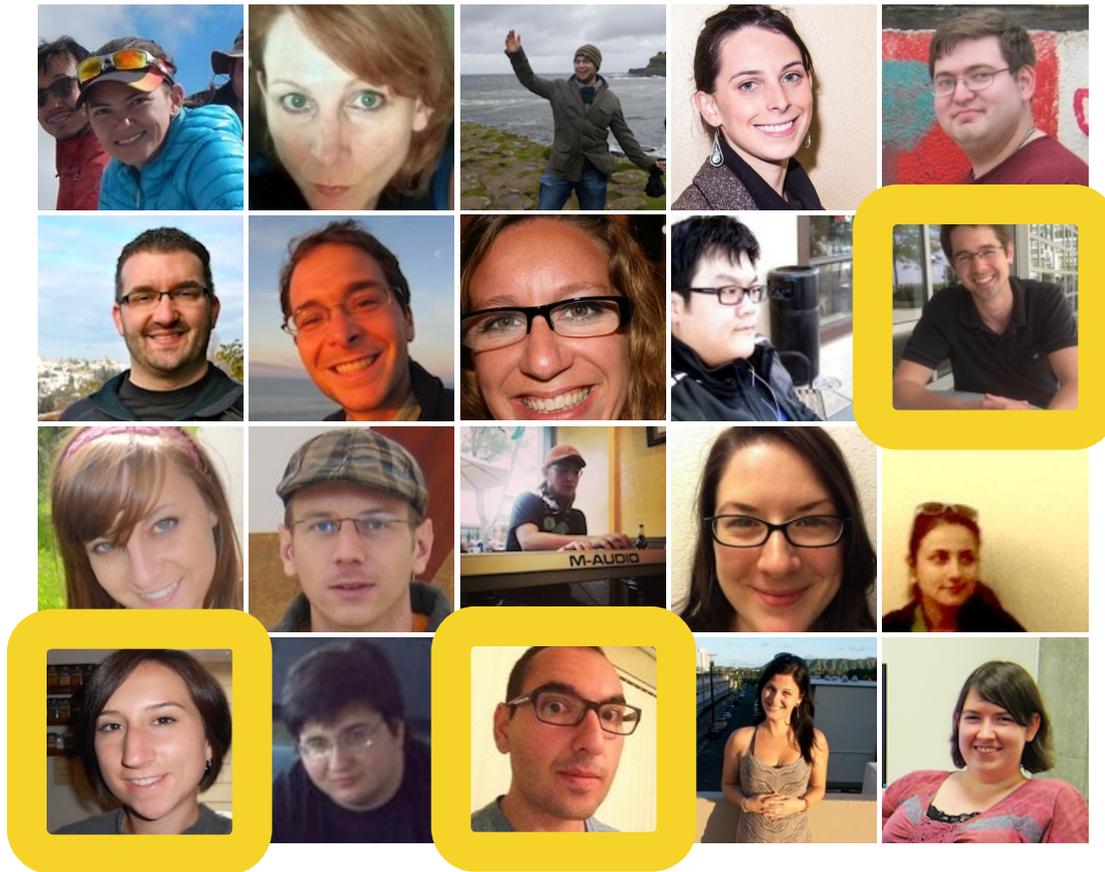
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Graduate<sup>v</sup> Assessment



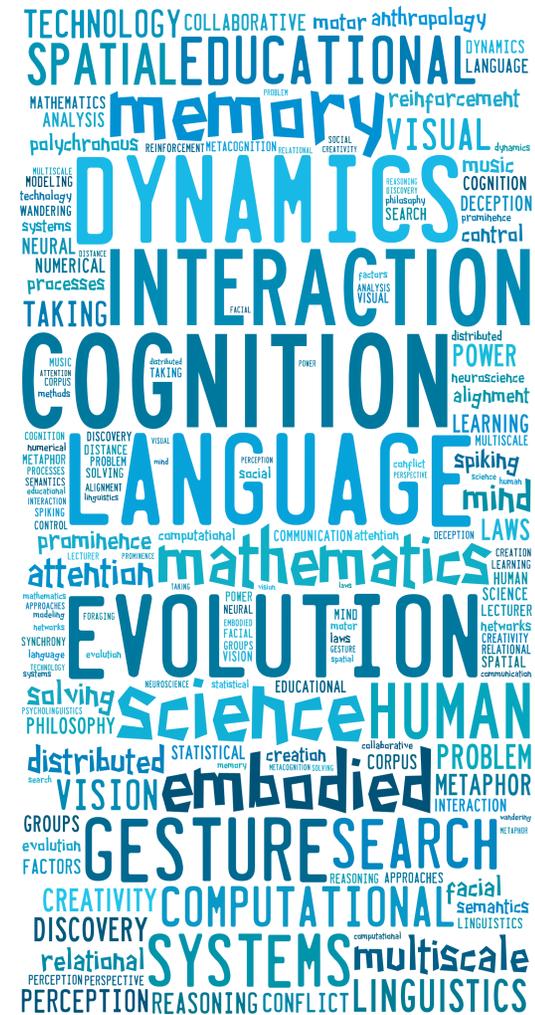
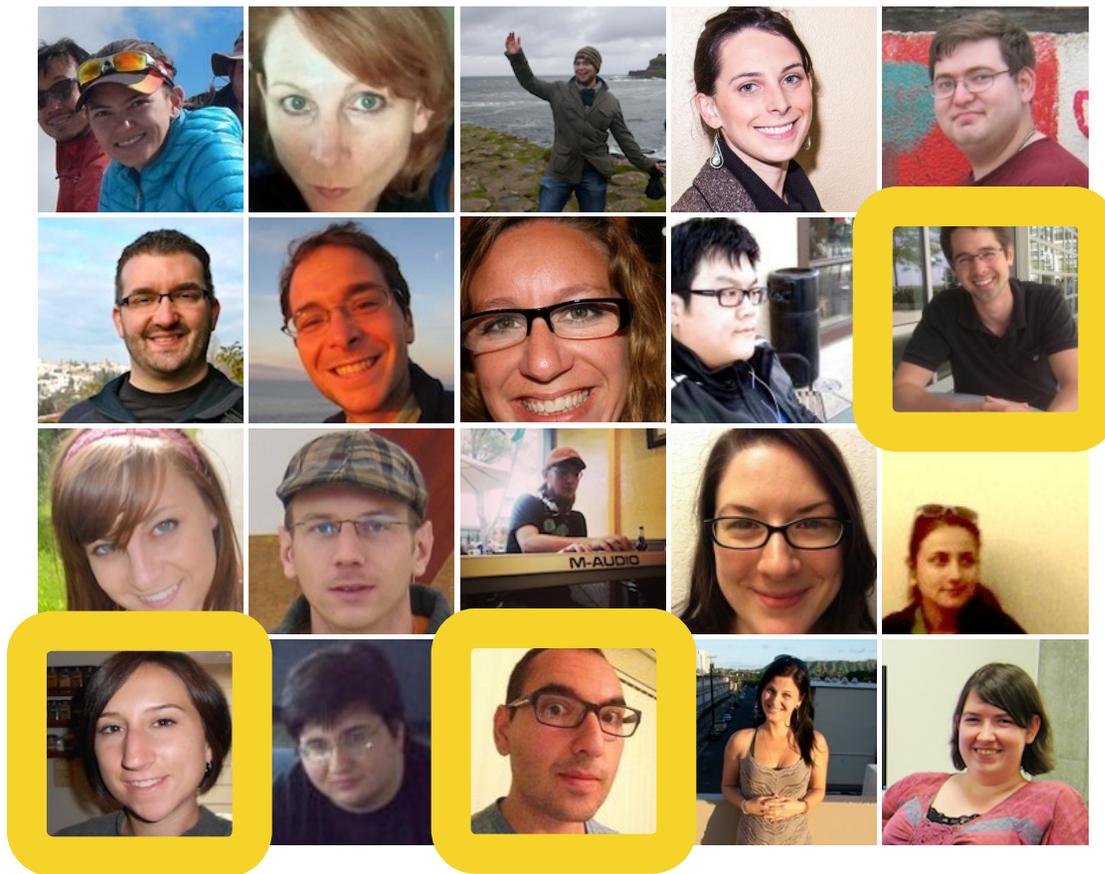
*program*  
Graduate<sup>v</sup> Assessment



*program*  
Graduate<sup>v</sup> Assessment



program  
Graduate Assessment



PLO 1: Understanding foundational concepts in cognitive and information sciences.

PLO 2: Skillful use of foundational methods in cognitive and information sciences.

PLO 3: Scientific communication skills.

PLO 4: Ability to integrate knowledge across the disciplines that compose cognitive and information sciences.

PLO 5: Expertise in a specific scientific domain.

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# training in scientific research



## Cognitive and Information Sciences Graduate Program Graduate Student Annual Progress Report Academic Year + Summer 2013-2014

Your UCM ID: **rdale**

Please fill out each section and click the "save" button by September 28th, 2014. This is our second annual progress report, and we have moved the process to an online submission system. Note: You no longer have to enter courses or teaching, as we can get this information elsewhere.

This report reflects your activities for the academic year Fall 2013 to Spring 2014, and also this past summer. Sections left blank mean that nothing has been done for that section (unless otherwise noted below).

These reports will be reviewed by the CIS faculty together as a group. By October 28th at the latest, the CIS faculty will reply with a memo to each student that summarizes the review. It will then be incumbent upon the student to meet with his/her advisory committee during the fall or spring semester to review the memo, and advise about future plans.

**Note:** At the bottom of this form is a SAVE button. You can save your progress on this form and come back to it.

### 2013-2014 committee

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<input type="text"/>	(chair)
<input type="text"/>	(committee member)

### 2013-2014 empirical data collection and analysis

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Summarize your empirical work for Fall 2013, Spring 2014 and Summer 2014. Include information about study design, piloting, numbers of participants, data analyses, and results. **Three to five sentences per period, on average.**

Fall 2013

chap [Abney, D. H.](#), [Warlaumont, A. S.](#), [Wallot, S.](#), [Haussmann, A.](#), [Ross, J.](#) (writing). A case study of embodied development: Non-linear methods on infant motor/vocalizations. Book Chapter

chap [Matlock, T.](#) & [Winter, T.](#) (in press). Experimental semantics. In [B. Heine & H. Narrog](#) (Eds.), *The Oxford Handbook of Linguistic Analysis*.

chap [Matlock, T.](#) & [Till Bergmann](#) (submitted). "Fictive Motion". In: [Dabrowska, Ewa](#) and [Dagmar Diviak](#) (eds.), *Handbook of Cognitive Linguistics*. [DeGruyter](#) Mouton.

chap [Spivey, M.](#) and [Holman, D.](#) "Connectionist Models of Bilingual Word Reading." In [Heredia, R.](#), *Methods in Bilingual Reading Comprehension Research*. Under review.

chap [Vinson D. W.](#), [Dale R.](#), [Tabatabaieian, M.](#) & [Duran, N. D.](#) (Submitted). Seeing and Believing: Social Influences on Language Processing. Book Chapter.

jour+ [Abney, D.H.](#) [McBride, D.M.](#), [Petrella, S.N.](#) (2013). Interactive effects in transfer-appropriate processing for event-based prospective memory. *Memory & Cognition*.

jour+ [Abney, D.H.](#), [Wagman, J.B.](#), & [Schneider, J.](#) (accepted). Changing grasp position on a wielded object provides self-training for perception of length. *Attention, Perception, & Psychophysics*.

jour+ [Bentz, C.](#), & [Winter, B.](#) (2013). Languages with more second language learners tend to lose nominal case. *Language Dynamics & Change*, 3:1, 1-27.

jour+ [Dale, R.](#) & [Vinson, D.W.](#) (2013). The Observer's Observer's Paradox. *Journal of Experimental And Theoretical Artificial Intelligence*.

jour+ [Huberty, J.L.](#), [Vener, J.](#), [Gao, Y.](#), [Matthews, J.L.](#), [Ransdell, L.B.](#), & [Elavsky, S.](#) (2013). Developing an instrument to measure physical activity related self-worth in women: Rasch analysis of the Women's Physical Activity Self-Worth Inventory (WPASWI). *Psychology of Sport & Exercise*, 14, 111-121. doi:http://dx.doi.org/10.1016/j.psychsport.2012.07.009

jour+ [Kello, C. T.](#), [Rodny, J.](#), [Warlaumont, A. S.](#), & [Noelle, D. C.](#) (2012). Plasticity, Learning, and Complexity in Spiking Networks. *Critical Reviews*, 4 in *Biomedical Engineering*, 40(6).

jour+ [Lancia, L.](#), & [Winter, B.](#) (2013). The interaction between competition, learning and habituation dynamics in speech perception. *Laboratory Phonology*, 4:1, 221-257.

jour+ [Parrill, F.](#), [Bergen, B.K.](#), & [Lichtenstein, P.V.](#) (2013). Grammatical aspect, gesture, and conceptualization: Using co-speech gesture to reveal event representations. *Cognitive Linguistics*, 24(1), 135-158.

jour+ [Paxton, A.](#), & [Dale, R.](#) (in press). Argument disrupts interpersonal synchrony. *Quarterly Journal of Experimental Psychology*.

jour+ [Wagman, J.B.](#) & [Abney, D.H.](#) (2013). Is calibration of the perception of length modality-independent? *Attention, Perception, & Psychophysics*.

jour+ [Winter, B.](#), & [Matlock, T.](#) (accepted). Reasoning about similarity and proximity. *Metaphor & Symbol*.

jour- [Abney, D.H.](#), [Paxton, A.](#), [Kello, C.T.](#), & [Dale, R.](#) (writing). Complexity matching in dyadic interaction. Article. \*part of first-year project

jour- [Chiu, E. M.](#) & [Spivey, M. J.](#) (under review). Timing of speech and display affects the linguistic mediation of visual search. *Perception*

jour- [Chiu, E. M.](#), [Quan, J.](#), [Thomas, K.](#), [Bridgeman, B.](#), & [Persike, M.](#) (under revision). Treading a slippery slope: Slant perception in near and far space. *Perception*.

jour- [Erickson, S.](#) & [Heit, E.](#) (2013). Math anxious yet overconfident. Submitted to *Psychological Science*, April 2013.

jour- [Erickson, S.](#) & [Heit, E.](#) (2013). Metacognition, confidence, and math performance. Submitted to *Psychonomic Bulletin and Review*, June 2013.

jour- [Fusaroli, R.](#), [Abney, D.H.](#), [Bahrami, B.](#), [Kello, C.T.](#), [Tylen, K.](#) (writing). Performance in a joint decision task is predicted by the degree of complexity matching of interlocutors' speech events. Article.

jour- [Fusaroli, R.](#), [Perlman, M.](#), [Mislove, A.](#), [Paxton, A.](#), [Matlock, T.](#), & [Dale, R.](#) (in preparation after submitting to several publications). Real-time effects of presidential debates on social media.

jour- [Greenwood, M.D.](#), [Matlock, T.](#), [Spivey, M.J.](#), & [Matthews, J.L.](#) (under revision). Verb agency and agent descriptions influence perspective-taking in visual contexts.

jour- [Rhodes, Theo](#); [Kello, Christopher](#); [Kerster, Bryan](#), (2013) Intrinsic and Extrinsic Contributions to Heavy Tails in Visual Foraging. *Visual Cognition* (Under Revision)

jour- [Rodny, J.](#), & [Noelle, D.](#) (Pending, Revision Under Review?). Modeling the Actor-Critic Architecture by Combining Recent Work in Reservoir Computing and Temporal Difference Learning in Complex Environments. Paper presented at Neural Computation and Psychology Workshop, San Sebastian, Spain. Place of publication Pending: World

jour- [Rattger, T.](#), [Winter, B.](#), [Grawunder, S.](#), [Kirby, J.](#), & [Grice, M.](#) (submitted). Assessing the incomplete neutralization of final devoicing in German. *Journal of Phonetics*.

jour- [Thompson, G.](#), [Kello, C.](#) (under revision). Walking Across Wikipedia: A Scale-Free Network Model of Semantic Memory Retrieval. *Frontiers in Language Science*.

jour- [Winter, B.](#), [Perlman, M.](#), & [Matlock, T.](#) (submitted). Using space to talk and gesture about numbers: Evidence from the TV News Archive. *Gesture*.

prep [Chiu, E. M.](#) & [Spivey, M. J.](#) (almost ready for submission). Incremental Delivery of Target Identity (Not Preview) Improves Visual Search.

prep [Paxton, A.](#), & [Dale, R.](#) (2013). Facilitating recurrence analysis on multi-level language. [arXiv:1308.2696 \[cs.CL\]](#).

prep [Tabatabaieian, M.](#), [Dale, R.](#), & [Duran, N.](#) (2013). Is dishonesty an automatic tendency? First year paper

proc [Bergmann, Till](#), [Dale, Rick](#) and [Gary Lupyan](#) (2013). "The Impact of Communicative Constraints on the Emergence of a Graphical Communication System". In [M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth](#) (Eds.), *Proceedings of the 35th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

proc [Chiu, E. M.](#) & [Spivey, M. J.](#) (2012). The role of preview and incremental delivery on visual search. In [N. Miyake, D. Peebles, & R. P. Cooper](#) (Eds.), *Proceedings of the 34th Annual Conference of the Cognitive Science Society* (pp. 216-221). Austin, TX: Cognitive Science Society.

proc [Chiu, E. M.](#) & [Spivey, M. J.](#) (2013). Incremental information processing on visual search: The critical role of delivery rate. *Conference of the Cognitive Science Society*. [Accepted as a poster]

proc [Erickson, S.](#) & [Heit, E.](#) (2013). Math and metacognition: Resolving the paradox. *Proceedings of the 35th Annual Meeting of the Cognitive Science Society*.

proc [Falke, J.](#), [Winter, B.](#) & [Spivey, M. J.](#) (2013). Candle-candle-candle-candy: Continuous attraction towards previously seen phonological competitors. In [M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth](#) (Eds.), *Proceedings of the 35th Annual Conference of the Cognitive Science Society* (pp. 2261-2266). Austin, TX: Cognitive Science Society.

proc [Kelly, L. J.](#) & [Heit, E.](#) (2013). Representational shifts towards the prototype in memory for hue. In [M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth](#) (Eds.), *Proceeding of the 35th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

proc [Kerster, B.E.](#), [Kello, C.T.](#), [Rhodes, T.](#), [Bien-Aimes, R.J.](#) (2013, July) Adaptive Foraging: Effects of Resource Conditions on Search Paths in a Web-Based Foraging Game. *Proceedings of the Annual Meeting of the Cognitive Science Society*.

proc [Paxton, A.](#), & [Dale, R.](#) (2013). Multimodal networks of interpersonal interaction and conversational contexts. In [M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth](#) (Eds.) *Proceedings of the 35th Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

proc [Roche, J.](#), [Paxton, A.](#), [Ibarra, A.](#), & [Tanenhaus, M.](#) (2013). From minor mishap to major catastrophe: Lexical choice in miscommunication. In [M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth](#) (Eds.) *Proceedings of the 35th Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

proc [St. Clair, W.B.](#) & [Noelle, D.](#) Implications of polychronous neuronal groups for the nature of mental representations. In [M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth](#) (Eds.), *Proceedings of the 35th Annual Conference of the Cognitive Science Society* (pp. 1372-1377). Austin, TX: Cognitive Science Society.

proc [Szary, J.](#), & [Dale, R.](#) (in press). Dyadic cooperation enhances retrieval and recall of crossword solutions. *Proceedings of the The Thirty Fifth Annual Meeting of the Cognitive Science Society*. Berlin, Germany.

proc [Winter, B.](#) & [Matlock, T.](#) (2013). More is up... and right: Random number generation along two axes. In [M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth](#) (Eds.), *Proceedings of the 35th Annual Conference of the Cognitive Science Society* (pp. 3789-3974). Austin, TX: Cognitive Science Society.

proc [Winter, B.](#) & [Matlock, T.](#) (in press). Creativity and the sensorimotor grounding of mathematics. In [Borkent, M.](#), [Dancygier, M.](#), & [Hinnell, J.](#) (Eds.), *Language and the Creative Mind*. Stanford, CA: CSLI Publications.

# COGSCI 2015

*MIND, TECHNOLOGY & SOCIETY*

37<sup>th</sup> Annual Cognitive Science Society Meeting

Pasadena, California, USA

July 23-25, 2015

## Invited symposia

Philosophy of Mind  
Technological Innovation  
Cognition in Society

## Keynote speakers

Martha Farah, University of Pennsylvania  
Christof Koch, Allen Institute for Brain Science  
Rosalind Picard, MIT Media Laboratory

## Program Organizers

Rick Dale, Carolyn Jennings, Paul Maglio, Teenie Matlock, David Noelle, Anne Warlaumont, Jeff Yoshimi  
Cognitive and Information Sciences – University of California, Merced

## Annual Meeting of the Cognitive Science Society ("CogSci")

premiere  
interdisciplinary  
cognitive science  
conference

almost 1,000 presentations  
1,500 attendees  
hundreds of schools

information sciences.

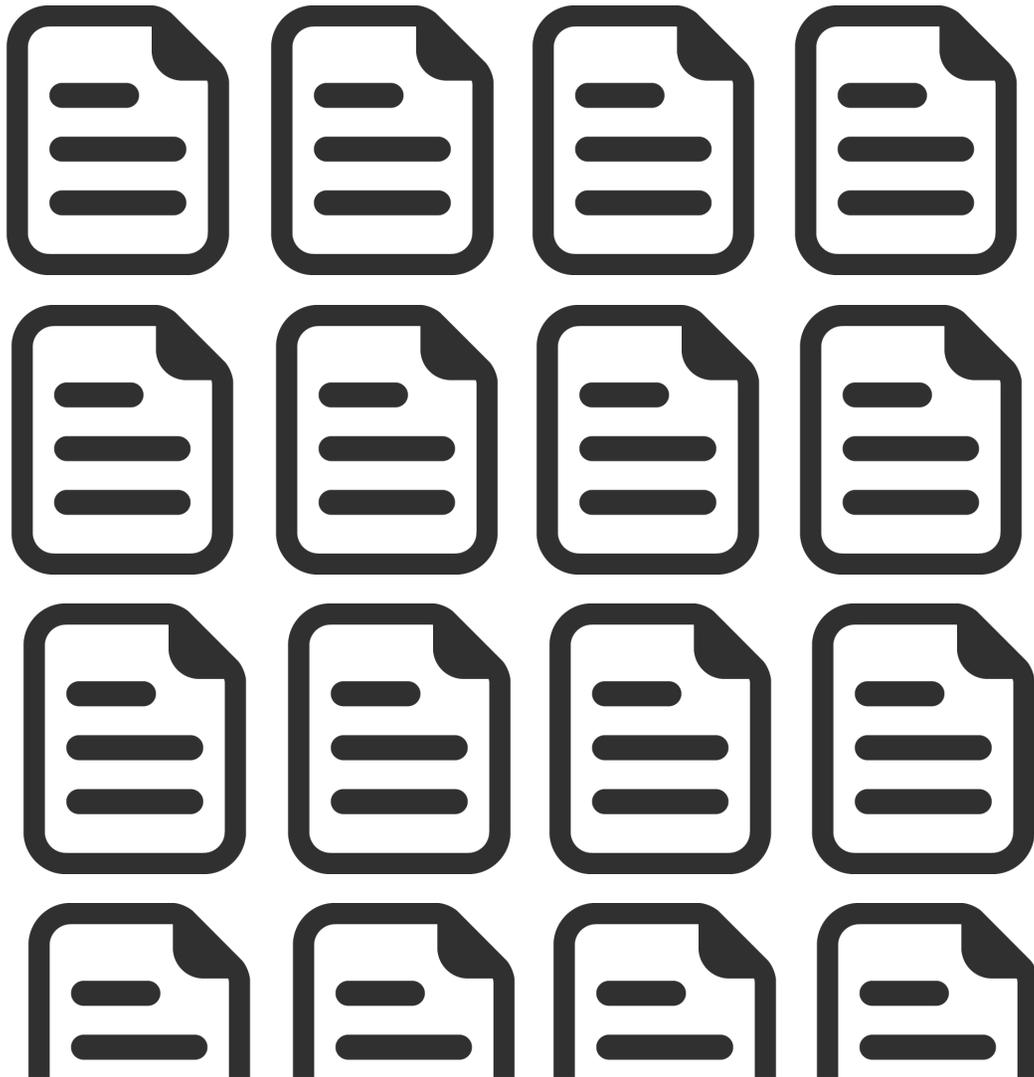
**PLO 5: Expertise in a specific scientific domain.**

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information sciences.

PLO 5: Expertise in a specific scientific domain.

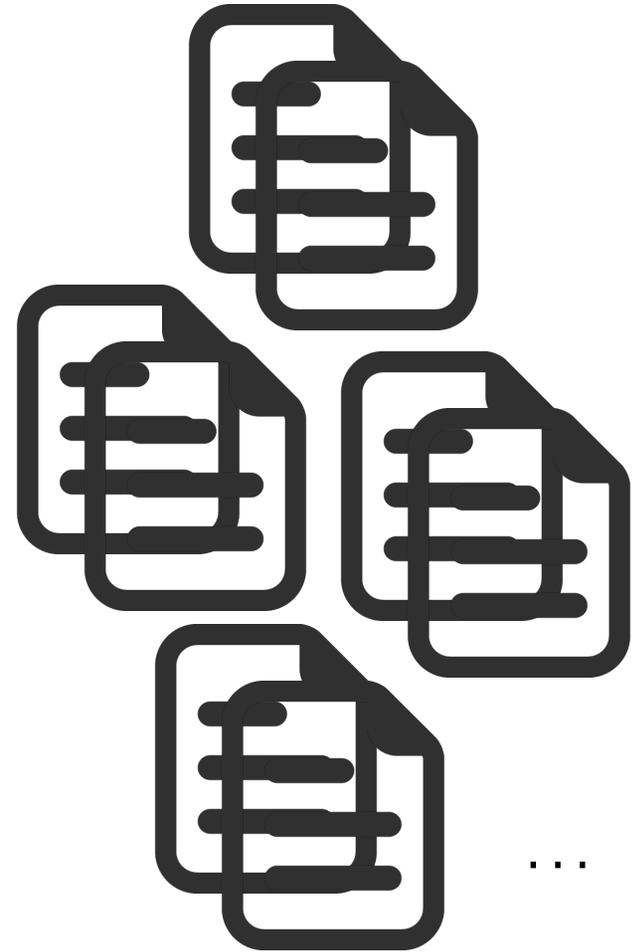
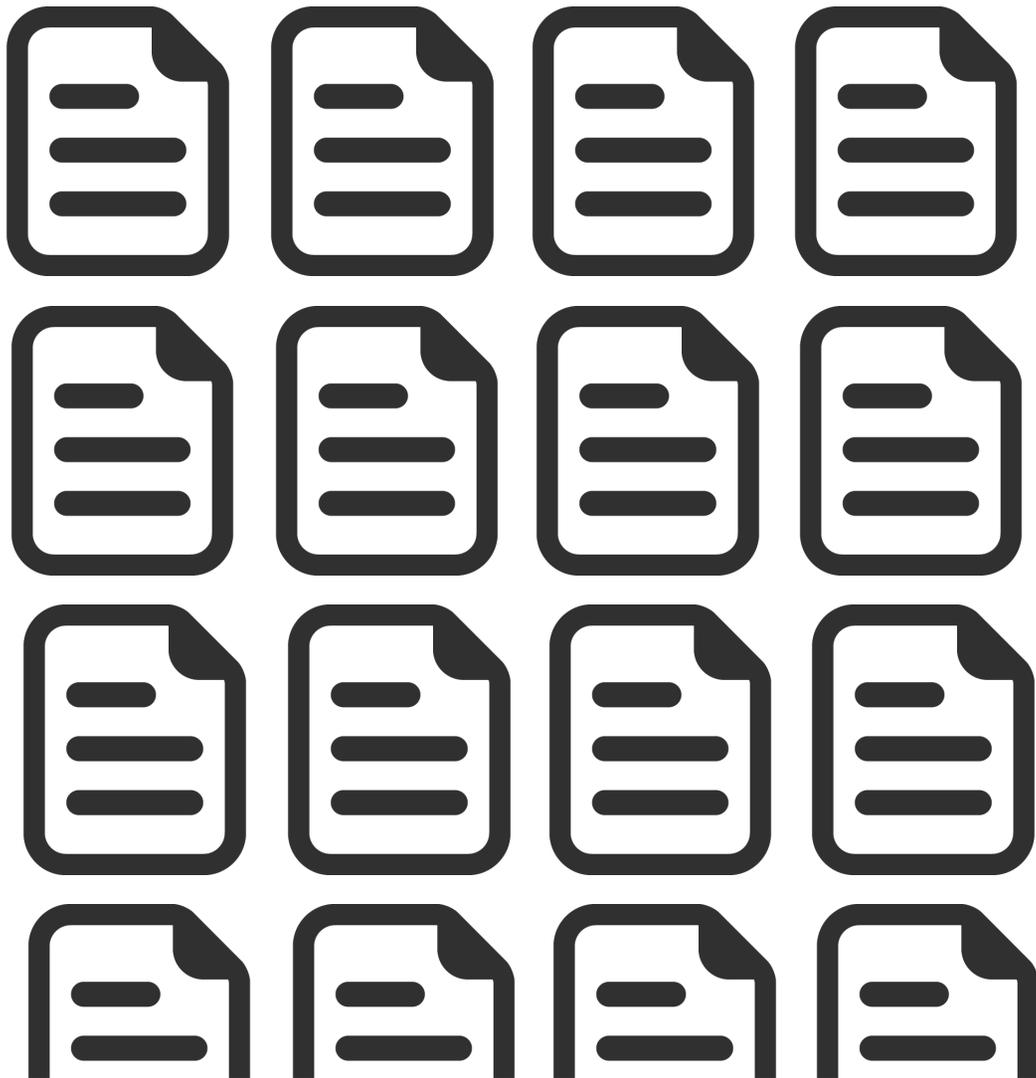
## CogSci Abstracts



information sciences.

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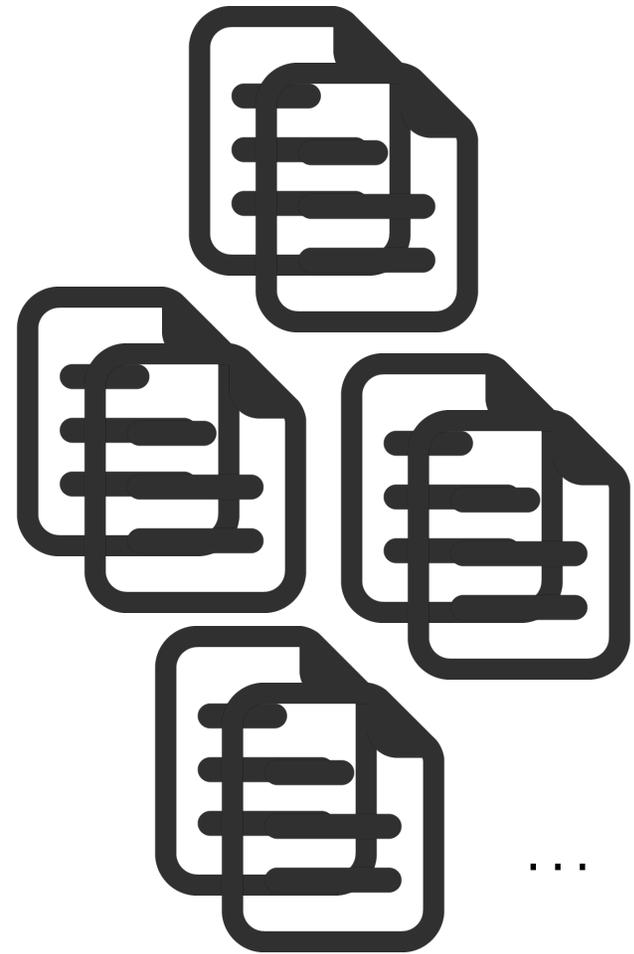
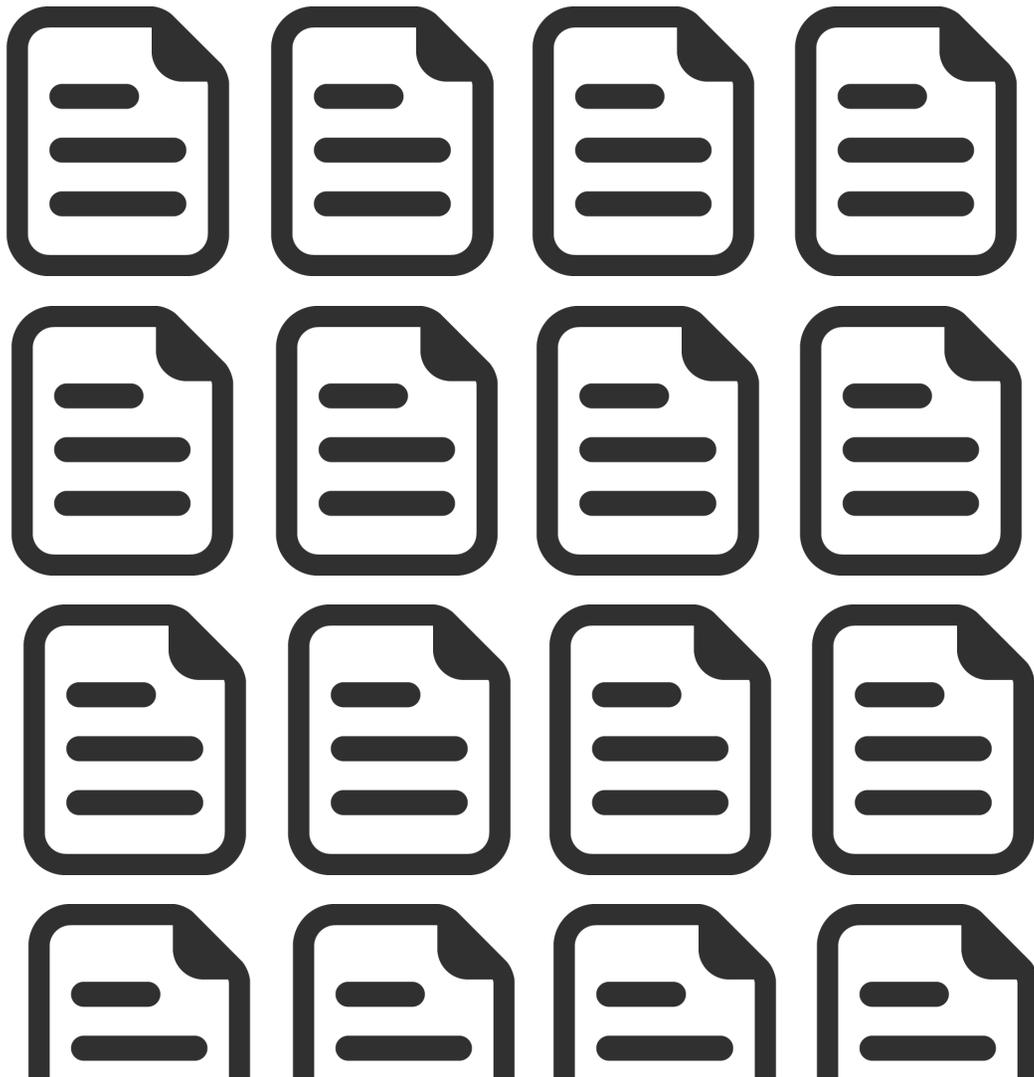
## CogSci Abstracts



information sciences.

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### CogSci Abstracts



similarity score

information sciences.

**PLO 5: Expertise in a specific scientific domain.**

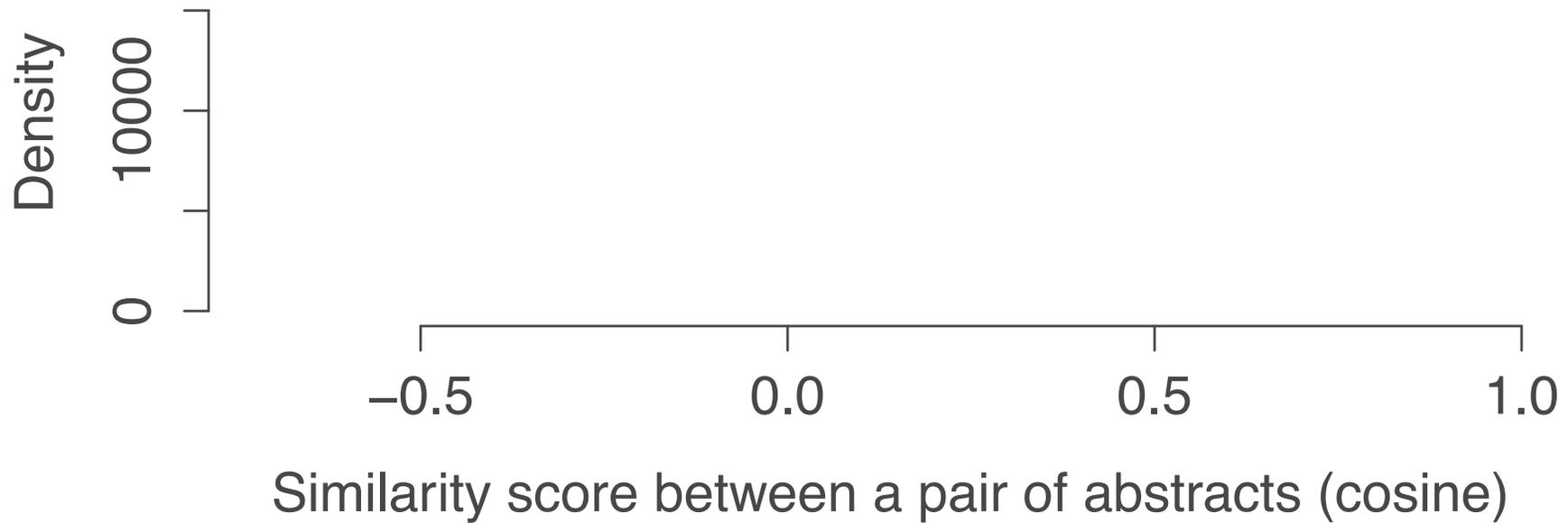
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Approach: compare similarities of  
4 advanced PhD students

information sciences.

## PLO 5: Expertise in a specific scientific domain.

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4 advanced PhD students



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## PLO 5: Expertise in a specific scientific domain.

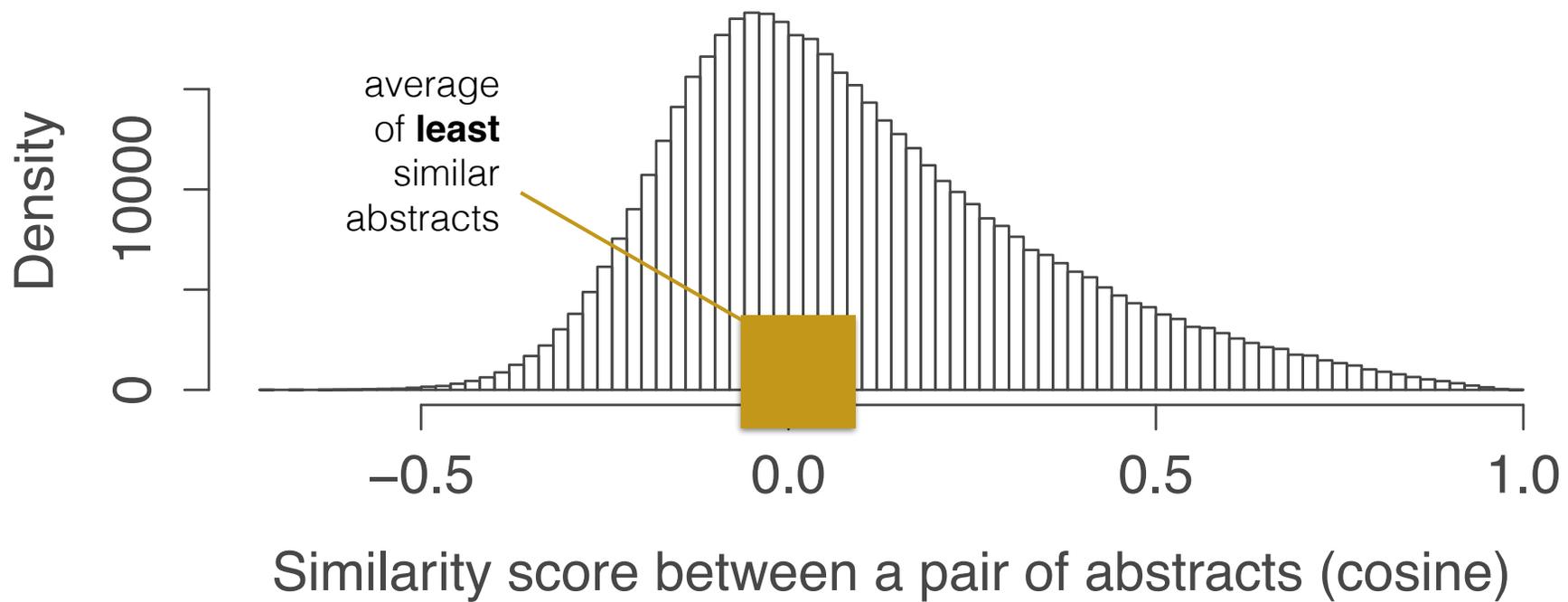
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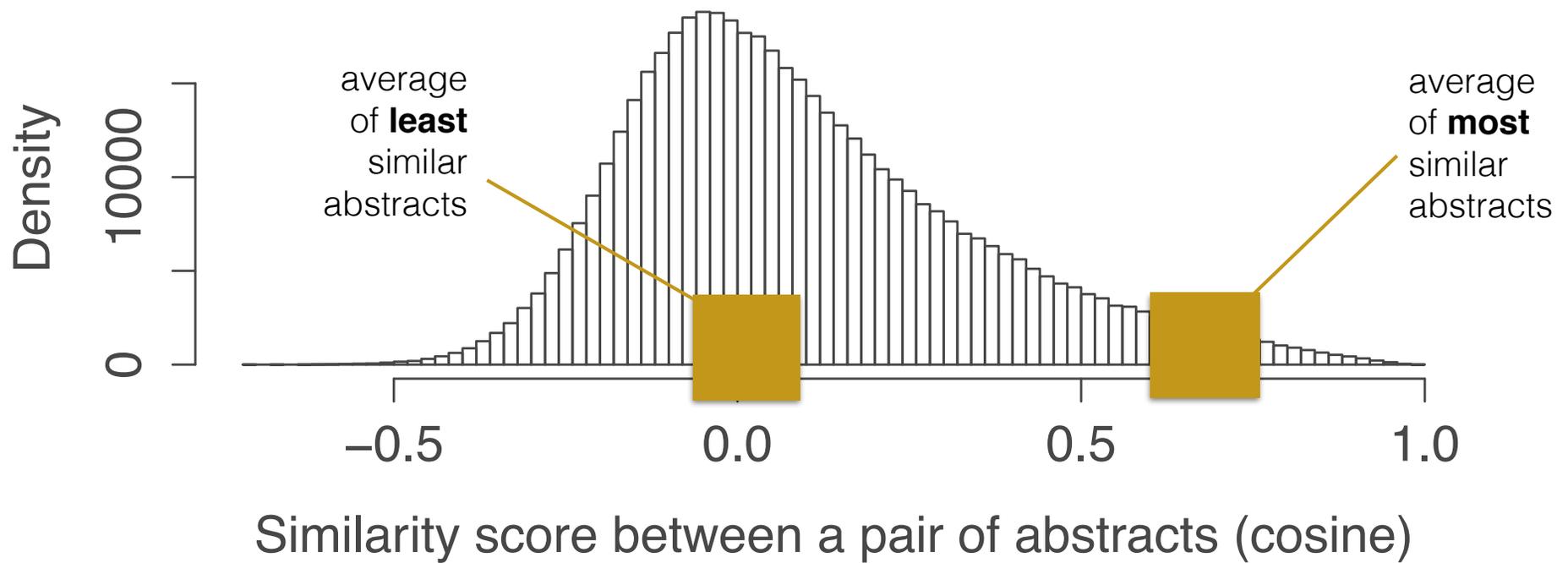
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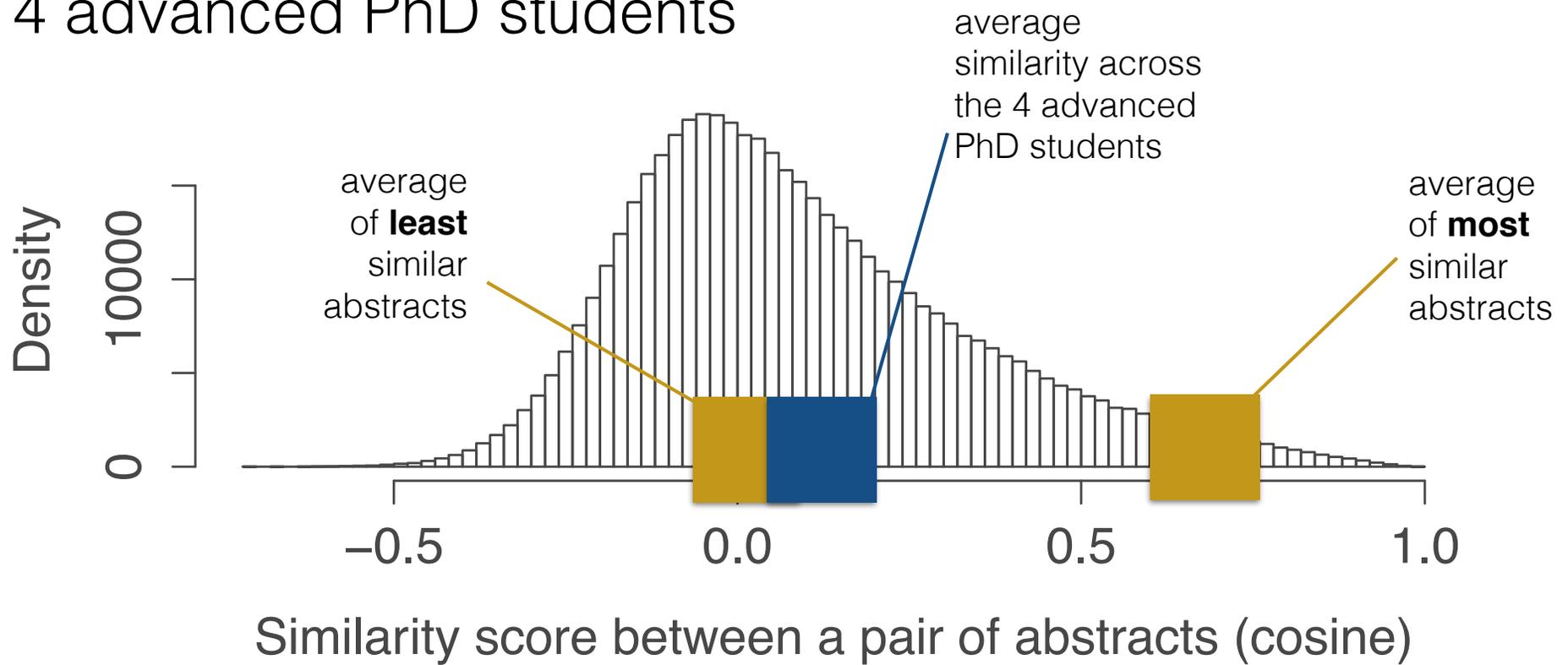
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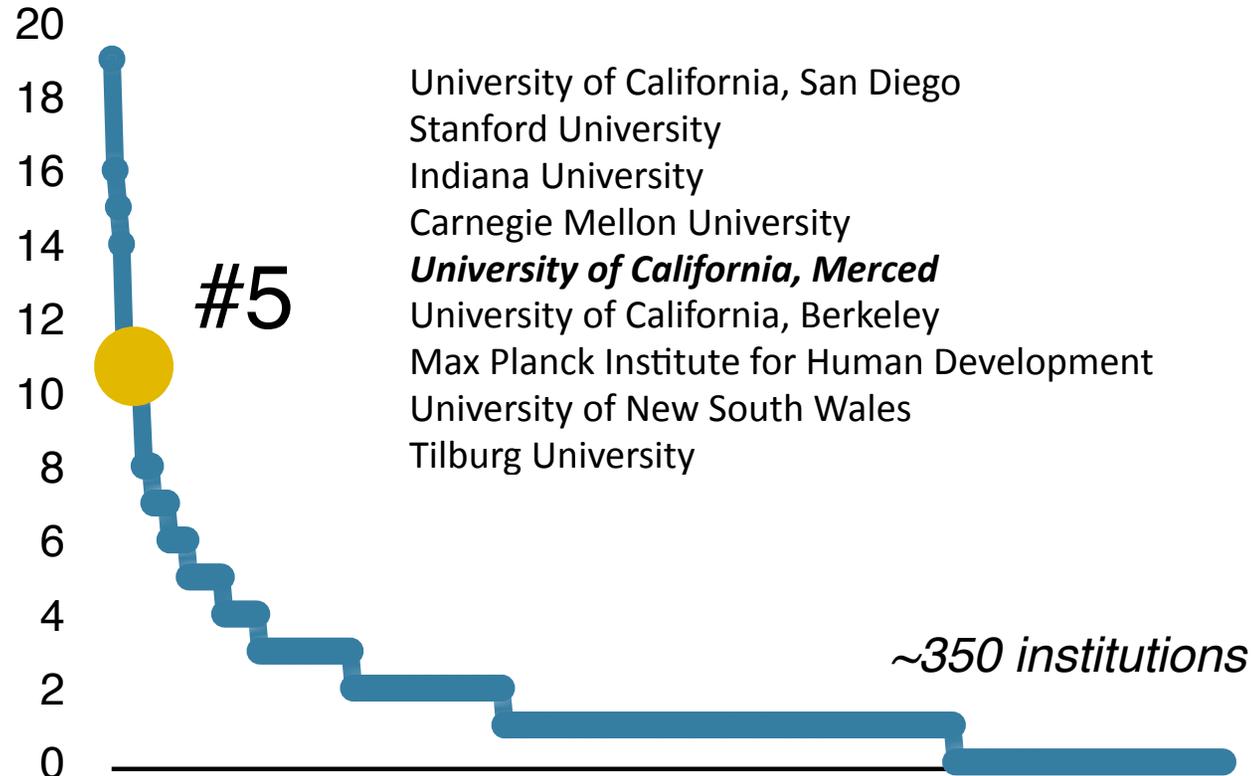
Approach: compare similarities of  
4 advanced PhD students





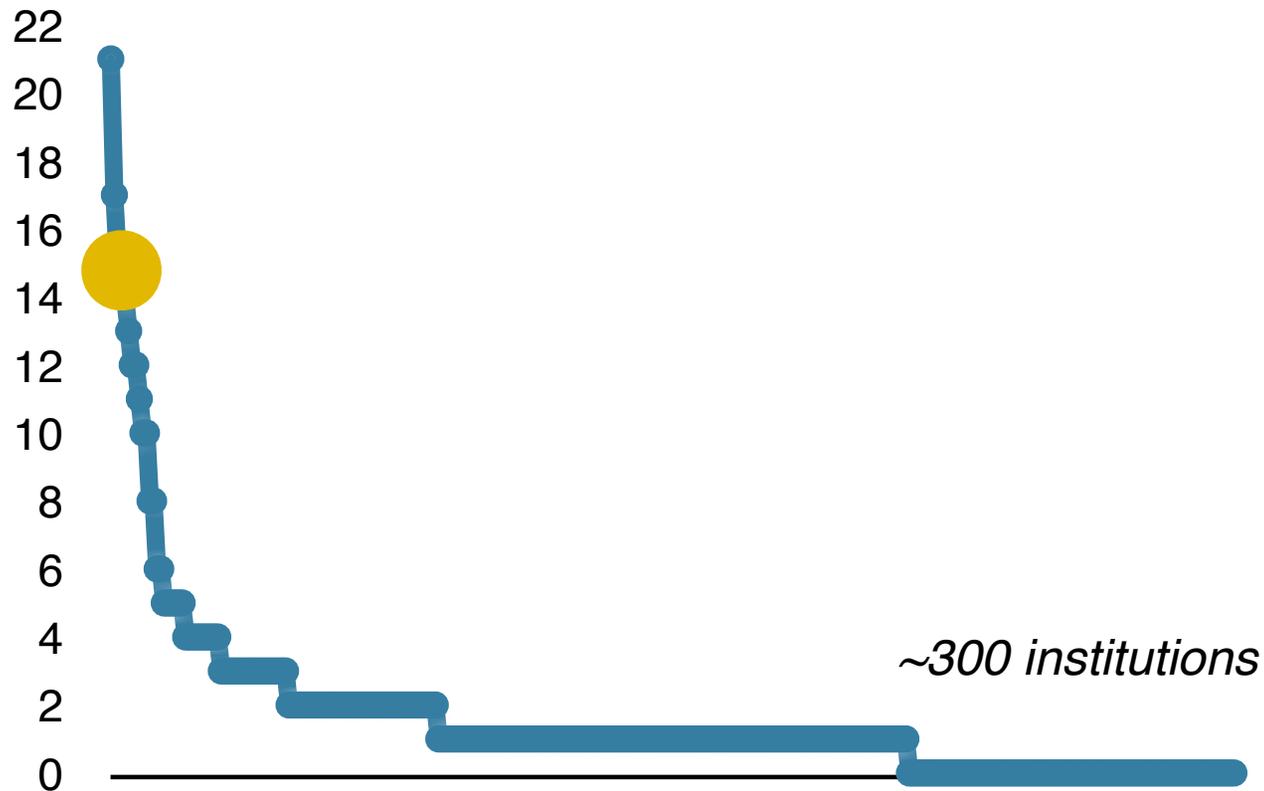
# CogSci 2013

**Accepted Proceedings Paper** 32% rejection rate



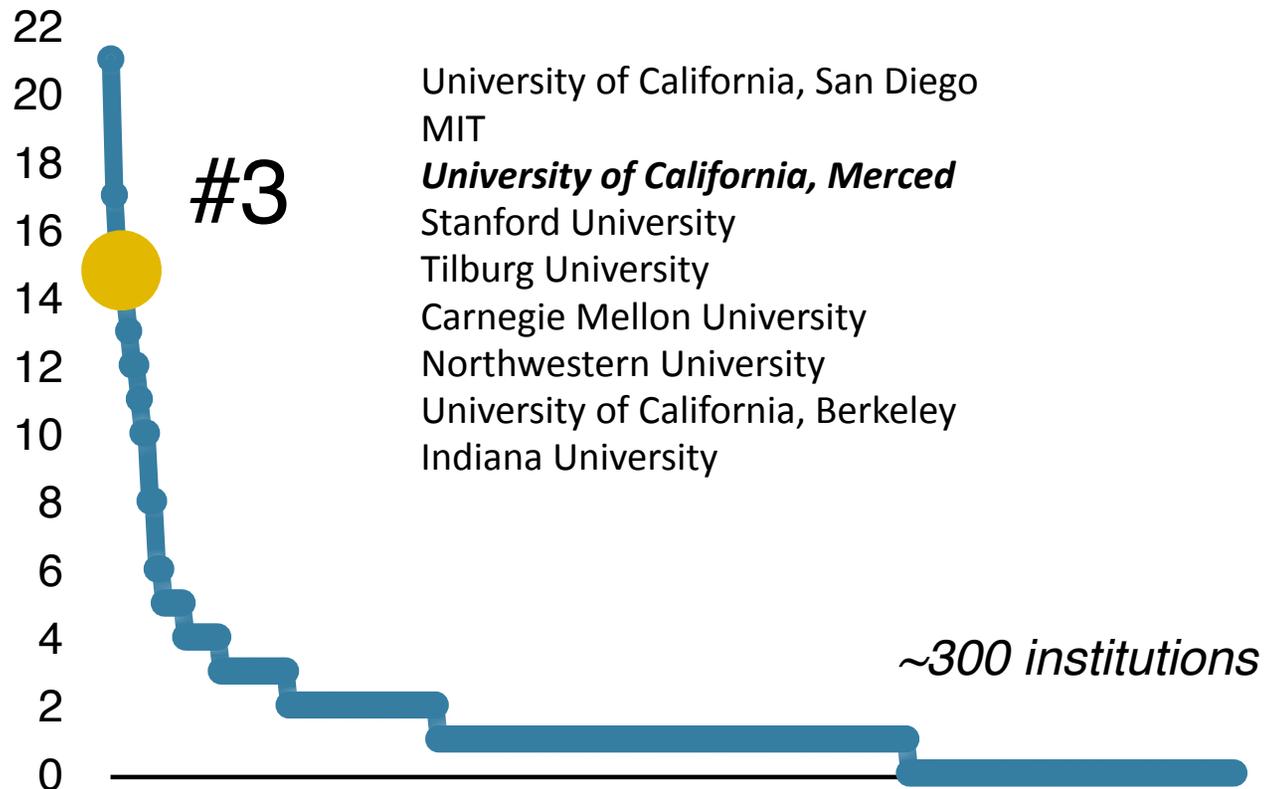
# CogSci 2014

**Accepted Proceedings Paper** 28% rejection rate



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**Accepted Proceedings Paper** 28% rejection rate



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training in  
scientific  
research

**cognitive & information sciences** graduate student productivity and contributions in the 2012-2013 academic year

Chicago  
Lisbon  
Berlin  
Galway  
Edmonton  
Santa Barbara  
Washington, DC  
Newcastle  
Minneapolis  
Potsdam

10 cities, 6 countries

59 unique  
conference  
presentations

language development: evolution, change, acquisition  
nonlinear methods for psychological science  
Isa summer institute universality and variability  
joint action workshop  
spatial cognition summer institute  
dynamic field theory  
structural equation modeling  
exploratory data mining

8 unique  
workshop  
experiences

40 unique writing  
endeavors

5 chapters  
12 accepted or in-press journal articles  
13 submitted journal articles  
13 proceedings  
3 in-prep papers

extensive  
service *including*

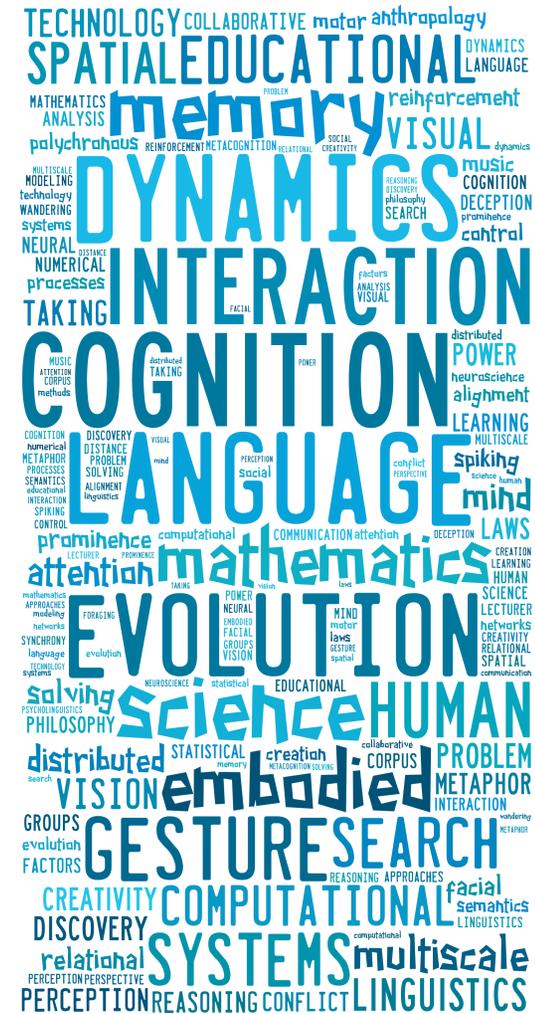
ad hoc journal manuscript reviewing  
providing extensive undergrad research experiences  
university representation and coordination  
workshop presentations to summer research  
programs, e.g., McNair Scholars Program



[cogsci.ucmerced.edu](http://cogsci.ucmerced.edu) based on data from 19 students

UCMERGED

program  
∇  
Graduate Assessment



# Thanks



Thanks to UCM Assessment