

# MARK BEEMAN

Department of Psychology  
Northwestern University  
2029 Sheridan Rd.  
Evanston IL 60208-2710

phone: 847-491-4617  
[mbeeman@northwestern.edu](mailto:mbeeman@northwestern.edu)

## **Major Professional Interests**

Cognitive neuroscience of insight and creative cognition; neural bases of semantic processing and natural language comprehension; brain and cognitive asymmetries

## **Education**

1981-1985: B.A., Psychology, Brandeis University  
1985-1990: M.A., Ph.D. in Experimental Psychology, University of Oregon

## **Employment**

1990 – 1992: Postdoctoral Fellow, Cognitive Neuroscience Section, NIH/ National Institute for Neurological Disorders and Stroke, Bethesda MD  
1992 – 2000: Assistant Professor, Department of Neurological Sciences, Rush Medical College, Chicago IL (half-time 1995-1996)  
2000 – 2002: Research Associate, Center for Cognitive Neuroscience, University of Pennsylvania, Philadelphia (half-time 2000-2001)  
2002 – 2013: Associate Professor of Psychology & Program in Neurosciences, Northwestern University  
2012 – current: Research Faculty Council, Segal Design Council, Northwestern University  
2013 – current: Professor of Psychology & Program in Neurosciences, Northwestern  
2015 – 2017: Chair, Department of Psychology, Northwestern University

## **Post-doctoral Awards**

Intramural Research Training Award, National Institutes of Health, 1990-1992  
McDonnell-Pew Fellowship to the Summer Institute in Cognitive Neuroscience, 1991  
Travel grant and stipend for the International School of Neuroscience at Padova, Italy, 1991  
FIRST Award, NIH/ National Institute for Deafness and other Communication Disorders, 1993  
McDonnell-Pew Fellowship to the Summer Institute in Cognitive Neuroscience, 1993  
Shannon Award, NIH/ National Institute for Deafness and Communication Disorders, 1999  
Fellow, Association for Psychological Science, 2009  
New Voices in Creativity and Intelligence, 2009  
Torrance Lecture, Torrance Center for Creativity and Talent Development, 2011  
Kavli Fellow, National Academy of Sciences, 2011  
Best Paper Award, Memory & Cognition, 2016

## **Pre-doctoral Awards**

Academic All-American, 1983, 1984, 1985  
Magna Cum Laude, Highest Honors in Psychology, Brandeis University, 1985  
Gertrude and Ida Stein Award for Outstanding Student-Athlete, 1985  
NCAA Post-Graduate Scholarship, 1985  
University of Oregon Biomedical Research Award, 1990

**Research Support** (Total costs = direct + indirect; **Bold = PI**)

**1993-1998 NIH/National Institute of Deafness and Communication Disorders**

*Right hemisphere coarse semantic coding*

**Principal Investigator**

Total costs = \$545,000

**1999-2001 NIH/National Institute of Deafness and Communication Disorders**

*Neuroimaging investigations of language processing*

**Principal Investigator**

Total costs = \$100,000

**2001-2006 NIH/National Institute of Deafness and Communication Disorders**

*An fMRI investigation of language in both hemispheres*

**Principal Investigator**, R01 DC04052

*Total costs = \$1,583,000*

**2002-2004 NIH/National Institute of Deafness and Communication Disorders**

*Supplement to An fMRI investigation of language in both hemispheres*

**Principal Investigator**, Supplement for minority postdoc

*Total costs approx \$180,000*

**2004-2007 Binational Science Foundation (U.S.- Israel)**

*Processing conventional vs. novel metaphors by the two cerebral hemispheres: An fMRI study*

**Co-PI** (with Miriam Faust, Bar-Ilan University, Israel)

Total costs = approx \$100,000

**2010-2011 DARPA**

*Rapid Team Cognitive Readiness Assessment based on Dynamic Bayesian Networks and Neurocognitive Measures*

Consultant (PI: Intelligent Automation, a private research group)

Total costs = approx \$100,000

**2011-2013 John Templeton Foundation**

*Brain bases of insight and cognitive control in highly creative versus analytic individuals across domains*

**Principal Investigator**, Grant # 24467

Total costs = \$375,000

**2011-2014 National Science Foundation**

*Insight and resting state brain activity*

Collaborator (PI: John Kounios, Drexel University), Grant # 1144976

Total costs = \$288,000

**2013-2015 Office of Naval Research**

*The role of intuitive implicit memory in explicit judgments*

**Co-Principal Investigator** of NU component (with Paul Reber & Ken Paller, NU Psychology)

Total costs = approximately \$600,000 (NU component)

Mark Beeman

**2015-2019 National Institute of Child Health and Human Development**

*Targeted problem reactivation and incubation during slow-wave sleep*

**Principal Investigator**, #1R03HD087111-01

Total costs = \$154,500

**2016-2018 Office of Naval Research**

*Enhancing intuitive decision-making through implicit learning*

**Co- Investigator** (PI: Paul Reber, NU Psychology)

Total costs = \$992,679

**Current:**

**2015-2021 Air Force Office of Scientific Research/Air Force Research Labs**

*Stimulating attention and creative problem solving*

Principal Investigator on project #FA8650-15-2-5518; Total costs = approximately \$500,000

Project under: Air Force Center of Excellence for Advanced Bioprogrammable Nanomaterials  
(Center grant PI = Chad Mirkin)

**2018-2020 Office of Naval Research**

*Cognitive Expertise by Repetition Enhanced Simulation-based (CERES) Training*

**Co- Investigator** (PI: Paul Reber, NU Psychology)

Total costs = \$1,042,873 (0.5 summer months/year)

**2019-2022. National Science Foundation**

*Learning, creative problem solving, REM sleep, and dreaming*

**Co-Investigator** (PI: Ken Paller, NU Psychology)

Total costs = \$594,983 (1 summer month in year 3)

**PUBLICATIONS**

**Books**

1. Beeman, M., & Chiarello, C. (Eds.). (1998). *Right hemisphere language comprehension: Perspectives from cognitive neuroscience*. Mahwah, NJ: Lawrence Erlbaum Associates. (With editors' commentaries after each of three sections).
2. Kounios, J. & Beeman, M. (April 2015). *The Eureka Factor: Aha moments, creative insight, and the brain*. New York: Random House Publishing.

**Papers and chapters**

3. **Beeman, M.** & Gernsbacher, M.A. (1988a). Real-time language comprehension research using the Apple-Psych system. *Behavior Research Methods, Instruments, & Computers*, **20**, 164-170.
4. **Beeman, M.** & Gernsbacher, M.A. (1988b). An on-line study of pronominal resolution. In S. Delancey & R.S. Tomlin (Eds.), *Proceedings of the Pacific Linguistics Conference*, **3**, 13-41.
5. Gernsbacher, M.A., Hargreaves, D.J., & **Beeman, M.** (1989). Building and accessing clausal representations: The advantage of first mention versus the advantage of clause recency. *Journal of Memory and Language*, **28**, 735-755.
6. **Beeman, M.** (1993). Semantic processing in the right hemisphere may contribute to drawing inferences from discourse. *Brain and Language*, **44**, 80-120. PMID: 8467379

7. Friedman, R.B., **Beeman, M.**, Lott, S.N., Link, K., Grafman, J., & Robinson, S. (1993). Modality specific phonological alexia. *Cognitive Neuropsychology*, **10**, 549-568.
8. **Beeman, M.**, Friedman, R.B., Grafman, J., Perez, E., Diamond, S., & Lindsay, M.B. (1994). Summation priming and coarse semantic coding in the right hemisphere. *Journal of Cognitive Neuroscience*, **6**, 26-45.
9. **Beeman, M.**, Ortony, A.O., & Monti, L.A. (1995). Emotion-cognition interactions. In M. Arbib (Ed.), *The Handbook of Brain Theory and Neural Networks*, pp. 360-363. Cambridge: MIT Press.
10. Smith, S., Faust, M.E, **Beeman, M.**, & Kennedy, L., & Perry, D. (1995). A property level analysis of lexical semantic representation in Alzheimer's disease. *Brain and Language*, **49**, 263-279.
11. Chiarello, C., & **Beeman, M.** (1997). Toward a veridical interpretation of right hemisphere processing and storage. *Psychological Science*, **8**, 343-344.
12. **Beeman, M.** (1998). Coarse semantic coding and discourse comprehension. In M. Beeman & C. Chiarello, (Eds.), *Right hemisphere language comprehension: Perspectives from cognitive neuroscience*, pp. 255-284. Mahwah, NJ: Lawrence Erlbaum Associates.
13. **Beeman, M.J.** & Chiarello, C. (1998). Complementary right and left hemisphere language comprehension. *Current Directions in Psychological Science*, **7**, 2-8.
14. **Beeman, M.** & Chiarello, C. (1998). Concluding remarks: Getting the whole story right. In M. Beeman & C. Chiarello, (Eds.), *Right hemisphere language comprehension: Perspectives from cognitive neuroscience*, pp. 377-389. Mahwah, NJ: Lawrence Erlbaum Associates.
15. Bowden, E.M., & **Beeman, M.J.** (1998). Getting the right idea: Semantic activation in the right hemisphere may help solve insight problems. *Psychological Science*, **9**, 435-440.
16. **Beeman, M.J.**, Bowden, E.M., & Gernsbacher, M.A. (2000). Right and left hemisphere cooperation for drawing predictive and coherence inferences during normal story comprehension. *Brain and Language*, **71**, 310-336.
17. **Beeman, M.J.** & Bowden, E.M. (2000). The right hemisphere maintains solution-related activation for yet-to-be solved insight problems. *Memory & Cognition*, **28**, 1231-1241.
18. Bowden, E.M. & **Jung-Beeman, M.** (2003a). Aha! Insight experience correlates with solution activation in the right hemisphere. *Psychonomic Bulletin & Review*, **10**, 730-737. PMID: 14620371
19. Bowden, E.M., & **Jung-Beeman, M.** (2003b). One hundred forty-four Compound Remote Associate Problems: Short insight-like problems with one-word solutions. *Behavioral Research, Methods, Instruments, and Computers*, **35**, 634-639.
20. **Jung-Beeman, M.**, Bowden, E.M., Haberman, J., Frymiare, J.L., Arambel-Liu, S., Greenblatt, R., Reber, P.J., & Kounios, J. (2004). Neural activity observed in people solving verbal problems with insight. *Public Library of Science – Biology*, **2**, 500-510. PMID: 15094802
21. Bowden, E.M., **Jung-Beeman, M.**, Fleck, J., & Kounios, J. (2005). New approaches to demystifying insight. *Trends in Cognitive Sciences*, **9**, 322-328. PMID: 15953756
22. **Jung-Beeman, M.** (2005). Bilateral brain processes for comprehending natural language. *Trends in Cognitive Sciences*, **9**, 512-518.
23. Virtue, S., Haberman, J., Clancy, Z., Parrish, T., & **Jung-Beeman, M.** (2006). Neural activity of inferences during story comprehension. *Brain Research*, **1084**, 104-114.
24. Kounios, J., Frymiare, J.L., Bowden, E.M., Fleck, J.I., Subramaniam, K., Parrish, T.B., & **Jung-Beeman, M.** (2006). The prepared mind: Neural activity prior to problem presentation predicts solution by sudden insight. *Psychological Science*, **17**, 882-890.

25. Mashal, N., Faust, M., Hendler, T & **Jung-Beeman, M.** (2007). An fMRI investigation of the neural correlates underlying the processing of novel metaphoric expressions. *Brain and Language*, **100**, 115-126.
26. Bowden, E.M. & **Jung-Beeman, M.** (2007). Methods for investigating the neural components of insight. *Methods*, **42**, 87-99.
27. Fleck, J., Green, D.L., Stevenson, J.L., Payne, L., Bowden, E.M, **Jung-Beeman, M.**, & Kounios, J. (2008). The transliminal brain at rest: Baseline EEG, unusual experiences, and access to unconscious mental activity. *Cortex*, **44**, 1353-1363.
28. **Jung-Beeman, M.**, Collier, A., & Kounios, J. (2008). How insight happens: learning from the brain. *NeuroLeadership Journal*, **1**, 20-25.
29. Kounios, J., Fleck, J., Green, D.L., Payne, L., Stevenson, J.L., Bowden, E.M., & **Jung-Beeman, M.** (2008). The origins of insight in resting-state brain activity. *Neuropsychologia*, **46**, 281-291.
30. Mashal, N., Faust, M., Hendler, T & **Jung-Beeman, M.** (2008). Hemispheric differences in processing the literal interpretation of idioms: Converging evidence from behavioral and fMRI studies. *Cortex*, **44**, 848-860.
31. Virtue, S., Parrish, T., & **Jung-Beeman, M.** (2008). Inferences during story comprehension: Cortical recruitment affected by predictability of events and working-memory capacity. *Journal of Cognitive Neuroscience*, **20**, 2274-2284.
32. Kounios, J. & **Beeman, M.** (2009). The Aha! moment: The cognitive neuroscience of insight. *Current Directions in Psychological Science*, **18**, 210-216.
33. Mashal, N., Faust, M., Hendler, T & **Jung-Beeman, M.** (2009). An fMRI study of processing novel metaphoric sentences. *Laterality*, **14**, 30-54.
34. Subramaniam, K., Kounios, J., Parrish, T.B., & **Jung-Beeman, M.** (2009). A brain mechanism for facilitation of insight by positive affect. *Journal of Cognitive Neuroscience*, **21**, 415-432.
35. Kounios, J. & **Beeman, M.** (2010). The cognitive neuroscience of insight and its antecedents. In S. Kornguth, R. Steinberg, & M.D. Matthews (Eds.) *Neurocognitive and Physiological Factors During High-Tempo Operations*. Ashgate Press.
36. **Beeman, M.** (2010). Right hemisphere language processing. In P.C. Hogan (Ed.), *Cambridge Encyclopedia of the Language Sciences*, 719-721. New York: Cambridge University Press.
37. **Beeman, M.**, Bowden, E.M., Haberman, J., Frymiare, J.L., Arambel-Liu, S., Greenblatt, R., Reber, P.J., & Kounios, J. (2011). Neural activity observed in people solving verbal problems with insight. Reprinted in: T. Roberts, M. Moser, D. LePan, J. Gaunce & L. Buzzard (Eds.), *Broadview Anthology of Expository Prose*. Peterborough, ON, Canada: Broadview Press.
38. Hu, M., Kounios, J., **Beeman, M.**, & Liang, H. (October 2011). Functional network analysis of insight in resting-state brain activity. *Proceedings of 4th International Workshop on Advanced Computational Intelligence*, Wuhan China, pp. 421-425.
39. Collier, A., & **Beeman, M.** (2012). Intuitive tip of the tongue judgments predict subsequent problem solving one day later. *Journal of Problem Solving*, **4(2)**, Article 8.
40. Ellamil, M., Dobson, C., **Beeman, M.**, & Christoff, K. (2012). Evaluative and generative modes of thought during the creative process. *NeuroImage*, **59**, 1783-1794.
41. Mirous, H.J., & **Beeman, M.** (2012). Bilateral processing and affect in creative language comprehension. In M. Faust (Ed.), *The Handbook of the Neuropsychology of Language*, pp. 319-341. Oxford: Blackwell Publishing.

42. Powers, C., Bencic, R., Horton, W.S., & **Beeman**, M. (2012). Hemispheric inference priming during comprehension of conversations and narratives. *Neuropsychologia*, **50**: 2577-2583.
43. Subramaniam, K., Faust, M., **Beeman**, M., & Mashal, N. (2012). The repetition paradigm: Enhancement of novel metaphors and suppression of conventional metaphors in the left inferior parietal lobe. *Neuropsychologia*, **50**, 2705-2719.
44. van Steenburgh, J.J., Fleck, J., **Beeman**, M., & Kounios, J. (2012). Insight. Chapter 24 in K. Holyoak and R. Morrison (Eds.), *The Oxford Handbook of Thinking and Reasoning*, pp 475-491. Oxford: Oxford University Press.
45. Wegbreit, E., Suzuki, S., Grabowecky, M., Kounios, J. & **Beeman**, M. (2012). Visual attention modulates insight versus analytic solving of verbal problems. *Journal of Problem Solving*, **4**(2), Article 5.
46. Zabelina, D.L., & **Beeman**, M. (2013). Short term attentional perseveration associated with real-world creative achievement. *Frontiers in Psychology*, **4**:191. doi: 10.3389/fpsyg.2013.00191
47. Fleck, J.I., **Beeman**, M., & Kounios J. (2013). Insight. In D. Reisberg (Ed.), *The Oxford Handbook of Cognitive Psychology*. Oxford: Oxford University Press.
48. Zabelina, D.L., Guzman-Martinez, E., Ortega, L., Grabowecky, M., Suzuki, S., & **Beeman**, M. (2013). Suppressed semantic information accelerates analytic problem solving. *Psychonomic Bulletin & Review*, **20**, 581-585.
49. Subramaniam, K., **Beeman**, M., Faust, M., & Mashal, N. (2013). Positively-valenced stimuli facilitate creative novel metaphoric processes by enhancing medial prefrontal cortical (mPFC) activation. *Frontiers in Psychology*, **4**: 211. doi: 10.3389/fpsyg.2013.00211
50. Reber, P.J., **Beeman**, M., & Paller, K. (2013). Human memory systems: A framework for understanding the neurocognitive foundations of intuition. D. Schmorrow & C.M. Fidopiastis (Eds.), *Foundations of Augmented Cognition - 7th International Augmented Cognition Conference, Held as Part of HCI International*, pp. 474-483. Springer.
51. Kounios, J. & **Beeman**, M. (2014). The cognitive neuroscience of insight. *Annual Review of Psychology*, **65**, 71-93. PMID: 24405359
52. Zabelina, D.L., Condon, D., & Beeman, M. (2014). Do dimensional psychopathology measures relate to creative achievement or divergent thinking? *Frontiers in Psychology: Psychopathology*. doi: 10.3389/fpsyg.2014.01029
53. Zabelina, D.L., O'Leary, D., Pornpattananangkul, N., Nusslock, R., & Beeman, M. (2015). Creativity and sensory gating indexed by the P50: Selective versus leaky attention in divergent thinkers and creative achievers. *Neuropsychologia*, **69**, 77-84.
54. Salvi, C., Bricolo, E., Franconeri, S., Kounios, J., Beeman, M. (2015). Sudden insight is associated with shutting out visual inputs. *Psychonomic Bulletin & Review*, **22**, 1814-1819.
55. Wegbreit, E., Franconeri, S., & **Beeman**, M. (2015). Anxious mood narrows attention in feature space. *Cognition & Emotion*, **29**, 668-677.
56. Zabelina, D.L., Colzato, L., Beeman, M., & Hommel, B. (2016). Dopamine and the creative mind: Individual differences in everyday creative performance are predicted by interactions between dopamine genes DAT and COMT. *PLoS One*. DOI: 10.1371/journal.pone.0146768
57. Salvi, C., Constantini, G., Bricolo, E., Perugini, M., Beeman, M. (2016). Validation of Italian Rebus Puzzles and Compound Remote Associate Problems. *Behavioral Research Methods*, **48**, 664-685. doi: 10.3758/s13428-015-0597-9

58. Zabelina, D.L., Saporta, A., & **Beeman**, M. (2016). Broad or flexible attention in creative individuals? Distinct patterns of attention for different types of creative thinking. *Memory & Cognition*, *44*, 488-498. doi:10.3758/s13421-015-0569-4 (Memory & Cognition Best Paper award, 2016)
59. Salvi, C., Bricolo, E., Kounios, J., Bowden, E., **Beeman**, M. (2016). Insight solutions are correct more often than analytic solutions. *Thinking & Reasoning*, *22*, 443-460. doi: 10.1080/13546783.2016.1141798
60. Salvi, C., Cristofori, I., Grafman, J. & **Beeman**, M. (2016). The politics of insight. *Quarterly Journal of Experimental Psychology*, *69*, 1064-1072.
61. Grunewald, K. & **Beeman**, M. (2018). Insight. In M. Bornstein, M.E. Arterberry, K.L. Fingerman, & J.E. Lansford (Eds.), *The SAGE Encyclopedia of Lifespan Human Development*. New York: Sage.
62. Cristofori, I., Salvi, C., **Beeman**, M. & Grafman, J. (2018). The effects of reward on problem solving. *Cognitive, Affective, and Behavioral Neuroscience*, *18*, 925-931. doi: 10.3758/s13415-018-0613-5.
63. Sanders, K.G., Osburn, S., Paller, K., & **Beeman**, M. (2019). Targeted Memory Reactivation during Sleep Improves Next-Day Problem Solving. *Psychological Science*, *30*, 1616-1624. doi:10.1177/0956797619873344
64. Zabelina, D., Hechtman, L., Saporta, A., **Beeman**, M., & Grunewald, K. (2019). Reduced perceptual integration as the mechanism for focused attention in divergent thinking. *Brain and Cognition*, *135*, 103587. DOI: 10.1016/j.bandc.2019.103587, PMID: 31326763
65. Salvi, C., Beeman, M., Bikson, M., McKinley, R., & Grafman, J. (2020). TDCS to the right anterior temporal lobe facilitates insight problem-solving. *Scientific Reports*, *10*, Article number 946. doi.org/10.1038/s41598-020-57724-1
66. Salvi, C., Simoncini, C., Grafman, J., & Beeman, M. (2020). Oculometric signature of switch into awareness? Pupil-size predicts sudden insight whereas microsaccades problem-solving via analysis. *Neuroimage*.
67. Sanders, K.G. & Beeman, M. (In press). Sleep and incubation: Using problem reactivation during sleep to study forgetting fixation and unconscious processing during sleep incubation. *Journal of Cognitive Psychology*.

### **In preparation**

- Beeman, M. (In prep). Components of insight solving in the brain. In C. Salvi, J. Wiley, & S.M. Smith (Eds.), *On the emergence of insight*. Cambridge University Press.
- Nolla, K., **Beeman**, M., & Reber, P. (In prep). “Women-Only Cohorts Improve Emotional and Performance Outcomes for Novice Women Players in the Highly Gendered Context of Esports.” *Manuscript in preparation after 4 years of data collection*.
- Nolla, K., **Beeman**, M., & Reber, P. (In prep). “Emotion regulation predicts skilled performance in esports competitors.” *Manuscript in preparation after 4 years of data collection*.

### **Selected Conference Presentations**

1. **Beeman**, M. (May 1991). *Coherence inferencing and structure building in the cerebral hemispheres*. Poster presented at the 2nd annual meeting for Theoretical and Experimental Neuropsychology (TENNET); Montreal, Canada.
2. **Beeman**, M. (November, 1992). *Summation priming and coarse coding in the right hemisphere*. Poster presented at the 33rd annual meeting of the Psychonomic Society; St. Louis.

3. **Beeman, M.,** Friedman, R.B., Kwabenah, B., & Grafman, J. (November, 1993). *Making normals dyslexic: A part of speech effect when reading briefly presented words*. Poster presented at the 34th annual meeting of the Psychonomic Society; Washington, DC.
4. **Beeman, M.,** Friedman, R.B., & Grafman, J. (March, 1994). *Part of speech effects when reading words briefly presented to each cerebral hemisphere*. Poster presented at the 1st annual meeting of the Cognitive Neuroscience Society; San Francisco.
5. Bowden, E.M., **Beeman, M.,** & Gernsbacher, M.A. (March, 1995). *Two hemispheres are better than one: Drawing coherence inferences during comprehension*. Poster presented at the 2nd annual meeting of the Cognitive Neuroscience Society; San Francisco.
6. **Beeman, M.,** & Shivde, G. (November, 1995). *Hemispheric differences in categorizing versus naming words*. Poster presented at the 36th annual meeting of the Psychonomic Society; Los Angeles CA.
7. **Beeman, M.,** Bowden, E.M., Hassenfeld, K., & Shivde, G. (November, 1996). *Right hemisphere advantage for some summation primes, not others*. Poster presented at the 37th annual meeting of the Psychonomic Society; Chicago IL.
8. **Beeman, M.,** Bowden, E.M., Stebbins, G.T., Desmond, J.E., Glover, G.H., & Turner, D.A. (March 1997). *Functional magnetic resonance imaging investigation of right hemisphere activity during a language task*. Poster presented at the 4th annual meeting of the Cognitive Neuroscience Society; Boston, MA.
9. **Beeman, M.,** Bowden, E.M. (1997). *The right hemisphere maintains activation of solutions to insight problems*. Poster presented at 38th annual meeting of the Psychonomic Society; Philadelphia.
10. **Beeman, M.J.** (May 1998). *Right hemisphere language comprehension: Evidence from lateralized presentation and neuroimaging*. Invited paper, 70th annual meeting of the Midwest Psychological Society; Chicago IL.
11. **Beeman, M.J.,** & Bowden, E.M. (November, 1998). *Hemispheric cooperation in drawing inferences and solving insight problems*. Paper presented at the 39th annual meeting of the Psychonomic Society; Dallas.
12. **Beeman, M.J.,** Stebbins, G.T., Carrillo, M.C., Karni, O., Glover, G.H., & Desmond, J. (November, 2000). *fMRI reveals right hemisphere semantic activation during verbal problem solving*. Paper presented at the 41<sup>st</sup> Annual meeting of the Psychonomic Society, New Orleans.
13. **Beeman, M.J.,** Stebbins, G.T., Bowden, E.M., Carrillo, M.C., Karni, O., Glover, G.H., & Desmond, J. (Nov., 2000). *Right hemisphere activity during verbal tasks: fMRI evidence for coarse semantic coding*. Paper presented at Society for Neuroscience, New Orleans.
14. **Beeman, M.J.,** Bowden, E., & Haberman, J. (April, 2002). *The Aha! experience and semantic activation in the cerebral hemispheres*. Poster presented at 9<sup>th</sup> Annual Meeting of the Cognitive Neuroscience Society, San Francisco.
15. **Beeman, M.J.** (June, 2002). *How the brain makes inferences*. Invited paper presented at joint meeting of the Society for Scientific Study of Reading and the Society for Text and Discourse, Chicago.
16. **Beeman, M.J.,** Haberman, J. & Bowden, E.M. (November, 2002). *fMRI Signal at the Moment of Insight, During Insight-Like Verbal Problems*. Paper presented at the 43<sup>rd</sup> Annual Meeting of the Psychonomic Society, Kansas City.
17. Kounios, J., **Beeman, M.J.,** Liu, S., Frymiare, J., Angelakis, E., Stathopoulou, T. (March, 2003). *The Spark of Insight: Electrophysiological Correlates of the Aha! Experience in Problem Solving*. Poster presented at the 10<sup>th</sup> Annual Meeting of the Cognitive Neuroscience Society, New York.
18. **Jung-Beeman, M.** (June, 2003). *Neural correlates of semantic integration, drawing inferences, and verbal problem solving*. Invited paper presented at International Conference on Higher-Level Language Processes in the Brain, Hanse Institute for Advanced Study, Delmenhorst, Germany.
19. **Jung-Beeman, M.,** Liu, S.A., Bowden, E.M., Haberman, J., & Kounios, J. (October, 2003). *fMRI*



- indices of brain activity when people comprehend sentences, draw inferences from stories, and solve insight-like verbal problems. Invited paper presented at the Annual meeting of the Society for Psychophysiological Research, Chicago IL.
20. **Jung-Beeman, M.** (November, 2003). fMRI signal when people generate causal inferences during stories. Paper presented at 44<sup>th</sup> Annual Meeting of the Psychonomic Society, Vancouver, Canada.
  21. Frymiare, J., **Jung-Beeman, M.**, Bowden, E., Liu., S., & Kounios, J. (April 2004). Brain oscillations prior to problem presentation predict solution by sudden insight. Poster presented at the 11<sup>th</sup> Annual Meeting of the Cognitive Neuroscience Society, San Francisco.
  22. Virtue, S., **Jung-Beeman, M.**, Haberman, J., Clancy, Z. (May 2004). Event-related fMRI during story comprehension reveals integration and selection of causal inferences. Presented at 16<sup>th</sup> Annual Convention of the American Psychological Society, Chicago.
  23. **Jung-Beeman, M.** (August 2004). Imaging higher-order language comprehension and insight problem solving: What and how from where? Paper presented at 26<sup>th</sup> Annual Meeting of the Cognitive Science Society, Chicago.
  24. Pilgrim, L., & **Jung-Beeman, M.** (November, 2004). Qualitatively different semantic processing in left and right hemispheres: The role of conceptual structure. Poster presented at 45<sup>th</sup> Annual Meeting of the Psychonomic Society, Minneapolis.
  25. Virtue, S., Haberman, J., Clancy, Z., Swan, T., Parrish, T., & **Jung-Beeman, M.** (Nov., 2004). fMRI signal reveals semantic integration during story comprehension: The role of time course and causal constraint. Poster presented at the 45<sup>th</sup> Annual Meeting of the Psychonomic Society, Minneapolis.
  26. Subramaniam, K., Haberman, J., Clancy, Z., Patterson, D., Parrish, T., & **Jung-Beeman, M.** (April 2005). Mood effects on creative insight problem solving. Poster presented at the 12<sup>th</sup> Annual Meeting of the Cognitive Neuroscience Society, New York.
  27. Pilgrim, L., & **Jung-Beeman, M.** (April 2005). Semantic matching across the hemispheres: The effect of conceptual structure. Poster presented at the 12<sup>th</sup> Annual Meeting of the Cognitive Neuroscience Society, New York.
  28. **Jung-Beeman, M.** (March 2006). Neural substrates and cognitive mechanisms of the “Aha!” moment. Invited paper, New Ideas about New Ideas, National Board of Economic Research, Cambridge MA.
  29. **Jung-Beeman, M.**, Bowden, E., Green, D. & Kounios, J. (April 2006). The neural bases of visual Aha! in object recognition. Poster presented at the 13<sup>th</sup> Annual Meeting of the Cognitive Neuroscience Society, San Francisco.
  30. Subramaniam, K., & **Jung-Beeman, M.** (May 2006). Positive mood and anxiety modulate anterior cingulate activity and preparation for insight. Poster presented at the Annual Convention of the Association for Psychological Science, New York.
  31. **Jung-Beeman, M.** (March 2007). Bilateral processes and affective modulation involved in drawing inferences during natural story comprehension. Paper presented at Brain Mechanisms and Cognitive Processes in the Comprehension of Discourse. Leiden, The Netherlands.
  32. **Jung-Beeman, M.** (April 2007). Neural basis of insight. Talk presented at Workshop on Creativity, Defense Agencies Research Projects Administration, Alexandria VA.
  33. Subramaniam, K., & **Jung-Beeman, M.** (May 2007). Positive and anxiety induced states modulate problem solving strategies. Poster presented at the 14<sup>th</sup> annual meeting of the Cognitive Neuroscience Society, New York.
  34. **Jung-Beeman, M.** (May 2007). Neural basis of insight. Talk presented at the 1st Annual Neuroleadership Summit, Asolo Italy.
  35. Wegbreit, E., Suzuki, S., Grabowecky, M., & **Jung-Beeman, M.** (2008). The effects of attentional states on verbal problems solving processes. Poster presented at the Annual meeting of the Cognitive Neuroscience Society, San Francisco.

36. Mashal, N., Faust, M., & **Jung-Beeman**, M (2008). The role of the temporal lobes in the comprehension of metaphoric and non-metaphoric texts. Poster presented at the Annual meeting of the Cognitive Neuroscience Society, San Francisco.
37. Mirous, H. & **Jung-Beeman**, M (2008). Individual differences in inference generation. Poster presented at the Annual meeting of the Cognitive Neuroscience Society, San Francisco.
38. **Jung-Beeman** & Kounios (May 2008). Symposium Co-chairs: Neural Basis of Creative Thought. Annual Convention of the Association for Psychological Science, Chicago IL.
39. **Jung-Beeman**, M. (May 2008). Neural basis of insight. Talk presented at the Annual Convention of the Association for Psychological Science, Chicago IL.
40. Mirous, H. & **Jung-Beeman**, M (June 2008). Mood Effects on Drawing Inferences During Story Comprehension. Poster presented at Institute of Education Sciences, Washington, D.C.
41. **Jung-Beeman**, M. (September 2008). "Neural mechanisms of insight and its facilitation by positive mood. Paper presented at "Insights into Insights" workshop, Salk Institute , La Jolla CA.
42. **Jung-Beeman**, M. (October 2008). Anatomy of Aha! Paper presented at 2008 Summit for the Neuroleadership Organization, New York NY.
43. Mirous, H. & **Jung-Beeman**, M (March, 2009). Mood modulation of inference priming during story comprehension. Poster presented at Annual Meeting of Cognitive Neuroscience Society, San Fran.
44. Collier, A. & **Jung-Beeman**, M (March, 2009). Intuition and insight problem solving. Poster presented at the Annual meeting of the Cognitive Neuroscience Society, San Francisco.
45. Subramaniam, K., Haberman, J., Clancy, Z., Bowden, E.M., Parrish, T., Collier, A., & **Beeman**, M. (May 2009). The neural basis for the facilitation of insight problem-solving by a positive mood. Poster presented at 21st annual meeting of Association for Psychological Science, San Francisco.
46. Collier, A. & **Beeman**, M. (May 2009). Intuition and insight problem solving. Poster presented at the 21st annual meeting of the Association for Psychological Science, San Francisco.
47. Wegbreit, E., Franconeri, S., & **Beeman**, M. (May, 2009). Mood modulation of attention. Poster presented at the Annual meeting of the Vision Sciences Society, Florida.
48. Mirous, H. & **Beeman**, M. (June 2009). Mood modulation of inference priming during story comprehension, II: Positive mood enhances inference priming. Poster presented at Interdisciplinary Education Society annual meeting, Washington DC.
49. Powers, C. & **Beeman**, M (October 2009). Comprehending conversaton language: Inference priming in the two hemispheres. Poster presented at Society for Neuroscience, Chicago
50. Collier, A. & **Beeman**, M. (October 2009). Aha! Memory: Solving with Insight Promotes Solution Memory. Poster presented at Society for Neuroscience, Chicago.
51. Ellamil, M., Dobson, C., **Beeman**, M., & Christoff, K. (April, 2010). Spontaneous and deliberate modes of thought during the creative process. Paper presented at the 17<sup>th</sup> annual meeting of the Cognitive Neuroscience Society, Montreal.
52. Subramaniam, K., Collier, A., Powers, C., & **Beeman**, M. (June 2010). Neural Basis for the Facilitation of Insight Problem-Solving by a Positive Mood. Poster presented at the annual meeting of the Organization for Human Brain Mapping, Barcelona, Spain.
53. Powers, C. & **Beeman**, M (November 2010). Hemispheric inference priming during conversation comprehension. Poster presented at the annual meeting of the Society for Neuroscience, San Diego.
54. Powers, C. & **Beeman**, M (November 2010). Hemispheric inference priming during conversation comprehension. Neurobiology of Language, San Diego.
55. Mirous, H.J. & **Beeman**, M. (April, 2010). Positive and anxious mood modulates inference priming during story comprehension. Poster presented at the 17<sup>th</sup> annual meeting of the Cognitive Neuroscience Society, Montreal.

56. Wegbreit, E., Franconeri, S., & **Beeman**, M. (April, 2010). The influence of happy and anxious moods on the scope of selective visual attention. Poster presented at the 17<sup>th</sup> annual meeting of the Cognitive Neuroscience Society, Montreal.
57. Collier, A.K., Reber, P.J., & **Beeman**, M (April 2011). Should my mind rely on my hunch? The subjective experience of accurate and inaccurate intuitions during problem solving. Poster presented at the 18<sup>th</sup> annual meeting of the Cognitive Neuroscience Society, San Francisco.
58. **Beeman**, M. (March 2011). Insight in the brain: The cognitive and neural bases of Eureka! moments. 2011 Paul E. Torrance Lecture, Torrance Center for Creativity and Talent Development, University of Georgia.
59. Powers, C. & **Beeman**, M (April 2011). Hemispheric inference priming during comprehension of conversation. Poster to be presented at the 18<sup>th</sup> annual meeting of the Cognitive Neuroscience Society, San Francisco.
60. **Beeman**, M. (April 2011). The creative brain: Insight preparation and execution. Paper presented at the 4th Indo-American Kavli Frontiers of Science Symposium, sponsored by National Academy of Sciences and Indo-U.S. Science and Technology Forum. Irvine, CA.
61. Zabelina, D., & **Beeman**, M. (August 2011). Creative cognition and attentional switching. Poster presented at the American Psychological Association (APA), Washington, DC.
62. Hu, M., Kounios, J., Beeman, M., & Liang, H. (October 2011). Functional network analysis of insight in resting-state brain activity. Paper presented at 4th International Workshop on Advanced Computational Intelligence, Wuhan China.
63. **Beeman**, M. (October 2011). Insight in the brain: Neuroimaging insight and intuition. Paper presented at annual meeting Diagnostic Error in Medicine, Chicago IL.
64. Powers C.& **Beeman**, M. (November, 2011). Inferences in Natural Conversation: An ERP study of Explicit versus Implied Language Comprehension. Society for Neuroscience. Washington, DC.
65. Zabelina, D. L., Guzman-Martinez, E., Ortega, L., Grabowecky, M., **Beeman**, M., & Suzuki, S. (2012 March). Suppressed semantic information accelerates problem solving. Poster presented at the *Cognitive Neuroscience Society*, Chicago, IL.
66. Salvi, C., Collier, A.K., Bricolo, E., Kounios, J., & **Beeman**, M. (May 2012). Aha is right: Insight solutions are more likely to be correct than are analytic solution. Association for Psychological Science Convention in Chicago, IL.
67. Powers, C. & **Beeman**, M. (May 2012). Changes in Problem Solving Rates and Strategies after a Single Attempt at OM or FA Meditation by Non-meditators. *Association for Psychological Science*. Chicago, IL.
68. Zabelina, D. L., & **Beeman**, M. (2012 May). Creativity and attention: Creative potential, but not creative achievement, is associated with better performance after invalid attention cues. Poster presented at the *Association for Psychological Science*, Chicago, IL.
69. Zabelina, D. L., Guzman-Martinez, E., Ortega, L., Grabowecky, M., Suzuki, S., & **Beeman**, M. (2012 August). Suppressed semantic information accelerates problem solving. Paper presented at the *American Psychological Association*, Orlando, FL.
70. Zabelina, D. L., & Beeman, M. (2013 April). *Two distinct attention or control effects related to divergent thinking versus creative achievement*. Poster presented at the Cognitive Neuroscience Society, San Francisco, CA.
71. Zabelina, D. L., Beeman, M., & Nusslock, R. (2013 August). *Attenuated sensory gating as a common underlying mechanism between creativity and psychopathology*. Chair of the symposium: "Neuroscience of creativity and intelligence." Paper presented at the American Psychological Association, Honolulu, HI.
72. Zabelina, D., & Beeman, M. (2013 December). Distinct patterns of attention for different types of

creative thinking. *Michigan State University*. East Lansing, MI

73. Beeman, M. (2014 March). *Insight and semantic fields*. Paper presented at Dyslexia Beyond Reading: Memory, Cognition, Expertise, and Innovation. San Francisco.
74. Zabelina, D., O'Leary, D., Pornpattananangkul, N., Nusslock, R., & Beeman, M. (2014 April). Creativity and P50 ERP sensory gating: Selective versus leaky attention in divergent thinkers and creative achievers. Poster presented at the 21st Annual Meeting of the Cognitive Neuroscience Society, Boston.
75. Zabelina, D. L., Beeman, M., Nusslock, R. (2014, August). Attention in creative individuals. American Psychological Association conference, Washington, D.C.
76. Dansky, E., Zabelina, D. L., Hechtman, L., & Beeman, M. (2014, September). Three levels of inhibition: Sensation, attention, and self-control. nuViBE: NU Bioscientist Presentation Sessions, Evanston, IL.
77. Zabelina, D. L., & Beeman, M. (2014, September). Creativity and P50 sensory gating: Selective versus leaky attention in divergent thinkers and creative achievers. Society for Psychophysiological Research annual convention. Atlanta, GA.
78. Beeman, M. (October 2014). Eureka: 'Aha' Moments in the Creative Process. Cold Spring Harbor Interdisciplinary Conference on Creativity, Cold Springs NY, October 2014
79. Grunewald, K., Beeman, M. (2014, November). Mechanisms of intuition. Poster presented at the 55th Annual meeting of the Psychonomics Society, Long Beach, CA
80. Dansky, E., Zabelina, D., Pornpattananangkul, N., Hechtman, L., Nusslock, R & Beeman, M. (May 2015). Three Levels of Inhibition: Sensation, Attention, and Self-Control. Midwest Psychological Association, Chicago
81. Zabelina, D. L. & Beeman, M. (2015, August). 'Neuroscience of Creativity' symposium Chair. Different types of attention for divergent thinkers and creative achievers: fMRI evidence. American Psychological Association (APA) annual convention. Toronto, Canada.
82. Beeman, M. (Oct., 2015). Stimulating attention and creative problem solving. Presentation at Air Force Research Labs, Dayton OH.
83. Co-organizer: Creative Neuroscience Working Group satellite of Society for Neuroscience, Chicago.
84. Beeman, M. (Oct., 2015). The cognitive processes and neural substrates of sudden insight. Creative Neuroscience Working Group satellite of Society for Neuroscience, Chicago.
85. Beeman, M. (Nov, 2015). Eureka! How positive mood prepares the brain for sudden insight. Kellogg Action Lab Experience. Evanston.
86. Grunewald, K., Beeman, M. (2015, November). The Role of Feedback in Intuition. Poster presented at the 56<sup>th</sup> Annual meeting of the Psychonomics Society, Chicago, IL.
87. Salvi, C., Bowden, E. & Beeman, M. (2016). The link between risk taking and Aha! moments. Association for Psychological Science, 28th Annual Convention (APS), Chicago, Illinois.
88. Ng, T., & Beeman, M. (2016). Taking in both Global and Local Levels Increases Insight Problem-Solving. Poster presented at the 28th Association for Psychological Science Annual Convention, Chicago, IL.
89. Salvi, C., Cristofori, I., Beeman, M. & Grafman, J. (2016). How subliminal reward enhances Aha! moments. Society for Neuroscience. New York.
90. Grunewald, K., Osburn, S., George, K., Paller, K., & Beeman, M. (2017, March). Sleep on it – The impact of problem reactivation during sleep on problem solving. Poster presented at the 24<sup>th</sup> Annual Cognitive Neuroscience Society Meeting, San Francisco, CA.
91. Ng, T., & Beeman, M. (2017). Selective Attention to Global Stimuli Induces Analytic Problem Solving. Poster to be presented at the Cognitive Neuroscience Society 2017 Annual Meeting, San Francisco, CA.

92. Nolla, Kyle & Beeman, Mark. (2017). Creative Cognition under Performance Pressure: Investigating How Anxiety Affects Attentional Styles and Creativity. Poster Presented at: Cognitive Neuroscience Society and satellite conference Society for the Neuroscience of Creativity.
93. **Grunewald, K.**, Saporta, A., Beeman, M. (2017, November). *The impact of the insight experience on memory*. Poster presented at the 58<sup>th</sup> Annual meeting of the Psychonomic Society, Vancouver, Canada.
94. **Grunewald, K.**, Osburn, S., Paller, K. A., Beeman, M. (2018, March). *The role of sleep in memory and problem solving*. Poster presented at the 25<sup>th</sup> Annual Cognitive Neuroscience Society Meeting, Boston, MA.
95. **Grunewald, K.**, Osburn, S., Paller, K. A., Beeman, M. (2018, March). *The role of sleep in memory and problem solving*. Poster presented at the 4<sup>th</sup> Annual Meeting of the Society for the Neuroscience of Creativity, Boston, MA.
96. Salvi, C., McKinley, R., Bikson, M., Beeman M., and Grafman, J. (2018). Insight is Facilitated by High Definition tDCS to the Right Temporal Lobe. Creativity Conference. Southern Oregon University. Ashland, Oregon.
97. Grunewald, K., Paller, K. A., Beeman, M. (November, 2018). Cueing problems during sleep to enhance solving and test mechanisms. Poster presented at the 59<sup>th</sup> Annual meeting of the Psychonomic Society, New Orleans, LA.
98. Nolla, Kyle & Beeman, Mark. "For the Win! The Role of Emotion Regulation in Competitive Gaming Performance." Presented at: Cognitive Neuroscience Society and satellite conference Society for the Neuroscience of Creativity, 2018.
99. Salvi, C., Conrardy, R., McKinley, R., Bikson, M., Beeman M., and Grafman, J. (March, 2018). Right temporal transcranial direct current stimulation improves insight problem solving. Poster presented at the 25<sup>th</sup> annual meeting of the Cognitive Neuroscience Society. Boston.
100. Ng, T., & Beeman, M. (March, 2018). Increasing salience of competitors increases selective visual attention and induces more analytic problem solving. Poster presented at the 25<sup>th</sup> annual meeting of the Cognitive Neuroscience Society. Boston.
101. Beeman, M. (2019). Aha! The Eureka moment and creative problem solving in the brain. Society for Neuroscience/ BrainFacts.Org, public webinar for Brain Awareness Week, March 12 2019
102. Salvi, C., Conrardy, R., McKinley, R., & Grafman, J. (2019). Pupil-size and Microsaccades Predict Different Problem-Solving Styles. Society for Neuroscience of Creativity. San Francisco, California.
103. Dastrup, K., Grunewald, K., Krause, C., Paller, K., & Beeman, M. (2019, May). The Relationship between Schizotypal Personality Traits, Sleep, and Problem Solving. Poster presented at the 31<sup>st</sup> Association for Psychological Science Annual Convention, Washington, D.C.
104. Patterson, L., Grunewald, K., Paller, K., & Beeman, M. (April, 2019). The Role of Mood States in Sleep-Facilitated Problem-Solving. Poster presented at the 91<sup>st</sup> Annual meeting of the Midwestern Psychological Association, Chicago, IL.
105. Ng, T, & Beeman, M. (November, 2019). Visual ensemble statistics induce distributed attention and increase subsequent insight problem solving. Poster presented at the 60<sup>th</sup> Annual meeting of the Psychonomic Society, Montreal.
106. Grunewald, K., Riley, K., McCullough, S., Paller, K., & Beeman, M. (November, 2019). Targeted problem reactivation during sleep impacts memory for the problem solution one week later. Poster presented at the 60<sup>th</sup> Annual meeting of the Psychonomic Society, Montreal.
107. Yu, Y., Salvi, C., & Beeman, M. (March 2020). Reduced certainty preference after solving problems with insight than after solving with analysis. Poster presented at the 27<sup>th</sup> annual meeting of the Cognitive Neuroscience Society.
108. Sanders, K., Dastrup, K., Patterson, L., Ghosh, A., Paller, K., & Beeman, M. (March 2020).

Mark Beeman

- Facilitating problem solving with targeted memory reactivation during in-lab overnight sleep. Poster presented at the 27<sup>th</sup> annual meeting of the Cognitive Neuroscience Society
109. Mann, K., Ng, T, Sanders, K., Beeman, M. (May 2020). Walking in Nature Facilitates Creative Incubation and Increases Insight Problem Solving. Poster to be at the 32nd APS Annual Convention, May 21-24, 2020, in Chicago, IL, USA.
  110. Nolla, Kyle; **Beeman**, Mark; Reber, Paul. "Emotion Regulation Supports Expert Performance in Esports Players of All Skill." Poster presented at Cognitive Neuroscience Society 2021 Virtual Conference.
  111. Nolla, Kyle; **Beeman**, Mark; Reber, Paul; & Adam, Emma. "Cognitive, Social, and Physiological Correlates of Top 100 Smash Performance." Presented at: UCI Esports Research Conference, 2019.
  112. Yu, Y., Smith, D., Gratton, C. *From correlation to communication: decomposing functional connectivity changes*. Poster submitted: Organization for Human Brain Mapping Annual Conference 2021.
  113. Yu, Y., Oh, Y., Kounios, J., Beeman, M. *Hidden brain states and dynamics extracted from EEG signals when people solve short verbal problems*. Poster to be presented at: CNS 2021 Virtual Meeting 2021, March 13-16.

### **Selected Invited Colloquia And Presentations**

- Syracuse University, Dept. of Psychology, 1991  
University of Wisconsin-Madison, Dept. of Psychology, 1992  
University of Illinois, Dept. of Psychology, 1993  
Boston University, Dept. of Psychology, 1994  
Oberlin College, Dept. of Psychology, 1994  
University of California-Riverside, Dept. of Psychology, 1996  
University of Wisconsin-Madison, Dept. of Psychology, 1996  
Northwestern University, Dept. of Psychology, 1998  
University of Illinois-Chicago, Dept. of Psychology, 1999  
University of California-Davis, Center for Neuroscience, 2000  
University of Pennsylvania, Center for Cognitive Neuroscience, 2000  
Sackler Institute, Cornell Medical College, 2001  
University of California-Davis, Dept. of Psychology, 2000  
University of Pittsburgh, Psychology & LRDC, Ctr. Neural Basis of Cognition (Pitt-CMU), 2002  
Hanse Institute for Advanced Study, Delmenhorst, Germany, June 2003  
Universite de Lyon (France), Cognitive Science Laboratory, 2004  
University of Chicago, Brain Research Imaging Center, 2005  
National Bureau of Economic Research, March 2006  
Bar-Ilan University, Israel, March 2006  
University of Illinois-Chicago, April 2006  
University of California-San Diego, November 2006  
Steppenwolf Theater, Chicago, November, 2008. Imagination and Insight. Presentation for Immersion program at Steppenwolf Theater  
Howard University, Department of Psychology, April 2010.  
Segal Design Institute, McCormick School of Engineering, Northwestern University, Jan. 2011.  
Torrance Lecture at Torrance Center for Creativity, Univ. of Georgia College of Education, March 2011

Mark Beeman

National Academy of Science/Kavli Foundation; Indo-American Frontiers of Science; Irvine, CA, April 2011

Lake Forest College, Opening Keynote Lecture, Brain Awareness Week, November 2011

Loyola University, Chicago: Keynote Lecture, Brain Awareness Week, March 2012

Illinois Science Council, Brain Science Series, April 2012

Learning and the Brain, San Francisco, Feb 2013

FermiLab, April 2013

Department of Physics, University of Illinois, Urbana-Champaign, September 2013

Segal Design Center, Northwestern University, January 2014

Northwestern University Women's Board, February 2014

Dyslexic Advantage, San Francisco, March 2014

New America Foundation, Washington DC, May 2014

Aspen Ideas Festival, Aspen CO, June 2014

Cold Spring Harbor Interdisciplinary Conference on Creativity, Cold Springs NY, October 2014

[missing data, didn't track]

Society for Neuroscience/ BrainFacts.Org, public webinar for Brain Awareness Week, March 12 2019

Public talk, Unitarian Church, Winnetka IL, October 2019. The Eureka Moment and Creative Problem Solving in the Brain.

Mark Beeman

**Peer Review and Related Activities**

NSF grant panels, 2009-2013

Editorial Board: *Frontiers in Psychology: Cognition*

Ad-hoc grant reviewing

*National Science Foundation*

*Bi-National (US-Israel) Science Foundation*

*NSERC*

Board of Editors of *Brain and Language* (1995-2006)

Ad hoc journal reviewing for:

*Proceedings of the National Academy of Sciences*

*Psychological Science*

*Brain and Cognition*

*Brain and Language*

*Brain Research*

*Cognition*

*Cognitive, Affective, and Behavioral Neuroscience*

*Cognition and Emotion*

*Cognitive Brain Research*

*Cognitive Science*

*Cortex*

*Discourse Processes*

*Emotion*

*Human Brain Mapping*

*Journal of Cognitive Neuroscience*

*Journal of Experimental Psychology: Human Perception and Performance*

*Journal of Experimental Psychology: Learning, Memory, and Cognition*

*Journal of Memory and Language*

*Memory & Cognition*

*Nature Neuroscience*

*Neuroimage*

*Neuropsychologia*

*Neuropsychology*

*Perception and Psychophysics*

*Psychological Bulletin*

*Psychonomic Bulletin & Review*

*Neuropsychiatry, Neuropsychology, and Behavioral Neurology*

Textbook reviews:

*Houghton Mifflin*

*WW Norton*

Tenure & promotion review:

*Colorado State University*

*Drexel University*

*Bar-Ilan University, Israel*

*Mississippi State University*

**Professional Affiliations and Service:**

Fellow, Association for Psychological Science

Psychonomic Society

Cognitive Neuroscience Society

Society for Neuroscience of Creativity; founding board member, current advisory board

Past: Elected board member, International Society for Women in Cognitive Neuroscience (1995-1998)



Mark Beeman

### **Teaching at Northwestern**

Topics in Cognitive Neuroscience: Winter 2003, Winter 2007

Research Methods in Psychology: Spring 2003, Winter 2004, Winter 2005, Winter 2006, Fall 2011

Language and the Brain (CogSci 210): Spring 2006, Winter 2007, Winter 2008, Winter 2009, Winter 2010, Winter 2011, Winter 2012, Winter 2013, Winter 2014

Advanced Seminar in Cognition/Neuroscience: Left brain, right brain: Spring 2004, Spring 2005, Spring 2006, Summer 2007, Fall 2007; Spring 2012, Winter 2014

Advanced Seminar in Cognition/Neuroscience: Insight in the brain: Winter 2009, 2010; Spring 2011

Advanced Seminar in Cognition/Neuroscience: Creative Problem Solving in the Brain: Spring 2019; Fall 2019

Cognitive Science Honors Seminar: Academic years 2003 – 2008

Director of Undergraduate Studies, and primary major advisor, Cognitive Science Program: 2003 – 2008

#### Graduate Seminars:

The creative brain: Spring 2007

Brain Asymmetries: Spring 2008

Insight in the brain: Spring 2010

Mood, attention, cognition: Spring 2011

Left brain, right brain: Winter 2012, Winter 2014

Creative Problem Solving in the Brain: Winter 2020

### **Graduate Students**

Karuna Subramaniam (NUIN), 2003 – 2007 (currently postdoc at Univ. of California-San Francisco)

Ezra Wegbreit (Psychology), September 2005 -2010 (Asst Prof at Cazenovia College)

Heather Mirous (Psychology), 2005-2012 (left academia)

Azurii Collier (Psychology), 2006-2012 (consultant, Accenture)

Chivon Powers (Psychology), 2008-2013 (currently postdoc at UC-Davis)

Darya Zabelina (Psychology), 2010-2015. Assistant Professor, Univ of Arkansas

Lisa Hechtmann (Psychology), (switched into lab) 2012-2015; employed as data analyst

Kristin Grunewald (Psychology), 2013-2019 (currently postdoc at U Notre Dame)

Tiffani Ng (Psychology), 2014-2019; employed as data analyst

Kylie Nolla (Psychology), entered September 2015

Yuhua Yu (Psychology), entered September 2019

D. Blaise Elliott (Psychology), entering September 2021

Nia McClendon (Psychology), entering September 2021

### **Awards won by Graduate Students under supervision:**

Cognitive Science Advanced Fellowship, 2006-2007, Karuna Subramaniam

Multidisciplinary Program in Educational Sciences Fellowship, 2006-2009, Heather Mirous

NIH Training grant (T32) Fellowship, 2008-2010, Azurii Collier

Cognitive Science 1st year Fellowship, 2008-2009, Chivon Powers

Society for Neuroscience, Neuroscience Scholar, 2008-2011, Azurii Collier

National Science Foundation Fellowship, 2009-2012, Chivon Powers

Cognitive Science Advanced Fellowship, 2009-2010, Ezra Wegbreit

Illinois Diversity of Future Faculty Fellowship, 2009-2011, Azurii Collier

Society for Neuroscience, Neuroscience Scholar, 2009-2012, Chivon Powers

NIH T32 Training Fellowship, 2012-2013, Chivon Powers

Merck - United Negro College Fund Fellowship, 2010-2012, Azurii Collier

National Science Foundation Fellowship, 2009-2012, Darya Zabelina

National Science Foundation Fellowship, 2011-2012, Lisa Hechtmann

PEO Scholar Award, Darya Zabelina, 2013

Mark Beeman

NIH T32 Training Fellowship, 2013-2015, Darya Zabelina  
Walter Dill Scott Scholarship (2018), Kristin Grunewald

Kyle Nolla:

GaymerX GDC Scholar – 2020 - \$2500 scholarship to attend the 2020 Game Developer’s  
Conference, including specialized mentorship programming  
Dispute Resolution Research Center Project Grant – 2019 – \$3250 – Kellogg School of Business at  
Northwestern University  
Graduate Research Grant – 2019 – \$1500 – Northwestern University  
Psychology Department Research Grant – 2018 – \$7000 – Northwestern University  
Advanced Cognitive Science Fellowship – 2018 – One year’s funding – Northwestern University  
Graduate Research Grant – 2017 – \$1500 – Northwestern University  
Kavli Summer Institute in Cognitive Neuroscience Fellowship – 2016 – The Kavli Institute  
Incoming Student Cognitive Science Fellowship – 2015 – One year’s funding – Northwestern U

### **Undergraduate Independent Study Students**

2002 – 2003: Emily Abramson, Janet Vadaparampil  
2003 – 2004: Sarah Chang, Jeet Patel, Janet Vadaparampil, Heidi Wong  
2004 – 2005: Therese Swan, Daniel Green  
2005 – 2006: Ariel Ashcraft  
2006 – 2007: Mike Claffey, Samir Rashid, Valentina Dehghan, Abhi Bhandari  
2007 – 2008: LaKrista Koegel, Mark Graves, Priyanka Bhagat  
2008 – 2009: Alex Chang, Tianning Xu, Kathrina Czarny  
2009 - 2010: Rachel Bencic, Emily Morson, Lisa Shandley  
2010 - 2011: Sinead Flood, Syeda Saeed, Rachel Bencic, Molly Hannon, Megan Ichinose, Harmony Lee,  
Ben Logan, Lisa Shandley  
2011 - 2012: Kaitlyn Thompson, Molly Hannon, Molly Conroy, Neal Kansara, Meredith Hamilton, Ben  
Logan, Daniel O'Leary, Harmony Lee, Feifei Huang, Stephanie Morris, Albert Ren  
2012 - 2013: Molly Hannon, Molly Conroy, Meredith Hamilton, Cliff (Storm) Heidinger, Neal Kansara,  
Jonathan Landis, Sydney Lindsey, Daniel O'Leary, Emily Reit  
2013-2014: Elena Dansky, Lucia Lee, Sydney Lindsey, Michelle Lortie, Samuel Osborn, Jacob Robinson  
2014-2015: Katie George, John Landis, Emily Liquin, Sam Osborn, Shirley Roitberg, Sam Trotter, Kira  
Riley  
2017-2018: Nicholas Liou, Lane Patterson, Sabren Burns, Emmanuel Ogunlana, Andrew Pen, Rachel  
Zhou, Malena Cheng, Charlie Cope, Alec Friswold, Sophia McCullough, Kira Riley  
2018-2019: Sam Agbah, Nicholas Liou, Lane Patterson, Anjan Ghosh, Katherine Mann, Adviti Alturi,  
Malena Cheng, Sophia McCullough & Patrick Zacher (SPS – now NU grad student)  
2019-2020: Katherine Mann, Adviti Alturi, Sam Agbah, Tristan Svoboda, Minha Ansari, Max Chapin  
2020-2021: Yasmeen Nahas

### **Undergraduate Honors Students**

2005 – 2006: Daniel Green (Cognitive Science)  
2008-2009: Mark Graves, Jr. (Cognitive Science)  
2014-2015: Shirley Roitberg (Cognitive Science)

### **NU Institute for Neuroscience, summer fellow:**

Caroline Freitag, Summer 2005

### **Illinois Math and Science Academy supervision:**

Tram Huynh, 2003 – 2004

### **Student Research Opportunities Program:**

Paris Ball, summer 2012

Mark Beeman

Chris Krause, summer 2017

Miriam Bautista, summer 2019

### **Awards won by Undergraduate students under supervision:**

Terese Swan, Weinberg College Research Grant, summer 2004

Daniel Greene, Cognitive Science Summer Undergraduate Research Fellowship, summer 2005; Honors

Sophia Lipov, Weinberg College Research Grant, & Cognitive Science Undergraduate Research Fellowship, summer 2013

Elina Zaonegina, Weinberg College Research Grant, summer 2013

Nicholas Liou, Academic URG Award, 2018

Katherine Mann, Summer URG, 2019

### **Postdoctoral Trainees**

Stella Arambel (Liu), 2002-04; Started faculty position at University of New Hampshire (Psychology), August 2004; deceased March 2005 (car accident)

Sandra Virtue, 2003-05 ; Began faculty position at DePaul University (Psychology), Fall 2005

Lea Pilgrim, 2003-05 (Now a postdoc at Georgetown University)

Nira Mashal, 2006-2007 (Now at Bar-Ilan University, Israel)

### **Research Staff**

1994 – 1998, 2002 – 2005 & 2012: Edward Bowden (now Assistant Professor at University of Wisconsin-Parkside)

2001 – 2004: Jason Haberman (now Assistant Professor at Rhodes College)

2003 – 2005: Zoe Clancy (went on to Pharmacology graduate school).

2004 – 2005: Dianne Patterson (went on to graduate school in Psychology at SUNY-Binghamton)

2012 – current: Arielle Saporta

2013 – 2014: Daniel O'Leary (grad student at Stanford, Affective Science)

### **Other lectures/activities at Northwestern**

Guest lectures in

Advanced Intro Psychology, 2009

Cognitive Psychology, May 12, 2004

NUIN 401C, April 27, 2004

Topics in Cognitive Neuroscience, March 2004

Psychology Department Graduate Prosem, October 2003, November 2002

Co-organizer of “Cross-lab Brain and Language” meeting, with James Booth and Cindy Thompson (both of Communication Sciences). Monthly meeting of 3 different labs (Jung-Beeman, Booth, & Thompson) studying different aspects of the cognitive neuroscience of language. Also attended by some Linguistics students and faculty – about 30 to 40 people total in attendance per month.

Cognitive Psychology Brown-bag – weekly (attendee and presenter)

FMRI weekly video-conference – weekly (attendee and presenter)

Cognitive Psychology recruiting weekend, March 2004, February 2005

Cognitive Neurology & Alzheimer's Disease Center, 2003; 2008

Segal Design Center, McCormick School of Engineering, 2011

Northwestern Women's Board, Feb 2014

Segal Design Center, McCormick School of Engineering, 2014

Mark Beeman

**Department, College, and University Service at Northwestern**

Psychology Department, Cognitive Area Graduate Admissions Committee, 2002 – 2003

Cognitive Psychology Search Committee, 2003 – 2004, 2004 – 2005

Graduate Admissions recruiting weekend talk, 2004, 2005

Psychology Department, BBC Area Graduate Admissions (Co-)Coordinator 2004 – 2005

Colloquium Coordinator, 2005 – 2006

Cognitive Science Program, Director of Undergraduate Studies, 2003 – 2008

Cognitive Science Program Committee, 2002 – 2012

Ad-hoc tenure committee, 2007-2008

Psychology Department Diversity Committee, 2009-2011

NU Social/Behavioral IRB Advisory Committee, 2011

Initiated and co-coordinate the “cross-lab brain and language” meeting, with labs of Cynthia Thompson & James Booth (Communication Disorders)

Segal Design Center Faculty Research Council, Feb 2012-current

Cognitive Science Program, Director of Undergraduate Studies, 2014 – 2015

Chair, Department of Psychology, Sep. 2015-Sep 2017 (stepped down, family health reasons)

**Community Work**

1998 – 2000: Initiated, organized and coached summer and after-school track club for children from Cabrini-Green and Washington Park public housing, Chicago

2004 – 2007: Soccer coach, Wilmette Park District

2007-2009: McKenzie Elementary School chess club tournament coordinator