

UMA R. KARMARKAR

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h-index: 14, Citations: 1530

Academic and Employment History

Assistant Professor, July 2011-present
Marketing Unit, Harvard Business School
Center for Brain Science (Affiliate), Harvard University

Ph.D., Consumer Behavior, June 2011
Graduate School of Business, Stanford University
Advisors : Baba Shiv, Brian Knutson

Postdoctoral Fellow 2004-06
HW Neuroscience Institute, University of California Berkeley
Advisor : Yang Dan

Ph.D., Neuroscience, June 2004
University of California, Los Angeles
Advisor : Dean Buonomano

Neural Systems and Behavior Program, August 2000
Marine Biological Laboratory, Woods Hole, MA

B.S., Symbolic Systems (Neural Systems), March 1998
Stanford University
Advisor : Thomas Wasow

Teaching Experience

Faculty Instructor: Management Matters in Science (November 2016)
Department of Molecular and Cellular Biology, Harvard University

Faculty Instructor: FIELD 3 (Design Thinking and Lean Startups 2016)
Harvard Business School

Faculty Lecturer: Shanghai Neuroeconomics Summer School (July 2015)
NYU-Shanghai

Faculty Instructor: Marketing Core (2011-2013)
Harvard Business School

Faculty Advisor: Individual Independent Projects/Fieldwork (2011-present)
Harvard Business School

Course Assistant: Consumer Psychology (Spring 2010, 2011)
Stanford Graduate School of Business

Course Designer/Instructor: "Lead or Follow? Perspectives from Mind and Brain on Interpersonal Influence" (MBA Alumni class, Summer 2007)
Lifelong Learning Program, Stanford Graduate School of Business

Section Leader: Undergraduate Behavioral and Cognitive Neuroscience (Spring 2000)
Neuroscience Interdepartmental Program, UCLA

Research Interests

Consumer choice behavior, consumer neuroscience, information processing, context-dependent value, time perception, uncertainty and ambiguity in decision-making.

Journal Publications

- Buckholtz JW, Karmarkar UR, Ye S, Brennan G, Baskin-Sommers A. Blunted ambiguity aversion during cost-benefit decisions in antisocial individuals. (*accepted, Scientific Reports*)
- Karmarkar UR. (2016) The impact of 'display-set' options on decision-making. *Journal of Behavioral Decision Making* doi: 10.1002/bdm.1998 (*forthcoming in print*)
- Karmarkar UR, Yoon C. (2016) Consumer neuroscience: Advances in understanding consumer psychology. *Current Opinion in Psychology* 10, 160-165. doi:10.1016/j.copsyc.2016.01.010
- Karmarkar UR, Shiv B, Spencer, RMC. (2015) Should you sleep on it? The effects of overnight sleep on subjective preference-based choice. *Journal of Behavioral Decision Making*. doi: 10.1002/bdm.1921. (*forthcoming in print*)
- Peysakhovich A[†], Karmarkar UR[†]. (2015) Asymmetric effects of favorable and unfavorable information on decision-making under ambiguity. *Management Science* (62(8): 2163-2178 doi: dx.doi.org/10.1287/mnsc.2015.2233. (*Authors contributed equally to this work*)
- Karmarkar UR, Shiv B, Knutson B. (2015) Cost conscious? The neural and behavioral impact of price primacy on decision-making. *Journal of Marketing Research* 52(4): 467-481.
- Karmarkar UR, Bollinger B. (2015) BYOB: How bringing your own shopping bags leads to treating yourself and the environment. (*Lead article*) *Journal of Marketing* 79(4): 1-15.
- Smidts A, Hsu M, Sanfey AG, Boksem, MA, Ebstein, RB, Huettel SA, Kable JW, Karmarkar UR, ... & Yoon, C. (2014). Advancing consumer neuroscience. *Marketing Letters*, 1-11.
- Karmarkar UR. (2011) Defining the contributions of network clock models to millisecond timing. *Front. Integr. Neurosci.* 5:41.
- Karmarkar UR, Tormala ZL. (2010) Believe me, I have no idea what I'm talking about: The effects of source certainty on consumer involvement and persuasion. *Journal of Consumer Research* 36(6):1033-49.

- Spencer RMC, Karmarkar U, Ivry, RB. (2009) Evaluating dedicated and intrinsic models of temporal encoding by varying context. *Phil. Trans. R. Soc. B.* 1525: 1853-1863.
- Karmarkar UR, Buonomano, DV. (2007) Timing in the absence of clocks: encoding time in neural network states. *Neuron.* 53(3):427-38. *(Includes cover illustration)*
- Karmarkar UR, Dan Y. (2006) Experience dependent plasticity in adult visual cortex. *Neuron.* 52(4): 577-85.
- Karmarkar UR, Buonomano DV. (2006) Different forms of homeostatic plasticity are engaged with distinct temporal profiles. *Eur. J. Neurosci.* 23(6):1575-84.
- Karmarkar U, Dan Y. (2005) One circuit, two kinds of timing. *Neuron.* 48(2):165-6.
- Karmarkar UR, Buonomano DV. (2003) Temporal specificity of perceptual learning in an auditory discrimination task. *Learning and Memory.* 10:141-147. *(Includes cover illustration)*
- Karmarkar UR, Najarian M, Buonomano DV. (2002) Mechanisms and significance of spike-timing dependent plasticity. *Biological Cybernetics.* 87:373-382.
- Karmarkar UR, Buonomano DV. (2002) A model of spike-timing dependent plasticity: One or two coincidence detectors? *J. Neurophys.* 88(1):507-13.
- Buonomano DV, Karmarkar UR. (2002) How do we tell time? *Neuroscientist.* 8(1): 42-51.
- Bookheimer SY, Dapretto M, Karmarkar U. (1999) Functional MRI in children with epilepsy. *Dev. Neurosci.* 21: 191-9.
- Aphasizhev R, Karmarkar U, Simpson L. (1998) Are tRNAs imported into the mitochondria of kinetoplastid protozoa as 5' extended precursors? *Molec. and Biochem. Parasitology.* 93: 73-80.

Chapters

- Plassmann H, Karmarkar UR. (2015) Consumer Neuroscience: Revealing meaningful relationships between brain and consumer behavior. In C Lamberton, M Norton, D Rucker (Eds.) *Cambridge Handbook of Consumer Psychology*. Cambridge University Press.
- Karmarkar US, Karmarkar UR. (2014) Customer experience and service design. In E Baglieri and US Karmarkar (Eds), *Managing Consumer Services: Factory or Theater?* (pp. 109-130). Springer.
- Knutson B, Karmarkar U. (2014). Appetite, consumption, and choice in the human brain. In SD Preston, M. Kringelbach, & B. Knutson (Ed.), *The interdisciplinary science of consumption* MIT Press.

Other Publications

- Hamilton R, Karmarkar UR. (2017) The 4 Minds of the Customer : A Framework for Understanding and Applying the Science of Decision-Making. MSI Reports 17-109.

Plassmann H, Karmarkar UR, Kessler B. (2016) “Brain Imaging Triggers Marketing Breakthroughs” INSEAD Knowledge. <http://knowledge.insead.edu/customers/brain-imaging-triggers-marketing-breakthroughs-4577>

Karmarkar UR, Plassmann H, Yoon C. (2015) “ Marketers Should Pay Attention to fMRI.” Harvard Business Review. <https://hbr.org/2015/11/marketers-should-pay-attention-to-fmri>

Karmarkar, UR, Dolan RJ. (2016) "Catalina in the Digital Age." Harvard Business School Teaching Note 516-086.

Dolan RJ, Karmarkar UR. (2013) "Catalina In the Digital Age." Harvard Business School Case 514-021.

Karmarkar UR. (2011) “Note on Neuromarketing.” Harvard Business School Note 512-031.

Press/media interviews and coverage available upon request

Invited Talks and Presentations

- Columbia Business School – March 2017
- School of Business, U.C. Riverside – March 2017
- Department of Psychology, U.C. San Diego – March 2017
- Leeds School of Business, C.U. Boulder – March 2017
- Google (Mountain View) – February 2017
- Rady School of Business, U.C. San Diego – February 2017
- School of Global Policy and Strategy, U.C. San Diego – February 2017
- Cybersecurity: Ignorance is Not an Excuse, RSAC Live Experts Panel, San Francisco – February 2017
- Wharton Neuroscience Initiative, University of Pennsylvania – February 2017
- Enigma/Usenix Cybersecurity Conference – January 2017
- University of Connecticut School of Business – December 2016.
- Ross School of Business, University of Michigan – December 2016.
- “Neuromarketing and Consumer Neuroscience” Course, Dartmouth College – November 2016.
- Haas School of Business, U.C. Berkeley, November 2016.
- Pamplin College of Business, Virginia Tech – October 2016.
- “Paper or Plastic” Course, Harvard Graduate School of Design – (annually in fall, 2014-present)
- Institute of Personality and Social Research, U.C. Berkeley – September 2016.
- ISAT/DARPA Meeting: Technology of Mass Empowerment meets Radicalization – July 2016.
- Program in Leadership and Development (PLD), HBS Executive Education – June 2016.
- INSEAD, Fontainebleau, France – June 2016.
- Rotman School of Management, University of Toronto – May 2016.
- Center for Brain Sciences Annual Retreat, Harvard University – May 2016.
- Fuqua School of Business, Duke University – December 2015.
- Kelley School of Business, Indiana University – October 2015.
- Cognitive Neuroscience Seminar, Department of Psychology, Northeastern University – October 2015.
- Haas School of Business, U.C. Berkeley – October 2015.
- International Women In Business Summit, Harvard University – October 2015.
- Association for Consumer Research, Doctoral Symposium – September 2015.
- Goizueta Business School, Emory University – September 2015.

- Anderson School of Business, UCLA – May 2015.
- Keynote: University of Chicago Brain Awareness Week – April 2015.
- Stanford Graduate School of Business – January 2015.
- Fox School of Business/Center for Neural Decision-Making, Temple University – November 2014.
- Department of Psychology, Harvard University – November 2014.
- Program for Research In Markets and Organizations, Harvard Business School – July 2014, 2015.
- Social Sciences Librarians Bootcamp, Harvard Business School – June 2014.
- Science of Social Change Group, Kennedy School, Harvard University – April 2014.
- Trustees Meeting, Marketing Science Institute– April 2014.
- Keynote: ISAT/DARPA Workshop on Trust – March 2014.
- Society for Consumer Psychology Doctoral Student Consortium – March 2014.
- Audax (*Rally*) Health – February 2014.
- Center for Brain Sciences, Harvard University – October 2013.
- Psychology Department, Yale University – September 2013.
- Advanced Management Program (AMP), Harvard Business School Executive Education – May 2013.
- Harvard Undergraduate Women in Business, Harvard University – March 2013.
- Ivey School of Business, University of Western Ontario – March 2013.
- Hubspot BizTalk, Hubspot Offices – February 2013.
- Women in Neuroscience Group, Harvard University – May 2012.
- Frontiers in (Marketing) Research Conference, TRC – May 2012.
- Interdisciplinary Group for Neuroscience and Society, Stanford University – May 2011.
- 50th Anniversary Event, Marketing Science Institute – April 2011.
- Rady School of Management, UCSD – April 2011.
- Kellogg School of Management, Northwestern University – November 2010.
- Rotman School of Business, University of Toronto – October 2010.
- Harvard Business School - October 2010.
- Fox School of Business, Temple University – September 2010.
- Fuqua School of Business / Dept. of Interdisciplinary Brain Science, Duke University - February 2010.
- Knudsen Lab, Stanford University – January 2004
- Dan Lab, U.C. Berkeley – January 2004

Conference Presentations

- Karmarkar UR, Ye S, Rimeikyte V, Kastman E, Peysakhovich A, Buckholtz JW. The representation of valenced information during ambiguous decision-making, Society for Psychophysiological Research, Annual Meeting 2016.
- Karmarkar UR. Understanding the differences between non-choice value and choice value. Presented in “Predicting choice: Using neural insights for population-level forecasting”, 10th Invitational Choice Symposium, 2016. *Workshop Co-Organizer*.
- Karmarkar UR, Shenhav A. Neural correlates of appreciating options versus choosing between them. Boston Judgment and Decision-Making Day. Boston College, 2016.
- Karmarkar UR. The impact of “display set composition” on purchase decisions. Society for Consumer Psychology Annual Conference, 2016.
- Karmarkar UR. The impact of “display set composition” on purchase decisions. Society for Judgement and Decision-Making, Annual Conference, 2015.
- Karmarkar UR. Using human and machine insights for behavioral interventions. ISAT/DARPA Workshop on Centaurs: Human-Computer Teams That Win Against Either Humans or Computers Alone, 2015.

Karmarkar UR. The impact of “display set composition” on purchase decisions. Association for Consumer Research Annual Conference, 2015.

Karmarkar UR, Peysakhovich A. Biases in information processing in ambiguous decision-making. Association for Consumer Research Annual Conference, 2015.

Karmarkar UR, Ye S, Rimeikytė V, Kastman E, Peysakhovich A, Buckholtz JW. Corticostriatal representation of information value during ambiguous decision-making. Society for Neuroeconomics Annual Meeting, 2015.

Peysakhovich A, Karmarkar UR*. Biases in using information to evaluate uncertain financial prospects. Boulder Summer Conference on Consumer Financial Decision-Making, 2015. **Presenting author*

Karmarkar UR. Choosing without knowing: biased information processing in uncertain financial decisions. Interdisciplinary Symposium on Decision Neuroscience, M.I.T. Annual Meeting 2015.

Peysakhovich A, Karmarkar UR*. Asymmetric Effects of Favorable and Unfavorable Information on Uncertain Decision-Making. Society for Neuroeconomics, Annual Meeting 2014. **Presenting author*

Karmarkar UR, Shiv B, Knutson B. Cost conscious? The neural and behavioral impact of price primacy on decision-making. Consumer Neuroscience Symposium, 2014.

Peysakhovich A, Karmarkar UR*. Asymmetric Effects of Favorable and Unfavorable Information on Uncertain Decision-Making. Behavioral Decision Research in Management, 2014. **Presenting author*

Karmarkar UR, Bollinger, BK. BYOB: How bringing your own shopping bags leads to indulging yourself and the environment. UCSD Rady Field Experimentation Conference 2014.

Karmarkar UR*, Bollinger, BK. BYOB: How bringing your own shopping bags leads to indulging yourself and the environment. Association for Consumer Research, Annual Meeting 2013. **Presenting author and session chair.*

Karmarkar UR. Understanding information processing in ambiguous choice. Session on “Advancing Biological Understanding of Economic and Consumer Decision-Making”, 9th Invitational Choice Symposium, 2013.

Karmarkar UR, Bollinger BK. BYOB: How bringing your own shopping bags leads to treating yourself and the environment. Customer Insights Conference, Yale School of Management. Annual Meeting 2013.

Karmarkar UR, Shiv B, Spencer RMC. Sleep on It? The effects of sleep on subjective preference-based choice. Interdisciplinary Symposium on Decision Neuroscience, Fox School, Temple University. Annual Meeting 2013.

Karmarkar UR, Shiv B, Knutson, B. The Effects of Price Primacy on Decision-Making and Perceptions of Product Value. Society of Consumer Psychology, Annual Meeting, 2012.

Karmarkar UR, Plassmann H, Shiv B, Rangel A. I Can Almost Taste It Now: Tracking the Neural Effects of Anticipatory Delays on Consumption. Association of Consumer Research, Annual Meeting, 2011.

Karmarkar UR, Shiv B, Knutson, B. The Effects of Price Primacy on Decision-Making and Perceptions of Product Value. Association of Consumer Research, Annual Meeting, 2011.

Karmarkar UR, Shiv B, Spencer RMC. The impact of sleep on attribute recall and choice satisfaction. Program No. 910.8. *Abstracts Viewer / Itinerary Planner*. Washington DC : Society for Neuroscience, 2010. CD-ROM.

Karmarkar UR. Sticker Shock : The Role of Price Primacy in the Decision Process. Interdisciplinary Symposium on Decision Neuroscience, Fox School of Business, Temple University. September 2010.

Karmarkar UR, Shiv, B, Spencer RMC. Should you sleep on it? : The effects of sleep on attribute recall and decision satisfaction. Behavioral Decision Research in Management, 2010.

Karmarkar UR, Tormala ZL. The Dynamic Effect of Source Certainty on Consumer Involvement and Persuasion. Association of Consumer Research, Annual Meeting, 2009.

Karmarkar UR, Spencer RMC, Shiv B. Sleep related changes in attribute recall and choice. Society for Neuroeconomics, Annual Meeting, 2009.

Karmarkar UR, Tormala ZL. Trust Me, Maybe: The Effects of Source Certainty on Consumer Involvement and Persuasion. Yale Whitebox Advisors Doctoral Seminar, 2009.

Karmarkar UR, Knutson, B, Shiv, B. Accept or Reject? : How task valence interacts with product information processing to alter purchase decisions. Association for Consumer Research, Annual Meeting, 2008.

Caporale N, Han F, Karmarkar UR, Dan Y. Nonlinear integration of binocular inputs in rat visual cortex in vivo. Program No. 436.9. *Abstracts Viewer / Itinerary Planner*. Washington, DC: Society for Neuroscience, 2006. CD-ROM.

- Buonomano DV, Karmarkar UR. Encoding time: temporal objects and temporal arithmetic. Program No. 774.1. *Abstracts Viewer / Itinerary Planner*. Washington, DC: Society for Neuroscience, 2005. CD-ROM.
- Karmarkar UR, Buonomano DV. Psychophysical analysis of interval discrimination favors state-dependent models of temporal processing. Program No. 321.11. *Abstracts Viewer / Itinerary Planner*. Washington, DC: Society for Neuroscience, 2004. CD-ROM.
- Karmarkar UR, Buonomano DV. Bi-directional homeostatic plasticity of evoked inhibition and intrinsic excitability in organotypic hippocampal slices. Program No. 256.8. *Abstracts Viewer / Itinerary Planner*. Washington, DC: Society for Neuroscience, 2003. CD-ROM.
- Karmarkar UR, Buonomano DV. Activity-dependent age sensitive changes in intrinsic excitability of CA1 pyramidal neurons. Program No. 551.18. *Abstracts Viewer / Itinerary Planner*. Washington, DC: Society for Neuroscience, 2002. CD-ROM.
- Karmarkar UR, Buonomano DV. Generalization of perceptual learning in an auditory temporal discrimination task. Program No. 166.5 *Abstracts Viewer / Itinerary Planner* Washington, DC : Society for Neuroscience, 2001. CD-ROM.
- Karmarkar UR, Buonomano DV. A model of associative LTP/LTD: one or two coincidence detectors? *Society for Neuroscience Abstracts*. Society for Neuroscience, 2000. Vol.26, Part 2, p.1903.

Honors and Awards

- 2017, MSI Young Scholar
- 2016, Top Ten Relevant Journal Publications, Neuromarketing Science and Business Assoc.
- 2016, T32 Training Program Grant to support nanocourse on Management Matters in Science, NIH/NIGMS (Supplement to PA16-133, PI- Catherine Dulac)
- 2014, 2015 Invitations for appointment to ISAT (Information Science and Technology, advisory group to DARPA; *declined due to scheduling conflicts.*)
- 2006, Jaedicke Fellowship, (recognition of outstanding academic performance), Stanford Graduate School of Business.
- 2005, Postdoctoral NRSA, National Institute of Health. Grant title: Visual cortical plasticity induced by motion.
- 2005, President's Postdoctoral Fellowship, (*declined in favor of NRSA*) University of California.
- 2004, Berkeley School of Optometry Training Grant, National Eye Institute.
- 2003, Faculty Women's Club Fellowship, University of California, Los Angeles.
- 1999, National Defense Science and Engineering Graduate Fellowship, Department of Defense.
- 1998, Chancellor's Fellowship, University of California, Los Angeles.
- 1996, Howard Hughes Medical Institute Summer Fellowship, HHMI / University of California, Los Angeles.

Academic Mentoring

- Research Advisor
 - Marina Burke (currently: Graduate student, Data analytics, NC State)
 - Ann Carroll (currently: Graduate student, Clinical psychology, Northwestern University)
 - Layla Stahr (currently: Undergraduate, Harvard University)
 - Sophia Sampson (currently: Undergraduate, University of Minnesota)
 - Shengxuan Ye (currently: Facebook)
 - Vaida Rimeikytė (currently: Graduate Student, Psychology, Cornell).
- Undergraduate Mentor, HBS Program for Research in Markets and Organizations (PRIMO; 2013-2015)
- PhD thesis committee, Joshua Manning, Brain and Cognitive Sciences Program, M.I.T (Chairs: John D. Gabrieli and Drazen Prelec, Graduated: Spring 2015)

- PhD thesis committee, Alexander Peysakhovich, Harvard Economics Department (Chair: Alvin E. Roth, Graduated: Fall, 2012)
- Harvard Graduate Women In Science and Engineering (HGWISE) Mentoring Program. (2012-2015)
⇒ Mentor of the Year Nominee, 2013
- Pre-major Undergraduate Advisor, Stanford University. (2007-2011)
- Project Brainstorm Outreach Program, UCLA (1998-2004)
- California State Science Fair Judge, California Science Center, CA. (2002-04)
- Catalyst Mentor for Women in Science, University of California, Los Angeles. (2000-01)
- Resident Undergraduate Academic Advisor, Stanford University. (1996-1998)

Service and Professional Societies

Annual Interdisciplinary Symposium on Decision Neuroscience, Conference Board (2014-present).

Society for Neuroeconomics, Council member (2016-present), Program Committee (2015, 2016).

Neuroscience Roundtables, Association for Consumer Research Annual Conference, (2012, 2014, 2015).

MIT/Harvard Decision (Neuro)Science Journal Club, Organizer (2011-2012).

Societies: Association for Consumer Research (*member, conference review board*), Society for Judgment and Decision Making, Society for Neuroeconomics, Society for Neuroscience.

Journal Reviewing (ad hoc unless otherwise specified): Acta Psychologica, BMC Neuroscience, Frontiers in Decision Neuroscience (*review editorial board*), Frontiers in Human Neuroscience, International Journal of Research in Marketing (IJRM), International Public Management Journal, JAMA Psychiatry, Journal of Consumer Research (JCR), Journal of Consumer Psychology (JCP), Journal of Experimental Psychology: General (JEXP:Gen), Journal of Marketing (JM), Journal of Marketing Research (JMR), Journal of Neuroscience, Journal of Product & Brand Management, MIS Quarterly, Neuroimage, Proceedings of the National Academy of Science (PNAS), Psychology and Economics, Social Cognitive and Affective Neuroscience (SCAN).