

CURRICULUM VITAE

LAURENCE T MALONEY

PROFESSOR, PSYCHOLOGY & NEURAL SCIENCE

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EDUCATION

Yale University	Mathematics	BA	1970-73
Stanford University	Mathematical Statistics	MS	1979-82
Stanford University	Cognitive Psychology	PhD	1979-85

APPOINTMENTS

2004 –	Professor, Psychology and Neural Science, New York University
1990 – 2004	Associate Professor, Psychology and Neural Science, New York University
1988 – 1990	Assistant Professor, Psychology and Neural Science, New York University
1985 – 1990	Assistant Professor, Psychology and EECS, University of Michigan, Ann Arbor
1984 – 1985	Research Scientist, NASA-Ames Research Center, Mountain View, California
1973 – 1979	Computer Scientist, most recently employed at Bolt Beranek and Newman, Inc., Cambridge, Massachusetts

HONORS

Troland Research Award of the National Academy of Sciences, USA, 1987.

Humboldt Research Prize of the Alexander von Humboldt Foundation, Germany, 2008.

Fulbright Scholar, Hungary, 2014-2015.

Guggenheim Fellowship, 2015.

Fellow, American Association for the Advancement of Science, elected 2012.

Fellow, Association for Psychological Science, elected 2011.

Fellow, Psychonomics Society, elected 2010.

Fellow, Society for Experimental Psychology, elected 2009.

Fellow, Zentrum für interdisziplinäre Forschung, Bielefeld, Germany, 1995 - 1996.

WICN Visiting Scholar, Wales Institute of Cognitive Neuroscience, Bangor University, Bangor, Wales, 2009.

Forchheimer Visiting Professor, Computer Science, Hebrew University, Jerusalem, 1999.

Golden Dozen Teaching Award, New York University, 1994.

GRANTS

Consequences of visual uncertainty in visual perception and action, \$903,595 direct + indirect costs, PI, National Institutes of Health/National Eye Institute, EY019889, 2011-2015.

Surface color and material perception in dynamic 3D scenes, \$324,060 direct + indirect costs, PI, National Science Foundation, NSF1059166, 2011-2014.

Perception and action: Ideal observers and actors. \$1,200,000 direct + indirect costs, co-PI (Michael Landy, PI), National Institutes of Health/National Eye Institute, EY08266, 2004-2008.

Depth and surface properties: Perception and action, \$722,000 direct + indirect costs, co-PI (Michael Landy, PI), National Institutes of Health/National Eye Institute, EY08266, 2001-2004.

OPTOTRAK motion measurement system. \$107,782, direct costs (no indirect), co-PI (Karen Adolph, PI), National Institutes of Health/NCRR.

The representations underlying perceptual judgment and action, \$600,000 direct + indirect costs, co-PI (Pascal Mamassian, University of Glasgow, PI), Human Frontiers Science Program, RG0109/1999-B, 1999-2003.

Perception of depth and surface properties, \$699,387 direct, \$1,058,221 direct + indirect costs, co-PI (M. S. Landy, PI), National Institutes of Health, 1995-2000.

Neural development and chromatic aberration, \$113,417 direct and indirect costs, Principal Investigator, 25% effort Academic, 67% Summer, Air Force Office of Scientific Research F49620-92-J-0187, 1992-1994.

Shape representation and multiple depth cues, \$279,301 direct costs, co-PI (M. S. Landy, PI), National Institutes of Health, 1992-1995.

Fusion and calibration of multiple depth cues, \$208,940 direct costs, co-PI (M. S. Landy, PI), National Institutes of Health EY08266, 1989-1992.

TEACHING EXPERIENCE

Graduate

Math Tools for Cognitive Science and Neuroscience
Simulation and Data Analysis
Mathematical Statistics
Multivariate Statistics
Linear Systems
Decision Making & Neuroeconomics

Undergraduate

Introductory Statistics
Cognitive Science
Cognition
Perception
Decision Making & Neuroeconomics

PROFESSIONAL SERVICE

Associate Editor, *Psychological Review*, 2015-

Associate Editor, *PLoS Computational Biology*, 2010-2014

Associate Editor, *Frontiers in Perception Science*, 2009 – 2015.

Editorial Board, *Journal of Vision*, January, 2005 –

Editorial Board, *Psychological Science*, Jan 2007 – Dec 2008, Jan 2011 –2012

Consulting Editor, *Psychological Review*, 2011-2014

Feature Editor (with Preeti Verghese, Michael S. Landy), Special issue: “The efficiency of vision and action” *Journal of Vision*, 2014-2015.

Feature Editor (with David Brainard), Special issue: “Color and material properties in complex 3D scenes” *Journal of Vision*, 2009-2010.

Feature Editor (with James Elder, Sergei Gepshtein), Special issue: “Perceptual organization and neural computation”, *Journal of Vision*, 2007-2008.

Feature Editor (with David C. Knill, Julia Trommershäuser), Special issue: “Sensori-motor processing and goal-directed movement”, *Journal of Vision*, 2006-2007.

Feature Editor (with David Brainard), Special issue: “Color and material perception in complex scenes” *Journal of Vision*, 2003-2004.

Feature Editor (with James Schirillo), Special issue: “Articulation” *Perception*, 2002.

Feature Editor (with Rainer Mausfeld & Dieter Heyer), Special issue: “The case for cognitive universals” *Behavioral & Brain Sciences*, 2002.

Scientific Consultative Group, National Gallery, London, 2011—

Methusalem Panel, KU Leuven, May 2014.

Examiner, Habilitation à diriger les recherches, Université Caen, Caen, France, Nov 3—10, 2011.

College of Reviewers, Canada Research Chair, 2006—

Advisory Board, DIRAC Project, IST-FP6 (Information Society Technologies, Framework Project 6, European Union), Martigny, CH, 2006.

Program Committee, ISMB/ECCB, 2011.

Program Committee, Cognitive Science 2010—2012.

Program Committee, CoSyNe, 2011.

Program Committee, Vision Sciences Society, 2010— 2015.

Program Committee, European Conference on Visual Perception, 2013.

Site Reviewer, Science Foundation of Ireland, Trinity College, Dublin, April, 2009.

BOOKS

3. Gepshtein, S., Singh, M. & Maloney, L. T. (2015), *Oxford Handbook of Computational Perceptual Organization*. New York: Oxford University Press, *in preparation*.
2. Knoblauch, K. & Maloney, L. T. (2012), *Modeling Psychophysical Data in R*. New York: Springer.
1. Landy, M. S., Maloney, L. T., and Pavel, M. [Eds] (1996), *Exploratory Vision: The Active Eye*. New York: Springer-Verlag.

REFEREED JOURNAL ARTICLES

Authors in italics were pre- or post-doctoral students working with me.

2014-2015 and in press

106. *Pedersini, R., Morvan, C., Maloney, L. T., Horowitz, T. S. & Wolfe, J. M.* (2016), Search must have a stop: stopping rules in abstract search. *Decision, under review*, June 10, 2015
105. *Juni, M. Z., Gureckis, T. M. & Maloney, L. T.* (2016), Information sampling behavior with explicit sampling costs. *Decision, in press*, September 7, 2015.
104. Dal Martello, M. F., DeBruine, L. M. & Maloney, L. T. (2015), Kin recognition not affected by facial inversion. *Journal of Vision*, 15(13):5, 1-11.
103. Wu, S.-W., Delgado, M. & Maloney, L. T. (2015), The neural correlates of perceptual decision under risk. *Frontiers in Neuroscience*, 9(314), 1-13.
102. *Zhang, H., Pailly, J. T. & Maloney, L. T.* (2015), Decision from models: generalizing probability information to novel tasks. *Decision*, 2(1), 39-53.
101. Ting, C.-C., Yu, C.-C., Maloney, L. T. & Wu, S.-W, (2015), Neural mechanisms for integrating prior knowledge and likelihood in reward-based inferences: The neural bases of judgment under uncertainty. *Journal of Neuroscience*, 35(4): 1792-1805.
100. *Zhang, H., Daw, N. D. & Maloney, L. T.* (2015), Human representation of visuo-motor uncertainty as mixtures of orthogonal basis distributions. *Nature Neuroscience*, DOI: 10.1038/nn.4055.
99. Hilford, A., Maloney, L. T., Glanzer, M. & Kim, K. (2015), Three regularities of recognition memory: The role of bias. *Psychonomic Bulletin & Review*, DOI: 10.3758/s13423-015-0829-0.

98. Zhang, H. & Kulsa, M. K. C. & Maloney, L. T. (2015), Acquisition, representation and transfer of models of visuo-motor error. *Journal of Vision*, 15(8):6, 1-15.
97. Fulvio, J. M., Maloney, L. T. & Schrater, P. R. (2015), Revealing individual differences in strategy selection through visual motion extrapolation, *Cognitive Neuroscience*, <http://dx.doi.org/10.1080/17588928.2014.1003181>, 1-11.

2012-2013

96. Fleming, S. Maloney, L. T. & Daw, N. D. (2013), The irrationality of categorical perception. *Journal of Neuroscience*, 33(49), 19060-19070.
95. Zhang, H., Daw, N. & Maloney, L. T. (2013), Testing whether humans have an accurate model of their own motor uncertainty in a speeded reaching task. *PLoS Computational Biology*, 9(5):e1003080, 1-11.
94. Gerhard, H. E. & Maloney L. T. (2013) Inferred perception of light sources in 3D is color-blind, *i-Perception*, 4(2), 98-100.
93. Glaser, C. Trommershäuser, J., Mamassian, P. & Maloney, L. T. (2012), Comparison of the distortion of probability information in decision under risk and in an equivalent visual task. *Psychological Science*, 23(4), 419-426.
92. Warren, P. A., Graf, E. W., Champion, R. & Maloney, L. T. (2012), Extrapolation under risk: human observers estimate and compensate for exogeneous uncertainty. *Proceedings of the Royal Society, Series B*, 279(1736), 2171-2179.
91. Zhang, H., Morvan, C., Etezad-Heydari, L.-A., Maloney, L. T. (2012), Very slow search and reach: eye-hand coordination in finding and touching a target among distractors. *PLoS Computational Biology*, 8(10), e1002718, 1-12.
90. Hudson, T. E., Wolfe, U. & Maloney, L. T. (2012), Speeded reaching movements around invisible obstacles. *PLoS Computational Biology*, 8(9), e1002676, 1-9.
89. Juni, M., Gureckis, T. M. & Maloney, L. T. (2012), Effective integration of serially presented stochastic cues. *Journal of Vision*, 12(8):12, 1-16.
88. Morvan, C. & Maloney, L. T. (2012), Human visual search does not maximize the post-saccadic probability of identifying targets. *PLoS Computational Biology*, 8(2), e1002342, 1-11.
87. Charrier, C., Knoblauch, K., Maloney, L. T., Bovik, A. C. & Morthy, A. (2012), Optimizing multi-scale SSIM via MLDS. *IEEE Transactions on Image Processing*, 21 (12), 4682-4694.

86. Zhang, H. & Maloney, L.T. (2012), Ubiquitous log odds: a common representation for probability and frequency distortion in perception, action and cognition. *Frontiers in Neuroscience*, 6(1), 1-14.

2010-2011

85. Wu, S.-W., Delgado, M. R. & Maloney, L. T. (2011), The neural correlates of subjective utility of monetary outcome and probability weight in economic and in motor decision under risk. *Journal of Neuroscience*, 31, 8822-8831.
84. Fleming, R. W., Jäkel, F., Maloney, L. T. (2011) Visual perception of thick transparent materials. *Psychological Science*, 22(6), 812-820.
83. Brainard, D. H. & Maloney, L. T. (2011), Surface color perception and equivalent illumination models. *Journal of Vision*, 11(5):1, 1–18.
82. Fujikake, H., Higuchi, T., Imanaka, K., & Maloney, L. T. (2011), Directional bias in the body while walking through a doorway: Its association with motor and cognitive factors. *Experimental Brain Research*, 210(2), 195-206
81. Zhang, H., Maddala, S. & Maloney, L.T. (2010), Planning routes across economic terrains: maximizing utility, following heuristics. *Frontiers in Psychology*, 1, 1-10.
80. Juni, M. Z., Singh, M. & Maloney, L. T. (2010), Robust visual estimation as source separation. *Journal of Vision*, 10(14):2, 1-20.
79. Zhang, H., Morvan, C. & Maloney, L. T. (2010), Gambling in the visual periphery: a conjoint-measurement analysis of human ability to judge visual uncertainty. *PLoS Computational Biology*, 6(12): e1001023, 1-10.
78. Maloney, L. T. & Zhang, H. (2010), Decision-theoretic models of visual perception and action. *Vision Research*, 50, 2362-2374.
77. Doerschner, K., Maloney, L. T. & Boyaci, H. (2010), Perceived glossiness in high dynamic range scenes. *Journal of Vision*, 10(9):11, 1-11.
76. Gerhard, H. E. & Maloney, L. T. (2010) Estimating changes in lighting direction in binocularly-viewed three-dimensional scenes. *Journal of Vision*, 10(9):14, 1-22.
75. Dal Martello, M. F. & Maloney, L. T. (2010), Lateralization of kin recognition signals in the human face. *Journal of Vision*, 10(8):9, 1-10.

74. Gerhard, H. E. & Maloney, L. T. (2010) Detection of light transformations and concomitant changes in surface albedo. *Journal of Vision*, 10(9):1, 1-14.
73. Zhang, H., Wu, S.-W. & Maloney, L. T. (2010), Planning multiple movements within a fixed time limit: The cost of active time allocation in a visuo-motor task. *Journal of Vision*, 10(6):1, 1-17.
72. Emrith, K., Chantler, M. J., Green, P. R., Maloney, L. T. & Clarke, A. D. F. (2010), Measuring perceived differences in surface texture due to changes in higher order statistics, *Journal of the Optical Society of America A*, 27(5), 1232-1244. Included in *Virtual Journal for Biomedical Optics*, 5(9), July 6, 2010.
71. Doerschner, K., Boyaci, H. & Maloney, L. T. (2010), Estimating the glossiness transfer function induced by illumination change and testing its transitivity. *Journal of Vision*, 10(4):8, 1-9.

2008-2009

70. Wu, S.-W., Dal Martello, M. F. & Maloney, L. T. (2009), Sub-optimal tradeoff of time in sequential movements. *PLoS ONE*, 4(12): e8228, 1-13.
69. Ho, Y.-X., Serwe, S., Trommershäuser, J., Maloney, L. T. & Landy, M. S. (2009), The role of visuo-haptic experience in visually perceived depth. *Journal of Neurophysiology*, 101(6), 2789-2801.
68. Wu, S.-W., Delgado, M. & Maloney, L. T. (2009), Economic decision-making compared to an equivalent motor task, *Proceedings of the National Academy of Sciences, USA*, 106(15), 6088-6093.
67. Glanzer, M., Hilford, A. & Maloney, L. T. (2009), Likelihood ratio decisions in memory: Three implications. *Psychonomic Bulletin & Review*, 16(3), 431-455.
66. Fulvio, J. M., Singh, M. & Maloney, L. T. (2009), An experimental criterion for consistency in the interpolation of partially-occluded contours. *Journal of Vision*, 9(4):5, 1-19.
65. Maloney, L. T. & Mamassian, P. (2009), Bayesian decision theory as a model of visual perception: Testing Bayesian transfer. *Visual Neuroscience*, 26, 147-155.
64. Knoblauch, K. & Maloney, L. T. (2008), Estimating classification images with generalized additive models. *Journal of Vision*, 8(16):10, 1-19, <http://journalofvision.org/8/16/10/>, doi:10.1167/8.16.10.
63. Hudson, T. E., Maloney, L. T. & Landy, M. S. (2008), Optimal compensation for temporal uncertainty in movement planning. *PLoS Computational Biology*, 4(7):e100130, 1-9.
62. Trommershäuser, J., Maloney, L. T. & Landy, M. S. (2008), Decision making, movement planning and statistical decision theory. *Trends in Cognitive Science*, 12(8), 291-297.

61. Ho, Y.-H., Landy, M. S. & Maloney, L. T. (2008), Conjoint measurement of gloss and surface texture. *Psychological Science*, 19(2), 196-204.
60. Kitazaki, M., Kobiki, H. & Maloney, L. T. (2008), The effect of pictorial depth cues, binocular disparity and motion parallax depth cues on lightness perception in three-dimensional virtual scenes, *PLoS ONE*, 3(9): e3177, 1-9.
59. Yeshurun, Y., Carrasco, M. & Maloney, L. T. (2008), Bias and sensitivity in two-interval forced-choice procedures, *Vision Research*, 48, 1837-1851.
58. Cohen, E. H., Singh, M. & Maloney, L. T. (2008), Perceptual segmentation and the perceived orientation of dot clusters: The role of robust statistics. *Journal of Vision*, 8(7), 1-13.
57. Tokunaga, R., Logvinenko, A. D. & Maloney, L. T. (2008), Multidimensional scaling of dissimilarities between yellow-blue surfaces rated under neutral light sources. *Visual Neuroscience*, 25, 395-398.
56. Fulvio, J. M., Singh, M. & Maloney, L. T. (2008), Precision and consistency of location and gradient judgments of visually-interpolated contours, *Vision Research*, 48(6), 831-849.
55. Knoblauch, K. & Maloney, L. T. (2008), MLDS: Maximum likelihood difference scaling in R. *Journal of Statistical Software*, 25(2), 1-26.
54. Logvinenko, A., Petrini, K. & Maloney, L. T. (2008), A scaling analysis of the snake lightness illusion. *Perception & Psychophysics*, 70(5), 828-840.

2006-2007

53. Hudson, T. E., Maloney, L. T. & Landy, M. S. (2007), Movement planning with probabilistic target information. *Journal of Neurophysiology*, 98, 3034-3046.
52. Doerschner, K., Boyaci, H. & Maloney, L. T. (2007), Testing limits on matte surface color perception in three-dimensional scenes with complex light fields, *Vision Research*, 47, 3409-3423.
51. Charrier, C., Maloney, L. T., Cherifi, H. & Knoblauch, K., (2007), Maximum likelihood difference scaling of image quality in compression-degraded images. *Journal of the Optical Society of America A*, 24, 3814-3826.
50. Dean, M., Wu, S.-W. & Maloney, L. T. (2007), Trading off speed and accuracy in rapid, goal directed movements, *Journal of Vision*, 7(5):10, 1-12.

49. Rhodes, G., Maloney, L. T., Turner, J. & Ewing, L. (2007), Adaptive face coding and discrimination around the average face, *Vision Research*, 47, 974-989.
48. Ho, Y.-X., Maloney, L. T. & Landy, M. S. (2007), The effect of viewpoint on perceived visual roughness, *Journal of Vision*, 7, 1-16.
47. Trommershäuser, J., Landy, M. S. & Maloney, L. T. (2006), Humans rapidly estimate expected gain in movement planning. *Psychological Science*, 17, 981-988.
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Chater, N. K. (Ed) (2009). Judgement and Decision Making, Vol. 2: Individual Decision Making. SAGE Publications Ltd.
46. Dal Martello, M. F. & Maloney, L. T. (2006), Where are kin recognition signals in the human face? *Journal of Vision*, 6, 1356-1366.
45. Trommershäuser, J., Mattis, J., Landy, M. S. & Maloney, L. T. (2006), Limits to human movement planning with delayed and unpredictable onset of needed information. *Experimental Brain Research*, 175, 276-284.
44. Schultz, S., Doerschner, K., & Maloney, L. T. (2006), Color constancy and hue scaling. *Journal of Vision*, 6, 1102-1116.
43. Boyaci, H., Doerschner, K., Snyder, J. L. & Maloney, L. T. (2006), Surface color perception in three-dimensional scenes. *Visual Neuroscience*, 23, 311-321.
42. Maloney, L. T. & Dal Martello, M. F. (2006), Kin recognition and the perceived facial similarity of children, *Journal of Vision*, 6, 1047-1056.
41. Fulvio, J. M., Singh, M. & Maloney, L. T. (2006), Combining achromatic and chromatic cues to transparency, *Journal of Vision*, 6, 760-776.
40. Logvinenko, A. D. & Maloney, L. T. (2006), The proximity structure of achromatic surface colors and the impossibility of asymmetric lightness matching. *Perception & Psychophysics*, 68, 76-83.
39. Ho, Y.-X., Landy, M. S. & Maloney, L. T. (2006), How direction of illumination affects perceived visual roughness, *Journal of Vision*, 6, 634-648.
38. Wu, S.-W., Trommershäuser, J., Maloney, L. T. & Landy, M. S. (2006), Limits to human movement planning in tasks with asymmetric gain landscapes. *Journal of Vision*, 6, 53-63.
37. Boyaci, H., Doerschner, K., & Maloney, L. T. (2006), Cues to an equivalent lighting model, *Journal of Vision*, 6, 106-118.

2004-2005

36. Maloney, L. T., Dal Martello, M. F., Sahm, C. & Spillmann, L. (2005), Past trials influence perception of ambiguous motion quartets through pattern completion. *Proceedings of the National Academy of Sciences, USA*, 102, 3164-3169.
35. Trommershäuser, J., Gepshtein, S., Maloney, L. T., Landy, M. S. & Banks, M. S. (2005), Compensation for changes in effective movement variability. *Journal of Neuroscience*, 25, 7169-7178.
34. Graf, E. W., Warren, P. A. & Maloney, L. T. (2005), Explicit estimation of visual uncertainty in human motion processing. *Vision Research*, 45, 3050-3059.
33. Snyder, J. L., Doerschner, K., & Maloney, L. T. (2005), Illumination estimation in three-dimensional scenes with and without specular cues, *Journal of Vision*, 5, 863-877.
32. Wolfe, U., Maloney, L. T. & Tam, M. (2005), Distortions of perceived length in the fronto-parallel plane: Tests of perspective theories, *Perception & Psychophysics*, 67, 967-979.
31. Boyaci, H., Doerschner, K. & Maloney, L. T. (2004), Perceived surface color in binocularly-viewed scenes with two light sources differing in chromaticity. *Journal of Vision*, 4, 664-679.
30. Warren, P.A. Maloney, L. T. & Landy, M. S. (2004), Interpolating sampled contours in 3D: Perturbation analyses. *Vision Research*, 44, 815-832.
29. Doerschner, K., Boyaci, H. & Maloney, L. T. (2004), Human observers compensate for secondary illumination originating in nearby chromatic surfaces, *Journal of Vision*, 4, 92-105.

2002-2003

28. Trommershäuser, J., Maloney, L. T. & Landy, M. S. (2003), The consistency of bisection judgments in visual grasp space. *Journal of Vision*, 3, 795-807.
27. Oruç, I, Maloney, L. T., & Landy, M. S. (2003), Weighted linear cue combination with possibly correlated error, *Vision Research*, 43, 2451-2468.
26. Trommershäuser, J., Maloney, L. T. & Landy, M. S. (2003), Statistical decision theory and the selection of rapid, goal-directed movements. *Journal of the Optical Society A*, 20, 1419-1433. [Included in Virtual Journal of Biological Physics Research](#), July 15, 2003.
25. Maloney, L. T. & Yang, J. N. (2003), Maximum likelihood difference scaling. *Journal of Vision*, 3, 573-585.

24. Boyaci, H., Maloney, L. T. & Hersh, S. (2003), The effect of perceived surface orientation on perceived surface albedo in three-dimensional scenes, *Journal of Vision*, 3, 541-553.
23. Trommershäuser, J., Maloney, L. T. & Landy, M. S. (2003), Statistical decision theory and tradeoffs in motor response. *Spatial Vision*, 16, 255-275.
22. Maloney, L. T. (2002), Illuminant estimation as cue combination. *Journal of Vision*, 2, 493-504.
21. Warren, P. A., Maloney, L. T., & Landy, M. S. (2002), Interpolating sampled contours in 3D: Analyses of variability and bias. *Vision Research*, 42, 2431-2446.

1990-2001

20. Yang, J. N. & Maloney, L. T. (2001), Illuminant cues in surface color perception: Tests of three candidate cues. *Vision Research*, 41, 2581-2600.
19. Bonnardel, V. & Maloney, L. T. (2000), Daylight, biochrome surfaces, and human chromatic response in the Fourier domain. *Journal of the Optical Society of America*, 17, 677-687.
18. Knoblauch, K., & Maloney, L. T. (1996), Testing the indeterminacy of color mechanisms from color discrimination data. *Vision Research*, 36, 295-306.
17. Poirson, A. B. & Maloney, L. T. (1996), A video-input device that displays high-luminance, high-resolution color images. *Vision Research*, 36, 2575-2578.
16. Landy, M. S., Maloney, L. T., Johnston, E. B., & Young, M. (1995), Measurement and modeling of depth cue combination: In defense of weak fusion. *Vision Research*, 35, 389-412.
15. Wuerger, S. M., Maloney, L. T., & Krauskopf, J. (1995), Proximity judgments in color space: Tests of a Euclidean color geometry. *Vision Research*, 35, 827-835.
14. Young, M. J., Landy, M. S. & Maloney, L. T. (1993), A perturbation analysis of depth perception from combinations of texture and motion cues. *Vision Research*, 33, 2685-2696.
13. Chan, A. S., Butters, N. Paulsen, J. S., Salmon, D. P., Swenson, M. R. Maloney, L. T. (1993), An assessment of the semantic network in patients with Alzheimer's-disease. *Journal of Cognitive Neuroscience*, 5, 254-261.
12. Maloney, L. T., and Thomas, E. A. C. (1991), Distributional assumptions and observed conservatism in the theory of signal detectability. *Journal of Mathematical Psychology*, 35, 443-470.

11. Maloney, L. T. (1990), The slope of the psychometric function at different wavelengths. *Vision Research*, 30, 129-136.
10. Maloney, L. T. (1990), Confidence intervals for the parameters of psychometric functions. *Perception & Psychophysics*, 47, 127-134.

1989 and earlier

9. Maloney, L. T., and Ahumada, A. J. (1989), Learning by assertion: A method for calibrating a simple visual system. *Neural Computation*, 1, 387-395.
8. Maloney, L. T. & Koh, K. (1988), A method for calibrating a visual display to high accuracy. *Behavior Research Methods, Instruments & Computers*, 20, 372-389.
7. Maloney, L. T. & Gelman, S. A. (1987), Measuring the influence of context: the interpretation of dimensional adjectives. *Language & Cognitive Processes*, 2, 205-215.
6. Maloney, L. T. (1986), Evaluation of linear models of surface spectral reflectance with small numbers of parameters. *Journal of the Optical Society of America A*, 3, 1673-1683.

Reprinted in

Healy, G., Shafer, S., & Wolfe, L., [Eds], (1992), *Physics-Based Vision: Principles and Practice*. Jones & Bartlett.

5. Maloney, L. T., and Wandell, B. A. (1986), Color constancy: A computational method for recovering surface spectral reflectance. *Journal of the Optical Society of America A*, 3, 29-33.

Reprinted in

Fischler, M., and Firschein, O. [Eds] (1987), *Readings in Computer Vision: Issues, Problems, Principles, and Paradigms*. Los Altos, California: Morgan Kaufmann, 293-297.

Ullman, S., and Richards, W., [Eds] (1990), *Image Understanding, 1989*. Norwood, NJ: Ablex, 215-224.

Kasturi, R., & Jain, R. C. [Eds] (1991), *Computer Vision: Advances & Applications*. Los Alamitos, CA: IEEE Computer Press, 11-15.

Healy, G., Shafer, S., & Wolfe, L., [Eds], (1992), *Physics-Based Vision: Principles and Practice*. Jones & Bartlett.

4. Gelman, S. A., Ravn, K. E., and Maloney, L. T. (1985), When "big" does not refer to overall size: dimensional adjectives in context. *Papers and Reports on Child Language Development*, 24, 62-69.
3. Maloney, L. T., and Wandell, B. A. (1984), A model of a single visual channel's response to weak test lights. *Vision Research*, 24, 633-640.
2. Maloney, L. T. (1983), Nearest neighbor analysis of point processes: simulations and evaluations. *Journal of Mathematical Psychology*, 27, 251-260.

1. Wandell, B. A., Sanchez, J., and Maloney, L. T. (1982), Adaptation in the long-wavelength pathways. *Vision Research*, 22, 1071-1074.

UNDER REVIEW OR SHORTLY TO BE SUBMITTED

Juni, M. Z., Gureckis, T. M. & Maloney, L. T. (2015), One-shot lotteries in the park: paying to increase your chances of winning, under review, December 31, 2015.

Tee, J. & Maloney, L. T. (2015), Evidence of suboptimal inference as a source of choice behavior variability, under review, November 10, 2015.

Tee, J., Zhang, H. & Maloney, L. T. (2015), Discrete representation of probability in a conjunction task, Science, under review, November 10, 2015.

Zhang, H. & Maloney, L. T. (2015), Bounded adaptive sampling model of frequency and probability distortion. Psychological Review, under review, December 1, 2015.

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8. *Charrier, C., Knoblauch, K., Maloney, L. T. and Bovik, A. C. (2011), Calibration de la métrique MS-SSIM pour les distorsions de compression à l'aide d'une échelle perceptive des différences. GRETSI, Bordeaux, France.*
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BOOK CHAPTERS & OPINION PIECES

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2014-2015

Maloney, L. T. (2015), Statistical decision theory, perception and action. Computational Vision Summer School 2015, Schwarzwald, Germany, July 27–August 5, 2015.

Maloney, L. T. (2015), Decision in an ongoing world. Meeting of the DFG Research Group “Kardinale Mechanismen der Wahrnehmung: Prädiktion, Bewertung, Kategorisierung”, Schloss Rauschholzhausen, Germany, July 20–24, 2015.

Maloney, L. T. (2015), Symposium on “Colour Constancy”, European Conference on Visual Perception, Liverpool, UK, August 23-27, 2015.

Maloney, L. T. & Gerhard, H. E. (2014), “Sequential Effects” Workshop, Pisa, Italy, December 11-12, 2014.

Maloney, L. T. (2014), CIMEC Workshop “Surfaces”, Roveretto, Italy, December 2-4, 2014.

Maloney, L. T. (2014), Detecting surface lightness changes concomitant with illumination changes. PRISM4: Perceptual Representation of Illumination, Shape and Materials, Bilkent University, Ankara, Turkey, October 6-9, 2014.

Maloney, L. T. (2014), Statistical decision theory, perception and action. European Summer School 2014, “Visual neuroscience: from spikes to awareness”, Rauschholzhausen, Germany, August 10-22, 2014.

2012-2013

Maloney, L. T. (2013), Estimating and discounting the light field: Perception of surface color in three-dimensional virtual scenes. 22nd Symposium of the International Colour Vision Society (ICVS), Winchester, England, UK, July 14-18, 2013.

Maloney, L. T. (2013), Issues in cue combination. London Cue Integration Workshop, University College, London, London, England, UK, September 12, 2013.

Maloney, L. T., Zhang, H., Morvan, C., & Etehad-Heydari, L.-A. (2013), Sub-optimal eye movement strategies in simple visual and visuo-motor tasks. In symposium “Are eye movements optimal?” European Conference on Visual Perception, Bremen, Germany, 25-29 August, 2013. Abstract: *Perception*, #806.

Maloney, L. T. (2012), Statistical decision theory, perception and action. European Summer School 2012, “Visual neuroscience: from spikes to awareness”, Rauschholzhausen, Germany, August 19-31, 2012.

Maloney, L. T. (2012), Abstract cue combination. Cue integration workshop, University College, London, London, England, UK, August 16-17, 2012.

Maloney, L. T. (2012), Statistical decision theory, perception and action. Computational Vision Summer School 2012, Schwarzwald, Germany, June 28–July 5, 2012.

Maloney, L. T. (2012), Measuring and modeling surface color and material appearance. Keynote address, Predicting perceptions: The 3rd international conference on appearance, Heriot-Watt University, Edinburgh, Scotland, April 17-19, 2012.

Maloney, L. T. (2012), W. S. Stiles and surface color appearance. The W. S. Stiles Memorial Lecture, Institute for Ophthalmology, University College, London, England, UK, April 13, 2012.

Maloney, L. T. (2012), Representing uncertainty in perception, action, and cognition. NYU-WIS Science Days, Weizman Institute of Science, Rehovot, Israel, The 3rd international conference on appearance, Heriot-Watt University, Edinburgh, Scotland, March 11-13, 2012.

Maloney, L. T. (2012), Perception of surface color and material: measuring and modeling appearance. Keynote address, special session on “Material perception”, Human Vision and Electronic Imaging XVII: conference E1104. San Francisco, CA, January 22-26, 2012.

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Maloney, L. T. (2011), Mixing memory and desire: Bayesian decision theory in perception and action. Bernstein Symposium, “Bayesian Inference: From Spikes to Behavior”, Bernstein Centre for Computational Neuroscience and the Centre for Integrative Neuroscience, University of Tübingen, Tübingen, Germany, Dec 10-11, 2011.

Maloney, L. T. (2011), Decision-theoretic models of action in space. Workshop: “Probabilistic models of cognition.” Sestri Levante, Liguria, Italy, July 19-21, 2011.

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Maloney, L. T. (2011), Perception, action, and uncertainty, Fifteenth International Conference on Cognitive and Neural Systems, Boston, MA, May 11-14, 2011.

Maloney, L. T. (2011), Learning and knowing, The Snowbird Learning Workshop, Ft. Lauderdale, FL, April 13-16, 2011.

Maloney, L. T. (2011), Distortions of probability information in human judgment: ubiquitous log odds. 2011 Minerva Workshop, Technion, Haifa, Israel, January 14, 2011.

Maloney, L. T. (2010), Statistical decision theory, perception and action. European Summer School 2010, "Visual neuroscience: from spikes to awareness", Rauschholzhausen, Germany, August-September, 2010.

Maloney, L. T. (2010), Decision under risk, movement under risk. Plenary Address, Mathematical Psychology 2010, August 7-10, 2010, Portland, OR.

Maloney, L. T. (2010), Perception of color and material in 3D. Keynote address, Innovative Manufacturing Research Conference, Heriot-Watt University, Edinburgh, Scotland, July, 2010.

CONFERENCE ABSTRACTS: 2010—

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Maloney, L. T. & Dal Martello, M. F. (2015), Testing additivity of kinship information in complementary facial regions. Paper presented at the Annual Meeting of the Vision Sciences Society, Naples, Florida, Abstract: *Journal of Vision, submitted.*

Zhang, H. , Kusla, M. & Maloney, L. T. (2015), Acquisition and transfer of models of visuo-motor uncertainty in a throwing task. Paper presented at the Annual Meeting of the Vision Sciences Society, Naples, Florida, Abstract: *Journal of Vision, submitted.*

Tee, J. & Maloney, L. T. (2015), Separating noise from sub-optimal inference in choice behavior variability. Paper presented at the Annual Meeting of the Vision Sciences Society, Naples, Florida, Abstract: *Journal of Vision, submitted.*

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Hofer, M., Maloney, L. T. & Fiser, J. (2015), Detecting structure in visual sequences. Paper presented at the Annual Meeting of the Vision Sciences Society, Naples, Florida, Abstract: *Journal of Vision, submitted.*

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Kucukoglu, G. & Maloney, L. T. (2014), Estimation of angular velocity of objects differing in material is inconsistent. Paper presented at the Annual Meeting of the Vision Sciences Society, Naples, Florida, May 16-21, 2014, Abstract: *Journal of Vision, accepted.*

Kim, M., Ng, K. & Maloney, L. T. (2014), Failure to discount the light for surfaces at varying orientations. Paper presented at the Annual Meeting of the Vision Sciences Society, Naples, Florida, May 16-21, 2014, Abstract: *Journal of Vision, accepted.*

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- Hang, Z., Kim, H., Daw, N. D. & Maloney, L. T. (2013) Learned myopic or far-sighted: experiences shape human temporal horizon in sequential decisions. First Multidisciplinary Conference on Reinforcement Learning and Decision Making, Princeton, NJ USA, October 25-27, 2013.
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- Zhang, H. Paily, J. T. & Maloney, L. T. (2012), Economic foraging in a terrain of constant hazard rate. *Annual Meeting of the Society for Neuroeconomics*, Miami, FL, September 28-30, 2012, *accepted*.
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- Juni, M. Z., Gureckis, T. M. & Maloney, L. T. (2012) One-shot lotteries in the park. *Cognitive Sciences 2012*, Sapporo, Japan, *accepted*.
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- Zhang, H., Daw, N. & Maloney, L. T. (2012), The motor error distribution implicit in planning of movement in a speeded reaching task compared to the true error distribution. Paper presented at the Annual Meeting of the Vision Sciences Society, Naples, Florida, Abstract: *Journal of Vision*, *accepted*.
- Tee J., Zhang, H. & Maloney, L. T. (2012), Joint probability of independent events is consistent with weighted combination of log probabilities. *Computational and Systems Neuroscience 2012*, Salt Lake City, Utah, February 23-26, #418, *accepted*.

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Wu, S.-W., Delgado, M. Maloney, L. T. (2011) The neural correlates of probability distortion in perceptual and in economic decision under risk. *Annual Meeting of the Society for Neuroscience, 830.09/XX39, Nov 16, 2011, Washington, D.C.*

Zhang, H., Daw, N. & Maloney, L. T. (2011), Testing whether humans have an accurate model of their own motor uncertainty in a speeded reaching task. *ACMC Satellite Conference, Society for Neuroscience Meeting, Nov 11, 2011, accepted.*

Schüür, F., Zhang, H., Bestmann, S. & Maloney, L. T. (2011), External and internal temporal uncertainty in decision making. *XI International Conference on Cognitive Neuroscience, September 25-29, 2011. Palma, Mallorca, Spain.* Abstract: *Front. Hum. Neurosci. Conference Abstract: XI International Conference on Cognitive Neuroscience (ICON XI)*. doi: 10.3389/conf.fnhum.2011.207.00393

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Juni, M, Z., Gureckis, T. M. & Maloney, L. T. (2011), Don't stop 'til you get enough: adaptive information sampling in a visuomotor estimation task. *Cognitive Sciences 2011, Boston, Massachusetts, 2854-2859.*

Charrier, C., Knoblauch, K., Maloney, L. T., & Bovik, A. C. (2011), Calibrating MS-SSIM for compression distortions using MLDS. *18th IEEE International Conference on Image Processing (ICIP 2011), Brussels, Belgium, accepted, 4/18/2011.*

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Juni, M, Z., Gureckis, T. M. & Maloney, L. T. (2011), Adaptive cue combination in a visual estimation task. Paper 63.319 presented at the Annual Meeting of the Vision Sciences Society, Naples, Florida, Abstract: *Journal of Vision, 11(11): 1062.*

Zhang, H., Daw, N. & Maloney, L. T. (2011), Testing whether humans have an accurate model of their own motor uncertainty in a speeded reaching task. Paper 55.12 presented at the Annual Meeting of the Vision Sciences Society, Naples, Florida, Abstract: *Journal of Vision, 11(11): 953.*

Maloney, L. T. & Dal Martello, M. F. (2011), Kin recognition based on viewing photographs of children's faces is not affected by facial inversion. Paper 61.26 presented at the Annual Meeting of the Vision Sciences Society, Naples, Florida, Abstract: *Journal of Vision, 11(11): 664.*

- Maloney, L. T. & Zhang, H. (2010), Control and prediction of probability distortion in human judgment, Paper presented at the annual meeting of the Society for Judgment and Decision Making, St. Louis, MO, November, 20-22, 2010, accepted.
- Zhang, H. & Maloney, L. T. (2010), Economic navigation: planning routes across terrains varying in cost. Annual Meeting of the Psychonomic Society, November 18-21, 2010, St. Louis, MO, accepted.
- Warren, P. A., Graf, E. W., Maloney, L. T. & Champion, R. A. (2009), Explicit estimation of visual uncertainty: a new motion extrapolation paradigm. European Conference on Visual Perception, Regensburg, Germany, August 2009. Abstract: *Perception* 38, Abstract Supplement:, accepted.
- Zhang, H. Maddula, S. V. & Maloney, L. T. (2010), Path planning in economic terrains: Heuristics and optimization. European Conference on Visual Perception, Lausanne, Switzerland, August 2010. Abstract: *Perception* 39, Abstract Supplement:, accepted.
- Maloney, L. T. & Zhang, H. (2010) The neural representation of uncertainty. Gordon Research Conference: Sensory coding & the natural environment. Bates College, Lewiston, ME, July 25-30, 2010, accepted.
- Kleinholdermann, U., Franz, V. H. & Maloney, L. T. (2010) No pain no gain: assessment of the grasp penalty function. Paper presented at the Annual Meeting of the Vision Sciences Society, Naples, Florida, Abstract: *Journal of Vision, J Vis, 10(7)*, 1083.
- Pedersini, R., Morvan, C., Maloney, L. T., Horowitz, T. S. & Wolfe, J. M. (2010), An abstract equivalent of visual search: gain maximization fails in the absence of visual judgments. Paper presented at the Annual Meeting of the Vision Sciences Society, Naples, Florida, Abstract: *Journal of Vision, J Vis, 10(7)*, 1311.
- Juni, M. Z., Gureckis, T. M. & Maloney, L. T. (2010), Integration of visual information across time. Paper presented at the Annual Meeting of the Vision Sciences Society, Naples, Florida, Abstract: *Journal of Vision, J Vis, 10(7)*, 1213.
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