David A. Leopold

National Institute of Mental Health• Bethesda, MD 20892
Phone: 301-594-0582 • E-Mail: leopoldd@mail.nih.gov
Website: http://lnpsych/nimh.nih.gov/leopold/

David A. Leopold, Ph. D.

Senior Investigator
National Institute of Mental Health
National Institute of Neurological Disorders and Stroke
National Eye Institute

EDUCATION

1992-1997 Ph.D. Baylor College of Medicine, Division of Neuroscience.
Dissertation: *Brain mechanisms of visual awareness.*
Advisor: Nikos Logothetis

1987-1991 B.S.E Duke University, Biomedical Engineering.

RESEARCH EXPERIENCE

2011-present Senior Investigator, National Institutes of Health
Section on Cognitive Neurophysiology and Imaging
Laboratory of Neuropsychology
National Institute of Mental Health

2004-2011 Tenure-track Investigator, National Institutes of Health
Unit on Cognitive Neurophysiology and Imaging

2004-present Director, Neurophysiology Imaging Facility
Shared Core Facility for Nonhuman Primate MRI
National Institute of Mental Health
National Institute of Neurological Disorders and Stroke
National Eye Institute

1997-2003 Research Scientist, Max Planck Institute for Biological Cybernetics
Advisor: Nikos Logothetis

HONORS AND AWARDS

2015 Outstanding Mentor Award, National Institute of Mental Health
2014 NIH Bench-to-Bedside Research Award

2011 Elected member of International Neuropsychology Symposium

2009 Editor's Choice Award, Human Brain Mapping

2009 Best Poster in fMRI, International Society Magnetic Resonance in Medicine

2006 Outstanding Mentor Award, National Institutes of Health

1993 Professor John J.Trentin Award for Scholastic Excellence

1991 NIH-MSTP (Medical Scientists Training Program) Fellowship

1991 Magna Cum Laude, Duke University

1991 Graduation with Distinction in Biomedical Engineering, Duke University

1990 Tau Beta Pi, National Engineering Honor Society

1990 NSF/ERC (Engineering Research Center) Undergraduate Fellowship

PUBLISHED ORIGINAL RESEARCH ARTICLES

1. Kaskan PM, Costa VD, Eaton HP, Zemskova JA, **Leopold DA**, Ungerleider LG, and Murray EA (2016) Valuable visual cues recruit extensive networks for anticipating reward. *Cerebral Cortex* (in press)
2. Chang, C, **Leopold DA**, Schölvinck ME, Mandelkow H, Picchioni D, Liu X, Ye F, Turchi J N, and Duyn JH (2016) Tracking brain arousal fluctuations with fMRI. *Proc Natl Acad Sci USA* (in press).
3. Murphy AP, **Leopold DA**, Humphreys GW, and Welchman AE (2016) Lesions to right posterior parietal cortex impair visual depth perception from disparity but not motion cues. *Phil Trans Royal Soc B* (in press).
4. Dougherty K, Cox MA, Ninomiya T, **Leopold DA** and Maier A (2015) Spiking responses in primary visual cortex are coupled to infragranular alpha cycle. *Cerebral Cortex* (in press).
5. Hung CC, Yen CC, Ciuchta JL, Papoti D, Bock NA, **Leopold DA** and Silva AC (2015). Functional MRI of visual responses in the awake, behaving marmoset. *NeuroImage* (in press).
6. Reveley C, Seth A, Silva AC, Yu D, Saunders RC, **Leopold DA** and Ye FQ (2015) Superficial white matter fiber systems impede detection of long-range connections in diffusion MR tractography *Proc Natl Acad Sci USA* (in press).
7. Liu X, Yanagawa T, **Leopold DA**, Fujii N, Duyn JH (2015) Arousal transitions in sleep, wakefulness, and anesthesia are characterized by an orderly sequence of cortical events. *NeuroImage* (in press).
8. Monosov I, **Leopold DA** and Hikosaka O (2015) Neurons in the primate medial basal forebrain signal combined information about reward uncertainty, value, and punishment anticipation. *J Neurosci* 35:7443-59.
9. McMahon DBT, Russ BE, Elnaiem HD, Kurnikova AI and **Leopold DA** (2015) Single unit activity during natural vision: diversity, consistency and spatial sensitivity among AF face patch neurons. *J Neurosci* 14:5537-48.
10. Russ BE and **Leopold DA** (2015) Functional MRI mapping of dynamic visual features during natural viewing in the macaque. NeuroImage 109:84-94.
11. Hung CC, Yen CC, Ciuchta J, Paparoti D, **Leopold DA** and Silva AC (2015) Face and body selective regions of the marmoset visual cortex. *J Neurosci* 35(3):1160-72.
12. Thomas C, Ye FQ, Irfanoglu O, Modi P, Saleem K, **Leopold DA** and Pierpaoli C (2014) The anatomical accuracy of brain connections derived from diffusion MRI tractography is inherently limited. *Proc Natl Acad Sci USA* 111(46):16574-9.
13. Schmiedt JT, Maier A, Fries P, Saunders RC, **Leopold DA** and Schmid MC (2014) Beta rhythms (12-20 Hz) in area V4 do not depend on bottom-up input from primary visual cortex *J Neurosci* 34(35)11857-64.

14. McMahon DBT, Bondar IV, Afuwape OAT, Ide DC, **Leopold DA** (2014), One month in the life of a neuron: longitudinal single unit electrophysiology in the monkey visual system. *J Neurophysiol* 112(7):1748-62.
15. McMahon DBT, Jones AP, Bondar IV, **Leopold DA** (2014) Face-selective neurons maintain consistent visual responses across months *Proc Natl Acad Sci USA* 111(22):8251-6.
16. Liu X, Yanagawa T, **Leopold DA**, Fujii N, Duyn JH (2014) Robust long-range coordination of spontaneous neural activity in waking, sleep, and anesthesia. *Cerebral Cortex* (in press).
17. Maier A, Cox MA, Dougherty, Moore B, and **Leopold DA** (2014) Anisotropy of ongoing neural activity in primate visual cortex. *Eye and Brain* 6:113-120.
18. Fukushima M, Saunders RC, **Leopold DA**, Mishkin M, Averbeck BB (2014) Differential coding of conspecific vocalizations in the ventral auditory cortical stream. *J Neurosci* 34(13): 4665-76.
19. Murphy AP, **Leopold DA**, and Welchman AE. (2014) Perceptual stabilization drives learning of location-dependent biases for bistable stimuli. *Front Psychol* 5(60):1-11;
20. Schmid, MC, Schmiedt JT, Peters AJ, Saunders RC, Maier A, **Leopold DA** (2013), Motion-sensitive responses in visual area V4 in the absence of primary visual cortex. *J Neurosci* 33(44):18740-5.
21. Cox MA, Schmid MC, Peters AJ, Saunders RC, **Leopold DA**, Maier A (2013) Receptive field focus of V4 neurons determines response to illusory surfaces. *Proc Natl Acad Sci* 110(42)17095-100.
22. Liu JV, Hirano Y, Nascimento GC, Stefanovic B, **Leopold DA**, Silva AC (2013) fMRI in the awake marmoset: somatosensory-evoked responses, functional connectivity, and comparison with propofol anesthesia. *NeuroImage* 78:186-195.
23. Daye PM, Monosov I, Hikosaka O, **Leopold DA**, Optican LM (2013) pyElectrode: an open-source tool using structural MRI for electrode positioning and neuron mapping. *J Neurosci Methods* 213(1):123-31.
24. Spaak E, Bonnefond M, Maier A, **Leopold DA** and Jensen O. (2012) Layer-specific entrainment of gamma-band neural activity by the alpha rhythm in monkey visual cortex. *Curr Biol* 22(24):2313-8.
25. McMahon DBT and **Leopold DA**. (2012) Stimulus timing dependent plasticity in high-level vision. *Curr Biol.* 22(4):332-7.
26. Fukushima M, Saunders RC, **Leopold DA**, Mishkin M, Averbeck BB. (2012) Spontaneous high-gamma field potentials reflect functional organization of auditory cortex in the awake macaque. *Neuron* 74(5):899-910.
27. Maier A, Aura C, and **Leopold DA** (2011) Infragranular sources of sustained LFP responses in macaque primary visual cortex. *J Neurosci.* 31(6):1971-1980.
28. Maier A, Adams GK, Aura C, and **Leopold DA** (2010) Distinct superficial and deep laminar domains of activity in the visual cortex during rest and stimulation. *Frontiers in Systems Neuroscience* 4(31):1-11.
29. Wilke M, Turchi, J, Smith K, Mishkin M, and **Leopold DA** (2010) Pulvinar inactivation disrupts selection of movement plans. *J Neurosci.* 30(25):8650-8659.
30. Schmid MC, Mrowka SW, Turchi J, Saunders RC, Wilke M, Peters AJ, Ye FQ, and **Leopold DA** (2010) Blindsight depends on the lateral geniculate nucleus. *Nature* 466:373-377.
31. Schölvinck, M, Maier, A, Ye FQ, Duyn, JH and **Leopold, DA** (2010) Neural basis of global resting

state fMRI activity. *Proc Natl Acad Sci USA*. 107(22): 10238-10243.

32. Tanji K, **Leopold DA**, Ye FQ, Zhu C, Malloy M, Saunders RC, Mishkin M. (2010) Effect of sound intensity on tonotopic fMRI maps in the unanesthetized monkey. *NeuroImage,* 49(1) 150-7.
33. Bondar IV, **Leopold DA**, Richmond BJ, Victor JD, and Logothetis NK (2009) Long-term stability of visual pattern selective responses of monkey temporal lobe neurons. *PLoS ONE* 4(12): e8222.
34. Pelled G, Bergstrom DA, Tierney PL, Conroy RS, Chuang KH, Yu D, **Leopold DA**, Walters JR, Koretsky AP. (2009) Ipsilateral cortical fMRI responses after peripheral nerve damage in rats reflect increased interneuron activity. *Proc Natl Acad Sci USA*, 106(33):14114-9.
35. Müller, K.-M., Schillinger, F., Do, D. H. and **Leopold DA** (2009) Dissociable perceptual effects of visual adaptation. *PLoS ONE* 4(7): e6183.
36. Wilke, M., Müller, K.-M., and **Leopold DA** (2009) Neural activity in the visual thalamus reflects perceptual suppression . *Proc Natl Acad Sci USA,* 106(23): 9465-70.
37. Müller, KM, Wilke M, and **Leopold DA** (2009) Visual adaptation to convexity in macaque area V4. *Neuroscience*, 161(2):655-862.
38. Cui J, Wilke M, Logothetis NK, **Leopold DA**, and Liang H (2009) Visibility states modulation microsaccade rate and direction. *Vision Research*, 49(2):228-36
39. Maier A, Wilke M, Aura C, Zhu C, Ye FQ, and **Leopold DA** (2008) Divergence of fMRI and neural signals in V1during perceptual suppression in the awake monkey. *Nature Neuroscience.* 11(10):1193-200.
40. Shmuel A and **Leopold DA** (2008) Neuronal correlates of spontaneous fluctuations in fMRI signals in monkey visual cortex: implications for functional connectivity at rest. *Human Brain Mapping*, 29(7):751-61.
41. Rhodes G, Jeffery L, Clifford CW, and **Leopold DA** (2007) The timecourse of higher level aftereffects. *Vision Research*. 47(17):2291-6.
42. Maier A, Logothetis NK, and **Leopold DA** (2007) Context dependent perceptual modulation in monkey visual cortex. *Proc Natl Acad Sci USA*, 104 (13):5620-5625.
43. Wang, Z., Maier A, **Leopold DA**, Logothetis NK, and Liang, H (2007) Single-trial evoked potential estimation using wavelets. *Computation in Biology and Medicine*. 37(4):463-473.
44. Wilke M., Logothetis N.K., and **Leopold, DA** (2006) Local field potential reflects perceptual suppression in monkey visual cortex. *Proc Natl Acad Sci USA*, 103(46):17507-12.
45. Wang, Z., Maier A, **Leopold DA** and Liang, H (2006) Relaxation based multichannel signal combination (RELAX-MUSIC) for ROC analysis of percept-related activity *IEEE Trans Biomed Eng*, 53(12 Pt 2):2615-8.
46. **Leopold, DA**, Bondar, I., and Giese, M (2006) Norm-based face encoding by single neurons in the monkey inferotemporal cortex. *Nature*, 442(7102):572-5.
47. Fukunaga M., Horovitz SG, van Gelderen P, de Zwart JA, Jansma JM, Ikonomidou V, Chu R, Deckers RHR, **Leopold DA**, and Duyn JH. Large amplitude spatially correlated fluctuations in BOLD fMRI signals during extended rest and early sleep stages. *Magnetic Resonance in Medicine*. 24(8),979-92.
48. Maier A., Logothetis N.K., and **Leopold DA** (2005). Global competition dictates local suppression in pattern rivalry. *Journal of Vision*, 5(9): 668-77.
49. Giese M. A., **Leopold DA** (2005) Physiologically inspired neural model for the encoding of face spaces. *Neurocomputing*, 65-66, 93-101.
50. **Leopold DA**, Rhodes, G., Mueller K.-M., and Jeffrey, L (2005) The dynamics of visual adaptation to faces. *Proceedings of the Royal Society, Series B,* 272(1566):897-904.
51. Wilke, M., Logothetis, N.K., and **Leopold DA** (2003). Generalized flash suppression of salient

visual targets *Neuron*, 39, 1043-1052.

52. Maier, A., Wilke, M., Logothetis, N.K., and **Leopold DA** (2003). Perception of temporally interleaved ambiguous patterns. *Current Biology,* 13, 1076-1085.
53. **Leopold DA** and Logothetis, N.K. (2003) Spatial patterns of spontaneous local field activity in the monkey visual cortex. *Reviews in the Neurosciences*, 14, 195-205.
54. **Leopold DA**, Murayama, Y. and Logothetis, N.K. (2003) Very slow activity fluctuations in monkey visual cortex: implications for functional imaging. *Cerebral Cortex* 13(4), 422-33.
55. **Leopold DA**, Wilke, M., Maier, A., and Logothetis, N.K. (2002) Stable perception of visually ambiguous patterns. *Nature Neuroscience*, 5:6, 605-609.
56. **Leopold DA**, Plettenberg, H.K, and Logothetis, N.K. (2002) Visual processing in the ketamine-anesthetized monkey: optokinetic and blood oxygen level-dependent responses. *Exp Brain Res 143:359-372.*
57. **Leopold DA**, O'Toole, A.J., Vetter T., and Blanz, V. (2001) Prototype-referenced shape encoding revealed by high-level aftereffects. *Nature Neuroscience*, 4:1, 89-94.
58. **Leopold DA** and Logothetis N.K. (1998) Microsaccades differentially modulate neural activity in the striate and extrastriate visual cortex. *Experimental Brain Research*, Vol 123, pp 341-345.
59. Logothetis, N.K., **Leopold DA** and Sheinberg, D. (1996) What Is Rivaling during Binocular Rivalry? *Nature* 380:621-624.
60. **Leopold DA** and Logothetis, N.K. (1996) Activity changes in Early Visual Cortex Reflect Monkeys' Percepts During Binocular Rivalry. *Nature* 379:549-553.
61. Logothetis, N.K. and **Leopold DA** (1995) On the Physiology of Bistable Percepts. A.I. Memo, No: 1553, C.B.C.L. Paper No. 125, pp: 1-20.
62. **Leopold DA**, Fitzgibbons, J.C., and Logothetis, N.K. (1995) The Role of Attention in Binocular Rivalry as Revealed through Optokinetic Nystagmus. A.I. Memo, No: 1554, C.B.C.L. Paper No. 126, pp. 1-17.
63. Agrawal, C.M., Haas, K.F., **Leopold DA**, and Clark, H.G. (1992) Evaluation of poly(L-lactic acid) as a material for intravascular polymeric stents. *Biomaterials*. 13(3) 176-182.

PUBLISHED REVIEW ARTICLES AND COMMENTARIES

1. Miller CT, Mitchell JF, Silva AC, **Leopold DA**, Freiwald WA, Wang X (2016) Marmosets: A neuroscientific model of human social behavior. (*in press*)
2. Bridge H, **Leopold DA**, and Bourne JA (2015) Adaptive pulvinar circuitry supports visual cognition. *Trends Cogn Sci* (in press).
3. Reynolds JH, Belmonte JC, Callaway EM, Churchland P, Caddick SJ, Feng G, Homanics GE, Lee K-F, **Leopold DA**, Miller CT, Mitchell JF, Mitalipov S, Movshon JA, Okano H, Ringach D, Sejnowski TJ, Silva AC, Strick PL, Wu J, Zhang F (2015) Brains, genes and primates. *Neuron* 86:617-631.
4. Mitchell JF and **Leopold DA** (2015) The marmoset monkey as a model for visual neuroscience. *Neuroscience Research* 93:20-46.
5. Hutchison RM, Womelsdorf T, Allen EA, Bandettini PA, Calhoun VD, Corbetta M, Penna SD, Duyn

J, Glover G, Gonzalez-Castillo J, Handwerker DA, Keilholz S, Kiviniemi V, **Leopold DA**, de Pasquale F, Sporns O,Walter M, and Chang C, (2013) *NeuroImage* 80:360-78.

6. Schölvinck ML, **Leopold DA**, Brookes MJ, and Khader PH (2013) The contribution of electrophysiology to functional connectivity mapping. *NeuroImage* 80:297-306.
7. **Leopold DA** (2012) Primary visual cortex: awareness, and blindsight. *Annual Review of Neuroscience* 35:91-109.
8. **Leopold DA** and Maier A (2012) Ongoing physiological processes in the cerebral cortex. *NeuroImage* 62(4):2190-200.
9. **Leopold DA** (2011) What is it like to be a human*? Cog Neurosci* 2(2):121-122.
10. **Leopold DA** (2010) Neuroscience: fMRI under the spotlight. *Nature*. 465:700-701.
11. **Leopold DA** and Rhodes G. (2010) A comparative view of face perception. *Journal of Comparative Psychology* 124(3):233-51.
12. **Leopold DA** (2009) Pre-emptive blood flow. *Nature*, 457(7228):387-88.
13. Giese MA and **Leopold DA** (2007) Wie wir Gesichter erkennen. *Spektrum der Wissenschaft*. 3/07: 20-23.
14. **Leopold DA** and Maier A. (2005) Neuroimaging: Perception at the brain's core. *Current Biology*, 16(3), R95-8.
15. **Leopold DA** and Wilke, M. (2005) Neuroimaging: Seeing the trees for the forest. *Current Biology* 15(18):R766-8.
16. **Leopold DA** (2003) Motion perception: read my LIP. *Nature Neuroscience*, 6(6), 548-549.
17. **Leopold DA**, Maier, A., and Logothetis, N.K. (2003) Measuring subjective visual perception in the nonhuman primate. *Journal of Consciousness Studies* 10(9-10), 115-30.
18. **Leopold DA** (2003) Visual Perception: Shaping What We See. *Current Biology*. 13, R10-R12.
19. **Leopold DA** (2002) Visual Neurophysiology: Recordings from the Human Primate. *Current Biology*. 12, R582-R584.
20. **Leopold DA** and Logothetis N.K. (1999) Multistable phenomena: changing views in perception. *Trends Cogn Sci*, Vol 3., No. 7, pp 254-264.

PUBLISHED BOOK CHAPTERS

1. Rhodes, G. and **Leopold DA** (2011) Adaptive norm-based coding of face identity. In Handbook of Face Perception. Oxford University Press, p. 263-286.
2. **Leopold DA** (2010). Dynamic facial signaling: a dialog between brains. In Dynamic Faces: Insights from Experiments and Computations. MIT Press.
3. Maier, A. and **Leopold DA** (2009) Binocular Rivalry. In Encyclopedia of Neuroscience (ed. M.D. Binder, N. Hirokaawa, U. Windhorst, and M.C. Hirst). Springer.
4. Maier, A. and **Leopold DA** (2009) Binocular Rivalry. In OUP Companion to Consciousness (ed. P. Wilken, T. Bayne, and A. Cleeremans). Oxford University Press.
5. **Leopold DA** & Bondar, I. (2005) Adaptation to complex visual patterns in humans and monkeys. In Fitting the mind to the world: adaptation and aftereffects in high-level vision (ed. C. W. Clifford & G. Rhodes). Oxford University Press, 189–211.
6. **Leopold DA**, Maier A, Wilke M, and Logothetis, N.K. (2004) Binocular Rivalry and the Illusion of Monocular Vision, in Binocular Rivalry and Perceptual Ambiguity (Eds. D. Alais and R. Blake), MIT Press, Cambridge, MA.
7. Logothetis, N.K. and **Leopold DA** (1997). Single Neuron Activity and Visual Perception. The Tucson

Proceedings, (Eds. Stuart Hameroff), In Toward a Science of Consciousness II. The second Tucson Discussions and Debates, pp. 309-319. MIT Press, Cambridge, MA.

8. Logothetis, N.K., **Leopold DA**, and Sheinberg D.L. (1997) Neural Mechanisms of Perceptual Organization, Cognitive Studies: Bulletin of the Japanese Cognitive Science Society,Volume 4, No. 3 pp. 99-119.
9. Logothetis, N.K., **Leopold DA** and Sheinberg, D.L. (1996) Proceedings of the International Institute for Advanced Studies, Kyoto, Japan, p.141-161.

MANUSCRIPTS CURRENTLY UNDER REVIEW OR IN PREPARATION

1. Papoti D, Yen CC, Hung CC, Ciuchta J, **Leopold DA**, and Silva AC (2016) Design and implementation of an embedded 8-channel receive-only array for whole-brain MRI and fMRI of conscious awake marmosets (under revision).
2. Shapcott K, Schmiedt J, Saunders RC, Maier A, **Leopold DA**, and Schmid MC (2015) Interneuronal correlations in area V4 increase following primary visual cortex lesion. (under revision).
3. Cox MA, Dougherty K, Adams GK, Reavis EA, **Leopold DA**, and Maier A. (2015) Transient suppression of visual responses during covert attentional shifts (under revision).
4. Reveley C, Gruslys A, Samaha J, Glen D, Saad Z, **Leopold DA**, Ye FQ, Seth A and Saleem KS (2015) Development of macaque 3D brain atlas toolkit (under revision).
5. Russ BE, Kaneko T, Saleem KS, Berman RA, and **Leopold DA** (2015) Distinct fMRI responses to self-induced versus stimulus motion during free viewing in the macaque (under revision).
6. Toarmino C, Yen CC, **Leopold DA**, and Silva AC (2015) An investigation of auditory cortical fields in awake marmosets using fMRI (in preparation)
7. Kienitz R, Maier A, Cox MA, Saunders RC, Schmiedt JT, **Leopold DA**, and Schmid MC (2015) The Kanizsa illusion elicits rhythmic 4Hz spiking of cortical area V4 neurons. (in preparation)
8. Murphy AP, Berman RA, and **Leopold DA** (2015) The functional anatomy of the pulvinar (in preparation).
9. **Leopold DA**, Freiwald WA, and Mitchell JF (2016) Evolved systems for high-level visual perception in the primate (in preparation).
10. Park SH, Russ BE, McMahon DBT, Berman RA and **Leopold DA** (2016) Functional subpopulations of neurons in a macaque face patch revealed by single-unit fMRI mapping during natural vision (in preparation).

INVITED TALKS AND SEMINARS

2016

- 3 June 2016, Center for Visual Sciences, University of Rochester, “Mechanisms of face processing in

the macaque"

- 5 May 2016, Department of Psychology, Dartmouth University, "Perspectives on face processing revealed with longitudinal recordings and fMRI in the macaque"
- 13 April 2016, Brain and Cognitive Sciences, Massachusetts Institute of Technology, "Perspectives on face processing revealed with longitudinal recordings and fMRI in the macaque."
- 4 April 2016, University of Texas at Austin, "Primate specializations for visual processing: the utility of natural vision paradigms"
- 22 March 2016, Conference *The future of primate research*, Shenzhen, China, "Investigating neural representation in macaques and marmosets using natural viewing paradigms."
- 19 February 2016, Gordon Research Conference on Thalamocortical Interactions, Ventura, California, "High resolution electrophysiological mapping of the primate pulvinar."

2015

- 27 October 2015, Peking University, McGovern Center, Beijing, China, "New perspectives on face patches through longitudinal single-unit recording and fMRI"
- 18 September 2015, Comparative Neural Circuitry Meeting, Jackson Hole, WY, "What is a face cell?"
- 1 May 2015, NACS Research Day, University of Maryland, "Probing face cells during natural vision"
- 24 March 2015, NIH Demystifying Medicine Lecture, "Neural circuits mediating unconscious vision in blindsight"
- 19 February 2015, Surgical Neurology Branch, NINDS, "Exploring brain circuits in the context of natural vision"

2014

- 11 September 2014, Columbia University, New York, "Neural and fMRI responses during natural viewing in the monkey brain"
- 22 July 2014, Gordon Research Conference, Neurobiology of Cognition, Newry, ME, "Coordinated responses to social stimuli within and between voxels"
- 15 July 2014, RIKEN Brain Science Institute, Wako, Japan, "Cortical circuits underlying social visual perception in the nonhuman primate"
- 11 July 2014, Brain and Cognitive Science, Seoul National University, Seoul, Korea, "Cortical circuits underlying social visual perception in the nonhuman primate"
- 30 June 2014, Keynote Talk, Interactive Brain Function Workshop, Monash University, Melbourne, Australia, "Cortical circuits underlying social visual perception in the nonhuman primate"
- 24 June 2014, NeuroCog Meeting, Coff's Harbour, Australia, "Multiple scales of time, space, and thought in systems neuroscience"
- 16 April 2014, Washington University, St Louis, MO, "Cortical circuits underlying social visual perception in the primate brain"
- 4 April 2014, University of Arizona, Department of Physiology, Tucson, AZ, "Cortical circuits underlying social visual perception in primates"
- 28 March 2014, University of Iowa, Department of Neurosurgery, Iowa City, IA, "Cortical circuits underlying social visual perception in primates"
- 24 February, 2014, George Mason University, Fairfax, VA, "New insights into complex visuosocial representation in the primate cerebral cortex"
- 4 February, 2014, NeuroTime Meeting, Amsterdam, Netherlands, "Time scales of neural specialization for faces in the ventral visual pathway"

2013

- 7 September, 2013, University of Pittsburgh Neuroscience Retreat, Wheeling, WV, "Emerging strategies for studying social representation in the primate brain"
- 24 April, 2013, Clinical Grand Rounds, National Institutes of Health, Bethesda, MD, "Neural circuits mediating unconscious vision in blindsight"
- 16 April, 2013, University of California, San Diego, CA, "Emerging strategies for studying social representation in the primate brain"
- 6 April, 2013, Western University, London, Ontario. "Natural videos as a tool to study social representation in the primate brain".

2012

- 6 December, 2012, International Institute for Advanced Studies, Kyoto, Japan, "Electrophysiological and fMRI approaches to studying social vision"
- 29 November, 2012, Department of Neuroscience, Columbia University, "Neural pathways underlying visual awareness in primates"
- 19 August, 2012, International Symposium on Primate Research, Kunming, China, Keynote Lecture, "Using natural videos to map social circuits in the nonhuman primate brain"
- 15 July, 2012, Federation of European Neuroscience Symposium, Barcelona, Spain, "Visual circuits underlying blindsight"
- 29 June, 2012, International Neuropsychological Symposium. Bonifacio, France. "Primary visual cortex: awareness and blindsight."
- 27 May, 2012, Concepts Actions and Objects Symposium, Rovereto, Italy, "Probing high level visual processing using natural stimuli"
- 4 May, 2012, Rutgers University, Newark, NJ. "Using fMRI and electrophysiology to study visual perception in nonhuman primates"
- 28 February, 2012, Georgetown University, Washington DC, "Primary Visual cortex, awareness, and blindsight"
- 17 February, 2012, University of Alabama, Birmingham, "Primary visual cortex, awareness, and blindsight"
- 14 February, 2012, NIDA, Baltimore, MD, "Visual cortex and awareness"
- 6 January, 2012, Neurocog Collective, Nosara, Costa Rica, "High-level visual representation in the primate brain"

2011

- 15 July, 2011, Multimodal Neuroimaging Symposium, University of Pittsburgh, "Ongoing neural activity in the cerebral cortex"
- 15 April, 2011, NIH Director's Seminar, NIH, "Neural mechanisms underlying visual perception"
- 9 March, 2011, Vanderbilt University, Nashville, TN, "Combining fMRI and electrophysiology to understand visual perception in the primate brain"
- 17 February, 2011, Brown University, Providence, RI, "Neural mechanisms of conscious visual perception"
- 10 February, 2011, Princeton University, Princeton, NJ, "Understanding the circuits of blindsight: a combined imaging, electrophysiology, and neuropharmacological approach."
- 2 February, 2011, Duke University, Durham NC, "Dissecting the thalamocortical circuitry of visual perception"
- 28 January, 2011, NIMH Networks Maturation Workshop, Washington DC, "Digging deeper into the physiology underlying resting state functional connectivity."
- 6 January, 2011, National Institute for Neurological Disorders and Stroke Seminar, "The thalamus, the cortex, and how we see".

2010

13 October, 2010, Melbourne Neurosciences Institute, Melbourne, Australia, "Thalamocortical circuits in visual perception"

- 18 September, 2010, 2nd Biennial Conference on Resting State Activity, "Distinct superficial and deep laminar domains of activity in visual cortex during rest"
- 29 June 2010, International Neuropsychological Symposium, Ischia, Italy, "Thalamocortical circuits underlying visual awareness"
- 20 April 2010, Yale University, New Haven, CT, "Perceptual visibility in the visual thalamus and cortex"
- 11 March 2010, Janelia Farm, Ashburn, VA, "Thlamocortical circuits in visual perception"

2009

- 10 October 2009, CMRR High Field Workshop, Minneapolis, “Using local electrophysiological signals to map endogenous fMRI fluctuations in the brain”
- 3 June 2009, NIDA, Baltimore, “Endogenous activity variation in the nonhuman primate brain and its relationship to perception”
- 25 March 2009, Nijmegen, Holland, “Multimodal functional imaging in nonhuman primates”
- 24 February 2009, Harvard University, Cambridge, MA, “Linking perceptual experience to neural events in the primate visual cortex and thalamus”

2008

- 5 December 2008, Magdeburg, Germany, “Using local electrophysiological signals to map endogenous fMRI fluctuations in the brain”
- 13 October 2008, Dartmouth College, Hannover, NH “Interpreting electrophysiological and fMRI responses in V1”
- 10 September 2008, Symposium, International Congress on Psychophysiology, St. Petersburg, Russia, “Neural correlates of perception measured with fMRI and microelectrodes”
- 14 March 2008, Helmholtz Lecture. Utrecht University, Utrecht Holland. “What IS a neural correlate of perceptual suppression?”

2007

- 15 October 2007, Boynton Colloquium. University of Rochester, NY. “A dissociation of basic neural signals in V1 during perceptual suppression"
- 20 June 2007, International Neuropsychological Symposium. Mati, Greece. “Using fMRI and microelectrodes to investigate perceptual suppression in awake monkeys"
- 19 April 2007, Yale University, New Haven, CT. “What processes in the brain make a stimulus visible?”
- 4 April 2007, Bogue Lecture, Mind Brain Institute, Johns Hopkins University, Baltimore Maryland, “Neural correlates of visual perception measured with electrophysiology and fMRI”
- 26 January 2007, Conference on Brain Network Dynamics, Berkeley, California, “The role of the primary visual cortex in multistable perception”

2006

- 29 October 2006, University of Western Australia, Perth, “Norm-based encoding of faces in the monkey inferotemporal cortex”
- 25 October 2006, Institute for Higher Nervous Function, Moscow, Russia, “Neural processes underlying visibility and recognition”
- 25 September 2006, New York University, NY. “What brain processes make a stimulus visible?”
- 21 September 2006, Newcastle University, Newcastle UK. “Combining fMRI and neurophysiology to study visual perception in the monkey”
- 14 September 2006, Massachusetts Institute of Technology, “Norm-referenced encoding of faces in the monkey inferotemporal cortex”
- 9 July 2006, FENS Symposium on Consciousness, Vienna, Austria, “What brain processes make a stimulus visible?”
- 22 June 2006, NIH Imaging Symposium, Bethesda, MD, “Combining fMRI and neurophysiology to study visual perception in the monkey”
- 11 June 2006, Human Brain Mapping Meeting, Florence, Italy. “Relating principles of electrophysiology to functional imaging”
- 12 May 2006, Baylor College of Medicine, Houston, TX. “What brain processes make a stimulus visible?”
- 15 February 2006, University of Texas, Houston, TX. “Prototype-referenced encoding of faces in the monkey inferotemporal cortex”

2005

- 5 September 2005, Helmholtz Symposium, Utrecht, The Netherlands. “Binocular rivalry and the illusion of monocular vision”
- 26 June 2005, Caltech, ASSC9. “Adaptational aftereffects to simple and complex shapes”

2004

- 21 April 2004, Isle of Mull, Scotland. "Norm-based face encoding in the monkey inferotemporal

cortex"

- 7 April 2004, Tucson Arizona, Center for Consciousness Studies, “What are the neural correlates of consciousness?”

2003

- 18 December 2003, Human Neuroimaging Conference, Neurology Clinic, Basel, Switzerland. “Mapping spontaneous neural activity in the brain with fMRI”
- 12 December 2003, Donders Center, Nijmegen, The Netherlands. “Neural responses during high-level adaptation to faces in monkey”
- 24 November 2003, German Primate Center, Goettingen, Germany. “Neural responses during Genralized Flash Suppression”
- 25 August 2003, Marine Biology Laboratory, Woods Hole, MA. “Slow changes in fast brain potentials: implications for fMRI”
- 12 June 2003, Goettingen, Germany, Goettingen Neurobiology Conference, Symposium on Adaptation, “Aftereffects with faces: evidence for prototype referenced encoding of identity”
- 31 May 2003, Memphis, TN, Association for the Scientific Study of Consciousness, Symposium on Binocular Rivalry, “Binocular rivalry and the illusion of monocular vision”
- 14 April 2003, California Institute of Technology, Dept. Neurobiology, “Unifying neural mechanisms of perceptual organization.”
- 14 January 2003, California Institute of Technology, Dept. Neurobiology, “Neural mechanisms of multistable visual perception in the monkey”

2002

- 22 November 2002, National Institutes of Health, “High-level perceptual aftereffects and the encoding of faces in monkey inferotemporal cortex.”
- 18 November 2002, Harvard College, Department of Biology, “High-level perceptual aftereffects and the encoding of faces in monkey inferotemporal cortex.”
- 12-15 June 2002, San Miniato, Italy, Workshop on Binocular Rivalry and Perceptual Ambiguity, “Instability and stability in the visual cortex during perceptual rivalry”
- 2-9 May 2002, Kunming China, Second Symposium on Complex Biological Systems. "Brain mechanisms of face recognition in man and monkey".
- 1 April 2002, Stanford University, Dept. Neurobiology, “Neural mechanisms of multistable visual perception in the monkey”
- 5 March 2002. Harvard Medical School, “Neural mechanisms of multistable visual perception”.
- 25-27 February 2002. ETH, Zuerich, Switzerland, “Visualizing spontaneous activity networks in the primate brain using combined fMRI and microelectrode recordings”
- 7 January 2002. Massachusetts Institute of Technology, “Exploring spontaneous brain events: electrophysiological and neuroimaging approaches”.

2001

- 17-21 August 2001. Big Sky, USA, Cooperative dynamics of neocortex.
- “Exploring spontaneous brain events: electrophysiological and neuroimaging approaches”.
- 9-10 February 2001. Marburg, Germany, Dept. of Physics
- “Intra- and interareal covariation of activity during multistable perception in the monkey”.

2000

- 4-10 September 2000. Kunming, China. Symposium on Complex Biological Systems.
- “Neural correlates of visual perception”.
- 14-17 May 2000. Cold Spring Harbor, NY. Toward animal models of attention and consciousness. “Neural activity during multistable vision in the monkey”.
- 25-27 February 2000. Tuebingen, Germany. Tuebingenwahrnehmungskonferenz (Tuebingen

perception conference). “Neural correlates of stable and multistable perception in the monkey”.

1999

- 28 September – 1 October 1999. Bielefeld, Germany. KogWis99, Meeting of the Society for Cognitive Science. “The language of vision”.

1998

- 8-9 October 1998. Heidelberg, Germany. Heidelberg Brain Symposium. “Stability and instability in visual perception”.

PUBLISHED MEETING ABSTRACTS

2015

Kaskan PM, Costa VD, Mitz AR, Eaton HP, Zemskova JA, Leopold DA, Ungerleider LG, Murray EA. 2015. Computational fMRI identifies cortical and subcortical areas representing value in macaque monkeys. FENS, Copenhagen, DE.

Day-Cooney J, Hung CC, Russ BE, Notardonato L, Silva AC, and Leopold DA. 2015. Visual features driving electrophysiological responses to naturalistic movies in the marmoset ventral pathway. Soc Neurosci Abstr

Poland E, Donner T, Leopold DA, Mueller KM, and Wilke M. 2015. Variability of spiking responses varies with perceptual visibility in V4, but not in pulvinar. Soc Neurosci Abstr

Hung CC, Russ BE, Day-Cooney JR, Yen CC, Berman RA, Notardonato L, Silva AC, and Leopold DA. 2015. Common modules of visual responses to naturalistic movies across macaque and marmoset: an fMRI study. Soc Neurosci Abstr

Grootswagers T, McMahon DBT, Leopold DA, and Carlson TA. 2015. Not all that glitters is gold: predicting behavior from brain representations suggests that only a subset of decodable information is used by the brain. Soc Neurosci Abstr

Godlove DC, Russ BE, Park S, Mpamaugo CS, Ye FQ, McMahon DBT, and Leopold DA. 2015. Mapping spatial patterns of whole brain MRI using simultaneously recorded single neurons. Soc Neurosci Abstr

Mpamaugo CS, Godlove DC, Russ BE, Park S, Ye FQ, McMahon DBT, and Leopold DA. 2015. Comparing fMRI maps derived from seed voxels, local field potential, and spiking activity during rest. Soc Neurosci Abstr.

Park S, Russ BE, McMahon DBT, Godlove DC, and Leopold DA. 2015. Functional MRI mapping based on responses of face-selective neurons during free viewing of natural videos. Soc Neurosci Abstr.

Ghazizadeh A, Griggs W, Leopold DA, and Hikosaka O. 2015. Brain areas involved in detecting valuable objects: a functional MRI study in macaques. Soc Neurosci Abstr

Takemura H, Pestilli F, Weiner KS, Keliris GA, Landi S, Sliwa J, Ye FQ, Barnett M, Leopold DA, Freiwald WA, Logothetis NK, and Wandell BA. 2015 Occipital vertical fiber system in human and macaque. Soc Neurosci Abstr

Bollimunta A, Bogadhi AR, Leopold DA, Krauzlis RJ. 2015. Attention-related BOLD and single-unit modulation with and without superior colliculus inactivation. Soc Neurosci Abstr

Bogadhi AR, Bollimunta A, Leopold DA, and Krauzlis RJ. 2015. Attention-related BOLD modulation with and without superior colliculus inactivation. Soc Neurosci Abstr.

2014

Liu X, Yanagawa T, Leopold DA, Fujii N, Duyn JH (2014) Electrophysiological correlate of fMRI resting-state networks in macaques. ISMRM Abstr.

Dougherty K., Cox MA, Leopold DA, and Maier A. (2014) Spiking responses in V1 are coupled to the phase of infragranular alpha LFP. Soc Neurosci Abstr

Thomas CP, Ye FQ, Irfanoglu M, Modi P, Saleem K, Leopold DA, and Pierpaoli C (2014) Anatomical accuracy of diffusion mri tractography: Testing the fundamental limits. Soc Neurosci Abstr

Love SA, Fukushima M, Doyle A, Saunders RC, Fujii N, Belin P, Mishkin M, and Leopold DA (2014) Norm-based

neural coding of conspecific vocalization in the macaque monkey. Soc Neurosci Abstr

Park S, Russ BE, McMahon DBT, Elnaiem HD,and Leopold DA (2014) Functional MRI mapping of IT single unit responses during natural vision. Soc Neurosci Abstr

Schmiedt JT, Maier A, Saunders RC, Leopold DA and Schmid MC (2014) Low-frequency oscillations in extrastriate cortex: Contributions of V1 and pulvinar. Soc Neurosci Abstr

Shapcott K, Schmiedt JT, Maier A, Saunders RC, Leopold DA, Schmid MC (2014) Neural noise correlations in visual area V4 of the rhesus macaque after V1 lesion. Soc Neurosci Abstr

Kienitz R, Cox MA, Schmiedt JT, Saunders RC, Leopold DA, Maier A, Schmid MC (2014) Rhythmic neural activity during perceptual grouping in visual area V4 and its dependence on area V1 input. Soc Neurosci Abstr

Russ BE, Leopold DA (2014) Differential response consistency in the macaque face processing system to the viewing of social and non-social movies. Soc Neurosci Abstr

Kaskan PM, Eaton HP, Zemskova JA, Costa VD, Mitz AR, Leopold DA, Ungerleider LG and Murray EA (2014) fMRI activation of cortical and subcortical regions in macaque monkeys associated with anticipation and receipt of reward. Soc Neurosci Abstr

Chang C, Leopold DA, Scholvinck ML, Liu X, Mandelkow H and Duyn JH (2014) Electrophysiological and behavioral contributions to the resting-state fMRI signal. Soc Neurosci Abstr

Turchi JN, Chang C, Monosov IE, Smith K, Yu DK, Ye FQ, Zhu C, Cortes CR, Mishkin M, Duyn JH, and Leopold DA (2014) Transient inactivation of basal forebrain subregions shapes spontaneous fMRI correlations in the macaque. Soc Neurosci Abstr

Cox MA, Leopold DA and Maier A (2014) Sensory stimulation and attentional allocation evoke opposing patterns of columnar activation in primary visual cortex. Soc Neurosci Abstr

Hung CC, Yen CC, Ciuchta JL, Day-Cooney JR, Papoti D, Bock NA, Russ BE, Leopold DA and Silva AC (2014) Face-selective regions of the marmoset extrastriate visual cortex - revealed by fMRI & electrocorticography. Soc Neurosci Abstr

Murphy AP, Deng, Russ BE, McMahon DBT and Leopold DA (2014) Response reliability of pulvinar neurons to repeated presentations of natural social movies. Soc Neurosci Abstr

Deng C, Murphy AP and Leopold DA (2014) Systematic mapping of basic visual responses across the pulvinar of the awake macaque. Soc Neurosci Abstr

Day-Cooney J, Hung CC, Russ BE, Ciuchta J, Silva AC, and Leopold DA. (2014) Neural responses to naturalistic movies in the common marmoset using electrocorticography. Soc Neurosci Abstr

Kaneko T, Russ BE, Leopold DA (2014) Differential contribution of external versus self-generated visual motion during natural viewing: An fMRI study in the macaque. Soc Neurosci Abstr

Vasileva LN, Jones AP, McMahon DBT, Bondar IV and Leopold DA (2014) Responses in the anterior fundus (AF) face patch to face size, identity, and viewing angle. Soc Neurosci Abstr

McMahon DB and Leopold DA (2014) Encoding 10,000 pictures. Soc Neurosci Abstr

Jones AP, McMahon DBT and Leopold DA (2014) Norm-based responses to identity in the macaque face patch AF. Soc Neurosci Abstr

2013

Fukushima M., Saunders R.C., Leopold, D.A., Mishkin, M. and Averbeck, B.B. (2013) Emergence of differential encoding for species-specific vocalizations along the ventral auditory cortical stream. Soc Neurosci Abstr

Dougherty, K., Cox, M.A., Leopold, D.A., and Maier A. (2013) Visually evoked cross-frequency coupling between deep and superficial layers of macaque V1. Soc Neurosci Abstr

Toarmino, C., Yen C.-C., Leopold, D.A., Miller, C.T., and Silva, A.C. (2013) Investigating auditory processing in awake

marmosets using fMRI. Soc Neurosci Abstr

Kaneko, T., Russ, B.E., and Leopold, D.A. (2013) Neural structures involved in the dynamic control of attention during natural viewing: An fMRI study in the macaque. Soc Neurosci Abstr

Leopold, D.A., Jones, A.P., McMahon, D. B. (2013) Longitudinal investigation of IT cortex: delayed emergence of learning-induced plasticity. Soc Neurosci Abstr

McMahon D.B., Bondar, I.V., and Leopold, D.A. (2013), Longitudinal investigation of IT cortex: Impact of stimulus repetition across days. Soc Neurosci Abstr

Jones, A.P., Leopold, D.A., and McMahon D. B. T (2013) Longitudinal investigation of IT cortex: Probing category selectivity with 10,000 stimuli. Soc Neurosci Abstr.

Elnaiem, H.D., McMahon, D.B.T., Russ, B.E., and Leopold, D.A. (2013). Longitudinal investigation of IT cortex: Responses to naturalistic movie stimuli. Soc Neurosci Abstr

Schmid, M.C., Schmiedt, J.T., Mayer A., Peters, A., Saunders, R., Maier, A., and Leopold, D.A. (2013). V1-independent signal processing by V4 neurons. Soc Neurosci Abstr.

Russ, B.E. and Leopold D.A. (2013) The predominance of motion in fMRI responses to natural videos in the rhesus macaque. Soc Neurosci Abstr

Hung ,C.-C., Yen, C.-C., Ciuchta, J., Papoti, D., Silva, A.C., and Leopold, D.A. (2013) Distinct face and body selective areas in marmoset cerebral cortex. Soc Neurosci Abstr

Ciuchta, J.L., Hung, C.-C., Yen, C.-C., Papoti, D., Leopold, D.A. and Silva, A.C. (2013) An investigation of complex visual stimulus representation in awake marmosets using fMRI. Soc Neurosci Abstr

Kaskan, P.M., Zemskova J.A., Costa, V.D., Mitz, A.R., Leopold, D.A., Ungerleider, L.G., and Murray, E.A. (2013) Reward related patches induced in inferior temporal cortex following learning in macaque monkeys demonstrated with fast event-related BOLD fMRI. Soc Neurosci Abstr.

2012

Johnson, H.F., Russ, B.E., McMahon, D.B.T., Leopold, D.A. (2012) Single unit responses of inferior temporal cortex neurons to social videos over multiple days in the rhesus macaque. Soc Neurosci Abstr

Fukushima, M., Saunders, R.C., Leopold, D.A., Mishkin, M., Averbeck B.A. (2012) Population neural coding of natural sounds in macaque auditory cortex. Soc Neurosci. Abstr

Schmid, M.C., Peters, A.J., Schmiedt, J.T., Saunders, R.C., Maier, A., Leopold, D.A. (2012) Organization of neural responses in macaque area V4 without input from V1. Soc. Neurosci. Abstr.

Spaak E., Maier A., Leopold, D.A., Bonnefond, M., Jensen, O. (2012) Layer-specific entrainment of gamma-band neural activity by the alpha rhythm in the monkey visual cortex. Soc Neurosci. Abstr.

Russ, B.E., Haque, T.S.,Leopold, D.A.(2012) Mapping fMRI responses during viewing of natural videos in the rhesus macaque: combining data driven and a priori methods.

Kaskan, P.M., Zemskova, J.A., Mitz, A.R., Leopold, D.A., Gothard, K.M., Ungerleider, L.G., Murray, E.A. (2012). Circuitry underlying affective processing of visual stimuli in macaque monkeys as revealed by event-related fMRI.

McMahon,D.B.T., Bondar, I.V., Leopold, D.A. (2012) Longitudinal tracking of learning-induced plasticity in IT neurons.

2011

Afuwape,O.A., McMahon,D.B.,Bondar,I.V.and Leopold,D.A.(2011) Day to day stability of visual responses in monkey inferotemporal cortex. Soc Neurosci Abstr

McMahon,D.B.,Bondar,I.V.,Afuwape,O.A.,and Leopold,D.A.(2011) Long-term plasticity driven by reward learning in monkey inferotemporal cortex. Soc Neurosci Abstr

Maier,A. Cox,M.A.,Reavis,E.,Adams,G.K., and Leopold,D.A. (2011) Perceptual awareness and selective attention differentially modulate neuronal responses in primary visual cortex. Soc Neurosci Abstr

Cox, M.A., Schmid,M.C., Peters,A.J., Saunders,R.C.,Leopold,D.A., and Maier, A. (2011) Single neuron and LFP responses to subjective shapes in area V4. Soc Neurosci Abstr

Fukushima, M, Saunders R. C.,Leopold, D.A., Mishkin, M. and Averbeck, B.B. (2011) Temporal dynamics of the

tonotopic map in awake primates. Soc Neurosci Abstr

Kurnikova, A., McMahon, D., Zhu, C., Merkle, H. Ye, F., and Leopold, D.A. (2011) Repetition priming effects in monkey cortex: an fMRI study. Soc Neurosci Abstr.

Russ, B.E. and Leopold, D.A. (2011) Behavioral and fMRI correlation patterns upon repeated viewings of natural movies in the macaque. Soc Neurosci Abstr

2010

Fukushima, M, Saunders R. C.,Leopold, D.A., Mishkin, M. and Averbeck, B.B. (2010) Neural encoding of natural sounds in macaque auditory cortex probed with microelectroencephalographic arrays. Soc Neurosci Abstr

McMahon, D.B. and Leopold. (2010) D.A. Stimulus timing dependent plasticity in high- and low-level vision. COSYNE

2009

Maier, A., Aura, C., Leopold, D.A. (2009) Visual awareness correlates with layer-specific activity in primary visual cortex. ECVP

Reavis, E.A., Leopold, D.A. , & Maier, A. Saccadic Modulation of Laminar Field Potentials in Primate Visual Cortex. (2009) Society for Neuroscience

Maier, A., Aura, C., Leopold, D.A. (2009) Visual awareness correlates with layer-specific activity in primary visual cortex. VSS

Maier, A.V., Adams, G.K., Aura, C., Leopold, D.A. (2009) Distinct laminar zones of coherent local field potentials in monkey V1. Cosyne

Schmid, M.C., S. Mrowka, J. Turchi, M. Wilke, F. Ye, R. Saunders, D.A. Leopold. V1-independent activation of extrastriate areas depends on direct geniculate input. (2009) Annual Meeting of the Society for Neuroscience.

Mrowka, S., H. Merkle, C. Zhu, K.M. Gothard, D.A. Leopold, M.C. Schmid. V1-independent fMRI activation patterns in the macaque temporal lobe. (2009) Meeting of the Society for Neuroscience.

Schölvinck, M., Maier, A., Zhu,C., Ye, F.Q., Duyn,J.H. and Leopold, D.A. State-Dependent, Widespread Correlation of Neural and FMRI Endogenous Fluctuations in the Awake Monkey. (2009) ISMRM Meeting

2008

Maier. A., Wilke, M., Aura, C., Zhu, C., Ye, F., Leopold, D.A. (2008) What happens in primary visual cortex when a stimulus becomes visible? Insights from fMRI and layer-specific neurophysiology in non-human primates. Japan Neuroscience Society

Tsuchiya, N., Maier, A., Logothetis, N.K., Leopold, D.A. (2008) Decoding monkey's conscious experience during ambiguous and unambiguous motion percept reveals initial non-conscious spike activity and later neuronal correlates of consciousness in area MT. ASSC 12.

Maier, A., Aura, C., Leopold, D.A. (2008) Visual awareness correlates with layer-specific activity in visual cortex. ASSC 12

Tsuchiya, N., Maier, A., Logothetis, N.K., Leopold, D.A. (2008) Decoding monkey's conscious experience during ambiguous and unambiguous motion percept reveals initial non-conscious spike activity and later neuronal correlates of consciousness in area MT. Toward a Science of Consciousness. 8th biennial Tucson conference.

Müller KM, Do DH, Leopold DA (2008) Independent measures of adaptation and aftereffect. Journal of Vision 8(6), 73a

Leopold, D.A, C. Aura, A. V. Maier. Laminar analysis of local field and current source density during physical and perceptual events in monkey V1. (2008) Society for Neuroscience Abstr.

Schmid, M.C., M. Wilke, J. Turchi, K. Smith, S. Mrowka, C. Zhu, F. Ye, D. A. Leopold. Inactivation of LGN strongly suppresses the BOLD-fMRI activity in macaque areas V1, V2, V3, but not in areas V4 and V5/MT. (2008)

Society for Neuroscience Abstr.

McMahon, D.B., S. A. Jennings, D. A. Leopold. Stimulus timing induced plasticity of face perception. (2008) Society for Neuroscience Abstr.

Scholvinck, M. L., A. V. Maier, F. Ye, C. Zhu, and D. A. Leopold. The neural basis of fMRI resting state fluctuations. (2008) Society for Neuroscience Abstr.

Tsuchiya, N, A. Maier, N. K. Logothetis, D. A. Leopold. Decoding kinetic depth using only the temporal structure of spike trains from area MT. (2008) Society for Neuroscience Abstr.

Adams, G.K., Maier, A. V., Aura, C. and Leopold, D. A. Endogenous fluctuations of LFP power in monkey V1 are compartmentalized into superficial and deep laminar zones. (2008) Society for Neuroscience Abstr.

Maier, A, Adams, G. K. Aura, C. and Leopold, D.A.. Distinct laminar zones of coherent local field potentials in monkey V1. (2008) Society for Neuroscience Abstr.

J. Cui, M. Wilke, N. Logothetis, D. Leopold, H. Liang. Stimulus visibility reflected in microsaccade activity. (2008) Society for Neuroscience Abstr.

Leopold, D.A., Wilke, M, and Maier A. (2008) Neural correlates of perception measured with fMRI and microelectrodes. 14th World Congress of Psychophysiology

Bondar, I.V., Leopold,D.A., and Logothetis, N.K. (2008) Stability of neuronal representation in inferotemporal cortex: long-term single neurons study by chronically implanted electrodes. 14th World Congress of Psychophysiology

2007

Maier, A.V, Aura, C.J. and Leopold, D.A. (2007) Laminar differences in perceptual modulation of V1 local field potentials. Society for Neuroscience Abstr.

Mueller, K.-M., Wilke, M., and Leopold, D.A. (2007) Shape selectivity of field potentials and neurons in macaque area V4. Society for Neuroscience Abstr.

Wilke, M., Turchi, J., Zhu, J, Mueller, K. M., Ye, F., and Leopold, D. A., (2007) Effects of reversible inactivation of pulvinar on neural and BOLD responses in visual cortex. Society for Neuroscience Abstr.

Pelled, G., Bergstrom, D.A., Chuang, K.-H., Tierney, P.L., Conroy, R.S., Yu, D., Leopold, D.A., Walters, J.R., and Koretsky, A.P. (2007) FMRI activation of the ipsilateral somatosensory cortex following forepaw denervation is associated with increased activity of cortical interneurons. Society for Neuroscience Abstr.

Tanji, K, Leopold, D.A., Ye, F., Zhu, C., Malloy, M., Saunders, R. and Mishkin, M. (2007) Sound level dependent activation in the macaque auditory cortex - an fMRI study. Society for Neuroscience Abstr.

Wang, Z., Maier, A, Logothetis, N.K., Leopold, D.A., and Liang H (2007) Prestimulus activity in area MT predicts psychophysical performance in a bistable motion task. Society for Neuroscience Abstr.

Pelled, G, Chuang KH, Bergstrom D, Weng JC, Leopold DA, Walters JR, and Koretsky AP (2007) Increasd interneuron activity is associated with ipsilateral fMRI activation following forepaw denervation. ISMRM Abstract

2006

Bondar, I.V., D. A. Leopold, and N K Logothetis (2006) "Pattern-selective cortical neurons show long-term stability in their stimulus preferences and temporal dynamics" European Conference on Visual Perception Abstr.

Liang, H., X. Wang, Z. Wang, Logothetis, N.K., D.A. Leopold, A. Maier. (2006) A comparison of local field potentials and spiking activity to predict perceptual report during bistable visual stimulation. Society for Neuroscience Abstr.

Maier, A., Wilke, M. Aura, C., Zhu, C., Ye, F.Q., Leopold, D.A. (2006) Stimulus invisibility uncouples BOLD from neuronal responses in monkey primary visual cortex. Society for Neuroscience Abstr.

Aura, C., Maier, A. & Leopold, D.A. (2006) Neuronal activity across cortical layers in monkey visual cortex. Society for Neuroscience Abstr.

Mueller, K.-M., M. Wilke, and D. A. Leopold, (2006) Neural responses in monkey area V4 and pulvinar following visual shape adaptation. Society for Neuroscience Abstr.

Tanji, K., M. Malloy, D. Leopold, F. Ye, C. Zhu, R. Saunders, M. Mishkin (2006). Visualization of tonotopic reversal on the supratemporal plane of the monkey. Society for Neuroscience Abstr.

Wang, Z., A. Maier, D. A. Leopold, H. Liang. (2006). Linear combination of neuronal signals in area MT improves determination of perceptual states. Society for Neuroscience Abstr.

Wilke M, Kai-Markus Mueller, David A. Leopold (2006). "The role of thalamo-cortical interactions in supporting visibility", Society for Neuroscience Abstr.

2005

Maier A., M. Wilke, N.K. Logothetis and D. A. Leopold (2005) "Flash suppression in monocular and binocular rivalry: psychophysical and neurophysiological observations", VSS Abstr

Leopold, D.A., Rhodes, G., Müller, K.-M. and Jeffery, L. (2005) "The dynamics of visual adaptation to faces" , VSS Abstr

Kai-Markus Müller, Marc O. Ernst, David A. Leopold (2005) "Contributions of convexity and aspect ratio to figural aftereffects" , VSS Abstr

M. Wilke, N. K. Logothetis* and D. A. Leopold (2005) "Effect of stimulus onset asynchrony on perceptual modulation in macaque V4" , VSS Abstr

2003

Maier, A., Logothetis, N.K. & Leopold, D.A. (2003) "Perception-related neural modulation in the visual cortex for pairs of different ambiguous patterns", Society for Neuroscience Abstr.

Wilke M. , Logothetis N.K., and Leopold D. A. (2003) "Neural activity during induced visual suppression in the monkey", Society for Neuroscience Abstr.

Bondar I.V., Leopold D.A., Boldyrev A.A. and Logothetis N.K., (2003) "Long-term stability of complex neural responses in monkey inferotemporal cortex", Society for Neuroscience Abstr.

Leopold, D.A., Bondar, I.V., Giese M.A., and Logothetis N.K., (2003) "Prototype-referenced encoding of faces in the monkey inferotemporal cortex.", Society for Neuroscience Abstr.

2002

Leopold, D.A., Augath, M.A. and Logothetis, N.K. (2002) "Visualizing global brain networks in the monkey using combined fMRI and electrophysiology" Society for Neuroscience Abstr.

Wilke, M., Leopold, D.A., Logothetis, N.K. (2002) "Flash suppression without interocular conflict" Society for Neuroscience Abstr.

Maier, A., Leopold D.A., Logothetis, N.K. (2002) "Neural activity during stable perception of ambiguous displays in monkey visual cortex." Society for Neuroscience Abstr.

Ghazanfar, A.A., J. Pauls, D.A. Leopold, M.D. Hauser and N.K. Logothetis (2002), "Neural responses to species-specific vocalizations in the auditory association cortex of the awake behaving rhesus monkey." Society for Neuroscience Abstr.

Leopold, D.A., Bondar, I.V., O'Toole, A.J., and Logothetis, N.K. (2002) "Exploring face representation in humans and monkeys using high-level aftereffects." European Conference on Visual Perception Abstr.

Bondar, I.V., Leopold, D.A., and Logothetis, N.K. (2002), "Evidence for prototype-referenced encoding of faces in the monkey."3rd Forum of European Neuroscience, Paris.

Maier, A., Wilke, M, Leopold, D.A. & Logothetis, N.K. (2002) Parallel perception of multiple visually bistable patterns. Tuebingen Wahrnehmungs-Konferenz

Wilke, M, Maier, A., Leopold, D.A. & Logothetis, N.K. (2002) Periods of stimulus absence stabilize the perception of ambiguous patterns. Tuebingen Wahrnehmungs-Konferenz

Bondar, I.V., Leopold, D.A., Pauls, J.M. & Logothetis, N.K. (2002) Investigation of face representation in monkeys using adaptational aftereffects. Tuebingen Wahrnehmungs-Konferenz

Haiss, F., Leopold, D.A., Pauls J.M., & Logothetis, N.K. (2002) Dynamics of brain state transitions during anesthetic induction in the monkey. Tuebingen Wahrnehmungs-Konferenz

2001

Leopold, D.A., Murayama, Y. and Logothetis, N.K. (2001) "Determiniants of neural activity covariation in macaque visual cortex under different behavioral states" Society for Neuroscience Abstr.

Murayama, Y., Leopold, D.A., and Logothetis, N.K. (2001) "Perception-related neural activity in the temporal lobe of rhesus monkeys under different conscious states" Society for Neuroscience Abstr.

Silver, M.A., Leopold, D.A., and Logothetis, N.K. (2001) "The effects of global perturbations on perceptual dominance during binocular rivalry between interocularly switched stimuli" Society for Neuroscience Abstr.

Bondar, I.V., Leopold, D.A., Pauls, J.M. and Logothetis, N.K. (2001) "Neural responses related to face identity in the inferotemporal cortex of monkeys measured with 64 implanted electrodes" Society for Neuroscience Abstr.

Wilke, M., Maier, A., Leopold, D.A., Treue, S., and Logothetis, N.K. (2001) "Periods of stimulus absence stabilize perception of ambiguous patterns" Society for Neuroscience Abstr.

Maier, A., Wilke, M., Leopold, D.A., Ghazanfar, A., and Logothetis, N.K. (2001) "Parallel perception of multiple visually bistable patterns" Society for Neuroscience Abstr.

2000

Leopold, D.A., Murayama, Y. and Logothetis, N.K. (2000) "Intra- and Interareal Covariation of Neural Activity during Multistable Perception in the Monkey" Society for Neuroscience Abstr. #498.10, Vol: 26, pp. 1332

Plettenberg, H., Leopold, D.A., Smirnakis, S.M., and Logothetis, N.K. (2000) "Perception-related Optokinetic Responses in the Semi-conscious Monkey"Society for Neuroscience Abstr. #250.11, Vol: 26, pp. 671.

Murayama, Y., Leopold, D.A., and Logothetis, N.K. (2000) "Neural Activity During Binocular Rivalry in the Anesthetized Monkey", Society for Neuroscience Abstr. #448.11, Vol: 26, pp. 1200.

1998

Leopold, D.A. and Logothethis, N.K. (1998), "The Influence of Microsaccadic Eye Movements on Neuronal Activity in the Cortical Visual Areas", Proceedings of the 26th Goettingen Neurobiology Conference, Vol 1, pp 79.

1995

Leopold, D.A. Sheinberg, D., and Logothetis, N.K. (1995) Binocular Rivalry: Interocular or Interstimulus Competition? Invest. Ophthalmol. Vis. Sci. Suppl. 36:S668.

Leopold, D.A. and Logothetis, N.K. (1995) Cell Activity in the Early Visual Cortex of Behaving Monkeys During Binocular Rivalry. Society for Neuroscience Abstr. Vol: 22, pp. 19

Sheinberg, D., Leopold, D.A. and Logothetis, N.K. (1995) Effects of Binocular Rivalry on Face Cell Activity in Monkey Temporal Cortex. Society for Neuroscience Abstr. Vol: 22, pp. 19

Leopold, D.A. and Logothetis, N.K. (1995) Cell Activity Reflects Monkey's Perception During Binocular Rivalry. Invest. Ophthalmol. Vis. Sci. Suppl. 36:S813.

Sheinberg, D., Leopold, D.A. and Logothetis, N.K. (1995) Controlling Perceptual Alternations During Binocular Rivalry. Invest. Ophthalmol. Vis. Sci. Suppl. 36:S668.

MENTORING

Postdoctoral Fellows

- Kenji Koyano, Ph.D. (2015-present)
- Aidan Murphy, Ph.D. (2015-present)
- Soo Hyun Park, Ph.D. (2013 – present)
- Chunshan Deng, Ph.D. (2012-present)
- Brian Russ, Ph.D. (2010-present)
- David Godlove (2013-2015), Computational Biologist, Sapient Government Services, Washington DC
- Alden Hung, Ph.D. (2012-2015), Research Scientist at Google DeepMind, London, UK
- David McMahon, Ph.D. (2007-2013), Staff Scientist, National Eye Institute
- Melanie Wilke, Ph.D. (2005-2008), Full Professor, University of Goettingen, Germany.
- Alexander Maier, Ph.D. (2005-2011), Assistant Professor, Vanderbilt University.
- Michael Schmid, Ph.D. (2007-2010), Emmy Noether Research Group Leader, Ernst Struengmann Institute, Frankfurt, Germany.

Graduate Students

- Adam Jones (University of Maryland, 2012-2015). Awarded Ph.D. in 2015.
- Aidan Murphy (University of Birmingham, 2012-2014). Awarded PhD in 2014.

- Kai-Markus Müller (Grad Sch for Behav and Neural Sciences, Tübingen). Awarded Ph.D. in 2010.
- Alexander Maier, (Grad Sch for Behav and Neural Sciences, Tübingen). Awarded Ph.D. in 2005.
- Melanie Wilke, (Grad Sch for Behav and Neural Sciences, Tübingen). Awarded Ph.D. in 2005.
- Holger Plettenberg, (University of Stuttgart), Awarded Diploma in 2002.

Postbaccalaureate (IRTA) Students

- Neda Perwez (2015-present)
- Adebambo Adedire (2015-present)
- Chinenyenwa Mpamaugo (2014-2015, presently in medical school at University of Pittsburgh)
- Julian Day-Cooney (2013-2015, presently in graduate school at University of Chicago)
- Heba Elnaiem (2012-2014, presently in medical school at UCSF)
- Tahir Haque (2011-2012, presently in medical school at Morehouse School of Medicine)
- Hannah Johnson (2011-2012, presently in medical school at Vanderbilt)
- Yemi Afuwape (2010-2011, presently in MD/PhD program at UT Southwestern)
- Michele Cox (2010-2011, presently in PhD program at Vanderbilt)
- Stacy Kurnikova (2010-2011, presently in PhD program at UCSD)
- Andrew Peters (2009-2010, presently in PhD program at UCSD)
- Eric Reavis (2008-2009, presently postdoctoral fellow at UCLA)
- Geoff Adams (2006-2007, presently postdoctoral fellow at Emory University)
- Chris Aura (2005-2007, presently in PhD program at University of Alabama, Birmingham)

THESIS COMMITTEES

- Adam Jones (2015), University of Maryland
- Robyn Ordman (2015), Macquarie University, Australia
- Katherine Storrs (2015), University of Queensland, Brisbane, Australia
- P. Christiaan Klink (2011), Utrecht University, Netherlands
- Tamara Watson (2006), School of Psychology, University of Sydney.
- Ryota Kanai (2005), Helmholtz Institute, Utrecht University, Netherlands.
- Chris Paffen (2005), Helmholtz Institute, Utrecht University, Netherlands.

ORGANIZED CONFERENCES AND SYMPOSIA

- 2018 Chair, Gordon Research Conference on Neurobiology of Cognition
- 2016 Co-chair, Gordon Research Conference on Neurobiology of Cognition, Newry, ME
- 2015 Co-organizer, Comparative Neural Circuits Conference, Jackson Hole, WY
- 2012 Co-organizer, Session "Expression and Development of Observational Learning", International Neuropsychological Symposium, Corsica, France

EXTRAMURAL AND INTERNATIONAL GRANTS

- Co-investigator, NHMRC grant APP1042893, "A role for the pulvinar nucleus in visual cortical development and plasticity". Principal Investigator James Bourne, Monash University (no funds awarded to the intramural program).

- Collaborator, NIH/NEI 5 R01 EY024028-01 grant. "Neural Coding of 3D Object and Place Structure in Two Cortical Pathways". Principal Investigator Charles E. Connor, Johns Hopkins University (no funds awarded to intramural program).
- Co-investigator, ARC "Center for Excellence for Understanding Integrative Brain Function". Principal Investigator Marcello Rosa, Monash University (no funds awarded to the intramural program).

COMMITTEES AND OTHER SERVICES

- NIMH Senior Advisory Committee (2015-present)
- Member, NIMH Animal Care and Use Committee (2012-present)
- Chair, NIMH Faculty Committee for Informatics (2013-present)
- NIMH Scientific Organizing Committee (2014-present)
- Member of External Advisory Committee for Caltech Imaging Center (2012-present)
- Member of External Advisory Board Emory University Conte Center (2014-present)
- Steering Committee for NIMH Scientific Director (2007-2010)
- Periodic ad-hoc reviewer for Center for Scientific Review (2007-present)
- Associated Editor, Frontiers in Perception (2012-present)
- Associated Editor, Neuroscience Research (2014-present)
- Associated Editor, Brain Connectivity (2013-present)

PROFESSIONAL SOCIETIES

- Member, Society for Neuroscience (1995-present)
- Member, International Neuropsychological Symposium (2011-present)
- Member, Cajal Club (2013-present)

AD HOC JOURNAL REVIEW

Animal Cognition
Biological Psychiatry
Biological Cybernetics
BMC Neuroscience
Cerebral Cortex
Current Biology
European Journal of Cognitive Psychology
European Journal of Neuroscience
Experimental Brain Research
Human Brain Mapping
Journal of Neuroscience
Journal of Neuroscience Methods
Journal of Neurophysiology
Journal of Vision
Nature
Nature Neuroscience
Nature Reviews Neuroscience
Nature Communications
Neuron
NeuroImage
Perception
Psychological Bulletin
PLoS One
PLoS Biology
PNAS
Perception and Psychophysics
Proceedings of the Royal Society
Psychonomic Bulletin and Review
Quarterly Journal of Experimental Psychology
Science
Trends in Cognitive Sciences
Vision Research