CURRICULUM VITAE

April, 2009

NAME Daeyeol Lee

PERSONAL DATA

Date of Birth: June 8, 1966

Place of Birth: On-yang, Republic of Korea

Citizenship: Republic of Korea

Permanent residency: USA

Current Position: Associate Professor

Department of Neurobiology
Interdepartmental Neuroscience Program
Yale University School of Medicine

Department of Psychology
Cognitive Science Program
Yale University

CONTACT INFORMATION

Mailing address: Department of Neurobiology
Yale University School of Medicine
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New Haven, CT 06510
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EDUCATION

1989	B.Econ.	Economics	Seoul National University, Korea.
1990	M.S.	Biology	University of Illinois at Urbana-Champaign, USA
1995	Ph.D.	Neuroscience	University of Illinois at Urbana-Champaign, USA

ACADEMIC POSITIONS

1995-1997	Postdoctoral Associate	Department of Physiology University of Minnesota, USA (advisor: Prof. Apostolos P. Georgopoulos)
1997-2000	Assistant Professor (tenure track)	Department of Neurobiology and Anatomy Wake Forest University School of Medicine

2000-2006	Assistant Professor (tenure track)	Department of Brain and Cognitive Sciences Center for Visual Science University of Rochester
2006-	Associate Professor (tenured)	Department of Neurobiology Yale University School of Medicine

HONORS AND AWARDS

1986-1989 Danam Fellowship, Danam Foundation
1987-1989 Fellowship for Prominent Collegians, Korea Foundation for Advanced Studies
1989-1990 University Fellowship, University of Illinois at Urbana-Champaign
1989-1995 Fellowship for Study Abroad, Korea Foundation for Advanced Studies

RESEARCH INTEREST

Neural mechanisms of sequence learning and selection
Neural mechanisms of decision making under uncertainty
Neural mechanisms of inter-temporal choice
Neural mechanisms of token & conditioned reinforcements
Reinforcement learning
Behavioral economics and game theory
Function of primate prefrontal cortex and basal ganglia
Coding and transmission of information in a population of neurons

GRANT SUPPORT

Active support:

2004-2009	PI	NIH Research Grant (R01 MH073246) "CRCNS: Dynamics and Neural Basis of Decision Making in Primate Frontal Cortex" (co-PI: Xiao-Jing Wang, Department of Neurobiology, Yale University) Total award: $1,498,529
2005-2010	PI	NIH Program Project Grant (P01 NS048328) "Neural Interactions Among Multiple Motor Structures" (Director, Marc H. Schieber) Project 3: Corticostriatal Network Total award: $7,666,627 Annual direct cost for Project 3: $147,162
2005-2010	PI	NIH Research Grant (R01 MH059216) "Cortical Mechanisms of Sequence Learning" Total award: $1,395,936
2006-2009	co-PI	NSF Research Grant (SES-0624190) "The evolution of our preferences: evidence from primate trading behavior" (PI: Laurie Santos, Department of Psychology, Yale University) Total award: $749,324

2007-2012	PI	NIH Research Grant (RL1 DA024855) Interdisciplinary Research Consortium on Stress, Self-control and Addiction (Director, Rajita Sinha, Department of Psychiatry, Yale University) Project 4: Stress, prefrontal cortex, and decision making. Total direct cost for Project 4: $750,000
2008-2013	Co-PI	NIH Program Project Grant Molecular and Cellular Basis of Cognitive Aging in Prefrontal Cortical Network (Project 1) (Direct, Amy Arnsten; PI, Min Wang, Department of Neurobiology, Yale University) Annual direct cost for Project 1: $167,284

Previous support:

1998-2000	Investigator	NIH Program Project Grant (P01 HD035955) "Implications of cortical plasticity for rehabilitation" (Director, Timothy Pons, Division of Surgical Sciences, Wake Forest University School of Medicine)
1999-2003	PI	James S. McDonnell Foundation, Cognitive Neuroscience Grant "Neural Mechanisms of Binding and Short-term Memory Capacity" Total award: $148,478
1999-2005	PI	NIH Research Grant (R01 MH059216) "Cortical Mechanisms of Sequence Learning" Total award: $1,443,720
2004-2005	PI	NIH Conference Grant (R13 MH070450) "Symposium: Adaptive Representation and Control in Vision" Total award: $35,746
2003-2008	PI	NIH Research Grant (R01 NS044270) "Dynamics of Cortical Communication" Total award: $1,346,624

TEACHING EXPERIENCE

Undergraduate Teaching:

2001-2006	Neuroscience Senior Seminar
2001-2006	Sensory and Motor Neuroscience

Graduate Teaching:

1998-2000	Introduction to Neuroscience
1998-2000	Sensory Neuroscience
1998-2000	Research Design and Methods
2001-2005	Sensory Systems

2004 Neuroeconomics: Cognitive Neuroscience of Decision Making
2007 Principles of Neuroscience
2008 Seminar in Visuomotor Neurophysiology

Medial Teaching:
1997-1999 Microanatomy

PROFESSIONAL ACTIVITIES

Editorial Experience:

2008-present, Review Editor, Frontiers in Behavioral Neuroscience
2009-present, Associate Editor, Journal of Neuroscience
2006, Guest Editor, Neural Networks, Special issue on neurobiology of decision making.
2009, Guest Editor, Frontiers in Behavioral Neuroscience, Special topic on neuroeconomics

Advisory Boards:

2009-present, Advisory Board for Faculty of 1000 Medicine Reports

Society committees:

2008, Program Committee, International Conference of Cognitive Science.

Meetings Organized:

2004, Co-organizer, Center for Visual Science Sympoisum, "Adaptive Representation and Control in Vision", University of Rochester, Rochester, NY
2007, Co-organizer, Okinawa Institute of Science and Technology Workshop on Cognitive Neurobiology, Okinawa, Japan.
2008, Co-organizer, Symposium on Decision Making and the Brain, 6th International Conference of Cognitive Sciences, Seoul, Korea.
2009, Co-organizer, "Perspective of Decision Neuroscience: Beyond the Biological Approach of Brain Science", 36th International Congress of Physiological Science, Kyoto, Japan.

Grant Review:

The Wellcome Trust, UK, 2003, 2006, 2007
Medical Research Council, UK, 2006
Netherlands Organisation for Scientific Research (NWO), 2004, 2006
Human Frontier Science Program, 2004
National Institute of Health, NIA Special Emphasis Panel, 2001
National Institute of Health, NIMH Special Emphasis Panel, 2008
National Institute of Health, Special Emphasis Panels, 2004-2005
National Institute of Health, Learning and Memory Study Section, 2005
National Science Foundation (ad hoc), 2002, 2003, 2004, 2008
National Science Foundation, CRCNS Review Panel, 2005, 2006, 2008.
United States-Israel Binational Science Foundation, 2006
National Institute of Health, Cognitive Neuroscience Study Section (ad hoc), 2007
National Institute of Health, Cognitive Neuroscience Study Section (regular member), 2007-2011
Global Centers of Excellence (COE) Program, Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan, 2008
Natural Sciences and Engineering Research Council of Canada, 2008

Manuscript Review:

Brain and Cognition / Cerebral Cortex / Current Biology
Experimental & Clinical Psychopharmacology
Experimental Brain Research /Human Brain Mapping
Journal of Cognitive Neuroscience
Journal of Computational Neuroscience
Journal of Neuroscience / Journal of Neurophysiology
Nature / Nature Neuroscience
Nature Reviews Neuroscience / Neural Networks
Neurology / Neuron / Neuroscience Letters
Perception / PLoS Biology / PLoS Computational Biology
PNAS / Quarterly Journal of Experimental Psychology
Science / Somatosensory and Motor Research

Review of Book Proposals:

Garland Science
Oxford University Press

Society Memberships:

1989-	Society for Neuroscience
1997-	Psychonomic Society
2000-	American Association for the Advancement of Science
2002-	Association for Psychological Science
2003-	Society for Cognitive Neuroscience
2004-	Society for Neuroeconomics
2005-	Behavioral and Brain Sciences (BBS) Associate

STUDENT ADVISING

Undergraduate students:

Drew Marticorena	2007-2008
Eric Tsytsylin	2008

Graduate students:

Michelle Conroy	2001 - 2003
Jaewon Hwang	2004 - 2006
Jeong-Woo Sohn	2001 - 2006
Christopher Donahue	2008 -

Postdoctoral fellows:

Stephan Quessy	2000 - 2001
Dominic J. Barraclough	2001 - 2006
Bruno B. Averbeck	2001 - 2006
Sang June Oh	2006 - 2008
Hyojung Seo	2004 - current
Soyoun Kim	2005 - current
Xinying Cai	2007 - current

Hiroshi Abe 2007 - current

THESIS COMMITTEE

Master thesis

Michelle Conroy 2004 (University of Rochester)

PhD Qualifying Exam Committee

Jason Droll 2003 (University of Rochester)
Daniel Zaksas 2004 (University of Rochester)
Jaimee Reynolds 2005 (University of Rochester)
Jeong-Woo Sohn 2006 (University of Rochester)
Matthew Johnson 2007 (Yale University)
Matthew Krause 2007 (Yale University)
Nao J. Gamo 2008 (Yale University)

Doctoral thesis

Ruskin Hunt 2002 (University of Rochester)
Joseph Atkins 2003 (University of Rochester)
Jason Droll 2005 (University of Rochester)
Daniel Zaksas 2006 (University of Rochester)
Jeong-Woo Sohn 2006 (University of Rochester, thesis advisor)
Alireza Soltani 2006 (Brandeis University, external member)
Noah Shamosh 2008 (Yale University)
Ethan Bromberg-Martin 2009 (Brown University, external member)

DEPARTMENT AND UNIVERSITY SERVICE

2000 Graduate Recruitment Planning Committee, Center for Visual Science, University of Rochester

2002 Admission committee, Department of Brain and Cognitive Sciences, University of Rochester

2002-2006 Curriculum committee, Inter-departmental Graduate Program in Neuroscience, University of Rochester

2002-2006 Web and Communications committee, Interdepartmental Graduate Program in Neuroscience, University of Rochester

2003 Director, Center for Visual Science Summer Undergraduate Research Fellowship, University of Rochester

2003-2006 Coordinator, Center for Visual Science Web site, University of Rochester.

2005-2006 Undergraduate Committee, Department of Brain and Cognitive Sciences, University of Rochester

2006 Associate Director, Center for Visual Science, University of Rochester

2008- Executive Committee, Cognitive Science Program, Yale University

INVITED PRESENTATIONS

Functional significance of lamination in the lateral geniculate nucleus
1994/8 National Institute of Mental Health, NIH
1995/1 Division of Biology, California Institute of Technology
1995/2 Department of Anatomy and Neurobiology, Washington University at St. Louis
1995/3 Brain Sciences Center, VA Medical Center, Minneapolis, MN

Neural mechanisms of sensorimotor integration
1996/11 Department of Neurobiology and Anatomy, Wake Forest University School of Medicine
1997/2 Department of Anatomy and Neurobiology, Washington University at St. Louis

Neural mechanisms for visual working memory
1999/5 Seoul National University, Department of Psychology, Korea

Neural mechanisms for interception of moving targets
1999/5 Institute for Medical Sciences, Ajou University, Korea
1999/12 Center for Molecular and Behavioral Neuroscience, Rutgers University
1999/12 Department of Psychology, University of Iowa
1999/12 Neurological Sciences Institute, Oregon Health Sciences University
2000/1 Division of Biology, California Institute of Technology
2000/2 Department of Psychology, Indiana University
2000/3 Department of Brain and Cognitive Sciences, University of Rochester
2000/3 Department of Psychology, University of Oregon

Neural mechanisms of sequence learning
2000/11 School of Life Sciences, Seoul National University
2000/11 Department of Physics, Choongbuk National University
2001/3 Center for Cognitive Science, University of Buffalo

Role of the supplementary motor area in learning and performance
2002/10 Neuroscience Program, University of Illinois at Urbana-Champaign
2002/10 Center for Integrative and Cognitive Neuroscience, Vanderbilt University

Game theory, decision making, and prefrontal cortex
2003/8 Brain Sciences Center, University of Minnesota
2003/9 Department of Psychology, Yonsei University, Korea
2003/9 Institute for Medical Sciences, Ajou University, Korea
2003/9 Department of Psychology, Seoul National University, Korea
2003/12 Center for Complex Systems, Brandeis University

Decisions, games, and stochastic behavior
2003/11 Annual Meeting of Society for Neuroscience, Symposium: "Neural Correlates of Primate Decision Making"

Decision making and prefrontal cortex
2003/11 Annual Meeting of the Korean Society for Brain and Neural Science, Symposium: "Current Trends in Systematic Neuroscience"
2004/2 Department of Brain and Cognitive Sciences, MIT
2004/3 Pre-COSYNE Workshop, "Neurobiology of Decision Making", Cold Spring Harbor

Laboratory
2004/5 Tamagawa-COE International Symposium on Attention and Decision Tamagawa University, Japan
2004/5 Neurobiology Session, 61st Annual Meeting of Korean Biochemistry Society
2004/8 New and Alternative Directions in Learning Conference, Carnegie Mellon University

Neural mechanisms of reinforcement learning and decision making
2004/11 Picower Center for Learning and Memory, MIT
2005/2 Department of Neurobiology, Yale University
2005/2 Department of Physiology and Biophysics, University of Washington in Seattle
2005/3 Mind/Brain Institute, Johns Hopkins University
2005/3 Center for Neural Science, New York University
2005/5 Department of Psychology, University of Minnesota
2005/7 Okinawa Computational Neuroscience Course
2006/11 2006 Korean Academy of Science and Technology (KAST), International Symposium on Leanring

Computation of values in primate frontal cortex
2005/5 Neurobiology of Decision-Making, Banbury Center, Cold Spring Harbor Laboratory

Neuroscience of decision making
2005/6 Mind and Brain Series, Korea Foundation for Advanced Studies
2005/12 Department of Psychology, University of Minnesota

Prefrontal cortex and subjective values
2005/6 Department of Psychology, Seoul National University, Korea
2005/6 Department of Psychology, Yonsei University, Korea

Neural basis of decision making in primates
2006/2 Department of Psychology, University of Oklahoma
2006/2 Center for Neuroeconomic Studies, Duke University
2006/3 Workshop on Prefrontal Cortex, Cosyne.
2006/5 "Prefrontal cortex, working memory, flexible behavior" (in memoriam of Patricia S. Goldman-Rakic), Yale University
2006/5 American Psychological Society 18th Convention, New York.
2006/6 Symposium on reward and decision making, UCLA.

Neural basis of social interactions
2006/6 Mini-symposium on Choices and the Brain, Caltech.
2006/7 22nd International Symposium on Attention and Performance, Macon, France.

Neuroeconomic studies of decision making
2006/11 Department of Economics, Seoul National University, Korea
2007/2 Cosyne 2007 Workshop, "Asking why - normative models in neuroscience"

Primate prefrontal cortex and economic decision making
2007/2 Department of Psychology, Yale University
2007/3 10th Tamagawa-Riken Dynamic Brain Forum 07, Hakuba, Japan.
2007/3 OIST Workshop on Cognitive Neurobiology, Okinawa, Japan
2007/3 Center for Neuroscience Studies, Queen's University, Canada

Economic decision making in primate brains

2007/6 Mini-symposium, "Use of non-human primate in medical research", Seoul National University College of Medicine, Korea
2007/7 KIST, Seoul, Korea.

Neurobiology of value and preference
2007/6 Department of Psychology, Seoul National University, Korea

Neural basis of time preference and decision making under uncertainty
2007/9 Neural bases of reward and decision making, Institute Gulbenkian de Ciencia (IGC) Portugal
2007/10 Ecole Polytechnique Fédérale de Lausanne, Switzerland
2008/7 Wellcome Department of Imaging Neuroscience, University of College London, UK
2008/7 Symposium on the Neural Basis of Reward and Economic Decision Making, Physiological Society Meeting, Cambridge, UK

Primate prefrontal cortex and decision making
2007/11 Department of Psychiatry, Yale University School of Medicine
2008/5 Cold Spring Harbor Laboratory

Neural circuit mechanisms for stochastic decision making in the primate brain
2008/1 Center for Neural Science 9-th Biennial Symposium, New York University.

Neural basis of time discounting: critical evaluation of multiple-self approach
2008/4 Mind, Brain, and Society: Neurocognitive Approaches to the Social Sciences, Yale University

Neuroscience becomes a social science: neuroeconomics and neuro-marketing
2008/4 World Science Forum 2008, Seoul, Korea

Neural basis of decision making in non-human primates
2008/7 Department of Experimental Psychology, University of Oxford, UK
2008/7 Symposium on Decision Making and the Brain, International Conference of Cognitive Sciences, Yonsei University, Korea

Temporal discounting and conditioned reinforcement in the primate brain
2008/7 International Symposium on Brain and Society, Korea University, Seoul, Korea

Discounted utilities, gains, and losses in the primate brain
2008/7 Mini-symposium on New Approaches to Decision Sciences: from Artificial Intelligence to Neuroeconomics, Seoul National University, Seoul, Korea

Repeated games and neural basis of decision making
2008/10 Loucks lecture, Department of Psychology, University of Washington at Seattle

Neural mechanisms of inter-temporal choice
2008/10 BNS seminar, University of Washington at Seattle

Decision making and primate cortico-striatal network
2009/3 Department of Neuroscience, Columbia University
2009/3 Neuroscience Seminar, National Institute of Health
2009/4 Department of Psychology, University of Iowa
2009/5 Brain, Mind, and Society, Caltech

2009/7 RIKEN BSI Summer program, Tokyo, Japan

From Macaca economicus to Homo economicus
2009/3 A symposium on economic decision making, Harvard University
2009/4 Wellington-Burnham Lecture, Department of Economics, Tufts University

Prefrontal cortex and decision making
2009/7 Department of Economics, University of Tokyo
2010/03 Frontal lobes 2010 conference, Toronto, Canada

PUBLICATIONS

Journal Articles:

1. Lee D, Lee C, and Malpeli JG (1992) Acuity-sensitivity trade-offs of X and Y cells in the cat lateral geniculate complex: role of the medial interlaminar nucleus in scotopic vision. Journal of Neurophysiology 68: 1235-1247.

2. Malpeli JG and Lee D (1994) Thermodynamic model of the morphogenesis of the primate lateral geniculate nucleus. Proc. Inter. Conf. Neural Information Processing, 1: 309-314.

3. Lee D and Malpeli JG (1994) Global form and singularity: modeling the blind spot's role in geniculate morphogenesis. Science 263: 1292-1294.

4. Lee D and Malpeli JG (1995) Retinal representation: response. Science 267: 1038.

5. Malpeli JG, Lee D, and Baker FH (1996) Laminar and retinotopic organization of the macaque lateral geniculate nucleus: magnocellular and parvocellular magnification functions. Journal of Comparative Neurology 375: 363-377.

6. Port NL, Lee D, Dassonville P, and Georgopoulos AP (1997) Manual interception of moving targets: I. Performance and movement initiation. Experimental Brain Research 116: 406-420.

7. Lee D, Port NL, and Georgopoulos AP (1997) Manual interception of moving targets: II. Online control of overlapping submovements. Experimental Brain Ressearch 116: 421-433.

8. Lee D, Port NL, Kruse W, and Georgopoulos AP (1998) Variability and correlated noise in the discharge of neurons in motor and parietal areas of the primate cortex. Journal of Neuroscience 18: 1161-1170.

9. Lee D and Malpeli JG (1998) Effects of saccades on the activity of neurons in the cat lateral geniculate nucleus. Journal of Neurophysiology 79: 922-936.

10. Lee D (1999) Effects of exogenous and endogenous attention on visually guided hand movements. Cognitive Brain Research 8: 143-156.

11. Lee D (2000) Learning of Spatial and Temporal Patterns in Sequential Hand Movements. Cognitive Brain Research 9:35-39.

12. Jung MW, Qin Y, Lee D, and Mook-Jung I (2000) Relationship among discharges of neighboring neurons in the rat prefrontal cortex during spatial working memory tasks. Journal of Neuroscience 20: 6166-6172.

13. Lee D and Chun MM (2001) What are the Units of Visual Short-term Memory: Objects or Spatial Locations? Perception & Psychophysics 63: 253-257.

14. Port NL, Kruse W, Lee D, and Georgopoulos AP (2001) Motor cortical activity during interception of moving targets. Journal of Cognitive Neuroscience 13: 306-318.

15. Lee D, Port NL, Kruse W, and Georgopoulos AP (2001) Neuronal clusters in the primate motor cortex during interception of moving targets. Journal of Cognitive Neuroscience 13: 319-331.

16. Lee D (2002) Analysis of phase-locked oscillations in multi-channel single-unit spike activity with wavelet cross-spectrum. Journal of Neuroscience Methods 115: 67-75.

17. Lee D and Quessy S (2003) Activity in the supplementary motor area related to learning and performance during a sequential visuomotor task. Journal of Neurophysiology 89: 1039-1056.

18. Lee D and Quessy S (2003). Visual search is facilitated by scene and sequence familiarity in rhesus monkeys. Vision Research 43: 1455-1463.

19. Lee D (2003). Coherent oscillations in neuronal activity of the supplementary motor area during a visuomotor task. Journal of Neuroscience 23: 6798-6809.

20. Averbeck BB and Lee D (2003). Neural noise and movement-related codes in macaque supplementary motor area. Journal of Neuroscience 23: 7630-7641.

21. Averbeck BB and Lee D (2004) Coding and transmission of information by neural ensembles. Trends in Neuroscience 27: 225-230.

22. Barraclough DJ, Conroy ML and Lee D (2004). Prefrontal cortex and decision making in a mixed-strategy game. Nature Neuroscience 7: 404-410.

23. Lee D (2004) Behavioral context and coherent oscillations in the supplementary motor area. Journal of Neuroscience 24: 4453-4459.

24. Lee D, Conroy ML, McGreevy BP, and Barraclough DJ (2004) Reinforcement learning and decision making in monkeys during a competitive game. Cognitive Brain Research 22: 45-58.

25. Lee D, McGreevy BP, and Barraclough DJ (2005) Learning and decision making in monkeys during a Rock-Paper-Scissors game. Cognitive Brain Research 25: 416-430.

26. Averbeck BB, Sohn J, and Lee D (2006). Activity in prefrontal cortex during dynamic selection of action sequences. Nature Neuroscience 9: 276-282.

27. Lee D (2006). Neural basis of quasi-ratioanl decision making. Current Opinion in Neurobiology 16:191-198.

28. Averbeck BB, and Lee D (2006) Effects of noise correlations on information encoding and decoding. Journal of Neurophysiology 95: 3633-3644.

29. Lee D, Schieber MH (2006) Serial correlation in lateralized choices of hand and target. Experimental Brain Research 174: 499-509.

30. Soltani A, Lee D, and Wang X-J (2006) Neural mechanism for stochastic behavior during a competitive game. Neural Networks 19: 1075-1090.

31. Sohn J-W and Lee D (2006) Effects of reward expectancy on sequential eye movements in monkeys. Neural Networks 19: 1181-1191.

32. Averbeck BB, and Lee D (2007) Prefrontal neural correlates of memory for sequences. Journal of Neuroscience 27: 2204-2211.

33. Lee D, and Seo H (2007) Mechanisms of reinforcement learning and decision making in the primate prefrontal cortex. Annals of the New York Academy of Sciences 1104: 108-122.

34. Lee D, Rushworth M, Walton M, Watanabe M, Sakamagi M (2007). Functional specialization of the primate frontal cortex during decision making. Journal of Neuroscience 27: 8170-8173.

35. Seo H and Lee D (2007). Temporal filtering of reward signals in the dorsal anterior cingulate cortex during a mixed-strategy game. Journal of Neuroscience 27: 8366-8377.

36. Seo H, Barraclough DJ, and LeeD (2007) Dynamic signals related to choices and outcomes in the dorsolateral prefrontal cortex. Cerebral Cortex 17: i110-i117.

37. Kim H, Lee D, Shin Y-M, and Chey J (2007) Impaired strategic decision-making in schizophrenia. Brain Research. 1180:90-100.

38. Kim Y, Huh N, Lee H, Baeg E, Lee D, and Jung MW (2007) Encoding of action history in the rat ventral striatum. Journal of Neurophysiology 98: 3548-3556.

39. Sohn J-W, and Lee D (2007) Order-dependent modulation of directional signals in the supplementary and presupplementary motor areas. Journal of Neuroscience 27: 13655-13666.

40. Lee D (2008) Game theory and neural basis of social decision making. Nature Neuroscience. 11: 404-409.

41. Kim S, Hwang J, and Lee D (2008) Prefrontal coding of temporally discounted values during inter-temporal choice. Neuron 59: 161-172.

42. Seo H, and Lee D (2008) Cortical mechanisms for reinforcement learning in competitive games. Philosophical Transactions of the Royal Society B 363: 3845-3857.

43. Luhmann C, Chun MM, Yi DJ, Lee D, and Wang, XJ (2008) Neural dissociation of delay and uncertainty in inter-temporal choice. Journal of Neuroscience 28: 14459-14466.

44. Seo H and Lee D (2009) Behavioral and neural changes following the gains and losses of conditioned reinforcers. Journal of Neuroscience. 29: 3627-3641.

45. Kim S, Hwang J, Seo H, and Lee D (2009) Valuation of uncertain and delayed rewards in primate prefrontal cortex. Neural Networks. In press.

Manuscripts submitted or in preparation:

1. Seo H, Barraclough DJ, and Lee D. Activity related to choice and reward in the lateral intraparietal area. Manuscript under review.

2. Hwang J, Kim S, and Lee D. Temporal discounting and inter-temporal choice in rhesus monkeys. Manuscript under review.

3. Sohn J-W, Averbeck BB, and Lee D. Encoding of sequential movements in macaque supplementary and presupplementary motor areas. Manuscript in preparation.

Book Chapters:

1. Lee D, Port NL, Kruse W, and Georgopoulos AP (1998) Neuronal population coding: Multielectrode recordings in primate cerebral cortex. In H. Eichenbaum and J. Davis (eds), Neuronal Ensembles : Strategies for Recording and Decoding, New York: Wiley. pp 117-136.

2. Kruse W, Port NL, Lee D, and Georgopoulos AP (2003). Neural mechanisms of catching: translating moving target information into hand interception movement. In: Johnson-Frey SH (Ed), Taking action: cognitive neuroscience perspective on intentional acts. Cambridge: MIT Press. pp. 361-375.

3. Lee D, Barraclough DJ, and Seo H (2007). Neural basis of social interactions in primates. Attention and performance XXII: sensorimotor foundation of higher cognition (Eds. Haggard P, Rossetti, Y & Kawato, M). Oxford University Press. pp. 249-265.

4. Lee D and Wang X-J (2008) Neural circuit mechanisms for stochastic decision making in the primate frontal cortex. In: Glimcher PW, Camerer CF, Fehr E, and Poldrack RA (eds) Neuroeconomics: decision making and the brain. pp 481-501.

5. Lee D (2009) Games in monkeys: neurophysiology and motor decision making. In: Square LR (eds.) Encyclopedia of Neuroscience, volume 4, pp.505-510. Oxford: Academic Press.

6. Lee D (2009) Neuroethology of decision making. In: Primate Neuroethology. In press.

Editorials and Commentaries:

1. Lee D (2005) Neuroeconomics: making risky choices in the brain. Nature Neuroscience 8: 1129-1130.

2. Lee D (2006) Neuroeconomics: best to go with what you know? Nature 441: 822-823.

3. Funahashi S, Lee D, Rushworth M (2006) Neurobiology of decision making. Neural Networks 19: 977-979.

4. Lee D (2007) To touch or not to touch: posterior parietal cortex and voluntary behavior. Neuron. 56: 419-421.

Articles about my work:

1. Stryker MP (1994) Precise Development from Imprecise Rules. Science 263: 1244-1245.

2. Platt ML (2004) Unpredictable primates and prefrontal cortex. Nature Neurosci 7: 319-320.

3. Rapoport A, Bearden JN (2005) Strategic behavior in monkeys. Trends Cogn Sci 9: 213-215.

4. Abrahams, M. Monkey puzzle: rock, paper, scissors ... banana? Guardian unlimited. September 25, 2007. [http://education.guardian.co.uk/print/0,,330800485-111765,00.html]

5. Analysis of the consumer's brain helps marketing research. Chosun Daily. April 25, 2008.

6. Brain knows - why you're selling good stocks. Donga Daily. April 25, 2008.

7. Secrets of "three-now-four-later" revealed. Chosun Daily. July 9, 2008.

8. Brain activity encodes reward magnitude and delay during choice. ScienceDaily. July 11, 2008.

9. Mysteries of brain nerve cells. Donga Daily. August 1, 2008.

Published Abstracts:

1. Lee D and Malpeli JG (1990) The cat medial interlaminar nucleus in dim-light vision. Soc. Neurosci. Abstr. 16: 711.

2. Lee D and Malpeli JG (1993) Role of the blind spot in the laminar morphogenesis of the rhesus lateral geniculate nucleus: a thermodynamic model. Soc. Neurosci. Abstr. 19: 525.

3. Malpeli JG, Lee D, and Baker FH (1993) Eccentricity-related variations of magnocellular and parvocellular inputs to macaque striate cortex. Invest. Ophthalmol. Visual Sci. 34: 812.

4. Lee D and Malpeli JG (1994) Effects of oculomotor behavior on visually evoked activity in the cat LGN. Soc. Neurosci. Abstr. 20: 134.

5. Lee D and Malpeli JG (1995) Effects of gaze angle on direction and orientation biases of lateral geniculate neurons in the awake cats. Soc. Neurosci. Abstr. 21: 657.

6. Port NL, Lee D, Kruse W, and Georgopoulos AP (1996) Motor cortical activity during target motion in the presence and absence of manual target interception. Soc. Neurosci. Abstr. 22: 12.

7. Lee D, Port NL, and Georgopoulos AP (1996) Interception of moving targets: online control of overlapping submovements. Soc. Neurosci. Abstr. 22: 1699.

8. Malpeli JG and Lee D (1997) Saccade-related modulation of gain in the lateral geniculate nucleus of the cat. Soc. Neurosci. Abstr. 23: 170.

9. Lee D, Port NL, Kruse W, and Georgopoulos AP (1997) Neuronal clusters in the primate motor cortex during interception of moving targets. Soc. Neurosci. Abstr. 23: 1400.

10. Lee D (1998) Effects of endogenous vs. exogenous attention on direction of hand movement in human subjects. Soc. Neurosci. Abstr. 24: 1679.

11. Merritt KD, Stanford TR, and Lee D (1999) Binding and short-term memory storage of spatial and non-spatial information. Soc. Neurosci. Abstr. 25: 650.

12. Lee D (1999) Learning of spatial and temporal patterns in sequential hand movements: effects of temporal predictability and complexity. Soc. Neurosci. Abstr. 25: 1899.

13. Lee D and Chun MM (1999) What are the units of visual short-term memory? Abstr. Psychonomic Soc. 4: 105.

14. Kirby MT, Lee D, Stanford TR, and Pons TP (2000) Integrated learning of bimanual movement sequences in humans. Soc. Neurosci. Abstr. 26: 709.

15. Lee D and Murray RP (2000) Neuronal activity in the primate supplementary motor area during learning of movement sequences. Soc. Neurosci. Abstr. 26: 1499.

16. Barraclough DJ, and Lee D (2001) Familiarity with scenes but not individual objects enhances visual short-term memory. Soc. Neurosci. Abstr. 27: 1113.

17. Quessy S, Farrell RC, and Lee D (2001) Neuronal activity in the supplementary motor area and the primary motor cortex during learning of movement sequences. Soc. Neurosci. Abstr. 27: 1932.

18. Lee D and Quessy (2001) Spike synchronization in the supplementary motor area and the primary motor cortex during sequence learning. Soc. Neurosci. Abstr. 27: 1932.

19. Lee D and Quessy (2002) Scene familiarity facilitates visual search in monkeys. Vision Sciences Soc Abstr.

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