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# Curriculum Vita Jeffrey D. Schall March 2, 2020

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	Nashville, TN 37240	Email ORCID orc	jeffrey.d.schall@vanderbilt.edu id.org/0000-0002-5248-943X
	Educati	ion	
1986 1982	Ph.D., Anatomy, University of Utah, Sa B.S.Chem., Chemistry, University of D	alt Lake City,	
	Scholastic and Profess	sional Distino	ction
2014	Fellow, American Association for the A		
2009	Chancellor's Research Award, Vanderb	•	7
2004	Fellow, Association of Psychological Science		
2002	Elected, International Neuropsychology Symposium		
2001 1998	Ellen Gregg Ingalls Award for Excellence in Classroom Teaching		
1998	Troland Research Award, National Academy of Sciences Investigator Award, McKnight Endowment Fund for Neuroscience		
1997-2000	Alfred P. Sloan Research Fellow	nent runa ioi	Neuroscience
1987	Association of Anatomy Chairmen Out	standing Diss	ertation Award Finalist American
1507	Association of Anatomists.	standing 2100	oracion i ivara i mansa, i mierican
1986	James W. Prahl Memorial Award for th	e Outstanding	g Graduate Student, University of
	Utah School of Medicine.	•	, ,
1986	Phi Kappa Phi, University of Utah.		
1984	Graduate Research Fellow, University	of Utah.	
1982	Phi Beta Kappa, University of Denver.		
1980	University Scholar, University of Denv	er.	
	Professional E	xperience	
2003 -	E. Bronson Ingram Professor of Neuros		erbilt University
2000-	Director, Center for Integrative & Cogn		
1999-	Professor, Department of Psychology, V		
1998-2015	Director, Vanderbilt Vision Research C	enter	
1998-2019	Director, Vision Training Program		
1995-1999	Associate Professor, Department of Psy	chology, Var	nderbilt University
1990-	Kennedy Center Investigator		
1989-1995	Assistant Professor, Department of Psy		
1986-1989	Postdoctoral Fellow, Department of Bra		
1000 1006	of Technology, Cambridge, Massachus		
1982-1986	Research Associate, Department of Ana	atomy, Onive	isity of Otali, Sait Lake City, Otali,
1981-1982	A.G. Leventhal, Ph.D. Research Assistant, Brain Research Lab	oratory Nati	onal Jewish Hospital and Asthma
1901-1904	Center, Denver, Colorado, D.W. Shuca	• •	onai sewisii Hospitai anu Astiinia
1980-1982	Research Assistant, Physiological Psych		ratory. Department of Psychology
	University of Denver, Denver, Colorado		
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	Funding
1986-1989	National Research Service Award, National Eye Institute, EY05959, The Role of the
1000 1002	Supplementary Motor Area in Eye Movements, \$63,996 total costs for 3 years.
1990-1992 1991-1993	Alfred P. Sloan Research Fellowship, \$25,000 total costs P.I., McDonnell-Pew Program in Cognitive Neuroscience, 90-39, Neural Correlates of
1991-1993	Directed Visual Attention in Visuomotor Cortex of Macaque Monkeys, \$60,000 total costs
1991-1996	P.I., National Eye Institute, R01-EY08890, Saccade Target Selection: Frontal Cortex, \$554,169 total costs
1993	P.I., University Research Council, <u>Support for Behavioral Physiology Experiments</u> , \$6,013
1993-1996	Sponsor, Kirk Thompson, NRSA F32-EY06495, National Eye Institute, <u>Thalamocortical Transformations</u> : Visuomotor Thalamus, \$75,900 total costs
1993-1996	Sponsor, Kirk Thompson, McDonnell-Pew Program in Cognitive Neuroscience, Neural Correlates of Visual Awareness, \$90,000 total costs
1994-1995	Preceptor, Doug P. Hanes, T32-EY07135 National Eye Institute, <u>Training Grant in</u> Vision Research.
1995-1998	Sponsor, Doug Hanes, NRSA F31-MH11178, National Institute of Mental Health,
1775-1776	Regulation of Saccade Initiation: Frontal Cortex \$39,024
1995-1996	Neuroscience module director, Howard Hughes Medical Institute Undergraduate
1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Biological Sciences Education Program (71195-513803), \$76,100 direct costs
	(supplemented by \$32,000 from College of Arts & Sciences)
1996-2000	P.I., National Eye Institute, R01-EY08890 renewal, Saccade Target Selection: Frontal
	Cortex, \$722,735 total costs
1996-2001	P.I., National Institute of Mental Health, R01-MH55806, Neural Control of Voluntary Movement, \$838,792 total costs
1997-2000	Investigator Award, McKnight Endowment Fund for Neuroscience, Neural Selection and Control of Visually Guided Action \$150,000 total costs
1998-2003	P.I., National Eye Institute, T32-EY07135, <u>Training Grant in Vision Research</u> , \$828,258 total direct costs
1998-2003	P.I., National Eye Institute, P30-EY08126, Core Grant in Vision Research, \$1,892,148 total costs
2000-2005	P.I., National Eye Institute, R01-EY08890, Saccade Target Selection: Frontal Cortex, \$1,868,460 total costs
2001-2006	P.I., National Institute of Mental Health, R01-MH55806, Neural Control of Voluntary  Movement, \$1,756,946 total costs
2002-2005	Sponsor, Stephanie Shorter-Jacobi, NRSA F32-EY14502, National Eye Institute, Neural Control of Orienting by Macaque Frontal Eye Field
2002-2005	coP.I. (with Gordon Logan and Tom Palmeri), National Science Foundation BCS0218507, Stochastic Models of Executive Control in Monkeys and Humans, Joint NSF/NIH Initiative to Support Collaborative Research in Computational Neuroscience,
2002 2006	\$756,181 total costs
2003-2006	Sponsor, Geoff Woodman, NRSA F32 EY015043, National Eye Institute, Neural
2004-2007	Correlates of Visual Object-Substitution Masking coSponsor (with Tom Palmeri), Leanne Boucher, NRSA F32EY016679, National Eye
2004-2009	Institute, <u>Modeling Interactive Motor Processes</u> P.I., National Eye Institute, T32-EY07135, <u>Training Grant in Vision Research</u> , \$2,832,395 total costs
2004-2009	P.I., National Eye Institute, P30-EY08126, Core Grant in Vision Research, \$3,020,000

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2005 2010	total costs
2005-2010	P.I., National Eye Institute, R01-EY08890, Saccade Target Selection: Frontal Cortex,
2006-2008	\$1,868,460 total costs Sponsor, Melanie Leslie, NRSA F32EY017765, National Eye Institute, <u>Ensemble Neural</u>
2000-2008	Monitoring and Saccadic Control
2006-2011	P.I., National Institute of Mental Health, R01-MH55806, Neural Control of Voluntary
2000 2011	Movement, \$1,726,688 total costs
2007-2010	coPI with Gordon Logan, Air Force Office of Scientific Research, FA9550-07-1-0192,
	Modeling the Role of Priming in Executive Control: Cognitive and Neural Constraints,
	\$707,000 total costs
2007-2010	PI, MacArthur Law and Neuroscience Project, Neurons, Actions, Reasons and
2000 2011	Crimes - A Dialogue between Law and Neuroscience, \$10,000 total costs
2008-2011	coSponsor (with Sohee Park), Katherine Thakkar, NRSA F31MH085405, National
	Institute of Mental Health, <u>Control of action in schizophrenia</u> : <u>Countermanding saccades</u> and ERP
2009-2011	Sponsor, Richard Heitz, NRSA F32EY019851, National Eye Institute,
2007-2011	Neurophysiological Correlates Of Decision Formation
2010-2015	P.I., National Eye Institute, T32-EY07135, Training Grant in Vision Research,
	\$2,832,395 total costs
2010-2015	P.I., National Eye Institute, P30-EY08126, Core Grant in Vision Research, \$3,875,000
	total costs
2011-2015	P.I., National Eye Institute, R01-EY08890, Saccade Target Selection: Frontal Cortex,
2011 2014	\$1,558,750 total costs
2011-2014	multi-PI with Tom Palmeri & Gordon Logan, National Eye Institute, 1R01EY21833,
2012-2017	Stochastic Models of Visual Search P.I., National Institute of Mental Health, R01-MH55806, Neural Control of Voluntary
2012-2017	Movement, \$390,000 total costs
2013-2015	coSponsor (with Geoff Woodman), Joshua Cosman, NRSA, F32EY023922, National Eye
	Institute, The Role of Long-Term Contextual Memory in Attentional Control
2013-2015	Sponsor, Paul Middlebrooks, NRSA F32EY23526, National Eye Institute, Neuronal
	mechanisms of response inhibition during decision making
2014-2018	multi-PI with Tom Palmeri & Gordon Logan, National Eye Institute, 1R01EY21833,
2015 2020	Stochastic Models of Visual Decision Making and Visual Search
2015-2020	coPI (with Geoff Woodman), National Eye Institute, T32-EY07135, <u>Training Grant in Vision Pagagraph</u>
2015-2016	<u>Vision Research</u> P.I., National Eye Institute, P30-EY08126, <u>Core Grant in Vision Research</u>
2013-2010	Principal Investigator transferred to David Calkins
2015-2016	Co-Investigator (with Charles Caskey), Focused Ultrasound Surgery Foundation, High-
	Risk Track, Noninvasive targeted neuromodulation and functional imaging in behaving
	<u>macaques</u>
2015-2018	P.I., National Eye Institute, R01-EY08890, Saccade Target Selection: Frontal Cortex
2016-2018	Co-Investigator (with Charles Caskey), National Institute of Mental Health, R24-
2015 2017	MH109105, Neuron selective modulation of brain circuitry in non-human primates
2015-2017	Co-Sponsor, Brent Miller, NRSA F32EY025538, National Eye Institute, Ensemble
2017-2019	<u>accumulator modeling of speed-accuracy tradeoff in visual search</u> Co-Sponsor, Zacharay J.J. Roper, NRSA F32EY028041, National Eye Institute, <u>A</u>
2017-2019	comparative electrophysiological study on the mechanisms of selective attention
2018-2020	Sponsor, Thomas R. Reppert, NRSA F32028846, National Eye Institute, <u>Linking</u>
	propositions for stages of processing during visual Search

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2019-2020 P.I., R13-EY030353-01, National Eye Institute, 2019 Eye Movements GRC/GRS

## **Teaching Experience**

Visual System, Neuroscience & Law (with Owen Jones of VU Law School), College Scholars Program: Neuroethics, Methods in Behavioral Neuroscience, Movement, Introduction to Neuroscience, Seminar in Physiological Psychology: Psychology of Human Motor Control, Brain & Behavior, Freshman Seminar, Seminar in Physiological Psychology: Current Issues in Neuroscience, Seminar in Physiological Psychology: Eye Movements and Attention, Brain & Behavior, College Scholars Program: Seminar in Neuroscience

# Graduate students supervised Doug Hanes, Department of Psychology Graduate Program. 1991-1997 Intramural fellow with Robert Wurtz in the Laboratory for Sensorimotor Research, NIH Currently Divisional Vice President and General Manager, GMAC Insurance 1994-1999 Narcisse Bichot, Department of Psychology Graduate Program Currently Research Scientist, Massachusetts Institute of Technology 1999-2003 Takashi Sato, Department of Psychology Graduate Program Currently Assistant Professor, Department of Neuroscience, Medical University of South Carolina 2001-2003 Shigehiko Ito, Department of Psychology Graduate Program Currently Legal Associate, White & Case LLP 2004 - 2009 Jeremiah Cohen, Neuroscience Graduate Program Currently Assistant Professor, Department of Neuroscience, Johns Hopkins University School of Medicine. 2003-2006 Corrie Camalier (with Gordon Logan and Tom Palmeri), Neuroscience Graduate Currently Postdoctoral Fellow, Laboratory of Neuropsychology, NIMH 2002 - 2010 Erik Emeric, Neuroscience Graduate Program Currently Research Associate with Veit Stuphorn, Zanvyl Krieger Mind-Brain Institute, Johns Hopkins University 2006 - 2011 Matthew Nelson, California Institute of Technology Graduate Program Currently postdoctoral research associate with Stan Dehaene, INSERM-CEA Cognitive Neuroimaging Unit 2006 - 2012 Katherine Thakkar (with Sohee Park), Psychological Sciences Graduate Program Currently Assistant Professor of Psychology, Michigan State University 2007 - 2013 Braden Purcell (with Tom Palmeri and Gordon Logan), Psychological Sciences Graduate Program Currently postdoctoral fellow with Roozbeh Kiani and XJ Wang, Center for Neural Science, New York University

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2008 - 2013	David Godlove, Neuroscience Graduate Program Currently Bioinformatics Architect, Sapient Government Services
2010 -	Robert Reinhart (with Geoff Woodman), Psychological Sciences Graduate Program Currently Assistant Professor of Psychology, Boston University
2011	Masters Thesis advisor for Mirjam Bloemendaal, MSc in Brain and Cognitive Sciences, University of Amsterdam, Cognitive Science
2013 - 2014	Dylan Morrow-Jones, Neuroscience Graduate Program
2014 - 2016	Siyuan Yin, Psychological Sciences Graduate Program
2015 -	Kaleb Lowe, Psychological Sciences Graduate Program
2016 -	Jacob Westerberg (with Alex Maier), Psychological Sciences Graduate Program
2017 -	Steven Errington, Psychological Sciences Graduate Program
2018 -	External advisor, Beatriz Herrera, Department of Biomedical Engineering, Florida International University
1992-2000	Postdoctoral fellows and associates supervised Kirk G. Thompson, NEI Research Fellow, Research Assistant Professor currently Scientific Review Officer, CSR, NIH, Bethesda, Maryland
1997-2000	Chenchal Rao Subraveti, Research Associate currently Senior Neuroinformatics Research Associate, Vanderbilt University
1998-2000	Tracy Taylor, NSERC Fellow currently Professor, Department of Psychology, Dalhousie University
1998-2003	Veit Stuphorn, Research Fellow, DFG Forschungsstipendium currently Associate Professor, Department of Psychological and Brain Sciences, The Johns Hopkins University
1998-2001	Aditya Murthy, Research Associate currently Associate Professor, Centre for Neuroscience, Indian Institute of Science
2000-2001	Joshua Brown, Research Associate currently Associate Professor, Department of Psychological and Brain Sciences, Indiana University
2002 -2003	Chi-Hung Juan, Research Associate currently Professor, Institute of Cognitive Neuroscience, National Central University, Taiwan
2001 - 2006	Stephanie Shorter, NEI Research Fellow currently Director of Research and Publications for the Yoga Care Foundation, Austin,

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	Texas.
2002 - 2007	Geoff Woodman, NEI Research Fellow currently Associate Professor, Department of Psychology, Vanderbilt University
2005 - 2008	Melanie Leslie, NEI Research Fellow currently in private life
2004 - 2008	Pierre Pouget, Research Associate currently Faculty Member, Université Pierre et Marie Curie, Institut du Cerveau et de la Moelle épinière (ICM), Paris, France
2003 - 2009	Leanne Boucher, NEI Research Fellow currently Associate Professor, Nova Southeastern University
2007 - 2009	Supriya Ray, Research Associate currently Assistant Professor and Wellcome Trust DBT Intermediate Fellow, Centre of Behavioural and Cognitive Sciences (CBCS), University of Allahabad
2009 - 2010	Claudia Wilimzig, Research Associate currently Medical Writer for Carl Zeiss Meditec, Berlin, Germany
2007 - 2014	Richard Heitz, NEI Research Fellow currently Principal Data Scientist, Abbott Laboratories, Chicago, IL
2011 – 2014	Bram Zandbelt, Postdoctoral research associate (with Gordon Logan & Tom Palmeri) currently Research Associate with Roshan Cools, Donders Institute for Brain, Cognition and Behaviour, Radboud University, Nijmegen, Netherlands.
2013 - 2015	Taihei Ninomiya, Postdoctoral research associate currently Assistant Professor, National Institute for Physiological Sciences, Okazaki, Japan
2011 - 2016	Joshua Cosman, NEI research fellow (with Geoff Woodman) currently Associate Director of Translational Neuromedicine, Pfizer Inc., Cambridge MA
2011 - 2016	Kiesuke Fukuda, Postdoctoral research associate (with Geoff Woodman) Assistant Professor, Department of Psychology, University of Toronto Mississauga
2011 - 2017	Paul Middlebrooks, NEI research fellow (with Gordon Logan & Tom Palmeri)
2013 - 2016	Wolf Zinke, Postdoctoral research associate (with Alex Maier and Geoff Woodman)
2014 – 2017	Brent Miller, NEI research fellow (with Tom Palmeri & Gordon Logan)
2016 - 2018	Mathieu Servant, Postdoctoral research associate (with Gordon Logan, Tom Palmeri & Geoff Woodman) Assistant Professor, Department of Psychology, University of Franche-Comté, Besançon, France.

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2016 - 2018	Zachary Roper, Postdoctoral research associate (with Geoff Woodman)
2016 -	Thomas Reppert, NEI Postdoctoral research fellow
2016 -	Amirsaman Sajad, CIHR Postdoctoral research fellow
2010- 2009- 2002- 2001 - 2006 2001- 2015	Professional Service - Manuscript Review  Editorial Board for Frontiers in Neuroscience  Advisory Board for Faculty of 1000 Biology Reports  Editorial Board, Journal of Neurophysiology  Associate Editor, Journal of Neuroscience  Abstract Review Committee, Vision Science Society
	Reviewer for Cerebral Cortex, Cognitive Psychology, eLife, eNeuro, European Journal of Neuroscience, Experimental Brain Research, Journal of Experimental Psychology: General, Journal of Experimental Psychology: Human Perception and Performance, Nature, Nature Neuroscience, Neuroimage, Neuron, Proceedings of the National Academy of Sciences, Public Library of Science, Science, Trends in Cognitive Science
	Professional Service - Grant Review
2015	National Eye Institute Board of Scientific Counselors (ad hoc)
2013	National Institutes of Health, special emphasis panel review: Neurobiology of active vision (Chair)
2012	National Eye Institute, Special Emphasis Panel to review P30 grants
2010, 2011	National Eye Institute, Special Emphasis Panel to review T32 grants (2010 Chair)
2007 - 2009	Chair, NIH Central Visual Processing Study Section
2005 -	NIH Central Visual Processing Study Section
2003, 2004	National Eye Institute, Special Emphasis Panel to review R01 grants
2002	National Eye Institute, Special Emphasis Panel to review Core Grants.
2000, 2001	National Institute of Mental Health, Neuroscience and Behavioral Science Review
	Branch, Silvio Conte Center Grants
1999, 2001	National Eye Institute, Special Emphasis Panel to review T32 grants.
1999, 2001	National Science Foundation, Sensory Systems
1998	National Eye Institute, Mentored Clinical Scientist Development Award
1998	National Science Foundation, Division of Integrative Biology and Neuroscience
1997	National Science Foundation, Behavioral Neuroscience
1996	The Wellcome Trust
1996 1996	The Israel Science Foundation  Department of Voterans Affairs Morit Pavious application for the VA Medical Passarah
1990	Department of Veterans Affairs Merit Review application for the VA Medical Research Service
1993	NIH Neurological Disorders Program Project Review B Committee
1993	Ad hoc, NIH Behavioral and Neurosciences Study Section 1
	Professional Service – Other
2020-	Federation of Associations in Behavioral & Brain Sciences (FABBS) Board of Directors
2019-2020	Vision Science Society, Past President
2018-2019	Vision Science Society, President

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2018-2019 2017, 2019	Council of Representatives, Federation of Associations in Behavioral and Brain Sciences Co-Chair, Gordon Research Conference on Eye Movements
2017, 2019	Vision Science Society Board of Directors, Treasurer
2013-2020	International Scientific Advisory Board for the Brain and Mind Institute (BMI),
2013-	University of Western Ontario
2003	Advisory Panel for 5 year Strategic Plan for Strabismus, Amblyopia and Visual Processing, National Eye Institute
2003	Advisory Board, Silvio O. Conte Center for Neuroscience Research: Cognitive and Neural Mechanisms of Conflict and Control, Princeton University
2001	I-RITE, Stanford University
2001 - 2015	Program committee, Vision Science Society
1992	Judge for 43rd International Science and Engineering Fair, Nashville, TN
1988	Participated in the Science-by-Mail program for school children, Boston Science Museum.
1984, '85, '86	Judge for Intermountain Junior Science and Humanities Symposium, University of Utah
	Department, College & University Service
2019-	Chair, Faculty Advisory Committee for Large Animals, Vanderbilt University
2016, 2017	Search Committee for Vanderbilt Brain Institute Director
2014-	Institutional Animal Care & Use Committee
2008-2009	Task Force on Graduate Education, Vanderbilt University
2006-2008	Board of Advisors for the Vanderbilt University Center for Ethics
2004	Internal Advisory Committee, Vanderbilt University Institute of Imaging Science
2003-2004	Committee on Moral Reasoning, Vanderbilt University
2003-	Kennedy Center Core Advisory Committee
2002	Ad hoc committee on Undergraduate Research, Vanderbilt University
2002-	Advisory Committee for Interdisciplinary Major in Communication of Science,
	Engineering and Technology, Vanderbilt University
2001-	Faculty Advisory Committee for Large Animals, Vanderbilt University
2001	Search committee for the Chair, Department of Ophthalmology & Visual Science, Vanderbilt University
2001-2015	Discovery Grant Review Committee, Vanderbilt University
2000-	Director, Center for Integrative & Cognitive Neuroscience
2000-2001	Search committee, Division of Animal Care clinical veterinarian
1999-2003	Director, Sensory Sciences and Neural Plasticity program, Kennedy Center
1999-	Neuroscience Council, Advisory Committee for Vanderbilt Brain Institute
1999-	Neuroscience Graduate Program Faculty Advisory Committee
1999-2001	Organizing Committee for Vanderbilt University Conference on Genomics, May 2001
1999-2000	Kennedy Center Research Associate Review Committee
1999	College of Arts & Science, Admissions Committee
1998-1999	Chair, Committee to recommend a Center for Integrative and Cognitive Neuroscience,
	Vanderbilt University
1998-1999	Search Committee for Associate Provost for Research, Vanderbilt University
1998	Transinstitutional Research Committee, Vanderbilt University
1998- 2003	Kennedy Center Coordinating Committee
1998	Participant in workshop "Worlds Apart - Chronicling Discovery", organized by Rick
	Chappell and Jim Hartz, sponsored by the First Amendment Center and the Office for
	Media Relations, Vanderbilt University
1996-1997	Committee to Develop Undergraduate Neuroscience Major, College of Arts & Sciences,
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	Vanderbilt University
1996-1997	Vanderbilt University Research Strategy and Policy Committee
1994-2000	Vanderbilt University Animal Care Committee
1993-2000	Director of Department of Psychology Animal Facility, Vanderbilt University.
1993	Department of Psychology ad hoc Committee on Faculty Recruitment
1990-	Graduate Studies Committee, Department of Psychology, Vanderbilt University.
	Professional Affiliations
2007-	Society for Evolutionary Analysis in Law
2003-	Association of Psychological Science
2002-	American Physiological Society
2001-2003	International Neuropsychology Symposium
2001 -	Vision Science Society
1995-	Neural Control of Movement
1993-	Cognitive Neuroscience Society
1986-	American Association for the Advancement of Science
1984-	Association for Research in Vision and Ophthalmology
1983-	Society for Neuroscience

#### Books

- Owen D. Jones, Jeffrey D. Schall, Francis X. Shen (2014) *LAW AND NEUROSCIENCE*. Wolters Kluwer Law & Business. June 16, 2014. <a href="http://www.psy.vanderbilt.edu/courses/neurolaw/">http://www.psy.vanderbilt.edu/courses/neurolaw/</a>
- Owen D. Jones, Jeffrey D. Schall, Francis X. Shen (2015) *LAW AND NEUROSCIENCE: A Teachers Manual*. Wolters Kluwer Law & Business.
- Owen D. Jones, Morris Hoffman, Jeffrey D. Schall, Francis X. Shen (2020) *BRAIN SCIENCE FOR LAWYERS*. In negotiation with American Bar Association
- Owen D. Jones, Jeffrey D. Schall, Francis X. Shen (2020) *LAW AND NEUROSCIENCE*, 2<sup>nd</sup> edition. Wolters Kluwer Law & Business.
- David Calkins, Jeffrey D Schall, Geoffrey F Woodman (Editors) *THE VISUAL SYSTEM*. Sinauer/Oxford (to appear in 2020).

#### **Edited volumes**

- 1) Thomas Geyer, Chris Olivers, **Jeffrey D. Schall**, Jeremy Wolfe (editors) (2020) *Visual Cognition*. Special Issue devoted to the 4<sup>th</sup> meeting of Visual Search and Selective Attention (VSSA IV) Volume 27, 2019 Issue 5-8.
- 2) Asif Shaikh, **Jeffrey D. Schall** (editors) (2020) Vision and Action. *Journal of Computational Neuroscience*. Special issue devoted computational models of gaze control in honor of the retirement of Lance M. Optican (in preparation)

#### **Peer-reviewed Publications**

- 1) Leventhal, A.G. & **J.D. Schall** (1983) Structural basis of orientation sensitivity in cat retinal ganglion cells. *Journal of Comparative Neurology* 220:465-475.
- 2) Leventhal, A.G., **J.D. Schall** & W. Wallace (1984) Relationship between preferred orientation and receptive field position of neurons in extrastriate cortex (area 19) in the cat. *Journal of*

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- Comparative Neurology 222:445-451.
- 3) Vitek, D.J., **J.D. Schall** & A.G. Leventhal (1985) Morphology, central projections and dendritic field orientation of retinal ganglion cells in the ferret. *Journal of Comparative Neurology* 241:1-11.
- 4) **Schall, J.D.**, V.H. Perry & A.G. Leventhal (1986) Retinal ganglion cell dendritic fields in old-world monkeys are oriented radially. *Brain Research* 368:18-23.
- 5) **Schall, J.D.**, D.J. Vitek & A.G. Leventhal (1986) Retinal constraints on orientation specificity in cat visual cortex. *Journal of Neuroscience* 6:823-836.
- 6) **Schall, J.D**. & A.G. Leventhal (1987) Relationships between ganglion cell dendritic structure and retinal topography in the cat. *Journal of Comparative Neurology* 257:149-159.
- 7) **Schall, J.D.**, V.H. Perry & A.G. Leventhal (1987) Ganglion cell dendritic structure and retinal topography in the rat. *Journal of Comparative Neurology* 257:160-165.
- 8) Leventhal, A.G., **J.D. Schall** & S.J. Ault (1988) Extrinsic determinants of retinal ganglion cell morphology in the cat. *Journal of Neuroscience* 8:2028-2038.
- 9) Leventhal, A.G., **J.D. Schall**, S.J. Ault, J.M. Provis & D.J. Vitek (1988) Class specific cell death shapes the distribution and pattern of central projection of cat retinal ganglion cells. *Journal of Neuroscience* 8:2011-2027.
- 10) **Schall, J.D.**, S.J. Ault, D.J. Vitek & A.G. Leventhal (1988) Experimental induction of an ipsilateral visual field representation in the visual pathway of normally pigmented cats. *Journal of Neuroscience* 8:2039-2048.
- 11) Logothetis, N.K. and **J.D. Schall** (1989) Neuronal correlates of subjective visual perception. *Science* 245:761-763
- 12) Logothetis, N.K. and **J.D. Schall** (1990) Binocular motion rivalry in macaque monkeys: Eye dominance and tracking eye movements. *Vision Research* 30:1409-1419.
- 13) Garraghty, P.E., **J.D. Schall** and J.H. Kaas (1990) Normal somatotopy in SI of tyrosinase-negative albino cats. *Brain Research* 536:315-317.
- 14) **Schall, J.D**. (1991) Neuronal activity related to visually guided saccadic eye movements in the supplementary motor area of rhesus monkeys. *Journal of Neurophysiology* 66:530-558.
- 15) **Schall, J.D**. (1991) Neuronal activity related to visually guided saccades in the frontal eye fields of rhesus monkeys: Comparison with supplementary eye fields. *Journal of Neurophysiology* 66:559-579.
- 16) Parthasarathy, H.B., **J.D. Schall** and A.M. Graybiel (1992) Distributed but convergent ordering of striatal projections: The frontal eye field and the supplementary eye field in the monkey. *Journal of Neuroscience* 12:4468-4488.
- 17) **Schall, J.D.**, A. Morel and J. Kaas (1993) Topography of supplementary eye field afferents to frontal eye field in macaque: Implications for mapping between saccade coordinate systems. *Visual Neuroscience* 10:385-393.
- 18) **Schall, J.D.**, M.R. Nawrot, R. Blake, K.P. Yu (1993) Visually guided attention is neutralized when informative cues are visible but unperceived. *Vision Research* 33:2057-2064.
- 19) **Schall, J.D.** and D.P. Hanes (1993) Neural basis of saccade target selection in frontal eye field during visual search. *Nature* 366:467-469.
- 20) Hanes, D.P., Thompson, K.G. and **J.D. Schall** (1995) Relationship of presaccadic activity in frontal eye field and supplementary eye field to saccade initiation in macaque: Poisson spike train analysis. *Experimental Brain Research* 103:85-96.
- 21) **Schall, J.D.**, A. Morel, D. King and J. Bullier (1995) Topography of visual cortical afferents to frontal eye field in macaque: Convergence and segregation of processing streams. *Journal of Neuroscience* 15:4464-4487.
- 22) Hanes, D.P. and **J.D. Schall** (1995) Countermanding saccades in macaque. *Visual Neuroscience* 12:929-937.
- 23) Schall, J.D., D.P. Hanes, K.G. Thompson and D.J. King (1995) Saccade target selection in frontal

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- eye field of macaque. I. Visual and premovement activation. *Journal of Neuroscience* 15:6905-6918.
- 24) Bichot, N.P., **J.D. Schall** and K.G. Thompson (1996) Visual feature selectivity in frontal eye fields induced by experience in mature macaques. *Nature* 381:697-699.
- 25) Hanes, D.P. and **J.D. Schall** (1996) Neural control of voluntary movement initiation. *Science* 274:427-430.
- 26) Thompson, K.G., D.P. Hanes, N.P. Bichot and **J.D. Schall** (1996) Perceptual and motor processing stages identified in the activity of macaque frontal eye field neurons during visual search. *Journal of Neurophysiology* 76:4040-4055.
- 27) Thompson, K.G., N.P. Bichot and **J.D. Schall** (1997) Dissociation of target selection from saccade planning in macaque frontal eye field. *Journal of Neurophysiology* 77:1046-1050.
- 28) Hanes, D.P., W.F. Patterson, **J.D. Schall** (1998) The role of frontal eye field in countermanding saccades: Visual, movement and fixation activity. *Journal of Neurophysiology* 79:817-834.
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- 188) T. Reppert, M. Servant, R. P. Heitz, J. D. Schall (2017) Neural correlates of speed-accuracy tradeoff: Superior colliculus and frontal eye field. Program No. 60.2 2017 Neuroscience Meeting Planner.
- 189) J. G. Elsey, K. Lowe, P. Middlebrooks, J. D. Cosman, J. D. Schall (2017) Functional architecture of frontal eye field: Spatial clustering of functional properties. Program No. 60.21 2017 Neuroscience Meeting Planner.
- 190) K. A. Lowe, J. D. Schall (2017) Metaclustering: A novel method for identifying robust classes of neuronal responses in frontal eye field. Program No. 60.19 2017 Neuroscience Meeting Planner
- 191) A. Sajad, J.D. Schall (2017) Microcircuitry of agranular frontal cortex: Laminar organization of saccade performance monitoring signals in supplementary eye field. Program No. 337.12 2017 Neuroscience Meeting Planner
- 192) S Errington, A Sajad, J Schall (2018) Microcircuitry of visual performance monitoring in the supplementary eye field: Laminar distribution of visual processing under conflict. Journal of Vision. 2018; 18(10):201-201. doi: 10.1167/18.10.201
- 193) A Sajad, J Schall (2018) Microcircuitry of visual performance monitoring in the supplementary eye field: Laminar distribution of error and reward processing. Journal of Vision. 2018; 18(10):200-200. doi: 10.1167/18.10.200
- 194) K Lowe; T Reppert; J Schall (2018) Effects of visual search target-distractor congruence on stimulus-response mapping in macaques: Performance strategies. Journal of Vision. 2018; 18(10):1212-1212. doi: 10.1167/18.10.1212
- 195) T Reppert; K Lowe; J Schall (2018) Effects of visual search target-distractor congruence on

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- stimulus-response mapping in macaques: Saccade timing and vigor. Journal of Vision. 2018; 18(10):1213-1213. doi: 10.1167/18.10.1213
- 196) Errington SP, Sajad A, Schall JD (2018) Microcircuitry of performance monitoring: Laminar structure of visual and conflict monitoring in the supplementary eye field. Program No. 081.13 2018 Neuroscience Meeting Planner.
- 197) Sajad A, Schall JD (2018) Microcircuitry of performance monitoring: Laminar origin of outcome monitoring and executive control in supplementary eye field Program No. 272.14 2018

  Neuroscience Meeting Planner.
- 198) Reppert TR, Heitz RP, Schall JD (2018) Visual search strategies: Performance monitoring by macaque supplementary eye field during speed-accuracy tradeoff. Program No. 486.09 2018 Neuroscience Meeting Planner.
- 199) Westerberg JA, Maier AV, Schall JD (2018) Visual search strategies: Priming of pop-out in macaques. Program No. 486.10 2018 Neuroscience Meeting Planner.
- 200) Lowe KA, Reppert T, Schall JD (2018) Visual search strategies: Induction of shape selectivity in macaque frontal eye field. Program No. 486.11 2018 Neuroscience Meeting Planner.
- 201) Lowe KA, Schall JD (2019) Induction of shape selectivity in macaque frontal eye field dissociates perceptual and motor processing stages of visual search. 35.16. Vision Science Society. Journal of Vision.
- 202) Reppert TR, Heitz RP, Schall JD (2019) Monitoring and proactive control of visual search speed-accuracy tradeoff by supplementary eye field. 36.341. Vision Science Society. Journal of Vision.
- 203) Errington SP, Sajad A, Schall JD (2019) Cortical microcircuitry of gaze monitoring in supplementary eye field. 63.347. Vision Science Society. Journal of Vision.
- 204) Westerberg JA, Maier AV, Schall JD (2018) Performance monitoring signals during visual priming. 63.442Vision Science Society. Journal of Vision.
- 205) Cox, Gregory Edward; Palmeri, Thomas J.; **Schall, Jeffrey D.**; Logan, Gordon D.; Smith, Philip L. (2019) A dynamic model of target selection in visual search by neurons in frontal eye fields. Joint meeting of 52nd Annual Meeting of the Society for Mathematical Psychology, and the 17th Annual Meeting of the International Conference on Cognitive Modelling, Montreal, Canada.
- 206) R. Doubnia, A. Sajad, B. Herrera, J. Schall, J. Riera, G. Woodman (2019) Microcircuitry of agranular frontal cortex: Laminar hase-amplitude coupling for cognitive control. Program No. 081.12 2019 Neuroscience Meeting Planner.
- 207) S.P. Errington, A. Sajad, J.D. Schall (2019) Microcircuitry of agranular cortex: Multiplexed executive control and performance monitoring signals. Program No. 081.11 2019 Neuroscience Meeting Planner.
- 208) B. Herrera, A. Sajad, G. F. Woodman, J. D. Schall, J. J. Riera (2019) Microcircuitry of agranular frontal cortex: A stochastic 2-compartment model of neocortical pyramidal cells. Program No. 081.13 2019 Neuroscience Meeting Planner.
- 209) K.A. Lowe, T.R. Reppert, J.D. Schall (2019) Separate modifiability of stages of target selection for visual search in macaques. Program No. 418.05 2019 Neuroscience Meeting Planner.
- 210) T.R. Reppert, R.P. Heitz, J.D. Schall (2019) Speed-accuracy tradeoff of visual processing in supplementary eye field: comparison with frontal eye field and superior colliculus. Program No. 418.04 2019 Neuroscience Meeting Planner.
- 211) A. Sajad, J.D. Schall (2019) Microcircuitry of agranular cortex: Laminar organization of signals for the feedback related negativity. Program No. 081.14 2019 Neuroscience Meeting Planner.
- 212) J.D. Schall, J.A. Westerberg, A.V. Maier (2019) Microcircuitry of visual attention: Attentional priming in area V4. Program No. 418.03 2019 Neuroscience Meeting Planner.
- 213) M.S. Schall, J.A. Westerberg, A.V. Maier, J.D. Schall, G.F. Woodman (2019) Contribution of area V4 to the N2pc event-related potential index of attention. Program No. 418.02 2019 Neuroscience Meeting Planner.

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214) N.C. Van Wouwe, S.A. Wylie, P.M. Kaskan, E.B. Bradley, A.M. Gifford, S. Selvam, S. Hughes, A. Lopez, J.D. Schall, F.T. Phibbs, B.M. Dawant, J.S. Neimat (2019) Effects of dorsal and ventral STN stimulation on stopping performance. Program No. 783.11 2019 Neuroscience Meeting Planner.

215) J.A. Westerberg, A. Maier, J.D. Schall (2019) Microcircuitry of visual attention: laminar organization of attentional selection in area V4. Program No. 418.01 2019 Neuroscience Meeting Planner.

### **Invited Presentations**

- 2019 "Neuro-Computational Mechanisms of Visual Search, Gaze Control, and Performance Monitoring", The Neuroscience Research Colloquium, York University, Toronto, Canada.
- 2019 "Microcircuitry of Performance Monitoring in Medial Frontal Cortex", The Neuroscience Research Colloquium, University of British Columbia, Vancouver, Canada.
- 2018 "Neuro-logic: How your brain is keeping you from changing your mind", Rotary Club of Green Hills, Nashville, TN.
- 2018 Keynote "Neural Control of Visual Search", Visual Search and Selective Attention (VSSA IV), Holzhausen am Ammersee, Germany.
- 2018 "Cognitive Control and Eye Movements", IBRO-APRC School on Cognitive Neuroscience: 5th Bangalore Cognition Workshop, Centre for Neuroscience, Indian Institute of Science, Bangalore, India
- 2018 "Microcircuitry of Performance Monitoring in Medial Frontal Cortex", National Institute of Aging Director's Seminar Series. Baltimore, MD.
- 2017 "Circuits and Computations for Movements of the Eyes", Keynote address at Scientific Meeting honoring the memory of David A. Robinson. May 26-27 2017. Johns Hopkins University School of Medicine. Baltimore, MD.
- 2017 "Cognitive Neurophysiology of Gaze Control" for *Heads Up! Concussion: Current Trends in Diagnosis and Management* Nancy M. Benegas, MD; Gary S. Solomon, PhD, FACPN; Allan K. Sills, MD, ABPP-CN; Jennifer V. Wethe, PhD; Jeffrey D. Schall, PhD. American Association for Pediatric Ophthalmology and Strabismus 43rd Annual Meeting, April 2 6, 2017, Preliminary Program, Nashville, TN
- 2017 "Neurons, Circuits, Decisions and Actions", The Smith-Kettlewell Eye Research Institute, San Francisco, California
- 2016 "Contributions of Supplementary Eye Field to Error Monitoring During Saccade Countermanding", Wallace H. Coulter Foundation Lecture, Department of Biomedical Engineering, Florida International University, Miami, Florida
- 2016 "Contributions of Supplementary Eye Field and Anterior Cingulate Cortex to Performance Monitoring during Saccade Countermanding", in Symposium: Action control and response monitoring, 18th World Congress of Psychophysiology, Havana, Cuba
- 2016 "Neurons, Circuits, Decisions and Actions", Department of Cell Biology and Neuroscience, Montana State University
- 2016 "Decisions, accumulators and neurons: How secure a bridge?", Center for Neural Science, New York University
- 2016 "Automatic and voluntary control of eye movements", TEAM Presentation, Organizer: Jeffrey Schall, Participants: Brian Corneil (Univ Western Ontario), Doug Munoz (Queen's Univ), Ziad Hafed (Tübingen Univ), 26<sup>th</sup> annual meeting of Neural Control of Movement Society, Montego Bay, Jamaica
- 2016 "Decisions, accumulators and neurons: How secure a bridge?", Département de Neurosciences, Université de Montréal
- 2015 "Eye Fields in Humans and Nonhuman Primates" Discussion leader for symposium presented

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- by Clayton Curtis, Stefan Everling, Beatriz Luna. Gordon Research Conference: Eye Movements Integrating Perception and Action for Optimal Vision. Bentley University, Waltham, MA
- 2014 "Recent investigations of neural mechanisms of decision-making in frontal and supplementary eye fields: Speed-accuracy, laminar processing, and event-related potentials", Neuroscience Seminar Series, Department of Experimental Psychology, University of Oxford, Oxford, UK
- 2014 "Neurons, Circuits, Decisions and Actions", Keynote, Conference on Decision Making, School of Experimental Psychology, University of Bristol, UK
- 2014 "Neurons, Circuits, Decisions and Actions", Institute Of NeuroScience, Université catholique de Louvain, Brussels, Belgium
- "Contributions of supplementary eye field to error monitoring", "Bridging psychological models and neural mechanisms", "Structure and function of frontal eye field", 3 lectures provided for Neuroscience Graduate Program, Université catholique de Louvain, Brussels, Belgium
- "Recent investigations of neural mechanisms of decision-making in frontal and supplementary eye fields: Speed-accuracy, laminar processing, and event-related potentials", L'Institut du Cerveau et de la Moelle Épinière, Université Pierre et Marie Curie, Hôpital de la Salpêtrière, Paris, France
- 2014 "Neural Guidance of Gaze: Gated Accumulation", Fourth workshop on Natural Environments, Tasks and Intelligence, University of Texas Austin
- 2014 "Neural control and monitoring of decision making", Oral Presentation, annual meeting of Neural Control of Movement Society, Amsterdam
- 2014 "The mechanisms responsible for guiding and controlling gaze shifts", VSS at ARVO Symposium "Eye and Hand Movements and Vision", annual meeting of the Association for Research in Vision and Ophthalmology. Orlando, Florida.
- 2014 "Neurophysiological mechanisms of stopping", Invited Symposium, Mechanisms of Response Inhibition, annual meeting of Cognitive Neuroscience Society, Boston
- 2013 "Where Does the Visual System End, and the Oculomotor System Begin?" Discussion leader for symposium presented by Christopher Pack, Martin Paré & Jude Mitchell. Gordon Research Conference: Eye Movements The Motor System that Sees the World. Stonehill College, Easton, MA
- 2013 "Neurons, Circuits, Decisions and Actions", Rudolf Magnus Lecture, University of Utrecht, Utrecht, The Netherlands.
- 2012 "From salience to saccades: Gated accumulator model of visual search", ZIF RESEARCH GROUP: Competition And Priority Control In Mind And Brain: New Perspectives From Task-Driven Vision. Opening Conference: Linking selection for visual perception, memory and action. Bielefeld University, Germany.
- 2012 "Stage theory of visual search: Gated accumulator model", Visual Search and Selective Attention: III. Bayarian School of Administration at Holzhausen/Ammersee, Germany.
- 2011 "From salience to action: A gated accumulator model of saccade target selection", Gordon Research Conference on Eye Movements, University of New England, Biddeford, Maine
- 2011 "Neural control and monitoring of saccadic eye movements: monkey and human", Motivation & Vision Symposium, University of Amsterdam & Netherlands Institute of Neuroscience-KNAW.
- 2010 "On the Selection and Control of Behavior", 2<sup>nd</sup> Annual Kenneth O. Johnson Memorial Lecture, The Zanvyl Krieger Mind/Brain Institute & Biomedical Engineering, Johns Hopkins University, Baltimore, MD
- 2010 "Multimodal measurements of visual selection: Spikes, local field potentials and event-related potentials", Department of Psychology, University of Oregon
- 2010 "On a Stage Theory of Attention & Decision" keynote speaker for Neuroscience Graduate Program retreat, University of Oregon
- 2010 "Neural guidance and control of visual search", Salk Institute Seminar Series. La Jolla,

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- California
- 2010 "How the Frontal Cortex Determines When and Where We Look" lead paper invited for Rank Prize Fund symposium in honor of Roger Carpenter, *Eye Movements: What Determines When and Where We Look,* Grasmere, Cumbria, England
- 2009 "Timing of selection for the guidance of gaze", Vision Science Society Symposium: Dynamic Processes in Vision, Moderator: Jonathan D. Victor, Naples, Florida
- 2009 "Neural Guidance and Control of Action", Integrative Neuroscience Seminar Series, Center for Neurobiology and Behavior, Keck-Mahoney Center for Mind and Brain, Columbia University College of Physicians and Surgeons
- 2009 "Neural Guidance and Control of Action", Princeton Neuroscience Institute, Princeton University
- 2009 "Neurophysiological mechanisms of eye movement decisions", Symposium I: Neurobiology of Decision Making. Winter Meeting, Canadian Physiological Society.
- 2008 "Neural Guidance and Control of Action", Wake Forest University School of Medicine Department of Neurobiology and Anatomy
- 2008 "Neurons, Choices, Actions, Reasons", Systems Biology of Decision Making, Mathematical Biosciences Institute, The Ohio State University
- 2008 "Neural Guidance and Control of Action", Neurons Brains and Models: Crossing Levels of Analysis in Cognitive Brain Research Interdisciplinary Seminar, University of Michigan
- 2008 Adrian Seminars in Neuroscience, Department of Physiology, Development and Neuroscience, Cambridge University
- 2007 "Contribution of frontal eye field to eye movements", Cortical Mechanisms of Vision. Centre for Vision Research, York University
- 2007 "On the role of the frontal lobe in timing eye movements", Neural Basis of Timing and Anticipation symposium, Yale University
- 2007 "On the contributions of the frontal eye field, supplementary eye field and anterior cingulate cortex to the guidance and control of saccades" in symposium Cortical Mechanisms for Eye Movements, Centre for Vision Research Conference 2007: Cortical Mechanisms of Vision
- 2007 Department of Neuroscience Seminar Series, University of Minnesota
- 2006 "Neural basis of saccade target selection", Friday, September 22, 2006, Centre for Vision Research, York University, Toronto Canada
- 2006 Center for Neuroscience at the University of Pittsburgh (CNUP) annual retreat
- 2006 "Prefrontal cortex, Working Memory, Flexible Behavior", in memoriam of Patricia S Goldman-Rakic. Yale University
- 2006 Invited presentation at 3rd Annual Computational and Systems Neuroscience meeting (Cosyne06), Salt Lake City Utah
- 2005 "Neural selection and control of visually guided saccades", Max Planck Institute for Biological Cybernetics, Tuebingen, Germany
- 2005 "Executive control of gaze by the frontal lobe" for Symposium on Executive Functions and the Frontal Lobe, University of Tuebingen
- 2005 "Neural selection and control of visually guided saccades", University of Indiana
- 2005 "Neural basis of deciding, choosing and acting", Neurobiology of Decision-Making, Banbury Center, Cold Spring Harbor Laboratory
- 2005 "Neural selection and control of visually guided saccades", School of Psychology colloquium series, Georgia Tech
- 2005 Dan Guitton Recognition Symposium, Canadian Physiological Society winter meeting, Mont Sainte Anne Quebec
- 2005 "Neural selection and control of visually guided saccades", Johns Hopkins University Department of Biomedical Engineering
- 2004 "Neural selection and control of visually guided movements", RIKEN Brain Science Institute,

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- Tokyo, Japan
- 2004 "Neural basis of saccade selection and control", 4th Antonio Borsellino College on Neurophysics, Trieste, Italy
- 2004 "Percept, Decision, Action: Bridging the Gaps", Novartis Foundation Symposium 271, Trieste, Italy
- 2004 "Neural basis of saccade selection and control", Department of Physiology, Northwestern University Medical School
- 2004 "An Interactive Race Model of Countermanding", 37th Annual Meeting of the Society for Mathematical Psychology, University of Michigan
- "Neural selection and control of visually guided saccades", invited speaker for the 24<sup>th</sup> Symposium of the Center for Visual Science, Adaptive Representation and Control in Vision, University of Rochester, Rochester, New York.
- 2004 "Neural mechanisms of visual search" VisioNYC (Vision in old New York), The New York Academy of Sciences, Columbia University, New York, New York.
- "Neural selection and control of visually guided saccades", invited speaker for the Eighth International Conference on Cognitive and Neural Systems, Center for Adaptive Systems and the Department of Cognitive and Neural Systems, Boston University.
- 2004 "Neural control of visually guided saccades", University of Montreal, Montreal, Canada.
- 2004 "Neural selection of visually guided saccades", Montreal Neurological Institute, McGill University, Montreal, Canada.
- 2004 "Neural selection and control of visually guided saccades", Neuroscience Seminar Series, Division of Neuroscience, Baylor College of Medicine, Houston, Texas
- 2004 van Swammerdam Lecture, Vrije Universiteit, Royal Netherlands Academy of Arts and Sciences, Amsterdam, The Netherlands
- 2003 "Neural correlates of primate decision making", Symposium, 33rd Annual Meeting of the Society for Neuroscience. New Orleans, Louisianna.
- 2003 Keynote speaker, European Conference on Eye Movements, Dundee, Scotland
- 2003 San Miniato Workshop on Visual Attention, San Miniato, Italy
- 2003 "Neural selection and control of visually guided saccades", Stanford University
- 2003 "Neural selection and control of visually guided saccades", University of California, Berkeley
- 2003 "Neural selection and control of visually guided saccades", University of Wisconsin
- 2003 "Neural selection and control of visually guided saccades", University of Pennsylvania
- 2003 "Neural selection and control of visually guided saccades", University of Western Ontario, London, Ontario, Canada
- 2003 "Neural selection and control of visually guided saccades", University of Quebec, Montreal, Ouebec, Canada
- 2002 "Neural Basis of Deciding, Choosing and Doing", 5th Annual Scholarship Conference of the Society for Evolutionary Analysis in Law. Vanderbilt University Law School, Nashville, Tennessee
- 2002 Attention and Performance XX, Ettore Majorana Foundation and Centre for Scientific Culture, Erice, Sicily
- 2002 "Antecedents and correlates of visual awareness in the frontal cortex" in Plenary Session on Visual Perception and Consciousness, 5<sup>th</sup> Annual "Toward a Science of Consciousness" conference, Tucson, Arizona
- 2002 "Neural selection and control of visually guided action", Dartmouth College
- 2002 "Neural selection and control of visually guided action". Brown University
- 2002 "Neural selection and control of visually guided action", University of Illinois
- 2001 "The physiology of cognitive processes", Royal Society, London, England.
- 2001 "Look and See: How the Brain Attends, Makes Choices and Directs the Eyes", Symposium, 31st

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- Annual Meeting of the Society for Neuroscience. San Diego, California.
- 2001 "Neural selection and control of visually guided movements", McGovern Institute, Massachusetts Institute of Technology, Cambridge, Massachusetts.
- 2001 Dynamics of Neural Networks: From Biophysics to Behavior, Institute for Theoretical Physics, Santa Barbara, California
- 2001 Symposium and workshop on the anterior cingulate, The Swartz Center for Computational Neuroscience, The Salk Institute for Biological Studies, The Gatsby Foundation, Rancho Santa Fe, California.
- 2001 "The Time it Takes to Think and Do: Accounting for Response Time", Symposium, Neural Control of Movement, Seville, Spain
- 2001 "Neural selection and control of visually guided action", Center for Neural Science, New York University
- 2000 Neuroscience Expert Panel, DARPA Focus 2000, Chantilly, Virginia.
- 2000 "Neural Mechanisms of Visual Perception and Cognition" 26<sup>th</sup> Annual SIERKEN Symposium, National Institute of Physiological Sciences, Okazaki, Japan.
- 2000 "Towards Animal Models of Attention and Consciousness", The Banbury Center, Cold Spring Harbor Laboratory
- 2000 McKnight Conference on Neuroscience, The Aspen Institute, Aspen, Colorado
- 2000 "Neural coding of visual selection in frontal cortex", invited for Neural Coding the Annual Symposium sponsored by the Center for Visual Science, University of Rochester, Rochester, New York.
- 2000 "Neural selection and control of visually guided action", Center for the Neural Basis of Cognition, Carnegie Mellon University, Pittsburgh, Pennsylvania.
- 2000 "Neural basis of deciding, choosing and doing", NIH Neuroscience Lecture Series, Sponsored by NINDS, NIMH, NIDCD, NIDA, and NICHD, Lipsett Amphitheater, Building 10, NIH, Bethesda, Maryland.
- 2000 "Neural selection and control of visually guided action", Progress in Neuroscience Seminar Series, Weill Medical College, Cornell University, New York, New York.
- 1999 "Neural selection and control of gaze", Computation and Neural System seminar series, California Institute of Technology, Pasadena, California.
- 1999 11<sup>th</sup> Annual Frontiers of Science Symposium, National Academy of Sciences, Beckman Center, Irvine, California.
- 1999 "Neural selection of targets for gaze", Invited presentation for Symposium: Perceptual and Cognitive Processing for Saccadic Eye Movements at the annual Optical Society of America. Santa Clara, California.
- 1999 "Neural selection and control of visually guided action", Vision Research Center Visiting Scholar Program, University of Alabama at Birmingham, Birmingham, Alabama.
- 1999 "Neural selection and control of visually guided action", Department of Physiology & Biophysics, University of Washington, Seattle, Washington.
- "Antecedents and correlates of visual awareness in macaque prefrontal cortex", Invited presentation at Pre-ARVO conference sponsored by *Vision Research* on Pre-attentive and attentive mechanisms in vision: Perceptual organization and dysfunction. Fort Lauderdale, Florida.
- 1999 "Neural selection and control of visually guided action", Volen National Center for Complex Systems, Brandeis University, Waltham, Massachusetts.
- 1999 "Neural selection and control of visually guided action", Neurobiology Department Seminar Series, Duke University, Durham, North Carolina
- 1999 "Neural selection and control of visually guided action", Neuroscience and Cognitive Science Seminar Series, University of Maryland, College Park, Maryland.

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1998 "Cortical control of gaze", Grand Rounds, Department of Neurology, Vanderbilt University.

- 1998 "Neural selection and control of visually guided action", Helmholtz Club, Irvine, California.
- 1998 Computational Neuroscience: Vision Course, Cold Spring Harbor Laboratory
- 1998 Panel member of symposium "What the brain's neurons can tell the mind's models of mind" chaired by Ray Klein, scheduled for the Fifth Annual Meeting of the Cognitive Neuroscience Society. San Francisco, California.
- 1998 "Neural selection and control of visually guided action", 10<sup>th</sup> Biennial McKnight Conference on Neuroscience, Aspen, Colorado
- 1998 "Neural selection and control of visually guided eye movements", Rockefeller University, New York, New York.
- 1998 "Neural selection and control of visually guided eye movements", Department of Psychology, University of Oregon, Eugene, Oregon.
- "Neural selection and control of visually guided eye movements", Boynton Colloquium Series, Center for Visual Sciences, University of Rochester, Rochester, New York.
- 1997 "Neural decisions for the guidance of gaze", Seminars in Neuroscience, The Center for Molecular Neuroscience, Vanderbilt University School of Medicine.
- 1997 Panel member in symposium "Visual Search and Selection", International Neuropsychological Symposium, Camogli, Italy.
- 1997 "Searching and stopping for the guidance of gaze", Kenneth Craik Club, Physiology Department, Cambridge University, Cambridge, UK.
- 1997 Invited presentation for *From Attention to Action, Contemporary Issues in Movement Planning, Preparation and Initiation*, biennial international symposium hosted by the Center for Neural Science, New York University, New York, NY
- 1997 "Searching and stopping for the guidance of gaze", Neuroscience Seminar Series, Queen's University, Kingston, Ontario
- 1997 "Searching and stopping for the guidance of gaze", David Bodian Lecture, Zanvyl Krieger Mind/Brain Institute, Johns Hopkins University, Baltimore, Maryland
- 1997 "Searching and stopping for the guidance of gaze", Department of Neurobiology, Harvard Medical School. Boston, Massachusetts.
- 1997 "Searching and stopping for the guidance of gaze", invited seminar in the Department of Neurobiology and Physiology, Northwestern University, Evanston, Illinois
- 1996 "Neural basis of saccade target selection", Cognitive Neuroscience Seminar at the National Institutes of Health, Bethesda, Maryland
- 1996 Panel organizer for symposium, "Saccade target selection", 6th annual meeting of Neural Control of Movement, Marco Island, Florida.
- 1995 Panel member for workshop, "Role of the primate frontal and medial eye fields in oculomotor control" 5th annual meeting of Neural Control of Movement, Key West, Florida.
- 1995 Vision: From Photon to Perception, National Academy of Sciences Colloquium, Beckman Center, Irvine, California
- 1995 "Neural basis of saccade target selection", Seminars in Cognitive Neuroscience Series, Montreal Neurological Institute, Montreal, Canada
- 1994 "Mechanisms of visual selection and attention that guide eye movements", McDonnell-Pew Program in Cognitive Neuroscience 1994 Annual Meeting, Miami, Florida
- 1991 "Central Control of Eye Movements", Grand Rounds, Department of Neurology, Vanderbilt University School of Medicine, Nashville, Tennessee
- 1990 "The neural basis of visually guided eye movement", Visual Science Symposium, annual meeting of American Academy of Optometry, Nashville, Tennessee
- 1989 "The role of frontal cortex in visually guided movements", Department of Psychology, Vanderbilt University, Nashville, Tennessee

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1989 "The role of frontal cortex in visually guided movements", Department of Neurobiology, State University of New York at Stony Brook, Stony Brook, New York

- 1988 "A survey of the neuronal responses in supplementary motor area in monkeys performing visually guided movements", 21st Winter Conference on Brain Research, Steamboat Springs, Colorado
- 1986 "Retinal ganglion cell morphology and cortical orientation specificity", Department of Brain and Cognitive Sciences, Massachusetts Institute of Technology, Cambridge, Massachusetts
- 1983 "Structural basis of retinal ganglion cell orientation sensitivity", Department of Neurobiology, State University of New York, Albany, New York.