

## Curriculum Vitae 2019

### GEORGE R. MANGUN

#### PERSONAL DATA

Married: Tamara Swaab; two children, Alexander (18) and Nicholas (16)  
Address: Center for Mind and Brain, UC Davis, 267 Cousteau Pl., Davis CA 95618

#### EDUCATION AND TRAINING

1987-88 University of California, San Diego, Postdoctoral Fellow, Cognitive Neuroscience.  
1987 University of California, San Diego, Ph.D., Neurosciences.  
1981-82 University of California, Los Angeles, ARCS Graduate Fellow, Brain Research Institute.  
1981 Northern Arizona University, B.S., Chemistry (extended major in life sciences).

#### EXPERIENCE

2019-2014- **Director**, Center for Mind and Brain, University of California, Davis.  
**Distinguished Professor** of Psychology, University of California, Davis, and  
**Distinguished Professor** of Neurology (cognitive neuroscience),  
University of California, Davis, School of Medicine.  
2010-2016-17 **Director**, Kavli Summer Institute in Cognitive Neuroscience.  
**Chair** (interim), Department of Psychology, University of California, Davis.  
2008-15 **Dean** of Social Sciences, University of California, Davis.  
2002-14 **Professor** of Psychology, University of California, Davis, and  
**Professor** of Neurology, University of California, Davis, School of Medicine.  
2002-09 **Director** (founding), Center for Mind and Brain, University of California, Davis.  
1999-02 **Director** (founding), Center for Cognitive Neuroscience, Duke University,  
**Professor** of Psychological and Brain Sciences, Duke University,  
**Professor** of Neurobiology, Duke University School of Medicine (appointed in 2000).  
1996-99 **Head**, Perception & Cognition Area, Dept. of Psychology, University of California, Davis.  
1992-99 **Assistant** through **Full Professor** of Psychology, Department of Psychology and Center for  
Neuroscience, University of California, Davis.  
1991-92 **Director**, Graduate Program in Cognitive Neuroscience, Dartmouth College.  
1990-92 **Assistant Professor** of Psychiatry, Dartmouth College and Medical School.  
1988-90 **Assistant Research Neuroscientist**, Dept. of Neurosciences, UC San Diego.

#### HONORS AND AWARDS

2016 Radboud Excellence Professorship, Radboud University, Nijmegen, The Netherlands  
2015 Kavli Futures Symposium Director, "Emerging Technologies for Neuroscience".  
2011 Elected Fellow, American Association for the Advancement of Science (AAAS).  
2010 Distinguished Scholar Alumnus Award, ARCS Foundation, USA.  
2009 Distinguished Visiting Fellow, Sage Center for the Study of the Mind (UCSB).  
2007 Elected Fellow, Association for Psychological Science (APS).  
2006 James McKeen Cattell Fund Fellow, Association for Psychological Science (APS).  
2006 Elected Member of the International Neuropsychological Symposium.  
2001 Senior Scientist Award, NIMH (2001-06).  
1999 Distinguished Scientist Lecturer Award, American Psychological Association (APA).  
1994 F.C. Donders Lectureship, Max Planck Institute, Nijmegen, The Netherlands.  
1993 Distinguished Early Career Contributions Award, Society for Psychophysiological Research.  
1991 Scientist Development Award, NIMH (1991-96).  
1985 National Research Service Award, NIMH (Individual).  
1984 Grass Foundation Fellow, Cold Spring Harbor Laboratory, New York.  
1982 Regents Fellow, Graduate Program in Neurosciences, UCSD.  
1981 ARCS Foundation Graduate Fellow, Brain Research Institute, UCLA.  
1980 Phi Kappa Phi National Honor Society, Northern Arizona University.

## PROFESSIONAL ACTIVITY

### ***Editorships, Editorial Boards, Consulting Referee:***

Co-Editor-in-Chief, *The Cognitive Neurosciences* (MIT Press) 2013-present.  
Associate Editor, *Journal of Cognitive Neuroscience* (MIT Press), 1996-2019.  
Senior Editor, *Brain Research* (Elsevier) 2006-2010.  
Editor, *Cognitive Brain Research* (Elsevier), 2002–2006.  
Editorial Boards (present and past), *Cognitive Neuroscience* (currently), *Brain Research*, *Cognitive, Affective, & Behavioral Neuroscience*, *Neuropsychologia*, *BrainMap*  
Consulting Referee (recent sample), *Science*, *Nature*, *Nature Neuroscience*, *PNAS*, *Psychological Science*, *Psychophysiology*, *Neuropsychologia*, *Experimental Brain Research*, *Journal of Experimental Psychology: HPP*, *Human Brain Mapping*, *Biological Psychology*, *Psychonomics Bulletin and Review*, *Journal of Neurophysiology*, *Neuroscience Letters*, *Brain Research*, *Neuron*, *Neuroimage*, *Vision Research*, *Cerebral Cortex*, *Frontiers in Human Neuroscience*

### ***Federal Government and Other Advisory Panels:***

Max Planck Society (FRG), Chair, Scientific Advisory Board (Fachbeirat), MPI for Psycholinguistics, Nijmegen (2016- present).  
International Scientific Advisory Board (Chair), Basque Center on Cognition, Brain and Language, Spain (2009-present)  
U.S. National Committee for the International Union of Psychological Science, Board on International Scientific Organizations, The National Academies, Cognitive Neuroscience Society Liaison (2015- present).  
European Research Council, Panel Chair and Member, Consolidator Grants Panel SH4: The Human Mind and its Complexity (2018-19).  
European Research Council, Panel Chair and Member, Consolidator Grants Panel SH4: The Human Mind and its Complexity (2016-17).  
National Academies Panel on Human Factors Science at the Army Research Laboratory, Member (2015-18).  
NIH Study Section (grant review panel), Member, Sensory Processes and Cognition (2012 - 18).  
European Research Council, Deputy Panel Chair and Member, Consolidator Grants Panel SH4: The Human Mind and its Complexity (2014- 2015).  
National Research Council (NRC), Member, Integrating Humans, Machines and Networks: A Global Review of Data-to-Decision Technologies (2012 – 2014).  
European Research Council, Member, Starting Grants Panel/Council - SH4-18: The Human Mind and its complexity (2012-2013).  
NIH Study Section, Ad hoc member, SPC (2012).  
NIH Special Emphasis Panel, Neurotechnology Study Section, ZRG1 NT-L (2011).  
NIMH Special Emphasis Panel, Scientific Review Group, ZRG1 BBBP-L (2010).  
National Science Foundation, Major Instrumentation Grants Program (2009).  
National Science Foundation, Major Instrumentation Grants Program (2008).  
NIMH Special Emphasis Panel, Scientific Review Group, ZRG1 IFCN-L (2009).  
NIMH Special Emphasis Panel, Scientific Review Group, ZRG1 BBBP-L (2009).  
National Research Council of the National Academy of Sciences -BAST Committee Advisor (2008).  
NIMH Special Emphasis Panel, Scientific Review Group, ZRG1 IFCN-E (2008).  
NIMH Special Emphasis Panel, IBSC Center Grant Review (2005).  
NIMH Special Emphasis Panel, Institutional Training Grants (2004).  
NIMH Study Section, Ad hoc member, BBBP-4 (2001).  
NIMH Special Emphasis Panel, Institutional Training Grants (2000).  
NIMH Study Section, Ad hoc member, BBBP-4 (2000).  
NIMH Special Emphasis Panel, Institutional Training Grants (1999).  
NIMH Special Emphasis Panel, Institutional Training Grants (1998).  
NIMH Site Visit Team to the Laboratory of Brain and Cognition, NIMH (1998).  
NIDA, Special Emphasis Panel, RFP (1997).

### **Ad Hoc Referee (sample)**

Wellcome Trust, U.K., Medical Research Council, U.K., United States-Israel Binational Science Foundation, National Science Foundation, Human Frontier Science Program, German Science Foundation (DFG), Dutch Science Foundation (NWO).

***Scientific Society and Other Advisory Boards:***

Member, Electorate Nominating Committee (ENC), Section on Neuroscience, American Association for the Advancement of Science (AAAS) (2018- 21)  
Interim President, Cognitive Neuroscience Society (2016 - present).  
Treasurer and *Ex Officio* Member, Governing Board, Cognitive Neuroscience Society (1994- present)  
Chair, 20<sup>th</sup> Anniversary Program Committee, Cognitive Neuroscience Society (2013 meeting).  
External Advisory Board, University of Missouri Imaging Center, Columbia, MO (2006-2011)  
External Advisory Board, Academy of Finland, Center for Excellence, Helsinki Univ. of Tech. (2005- 2010)  
External Advisory Board, University of Rochester Imaging Center, New York (2002 - present)  
Scientific Advisory Committee, Leibniz Program for Neuroscience, Univ. of Magdeburg, Germany (2000-18)  
Scientific Advisory Committee, Center for Advanced Imaging Magdeburg (CAIM), University of Magdeburg, Germany (2000-18)  
Scientific Advisory Board, International Conf. on Functional Mapping of the Human Brain (1996-2004 meetings)  
Organizing Committee, Association for the Scientific Study of Consciousness, 5th Annual Meeting (2001)  
U.S. Organizing Committee, EPIC International Conference (1998 meeting).  
Organizing Committee, 38th Annual Meeting of Soc. for Psychophysiological Research (1998 meeting)  
International Organizing Committee, 8th World Congress of Psychophysiology (1996)  
Governing Committee, Cognitive Neuroscience Society (1994 -1996)  
Co-Director, McDonnell Summer Institute in Cognitive Neurosciences (1992, 1997)  
Chair, Founding Committee, Cognitive Neuroscience Society (1992-94)

***Society Memberships:***

Society for Neuroscience, Association for Psychological Science, Cognitive Neuroscience Society, International Brain Research Organization, American Association for the Advancement of Science

**UNIVERSITY SERVICE (exclusive of past service as dean)**

***Current***

MIND Institute IDDRC Campus Advisory Committee (2019- )  
Neuroscience Strategy Steering Committee, UC Davis (2019 - )  
IMPACT Pre-Proposal Review Committee, OVC, UC Davis (2019)  
Chancellor's Faculty Honors Committee (2017- )  
Executive Advisory Committee (Chair), Imaging Research Center, UC Davis (2015 - )  
Executive Committee, NIH Training Program in Neuroscience (2007 - )

***Past***

Neuroscience Graduate Group Admissions Committee (2017, 2018)  
*Ad hoc* review committee (Chair), Nursing Graduate Programs (2016 -17)  
Committee on the 21<sup>st</sup> Century University, Office of the Chancellor (2014-15)  
Strategic Planning Committee on Diversity & Inclusion, Office of the Chancellor (2014-15)  
Steering Committee, UC Davis NSF ADVANCE Program (2013-15)  
Campus Council on Community and Diversity (2013-15)  
Executive Committee, UC Davis-NIH Neurotherapeutics Research Institute (2007-2010)  
Search Committee Chair, Dean of Biological Sciences (2010-2011)  
Search Committee Chair, Director Search, Center for Neuroscience (2010)  
Search Committee Chair, Director Search, Inst. for Govern. Affairs, UCD Office of the VC for Research, (2009)  
Search Committee Member, Director Search, Center for Neuroscience (2009)  
Advisory Committee, Center for Neuroscience, UC Davis (2003-2008)  
Executive Advisory Committee (Chair), Imaging Research Center, UC Davis (2003-2011)  
Executive Committee, Graduate Program in Neuroscience (2005-2008)  
Search Committee Member, Neurology Chair Search, UCDCMC (2003-06)  
Search Committee Chair, M.I.N.D. Institute Electrophysiology position, UCDCMC (2003-06)  
Search Committee, Director of Imaging Research Center, UCDCMC (2002-03).  
Academic Priorities Committee (Advisory to Provost), Duke University, (1999-2002)  
Executive Committee, Brain Imaging and Analysis Center, Duke School of Medicine, (1999-2002)  
Search Committee, Chair of Dept. of Neurobiology, Duke School of Medicine (2001-02)  
Chair, Executive Committee, Program in Neural Analysis and Engineering, Duke University, (2000-2002)

Chair, Training Program in Cognitive Neuroscience, Duke, (2000-2002)  
Graduate Studies Committee in Psychology, Duke, (2001-2002)  
Steering Committee, Neurobiology Department, Duke School of Medicine, (2001-2002)  
Search Committee, Dean, Duke School of Medicine (Campus Representative), Duke University, (2000-01)  
Provost's Academic Advisory Council, UCD (1997-98)  
Dean's Advisory Committee, Division of Social Sciences, UCD (1996-1998)  
Chair, Admissions Committee, Department of Psychology, UCD (1997-1998)  
Chair, Mind Sciences Committee, Subcommittee of Academic Planning Council, UCD (1996-1998)  
Head, Cognition and Perception Section, Department of Psychology, UCD (1996-1999)  
Executive Committee, Graduate Program in Neurosciences, UCD (1997-1998)  
Chair, Graduate Curriculum Committee in Psychology, UCD (1997-1998)  
Departmental Representative to Academic Senate, UCD (1997-98)

## **TEACHING EXPERIENCE**

### UC Davis

Instructor, Cognitive Neuroscience (Psc 135)  
Instructor, Professional Development (Psc 290, graduate seminar)  
Instructor, Cognitive Neuroscience Core Course (Psc 261/Nsc223)  
Instructor, Mind and Brain: Attention and Awareness (Frs 001) (Freshman Honors Seminar).  
Instructor, Mechanisms of Attention (Psc 290; graduate seminar)  
Instructor, Cognitive Psychology (Psc 230; graduate core course).  
Instructor, Cog. Neurosci. of Attention and Awareness (Psc 290/Neu 234; graduate seminar)  
Instructor, Sensory Processes (undergraduate major course).

### Duke University

Instructor, Cognitive Neuroscience, Duke University (developed graduate core course)  
Instructor, Cognitive Neuroscience, Duke University, (developed undergraduate lecture course).  
Instructor, Mind, Brain & Cognition, Duke University, (FOCUS PROGRAM - Freshman honors).

### Dartmouth College

Instructor, Special Topics in Cognitive Neurosci., Dartmouth, (developed graduate elective).  
Lecturer, Neurosciences III, Dartmouth Medical School, (core course).  
Instructor, Neurobiology of Attention, Dartmouth, (developed graduate elective).  
Instructor, Perspectives in Cog. Neurosci., Dartmouth, (graduate elective course).  
Lecturer, Neurosciences (graduate), Dartmouth, (core course).  
Guest Lecturer, Gross Anatomy, Brown University, 1990-92.  
Lecturer, Vision (graduate) Dartmouth, 1990.

### UC San Diego

Lecturer, Neurophysiology (graduate), UCSD, 1989 and 1990.  
Lecturer, Physiol. Basis of Human Info Proc. (graduate), UCSD, 1989.  
Teaching Assistant, Medical Neurology (medical), UCSD, 1984 and 1985.  
Teaching Assistant, Mammalian Neuroanatomy (graduate), UCSD, 1983.

## **RESEARCH INTERESTS**

Cognitive neuroscience of perception, attention and awareness  
Neural mechanisms of visual attention  
Disorders of attention  
Human brain electrophysiology  
Functional neuroimaging  
Multimodality imaging

## STUDENTS/POSTDOCS SUPERVISED

### Current: (members of Mangun lab)

Sean Noah, Doctoral Student, UC Davis, Psychology, currently.  
Olivia Krieger, Doctoral Student, UC Davis, Psychology, currently.  
Lee Holcomb, Doctoral Student, UC Davis, Psychology, currently.  
John Nadra, Doctoral Student, UC Davis, Psychology (fall 2019).  
Soukhin Das, Doctoral Student, UC Davis, Psychology (fall 2019).

*Undergraduate research interns:* Natalie Khodayari, Diana Olivan, Travis Powell (now Junior Specialist), Maddy Chamberlain, Tamim Housain, Atish Kumar, Kyle Astleford  
*High School Summer Interns (2019):* James Olichney, Ellie Dickinson

### Past: (sample)

#### Currently Holding Faculty or Major Research Positions:

- \*Ashley Royston, Ph.D. UC Davis, Psychology. Currently, User Research Engineer, Microsoft Studios, Seattle, Washington
- Yuelu Liu, Ph.D., Postdoctoral Fellow (2013 - 17). Currently, Staff Data Scientist, Black Thorn Therapeutics, San Francisco
- \*Jesse Bengson, Ph.D., (Psychology doctoral student and then postdoctoral fellow, UCD Center for Mind and Brain 2005-2015). Currently, Assistant Professor of Psychology, Sonoma State University, CA.
- Farran Briggs, Ph.D., (postdoctoral fellow, UCD Center for Neuroscience 2009-2012). Currently, Associate Professor, Department of Neuroscience, University of Rochester.
- Yukare Takarae, Ph.D., (postdoctoral fellow, UCD Center for Mind and Brain 2009-2012). Currently, Assistant Professor (tenure-track) of Psychiatry, Univ. of Texas Southwestern Medical Center, Dallas.
- Todd Kelly, Ph.D. (postdoctoral fellow, UCD Center for Mind and Brain, 2010-2012), Currently, User Research Engineer, Microsoft Studios, Seattle, Washington.
- Chris Blais, Ph.D. (postdoctoral fellow, UCD Center for Mind and Brain, 2010-2012), Currently, Assistant Research Professor, Hugh Downs School of Communication, Arizona State University.
- Ali Mazaheri, (postdoctoral fellow, UCD Center for Mind and Brain, 2008-2009), Currently, Associate Professor (tenured), University of Birmingham, United Kingdom.
- Joy Geng, Ph.D., (postdoctoral fellow, UCD Center for Mind and Brain, 2006-2008). Currently, Associate Professor of Psychology (tenured), University of California, Davis.
- \*Katherine MacLean, Ph.D. (Doctoral Program in Psychology 2004-09, UCD Center for Mind and Brain), Instructor in the Department of Psychiatry and Behavioral Sciences at Johns Hopkins School of Medicine 2009-2012; Currently, consultant, writer and patient advocate.
- Barry Giesbrecht, Ph.D., (postdoc, Ctr for Cognitive Neuroscience, Duke Univ.). Currently: Professor of Psychology (tenured), University of California, Santa Barbara.
- \*Bong J. Walsh, Ph.D. (Doctoral Program in Neuroscience 2003-2008, Postdoc, 2008-2009, UCD Center for Mind and Brain). Currently, Assistant Professor, Argosy University, San Francisco.
- \*Wayne Khoe, Ph.D., (Doctoral Student in Psychology, Ctr. for Cognitive Neuroscience, Duke Univ., 1998-2003). Postdoctoral fellow in neurosciences at UCSD with Steve Hillyard (2003-2015). Currently, CEO Tigermouse, Inc., San Diego, CA.
- \*Sean P. Fannon, (doctoral student, Ph.D. in Psychology, Duke University, 2000-2006). Currently Professor of Psychology (tenured), Folsom College, California.
- Daniel Weissman, Ph.D., (postdoc, Ctr. for Cognitive Neuroscience, Duke Univ., 1998-2002). Currently Associate Professor of Psychology (tenured), University of Michigan.
- Kevin Wilson, Ph.D., (postdoc, Ctr. for Cognitive Neuroscience, Duke Univ., 1998-2004) Currently: Associate Professor of Psychology (tenured), Gettysburg College, Pennsylvania.
- Michael D. Nelson, Ph.D., (postdoc, Ctr. for Cognitive Neuroscience, Duke Univ.) Currently: Assistant Professor of Psychology (tenure-track), Gonzaga University.
- \*Joseph B. Hopfinger, (doctoral student, Ph.D. in Psychology, UC Davis, 1994-1998). Currently, Professor of Psychology (tenured), University of North Carolina, Chapel Hill.
- \*Amishi P. Jha, (doctoral student Ph.D. in Psychology, UC Davis, 1993-1998). Currently, Associate Professor of Psychology (tenured), University of Miami, Florida.

- Joseph Dien, Ph.D., (postdoc, Center for Neuroscience, UC Davis, 1997-99). Currently, Research Scientist, Johns Hopkins University.
- C. Mark Wessinger, Ph.D. (postdoc, Center for Neuroscience, UC Davis, 1995-1997). Currently, Head of Science, Dynaread Special Education Corporation, Cranbrook, British Columbia, Canada
- \*Todd C. Handy, (doctoral student, Ph.D. in Psychology, UC Davis, 1994-1997). Currently, Professor of Psychology (tenured), University of British Columbia.
- Alan Kingstone, Ph.D., (postdoc, Center for Neuroscience, UC Davis, 1992-95). Currently, Professor of Psychology (tenured), University of British Columbia, Canada.
- Emrah Duezel, M.D. (postdoc, Center for Neuroscience, UC Davis, 1996). Currently, Professor of Cognitive Neuroscience (tenured) University College London, U.K., and Professor of Neurology (C3 – tenured), University of Magdeburg, Germany.
- Kent Kiehl, B.A., (postgraduate researcher, Psychology, UC Davis (1996-97); Received Ph.D. at University of British Columbia in 2001. Currently, Associate Professor of Psychology (tenured), University of New Mexico.
- Alice Mado Proverbio, Ph.D., (postdoc, Center for Neuroscience, UC Davis, 1993-94). Currently, Associate Professor of Psychology (tenured), University of Milan, Italy.
- Massimo Girelli, Ph.D., (postdoc, Center for Neuroscience, UC Davis, 1996-97). Currently, Associate Professor, University of Verona, Italy.
- Jens-Max Hopf, M.D. (postdoc, Center for Neuroscience, UC Davis, 1996-97). Currently, Professor of Neurology, University of Magdeburg, Germany.
- Jeff Maxwell, (undergraduate research assistant, UC Davis, 1997-98). Received his Ph.D. in Psychology at the University of Wisconsin with Dr. Richie Davidson. Currently a staff scientist at the U.S. Army Research Laboratory, Human Research & Engineering Directorate.

*Undergraduate research interns* (past since 2015 only): Alex Morales, Aviel Haberman, Manvita Tatavarthy, Kira Anderson, Jamie Napan, Kelsey Klein.

Currently in Training Positions:

- \*Andre Bastos, Ph.D., (NSF Fellow; doctoral student, UC Davis, Neuroscience, 2008-2013). Currently, Postdoctoral Fellow MIT.
- Elisa Jordao, Visiting doctoral student (from Univ. Sao Paulo, Brazil).
- Niels Las, M.S., Research Intern (2016), Donders Institute, Radboud University, The Netherlands.
- Xiangfei Hong (Chinese Scholarship Council Fellow 2012-2014), visiting doctoral student, UC Davis.
- Anahita Hamidi (NSF Fellow), doctoral student, UC Davis, Neuroscience, currently.
- Jaap Munneke, (visiting doctoral student, UCD Center for Mind and Brain, from Free University of Amsterdam, 2009), Currently, postdoctoral fellow, University of Amsterdam.
- Rodrigo Montefusco-Siegmund, visiting doctoral student, UCD Center for Mind and Brain, from University of Chile) Currently, doctoral student University of Chile.
- Risa Sawaki, (visiting doctoral student, UCD Center for Mind and Brain, 2007-2008). Currently, postdoctoral fellow with Joy Geng, UC Davis.
- Maryam Soltani, (undergraduate honors student, UC Davis, 1997-98). Received Ph.D. in Psychology at UC Berkeley in 2006, her M.D. from UC San Diego, and is currently in residency training at UCSD.

\* Received Ph.D. with G.R.M. as major professor.

## GRANT HISTORY

ACTIVE:

NIMH 1R01 MH117991-01 (P.I., Mangun, G.R.; Joint P.I., Ding, M.) "Mechanisms of attentional control: Structure and dynamics from simultaneous EEG-fMRI and machine learning" 07/01/2018 – 06/30/2023. This grant uses simultaneous EEG and fMRI recordings, advanced signal processing, and machine learning to investigate the fine structure of attentional control in humans. Total Award: \$2.7M

NIMH 2R25 MH057541-23 (P.I., Mangun, G.R.) "Summer Institute in Cognitive Neuroscience" 08/02/2015 – 06/30/2020. This is a training grant for doctoral and postdoctoral trainees. Total Award: \$1.25M

Kavli Foundation (P.I., Mangun, G.R.) "Kavli Summer Institute in Cognitive Neuroscience. 08/02/2015 – 06/30/2020. This grant supports NIMH grant MH057541 in conjunction with the Summer Institute in Cognitive Neuroscience to advance training in engineering and physical sciences as they contribute to cognitive neuroscience training and research. Total Award: \$375,000

ACTIVE (T32 Training Grants and Fellowships):

NEI T32 EY015387 (P.I., Burns, M.) "Training Program in Vision Science" 09/01/18 - 08/31/2023.  
Role: Training Mentor.

NIMH T32 MH082174 (P.I., Usrey, W.M.). "Training Grant in Basic Neuroscience" 08/03/20014-07/31/2019 Role: Training mentor.

NIA T32 AG050061 (P.I., DeCarli, C.) "Neuroscience of Cognitive Aging" 05/01/16 - 04/30/21. Role: Training Mentor

ACTIVE (AS SPONSOR):

PAST:

NSF BCS 1339049 (P.I., Mangun, G.R.) "Mechanisms of Willed Attention" 08/15/13 – 06/30/16; This grant is investigating the mechanisms of free will in the control of visual attention.

NSF IOS 1450960 (P.I.s Usrey & Mangun) "BRAIN EAGER: "ECOSTIM-MR"-Novel Multimodal Approach for High-Resolution Brain Research" 09/15/14 – 09/14/16. This grant is developing new technology related to the federal BRAIN Initiative.

NSF BCS 1228535 (P.I.s Usrey & Mangun) "Mechanisms of Attention in Early Visual Processing" 08/15/2012 – 07/31/2016. This grant investigates neurophysiological mechanisms of attention.

Kavli Foundation (P.I., Mangun, G.R.) "Emerging Technologies for Neuroscience: Building the New Brain Science. 5/15/14 –12/31/15. This grant supported a *Kavli Futures Symposium* in conjunction with the NIMH Summer Institute in Cognitive Neuroscience, 2015.

NIMH 1R21MH099327-01 (P.I.'s Swaab & Carter) "Cognitive Control and Language Impairments in Schizophrenia" 12/01/12 – 11/30/15. This grant investigates cognitive deficits in schizophrenia.

NIMH 2R25 MH057541-18 (P.I., Mangun, G.R.) "Summer Institute in Cognitive Neuroscience" 08/02/2010 – 06/30/2015

NIMH 1R01 MH087450 (P.I., Luck, S.J.) "ERPLAB: Extensible, open source software for analysis of event-related potentials" 12/01/09-11/31/14 Role: Steering Committee Member

NIMH 5R01 MH055714 (P.I., Mangun, G.R.) "ERP and fMRI Studies of Visual Attention", 06/01/1997-11/30/2013.

NIDA TL1 DA024854-05 (P.I., Carter, C) "Interdisciplinary Training Program in Neurotherapeutics" 09/01/07-06/30/12 Role: Co-PI (Training component of NCCR U54 RR024922-01 "NeuroTherapeutics Research Consortium")

- NIMH 5R01 MN084819-01 (P.I.s, Makeig, S. & Grethe, J.) "A Human Electrophysiology Associated Anatomic Data and Integrated Tool Resource" 04/17/09-02/28/12, Role: Co-Investigator and Advisory Board Member. This grant is a collaboration with UCSD which is the home institution.
- NIMH R01 MH059883 (P.I., Carter, C.S.) "Pathophysiology of Cognitive Disability in Schizophrenia" 7/1/07-6/30/12, Role: Co-Investigator
- NIMH 1R24 MH081807 (P.I., Carter, C.S.) "Cognitive Control in Schizophrenia" 7/1/08-6/30/11. Role: Co-Investigator
- NSF BCS-0727115 (P.I., Mangun, G.R.) "Combined Human Studies of Thalamo-Cortical Mechanisms in Attentional Control", 07/01/07 – 06/30/11.
- Fetzer Foundation, (P.I., Saron, C.) "A Longitudinal, Randomized Waitlist Control Study of Cognitive, Emotional, and Neural Effects of Intensive Meditation Training", 1/01/06-12/31/11, Role: Co-PI
- NCRR 1S10RR0129262-01 (P.I. Carter, C.S.) "High Field MRI Scanner for Integrative Neuroscience" 12/01/09-11/30/10. Role: Co-PI.
- NCRR 1S10 RR025672-01 (P.I., Buonocore, M.H.) "3T MRI Upgrade for Advanced Imaging Studies in Clinical and Basic Neuroscience" 04/01/09-03/31/10. Role: Co-PI
- NIMH K05 MH02019 "Neural Mechanisms of Attentional Control and Selection", 75% effort, Principal Investigator, 3/01/01 - 2/30/06. Direct = \$117,000/yr (Senior Scientist Award).
- NIDA R13 DA018547-01 "Multiple Perspectives on Decision Making", 04/01/04-06/30/04. Direct Costs = \$25,000 (Conference grant)
- NINDS P01 NS41328 "Neural Mechanisms of Voluntary Attention and Orienting", 10% effort, Co-PI (Project 2), 09/27/01-09/26/06, Direct = \$138,500 yr 1. (Program Project Section).
- NIMH R01 MH60415 (P.I., Woldorff, M), "Studies of attention using combined ERPs and fMRI", 5% effort, 04/01/01-03/30/06, Direct costs = \$250,000 yr 1. (Research Grant).
- NIMH RO3 MH (PI, Brannon, E.M.) "Electrophysiological correlates of numerical discrimination in human infants" 5% effort, 01/01/02 - 01/01/04, Direct costs = \$50,000 each year (Small Grant).
- NINDS P01 NS41328 (Proj. 2 P.I., Mangun, G.R.) "Neural Mechanisms of Voluntary Attention and Orienting", 10% effort, 09/27/01-09/26/02 Direct = \$138,500 yr 1. (Program Project Section).
- Army Research Office DAAD19-00-1-0503 (P.I., Mangun, G.R.) "Brain Attention Mechanisms in Perception and Performance", 5% effort, 09/01/00-08/31/02, Direct Costs \$58,432 yr 1. (Research Grant).
- NIMH R01 MH57138 (P.I., Mangun, G.R.) "Integration of ERPs and fMRI in Studies of Selective Attention" 10% effort, 04/01/98 - 03/30/02.
- NIMH R01 MH55714 (P.I., Mangun, G.R.) "Combined PET and ERP Studies of Selective Attention" 10% effort, 04/01/97 - 04/31/00.
- HFSP0 RG0136/1997-B (Program Director: Mangun, G.R.) "Converging Approaches to the Study of Selective Attention", 10% effort, 07/01/97 - 6/30/00.
- NINDS 2 P01 17778 (Proj. 2 P.I., Mangun, G.R.) "Brain Mechanisms of Visual Selective Attention", 10% effort, 07/01/94-06/30/99.
- NIMH 1 K21 MH00930-05 (P.I., Mangun, G.R.) "Neural Mechanisms of Selective Attention in Humans", 80% effort, 04/1/91-03/31/96.



NIMH R03 MH54115-01 (P.I., Mangun, G.R.) "Combined PET and ERP Studies of Selective Attention", 5% effort, 05/01/95-04/30/96.

University of California Faculty Research Grant, (P.I., Mangun, G.R.) "Selective Attention to Stimulus Dimension and Spatial Position: Function Anatomy with fMRI", 10% effort, 07/01/96-06/30/97.

University of California Faculty Research Grant, (P.I., Mangun, G.R.) " Combined PET and ERP Studies of Attention ", 5% effort, 07/01/94-06/30/95.

Human Frontiers Science Program Organization, (P.I., Gazzaniga, M) "Brain Mechanisms of Perception, Attention and Cognition: The Split-Brain Approach", 5% effort, Role: Co-PI, 07/01/92-06/31/95.

NINDS 7 P01 NS 17778-08 "Cortical Networks in Auditory Pattern Perception: Cognitive, Anatomic and Physiologic Correlates" ( Project 3, Program in Cognitive Neuroscience), 5% effort, Co-Principal Investigator (Project 3), 07/01/91-06/30/95.

NINDS 7 P01 NS 17778-08 "Brain Mechanisms of Overt and Covert Orienting" (Project 4, Program in Cognitive Neuroscience), 10% effort, Co-Principal Investigator (Project 4), 07/01/91-06/30/95.

Hitchcock Foundation Grant, (P.I., Mangun, G.R.) "Electrophysiological Studies of Visual-Spatial Attention in Patients with Damage to the Parietal Cortex." 5% effort, 05/1/91-04/31/92; Direct Costs 1991-92 \$5,000.

NIMH 5 R01 MH25594-16 (P.I., Hillyard, S.A.) "Electrophysiological Studies of Selective Perception", 25% effort, 07/01/88 - 07/01/90. Role: Co-PI. Received MERIT Award from NIMH.

NIMH NRSA 5 F31 MHJ09360-03 (Fellow: Mangun, G.R.) "The Neural Basis of Selective Attention in Man", 50% effort, 10/1/85 - 12/31/87.

PAST (AS SPONSOR):

NEI K99/R00 EY018683 (P.I., Briggs, F). "Effects of spatial attention on neuronal circuits in the early visual system" 7/1/09-6/30/14. Role: Co-mentor (with Marty Usrey).

NIMH 5K01 MH087720 (P.I., Takarae, Y.) "Electrophysiological Correlates of Inhibitory Control and Error Monitoring in Autism" 12/01/09-11/30/14 Role: Co-mentor (with Cliff Saron).

NSF 2009 "Oscillatory EEG and Attention" (Bastos, Andre – fellow) 7/1/2010-6/30/2013 (NSF Graduate Fellowship), Role: Sponsor (deferred to 7/1/2010 to accept Fulbright Fellowship). Role: Co-sponsor (with Marty Usrey).

NSF 2012 "Investigating Neural Mechanisms Underlying Sustained Attention with Meditation Training" (Hamidi, Anahita – fellow) 7/1/2012-6/30/2013 (NSF Graduate Fellowship), Role: Co-sponsor (with Cliff Saron).

NSF 2004 "Attention, Training and Meditation" (MacLean, Katherine, Fellow) 7/1/2004-6/30/2007 (NSF Graduate Fellowship), Role: Sponsor.

NWO (Netherlands Organization for Scientific Research) "Oscillatory EEG Measures of Attention" Sponsor (Mazaheri, A., Fellow), 08/1/08 -07/31/09.

NWO (Netherlands Organization for Scientific Research) "Cognitive Neuroscience of Attention" Sponsor (Bekker, E.M., Fellow), 05/1/05 -04/30/06.

NINDS F32 NS41867 "Neural correlates of Global and Local Processing" Sponsor (Weissman, D., Fellow), 12/01/00-11/30/03.

NSF 2000 "Neural Mechanisms of Visual Attention" Sponsor, (Fannon, S., Fellow), 07/01/00-6/30/03, Direct = \$26,700/yr.

McDonnell Foundation 99-36 "Time course and functional anatomy of attentional control" Sponsor, (Giesbrecht, B., Fellow), 09/01/99-08/31/02, Direct Costs \$50,000 yr 2.

McDonnell Foundation 20002042, "Reference Frame Effects in the Top-Down Control of Visual Attention" Sponsor (Wilson, K.D., Fellow), 08/01/00-08/01/03, Direct Costs \$50,000 yr 1.

NSF Graduate Fellowship (Hopfinger, J., Fellow) "Studies of Visual Attention" 07/01/95 - 06/30/98.

NIMH 1F31MH11427 Graduate Fellowship (Jha, A., Fellow) "ERP Studies of Attention Following Parietal Damage" 10/01/96-09/30/98.

NIMH 1F32MH11751 Postdoctoral Fellowship (Dien, J., Fellow) "Time course of Selective and Divided Attention Systems. 8/1/97-7/31/98.

## PUBLICATIONS

### **Edited Books, Textbooks, Special Issues**

Heinze, H.J., Munte, T.F. and Mangun, G.R. (Editors), (1993). New Developments in Event-Related Potentials, Birkhauser: Boston.

Heinze, H.J., T.F., Munte and Mangun, G.R. (Editors), (1994). Cognitive Electrophysiology, Birkhauser: Boston.

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Mangun, G.R. and Guzeldere, G. (Guest Editors) (2002). The Science of Consciousness. PSYCHE, Vol. 9 (Special Issue/online journal).

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Gazzaniga, M.S., Ivry, R. and Mangun, G.R. (2009). Cognitive Neuroscience: The Biology of the Mind. (3rd Edition). W.W. Norton Pub., New York (textbook).

Reuter-Lorenz, P.A., Baynes, K., Mangun, G.R., Phelps, E.A. (Editors) (2010). The Cognitive Neuroscience of Mind: A Tribute to Michael S. Gazzaniga. MIT Press.

Mangun, G.R. (Editor) (2012). The Neuroscience of Attention: Attentional Control and Selection. Oxford University Press: New York.

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- Gazzaniga, M.S., Ivry, R. and Mangun, G.R. (2013). Cognitive Neuroscience: The Biology of the Mind. (4th Edition). W.W. Norton Pub., New York (textbook). *Translated into French, Italian, Portuguese, and Chinese*.
- Mangun, G.R. (Editor) (2013). Cognitive Electrophysiology of Attention: Signals of the Mind. Academic Press: New York.
- Gazzaniga, M.S. and Mangun, G.R. (Editors) (2014). The Cognitive Neurosciences (5<sup>th</sup> Edition). MIT Press: Cambridge, MA.
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- Poeppel, D., Gazzaniga, M.S. and Mangun, G.R. (Editors) (2019). The Cognitive Neurosciences VI. MIT Press, Cambridge, MA. *Forthcoming*

### **Papers and Chapters**

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2. Hillyard, S.A. and G.R. Mangun (1986). The neural basis of visual selective attention: A commentary on Harter and Aine. Biological Psychology, 23: 265-270.
3. Mangun, G.R., R.M. Mulkey, B. Young and G.E. Goslow, Jr. (1986). "Cross-talk" in Electromyograms: Contamination of EMGs recorded with bipolar, fine-wire electrodes by volume conducted myoelectric activity from distant sources. Electromyography and Clinical Neurophysiology, 26: 443-461.
4. Mangun, G.R. and S.A. Hillyard (1987). The spatial allocation of visual attention as indexed by event-related brain potentials. Human Factors, 29: 195-212.
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9. Luck, S.J., S.A. Hillyard, G.R. Mangun, and M.S. Gazzaniga (1989). Independent hemispheric attentional systems mediate visual search in split-brain patients. Nature, 342: 543-545.
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76. Chau, W. K. W., Giesbrecht, B., Mangun, G. R., & McIntosh, A. R. (2002). Event-related analysis of fMRI data using partial least squares. Presented at the 10<sup>th</sup> Annual meeting of the International Society for Magnetic Resonance Imaging in Medicine, Honolulu, HI.
77. Giesbrecht, B., Woldorff, M. G., & Mangun, G. R. (2002). Cortical networks and consequences of top-down attentional control. Presented at the Army Research Office Annual Meeting, Cashiers, NC.
78. Khoe, W., Freeman, E., Walczak, A., Chang, T., Woldorff, M.G. & Mangun, G.R. (2003). Probing Lateral Interactions in Early Visual Areas: An Electrophysiological Study of Stimulus Context. Poster presented at Annual Meeting of the Cognitive Neuroscience Society, NY.
79. Slagter, H., Weissman, D. H., Giesbrecht, B., Kenemans, J. L., Mangun, G. R., Kok, A., Woldorff, M. G. (2003, November). Spatial versus nonspatial preparatory attention: A combined fMRI and ERP study. Society for Neuroscience Abstracts, Vol. 28, New Orleans, LA.
80. Fannon, S. P. & Mangun, G. R. (2004). "Are attentional templates and mental images equivalent? Comparing the effects of feature-based attention and mental imagery on target detection." Cognitive Neuroscience Society Annual Meeting.
81. KD Wilson, JP Bermudez, MG Woldorff, & GR Mangun (2004). Psychophysical Evidence for Distinct Object-Based Effects During Top-Down and Bottom-Up Shifts of Visual Spatial Attention. Society for Neuroscience Abstracts, Vol. 29, San Diego, CA.
82. Slagter, H., Giesbrecht, B., Kok, A., Weissman, D. H., Kenemans, J. L., Mangun, G. R., Woldorff, M. G. (2005, April). Spatio-temporal dynamics of brain mechanisms in attentional control: A combined ERP and fMRI study. Poster presented at the Annual Meeting of the Cognitive Neuroscience Society, New York, NY.
83. Fannon, S. P. & Mangun, G. R. (2005). "Attention-related baseline shifts do not determine the amplitude of subsequent target-evoked responses" American Psychological Society Annual Meeting, Los Angeles, CA.
84. Walsh B.J., Fannon S.P., Giesbrecht B., Mangun G.R. (2005). Dissecting attentional control systems for spatial attention. American Psychological Society Annual Meeting, Los Angeles, CA.
85. Walsh B.J., Fannon S.P., Heipertz D., Teng S., Giesbrecht B., Mangun G.R. (2005). Combining functional MRI and event-related potentials to dissect attentional control systems. Society for Neuroscience Abstracts, Vol. 30, Washington, D.C.
86. Walsh B.J., Fannon S.P., Heipertz D., Teng S., Giesbrecht B., Heldmann, M., Muentz, T.F. , and Mangun G.R. (2006). Time Course and Functional Anatomy of Attention Control. Cognitive Neuroscience Society Annual Meeting, New York, N.Y.
87. E.M. Bekker, S. Teng, D.M. Horton, G.R. Mangun (2006). Neural correlates of cross-modality attentional switching. Cognitive Neuroscience Society Annual Meeting, New York, N.Y.
88. Fannon, S. and Mangun, G.R. (2006). Role of Anterior IPS in Directing Attention to Visual Features and Dimensions. Cognitive Neuroscience Society Annual Meeting, New York, N.Y.



89. MacLean, K., Saron, C., Aichele, S., Bridwell, D., Jacobs, T., Zanesco, A., Mangun, G.R. (2008). Improvements in perceptual threshold with intensive attention training through concentration meditation. Journal of Cognitive Neuroscience Suppl.
90. Fannon, S. and Mangun, G.R. (2008). The effects of irrelevant pre-target stimuli on feature-specific baseline shifts in selective Attention. Journal of Cognitive Neuroscience Suppl.
91. K.A. MacLean, S. R. Aichele, D.A. Bridwell, T.L. Jacobs, A.P. Zanesco, B.G. King, E. Ferrer, G.R. Mangun, and C.D. Saron (2008). Intensive attention training in concentration meditation leads to improvements in visual sustained attention and response inhibition. Washington, D.C.: Society for Neuroscience Abstracts.
92. MacLean, K. A, Aichele, S., Bridwell, D., Jacobs, T.L., Zanesco, A., King, B., Mangun, G. R. & Saron, C. D. (2008). Intensive attention training in concentration meditation leads to improvements in visual sustained attention and response inhibition. Program No. 871.1. 2008 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2008. Online.
93. MacLean, K. A., Saron, C. D., Aichele, S., Bridwell, D., Jacobs, T. L., Zanesco, A., & Mangun, G. R. (2008) Improvements in perceptual threshold with intensive attention training through concentration meditation. Presented at the 2008 meeting of the Society for Cognitive Neuroscience annual meeting, San Francisco, CA. Online.
94. Fassbender, C, Coffey-Corina, S., Mizuiri, D.S., Dixon, J.F., Blake, C., Bhangoo, R., Carter, C.S., Mangun, G.R., and Schweitzer, J.B (2009). Impaired Response Preparation in ADHD. Human Brain Mapping 2009, San Francisco, U.S.A. June 18-23 2009
95. Bengson, J.B. and Mangun, G.R. (2009) Individual Variability in working memory capacity predicts success in attentional related processing of visual stimuli. Cognitive Neuroscience Society, San Francisco, CA, April 2009.
96. Sagar, M., Aichele, S. R., Jacobs, T. L., Zanesco, A. P., Bridwell, D. A., Maclean, K. A., King, B. G., Sahdra, B. K., Rosenberg, E. L., Shaver, P. R., Ferrer, E., Tang, A. C., Wallace, B. A., Mangun, G. R., Miikkulainen, R., & Saron, C. D. (2009). Longitudinal changes in brain activity associated with intensive meditation training. Program No. 871.2. *2009 Neuroscience Meeting Planner*. Chicago, IL: Society for Neuroscience, 2009. Online.
97. MacLean, K. A., Aichele, S. R., Bridwell, D. A., Jacobs, T. L., Zanesco, A. P., King, B. G., Sagar, M., Mazaheri, A., Ferrer, E., Rosenberg, E. L., Sahdra, B. K., Shaver, P.R., Wallace, B. A., Mangun G. R., & Saron, C. D. (2009). Effects of intensive meditation training on sustained attention: Changes in visual event-related potentials, ongoing EEG and behavioral performance. Program No. 871.3. *2009 Neuroscience Meeting Planner*. Chicago, IL: Society for Neuroscience, 2009. Online.
98. Risa Sawaki, Sharon Coffey Corina, Jun'ichi Katayama, Blythe A. Corbett, & George R. Mangun (2009) Impaired early visual processing is associated with high distractibility in children with ADHD Cognitive Neuroscience Society, San Francisco, CA, April 2009.
99. Megan A. Boudewyn, Tamara Y. Swaab, Ann Kring, Steven Luck, George R. Mangun, J. Daniel Ragland, Charan Ranganath, Cameron S. Carter (2010). Online processing of discourse-level congruence and Lexical associative priming in schizophrenia: an erp study. Cognitive Neuroscience Society Annual Meeting, Montreal.
100. Sagar, M., Aichele, S.R, Jacobs, T.L., Zanesco, A. P., Bridwell, D. A., MacLean, K. A., King, B. G., Sahdra, B. K., Rosenberg, E. L, Shaver, P. R., Ferrer, E.,Wallace, B. A., Mangun, G. R., Saron, C. D. & Miikkulainen, R. A computational approach to understanding the longitudinal changes in cortical activity associated with intensive meditation training. Presented at Computational Neuroscience annual meeting, San Antonio, TX. July 2010.

101. Sahdra, B.K., MacLean, K. A., Ferrer, E., Shaver, P. R., Rosenberge, E. L., Jacobs, T. L., Zanesco, A. P., King, B. G., Aichele, S. R., Bridwell, D. A., Mangun, G. R., Lavy, S., Wallace, B. A., & Saron, C. D. Response Inhibition Enhanced By Meditation Training Predicts Improved Adaptive Functioning To be presented at the 2010 meeting of the American Psychological Association, San Diego, CA. August 2010.
102. Sagar, M., Aichele, S. R., Jacobs, T. L., Zanesco, A. P., Bridwell, D. A., MacLean, K. A., King, B. G., Sahdra, B. K., Rosenberg, E. L., Shaver, P. R., Ferrer, E., Tang, A. C., Wallace, B. A., Mangun, G. R., Miikkulainen R., & Saron, C. D. Training attention: longitudinal changes in cortical activity associated with intensive meditation. 2010 SPIE Human Vision and Electronic Imaging Conference Symposium Presentation. Online.
103. Ziemba CM, Mangun GR & Usrey WM (2010). The influence of pulvinar activity on corticocortical communication. *Frontiers in Neuroscience Conference Abstract: Computational and Systems Neuroscience (COSYNE)*. doi: 10.3389/conf.fnins.2010.03.00333
104. Mazaheri, A., Bengson, J, & Mangun, G.R. (2010). The neural correlates of an imminent failure in response inhibition. Society for Neuroscience Abstracts. San Diego, CA.
105. C. Fassbender, S. Coffey-Corina, J.F. Dixon, D, Mizuiri, T-M. Yip, K.J. Rutledge, C.S. Carter, G.R. Mangun & J. Schweitzer (2010). ADHD Symptoms Affect Neural Correlates of Performance Preparation and Evaluation. Society for Neuroscience Abstracts. San Diego, CA
106. Swaab, T.Y., Boudewyn, M.A., Kring, A.M., Luck, S., Mangun, G.R., Ragland, J.D., Ranganath, C., Carter, C.S. Electrophysiological evidence for impaired dis-course processing but spared associative priming in schizophrenia. Society for the Neurobiology of Language Conference, San Diego.
107. Briggs, F., Mangun, G.R., & Usrey, W.M. (2011). Visual attention enhances the synaptic efficacy of thalamocortical communication. Society for Neuroscience Abstracts. Program No. 221.01, *2011 Neuroscience Meeting Planner*. Washington, D.C.: Society for Neuroscience, Online.
108. Blais. C., Hubbard, E., & Mangun, G.R. (2011) An ERP investigation of context specific cognitive control.. Society for Neuroscience Abstracts. Program No. 194.22, *2011 Neuroscience Meeting Planner*. Washington, D.C.: Society for Neuroscience, Online.
109. Kelley, T.A. & Mangun, G.R. (2011). Electrophysiological correlates of improved distractor filtering. OPAM 19<sup>th</sup> Annual Conference, Seattle Washington, USA.
110. Mangun, G.R., Bengson, J.J. & Mazaheri, A. (2012). Simultaneous EEG and fMRI measures of top-down spatial attention. Program No. 492.25. 2012 Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012. Online.
111. Bengson, JJ, Kelley, T.A., Mangun G.R. (2012). The neural dynamics of willed attention: A combined ERP and fMRI study. Program No. 728.11. 2012 Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012. Online.
112. Kelley, T., Mangun, G.R. (2013). Practice improves late-stage distractor filtering: a combined EEG-fMRI study. Cognitive Neuroscience Society, San Francisco, CA.
113. Bengson, J.J., Kelley, T., Mangun, G.R. (2013). The neural dynamics of willed attention. Cognitive Neuroscience Society, San Francisco, CA.
114. Liu, Y., Bengson, J.J., Huang, H., Mangun, G.R., Ding, M. (2013). Brain Structures Modulating Alpha Oscillations in Anticipatory Visual Attention: A Simultaneous fMRI-EEG Study. Society for Neuroscience Annual Meeting, San Diego, CA.
115. Hong, X., J. Sun, J.J. Bengson, G. R. Mangun, S. Tong (2014). Age-Related Changes in Alpha Lateralization during Top-Down Control of Visual Spatial Attention. Cognitive Neuroscience Society, Boston, MA.

116. Boudewyn, M.A., Dave, S., Traxler, M.J., Long, D.L., Mangun, G.R., Carter, C.S. & Swaab, T.Y. (2014). The influence of referential context on the processing of ambiguous syntactic structures in schizophrenia: evidence from event-related potentials. Cognitive Neuroscience Society Meeting, Boston. April 5- 8.
117. Liu Y, Hong X, Bengson J, Ding M, Mangun GR (2014). Dorsal anterior cingulate cortex mediates decisions about where to attend: evidence from graph-theoretic analysis of network connectivity. Poster presentation at the Society for Neuroscience meeting, Washington DC, 647.18.
118. Bastos, A., Esmeraldo, H.B.S., Mangun, G.R., Usrey, W.M. (2014). Modeling the emergence of gamma band oscillations in the visual thalamocortical pathway. 2014 Neuroscience Meeting Planner. Washington, D.C.: Society for Neuroscience, 2014. Online.
119. Royston, A., Napan, J., Anderson, K., Haberman, A., Luck, S.J., Hillyard, S.A., Usrey, W.M., Mangun, G.R. (2015). ERP evidence of reafferent priming of V1 feedforward circuits by spatial attention during dynamic vision. Society for Neuroscience, Chicago, IL.
120. Rajan A, Liu Y, Huang H, Bengson J, Mangun GR, Ding M (2015). Deciding where to attend: increased frontal theta/delta oscillations and their neuronal substrate. Poster presentation at the Society for Neuroscience meeting, Chicago, IL.
121. Liu Y, Chen CJ, Bengson J, Hong X, Wang JL, Ding M, Mangun GR (2015). Neural substrates of voluntary selection in top-down selective attention. Poster presentation at the 2015 Cognitive Neuroscience Society Annual Meeting, San Francisco.
122. Boudewyn, M.A., Long, D.L., Traxler, M.J., Lesh, T., Mangun, G.R., Carter, C.S. & Swaab, T.Y. (2015). Referential context processing deficits in schizophrenia: evidence from electrophysiology. Cognitive Neuroscience Society Meeting, San Francisco. March 28-31
123. Liu, Y., Alitto, H.J., Royston, A., Mangun, G.R., Usrey, W.M. Feature-based attention modulates correlated BOLD activity in the visual cortex. Poster presented at Society for Neuroscience, Chicago, IL, October 17, 2015.
124. Royston A., Napan, J., Mangun, G.R. Ongoing Dynamic Stimuli Facilitate Attention Effects in V1. Poster presented at AAAS – PD, San Francisco, CA, June 16, 2015.
125. Napan, J., Haberman, A., Royston, A., Mangun, G.R. Behavioral Effects Related to Stimulus Dynamicity. Poster presented at AAAS – PD, San Francisco, CA, June 16, 2015.
126. Napan, J.\*, Royston, A., Anderson, K., Mangun, G.R. Behavioral Effects in an Unforced-Choice and Adaptively Staircased Detection Task. Poster presented at AAAS-PD, San Diego, CA, June 15, 2016.
127. Bengson, J.J., Liu, Y., Morales, A., Khodayari, N. & Mangun, G.R. & Ding, M. (October, 2015). Deciding where to attend: Increased frontal theta/delta oscillations and their neuroanatomical substrate. Society for Neuroscience, Chicago, Illinois:
128. Royston, A., Napan, J., Anderson, K., Haberman, A., Luck, S.J., Hillyard, S.A., Usrey, W.M., Mangun, G.R. Attention to ongoing stimuli modulates feedforward processing in human primary visual cortex. Poster presented at CNS, New York, NY, April 4, 2016.
129. Meyyappan, S., A. Rajan, Y. Liu, J. Bengson, R. Sitaram, G.R. Mangun, M. Ding (2016). Decoding Attentional States using Multi-Voxel Pattern Analysis. Poster presentation at the Society for Neuroscience meeting, San Diego, CA.
130. Rajan, A., S. Meyyappan, H. Walker, Y. Liu, J. Bengson, G.R. Mangun, M. Ding (2016). Control of Spatial vs Feature Attention: A MVPA study. Society for Neuroscience meeting, San Diego, CA.

131. Royston, A., J. Napan, K. Anderson, S. Luck, S.A. Hillyard, W.M. Usrey, & G.R. Mangun (2016). ERP evidence of an attention effect in human primary visual cortex. Federation of European Neuroscience Societies, Copenhagen, Denmark.
132. Bengson, J., X. Zhang & G.R. Mangun (2017). Dynamic coupling between the anterior cingulate and occipital alpha power during willed attention. Cognitive Neuroscience Society Meeting, San Francisco, CA.
133. Ding, M., Y. Liu, J. Bengson, H. Huang, G.R. Mangun (2017). Brain Structures Modulating Alpha Oscillations in Anticipatory Spatial Visual Attention: A Simultaneous EEG-fMRI Study. Cognitive Neuroscience Society Meeting, San Francisco, CA.

## **PRESENTATIONS**

### **Honorary Lectures**

Award Lecture (Distinguished Early Career Contributions Award), "Dissecting the Functional Architecture of Brain Attention Systems Using Event-Related Potentials", Society for Psychophysiological Research, October, 1993, Germany.

F.C. Donders Lecture, "The Functional Architecture of Brain Attention Systems", Max-Planck Institute for Psycholinguistics, Nijmegen, Holland, 1994.

Neuropsychology Special Lecture, "Probing Attention and Awareness with Electromagnetic and Functional Neuroimaging", 8th World Congress of Psychophysiology, Tampere, Finland, June, 1996.

Award Lecture (APA Distinguished Scientist Lecturer), "Attention and Awareness: From Cognitive Theory to Cortical Mechanisms", Eastern Psychological Association Annual Meeting, Providence, R.I., 1999.

Plenary Lecture, "Functional Architecture of Visual Attention", Presented at the opening of the F.C. Donders Centre for Cognitive Neuroimaging, Nijmegen, The Netherlands, September, 2002.

Plenary Lecture, "The Mind's Eye: Neurobiology of Visual Attention", Federation of European Psychophysiological Societies, Bordeaux, France, September, 2003.

Keynote Speaker, "Biology of the Mind: Our Greatest Challenge", Annual Phi Sigma Initiation Ceremony, University of California, Davis Chapter, May, 2004.

Keynote Speaker, ADMAN Annual Administrative Conference, University of California, Davis, May, 2005.

Keynote Speaker, Society for Psychophysiological Research, Dallas, Texas, 2008.

Plenary Lecture, Japanese Psychological Association, Hokaido, Japan, 2008.

Award Lecture (Distinguished Scholar Alumnus Award) "Cognitive Neuroscience", ARCS Foundation Annual Ceremony and Banquet, San Francisco, CA, October, 2010.

Plenary Lecture, Conference on Basic and Clinical Research in Neuroscience, Leibniz Institute for Neurobiology, University of Magdeburg, Magdeburg, Germany, 2013.

Radboud Excellence Initiative Lecture "The Science of Attention", Nijmegen, The Netherlands, 2016.

### **Symposia, Conferences and Summer Schools Organized**

Symposium Organizer/Chair, "Attention and Event-Related Potentials", Tenth International Conference on Event-Related Potentials of the Brain, Eger, Hungary, June, 1992.

Symposium Organizer/Chair, "Functional Measures of Cognitive Processes", Society for Psychophysiological Research, September, 1993, Rottach-Egern, Germany.

Chair (invited), "Human Behavioral Neurobiology: Attention and Memory", Society for Neuroscience, November, 1993, Washington, D.C.

Conference Organizer and Symposium Chair, "Cognitive Neuroscience Society", San Francisco, CA, March, 1994.

Conference Organizer, "Mapping Cognition in Time and Space: Combining EEG and MEG with Functional Imaging", Magdeburg, Germany, July, 1994.

Symposium Chair, "Attention: Mechanism and Models", Cognitive Neuroscience Society, San Francisco, March, 1994.

Chair (invited), "Human Behavioral Neurobiology: Attention and Memory", Society for Neuroscience, November, 1994, Miami, Florida.

Co-Chair, Functional Imaging Workshop: "How to do it, How to interpret it". San Francisco, CA, March 1995.

Symposium Organizer/Chair, "Convergent Approaches in the Study of Human Cognition". 8th World Congress of Psychophysiology, Tampere, Finland, June, 1996.

Symposium Organizer/Chair (with Alan Kingstone) "Cognitive Neuroscience and Visual Attention: Convergent Approaches" International Congress of Psychology, Montreal, Canada, August, 1996.

Symposium Organizer/Chair, "Multimodal Integration in Neuroimaging" Brain Map '96 meeting in San Antonio, December, 1996.

Director, McDonnell Summer Institute in Cognitive Neuroscience "Functional Imaging", Hanover, New Hampshire, July, 1997.

Symposium Organizer/Chair, "Mapping Cognition in Space and Time: Integration of Electromagnetic Recording and Functional Neuroimaging in Human Neuroscience". Society for Neuroscience Annual Meeting, New Orleans, 1997.

Symposium Organizer/Chair, "Multimethodological Integration in Brain Imaging " Brain Map '97 meeting in San Antonio, December, 1997.

Symposium Organizer/Chair, "Contributions of functional imaging to cognitive theory: What have we learned?" Cognitive Neuroscience Society, San Francisco, April, 1998

Symposia Organizer/Chair, "Convergent Approaches to the Study of Attention", EPIC International Conference, Boston, Mass., July, 1998.

Symposium Organizer/Chair, "Mapping Cognition in Space and Time: Integration of Electromagnetic Recording and Functional Neuroimaging In Human Neuroscience, SFN Sponsored Symposium, Society for Neuroscience, New Orleans, 1998.

Symposium Organizer/Chair, "Multimethodological Integration in Cognitive Brain Imaging " Brain Map '98 meeting in San Antonio, December, 1998.

Symposium/Social Organizer/Chair, Society for Neuroscience Social in Cognitive Neuroscience, "Imaging Cognition: Are we there yet?". Annual Meeting of the Society for Neuroscience, Miami, 1999.

Satellite Symposium Organizer, "Attentional Processes In Perception And Working Memory", Cognitive Neuroscience Society, Washington, D.C., 1999.

Symposium Organizer/Chair, "Probing the Brain's Attention System by Integrating ERPs and fMRI" Seventh International Conference on Cognitive Neuroscience, Budapest, Hungary, 1999.

Conference Organizer, Fifth Annual International Meeting of the Association for the Scientific Study of Consciousness (ASSC5), "The Contents of Consciousness", Duke University, May 2001.

Satellite Symposium Organizer, "Neural Mechanisms of Executive Control of Cognition", The meeting of the Cognitive Neuroscience Society, San Francisco (April, 2002).

Symposium Organizer/Chair, "Cortical Mechanisms in Executive Control of Behavior", SFN sponsored symposium, Society for Neuroscience, Orlando, FL., 2002.

Symposium Co-Organizer/Co-Chair, "Awareness, Attention and the Brain in Conscious Experience", Satellite Symposium of the Cognitive Neuroscience Society Annual Meeting, San Francisco, CA, 2004.

Conference Co-Organizer/Co-Chair, "Exploring the Mind: Multiple Perspectives in Decision Making". National Institute of Drug Abuse sponsored conference, Davis, CA, Spring, 2004.

Conference Organizer, "Attention, Awareness and Action", UC Davis, Mondavi Center, July 2006.

Workshop Co-Organizer, "Neurobiology of Psychological Torture", UC Davis, Center for Mind and Brain, September, 2006.

Satellite Symposium Co-Organizer, "The Cognitive Neuroscience of Mind: A Tribute to Michael S. Gazzaniga, Cognitive Neuroscience Society, San Francisco, CA 2008.

Section Co-Organizer, "Cognitive Neuroscience of Attention", Summer Institute in Cognitive Neuroscience, Tahoe, California, 2008.

Satellite Symposium Organizer, "Cognitive Electrophysiology: Signals of the Mind". Cognitive Neuroscience Society, San Francisco, CA, 2011.

NIMH Summer Institute in Cognitive Neuroscience, 2011, 2012, 2013 & 2014 Santa Barbara and Lake Tahoe, California.

Kavli Futures Symposium Director, "Emerging Technologies for Neuroscience: Building the New Brain Science", Santa Barbara, CA, July 2015.

Symposium Organizer (invited), "Toward a Mechanistic Approach to Mindfulness Meditation Training", Society for Psychophysiological Research (SPR), Seattle, Washington, 2015.

### **Symposia Lectures**

"The Electrophysiology of Human Visual Attention", In: Attention and the Brain, American Psychological Society, Washington, D.C., 1991.

"Attentional Control of Sensory Transmission in the Human Visual Cortex", In: New Developments in Event-Related Potentials, Hannover, FRG, 1991.

Session Chair, "Electrophysiology of Motor Control and Neurological Disease", In: New Developments in Event-Related Potentials, Hannover, FRG, 1991.

"Brain Waves and Visual Attention", In: Brain Physiology and Cognition: A Tribute to Robert Galambos. La Jolla, CA, 1991.

"Event-Related Potentials and Visual Attention", International Neuropsychological Symposium, Taormina, Sicily, 1991.

"Electrical Brain Imaging" International Neuropsychological Symposium, Taormina, Sicily, 1991.

"Electrophysiological Measures of Interhemispheric Transfer" 2nd Dartmouth International Conference on the Corpus Callosum and Epilepsy, Hanover, N.H., 1991.

"Brain Mechanisms of Visual Selective Attention", Canadian Society for Brain, Behavior and Cognitive Science, Quebec, Canada, June, 1992.

"Electrophysiological Studies of Visual Attention and Their Relation to PET Results: A Commentary on Posner", American Psychological Society, San Diego, CA., June 1992.

"Imaging Brain Activity Related to Perceptual and Cognitive Processes" In: Modern Techniques in Cerebral Imaging, El Escorial, Spain, July, 1992.

"Interhemispheric transfer of visual information" In: Dynamic Brain Mapping", Institute for Cognitive and Decision Sciences, University of Oregon, September, 1992.

"Combining PET and ERPs to localize attentional selection in time and space". University of Illinois (invited): Converging Operation In The Study Of Visual Selective Attention: In honor of Charles Eriksen.

"Event-related potential measures of linguistic and musical expectancy". Von Karajan-Stiftung Foundation Conference (invited). Vienna Austria, June, 1994.

"Electrophysiological and Neuroimaging Approaches to the Study of Human Cognition". European Summer Institute in Cognitive Neuroscience, Nijmegen, Holland, June 30, 1994.

"Event-related Potential Correlates of Early Attentional Selection in Vision". University of Nijmegen, Department of Psychology, Nijmegen Holland, July 5, 1994.

"Combined PET and ERP Studies of Visual Attention". University of Amsterdam Mini conference on Visual Information Processing, Amsterdam, Holland, 1994.

"Combined use of PET and ERPs in the Study of Visual Attention" Conference on Supercomputers in Brain Research. Julich, Germany. 1994.

"Combining Electromagnetic and Functional Imaging in Studies of Cognition and Perception". Conference on Convergent Methods in Neuroscience, Julich, Germany. 1995.

"Challenges and limitations for the integration of electromagnetic recording and functional neuroimaging in the study of human cognition". Brain Map '95 meeting in San Antonio, December, 1995.

"Asymmetries in signal detectability following damage to the parietal cortex". 8th World Congress of Psychophysiology, Tampere, Finland, 1996.

"Combining electrophysiology and positron emission tomography in the study of spatial selective attention". International Congress of Psychology, Montreal, Canada, August, 1996.

"Combined PET and ERP measures of visual spatial attention during form discrimination and luminance detection. Society for Psychophysiological Research, Vancouver, 1996.

"Integrating electrophysiology with functional neuroimaging", Third International Congress on Functional Imaging of the Human Brain. Copenhagen, Denmark, May, 1997.

"Integrating electrophysiology and function neuroimaging in human cognition. BASIC Conference, Banff, Alberta, Canada, May, 1998.

"Attention!" EPIC International Conference, Boston, Mass., July 1998.

"The Functional Architecture of Visual Attention" presented at the 18th International Conference on Attention and Performance, Windsor Great Park, England, July 1998.

"Integrating Functional Neuroimaging and Electrophysiology in the Study of Human Attention", American Psychological Association Annual Meeting, San Francisco, August, 1998.

"Combining human electrophysiology and functional neuroimaging in the study of selective visual attention", presented at "Cognitive Neuroimaging Research: Design and Interpretation Meeting", Division of Mental Disorders, Behavioral Research and AIDS, NIMH, September, 1998.

"Combining functional neuroimaging with ERPs to measure localization and timing of attentional operations", presented in, "Functional Neuroimaging of Human Cognition", Michigan State University, East Lansing, MI, October, 1998.

"Cortical Mechanisms for the Control of Orienting to Locations, Features and Objects", presented in "Neural Mechanisms of Executive Control of Cognition", Satellite symposium of the Cognitive Neuroscience Society meeting, San Francisco (April, 2002).

"Cortical Mechanisms of Attentional Control", presented in "Cortical Mechanisms in Executive Control of Behavior", SFN sponsored symposium, Society for Neuroscience, Orlando, FL., 2002.

### **Colloquia**

"Electrophysiological Studies of Visual-Spatial Attention In Humans", Vision Group Seminar, Dept. of Psychology, UCSD, 1988.

"Cerebral Specialization: Evidence in Humans Following Commissurotomy", Lecture to Honors Course, Dept. of Biological Sciences, Northern Arizona University, 1989.

"Visual Attention", Colloquium, Department of Psychiatry, Harvard Medical School/Brockton VAMC, Massachusetts, 1989.

"ERP Measures of Attentional Orienting in Humans", Colloquium, Department of Neurology, Medical School of Hannover, Federal Republic of Germany, 1989.

"The Electrophysiology of Visual Attention", Colloquium, Program in Cognitive Neuroscience, Dartmouth College, New Hampshire, 1989.

"Investigations of Brain Mechanisms of Attention in Split-Brain Patients", Colloquium, Department of Psychiatry, Harvard Medical School/Brockton VAMC, Massachusetts, 1989.

"Cognition and the Cerebral Hemispheres: Comments on Split-Brain Patients" Lecture to Medical Gross Anatomy Course, Brown Medical School, 1990.

"ERPs, Mental Chronometry and Localization of Function", Workshop organized for McDonnell Summer Institute, Dartmouth Medical School, 1991.

"Brain Mechanisms of Attention" Rose F. Kennedy Center, Albert Einstein College of Medicine, April 1992.

"Electrophysiology of Attention" Department of Psychology, University of California, Berkeley, Nov. 1992.

"Combined PET and ERP Studies of Selective Attention in Humans" Oregon Attention Conference, May 1993.

"Functional Architecture of Brain Attention Systems", University of Helsinki, August, 1993.



"Combining ERP and PET in the Study of Brain Attention Systems", Helsinki University of Technology, August, 1993.

"Neural Architecture of Brain Attention Systems" University of Amsterdam, July, 1994.

"Functional architecture of brain attention systems" University of California, Santa Cruz, January, 1995.

"Integration of PET and ERPs in Studies of Visual Spatial Attention", University of Oregon, March, 1996.

"Mechanisms of Attention" First International Summer School in Cognitive Neuroscience, University of Groningen, Holland, June, 1996.

"Functional Imaging in Studies of Human Cognition: Combining electrical and blood flow methods", Stanford University, January, 1997.

"Probing Attention and Awareness Using ERPs and Functional Imaging", Purdue University, March, 1998.

"Neural Networks for Attentional Control of Sensory Processing", Rockefeller University and Cornell's Sackler Institute, November, 2000.

"Neural Mechanisms of Selective Perception and Attentional Control", Northwestern University, Dept. of Psychology and Program in Cognitive Neuroscience, February, 2002.

"Functional Architecture of Visual Attention", Department of Neurobiology, Physiology and Behavior Colloquium, University of California, Davis, 2002.

"Brain Mechanisms of Attention", Neurology Grand Rounds, UCDMC, 2003.

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