

## JOHN DARRELL VAN HORN, M.Eng., Ph.D.

### CURRICULUM VITAE

#### CONTACT INFORMATION:

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#### SCHOLARLY METRICS:

**PubMed:** <http://tinyurl.com/mfaffgf>  
**Google Scholar (GS):** <http://tinyurl.com/km89665>  
**Microsoft Academic (MA):** <https://tinyurl.com/y9m9p9pu>  
**ORCID:** <http://orcid.org/0000-0003-1537-0816>  
**Scholia:** <https://tools.wmflabs.org/scholia/author/Q30085386>

**h-index**  $\geq 58$ , over 220 peer reviewed publications (*c.f.* GS) and book chapters  
**Co-Authors:** 251+ co-authors (1992-2020); 13,202+ Citations (*c.f.* GS)  
**Erdős Number** = 4

EDUCATION:

1989	Bachelor of Arts in Psychology (67 Credit Major) Eastern Washington University Cheney, WA
1992	Doctor of Philosophy in Psychology Title: " <i>Brain structural abnormality and laterality in schizophrenia</i> " University of London London, England
2000	Masters of Science in Engineering (Electrical and Computer) University of Maryland College Park, Maryland

PROFESSIONAL EXPERIENCE:

August 2019 - Present: Professor, *Department of Psychology*, 485 McCormick Road, University of Virginia, Charlottesville, VA 22903

August 2019 – Present: Professor, *School of Data Science*, Dell Building #1, University of Virginia, Charlottesville, VA 22903

January 2020 – Present: Faculty, *Neuroscience Graduate Program*, University of Virginia, Charlottesville, VA 22903

2018-2019: Associate Professor of Clinical Neurology, *Department of Neurology, Keck School of Medicine of USC*, University of Southern California (USC), 2025 Zonal Avenue, SHN, Los Angeles, CA 90033.

2013-2018: Associate Professor of Neurology (Clinical Scholar), *Department of Neurology, Keck School of Medicine of USC*, University of Southern California (USC).

2013-2019: Faculty member, *USC Mark and Mary Stevens Neuroimaging and Informatics Institute (INI)* and *Laboratory of Neuro Imaging (LONI)* at the Keck School of Medicine of USC, University of Southern California (USC).

2013-2019: Faculty member, *Neuroscience Graduate Program*, University of Southern California (USC), 3641 Watt Way, HNB 120, Los Angeles, California 90089-2520.

2013-2019: Director of Education, *USC Mark and Mary Stevens Neuroimaging and Informatics Institute (INI)* at the Keck School of Medicine of USC, University of Southern California (USC).

2014-2015: Chair, Faculty Search Committee, *USC Mark and Mary Stevens Neuroimaging and Informatics Institute (INI)* at the Keck School of Medicine of USC, University of Southern California (USC).

2014-2019: Member of the *USC Neuroscience Program Executive Committee*, University of Southern California (USC).

2014-2019: Faculty member (by courtesy), *USC Viterbi School of Engineering, Ming Hsieh Department of Electrical Engineering*, 3740 McClintock Avenue, EEB 100, Los Angeles, CA 90089-2560

2013: Associate Professor of Neurology, *Laboratory of Neuro Imaging, Department of Neurology*, UCLA David Geffen School of Medicine, 635 Charles E. Young Drive, NRB #225, Los Angeles, CA 90025.

2012-2013: Faculty Member, UCLA Neuroscience Interdepartmental Program (NS IDP)

2012-2013: Faculty Member, UCLA Biomedical Engineering Interdepartmental Program (BME IDP)

2011-2013: Principal, *UCLA Institute for Informatics (I2)*.

2011-2013: Assistant Professor of Neurology, *Laboratory of Neuro Imaging, Department of Neurology*, UCLA David Geffen School of Medicine, 635 Charles E. Young Drive, NRB #225, Los Angeles, CA 90025.

2006-2011: Assistant Adjunct Professor of Neurology, *Laboratory of Neuro Imaging, Department of Neurology*, UCLA David Geffen School of Medicine.

2002-2006: Research Associate Professor, *Psychology and Brain Science/Center for Cognitive Neuroscience*, Dartmouth College, 6162 Moore Hall, Hanover, New Hampshire 03755.

2002-2006: Assistant Director, *Dartmouth Brain Imaging Center*, Dartmouth College.

2001-2006: Operations Director, *The fMRI Data Center*.

2000-2002: Research Assistant Professor, *Psychology and Brain Science/Center for Cognitive Neuroscience*, Dartmouth College.

1997-2010: Honorary Research Fellow, *Department of Psychology, University College London*, University of London, Gower Street, London, WC1E 6BT England.

1997-2000: NIH Staff Fellow, *Laboratory of Brain and Cognition, National Institute of Mental Health*, 10 Center Drive 4C-104, Bethesda, MD 20892.

1997-2000: Guest Researcher, *Brain Imaging Center, National Institute of Drug Abuse*, Johns Hopkins Bayview Campus, Baltimore, MD.

1992-1997: IRTA Postdoctoral Research Fellow, *Unit on Integrative Neuroimaging, National Institute of Mental Health*, Building 10-4C108, 9000 Rockville Pike, Bethesda, MD 20892, and *Clinical Brain Disorders Branch, NIMH, Neurosciences Center at St. Elizabeth's Hospital*, 2700 Martin Luther King Jr. Avenue SE, Washington, D.C. 20032.

## VISITING POSITIONS

March 2020 – August 2021\*: Visiting Faculty, *Scuola IMT Alti Studi Lucca* - Piazza S. Francesco, 19 - 55100 Lucca, LU, Tuscany, Italia (<https://www.imtlucca.it/>).

*\*Postponed till Summer 2021 due to COVID-19.*

## PROFESSIONAL ACTIVITIES:

### University Teaching Experience:

#### University of Virginia:

2020-Present: *UVA Psych 4500 – Brain Mapping with MRI* (Fall Term): A three-credit hour seminar course on the foundational techniques of structural and functional neuroimaging to map brain form, function, and connectivity in health and disease.

To begin in 2021: *UVA Psych 5500 – Applications of Human Brain Mapping* (Spring Term): A three-credit hour seminar course on the applications of structural and functional neuroimaging to map brain form, function, and connectivity in health and disease.

2020-Present: *DS 6011: Data Science Capstone Project Work I* (Fall Term): This course is designed for capstone project teams to meet in groups, with advisors, and with clients to advance work on their projects.

To begin in 2021: *DS 6013: Data Science Capstone Project Work II* (Spring Term): This course is designed for capstone project teams to meet in groups, with advisors, and with clients to advance work on their projects.

[November 15, 2019: *Brain and Data Science Meet-Up* – an informal gathering of students and faculty to discuss the data science challenges involved in modern brain science. Hosted by the UVA School of Data Science with contributions from the Department of Psychology and the UVA Brain Institute, the event was sponsored by the Mead Foundation.]

#### University of Southern California:

2016-2019: Member of the *USC Keck School of Medicine Graduate Council*.

2013-2019: Education Director and graduate course curricula development through the *USC Mark and Mary Stevens Neuroimaging and Informatics Institute (INI)*. [Duties include the development of complete, one-year master's degree level course in human neuroscience, psychology, neurophysiology, neuroimaging methods, and the information sciences. This is the first such master's program in the country dedicated to the unique combination of neuroimaging and informatics.]

2013-2019: *USC Neuroscience Graduate Program (NGP) Faculty Member*

2014-2019: *USC Viterbi School of Engineering, Ming Hsieh Department of Electrical Engineering Faculty Member* (secondary appointment)

2015: *MEDS 340L The Brain in Health and Disease* [This detailed course at USC involves the study of the human brain with emphasis on structure-functional relationships, illustrative case

studies, current imaging techniques, with illustrative laboratory exercises using specimens and slides.]

2014-2016: *Advanced Neuroscience (NEURO 525), Neuroscience Graduate Program, Spring Term*. Contributed two, two-hour lectures and course materials on human neuroanatomy.

2013-2019: *USC Neuroscience Graduate Program (NGP) Annual Retreat Chair*. [Direct planning of the USC NGP retreat, coordinate with student organizers, book the venue, plan activities, etc., for this three-day event held at the Brandeis-Bardin Campus of the American Jewish University in Simi Valley, CA].

2015-2019: *NIIN 500 Neuroimaging and Systems Neuroscience* [This graduate-level course provides a detailed overview of elemental neuroanatomy and brain systems with an emphasis on a neuroimaging perspective. Examples from clinical cases and their consequences on behavior are explored.]

2014: Invited Course Lecturer - “*The Human Visual System Explored using Neuroimaging*”, Department of Ophthalmology, Keck School of Medicine of USC, October 24<sup>th</sup>, 2014.

2016: Invited Course Lecturer – “*Graphical Data Mining Approaches in Human Neuroimaging*”, Machine Learning for Medical Applications, USC Department of Computer Science, January 25<sup>th</sup>, 2016.

University of California Los Angeles:

2011-2013: *Introduction to Functional Anatomy of Central Nervous System (NS102)*, Neuroscience Program, Autumn Term, University of California Los Angeles, Los Angeles, California (co-taught with Prof. Dwayne Simmons; course inherited from Dr. Arnold Scheibel) [Prepare and conduct neuroanatomy lectures, oversee lab class, procure brain specimens, prepare brain specimens for use in class laboratories, and supervise course TAs]

2009-2011: *Introduction to Human Brain Mapping Using fMRI (NS191B)*, Neuroscience Program, Winter Term, University of California Los Angeles, Los Angeles, California [Prepare and conduct lectures on human neuroimaging using MRI, fMRI, and DTI]

2013: *Training Program in Translational Science Clinical & Translational Science Institute (CTSI) - Neuroimaging: A Short Course on Modern Imaging Modalities in Clinical Investigation*, “Human Connectomics: Representation and Quantification using Diffusion Imaging Methods”, April 11, 2013. [Contributed this talk as part of a series of neuroimaging lectures focused on mapping the brain in health and disease]

2013: *Medical Neurosciences II*, Jan. 8-10, 22-24, 2013, UCLA School of Medicine. Taught jointly with Prof. Susan Bookheimer. [Integrated and updated our presentation on “Neuroimaging in Aging and Memory”]

2012: *Medical Neurosciences II*, Jan. 10-12, 24-26, 2012, UCLA School of Medicine. Taught jointly with Prof. Susan Bookheimer. [Special for this year: I worked to prepare a self-guided set of slides for the students on “Neuroimaging in Aging and Memory”]

2011: *Medical Neurosciences II*, Jan. 5-7, 25-27, 2011, UCLA School of Medicine. Taught jointly with Prof. Susan Bookheimer.

2010-2013: UCLA Graduate Neurosciences Program Committee, Co-Chair *Focused Areas of Research (FAR) on Neuroimaging and Cognitive Neurosciences*. [Developing the core curriculum for students wishing to specialize in neuroimaging techniques and applications. Involved presentation at two NS IDP graduate student recruitment events]

2010: *Medical Neurosciences II*, Jan. 6-8, 27-29, 2010, UCLA School of Medicine. [Taught jointly with Profs. Susan Bookheimer and Elizabeth Sowell].

2009: *Medical Neurosciences II*, Jan. 7-9, 27-29, 2009, UCLA School of Medicine. [Taught jointly with Profs. Susan Bookheimer and Elizabeth Sowell].

2008: *Medical Neurosciences II*, Jan. 8-10, 22-24, 2008, UCLA School of Medicine. [Taught jointly with Profs. Susan Bookheimer and Elizabeth Sowell].

2008: *Advanced Neuroimaging Summer School*, July 25, 2008, Directors - Profs. Mark Cohen and Russell Poldrack.

2007: *Advanced Neuroimaging Summer School*, August 24, 2007, Directors - Profs. Mark Cohen and Russell Poldrack.

Dartmouth College:

2003-2006: *Introduction to Human Brain Mapping Using fMRI*, PBS60, Psychological and Brain Sciences, Winter Term, Dartmouth College, Hanover, New Hampshire [Among the most popular upper-level courses in the undergraduate psychology degree curriculum]

University College London:

1989-1992: *Statistical/Experimental Methods and Psychological Laboratory Instruction*, Department of Psychology, University College London, University of London, Gower Street, London, WC1E 6BT England

Undergraduate, Graduate, Medical Student Supervision, and Degree Committees:

University of Southern California:

Sonja Fenske, USC Neuroscience Graduate Program, Ph.D. committee chairperson

Minqi Chong, USC Viterbi School of Engineering, Ph.D. committee member

Kavi Patel, Keck School of Medicine of USC, Medical Student, Summer Project Supervisor, 2014 [supervised work on neuroanatomically-informed electroencephalography source localization in TBI patients, submitted as a poster to the 2015 Organization for Human Brain Mapping Annual Meeting in Honolulu, HI]

Adam Wade, Keck School of Medicine of USC, Medical Student, Summer Project Supervisor, 2014 [supervised work on pupil diameter correlates of traumatic brain injury measured using multimodal MRI, submitted as a poster to the 2015 Organization for Human Brain Mapping Annual Meeting in Honolulu, HI]

Avnish Bhattra, Masters of Science in Neuroimaging and Informatics (NIIN) student, 2015-2016. [Supervised his work as a research assistant doing work on traumatic brain injury (TBI). This resulted in a poster submission for the 2016 Organization for Human Brain Mapping Annual Meeting in Geneva, Switzerland, as well as a co-authorship on a peer-reviewed research article]

Jocelyn Hull, Keck School of Medicine of USC, Medical Student, Project Supervisor, 2016-2017 [supervised work on her project entitled “Resting-State Functional Connectivity in Autism Spectrum Disorders”]

University of California Los Angeles:

Doctorates of Philosophy:

Micah Chambers, Biomedical Engineering, (2010-2013; supervisor) – [Selected in July 2011 as a Neuroimaging Training Program (NITP) Fellow of which only 6 are awarded annually. Presented neuroimaging work at several international scientific conferences. Awarded a phRMA Fellowship for neuroimaging informatics. Currently working in industry.]

Carl Lederman, Mathematics (supervisor/committee member; completed, September 2011) “Finite element and mesh-free applications to image processing”, [now works for a US Air Force contractor at Edwards AFB modeling fluid dynamics using some of the methods we developed for the analysis of brain imaging data]

Salvatore John Torrisi, Department of Psychiatry (committee member, completed summer, 2013), “Functional brain connectivity during emotion regulation and applications to bipolar disorder”, [now conducting post-doctoral work at the National Institutes of Health, Bethesda, MD]

Daya Alexander, M.S., UCLA Neuroscience Interdepartmental Program, Department of Neurosurgery, “The effect of repeat mild traumatic brain injury in the adolescent rat on Alzheimer's disease pathogenesis”, (committee member, 2011-2013)

Joel Frohlich, B.S., UCLA Neuroscience Interdepartmental Program, Department of Neurosurgery (lab rotation supervisor) [09/2014 - published review article and a book chapter on the ketamine model of schizophrenia. Completed his PhD in neuroscience at UCLA where he is also a post-doctoral fellow].

Masters Degrees:

Robin Jennings, Biomedical Statistics, (2009-2011; supervisor) – [I supervised her work on the meta-analytic assessment of publication bias in the peer-reviewed brain activation neuroimaging literature. This resulted in her first first-author publication. She now is responsible for managing clinical trial research projects at UCSD.]

Jessica Lu, Neurosurgery Neuroengineering, (2010-2012; committee member) – [Jessica works in the area of brain-computer interfaces and completed her degree in 2012]

Undergraduate Degree Research Projects:

None

Post-Doctoral Fellows:

Andrei Irimia, Ph.D. (2010-2013), concerning work on traumatic brain injury [Andrei was a winner of the Department of Neurology Poster Day Mazziotta Prize in 2012]. He has competed for and

received numerous travel awards to present his work. Since coming to UCLA to work with me on my NA-MIC TBI project in 2010, he has five first author publications. He is now on the faculty in the Leonard Davis School of Gerontology of the University of Southern California.]

Shantanu Joshi, Ph.D. (2009-2013), concerning work on geometric shape analysis, comparison, and display of the human brain (K99-award under review) [He was a winner of the Department of Neurology Poster Day Mazziotta Prize in 2012]. He has several publications relevant to neuroimaging data analysis, data mining, and visualization. He is now on the faculty at UCLA.]

Other:

2007-2008: Anna Xu, Independent Study Program, UCLA (supervisor).

2007-2008: Rebecca Liu, Independent Study Program, UCLA (supervisor).

Community Outreach Instruction:

2011-2013: UCLA NS IDP “Brain Camp” (directed by Dr. Joseph Watson) [A two-week summer program for under-represented high school students from around the Los Angeles area.]

2012: The Los Angeles Brain Bee (<http://www.losangelesbrainbee.com/>) [Conducted two sessions introducing high-school level participants to neuroimaging research.]

Dartmouth College:

Doctorates of Philosophy:

2006: Marian Berryhill, Ph.D., “Within and Between Hand Acquisition of Multiple Stimulus-Response Mappings”, Dartmouth College, Hanover, NH (committee member)

2005: Kestutis Kveraga, Ph.D., “Neural and Behavioral Mechanisms of Sensorimotor Performance Shifts Under Speed Uncertainty”, Dartmouth College, Hanover, NH (committee member)

2005: Malia Mason, Ph.D., “In Search of a Default Mental Mode: Stimulus-Independent Thought, Stream of Consciousness, and the Psychology of Mindwandering”, Dartmouth College, Hanover, NH (committee member)

Undergraduate Degree Research Projects:

2006-2007: Jonathan Woolf, Dartmouth Presidential Scholar Project, “Modeling Functional Connectivity of Motor Systems with BOLD fMRI and DTI” (supervisor).

2006: Sarah Wang, “Optical Nastygmus using Caloric Stimulation in fMRI”

2004: Melana Yanos, Senior Honors Thesis, Dartmouth College, Hanover, NH (supervisor).

2003: Ryan Duffy, Senior Honors Thesis, Dartmouth College, Hanover, NH (supervisor).

Other:

2010-2011: Carinna Torgerson, Loyola Marymount University [various projects involving connectomics, traumatic brain injury, Bipolar Disorder, and Autism Spectrum Disorder. I supervised her first published research study which appeared in spring 2013. She is now a graduate student in the USC Neuroscience Graduate Program and has a number of papers published or under consideration at peer-reviewed journals.]

2006: Dartmouth Women in Science Program (WISP): Tory Sheppard, “Neuroeconomics: Finding the ‘Buy Button’ in the Brain”; Jessica Lane, “The Aging Brain” (supervisor).



2014: Summer internship supervisor for Mr. Adam Wade and Mr. Kavi Patel, Keck School of Medicine of USC.

2014-2016: Consulting Supervisor for Master's Degree Candidate Andrew Zywiec in the Department of Physiology and Neuroscience, St. George's University, Grenada West Indies. Visiting scholar at USC from January 19<sup>th</sup>-February 19<sup>th</sup>, 2016.

2012-2015: Bo Wang, Ph.D. Dissertation Committee, "4D Image Modeling for Pathological Anatomy Analysis", School of Computing, University of Utah, Salt Lake City, Utah.

### **Memberships in Academic Societies:**

1993-Present: Society for Neuroscience

1997-Present: Organization for Human Brain Mapping (OHBM) -  
Chair of Education, [2013-Beijing, China; **2014-Hamburg, Germany**; 2015-Honolulu, HI];  
Program Chairman [2014-Hamburg, Germany; **2015-Honolulu, HI**; 2016-Geneva, Switzerland]  
Scientific Advisory Board [2017-Present]  
Best Practices Committee, Inaugural Chair [2020-Present]

2016-Present: Society for Claustrum Research –  
Past President, [2018-2019], Chicago, IL  
**President**, [2017-2018], San Diego, CA  
Vice President, [2016-2017], Washington DC

2002-Present: Cognitive Neuroscience Society

2004-Present: American Psychological Society

2004-2007: American Association of University Professors

1996-2007: American Association for the Advancement of Science

1997-2007: American Society for Gravitational and Space Biology

1991-1995: The British Psychological Society

1991-1993: The Royal Statistical Society

1990-1993: Association for the Study of Animal Behaviour

### **Professional Journal Article Ad Hoc Review and Editorships:**

*Ad Hoc Reviewer:*

*American Journal of Psychiatry* (since 2012)

*Archives Italiennes de Biologie*

*Biomed Central Medical Imaging* (since 2007)

*Brain Connectivity* (since 2013)

*Brain Research*

*Cerebral Cortex*

*Cognitive, Affective, and Behavioral Neuroscience*

*Computers in Biology and Medicine*

*Current Biology* (since 2015)

*Epilepsia*

*Frontiers in Neuroscience* (since 2010)

*GigaScience* (since 2013)

*Human Brain Mapping*  
*Journal of Cognitive Neuroscience* (since 2001)  
*Journal of Chemical Neuroanatomy* (since 2014)  
*Journal of Neuroimaging*  
*Journal of Neuroscience*  
*Journal of Neuroscience Methods* (since 2018)  
*Nature* (since 2013)  
*Nature Communications* (since 2016)  
*Nature Neuroscience*  
*Nature Reviews Neurology* (since 2013)  
*Neuron*  
*NeuroImage* (since 1997)  
*NeuroImage: Clinical* (since 2013)  
*Neuropsychologia*  
*PNAS* - special consultant to the topic editor (since 2015)  
*Trends in Cognitive Science*

*Editorships:*

*Brain Imaging and Behavior* (since 2006; Founding Editorial Board);  
*Elsevier Science Publishers* (since 2007; book proposal reviewer);  
*Frontiers in Brain Imaging Methods* (since 2012; Associate Editor);  
*Frontiers in Neuroinformatics* (since 2008, Associate Editor);  
*Neuroscience Imaging* (since 2005; Founding Editorial Board);  
*Neuroinformatics* (since 2006; Editorial Board, since 2009; Action Editor, since 2018).

2008: *Brain Imaging and Behavior* – New Horizons for the Next Era of Human Brain Imaging, Cognitive and Behavioral Research: Pacific Rim Activity (December), Editor.

2009: *Frontiers in Neuroinformatics* - Neuroimaging Workflow Design and Data-Mining (April), Editor.

2012: *Frontiers in Neuroinformatics* – Electronic Data Capture, Representation, and Applications in Neuroimaging (expected to appear in April), Editor.

2013: *Brain Imaging and Behavior* – New Horizons in Human Brain Imaging: A Focus on Genetic Neuroimaging in Aging and Age-Related Disease, Editor.

2014: *Frontiers in Neuroinformatics* – Recent Advances and the Future Generation of Neuroinformatics Infrastructure (with Xi Cheng, Daniel Marcus, and Qian Luo).

2015: *Brain Imaging and Behavior* – New Horizons in Human Brain Imaging: A Focus on the Developing Brain, Editor (with Kevin Pelphrey).

2015: *Neurosurgical Focus* - Neuroimaging in Degenerative and Traumatic Encephalopathies, Editor (with Meng Law and Charles Liu).

**Research Grant Review Duties:**

2011: Reviewer for *the NIH Neurotoxicology and Alcohol [NAL] Study Section*.

2010: Reviewer for NIH ZRG1 BDCN A55R Panel (RFA-OD-10-005) “*Recovery Act Limited Competition: NIH Director’s Opportunity for Research in Five Thematic Areas (RC4)*”

2013-2014: Army Rapid Innovation Fund, *Traumatic Brain Injury Assessment and Treatment*, (TBI-AT)

2014: *Opportunities for Collaborations at the NIH Clinical Center* (U01; PAR-13-358)

2014: *NIH Mentored Quantitative Research Development Award* (K25; PA-14-048)

2015: Reviewed applications for two *NIH BRAIN* R25 RFAs: Short Courses in Computational Neuroscience (RFA-MH-15-215) and in Research Tools and Methods (RFA-MH-15-220).

2015: Reviewer for the Large Investment Grant Programme of *The Netherlands Organisation for Scientific Research* (NWO).

2015: Primary Reviewer for the *National Institute of Diabetes and Digestive and Kidney Diseases* (NIDDK) ancillary R01 application for the “LOOK AHEAD” program (ZDK1 GRB-6 (J4) 1).

2016: Reviewer for the “Lifespan Human Connectome – Baby Connectome” (U01) grant mechanism for the *NIH Blueprint for Neuroscience Research*.

2016: Reviewer for the “NIMH Research Education Programs (R25)” grant program (ZMH1 ERB-X (01) 1).

2016: Reviewer for the “NIDDK Ancillary Studies” grant program (ZDK1 GRB-9 (J1) 1).

2020: Clinical High Risk for Psychosis Research Network and Data Coordinating Center (RFA-MH-20-340; RFA-MH-20-341).

2020: 2020/10 ZNS1 SRB-H (14) R; Review of RFA NS-20-013 White Matter Lesion Etiology of Dementia in the U.S. Including in Health Disparity Populations (U19)

### **Relevant Committees and Service:**

#### University of Virginia:

2019-2020: Co-Chair (with Dr. Steven Boker), *Quantitative Psychology and Data Science Junior Faculty Selection Committee*.

2020-Present: Tenure/Tenure Track Open Rank *Data Analytics and Data Systems Engineering, Data Analytics “At Scale” Faculty Selection Committee* [Present Chair; Dr. Don Brown, Chair until 11/2020].

2020: Member, *UVA School of Data Science Building Committee*.

2020: Chair, Change-in-Series Review Committee for Dr. Heman Shakeri, *UVA School of Data Science*.

- 2020: Member, UVA School of Data Science Undergraduate Program Development Committee
- 2019-Present: Member, *UVA School of Data Science Academic Affairs Committee*.
- 2020: Member, *UVA Department of Psychology, Web Presence Committee*

University of Southern California:

- 2013-2019: *USC Mark and Mary Stevens Neuroimaging and Informatics Institute (INI), Keck School of Medicine of USC, Director, Education Committee*. [established the master of science degree program in neuroimaging and informatics (<http://niin.usc.edu>); hosting seminars, visiting faculty, and student groups]
- 2013-2019: Member of the *USC Neuroscience Graduate Program Student Selection Committee*.
- 2014-2019: Faculty Director, *USC Neuroscience Graduate Program Annual Retreat Committee*.
- 2014-2019: Member, *USC Neuroscience Graduate Program Executive Committee*
- 2015-2019: *USC Mark and Mary Stevens Neuroimaging and Informatics Institute (INI), Keck School of Medicine of USC, Center for Image Acquisition Policy Committee*.

University of California Los Angeles:

- 2007-2008: Committee on Graduate Education, Dept of Neurology, David Geffen School of Medicine (Spenser - Chair, Gorden - staff); Committee on Resident Core Curriculum, Department of Neurology, David Geffen School of Medicine (Stern - Chair, Gorden - staff)
- 2008-2009: Committee on Graduate Education, Dept of Neurology, David Geffen School of Medicine (Mody - Chair, Gorden - staff); Information Technology, Department of Neurology, David Geffen School of Medicine (Toga - Chair, Hansin de Asis - staff)
- 2009-2013: Brain Mapping Center Seminar Series Committee (Allan Wu – Chair)
- 2009: Neuroimaging Planning Committee, UCLA School of Medicine (Cannon – Chair)
- 2010-2013: Information Technology, Dept of Neurology, David Geffen School of Medicine (Toga - Chair, Hansin de Asis - staff)
- 2010-2013: Executive Board, Staglin Center for Cognitive Neuroscience, UCLA.
- 2010-2013: *Neuroimaging Focus Area of Research (FAR) directorship* (with Susan Bookheimer), Neuroscience IDP.

Dartmouth College:

2002-2007: Dartmouth Brain Imaging Center Protocol Review Committee  
2004-2005: Dartmouth Brain Imaging Center 3T MRI Scientific Advisory Committee  
2003: Dartmouth College Bioinformatics Advisory Committee

Society for Neuroscience (Washington, DC):

2007-2010: Society for Neuroscience, Neuroinformatics Standing Committee  
2003-2004: Society for Neuroscience, Brain Informatics Group (BIG)

National Institutes of Health (Bethesda, MD):

2006: Linking Informatics of Neuroscience Communities (LINC), Neuroimaging Informatics Committee, National Institutes of Health  
2003-2008: NifTI Neuroimaging Data Formats Working Group Committee  
2005-2006: Sub-Committee on Neuroimaging, Human Brain Project, NIMH

Organization for Human Brain Mapping (HQ'd in Minnesota, MN):

2012-2013: 2013 Annual Meeting Program Committee  
2012-2015: Education Committee Chairman  
2014-2016: Annual Meeting Program Chairman  
(Hamburg, Germany; Honolulu, HI; Geneva, Switzerland)  
2017-Present: OHBM Scientific Advisory Board Member  
2020-Present: OHBM Standards Committee Chair

International Neuroinformatics Coordinating Facility (INCF; Stockholm, Sweden):

2010-2016: Data Sharing Workgroup  
2017-Present: Training and Education Committee

**Conferences, Symposia, and Workshops:**

Organizer and Chair, “Neuroscientific Data Sharing for the New Millennium”, NIMH Neuroinformatics Office Social, **Society for Neuroscience Annual Meeting**, San Diego, CA. November 13th, 2001.

Workshop Co-Director, fMRI Data Center Summer Workshop In Neuroinformatics, **Dartmouth College**, Hanover, NH July 4th-6th, 2002.

Organizer and Chair, “Human Brain Project: Recent Advancements in Computational Toolsets for Inspection and Visualization of fMRI and EEG Methods”, NIMH Neuroinformatics Office Social, **Society for Neuroscience Annual Meeting**, Orlando, FL, November 5th, 2002.

Workshop Director, fMRI Data Center Summer Workshop In Neuroinformatics, **Dartmouth College**, Hanover, NH July 7th-9th, 2003.

Workshop Director, fMRI Data Center Summer Workshop In Neuroinformatics, **Dartmouth College**, Hanover, NH, July 11th-13th, 2004.

Co-Organizer and Co-Chair, “Human Brain Project: Ontologies for Neuroscience”, NIMH Neuroinformatics Office Social, **Society for Neuroscience Annual Meeting**, New Orleans, LA, November 8th-12th, 2003.

Co-Chair “Neuropsychology, Psychiatry, and the ‘Neuroexperience’”, Seventh Annual fMRI Experience Conference and British Psychophysiological Society Annual Meeting, **Aston University**, Birmingham, England, September 12th – 16th, 2005.

Organizer, Brain Imaging Research at Dartmouth College, **Dartmouth College**, Hanover, New Hampshire, October 26th, 2006.

Presentation: **Institute for Pure and Applied Mathematics (IPAM)**, “A Role for Levels Sets in Functional Neuroimaging Data Analysis?” - Professor Stanley Oscher’s Laboratory, with Ivo Dinov: March 28th, 2007.

Chair, Capturing Experimental Design Metadata In Ways That Facilitate Data Mining (Working Group #1), “PubMed Plus: New Directions in Publishing and Data Mining” Leadership Conference, Eric P. Newman Education Center (EPNEC), Washington University Medical Center, **Washington University in St. Louis**, St. Louis, Missouri, June 18th-19th, 2007.

Co-chair, fMRI Special Interest Group, **Center for Biomedical Computing (CCB)**, LONI, UCLA (with Cornelius Hojatkashani, Russell Poldrack, and Mirella Dapretto), June 2007-Sept 2009.

Co-chair, *Special Interest Group for DTI (SIG-DTI)*, **Center for Computational Biology (CCB)**, LONI, UCLA (with Nathan Hageman and Kristi Clarke), since June 2007.

Organizer, *New Horizons in Human Brain Imaging: A Focus on the Pacific Rim*, Waikaloa, HI, April 12-15, 2009.

Co-chair, *Statistical Shape Analysis: Theory, Software, and Applications*, **ISBI 2009**, Boston, MA, June 28<sup>th</sup>-July 1st, 2009.

Organizer, *Slicer Software Training Event*, **UCLA Neuroscience Research Building**, Los Angeles, CA, November 8<sup>th</sup>, 2010.

Organizer, *New Horizons in Human Brain Imaging: A Focus on Brain Networks and Connectivity*, Turtle Bay, HI, December 1-3, 2010.

Organizer, *Big Data Analysis Using LONI Pipeline*, **UCLA Neuroscience Research Building**, Los Angeles, CA, April 17<sup>th</sup>, 2012.

Organizer, *New Horizons in Human Brain Imaging: A Focus on Genetic Neuroimaging in Aging and Age-Related Disease*, Turtle Bay, HI, March 4-6, 2013.

Chair – “Genes and Brain Networks Session”, 11th Annual CNS Basic And Translational Science Symposium System Biological Approaches To Gut-Brain Interactions In Health and Disease – From Molecular To Social Networks, **University of California Los Angeles**, April 26th, 2013.

Organizer, *New Horizons in Human Brain Imaging: A Focus on the Neuroimaging of Brain Development*, Turtle Bay, HI, March 5-7, 2014.

Organizer, *Structural and diffusion brain imaging for medical image analysis in 3D Slicer: A workshop and tutorial on 3D neuroimaging and visualization*, Institute of Neuroimaging and Informatics, **Keck School of Medicine of USC**, University of Southern California, Los Angeles, CA, February 14<sup>th</sup>, 2014.

Organizer, *LONI Pipeline Demo Day – Big Data Analysis using the LONI Pipeline*, **Rosen Family Campus Theater, University of Southern California**, Los Angeles, CA, October 2<sup>nd</sup>, 2015.

Co-Organizer, *California Big Data Biomedical Workshop*, **J.W. Marriott Hotel and Resort**, Palm Desert, CA, October 9-10<sup>th</sup>, 2015.

Workshop Co-Organizer, *LONI Pipeline Demo Day – Big Data Analysis using the LONI Pipeline*, **Soto Street Building, University of Southern California**, Los Angeles, CA, February 19<sup>th</sup>, 2016.

Director/Organizer, NIH-NSF *Data Science Innovation Labs* Program:

2016 – Theme of Mobile Health, Lake Arrowhead, CA, June 20-24.

2017 – Theme of the Human Microbiome, Wylie Inn and Conference Center, June 19-23.

2018 – The Mathematics of Single Cell Dynamics, Riverhouse Inn, Bend, Oregon, June 24-29.

2019 – Data Science Challenges in Rural Health and Environmental Exposures, North Carolina, June 17-21.

2020\* – Data Integration in the Brain Sciences, Charlottesville, Virginia, July 19<sup>th</sup> -24<sup>th</sup>.  
*Postponed to take place beginning in late 2020 and completing in 2021 due to COVID-19.*

Co-Organizer, *Imagining the New University: Rethinking scholarship, education, and institutions for an open, networked era*, March 8 - March 9, 2017, **Big 10 Conference Center**, Rosemont, IL.

Co-Organizer, *BD2K Guide to the Fundamentals of Data Science Series*, Friday mornings beginning September 9, 2016. [This online webinar series provides essential training suitable for individuals at an introductory “101” overview level. All video presentations from the seminar series are streamed for live viewing, recorded, and posted online for future viewing and reference, as well as indexed as part of the Educational Resource Discovery Index (ERuDIte) archive. The webinar series is a collaboration between the TCC, the NIH Office of the Associate Director for Data Science, and BD2K Centers Coordination Center (BD2KCCC)]. Series concluded in 2018.

Symposium Co-Organizer: “Brodmann (1868-1918): A pioneer of human brain mapping and his impact on present and future concepts” (with Karl Zilles, Research Centre Jülich, Jülich, Germany), *24<sup>th</sup> Annual Organization for Human Brain Mapping Annual Meeting*, Singapore, June 18<sup>th</sup>, 2018 [session specifically highlighted during the closing remarks from the past-president].

Symposium Organizer: “Neuroimaging Assessment and Outcome Prediction in Traumatic Brain Injury”, *International Organization of Psychophysiology*, **IMT School of Advanced Study**, Lucca, Italy, September 6<sup>th</sup>, 2018.

Symposium Organizer: Neuroplasticity and Brain Repair Retreat “Metaplasticity and Megaplasticity: Changing the Brain from Synapse to Community”, UCLA Lake Arrowhead Conference Center, Lake Arrowhead, CA, December 6 – 8, 2019.

#### HONORS AND SPECIAL AWARDS:

2020: Named to the inaugural class of *Fellows of the Organization for Human Brain Mapping (OHBM)* [<https://tinyurl.com/y97e2fls>]; The OHBM Fellow distinction honors outstanding Active members who have demonstrated academic

- and intellectual leadership in the disciplines represented by the Society over an extended period of time. No more than 1% of current active OHBM members will be selected in any given year to receive the Fellow of OHBM status. See <https://tinyurl.com/t7cgnla>. Selected fellows are permitted to include the initials “FOHBM” among their credentials as an honored member of one of the community’s most eminent societies for human brain mapping.]
- 2013: Best Paper Award - *Medical Image Computing and Computer Assisted Intervention Society* (MICCAI), with Bo Wang (Utah), Marcel Prastawa (Utah), Andrei Irimia (USC), Paul Vespa (UCLA), and Guido Gerig (Utah)
- 2013: Runner-Up, *Best Video of the Brain*, 2013 Brain-Art Competition, The Neuro Bureau (<https://www.neurobureau.org/galleries/brain-art-competition-2013/#video>),  
*Organization for Human Brain Mapping Annual Meeting*, Seattle, WA.
- 2012: Certificate of Distinction in Education, Department of Neurology, UCLA
- 2012: Winner, *Best Representation of the Human Connectome*, 2012 Brain-Art Competition, The Neuro Bureau (<https://www.neurobureau.org/galleries/brain-art-competition-2012>),  
*Organization for Human Brain Mapping Annual Meeting*, Beijing, China.
- 2011: *National Alliance for Medical Image Computing (NA-MIC)* Summer Tutorial Contest Winner – “Automatic Segmentation of Traumatic Brain Injury MRI volumes using Atlas Based Classification and 3D Slicer” (with Andrei Irimia and Micah Chambers)
- 2009: Frontiers Associate Editor Award, Frontiers Research Foundation
- 2004: State of New Hampshire Governor’s Commendation
- 1992-1997: NIH Intramural Training Award Research Fellowship
- 1992: NATO Collaborative Research Award (CRG 910941)
- 1990-1991: Tragaskis Bequest (U.K.)
- 1990-1992: Overseas Research Award (U.K.), renewed twice
- 1989: National Dean's List
- 1988-1989: Psi Chi Honors Society

#### RESEARCH GRANTS AND FELLOWSHIPS RECEIVED:

Grant writing has long been a particular emphasis, involving focused research-oriented NIH grants, project-based NIH programs, and private foundation awards. This includes several R01’s, an NIH ARRA RC1 “Challenge Grant”, Phase I and II STTRs, and other neuroscience-focused research awards. Additionally, I have taken a principle role in the writing of major, multi-site, multi-investigator proposals under U54, U24, U01, P41, and P20 class NIH mechanisms. These include large-scale, “team-science” grants for the Human Connectome Project (HCP; U54/U01), the LONI Resource (P41), the fMRI Data Center (P20), Big Data to Knowledge (BD2K; U54, U24, and numerous grant supplements), and academic-corporate partnerships on computational neuroimaging methods for the analysis of traumatic brain injury (STTR Phases I/II). In each of these, I have authored or made major contributions to the applications, provided major intellectual direction, supervised the creation of graphical content, web-based supporting information, budget creation/justification, resource descriptions, etc. Moreover, I have authored and co-authored numerous published papers on work conducted under these efforts, presented work at conferences, etc. I also have had much success in NIH R13 meeting awards to support the *New Horizons in Human Brain Imaging* meeting series and for providing student travel fellowships for the *Organization for Human Brain Mapping (OHBM)* 2015 annual meeting. Lastly, I have been awarded several NIH grant award supplements along with National Science Foundation (NSF)



support to conduct the *Data Science Innovation Lab* series (2016-2019). This activity, in particular, is supported (as of 2020) by an NIH R25 grant. In what follows, I list active, submitted, in-preparation, and completed grants of which I have served as PI, co-investigator, or otherwise have made important contributions:

ACTIVE:

2017-2022: NICHD R01 Autism Centers of Excellence: Networks - 2R01HD073983-01

Role: **Site PI** (Data Coordinating Center; Kevin Pelphrey, UVA, Project PI)

Title: Multimodal Developmental Neurogenetics of Females with ASD

Total: \$300,000/year for 5 years

Comment: Under this project, I am the PI of the data coordinating center responsible for the receipt, quality assurance, archiving, and informatics of all autism neuroimaging and electrophysiological data gathered at the project's participating centers (University of Virginia, Children's National Hospital, Yale, Harvard, University of Washington, UCLA, and USC).

2018-2023: NICHD R01 - 1 R01 MH117982-01

Role: **Site PI** (Data Coordinating Center; Mirella Dapretto, UCLA, project PI)

Total: \$837,175/year for 5 years

Comment: The proposed research will take a critical first step toward parsing the significant heterogeneity observed in Autism Spectrum Disorder (ASD) by combining state-of-the-art imaging and data-analytic methods to examine brain function, novel approaches to account for genetic susceptibility, and an unprecedentedly deep phenotypic characterization of a large, gender-balanced sample of youth with ASD. Capitalizing on the availability of EEG data previously collected on this sample as part of a different project, we will also explore whether any ASD subgroups identified by combining imaging, genetic, and phenotypic measures may be linked to distinct EEG profiles in order to develop easily deployable biomarkers of ASD that are predictive of meaningful differences in symptomatology and developmental outcomes. A better understanding of the neural mechanisms underlying heterogeneity in ASD will ultimately contribute to the development of more personalized and efficacious interventions.

2020-2025: NIH Innovative Programs to Enhance Research Training (IPERT)

Title: Biomedical Data Science Innovation Labs: An Intensive Research Project Development Program

Role: **PI**

Amount: \$824,681

Comment: To encourage community and career path development, we will develop a series of unique Biomedical Data Science Innovation Lab workshops based on large-scale biomedical data to address salient challenges in health and disease. This event will follow a rigorous, interactive, mentored, and facilitated format over a 5-day residential program where team projects will be developed for NIH/NSF grant submissions. Finally, we will rigorously assess and characterize program effectiveness against emerging metrics from the Science of Team Science community.

SUBMITTED:

2021-2022: NIH High-End Instrumentation (HEI) Grant

Title: High-Performance Neuroscience Computational Platform

Role: **PI**

Amount: \$2million for one year to purchase equipment only

Comment: To support neuroscience discovery at scale this project will acquire and deploy a shared, neuroscience-dedicated, high-performance computing instrument. The proposed high-end instrumentation will form the core of UVA's institutional goals for advancing research excellence in brain and data sciences and will greatly enhance a diverse array of science on the brain in health and disease.

2021-2026: NIA Alzheimer's Disease Research Center (ADRC) P30 Award

Title:

Role: **Research Education Component (REC) PI** (Carol Manning, Ph.D. and Jaideep Kapur, M.D., PhD, Overall MPIs)

Amount: \$1.4million/year

Comment: The Virginia Alzheimer's Disease Center (VADC) will train, cultivate, and support graduate students, postdoctoral fellows, junior faculty, and research associates at the University of Virginia by leveraging the interdisciplinary and collaborative nature of UVA faculty in the VADC and related programs. These include foundational and hands-on activities presented virtually and in-person through innovative project and grant development workshops.

#### IN PREPARATION:

2021-2026: Intellectual Disabilities and Disorders Research Center (IDDRC) Grant

Title: Virginia Intellectual and Developmental Disabilities Research Center (V-IDDRC)

Role: **Data Science Core PI** (Kevin Pelphrey, Ph.D. and Richard Stevenson, M.D, Overall MPIs)

Amount: \$1.3million/year

Comment: The Virginia Intellectual and Developmental Disabilities Research Center's (V-IDDRC) Microbiome & Metabolomics Core (MMC) will provide the capability to profile the microbiome, metabolome, and immunome to test hypotheses of mechanisms by which early life inflammation affects intellectual and developmental disabilities.

2021-2026: NIH Bioengineering Research Grants (BRG; PAR-18-206) (R01)

Title: Morphological and Electrical Brain Atlases for Traumatic Brain Injury

Role: **MPI** (with Stephen Aylward, Kitware, and Marc Niethammer, UNC)

Amount: \$350,000 total/year

Comment: In the US, about 1.7 million people are victims of traumatic brain injury (TBI) annually, with many requiring surgical intervention. Initial assessment and treatment of TBI have appropriately become major US healthcare initiatives; however, the follow-on effects of TBI can be particularly challenging for the patient and for healthcare systems, and those follow-on effects deserve further attention. For example, post-traumatic epilepsy (PTE) develops in 30-50% of TBI patients. Herein we propose to refine and test our tools that perform the combined analysis of neuro-images and brain activity recording (EEGs) for assessing and planning the treatment of PTE.

2021-2026: Computational Approaches to Curation at Scale for Biomedical Research Assets (R01)

Title: Advancing large-scale curation of biomedical data science training resources

Role: **PI**

Amount: \$500,000 total/year

Comment: Under this unique R01 mechanism to support the efficient scaling-up the curation of biomedical resource archives, we will undertake the following: i) Facilitate new and improved automated discovery, access, organization, and citation of educational resources through the streamlining of tools for populating ERuDIte; ii) Develop evidence-based biomedical data science curricula from ERuDIte as well as personalize the discovery of training resources; iii) Leverage international partnerships to extend the reach of ERuDIte, its contents and its abilities; and iv)

Facilitate outreach and engage with the data science training community to identify and contribute career path development through the use of ERuDIte.

2021-2026: NIH Parent R01

Title: Structural and Connectivity Mapping of the Claustrum

Role: **PI**

Amount: \$500,000 total/year

Comment: The human claustrum is a poorly understood brain structure which forms widespread reciprocal connections with the cerebral cortex. Studies have associated abnormalities in the size and function the claustrum with neuropsychiatric symptoms in diseases like Wilson's disease, Alzheimer's disease, and epilepsy. This project will optimize MRI protocols for in vivo human as well as *ex vivo* mouse imaging of the claustrum, develop novel algorithms for the reliable characterization of its anatomy, and detailing its neural connectivity.

COMPLETED:

2015-2019: NIH U24 - 1U24ES026465-01

Title: Big Data U: Empowering Modern Biomedicine via Personalized Training

Role: **PI**

Amount: \$1.4 million/year direct

Comment: This is a unique team effort based at USC involving investigators from the Stevens Institute, the Information Sciences Institute (ISI), and the School of Cinematic Arts to develop a novel training paradigm for Big Data education.

2016-2019: NIH U24 - 1U24ES026465-01 – Supplement

Title: Innovation Lab Scoping Workshops

Role: **PI**

Amount: \$45,000/year direct

Comment: To host a planning and preparatory meeting in advance of a larger Innovation Lab workshop.

2016-2019: NIH U24 - 1U24ES026465-01 – Supplement

Title: Innovation Labs: An Intensive Big Data Biomedicine Proposal Development Program

Role: **PI**

Amount: \$144,956 /year direct

Comment: To organize and host an Innovation Lab workshop focused on topics relevant to the use of “Big Data” in biomedicine. A different theme is identified each year and young faculty apply to attend this week-long event. Carefully selected senior faculty mentors guide teams in the development of novel research projects in the chosen topic domain.

2016-2019: NIH U24 - 1U24ES026465-01 – Supplement

Title: BD2K TCC International Interactions and Frameworks for “Big Data” Training and Standards

Role: **PI**

Amount: \$100,000 /year direct

Comment: A unique international meeting is proposed for bringing together experts from science training consortia across three continents (North America, Europe, and Africa) to discuss and plan for enhanced collaboration, the sharing of knowledge, and the development of further joint activities.

2018: National Science Foundation

Title: Innovation Lab Travel Stipend Support

Role: **PI**

Amount: \$40,000 total costs

Comment: To support travel stipends for the 2018 Data Science Innovations Lab event at the Riverhouse Inn and Conference Center in Bend, Oregon.

2014-2017: NIH - 1U54EB020406-01

Title: Big Data for Discovery Science (BDDS)

Role: **Co-Investigator** (PI: Toga, A.W.)

Total Award Amount: \$2,095,250/year

Comment: The overarching goal of the BDDS Center project is to ease the management and organization of biomedical big data and accelerate data-driven discovery by eliminating or reducing three distinct barriers to effective discovery science: complexity with respect to physical distribution and heterogeneity, scalability of analysis, and ease of access and interaction with big-data and associated analytic methods. These issues are fundamental to discovery science and transcend the specifics of the research question as we span levels of scale from cells to organs to systems, and integrate data from imaging, genetics, "omics," and phenotypes.

2017-2019/(2022): NINDS R01

Title: Effects of blood-brain barrier disruption upon white matter connectivity subsequent to traumatic brain injury in older adults

Role: **Co-Investigator** (Andrei Irimia, PI)

Amount: \$250,000 annually

Comment: To assess the effects of traumatic brain injury on blood brain barrier integrity in older adults and the prospects for recovery from injury.

1998-2019/(2023): NIH - 2P41EB015922-21

Title: Laboratory of Neuro Imaging Resource (LONIR) – Training and Dissemination

Role: **Investigator** (Arthur W. Toga, PI)

Amount: \$1,717,236/yr total costs (\$190,621 for training and dissemination)

Comment: Under the direction of Dr. Arthur Toga, Director of the USC Mark and Mary Stevens Neuroimaging and Informatics Institute, this effort seeks to generate a comprehensive suite of technologies include algorithmic and computational methods for image management, processing, data analysis and visualization. The technologies are ideally suited to enable holistic studies of the interactions between different imaging data modalities, phenotypic population characteristics, and physiological brain connectivity. The intention of training and dissemination under LONIR is to provide a complete battery of the materials needed to educate investigators both on the theory and philosophy of image analysis, computational anatomy and multidimensional modeling, as well as the specific applications of software developed as part of the LONI P41 Resource.

2012-2017: NIH/NIBIB - 7P41EB015922-17

Role: **Co-Investigator** (PI: Toga, A.W.)

Title: Laboratory of Neuro Imaging Resource (LONIR)

Total Award Amount: \$1,187,436/year

Comment: Under this recently renewed award I am responsible for the majority of education and outreach activities involving workshops held at UCLA and worldwide surrounding informatics and image data processing software developed under this resource.

2012-2017: NICHD R01 Autism Centers of Excellence: Networks - 1R01HD073983-01

Role: **Site PI** (Data Coordinating Center; Kevin Pelphrey, GWU, project PI)

Title: Multimodal Developmental Neurogenetics of Females with ASD

Total: \$300,000/year for 5 years

Comment: Under this project, I am the PI of the data coordinating center responsible for the receipt, quality assurance, archiving, and informatics of all autism neuroimaging and electrophysiological data gathered at the project's participating centers (Yale, Harvard, University of Washington, UCLA, and USC).

2017: National Science Foundation

Title: Innovation Lab Travel Stipend Support

Role: **PI**

Amount: \$40,000 total costs

Comment: To support travel stipends for the 2017 Data Science Innovations Lab event at the Wylie Inn and Conference Center near Boston, MA.

2015-2018: NIH Phase II STTR

Title: Multimodality Image-Based Assessment System for Traumatic Brain Injury

Role: **PI** (with Stephen Aylward of Kitware, Inc.)

Amount: \$200,000/year

Comment: In the US, approximately 1.7 million individuals are victims of traumatic brain injury (TBI) annually, with many requiring surgical intervention or long-term care. Initial assessment and treatment of TBI have appropriately become major US healthcare initiatives, yet the effects of TBI can be particularly challenging for the patient and for healthcare systems. Neuroimaging data and processing approaches, however, are presently not properly employed to address this challenge. We propose to refine, apply, and test tools initiated under our Phase I STTR to perform the combined, efficient analysis of multimodal neuroimaging data sets for use in assessing the extent of brain injury, its change over time, and for optimization of treatment planning.

2017: National Science Foundation

Title: Innovation Lab Travel Stipend Support

Role: **PI**

Amount: \$40,000 total costs

Comment: To support travel stipends for the 2017 Data Science Innovations Lab event at the Wiley Inn and Conference Center, Boston, MA.

2012-2017: NICHD R01 Autism Centers of Excellence: Networks - 1R01HD073983-01

Role: **Site PI** (Data Coordinating Center; Kevin Pelphrey, GWU, project PI)

Title: Multimodal Developmental Neurogenetics of Females with ASD

Total: \$300,000/year for 5 years

Comment: Under this project, I am the PI of the data coordinating center responsible for the receipt, quality assurance, archiving, and informatics of all autism neuroimaging and electrophysiological data gathered at the project's participating centers (Yale, Harvard, University of Washington, UCLA, and USC).

2016: National Science Foundation

Title: Innovation Lab Travel Stipend Support

Role: **PI**

Amount: \$40,000 total costs

Comment: To support travel stipends for the 2016 Data Science Innovations Lab event at Lake Arrowhead, CA.

2015: NIH/NINDS/NIBIB - 1 R13 NS092117-01

Role: **PI**

Title: Student Investigator Travel Awards for OHBM 2015

Total Award Amount: \$13,000/year

Comment: This provides NIH funding to support trainee travel awards to the 2015 annual meeting of the Organization for Human Brain Mapping (OHBM) in Honolulu, Hawaii. The OHBM is the primary international meeting concerned with the organization of the human brain and its investigation with MRI-based imaging approaches. These awards will assist with travel expenses for deserving US-based postdoctoral fellows, medical students and graduate students and those from developing countries with the highest ranking scientific abstracts.

2014-2015: U01DK082370

Role: **Site PI** (Emeran Mayer, project PI)

Title: MAPP Research Network Second Phase

Total: \$39,761

Comment: This project as part of the MAPP Research Network will provide new insights into causes progression, and risk factors for Urological Chronic Pelvic Pain. The proposed studies expand on the insights gained from successful initial MAPP funding cycle and will address symptom patterns, patient subtypes and various biomarkers, including brain signatures in addition to identification of factors associated with and predictive of symptom change. Here, I supervise the multimodal analysis of brain imaging data and correlate brain biomarkers with clinical metrics of chronic pain.

2009-2013: NIMH R21 - 1R21MH086104

Role: **Co-Investigator** (PI: Altshuler, L)

Title: Functional Connectivity and Anatomic Connectivity in Bipolar Disorder

Total: \$100,000/yr for 3 years

Comment: We developed integrated approaches to the joint analysis of functional as well as structural connectivity on data obtained in patients with bipolar disorder and age-and gender-matched healthy control subjects.

2013-2014: NIMH

Role: **PI**

Title: LONI Pipeline and NITRC-CE Joint Testbed Project to Enhance and Expedite Neuroimage Data Processing from the National Database for Autism Research (NDAR)

Total: \$100,000

Comment: This was a joint project between our group, investigators at the University of Massachusetts, and the NIMH to integration computational, data processing, and primary neuroimaging data in autism.

2010-2014: NIH/ NIBIB/NINDS 2U54EB005149-06

Title: Traumatic Brain Injury (Core 2D: Driving Biological Project)

Role: **Site PI** (U54 Project PI: Ron Kikinis, M.D., Brigham and Women's Hospital, Harvard School of Medicine)

Total Award Amount: \$247,492 per year

Comment: This project worked to develop sophisticated multi-modal neuroimage data processing methodologies for patient-specific consideration of traumatic brain injury (TBI). The methods and their applications have appeared in several high-profile publications.

2013: IBM, Inc.

Role: **PI**

Title: “New Horizons in Human Brain Imaging: A Focus on Neuroimaging and Genetics in Aging and Age-Related Disease”

Amount: \$15,000

2013: International Neuroinformatics Coordinating Facility

Role: **PI**

Title: “New Horizons in Human Brain Imaging: A Focus on Neuroimaging and Genetics in Aging and Age-Related Disease”

Amount: \$10,000

2013: *CANARIE*

Role: **PI**

Title: “New Horizons in Human Brain Imaging: A Focus on Neuroimaging and Genetics in Aging and Age-Related Disease”

Amount: \$10,000

2013: *Institute for Collaborative Biotechnology*

Role: **PI** (with Grafton, S.T.)

Title: “New Horizons in Human Brain Imaging: A Focus on Neuroimaging and Genetics in Aging and Age-Related Disease”

Amount: \$20,000

Comment: Funds to support participant travel costs.

2009-2012: NIMH ARRA RC1 Challenge Grant Program

Role: **PI**

Title: Informatics Meta-Spaces for the Exploration of Human Neuroanatomy

Total Award Amount: ~\$500,000 direct per year

Comment: The NIH priority score for this proposal was ranked in the 1<sup>st</sup> percentile. This project is developing a Google-Earth like interface for the interactive examination of multiple brain imaging data sets drawn from large-scale neuroimaging archives. It has generated several peer-reviewed research articles.

2010-2011: *Hewlett-Packard*

Role: **PI**

Title: “New Horizons in Human Brain Imaging: A Focus on Brain Networks and Connectivity”

Amount: \$10,000

Comment: Proposal evaluated for its ability to link scientists with potential industry partners in pursuing research on brain connectivity using large-scale computation.

2010-2011: *Isilon, Inc.*

Role: **PI**

Title: “New Horizons in Human Brain Imaging: A Focus on Brain Networks and Connectivity”

Amount: \$10,000

Comment: Isilon recognized the need for high-end storage in neuroimaging and selected our proposal as an example of big data storage needs in the biomedical sciences.

2010-2011: *CANARIE*

Role: **PI**

Title: “New Horizons in Human Brain Imaging: A Focus on Brain Networks and Connectivity”

Amount: \$10,000

Comment: Resulting from a partnership between the Canadian C-Brain Project and LONI.

2007-2009: *University of California Pacific Rim Institute*

Role: **PI**

Title: “New Horizons in Human Brain Imaging: A Focus on the Pacific Rim”

Amount: \$3000

Comment: The UC Pacific Rim Institute evaluates funding proposals that seek to seed interactions between UC campuses and institutions based around the Pacific. Meeting proposals are critically reviewed by a panel of faculty from around the UC.

2007-2009: *International Brain Research Organization (IBRO)*

Role: **PI**

Title: “New Horizons in Human Brain Imaging: A Focus on the Pacific Rim”

Amount: €4000

Comment: IBRO provides support for international meetings and conferences through critical review of proposals from submitters around the world. They were particularly excited about our proposal for this meeting of Pacific Rim based neuroimaging researchers.

2008-2009: *Sun Microsystems*

Role: **PI**

Title: “New Horizons in Human Brain Imaging: A Focus on the Pacific Rim”

Amount: \$10,000

Comment: High performance computing is now becoming the standard expectation for multimodal imaging and Sun contributed funds to support this unique meeting.

2007-2009: *CSIRO (Australia)*

Role: **PI**

Title: “New Horizons in Human Brain Imaging: A Focus on the Pacific Rim”

Amount: \$3000

Comment: The CSIRO is the Australian equivalent of the NSF in the US and provides research and conference support for collaborative work involving investigators based in Australia. They evaluated our proposal for support as one of “leading example promoting international coordination and collaboration”

2008-2009: *Institute for Collaborative Biotechnology*

Role: **PI** (with Grafton, S.T. and Miller, M.B., UCSB)

Title: “New Horizons in Human Brain Imaging: A Focus on the Pacific Rim”

Amount: \$20,000

Comment: The ICB is supported by funding from the US Army to examine individual differences in human brain function that relate to basic cognitive functions as well as military applications for determining battlefield readiness. Funding proposals are evaluated by an international panel of reviewers.

2010-2011: NINDS/NIDA/NIMH R13 - International Planning Visits and Workshops

Role: **PI** (Co-Investigators: Bandettini, P., Strother, S., Cheng, K., Egan, G., Stenger, A., Evans, A., Grafton, S.T., Miller, M.B.)

Title: “New Horizons in Human Brain Imaging: Modeling Brain Connectivity”

Amount: \$30,000 per year

Comment: Provided the majority of support for our second New Horizons meeting on brain networks and connectivity.

2004-2009: NIH/NIMH - 5 R01 MH71940



Role: **Co-Investigator** (PI: Toga, A.W.)

Title: "Collaborative Brain Mapping: Tools for Sharing"

Total Award Amount: \$2,442,113

Comment: A project to develop tools for human brain atlas, data sharing, and visualization of neuroimaging results.

2007-2008: NIMH/NINDS/NIBIB R13 - International Planning Visits and Workshops

Role: **PI**

Title: "New Horizons in Human Brain Imaging: A Focus on the Pacific Rim"

Amount: \$15,000 per year

Status: Award completed Aug 2009

Comment: With the support of this award I was able to host the inaugural New Horizons meeting on the Big Island of Hawaii, involving 30 speakers and 40 attendees.

2005-2007: NIMH Human Brain Project (HBP) P20 (Dartmouth, UC Berkeley, Rotman Institute), P20 MH072580-01

Role: **PI** (with Michael Gazzaniga)

Title: "fMRI Research via Database Mining, Management, and Visualization"

Amount: \$909,123 costs per year

Comment: This P20 project provided support for the fMRI Data Center project to gather and archive complete neuroimaging data sets from peer-reviewed cognitive neuroimaging investigations using fMRI.

2005: Neuroscience Center at Dartmouth Grant

Role: **Co-Investigator** with Jeffrey S. Taube, Ph.D. and Jay C. Buckey, M.D.

Title: "Neural Substrates for the Perception of Self-Motion and Motion Sickness"

Amount: \$12,000 for one year

Comment: A small project to conduct fMRI in healthy subjects subjected to visual motion in which they experienced mild motion sickness.

2003-2008: NINDS (RO1-NS33504-10)

Role: **Co-Investigator** (Scott T. Grafton M.D., Dartmouth, PI)

Title: "Functional Substrates of Long-Term Motor Learning"

Amount: \$250,000 per year

Comment: This was a project to computationally model continuous human motor function during pursuit tracking during fMRI image acquisition.

2003-2008: NINDS (PO1 – NS44393)

Role: **Co-Investigator** (with Scott Grafton, M.D.; James Houk Ph.D., Northwestern Univ., Program Project PI)

Title: "Integration of Motor Programs Over Time - Project 1. Motor Program Integration in Humans" (Scott Grafton M.D., Dartmouth, Sub-Project PI)

Amount: \$250,000 per year

Comment: A project seeking to examine the notion of 'internal models of motor control' in humans performing continuous tasks of motor performance.

2001-2004: NSF (01-071) Infrastructure for Cognitive Science

Role: **Co-Investigator** (as of 2003; Michael S. Gazzaniga, Ph.D., Dartmouth, PI)

Title: "The fMRI Data Center"

Amount: Five year program - \$1 million direct costs for one year

Comment: This project provided the initial support for the fMRI Data Center project to gather and archive complete neuroimaging data sets from peer-reviewed cognitive neuroimaging investigations using fMRI.

2001-2002: National Science Foundation (01-41)

Role: **PI**

Title: "A Pilot Project to Investigate Continuous Performance fMRI in Normal Humans"

Amount: \$49,967 total costs per year

Comment: A project seeking to develop and examine the continuous performance of tasks of motor control.

## LECTURES AND PRESENTATIONS:

### Invited Lectures:

The Department of Psychology, City of London Polytechnic, London, England, May 15th, 1991

The Department of Speech Sciences, University College London, London, England, December 5th, 1991

VA Medical Center, Minneapolis, MN, January 8th, 1997

Department of Radiology, University of Washington Medical Center, Seattle, WA, January 13th, 1997

National Institutes of Drug Abuse (NIDA), Johns Hopkins University Bayview Campus, Baltimore, MD, May 29th, 1997

Georgetown Institute for Cognitive and Computational Sciences, Georgetown University, Washington D.C., September 26th, 1997

Department of Neuropsychiatry, Johns Hopkins University, Baltimore, MD, November 11th, 1997

The Neurosciences Institute, La Jolla, CA, June 29th, 1999

Neural Information Processing Systems, Rumba Two-Day Workshop, Whistler, B.C., Canada, December 6th, 2001.

2002 Biological Psychiatry Annual Meeting, Philadelphia, Pennsylvania, May 17th, 2002

fMRI Experience IV, National Institutes of Health, Bethesda, Maryland May 13th-14th, 2002

CODATA 18th International Conference, Montreal, Quebec, Canada, September 30th, 2002.

Neural Information Processing Systems, Rumba Two-Day Workshop, Whistler, B.C., Canada, December 12th -14th, 2002.

Trans-NIH (NICHD, NIDA, NIMH, & NINDS) Conference on Pediatric Functional Neuroimaging, Bethesda, MD, May 24th-26th, 2004.

Center for the Study of Learning, Georgetown University, Washington D.C., June 24th, 2004

Human Brain Project Annual Meeting, National Institutes of Health, Natcher Center, April 25th, 2005.

fMRI Experience VII, Aston University, Birmingham, England, September 14th, 2005

Boston Area Dartmouth Alumni Association, Boston Museum of Science, April 8th, 2006.

Databasing the Brain Workshop - Oslo, Norway, June 25 – 27, 2006

Advanced Neuroimaging Summer School (Russell A. Poldrack & Mark S. Cohen, Directors), UCLA Faculty Center (Hacienda Room), August 13-24, 2007.

1st INCF Workshop on Neuroimaging Database Integration – Karolinska Institute, Stockholm, Sweden, August 29-30, 2007.

Department of Radiology Weekly Seminar Series, University of Washington, Seattle, WA, September 24th, 2007.

New Directions in Data Mining: Synergistic Enhancements of Online Journals and Databases Panel Discussion, Society of Neuroscience Annual Meeting, November 6th, 2007, San Diego, CA.

1st INCF Workshop on Neuroimaging Database Sustainability – Karolinska Institute, Stockholm, Sweden, December 13th -14th, 2007.

INCF Autumn School on Methods in Neuroinformatics, “Imaging the Brain at Rest”, Royal Institute of Technology, Stockholm, September 10-11, 2008.

INCF Autumn School on Methods in Neuroinformatics, “Scientific Workflow Design and Optimization”, University of West Bohemia, Pilsn, Czech Republic, September 5-8, 2009.

Advanced Neuroimaging Summer School (Mark S. Cohen, Director), UCLA Faculty Center (Hacienda Room), July 16th, 2010.

Colloquium Speaker, Department of Psychology, Stanford University, October 20<sup>th</sup>, 2010.

Colloquium Speaker, Department of Radiology, University of Washington, June 13-14<sup>th</sup>, 2011.

Invited Speaker, *2nd Annual Traumatic Brain Injury Conference*, Washington, DC, March 6-7<sup>th</sup>, 2012.

Invited Speaker, *Structure and Function Connectivities in Neurodegenerative Diseases: A Biotechnology National Research Resource*, University of California San Francisco, CA, June 2, 2012.

Invited Speaker, “The Analysis of Large Data Sets”, *The Use and Federation of Large Data Sets in Ontario*, The Ontario Brain Science Institute, Toronto, ON, Canada, August 22-23, 2012.

Invited Speaker, “Measuring and Modeling Alterations in Structural Connectivity in Brain Trauma”, *The 13<sup>th</sup> Annual University of California Neurotrauma Symposium*, Sonoma, CA September 9-11, 2012.

Invited Speaker, “Mapping Connectivity Damage in a Famous Case of TBI”, *Department of Anatomical Sciences and Neurobiology*, University of Louisville, Louisville, Kentucky, January 24<sup>th</sup>, 2013.

Invited Speaker, “Modeling the Network Connectivity in a Noted Neurological Case”, *The Feinstein Institute for Medical Research*, North Shore Jewish Hospital, Long Island, New York, March 20<sup>th</sup>, 2013.

Invited Speaker, “Large Scale Brain Networks”, *11th Annual CNS Basic And Translational Science Symposium System Biological Approaches To Gut-Brain Interactions in Health And Disease – From Molecular To Social Networks*, University of California Los Angeles, April 26<sup>th</sup>, 2013.

Invited Speaker, “Multimodal Brain Atlasing in the Connectomics Era”, *International Neuroinformatics Coordinating Facility (INCF) Human Atlasing Workshop*, Seattle, WA, June 14-15, 2013.

Invited Faculty, “International Neuroinformatics Coordinating Facility (INCF) Achieving Excellence in Neuroinformatics in Latin America”, *Summer Course, Cuban Neuroscience Center*, Havana, Cuba, September 16-21, 2013.

Invited Symposium Speaker: “Neuroimaging Data Processing Challenges in the Context of Traumatic Brain Injury (TBI)”, *USC Department of Biomedical Engineering (BME)*, October 14<sup>th</sup>, 2013.

Invited Grand Rounds Speaker: “Multimodal Neuroimaging in TBI: Rationale, Analysis, Modeling, and Implications for Clinical Outcome”, *Keck School of Medicine of USC, Department of Neurology*, October 29<sup>th</sup>, 2013.

Invited Symposium Speaker: “Neuroimaging Data Processing Challenges in the Context of Traumatic Brain Injury (TBI)”, *USC Ming Hsieh Department of Electrical Engineering*, November 4<sup>th</sup>, 2013.

Invited Special Symposium Speaker: “Traumatic Brain Injury (TBI): Exploration with Multimodal Neuroimaging, Analysis, and Modeling”, *Lewis Center for Neuroimaging*, University of Oregon, December 4<sup>th</sup>, 2013.

Speaker: “NA-MIC TBI DBP: Three Years of Progress in Modeling and Mapping Neurotrauma”, *Marriot City Center*, Salt Lake City, UT, January 9<sup>th</sup>, 2014.

USC Department of Neurology/INI Research Retreat Presenter: “Modeling and Mapping of Neurotrauma”, *Keck School of Medicine of USC*, February 8<sup>th</sup>, 2014.

Invited Grand Rounds Speaker: “Modern Neuroimaging Approaches for the Examination of Neurotrauma: Implications for Cognitive and Psychiatric Assessment”, *Keck School of Medicine of USC, Department of Psychiatry*, February 11<sup>th</sup>, 2014.

Faculty Speaker: “Accessing and Processing ASD Neuroimaging Data from LONI, NITRC, and NDAR Resources”, *New Horizons in Human Brain Imaging*, Oahu, Hawaii, March 7<sup>th</sup>, 2014.

Invited Speaker: “High-Throughput MRI Image Processing using the LONI Pipeline: History, Usage, and Applications”, *Yale University*, April 22<sup>nd</sup>, 2014.

Keynote Speaker: “Mapping of Structural and Connectomic Alteration in Traumatic Brain Injury”, *Translational and Molecular Imaging Institute, Icahn School of Medicine at Mount Sinai*, New York, New York, May 29<sup>th</sup>, 2014.

Invited Speaker: “Integrating Clinical Imaging Challenges, Connectomics, Informatics Approaches, and their Application”, *Centre for Integrative Neuroscience (MCIN), Montreal Neurological Institute, McGill University*, Montreal, Canada, September 5<sup>th</sup>, 2014.

Workshop Leader: “Professionalism and Ethics in Neuroscience”, *USC Neuroscience Graduate Program Retreat*, September 26<sup>th</sup>, 2014.

Invited Speaker: “Big Data Informatics for Brain Imaging”, *Cuban Neuroscience Center*, Havana, Cuba, October 18<sup>th</sup>, 2014.

Colloquium Speaker: “Challenges for Neuroimaging Big Data Analytics and Resources”, *MIND Research Institute*, University of New Mexico, Albuquerque, NM, March 6<sup>th</sup>, 2015.

Invited Symposium Speaker: “The Graphical Mining of Large-Scale Neuroimaging Datasets”, *University of Sao Paulo*, Sao Paulo, Brazil, March 13<sup>th</sup>, 2015.

Colloquium Speaker: “Multimodal Neuroimaging Approaches in Neurotrauma”, Department of Psychology, *University of Delaware*, Newark, Delaware, April 9<sup>th</sup>, 2015.

Symposium Speaker: “Connectome and Genomics: Omics and Big Data For Neuroradiology, Session I - Omics and Big Data for Brain Development and Neurodegenerative Disorders”. *American Society of NeuroRadiology (ASNR) Annual Meeting*, Chicago, Illinois, April 28<sup>th</sup>, 2015.

Colloquium Speaker: “Big Data, the Brain, and You”, Biomedical and Health Information Sciences (BHIS), *University of Illinois at Chicago*, Chicago, Illinois, May 18<sup>th</sup>, 2015.

Speaker: “Traditional and Emerging Neuroimaging Techniques for Sports-Induced Concussions”, *National Summit on Sports Concussion: Sports and Concussion Outcomes*, Los Angeles, CA, June 5<sup>th</sup>, 2015.

Session Chair and Speaker: “The Promise of Structural and Functional Connectomics to Advance Understanding of Heterogeneous Etiology in Autism”, *State-of-the-Science: Neuroimaging of Autism, Organization for Human Brain Mapping (OHBM) Annual Meeting*, June 16<sup>th</sup>, 2015, Hawaii Convention Center, Honolulu, Hawaii.

Speaker: “Integration of behavioral, structural, functional, and genetic data for the study of autism spectrum disorders”, *The Eleventh International Conference on Data Integration in the Life Sciences 2015 (DILS2015)*, held at University of Southern California's Information Sciences Institute in Marina del Rey, California, on July 9-10, 2015.

Special Lecturer: “LONI Pipeline: A Scalable, Distributed & Service-Oriented Big Data Neuroimaging and Genetics Workflow System”, Instituto de Neurobiología, Universidad Nacional Autónoma De México (UNAM), Campus Juriquilla, Mexico on July 28<sup>th</sup>, 2015.

Invited Speaker: “New Frontiers of Brain Research using Big Data Neuroimaging and Informatics”, hosted by the *University of Southern California – Mexico Office*, Impact Hub DF (<http://mexicocity.impacthub.net/>), Ciudad de Mexico, on July 30<sup>th</sup>, 2015.

Invited Speaker: “Communications and Information Theory to Analysis of Functional Connectivity”, *State of the Art Neuroimaging: Bench to Bedside*, Grove Park Inn, Asheville, NC, September 3<sup>rd</sup>-6<sup>th</sup>, 2015.

Invited Speaker: “Emerging Biomarkers and Approaches to TBI”, *State of the Art Neuroimaging: Bench to Bedside*, Grove Park Inn, Asheville, NC, September 3<sup>rd</sup>-6<sup>th</sup>, 2015.

Invited Speaker: “What is Big Data?”, *State of the Art Neuroimaging: Bench to Bedside*, Grove Park Inn, Asheville, NC, September 3<sup>rd</sup>-6<sup>th</sup>, 2015.

Seminar Speaker: “Ethics in Biomedical Research – Incidental Findings”, *USC Neuroscience Graduate Program Retreat*, AJU Brandeis-Bardin Campus, Simi Valley, CA, September 25<sup>th</sup>, 2015.

Seminar Speaker: “Don’t Shade your Eyes – Plagiarize?”, *USC Neuroscience Graduate Program Retreat*, AJU Brandeis-Bardin Campus, Simi Valley, CA, September 25<sup>th</sup>, 2015.

Plenary Speaker: “Graphical Data Mining Approaches in Human Neuroimaging”, Centro de Investigación en Matemáticas A.C., Mathematics Research Center, Guanajuato, Mexico, November 5-6<sup>th</sup>, 2015.

Seminar Speaker: “Toward Efficient Large-Scale Data Processing using Computational Workflow Systems”, Centro de Investigación en Matemáticas A.C., Mathematics Research Center, Guanajuato, Mexico, November 5-6<sup>th</sup>, 2015.

Host and Organizer: Pedro Valdes-Sosa, M.D., Ph.D., from the Cuban Neuroscience Center in Havana, Cuba: i) USC Neuroscience Graduate Program Distinguished Speaker, ii) *Inaugural USC Latino “Last Lecture”* speaker, February 29<sup>th</sup>, 2016, USC, Los Angeles, CA. [Noteworthy as being the first time since prior to the Cuban Revolution that USC had hosted a Cuban-based scientist. See <http://dailytrojan.com/2016/02/29/cuban-neuroscientist-gives-last-lecture/>].

Invited Speaker: “BD2K: Training Coordination Center (TCC)”, *ELIXIR-Europe, All-Hands-Meeting*, Barcelona, Spain, March 9<sup>th</sup>-10<sup>th</sup>, 2016.

Session Chair: “Big Data Neuroimaging”, *18th World Congress of Psychophysiology (IOP2016) of the International Organization of Psychophysiology (IOP)*, Havana, Cuba August 31<sup>st</sup> to September 4<sup>th</sup>, 2016.

Symposium Organizer: “Big Data Neuroimaging”, International Organization for Psychophysiology (IOP) Annual Meeting, Melia Habana Hotel and Conference Center, Havana, Cuba, August 31<sup>st</sup> to September 4<sup>th</sup>, 2016.

Symposium Co-Organizer: “California Big Data Biomedical Workshop”, *Hyatt Vineyard Creek Resort*, Sonoma, CA, September 29<sup>th</sup>-October 1<sup>st</sup>, 2016 [with Arthur Toga, Paul Thompson, and Carl Kesselman].

Symposium Co-Organizer: “Big Data for Discovery Science”, *Association for Computing Machines, Conference on Bioinformatics, Computational Biology, and Health Informatics (ACM BCB)*, Seattle, WA, Sunday, October 2, 2016.

Symposium Co-Organizer: “Scientific Knowledge Discovery over Big Data”, *Society for Neuroscience Annual Meeting*, San Diego, CA, Thursday, November 17, 2016.

Keynote Speaker: “Mapping white matter connectivity of the human claustrum using *in vivo* neuroimaging”, *Society for Claustrum Research Third Annual Symposium, The Undiscovered Claustrum in Conjunction with the Centenary Celebration of Francis Crick*, Salk Institute, Torrey Pines, CA, Saturday, November 12, 2016.

Speaker: “Big Opportunities for Big Data Training at USC and Beyond”, *USC Institute for Prevention Research (IPR) and the Department of Preventive Medicine*, USC Health Sciences Campus, January 20, 2017.

Invited Lecturer: “Informatics Infrastructure for Neuroimaging: Toward an Atlas for the Vision Impaired”, *IMT School for Advanced Study*, Lucca, Italy, March 24<sup>th</sup>, 2017.

Presenter: “Analysis of white matter connectivity affirms the claustrum as a member of the Rich Club network of the human brain”, *2017 Australasian Neuroscience Society Annual Meeting*, December 2<sup>nd</sup>, 2017, Sydney, Australia

Invited Lecturer: “The Last Brain Region: the Study of the Claustrum, its Form, Connectivity and Function”, *Monash Biomedical Imaging, Monash University*, December 6<sup>th</sup>, 2017, Melbourne, Australia.

Seminar Speaker: “Neuroimaging across the spectrum of Traumatic Brain Injury (TBI)”, *Department of Neurobiology, Florida State University*, Tallahassee, FL, February 5<sup>th</sup>, 2018.

Presenter: “Learning Paths in the ERUDITE portal”, *Applying Bioinformatics and Data Science Competency Frameworks to ELIXIR Training*, Amsterdam, The Netherlands, April 4-6<sup>th</sup>, 2018.

Seminar Speaker: “Making data science training resources FAIR”, *eSciences Institute, University of Washington*, Seattle, WA, April 11<sup>th</sup>, 2018.

Symposium Speaker: “Multimodal Brain Signatures”, *24<sup>th</sup> Annual Organization for Human Brain Mapping Annual Meeting*, Singapore, June 18<sup>th</sup>, 2018.

Symposium Speaker: “Toward the FAIRness of Data Science Training Resources”, *26<sup>th</sup> International Conference on Intelligent Systems in Molecular Biology (ISMB)*, Hyatt Regency Hotel, Chicago, IL, July 8<sup>th</sup>, 2018.

Workshop Speaker: “Applying the FAIR principles to Online Data Science Training Resources”, *Workshop on Developing a Data Science Competent EHS Workforce*, National Institute of Environmental Health Sciences, Research Triangle, Park, North Carolina, August 14-15, 2018.

Invited Lecturer: "Neuroimaging as a 'Big Data' Science", *Data Science Institute, University of Virginia*, Charlottesville, Virginia, August 30<sup>th</sup>, 2018.

Symposium Speaker: "Mild cognitive impairment and structural brain abnormalities in a sexagenarian with a history of childhood traumatic brain injury", *International Organization for Psychophysiology, IMT School for Advanced Study*, Lucca, Italy, September 6<sup>th</sup>, 2018.

Symposium Speaker: "Data Science: An Introduction to the Computational Tools and Techniques for Large-scale Biomedical Research", *NIDA-NIAAA 2018 Mini-Convention: Frontiers in Addiction Research*, San Diego Convention Center, November 2, 2018.

Invited Lecturer: "The Last Brain Region: the Study of the Claustrum, its Form, Connectivity and Function", Department of Psychology, *University of Virginia*, December 13<sup>th</sup>, 2018, Charlottesville, Virginia.

Conference Presenter: "ERudite Learning Paths", *Bioinformatics Education Summit*, May 14-17, 2019, Newlands Tsogo Sun Hotel, Cape Town, South Africa.

Keynote Speaker: "Data Science: An introduction to the computational tools and techniques for large-scale biomedical research", Big Data Neuroscience Workshop 2019: Organized by the Advanced Computational Neuroscience Network (ACNN), September 19 - 20, 2019, *University of Michigan, Ann Arbor*, Michigan.

Seminar Speaker: "Considering Big Data: Finding our way in an era of large-scale studies of brain form and function", October 26<sup>th</sup>, 2020, Social Lunch, Department of Psychology, *University of Virginia*, Charlottesville, Virginia.

Other Scientific Presentations:

**Psychobiology Society/Psychophysiology Society Joint Conference; Royal Holloway and Bedford New College, Egham, England; September 23rd-25th, 1991:**

**Van Horn, J.D.** and McManus, I.C. "Ventricular enlargement in schizophrenia: A meta-analysis of studies using the ventricular-brain ratio (VBR)."

**Symposium: Issues in Schizophrenia; Department of Psychology, University College London, England; November 7th, 1991;**

**Van Horn, J.D.** and McManus, I.C. "Neuropathology in Schizophrenia."

**Society of Nuclear Medicine, 40th Annual Meeting, Toronto Convention Center, Toronto, Ontario, Canada; June 8th-11th, 1993:**

Esposito, G., **Van Horn, J.D.**, Weinberger, D.R., and Berman, K.F. "Gender differences in cerebral blood flow with PET: Is there an effect of cognitive state?"

Mattay, V.S., Berman, K.F., Ostrem, J.L., **Van Horn, J.D.**, Bigelow, L.B., Goldberg, T.E., and Weinberger, D.R. "The effect of amphetamine on regional cerebral blood flow during cognitive activation: A PET study"

**American Psychiatric Association, 146th Annual Meeting, San Francisco, CA; May 22nd-27th, 1993:**



**Van Horn, J.D.**, Berman, K.F., Esposito, G., Ostrem, J.L., and Weinberger, D.R. "Is there frontal lobe lateralization? A study using PET".

**Canadian Society for Brain, Behaviour, and Cognitive Science/Experimental Psychological Society Joint Conference, University of Toronto, Toronto, Canada, July 15th-17th, 1993:**

McManus, I.C. and **Van Horn, J.D.** "Task difficulty and hand differences on the Annett Pegboard Task".

**Society for Neuroscience, 23rd Annual Meeting, Washington Convention Center, Washington DC, November 7th-12th, 1993:**

**Van Horn, J.D.**, Terrazas, A., Berman, K.F., Goldberg, T.E., and Weinberger, D.R., "A linear regression approach to the assessment of rCBF changes in cognitive paradigms: A Monte Carlo simulation study"

Berman, K.F., Ostrem, J.L., **Van Horn, J.D.**, Mattay, V.S., Esposito, G., and Weinberger, D.R. "A comparison between normal monozygotic and dizygotic twins studied during cognition with positron emission tomography"

Esposito, G., Weinberger, D.R., **Van Horn, J.D.**, Ostrem, J.L., and Berman, K.F. "Do women have more active brains than men? A PET study during cognitive activation"

**American College of Neuropharmacology Conference, Honolulu, HI, December 12th-18th, 1993:**

**Van Horn, J.D.**, Gold, J., Esposito, G., Ostrem, J.L., Weinberger, D.R., and Berman, K.F. "Maze learning and frontal lobe functioning assessed with PET"

Ostrem, J.L., Berman, K.F., Mattay, V.S., **Van Horn, J.D.**, Esposito, G., and Weinberger, D.R. "A comparison of two abstract reasoning tasks using O15 PET"

Esposito, G., Berman, K.F., **Van Horn, J.D.**, Ostrem, J.L., and Weinberger, D.R. "Determinants of cerebral blood flow during cognitive tasks"

**American Academy of Neurology Conference, Washington, D.C., May 4th, 1994:**

Berman, K.F., Ostrem, J.L., Mattay, V.S., Esposito, G., **Van Horn, J.D.**, Torrey, E.F., Weinberger, D.R. "The roles of the dorsolateral prefrontal cortex and the hippocampus in working memory: PET studies of normal and abnormal states"

**Society of Biological Psychiatry Annual Meeting, Philadelphia, PA, May 18th-22nd, 1994:**

Berman, K.F., Ostrem, J.L., Mattay, V.S., Esposito, G., **Van Horn, J.D.**, Abi-Dargham, A., Torrey, E.F., and Weinberger, D.R. "The roles of the dorsolateral prefrontal cortex and hippocampus in working memory and schizophrenia"

**Van Horn, J.D.**, Gold, J., Esposito, G., Ostrem, J.L., Weinberger, D.R., and Berman, K.F. "The role of the frontal lobe during maze learning assessed using PET"

Esposito, G., **Van Horn, J.D.**, Ostrem, J.L., Mattay, V.S., Weinberger, D.R., and Berman, K.F. "The effect of sex, age and pCO<sub>2</sub> on cerebral blood flow during cognitive stimulation"

Ostrem, J.L., Berman, K.F., Mattay, V.S., **Van Horn, J.D.**, Esposito, G., and Weinberger, D.R. "The neural basis of abstract reasoning: An investigation of two problem solving tasks with PET"

**American Psychiatric Association, 146th Annual Meeting, San Francisco, CA; May 21st-26th, 1994:**

**Van Horn, J.D.**, Terrazas, A., Weinberger, D.R., and Berman, K.F. "Monte Carlo simulation of PET region of interest data sets"

Ostrem, J.L., **Van Horn, J.D.**, Esposito, G., Gold, J., Weinberger, D.R., and Berman, K.F. "Effects of cohort size on PET cognitive activation"

**Society of Nuclear Medicine 41st Annual Meeting, Orlando, FL, June 5th-8th, 1994:**

Berman, K.F., Schmidt, P.J., Ostrem, J.L., Danaceau, M.A., Esposito, G., **Van Horn, J.D.**, Mattay, V.S., Rubinow, D.R., Weinberger, D.R. "Effects of gonadal steroids on cerebral blood flow: Patients with menstrual-related mood disorder and controls studied with PET during medical oophorectomy and hormone replacement"

**Society for Neuroscience 24th Annual Meeting, Miami Beach, FL, November 13th-18th, 1994:**

Esposito, G., Kirkby, B.S., **Van Horn, J.D.**, Ostrem, J.L., Weinberger, D.R., and Berman, K.F. "Aging effects on CBF during cognitive stimulation: A focus on the frontal lobe"

Kirkby, B.S., Ostrem, J.L., **Van Horn, J.D.**, Weinberger, D.R., and Berman, K.F. "Functional reorganization following closed head injury: A PET study of monozygotic twins"

Esposito, G., Kirkby, B.S., **Van Horn, J.D.**, Ostrem, J.L., Weinberger, D.R., and Berman, K.F. "Aging effects on CBF during cognitive stimulation: A focus on the frontal lobe"

Berman, K.F., Schmidt, P.J., Ostrem, J.L., Danaceau, M.A., Esposito, G.E., **Van Horn, J.D.**, Rubinow, D.R., Weinberger, D.R. "PET studies of cognitively related cerebral blood flow in menstrual-related mood disorder patients and controls: Effects of gonadal steroids".

**XVIIth International Symposium on Cerebral Blood Flow and Metabolism, Cologne, Germany, July 2nd-6th, 1995:**

Berman, K.F., Schmidt, P.J., Ostrem, J.L., Danaceau, M.A., **Van Horn, J.D.**, Esposito, G., Rubinow, D.R., and Weinberger, D.R. "The effects of gonadal steroid hormones on cognitively-related regional cerebral blood flow: A positron emission tomography study";

Esposito, G., Kirkby, B.S., **Van Horn, J.D.**, Ostrem, J.L., Mattay, V.S., Weinberger, D.R., and Berman, K.F. "Normal aging is associated with task-specific neurophysiological changes: PET rCBF measurements during cognitive stimulation".

**Society of Magnetic Resonance Third Annual Meeting, Nice, France, August 19th-25th, 1995:**

Ramsey, N.F., Kirkby, B., van Gelderen, P., Berman, K., Moonen, C.T.W., Mattay, V.S., Frank, J.A., **Van Horn, J.D.**, Esposito, G., and Weinberger, D.R. "A direct comparison of 3D BOLD fMRI and H215O PET imaging of primary sensory motor cortex in humans".

**Society for Neuroscience 25th Annual Meeting, San Diego, CA, November 11th-16th, 1995:**

**Van Horn, J.D.**, Esposito, G., Kirkby, B.S., Weinberger, D.R., and Berman, K.F. "Appraisal of univariate and multivariate analysis techniques for PET brain image quantification"

Kirkby, B.S., **Van Horn, J.D.**, Esposito, G., Goldberg, T.E., Weinberger, D.R., and Berman, K.F. "Long term changes in rCBF during cognition following severe closed head injury: A PET study"

Esposito, G., Kirkby, B.S., **Van Horn, J.D.**, Weinberger, D.R., and Berman, K.F. "Different pathophysiological mechanisms of altered Wisconsin Card Sort performance in schizophrenics and elderly normal subjects"

Austin-Lane, J.L., Kirkby, B.S., **Van Horn, J.D.**, Esposito, G., Weinberger, D.R., and Berman, K.F. "A retrospective study of the effects of chronic smoking on regional cerebral blood flow during cognitive processing"

Berman, K.F., Gold, J.M., Noga, J.T., Abi-Dargham, A., **Van Horn, J.D.**, and Weinberger, D.R. "A PET study of working memory in schizophrenia: Effects of performance level"

Weinberger, D.R., Ramsey, N.F., Kirkby, B., van Gelderen, P., Berman, K.F., Mattay, V.S., Frank, J.A., **Van Horn, J.D.**, Esposito, G., and Moonen, C.T.W. "Three-dimensional BOLD fMRI and O-15 Water PET neuroactivation maps are highly correlated".

**Society of Nuclear Medicine 43rd Annual Meeting, Denver, CO, June 3rd-6th, 1996:**

Esposito, G., Kirkby, B.S., **Van Horn, J.D.**, Ostrem, J.L., Weinberger, D.R., and Berman, K.F. "Different pathophysiological mechanisms of impaired Wisconsin Card Sorting in elderly normal subjects and schizophrenics studied with PET"

**2nd International Conference on Functional Mapping of the Human Brain, Boston, MA, June 17th-21st, 1996:**

**Van Horn, J.D.**, Esposito, G., Weinberger, D.R., and Berman, K.F. "Volume-based multivariate discriminant and canonical correlation analysis of neurophysiological measures of brain function"

Maisog, J.M., Courtney, S., **Van Horn, J.D.**, and Haxby, J.V. "Multivariate multiple regression on fMRI data to map functionally distinct areas"

Esposito, G., Kirkby, B.S., **Van Horn, J.D.**, Ostrem, J.L., Weinberger, D.R., and Berman, K.F. "Impaired Wisconsin Card Sorting test performance in normal aging and in schizophrenia: PET evidence of different pathophysiological mechanisms for a common cognitive deficit"

Ellmore, T.M., **Van Horn, J.D.**, Kirkby, B.S., Austin-Lane, J., Weinberger, D.R., and Berman, K.F. "The effects of signal averaging in cognitive and motor PET paradigms"

Mattay, V.S., Santha, A.K.S., **Van Horn, J.D.**, Sexton, R., Frank, J.A., and Weinberger, D.R. "Motor function and hemispheric asymmetry: A whole brain Echo Planar fMRI study"

**Society for Neuroscience 26th Annual Meeting, Washington D.C, November 16th-21st, 1996:**

Weinberger, D.R., Santha, A., Mattay, V.S., Frank, J., Kirkby, B., **Van Horn, J.D.**, Esposito, G., and Berman, K.F. "Within subject neuroactivation mapping with whole brain isotropic EPI and 3-D PET: A direct comparison"

Goldberg, T.E., Fleming, K., Berman, K.F., **Van Horn, J.D.**, Esposito, G., Ostrem, J., Gold, J.M., and Weinberger, D.R. "Neurophysiology of dual task performance: A PET O15 study"

Esposito, G., Kirkby, B.S., **Van Horn, J.D.**, Weinberger, D.R., and Berman, K.F. "PET evaluation of cognitively related neurophysiological sequelae accompanying incidental findings of microvascular changes in the elderly: A preliminary report"

**Van Horn, J.D.**, Austin-Lane, J.L., Kirkby, B.S., Esposito, G., Weinberger, D.R. and Berman, K.F. "Characterizing rCBF response in a PET study of graded working memory load"

Ellmore, T.E., **Van Horn, J.D.**, Esposito, G., Kirkby, B.S., Austin-Lane, J.L., Weinberger, D.R., and Berman, K.F. "Signal averaging in cognitive and motor PET paradigms"

Berman, K.F., Schmidt, P.J., Rubinow, D.R., Esposito, G., **Van Horn, J.D.**, Austin-Lane, J.L., Danaceau, M.A., and Weinberger, D.R. "Modulation of cognitively related cortical activity by gonadal steroid hormones directly demonstrated with PET"

**Society for Magnetic Resonance Imaging Annual Meeting, Vancouver, Canada, April 12th-18th, 1997:**

Callicott, J.H., Santha, A., Mattay, V.S., **Van Horn, J.D.**, Coppola, R., Podell, D., Finn, K., Bertolino, A., Frank, J.A., and Weinberger, D.R. "A preliminary examination of statistical power and the creation of intra-subject activation maps in fMRI"

Bertolino, A., Esposito, G., Callicott, J.H., Mattay, V.S., **Van Horn, J.D.**, Frank, J.A., Berman, K.F., and Weinberger, D.R. "H-MRSI predicts rCBF activation during working memory in patients with schizophrenia"

Ye, F.Q., Berman, K.F., Ellmore, T., Esposito, G., **Van Horn, J.D.**, Yang, Y., Duyn, J., Salustri, C., Smith, A., Frank, J., Weinberger, D.R., and McLaughlin, A.C. "H215O PET validation of arterial spin tagging measurements of cerebral blood flow in humans"

**Society for Research on Nicotine and Tobacco Annual Meeting, Washington, D.C., March 5th-7th, 1999:**

Ernst, M., Jons, P.H., Matochik, J.A., **Van Horn, J.D.**, Heishman, S.J., and Henningfield, J.E. "Nicotine effects on cerebral blood flow during a working memory task"

**Cognitive Neuroscience Society Annual Meeting, Washington D.C., April 11th-13th, 1999:**

Von Turennout, M., Ellmore, T., Chow, L., **Van Horn, J.D.**, Martin, A. "Long-lasting reduction in neural activity after a single exposure to real and nonsense objects: An event-related fMRI study of perceptual priming"

**5th International Conference on Functional Mapping of the Human Brain, Dusseldorf, Germany, June 21st-26th, 1999:**

**Van Horn, J.D.** and Ellmore, T.E. "Modeling the hemodynamic response function in fMRI using linear time invariant systems"

**6th International Conference on Functional Mapping of the Human Brain, San Antonio, TX, USA, June 12th-16th, 2000:**

**Van Horn, J.D.**, Ingelholm, J., Furey, M. and Haxby, J.V. "Accounting for cardiac and respiratory variation in BOLD signal using multivariate regression analysis in event-related fMRI"

**Society for Neuroscience 31st Annual Meeting, San Diego, CA, November 10th-15th 2001:**

**Van Horn, J.D.**, Inati, S., Grafton, S.T. "Patterns of brain activation in visuomotor tracking: a study using continuous performance fMRI"

Kveraga, K., Hughes, H.C., Inati, S., and **Van Horn, J.D.** "Regions associated with response selection processes are activated with increasing stimulus entropy"

**Neural Information Processing Systems Annual Meeting, RUMBA Two-Day Workshop: Concepts and Methods in Neuroimaging, Whistler, B.C., Canada, December 7-8, 2001**

**Van Horn, J.D.** “The human visuomotor system investigated using continuous performance paradigms in fMRI”

**Cognitive Neuroscience Society Annual Meeting, San Francisco, California April 14th-16th, 2002**

**Van Horn, J.D.**, Woodward, J.B., Grethe, J.S., Aslam, J., Rus, D., Rockmore, D., and Gazzaniga, M.S. “Summary statistic measures for rapid assessment and clustering of fMRI time course dynamics”

**Cognitive Neuroscience Society Annual Meeting, San Francisco, California April 18th-20th, 2004**

**Van Horn, J.D.**, Woodward, J.B., Dobson, J., Wolfe, J. Vance, B., Schumacher, S., Grafton, S.T., Rockmore, D., and Gazzaniga, M.S. “The fMRI Data Center: An Essential Resource for Cognitive Neuroscience”

**Society for Neuroscience 34th Annual Meeting, San Diego, CA, October 23rd-27th 2004:**

**Van Horn, J.D.**, Yanos, M.E.S., Schmitt, P.J., and Grafton, S.T. “Ethanol-Related BOLD Activity Suppression in Frontal and Parietal Cortex during Visuomotor Target Capture”

**12th International Conference on Functional Mapping of the Human Brain, Florence, Italy, June 11th-15th, 2006:**

Farrer, C., Frey, S.H., **Van Horn, J.D.**, Tunik, G., Turk, D., and Grafton, S.T. “The angular gyrus is equally involved in different aspects of action awareness.”

Hamilton, A. and **Van Horn, J.D.** “FIND: A simple tool for searching fMRI papers.”

**15th International Conference on Functional Mapping of the Human Brain, San Francisco, CA, June 18 - 23, 2009:**

Colby, J.J., Smith, L., O'Connor, M.J., Bookheimer, S.Y., **Van Horn, J.D.**, Sowell, E.R., “A tract-based diffusion tensor imaging study of the effects of prenatal methamphetamine exposure on white matter microstructure”

Patel, V., Dinov, I.D., **Van Horn, J.D.**, Toga, A.W. “MiND: An Extensible Framework for Storage and Modification of DWI Metadata”

Dinov, I.D., Parker, D.S., Hojatkashani, C., Magsipoc, R., Lozev, K., Petrosyan, P., Liu, Z., MacKenzie-Graham, A., **Van Horn, J.D.**, Toga, A.W. “Neuroimaging Workflow Construction, Execution, Validation and Interpretation using the LONI Pipeline”

**Special Interest Group on Graphics and Interactive Techniques (SIGGRAPH), July 25<sup>th</sup>-29<sup>th</sup>, 2010, Los Angeles, CA**

Bowman, I., Joshi, S., Jennings, R., Hasson, D., Liu, Z, Toga, A. and **Van Horn, J.D.** “Visual Mining of Neuro-Metaspace”

**16th Annual Meeting of the Organization for Human Brain Mapping, Barcelona, Spain, June 6-10, 2010**

Rosen, B., Wedeen, V.J., **Van Horn, J.D.**, Fischl, B., Buckner, R.L., Wald, L., Hamalainen, M., Stufflebeam, S., Roffman, J., Shattuck, D.W., Thompson, P.M., Woods, R.P., Freimer, N., Bilder, R., and Toga, A.W. "The Human Connectome Project"

**VisWeek 2010**, Salt Lake City, UT, October 24<sup>th</sup>-29<sup>th</sup>

Joshi, S.H., Bowman, I., and **Van Horn, J.D.** "Large-scale neuro-anatomical visualization using a manifold embedded approach"

**17th Annual Meeting of the Organization for Human Brain Mapping**, Quebec City, Canada, June 6-10, 2010

Irimia, A., Chambers, M.C., Prastawa, M.W., Gouttard, S., Vespa, P.M., Hovda, D.A., Alger, J.R., Pujol, S.M.A., Gerig, G., Aylward, S.R., Toga, A.W., Kikinis, R., and **Van Horn, J.D.** "Automatic Multimodal Segmentation for the Clinical Assessment of Traumatic Brain Injury in 3D Slicer"

Bowman, I., Joshi, S.H., and **Van Horn, J.D.** "Graphical Knowledge Discovery for Neuroimaging Archives"

**18th Annual Meeting of the Organization for Human Brain Mapping**, Beijing, China, June 10-14, 2012.

Irimia, A., **Van Horn, J.D.**, Chambers, M.C., Prastawa, M.W., Gouttard, S., Vespa, P.M., Hovda, D.A., Alger, J.R., Pujol, S.M.A., Gerig, G., Aylward, S.R., Toga, A.W., and Kikinis, R. "Connectome-level evaluation of neurodegeneration caused by traumatic brain injury"

Bowman, I., Joshi, S.H., and **Van Horn, J.D.** "Graphically-Driven Exploration and Informatics of Neuroimaging Data Archives"

**VisWeek 2012**, Seattle, WA, October 14-19, 2012.

Bowman, I., Joshi, S.H., and **Van Horn, J.D.** "Query-Based Coordinated Multiple Views with Feature Similarity Space for Visual Analysis of MRI Repositories"

**International Society for Biomedical Imaging (ISBI)**, San Francisco, CA, April 7-11, 2013.

**Van Horn, J.D.**, Joshi, S., and Bowman, I. "Graphical Data Mining of Human Cortical Surface Morphometry"

Goh, M., Irimia, A., Torgerson, C., Kikinis, R., Vespa, P., and **Van Horn, J.D.** "High-Resolution Electroencephalographic Forward Modeling in Traumatic Brain Injury Using the Finite Element Method"

Wang, B., Prastawa, M., Irimia, A., Chambers, M., Sadeghi, N., Vespa, P., **Van Horn, J.D.**, and Gerig, G. "Analyzing Imaging Biomarkers for Traumatic Brain Injury Using 4D Modeling of Longitudinal MRI"

**19th Annual Meeting of the Organization for Human Brain Mapping**, Seattle, WA USA, June 16-20, 2013.

Labus, J., Ashe-McNalley, C., **Van Horn, J.D.**, Torgerson, C., Irimia, A., Chambers, M., Tillisch, K., and Mayer, E. "Alterations in regional volumetric brain network properties in persistent abdominal pain"

Chambers, M., Irimia, A., Altshuler, L., and **Van Horn, J.D.** "Structural and Resting-State Functional Connectivity Disturbances in Bipolar Disorder"

Irimia, A., Goh, M., Torgerson, C., Kikinis, R., Vespa, P., and **Van Horn, J.D.** “Effects of traumatic brain injury upon the inverse localization accuracy of electroencephalography”

Goh, M., Irimia, A., Torgerson, C., Kikinis, R., Vespa, P., and **Van Horn, J.D.** “Impact of brain injury upon the EEG forward solution as computed using the finite element method”

Dinov, I., Eggert, P., Pierce, J., Hobel, S., Liu, Z., Petrosyan, P., Zamanyan, A., **Van Horn, J.D.**, and Arthur Toga “Neuroimaging-Genetics Pipelines: Big Data, Independent Software Tools and Dispersed Devices”

Torgerson, C., Irimia, A., Chambers, M., and **Van Horn, J.D.** “Seeking the Hidden: Uncovering the Claustrum’s Curious Connections Using Diffusion Tensor Imaging”

**Society for Neuroscience 31st Annual Meeting, San Diego, CA, November 10th-15th 2013:**

Irimia, A., Goh, S.Y.M., Torgerson, C.M., Chambers, M.C., Vespa, P.M., Kikinis, R., and **Van Horn, J.D.** “Electroencephalographic Inverse Localization of Cortical Loci Generating Epileptiform Activity in Comatose Acute Traumatic Brain Injury Patients”

**20th Annual Meeting of the Organization for Human Brain Mapping, Hamburg Germany, June 8-12, 2014:**

Irimia, A., Goh, S.-Y.M., Torgerson, C.M., and **Van Horn, J.D.** “Connectomic neuroimaging for estimating effective brain age as a biomarker of neurodegeneration”

Irimia, A., Goh, S.-Y.M., Torgerson, C.M., Vespa, P., **Van Horn, J.D.** “Multimodal neuroimaging for mapping brain atrophy and axonal demyelination in traumatic brain injury”

Goh, S.-Y.M., Irimia, A., Torgerson, C., **Van Horn, J.D.**, Kikinis, R., and Vespa, P. “Localization of epileptiform electrical activity recorded from severe TBI patients using scalp EEG”

**Van Horn, J.D.**, Hall, D., Haselgrove, C., Koser, B., Liu, Z., Petrosyan, P., Dinov, I., Toga, A., and Kennedy, D. “Linking Data, Computation, and Processing through NDAR, NITRC, and the LONI Pipeline”

**21st Annual Meeting of the Organization for Human Brain Mapping, Honolulu, Hawaii, June 14-18, 2015:**

Clark, D., Haselgrove, C., Kennedy, D.N., Liu, Z., Milham, M., Petrosyan, P., Torgerson, C.M., **Van Horn, J.D.**, and Craddock, R.C. “Harnessing cloud computing for high capacity analysis of neuroimaging data from NDAR”

Torgerson, C.M., Irimia, A., **Van Horn, J.D.**, and the GENDAAR Working Group “The search for structural biomarkers in autism spectrum disorder”

Patel, K., Irimia, A., Goh, S.-Y.M., Wade, A.C., Vespa, P.M., and **Van Horn, J.D.** “The relationship between epileptiform activity and cortical atrophy after traumatic brain injury”

Wade, A., Irimia, A., Goh, S.-Y.M., Patel, K., Vespa, P.M., and **Van Horn, J.D.**, “Acute Glasgow Coma Score, pupil size, and seizure occurrence predict cortical atrophy six months after traumatic brain injury”

Poline, J.B., Keator, D., Gorgolewski, K.J., Auer, T., Chen, G., Craddock, C., Flandin, G., Ghosh, S., Halchenko, Y.O., Hanke, M., Haselgrove, C., Helmer, K., Jenkinson, M., Klein, A., Lanyon, L., Marcus, D., Margulies, D., Maumet, C., Michel, F., Nichols, B.N., Nichols, T., Poldrack, R., Reynolds, R., Saad, Z., Schmah, T., Steffener, J., Turner, J., **Van Horn, J.D.**, and Kennedy, D.N., “How to make brain imaging research efficient and reproducible: Building software development community and standards”

Goh, S.-Y.M., Irimia, A., Torgerson, C.M., Tubi, M.A., Real, C.R., Hanley, D.F., Martin, N.A., Vespa, P.M., and **Van Horn, J.D.** “Quantitative evaluation of the corticospinal tract in hemorrhagic stroke using diffusion tractography”

Kennedy, D., Haselgrove, C., **Van Horn, J.D.**, and Hall, D. “The National Database for Autism Research: Quality Assurance Metrics for Structural Neuroimaging”

Dinov, I., **Van Horn, J.D.**, Petrosyan, P., Liu, Z., Hobel, S., and Toga, A.W. “The Pipeline Environment: A Scalable, Distributed and Service-Oriented Neuroimaging and Genetics”

Ghosh, S., Auer, T., Gorgolewski, K., Halchenko, Y., Hanke, M., Flandin, G., Nichols, N., Poldrack, R., **Van Horn, J.D.**, Marcus, D., and Keator, David “NIDM-Workflow - The Evolution of Provenance in Neuroimaging”

Irimia, A. and **Van Horn, J.D.** “Scale dependence of graph-theoretic measures in network representations of human brain connectivity”

**SPIE Medical Imaging 2016, San Diego, California, February 27<sup>th</sup>-March 3<sup>rd</sup>, 2016:**

Goh, S-Y. M., Irimia, A., Vespa, P.M., and **Van Horn, J.D.** “Patient-tailored multimodal neuroimaging, visualization, and quantification of human intra-cerebral hemorrhage.

**22nd Annual Meeting of the Organization for Human Brain Mapping, Geneva, Switzerland, June 24-30, 2016:**

Irimia, A., Torgerson, C., Abe, S., and **Van Horn, J.D.** “Machine learning distinguishes ASD patients from healthy control subjects based on brain morphometry”

Bhattra, A., Irimia, A., and **Van Horn, J.D.** “Assessing neurometabolism after traumatic brain injury: insights from multimodal neuroimaging”

Torgerson, C., Bhattra, A., Jacokes, Z., Law, M., Hazany, S., Irimia, A., and **Van Horn, J.D.** “Multimodal Neuroimaging of Brain Structure Alterations in Adolescents with Anatomic Hemispherectomy”

Irimia, A., Vespa, P., **Van Horn, J.D.** “Spatiotemporal profiles of post-traumatic epileptiform discharges initiated via recurrent excitation”

Abe, S., Irimia, A., **Van Horn, J.D.** “Large-scale interactive graphical visualization of brain surfaces using INVIZIAN”

Petrosyan, P., Hobel, S., Irimia, A., **Van Horn, J.D.**, and Toga, A.W. “LONI QC: a system for the quality control of structural, functional and diffusion brain images”

**Twenty-Third Annual Meeting of the Organization on Human Brain Mapping, June 25-29, 2017, Vancouver, Canada**



Abe, S., Irimia, A., Lei, X., Jacokes, Z.J., Torgerson, C.M. and **Van Horn, J.D.** for the GENDAAR Research Consortium “Visualizing brain surfaces in multi-dimensional space using the INVIZIAN platform”

Bhattra, A., Irimia, A., Torgerson, C.M., and **Van Horn, J.D.** “Neuroimaging analysis of white matter connectivity between the claustrum and the rich-club network of the human brain”

Hinojosa-Rodriguez, M., Lei, X., Torgerson, C.M., Irimia, A. and **Van Horn, J.D.** “Deep learning reveals brain features associated with preterm birth and perinatal risk factors”

Irimia, A., Goh, S.Y.M., Torgerson, C.M., and **Van Horn, J.D.** “Effects of micro-hemorrhages upon white matter connectivity in older adults”

Jacokes, Z.J., Torgerson, C.M., Irimia, A. and **Van Horn, J.D.** for the GENDAAR Consortium “Quality control and analysis of structural magnetic resonance imaging volumes acquired by the Autism Center of Excellence Collaboration”

Lei, X., Torgerson, C.M., Abe, S., Irimia, A., and **Van Horn, J.D.** for the GENDAAR Consortium “Comparison of machine learning methods for identifying structural brain features associated with the interaction of autism spectrum disorders with sex”

Lei, X., Torgerson, C.M., Abe, S., Irimia, A., and **Van Horn, J.D.** for the GENDAAR Consortium “Machine learning using neural networks reveals the structural brain features which modulate the interaction between sex and autism spectrum disorder”

Torgerson, C.M., Jacokes, Z.J., Hull, J.V., Irimia, A. and **Van Horn, J.D.** “Effects of Alzheimer’s disease upon the volume and surface area of the human claustrum as revealed using magnetic resonance imaging”

**Van Horn, J.D.**, Irimia, A., Torgerson, C.M., Jacokes, Z.J., McLean, R., and Harding, R.A. “Neuroimaging-based classification of mild cognitive impairment in traumatic brain injury: a case study investigation”

**2017 Australasian Neuroscience Society Annual Meeting, December 2<sup>nd</sup>, 2017, Sydney, Australia**

**Van Horn, J.D.**, Bhattra, A., Irimia, A., and Torgerson, C.M. “Analysis of white matter connectivity affirms the claustrum as a member of the Rich Club network of the human brain”

**Van Horn, J.D.**, Irimia, A., Torgerson, C., Jacokes, Z., McClain, R., Harding, R., and Vespa, P. “Neuroimaging-Based Classification of MCI Following TBI during Youth”

**Twenty-Fourth Annual Meeting of the Organization on Human Brain Mapping, June 17-21, 2018, Singapore**

Torgerson, C., Jacokes, Z., **Van Horn, J.D.**, and the GENDAAR Research Consortium “Autism Spectrum Disorder and cortical thickness in sibling pairs”

Asturias, A., Jacokes, Z., Torgerson, C., Gajawelli, N., Romano, R., Law, M., Liu, C., and **Van Horn, J.D.** "Transient Changes in Cortical Thickness during a Season of Collegiate Football"

Asturias, A., Jacokes, Z., Torgerson, C., Gajawelli, N., Romano, R., Liu, C., Law, M., and **Van Horn, J.D.** "Diffusion Imaging and Generalized Fractional Anisotropy in Contact Sport Collegiate Athletes"

Kim, H., Irimia, A., Hobel, S., Petrosyan, P., M., Tang, H., Esquivel Castelo Blanco, R.I., Duffy, B.A., Zhao, L., Liew, S.-L., Clark, K., Law, M., Mukherjee, P., **Van Horn, J.D.**, and Toga, A.W. "LONI-QC, Web-based system for quality control of neuroimaging data: Part 1 - Design and workflow"

Tang, H., Irimia, A., Hobel, S., Petrosyan, P., M., Esquivel Castelo Blanco, R.I., Duffy, B.A., Zhao, L., Crawford, K., Liew, S.-L., Clark, K., Law, K., Mukherjee, P., Manley, G.T., **Van Horn, J.D.**, Toga, A.W, and Kim, H. "LONI-QC, Web-based system for quality control of neuroimaging data: Part 2 – AutoQC and evaluation"

Jacokes, Z., Kim, H., **Van Horn, J.D.**, and the GENDAAR Research Consortium "Quality Control in Structural Imaging Data across Multiple Sites using Factor Analysis"

### **Twenty-Fifth Annual Meeting of the Organization on Human Brain Mapping, June 9-13, 2019, Rome, Italy**

Jacokes, Z., Torgerson, C., and **Van Horn, J.D.** for the GENDAAR Research Consortium "Statistical Analysis of Sex in Autism Spectrum Disorder Using Canonical Correlation"

Torgerson, C., Jacokes, Z., and **Van Horn, J.D.** for the GENDAAR Research Consortium "Sexual dimorphism without group differences in ASD and typically developing subjects"

### **PUBLICATION/BIBLIOGRAPHY:**

#### **RESEARCH PAPERS**

##### **A. Research Papers (PEER-REVIEWED):**

1. **Van Horn, J.D.** and McManus, I.C. (1992) "Ventricular enlargement in schizophrenia: A meta-analysis of studies using the ventricular-brain ratio (VBR)," *British Journal of Psychiatry*, 160, 687-697. [Initiated the study, performed all literature searches, conducted the analysis, and wrote the paper]
2. Laland, K.N., Kumm, J., **Van Horn, J.D.**, and Feldman, M.W. (1995) "A gene-culture model of human handedness", *Behavior Genetics*, 25, 433-445. [Performed detailed goodness-of-fit analyses between observed and expected gene-culture model frequencies of human handedness]

3. **Van Horn, J.D.**, McIntosh, A.R., and Maisog, J. Ma. (1995) "Complications in the use of the SPM Chi-Squared Statistic", *Journal of Cerebral Blood Flow and Metabolism*, 15, 895-896.
4. Ramsey, N.F., Kirkby, B.S., Van Gelderen, P., Berman, K.F., Duyn, J.H., Frank, J.A., Mattay, V.S., **Van Horn, J.D.**, Esposito, G., and Weinberger, D.R. (1996) "Functional mapping of human sensorimotor cortex with 3D BOLD fMRI correlates highly with H215O PET rCBF", *Journal of Cerebral Blood Flow and Metabolism*, 16, 755-764. [Conducted all SPM analyses of PET data]
5. Mattay, V.S., Berman, K.F., Ostrem, J.L., Esposito, G., **Van Horn, J.D.**, Bigelow, L.B., and Weinberger, D.R. (1996) "Dextroamphetamine enhances 'neural network specific' physiological signals: A Positron-Emission Tomography rCBF study", *Journal of Neuroscience*, 16, 4816-4822. [Collected the oxygen-15 PET data in normal subjects under amphetamine and placebo dose conditions]
6. Kirkby, B.S., **Van Horn, J.D.**, Ostrem, J.L., Weinberger, D.R., and Berman, K.F. (1996) "Cognitive activation during PET: A case study of monozygotic twins discordant for closed head injury," *Neuropsychologia*, 34, 689-697. [Helped to collect the PET data for the study, perform analyses, suggest statistical testing, and contributed to the authorship of the paper]
7. Esposito, G., **Van Horn, J.D.**, Berman, K.F., and Weinberger, D.R. (1996) "Gender differences in cerebral blood flow as a function of cognitive state: A PET study", *Journal of Nuclear Medicine*, 37, 559-564. [Helped to collect the PET data for the study, perform analyses, suggest statistical testing, and contributed to the authorship of the paper]
8. **Van Horn, J.D.**, Berman, K.F., and Weinberger, D.R. (1996) "Functional lateralization of the prefrontal cortex during traditional frontal lobe tasks", *Biological Psychiatry*, 39, 389-399.
9. Berman, K.F., Schmidt, P.J., Rubinow, D.R., Danaceau, M.A., **Van Horn, J.D.**, Esposito, G., Ostrem, J.L., and Weinberger, D.R. (1997) "Modulation of cognitive-specific cortical activity by gonadal steroids: A PET study in women" *Proceedings of the National Academy of Sciences, USA*, 94, 8836-3341. [Helped to collect the longitudinal PET data in a large sample of females for the study, performed all statistical analyses]
10. Jacobsen, L.K., Hamburger, S.D., **Van Horn, J.D.**, Vaituzis, A.C., McKenna, K., Frazier, J.A., Gordon, C.T., Lenane, M.C., Rapoport, J.L., and Zametkin, A.J. (1997) "Cerebral glucose metabolism in childhood onset schizophrenia" *Psychiatry Research: Neuroimaging Section*, 75, 131-144. [Contributed to statistical analysis of PET data]
11. Goldberg, T.E., Berman, K.F., Fleming, K., Ostrem, J.L., **Van Horn, J.D.**, Esposito, G., Gold, J.M., Weinberger, D.R. (1998) "Uncoupling cognitive workload and prefrontal cortical physiology: A dual task rCBF PET study", *NeuroImage*, 7, 296-303. [Performed all PET image data analysis for the study]
12. Mattay V.S., Callicott J.H., Bertolino A., Santha A.K., **Van Horn J.D.**, Tallent K.A., Frank J.A., Weinberger D.R. (1998) "Hemispheric control of motor function: a whole brain echo planar fMRI study," *Psychiatry Research*, 83, 7-22. [Performed all PET image data analysis for the study]

13. **Van Horn, J.D.**, Ellmore, T.M., Esposito, G., and Berman, K.F. (1998) "Mapping voxel-based statistical power on parametric brain images" *NeuroImage*, 7, 97-108.
14. **Van Horn, J.D.**, Gold, J., Esposito, G., Ostrem, J.L., Mattay, V., Weinberger, D.R., and Berman, K.F. (1998) "Changing Patterns of Brain Activation During Maze Learning: An H215O PET study", *Brain Research*, 793, 29-38.
15. Esposito, G., Kirkby, B.S., **Van Horn, J.D.**, Ellmore, T.M., and Berman, K.F. (1999) "Context-dependent, neural system-specific neurophysiological concomitants of aging: Mapping PET correlates during cognitive activation", *Brain*, 122, 963-979. [Performed all PET image data analysis for the study]
16. Alexander, G.E., Mentis, M.J., **Van Horn, J.D.**, Grady, C.L., Berman, K.F., Furey, M.L., Pietrini, P., Schapiro, M.B., Rapoport, S.I., and Moeller, J.R. (1999) "Individual differences in PET activation of object perception and attention systems predict face matching accuracy," *NeuroReport*, 10, 1965-1971. [Wrote custom software and performed all PET image data analysis for the study]
17. Gourovitch, M.L., Kirkby, B.S., Goldberg, T.E., Weinberger, D.R., Gold, J.M., Esposito, G., **Van Horn, J.D.**, and Berman, K.F. (2000) "A comparison of rCBF patterns during letter and semantic fluency," *Neuropsychology*, 14, 353-60. [Conducted all statistical analyses of PET data for the study]
18. Bertolino A., Esposito G., Callicott JH, Mattay V.S, **Van Horn J.D.**, Frank J.A., Berman K.F., Weinberger D.R. (2000) "Specific relationship between prefrontal neuronal N-acetylaspartate and activation of the working memory cortical network in schizophrenia," *American Journal of Psychiatry*, 157, 26-33. [Contributed to the description of the PET imaging data acquisition]
19. Ye, F., Berman, K.F., Ellmore, T., Esposito, G., **Van Horn, J.D.**, Yang, Y., Duhn, J., Smith, A.M., Frank, J.A., Weinberger, D.R., McLaughlin, A.C. (2000) "H215O PET validation of steady-state arterial spin tagging cerebral blood flow measurements in humans" *Magnetic Resonance in Medicine*, 44, 450-456. [Performed all PET data analyses for the study]
20. Ernst, M., Matochik, J.A., Heishman, S.J., **Van Horn, J.D.**, Jons, P.H., Henningfield, J.E., and London, E.D. (2001) "Effect of nicotine on brain activation during performance of a working memory task", *Proceedings of the National Academy of Sciences*, 98, 4728-4733. [Contributed to the analysis of PET data]
21. **Van Horn, J.D.**, Grethe, J.S., Kostelec, P., Woodward, J.B., Aslam, J.A., Rus, D., Rockmore, D., and Gazzaniga, M.S. (2001) "The Functional Magnetic Resonance Imaging Data Center: The Challenges and Rewards of Large-Scale Databasing of Neuroimaging Data", *Philosophical Transactions of the Royal Society of London, Series B*, 356, 1323-1339.
22. Janata, P., Birk, J., **Van Horn, J.D.**, Lemon, M., Tilman, B., and Bharucha, J. (2002) "The Cortical Topography of Tonal Structures Underlying Western Music", *Science*, 298, 2167-2170. [Contributed the idea that Fourier analysis would be the best way to process the data; consulted on the writing of analysis code; assisted in editing the paper]

23. Miller, M.B., **Van Horn, J.D.**, Wolford, G.L., Handy, T.L., Valsangkar-Smyth, M., Inati, S., Grafton, S.T., and Gazzaniga, M.S. (2002) "Extensive individual differences in brain activations associate with episodic retrieval are reliable over time", *Journal of Cognitive Neuroscience*, 14(8), 1-17. [Wrote custom ANOVA analysis software to analyze individual variance between subjects; helped to author the paper]
24. Handy, T.C., Miller, M.B., Schott, B., Shroff, N.M., Janata, P., **Van Horn, J. D.**, Inati, S., Grafton, S.T., & Gazzaniga, M.S. (2004). "Visual Imagery and memory--Do retrieval strategies affect what the mind's eye sees?" *European Journal of Cognitive Psychology*, 16(5), 631-652. [Contributed to the interpretation of results]
25. Baird, A.A., Colvin, M., Inati, S., **Van Horn, J.D.**, and Gazzaniga M.S. (2005) "Functional connectivity: Integrating behavioral, DTI and fMRI data sets", *Journal of Cognitive Neuroscience*, 17, 687-693. [Aided with the analysis and interpretation of the joint fMRI-DTI data processing]
26. Schaich-Borg, J., Hynes, C., **Van Horn, J.D.**, Grafton, S.T., and Sinnott-Armstrong, W. (2006) "Consequences, action, and intention as factors in moral judgments: An fMRI investigation", *Journal of Cognitive Neuroscience*, 18, 803-817. [Supervised the writing of a multivariate analysis data processing routine specific to the type of experiment conducted in this study]
27. **Van Horn, J.D.**, Yanos, M., Schmitt, P.J., and Grafton, S.T. (2006) "Alcohol-Induced Suppression of BOLD Activity During Goal-Directed Visuomotor Performance", *NeuroImage*, 31(3), 1209-1221.
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None.

#### F. RESEARCH PAPERS – NON-PEER-REVIEWED (SUBMITTED)

None.

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184. **Van Horn, J.D.** (2020) "Building Bridges Between Brain and Data Sciences", *Big Data*. <https://doi.org/10.1089/big.2020.0065> [An argument that the study of the brain requires a data science approach and that numerous data and tools resources exist to support brain research as a science of discovery].
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None.

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## MEDIA RELATIONS:

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Reuters News Service, August 2001, interview.  
Vox of Dartmouth, August 2001, quotation.  
ADVANCE for Imaging and Radiation Therapy Professionals, August 2001, “New fMRI data center to expand horizons for professionals and the field”, interview.  
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Vox of Dartmouth, July 2002, quotation.  
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Boston Globe, Feb. 2004, “Universities view tool that shows brains at work”, interview.  
Dartmouth Undergraduate Journal of Science, Winter 2002, “Data sharing and the future of fMRI”, interview.  
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Vox of Dartmouth, May 2004, “Progress of the brain image bank”, interview  
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Vox of Dartmouth, May 2005, “Magnetic Forces”, interview.  
Vox of Dartmouth, December 2005, “Dartmouth’s fMRI Lab makes film debut in Wired to Win”, interview.  
The Dartmouth, January 2006, “Newly released IMAX film relies on College fMRI research”, interview.  
Wired to Win, IMAX film, December 2005 premier, provided the fMRI activation content featured in the film.  
Vox of Dartmouth, October 2006, “Brain Imaging Center Hosts Public Presentation”, interview.  
The Incredible Human Machine, The National Geographic Channel, October 21, 2007, television appearance.  
Science News, June 2014, comment on “The hubs of the human connectome are generally implicated in the anatomy of brain disorders” Nicolas A. Crossley, Andrea Mechelli, Jessica Scott, Francesco Carletti, Peter T. Fox, Philip McGuire, and Edward T. Bullmore, *Brain*, doi:10.1093/brain/awu132.

The following media outlets featured the work described in my article in the journal *PLoS ONE*, appearing May 16<sup>th</sup>, 2012. Where I was interviewed directly is as indicated.

Science Daily, May 16<sup>th</sup>, 2012  
The Guardian (UK), May 16<sup>th</sup>, 2012  
LiveScience.com, May 17<sup>th</sup>, 2012  
Los Angeles Times, May 16<sup>th</sup>, 2012  
Huffington Post, May 17<sup>th</sup>, 2012  
New Scientist (UK), May 17<sup>th</sup>, 2012 (interviewed)  
CNN, May 16<sup>th</sup>, 2012 (interviewed)  
PlanetSave.com, May 17<sup>th</sup>, 2012  
TG Daily, May 17<sup>th</sup>, 2012  
SmartPlanet.com, May 19<sup>th</sup>, 2012

UCLA Daily Bruin, May 23<sup>rd</sup>, 2012 (interviewed)  
Reuters News, May 16<sup>th</sup>, 2012 (interviewed and TV appearance)  
Discovery Channel, May 17<sup>th</sup>, 2012 (interviewed)  
Sirius XM Radio, May 23<sup>rd</sup>, 2012 (radio appearance)  
NOVA scienceNOW, May 23<sup>rd</sup>, 2012 (interview)  
Discover Magazine Special Issue on “The Brain”, Fall 2012 (interview and featured work)  
KPCC, Pasadena National Public Radio, June 5<sup>th</sup>, 2012 (radio interview)  
National Public Radio, July 31<sup>st</sup>, 2012 (radio interview)  
Diario Clarín (Argentina), July 5<sup>th</sup>, 2012 (interview and featured work)  
And many other news sources, blogs, and websites

The following media outlets featured the work described in my article in the journal *Frontiers in Human Neuroscience*, appearing February 11<sup>th</sup>, 2014. Where I was interviewed directly is as indicated.

Scientific American MIND, May 10<sup>th</sup>, 2014 Issue (interviewed)  
National Geographic, May 10<sup>th</sup>, 2014 (interviewed)  
Science News, May 12<sup>th</sup>, 2014 (interviewed)  
USC Annenberg News, May 12<sup>th</sup>, 2014  
iOp.com, May 11<sup>th</sup>, 2014  
Science Daily, February 11, 2014  
Article featured on the Frontiersin.org website, February 14<sup>th</sup>, 2014

Radio Iran (KIRN, <http://www.670amkirn.com/>), Los Angeles, CA, February 7<sup>th</sup>, 2015 – interviewed concerning the new University of Southern California (USC) masters of science degree program in neuroimaging and informatics.

Interview with Malcolm Ritter of *The Associated Press*, February 11<sup>th</sup>, 2015. Discussing current trends in human brain imaging. Published in several locations, e.g.  
<http://www.newsobserver.com/living/health-fitness/article24878257.html>

Interview with Timandra Harkness of the *British Broadcasting Corporation (BBC)*, March February 13<sup>th</sup>, 2015. An interview concerning “Big Data” and neuroscience. Referred to me as “the midwife of neuroscience data sharing”! <http://www.bbc.co.uk/programmes/b03kqfzx>

Interview with Cody C. Delistraty of *The Atlantic* magazine, March 2<sup>nd</sup>, 2015. An interview concerning the injury affecting the brain of Phineas Gage. Submitted a comment critical of the theme of the resulting article to the editors (March, 2015) with Malcolm Macmillan and Matthew Lena.

Television Interview with Jay Fidell of *ThinkTech Hawaii*, June 17<sup>th</sup>, 2015, Honolulu, Hawaii along with Karen Berman, M.D. and Linda Chang, M.D. discussing the Organization for Human Brain Mapping’s Annual Meeting of other brain related topics:  
<https://www.youtube.com/watch?v=SNikkTwQhHM>

Interview with Douglas Morino, Writer/Editor, Internal Communications for Health Sciences Public Relations & Marketing, University of Southern California, for the June 17<sup>th</sup> issue of USC Keck News concerning the *USC Master of Science in Neuroimaging and Informatics (NIIN)* program.

Interviewed in *USC News* about the NIH Big Data to Knowledge (BD2K) Training Coordinating Center (TCC) project (<https://news.usc.edu/87595/usc-to-teach-worldwide-researchers-how-to-analyze-biomedical-information-at-big-data-u/>)

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Article in USC’s Health Science Campus News “Commencement 2016: Big day for first class of brain mapping master’s students”, June 16, 2016, (<http://hscnews.usc.edu/commencement-2016-big-day-for-first-class-of-brain-mapping-masters-students/>).

Article in USC’s Health Science Campus News “Young investigators sought for new program”, August 30<sup>th</sup>, 2016. <http://keck.usc.edu/young-investigators-sought-for-new-program/>.

Featured in “Big Data Biomedicine”, <https://www.youtube.com/watch?v=F6CI7jXHGWg>

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Features in “Big Data Science: An Introductory Tutorial”, [https://www.youtube.com/watch?v=25z-iALT\\_KM](https://www.youtube.com/watch?v=25z-iALT_KM)

Quoted in USC HSC News article “Online seminar offers guide to fundamentals of data science”, April 27<sup>th</sup>, 2017, <http://hscnews.usc.edu/online-seminar-offers-guide-to-fundamentals-of-data-science/>.

Appeared in a segment on National Public Radio, May 21, 2017, <http://www.npr.org/sections/health-shots/2017/05/21/528966102/why-brain-scientists-are-still-obsessed-with-the-curious-case-of-phineas-gage>

Quoted in “United States bans most government scientists from travel to Cuba”, *Science Magazine*, November 28<sup>th</sup>, 2017, <http://www.sciencemag.org/news/2017/11/united-states-bans-most-government-scientists-travel-cuba>

Co-signee of a letter to the *Guardian* newspaper in London, England suggesting joint scientific scrutiny of neurological data from affected diplomats in Cuba, June 1, 2018: <https://www.theguardian.com/world/2018/jun/01/cuba-sonic-attack-conspiracy-theories-and-flawed-science>

Quoted in a *Science Magazine* editorial entitled “Sonic attack or mass paranoia? New evidence stokes debate over diplomats’ mysterious illness” on the neurological effects of sonic “attacks” on diplomats in Cuba, June 20<sup>th</sup>, 2018: <http://www.sciencemag.org/news/2018/06/sonic-attack-or-mass-paranoia-new-evidence-stokes-debate-over-diplomats-mysterious>

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Spectrum News, March 1, 2020, provided comment on a neuroimaging study showing that older autistic adults may retain strong visual abilities: <https://www.spectrumnews.org/news/older-autistic-adults-may-retain-strong-visual-abilities/>