

CURRICULUM VITAE

Name: Vince D. Calhoun, Ph.D.
Born: October 1, 1967, Toledo, Ohio
Family: Married to June; son Jachin (age 9), daughter Anaiah (age 4),
daughter Sarita (age 1)



Education:

B.S. Electrical Engineering, University of Kansas, Lawrence, KS, May 1991
M.A. Biomedical Engineering, Johns Hopkins University, Baltimore, MD, May 1993
M.S. Information Systems, Johns Hopkins University, Baltimore, MD, January 1996
Ph.D. Electrical Eng., Univ. of Maryland Baltimore County, Baltimore, MD, May 2002

Career:

2012-present Executive Science Officer
The Mind Research Network, Albuquerque, NM

2011- 2012 Chief Executive Officer
The Mind Research Network, Albuquerque, NM

2011- present Adjunct Senior Scientist
Lovelace Respiratory Research Institute

2010- present Professor, Departments of Electrical and Computer Engineering (primary),
Neurosciences, Computer Science, and Psychiatry
University of New Mexico, Albuquerque, NM

2010 Associate Professor, Department of Psychiatry
The University of New Mexico, Albuquerque, NM

2009-2011 Chief Technology Officer
The Mind Research Network, Albuquerque, NM

2009-present Affiliate Professor, Chester F. Carlson Center for Imaging Science
Rochester Institute of Technology, Rochester, NY

2007-2010 Associate Professor, Department of Computer Science
University of New Mexico, Albuquerque, NM

2007-2010 Associate Professor, Department of Neurosciences
University of New Mexico, Albuquerque, NM

2006- present Director Image Analysis and MR Research
The Mind Research Network, Albuquerque, NM

- 2006-2010 Associate Professor, Department of Electrical and Computer Engineering
University of New Mexico, Albuquerque, NM
- 2005- present Associate Professor, Adjunct, Department of Psychiatry
Yale University, New Haven, CT
- 2002- present Assistant Professor, Adjunct, Department of Psychiatry
Johns Hopkins University, Baltimore, MD
- 2002-2005 Assistant Clinical Professor, Department of Psychiatry
Yale University, New Haven, CT
- 2002-2006 Director, Medical Image Analysis Laboratory
Institute of Living, Hartford, CT
- 2001-2002 Senior Research Engineer, Psychiatric Neuroimaging
Johns Hopkins University, Baltimore, MD
- 1996-2001 Research Engineer, Psychiatric Neuroimaging
Johns Hopkins University, Baltimore, MD
- 1993-1996 System Manager/Programmer, Psychiatric Neuroimaging
Johns Hopkins University, Baltimore, MD
- 1993-1993 Research Technician, Laboratory for Studies on the
Controlled Release of Bioactive Materials
Johns Hopkins University, Baltimore, MD
- 1990-1991 Research Assistant, Remote Sensing Laboratory
University of Kansas, Lawrence, KS

Professional Honors or Recognition:

2012 Recipient, A. Earl Walker Neuroscience Award
Dept. of Neurosciences, University of New Mexico

2010 Recipient, Outstanding Young Engineer Award
IEEE, Albuquerque Section

2010 Recipient, Distinguished Researcher Award
Department of ECE, University of New Mexico

2008 Recipient, Junior Faculty Research Award
School of Engineering, University of New Mexico

Course on “Independent Component Analysis of BOLD fMRI Data” Selected for International Society of Magnetic Resonance in Medicine (ISMRM) Global Outreach Program (online 2008-2011)

2006- Senior Member, IEEE

2006- Member, American College of Neuropsychopharmacology

2006 Recipient, Young Investigator Memorial Travel Award
American College of Neuropsychopharmacology

2005 Recipient, Young Investigator Award
International Congress on Schizophrenia Research

2004 Recipient, Early Career Investigator Award
International Society for Neuroimaging in Psychiatry

2002 Member, IEEE

1992, 1995 Student Travel Award
International Society of Magnetic Resonance in Medicine

1991 Student Member, IEEE

Member, Phi Beta Kappa (honor society)

Member, Omicron Delta Kappa (honor society)

Member, Secretary, Mortar Board (honor society)

Member, President, Tau Beta Pi (engineering honor society)

Member, Eta Kappa Nu (engineering honor society)

List of Funded Research:

*indicates obtained (or renewed) while at UNM

Active

*NIMH; 1RC1MH089257 (Calhoun) 9/30/09-9/29/12
Genetic Markers of White Matter Integrity and Clinical Severity in Schizophrenia \$320,000/year directs

The goal of this Challenge grant application is to identify novel biomarkers of clinical severity in patients with schizophrenia. There are currently no reliable biomarkers for schizophrenia, so the proposed use of sophisticated genotyping, neuroimaging and biostatistical tools for searching biomarkers that can predict disease severity in two large cohorts of patient has a high clinical impact. The identification of such biomarkers will not only increase our knowledge of the pathophysiology of schizophrenia but also, and most importantly, may help predict an increased risk for this illness even before the onset of symptoms.

Role: Principle Investigator

- *NIBIB; 1R01EB000840 (Calhoun) 2/1/08-1/31/13
 A unified framework for flexible brain image analysis \$350,000/year directs
 The imaging findings in schizophrenia are widespread, heterogeneous, not diagnostic, and have limited replicability and it is likely that in part the lack of consistent findings is because most models do not adequately account for the variability present in the data from schizophrenia patients. The successful completion of this research will provide a powerful set of algorithms and software tools for the research community to increase the sensitivity and specificity of functional brain imaging techniques.
 Role: Principle Investigator
- *NIH/NIBIB; 1R01EB006841 (Calhoun) 4/1/07 – 3/31/15
 Multivariate methods for identifying multi-task/multimodal brain imaging biomarkers \$350,000/year directs
 To develop methods, based upon independent component analysis, for joint-statistical analysis of multi-task and multimodal brain data (functional MRI, DTI, structural MRI) to identify multimodal biomarkers.
 Role: Principle Investigator
- *NIH/NIBIB; 2R01EB005846 (Calhoun) 5/1/09 – 4/30/13
 Informed Data-Driven Fusion of Behavior, Brain Function, and Genes \$350,000/year directs
 This application proposes to further develop, enhance, and disseminate a set of sophisticated multivariate analysis tools for combination and examination of data from multiple modalities such as fMRI, ERP, genomic, and behavioral studies.
 Role: Principle Investigator
- *NIH/NCRR; 1P20RR021938 (Calhoun) 8/1/08 – 7/31/13
 COBRE: Neural Mechanisms of Schizophrenia: Use of Multiple Tools \$1,725,415/year directs
 to Examine Dysfunctions in Neural Integration
 Center grant funding 4 junior PIs and 4 cores which examines functional and anatomical connectivity in schizophrenia using multimodal neuroimaging analyses.
 Role: Principle Investigator
- *NSF; 1116944 (Calhoun) 8/1/2011 – 7/31/2014
 CIF: Small: Collaborative Research: Entropy Rate for Source Separation and Model Selection: Applications in fMRI and EEG \$120,000/year directs
 We will develop a class of powerful methods for source separation—primarily using independent component analysis (ICA)—and model selection using entropy rate so that we can fully take both the full higher-order-statistical information and sample correlation into account in the development. We will apply these techniques to the analysis of functional magnetic resonance (fMRI) data (both the magnitude and full complex fMRI data) and the rejection of gradient and pulse artifacts in electroencephalography (EEG) in concurrent EEG-fMRI data. In both cases, information on the nature of source distribution as well as the extent of correlation—e.g. through the use of reference electrocardiogram (ECG) and eye movement data collected during the acquisition, as well as the information on the imaging parameters.
 Role: Principle Investigator [collaborative project with Tulay Adali @ UMBC]
- *NSF; 1016619 (Calhoun) 8/15/2010–7/31/2013
 III: Small: Collaborative Research: Canonical Dependence Analysis \$170,000/year directs
 for Multi-modal Data Fusion and Source Separation
 We will develop a set of powerful tools for multi-subject (multi-set) data analysis and multi-modal data fusion based on canonical dependence analysis that extends the power and flexibility of multiset canonical correlation analysis. We will study brain function and functional associations during simulated driving, a naturalistic task where data-driven methods have proven especially useful. We will also investigate genetic associations with good or poor driving behavior and will study the brain function variability at different blood alcohol levels.
 Role: Principle Investigator [collaborative project with Tulay Adali @ UMBC]

*1R01MH094524-01A1 (Calhoun & Turner, Co-PIs)	1R01MH094524-01A1 (Calhoun & Turner, Co-PIs)
Mining the Genomewide Scan: Genetic Profiles of Structural Loss in Schizophrenia	\$414,000/yr Directs
<p>The development of both neuroimaging and genome-wide scan technologies have created a proliferation of data about neuropsychiatric disorders. It is possible to collect more information in a study about each subject than there are subjects available to study, creating a challenge for standard statistical techniques. We develop an approach already used separately in imaging and genetics, but apply it here to the combination of imaging genetic data on a massive dataset, to determine genetic effects on brain structure in psychiatric disorders.</p>	
<p>Role: Principle Investigator [Co-PI with Jessica Turner]</p>	
5R01MH085010 (Kiehl)	7/17/2009 - 4/30/2014
NIH/NIMH	\$396,653/yr Direct
The Cognitive Neuroscience of Female Psychopathy	
<p>To test the paralimbic dysfunction hypothesis of psychopathy in female offenders using event-related potentials and functional magnetic resonance imaging</p>	
<p>Role: Co-Investigator</p>	
5R01DA026505 (Kiehl)	9/1/2009 - 5/31/2014
NIH/NIDA	\$424,868/yr Direct
Socio-moral processing in psychopathy and substance abuse	
<p>To use functional imaging to elucidate and characterize the functional neuroanatomy of processing of moral stimuli for linguistic and picture stimuli in psychopathy and substance abuse</p>	
<p>Role: Co-Investigator</p>	
1R01DA026964 (Kiehl)	7/01/2010 - 6/30/2015
NIH/NIDA	\$352,115/yr Direct
Action monitoring, action observation and dopamine genes as predictors of substance abuse	
<p>To utilize multimodal imaging techniques (ERP/fMRI) to characterize the integrity of neural circuits engaged in action-monitoring in incarcerated drug-abusers</p>	
<p>Role: Co-Investigator</p>	
1R21DA027626 (Liu)	9/1/2009 - 8/31/2013
NIH/NIDA	\$253,613/yr Direct
A multilevel vulnerability study of substance abuse via CNV, brain activation and behavior	
<p>This project focuses on the understanding of the vulnerability to substance abuse in different developmental phases will greatly assist the diagnosis, prevention and treatment plans. The efficiency and effectiveness of prevention and treatment efforts can also be improved with increased knowledge about common pathways underlying disorders related to different substances</p>	
<p>Role: Co-Investigator</p>	
RO1MH077945 (Pearlson)	12/1/2007–11/30/2012
NIH/NIMH	\$670,295/yr Direct
Bipolar & Schizophrenia Consortium for Parsing Endophenotypes	

The overall goal of the proposed research is to examine a broad panel of putative endophenotypes in affected individuals with schizophrenia and bipolar and their unaffected relatives in order to: 1) characterize the degree of familial phenotypic overlap between SZ and psychotic BP; 2) identify patterns of endophenotypes unique to the two disorders, and 3) contrast the heritability of endophenotypes across the disorders.

Role: PI on Subcontract

R01MH080956-01 (Stevens) 4/1/2008-03/31/2013
NIH/NIMH \$250,000/yr Direct

Characterizing Two Distinct ADHD Neurobiologies with fMRI

A study using functional imaging, genetic analysis, and neuropsychological assessment to examine whether there are two separate profiles of neurobiological impairment underlying impulsive behavior in ADHD.

Role: PI on Subcontract

R01MH081969 (Stevens) 7/1/2008-6/30/2013
NIH/NIMH

Adolescent maturation of brain network integration for executive control abilities \$250,000/yr Direct

Develop novel analytic tools for fMRI and aid in structure/function analysis. In addition, implement the data fusion analysis.

Role: PI on Subcontract

1 R01AA016599 (Pearlson) 2/1/2007-1/31/2012
NIH/NIAAAA \$446,656/yr Direct

Alcohol and Drug Use in College Students: Cognition and fMRI

Investigates effects of drug and alcohol use on cognitive abilities, structural and functional brain MRI in freshman college students, with repeat assessment at 24 months.

Role: PI on Subcontract

1 R01DA025074 (Hutchison) 9/30/2008-8/31/2013
NIH/NIDA \$396,000/yr Direct

Effectiveness of Varenicline: Testing Individual Differences

Role: Co-Investigator

1R01MH090169-01A1 (Kosson) 7/1/2011 - 6/30/2015
NIH/NIMH \$285,000/yr Direct

Neural Substrate of Cognitive and Emotional Deficits in Psychopathy

The current project examines regional brain activation while offenders and healthy controls complete cognitive and emotional tasks validated for differentially activating left hemisphere systems.

Role: Co-Investigator

2 R44 MH075481-03A2 (Ruano) 09/2/2009 -
NIH/NIMH 8/31/2012
\$200,000/yr Direct

MRI DNA Biomarkers for Neuropsychiatric Disease

There is an urgent need for innovative technologies to study the multi-gene etiology of these disorders for early diagnosis, prevention, and treatment. Advances in the Genomas PhysioGenomics™ technology allow us to develop disease related DNA arrays. These products will enable researchers to couple neuropsychiatric endophenotypes, structural and functional imaging of the brain) with genetic information from hundreds of genes, including single nucleotide polymorphisms (SNPs) and haplotypes, to build multigene DNA markers of disease.

Role: PI on Subcontract

Completed

NARSAD; (Calhoun) 4/1/04-3/31/09
 Assessment of the State-Trait Specificity of Auditory Cortex fMRI \$60,000 directs
 Synchrony Maps in Schizophrenia and Bipolar Disorder
 Study of specificity of auditory cortex maps in acute psychotic bipolar patients and after 6 months of medication. Maps are generated using independent component analysis methods we have developed.
 Role: Primary Investigator

NIAAA; 1 RO1 AA015615-01 (Pearlson) 3/1/05 – 2/28/09
 Alcohol and Driving: fMRI Studies \$250,000/year directs
 To study specific cognitive impairments caused by alcohol, their underlying functional anatomy and how they relate to performance on a validated simulated driving task.
 Role: PI on subcontract

NIMH; 1 R01 MH072681-01 (Kiehl) 7/1/05-6/30/09
 Abnormal functional connectivity in psychosis \$250,000/year
 To use functional brain imaging measures to differentially diagnose schizophrenia from psychotic bipolar illness.
 Role: Co-Investigator

NIMH; K23 MH070036-01 Stevens (PI) 8/01/04 - 7/01/09
 Neuroimaging Cognition in Adolescent Behavior Disorders \$142,250/year
 A 5-year Career Development Award to provide the PI skills for an independent clinical neuroscience research career investigating how brain function relates to diagnoses associated with disruptive behavior.
 Role: Co-Mentor

NIH/NIBIB; R01EB005846 (Calhoun) 8/1/05 – 5/31/09
 Collaborative Research: Spatiotemporal Fusion of fMRI, EEG, and Genetic Data Using Independent Component Analysis \$220,000/year directs
 To develop data fusion approaches for fMRI, EEG, and gene SNP array data.
 Role: Primary Investigator

*NSF-CCF; 0635129 (Calhoun) 8/1/06-7/31/10
 Collaborative Research: Complex-Valued Signal Processing and its Application to Analysis of Brain Imaging Data \$100,000/year directs
 To establish a framework for complex-valued signal processing such that the full potential of complex-valued signal processing can be realized and the need for simplifying assumptions such as circularity of signals can be eliminated. We will then show how this framework can be utilized to derive efficient algorithms for performing ICA in the complex domain, and focus upon functional magnetic resonance imaging (fMRI), structural MRI (sMRI) and diffusion tensor imaging (DTI).
 Role: Primary Investigator

NSF-SEI; 0612076 (Calhoun)	8/1/06-7/31/10
Collaborative Research: SEI: Independent Component Analysis of Complex-Valued Brain Imaging Data	\$200,000/year directs
To develop multivariate methods for incorporating complex-valued processing strategies in the context of structural MRI, functional MRI, and diffusion tensor imaging data.	
Role: Primary Investigator	
NIMH; 2 RO1 MH43775-14 (Pearlson)	3/1/05 – 2/28/11
Quantitative Neuroimaging in Psychosis	\$250,000/year
Investigates circuit-wide abnormalities in schizophrenia using functional and structural brain MRI in schizophrenia and healthy controls.	
Role: Co-Investigator	
NIDA; 1 R01 DA020870-01 (Kiehl)	9/1/05-8/31/10
Neurocognitive changes associated with behavioral treatment in cocaine abusers	\$388,096/year
To examine functional and structural changes associated with three cognitive behavioral treatment protocols in cocaine abusers.	
Role: Co-Investigator	
NIH: 1 R24 RR021992 (Potkin)	4/1/06-3/31/12
BIRN: Functional Imaging Research for Schizophrenia Testbed	\$157,000/year directs
Federated database project involving 19 performance sites. PI involvement in cognitive, statistics, and calibration workgroups.	
Role: PI on Subcontract	

Service:

Founding Editor-in-Chief: Engineering Section
Computation, 2012-

Associate Editor
Journal of Neuroscience Methods, 2013-

Associate Editor
Frontiers in Brain Imaging Methods, 2012-

Editorial Board
NeuroImage: Clinical, 2012-

Editorial Board
Brain Connectivity, 2010-

Member, Program Committee
Mathematical Methods in Biomedical Image Analysis (MMBIA)
San Francisco, 2010

Member, Program Committee
First International Conference on Pattern Recognition (ICPR) workshop on Brain Decoding

Pattern recognition challenges in fMRI neuroimaging, Aug 2010

Treasurer, Organization for Human Brain Mapping, June 2009-

NIH Study Section, Biomedical Imaging Technology (BMIT), Charter Member, Nov 2009-

Member, Program Committee

2009 International Congress on Schizophrenia Research (ICOSR2009)

Member, Technical Committee

2009 IEEE Workshop on Statistical Signal Processing (SSP2009)

NIH Study Section, Genetics and Psychopathology (ZRG1 HOP-V), Feb 2008

NIH Study Section, Surgical Sciences, Biomed. Imaging and Bioeng. (SBIB-J), June 2007

Member

IEEE Signal Processing Society BISP Technical Committee, 2008-

Member, Program Committee IEEE International Symposium on Signal Processing and Information Technology (IEEE ISSPIT'08)

Editorial Board

NeuroImage, 2008-

Editorial Board

Frontiers in Human Neuroscience, 2007-

Editorial Board

The Open Biomedical Engineering Journal, 2007-

Associate Editor

International Journal of Computational Intelligence and Neuroscience, 2006-

Chapter Organizer, 2006

IEEE EMBS, Albuquerque

Associate Editor

IEEE Signal Processing Letters, 2005-2009

NIH Study Section, Biomedical Imaging Technology (BMIT), June 2005, Feb 2006, Sept 2007

Natural Sciences and Engineering Research Council of Canada (NSERC), Ad hoc grant reviewer, Jan 2006

The Scottish Executive Healthy Department, Ad hoc grant reviewer, Feb 2006

NIH Study Section, RFA New way of imaging neural activity, April 2006

The Wellcome Trust, Ad hoc grant reviewer, March 2005, May 2006

NSF Grant Review Panel (CRCNS), March 2006

NSF Grant Review (BCS), November 2006

Netherlands Organization for Scientific Research (NWO), Social Sciences, grant reviewer, Nov 2006

General Chair

Machine Learning for Signal Processing 2005, Mystic Connecticut

Member, Technical Committee

First International Workshop on Biosignal Processing and Classification (BPC), 2005-

Member, Program Committee

International Conference on Intelligent Knowledge Systems (IKS-2005)

NIH Study Section, Ad hoc member, Human Brain Project (HBP)/Neuroinformatics, 2005

Editorial Board

Human Brain Mapping 2004-

Member, Technical Program Committee

Machine Learning for Signal Processing (MLSP), 2004-

Member, Advisory Board

International Conference on Informatics (ICI-2004)

NIH Study Section, Ad hoc member, Human Brain Project (HBP)/BIST (Biomedical Information Science and Technology), Feb 2004

Member, Technical Program Committee

Neural Networks for Signal Processing (NNSP 2003)

Member: Tau Beta Pi Mentoring Program, 2003-

Member: International Review Panel, 2003-

Medical Science Monitor

UNM Service:

Member: School of Engineering Promotion and Tenure Committee, 2011-

Member: CTSC Multidisciplinary Advisory Committee, Fall 2011-present

Member: Engineering Dean's Selection Committee, 2009

Member: ECE Promotion & Tenure Committee, 2008

Member: ECE Strategic Planning Committee, 2008/2009

Area Chair: CompE Group, Spring 2007-Spring 2009

Member: Graduate Committee, ECE, Fall 2007-present

Member: CompE Faculty Search Committee, Fall 2006

Chair: Bioengineering Committee, Fall 2006

Chapter organizer: UNM IEEE Engineering in Medicine and Biology Chapter, 2007-present

Member, Advisory council, Program in Interdisciplinary Biological and Biomedical Sciences (PIBBS), 2007-present

Full Bibliography:

Peer Reviewed Journal Articles (over 240 published or in press journal articles):

- [1] B. Reisfeld, S. Blackband, V. D. Calhoun, S. Grossman, S. Eller, and K. Leong, "The use of magnetic resonance imaging to track controlled drug release and transport in the brain," *Mag.Res.Imag.*, vol. 11, pp. 247-252, 1993.
- [2] S. Kalyanasundaram, V. D. Calhoun, and K. W. Leong, "A finite element model for predicting the distribution of drugs delivered intracranially to the brain," *Am.J.Physiol.*, vol. 273, pp. R1810-R1821, 1997.
- [3] V. D. Calhoun, T. Adali, M. Kraut, and G. D. Pearlson, "A Weighted-Least Squares Algorithm for Estimation and Visualization of Relative Latencies in Event-Related functional MRI," *Magn.Res.Med.*, vol. 44, pp. 947-954, 2000.
- [4] V. D. Calhoun, T. Adali, V. McGinty, J. J. Pekar, T. Watson, and G. D. Pearlson, "fMRI Activation In A Visual-Perception Task: Network Of Areas Detected Using The General Linear Model And Independent Component Analysis," *NeuroImage*, vol. 14, pp. 1080-1088, 2001.
- [5] V. D. Calhoun, T. Adali, G. D. Pearlson, and J. J. Pekar, "A Method for Making Group Inferences from Functional MRI Data Using Independent Component Analysis," *Human Brain Mapping*, vol. 14, pp. 140-151, 2001.
- [6] V. D. Calhoun, T. Adali, G. D. Pearlson, and J. J. Pekar, "Spatial and temporal independent component analysis of functional MRI data containing a pair of task-related waveforms," *Hum.Brain Map.*, vol. 13, pp. 43-53, 2001.
- [7] V. D. Calhoun, T. Adali, G. D. Pearlson, P. C. van Zijl, and J. J. Pekar, "Independent component analysis of fMRI data in the complex domain," *Magn Reson.Med.*, vol. 48, pp. 180-192, 2002.
- [8] V. D. Calhoun, J. J. Pekar, V. B. McGinty, T. Adali, T. D. Watson, and G. D. Pearlson, "Different activation dynamics in multiple neural systems during simulated driving," *Hum.Brain Map.*, vol. 16, pp. 158-167, 2002.
- [9] A. Horska, V. D. Calhoun, D. H. Bradshaw, and P. B. Barker, "A rapid method for correction of partial CSF volume in quantitative proton MR spectroscopic imaging," *Magn.Res.Med.*, vol. 48, pp. 555-558, 2002.

- [10] M. A. Kraut, S. Kremen, L. R. Moo, J. B. Segal, V. D. Calhoun, and J. Hart, Jr., "Object activation in semantic memory from visual multimodal feature input," *J.Cogn Neurosci.*, vol. 14, pp. 37-47, 2002.
- [11] M. A. Kraut, S. Kremen, J. B. Segal, V. D. Calhoun, L. R. Moo, and J. Hart, Jr., "Object activation from features in the semantic system," *J.Cogn Neurosci.*, vol. 14, pp. 24-36, 2002.
- [12] N. Mikhelashvili-Browner, D. M. Yousem, A. S. Mandir, V. D. Calhoun, C. Wu, K. K. Oguz, and C. L. Vaughan, "Correlation of reaction time in and out of the functional MR unit," *Acad.Radiol.*, vol. 9, pp. 513-519, 2002.
- [13] V. D. Calhoun, T. Adali, J. J. Pekar, and G. D. Pearlson, "Latency (in)sensitive ICA: Group Independent Component Analysis of fMRI Data in the Temporal Frequency Domain," *NeuroImage*, vol. 20, pp. 1661-1669, 2003.
- [14] M. Kraut, V. D. Calhoun, J. Pitcock, C. Cusik, and J. Hart, "Neural Hybrid Model of Semantic Object Memory: Implications from Event-Related Timing Using fMRI," *J.Int.Neuropsychol.Soc.*, vol. 9, pp. 1031-1040, 2003.
- [15] N. Mikhelashvili-Browner, D. M. Yousem, C. Wu, M. A. Kraut, C. L. Vaughan, K. K. Oguz, and V. D. Calhoun, "Lack of sex effect on brain activity during a visuomotor response task: functional MR imaging study," *AJNR Am.J.Neuroradiol.*, vol. 24, pp. 488-494, 2003.
- [16] M. A. Mohamed, D. M. Yousem, A. Tekes, N. M. Browner, and V. D. Calhoun, "Timing of cortical activation: a latency-resolved event-related functional MR imaging study," *AJNR Am.J.Neuroradiol.*, vol. 24, pp. 1967-1974, 2003.
- [17] S. H. Mostofsky, J. G. Schafer, M. T. Abrams, M. C. Goldberg, A. A. Flower, A. Boyce, S. M. Courtney, V. D. Calhoun, M. A. Kraut, M. B. Denckla, and J. J. Pekar, "fMRI evidence that the neural basis of response inhibition is task-dependent," *Brain Res.Cogn Brain Res.*, vol. 17, pp. 419-430, 2003.
- [18] K. K. Oguz, N. M. Browner, V. D. Calhoun, C. Wu, M. A. Kraut, and D. M. Yousem, "Correlation of functional MR imaging activation data with simple reaction times," *Radiology*, vol. 226, pp. 188-194, 2003.
- [19] V. D. Calhoun, T. Adali, and G. D. Pearlson, "Independent Component Analysis Applied to fMRI Data: A Generative Model for Validating Results," *Journal of VLSI Signal Proc.Systems*, vol. 37, pp. 281-291, 2004.
- [20] V. D. Calhoun, T. Adali, and J. J. Pekar, "A method for comparing group fMRI data using independent component analysis: application to visual, motor and visuomotor tasks," *Magn Reson Imaging*, vol. 22, pp. 1181-1191, Nov 2004.
- [21] V. D. Calhoun, D. Altschul, V. McGinty, R. A. Shih, D. Scott, and G. D. Pearlson, "Alcohol Intoxication Effects on Visual Perception: An fMRI Study," *Hum Brain Mapp*, vol. 21, pp. 15-26, 2004.
- [22] V. D. Calhoun, K. A. Kiehl, P. F. Liddle, and G. D. Pearlson, "Aberrant Localization of Synchronous Hemodynamic Activity in Auditory Cortex Reliably Characterizes Schizophrenia," *Biological Psychiatry*, vol. 55, pp. 842-849, 2004, PMC2771440.
- [23] V. D. Calhoun, J. J. Pekar, and G. D. Pearlson, "Alcohol Intoxication Effects on Simulated Driving: Exploring Alcohol-Dose Effects on Brain Activation Using Functional MRI," *Neuropsychopharmacology*, vol. 29, pp. 2097-2107, 2004.
- [24] V. D. Calhoun, M. Stevens, G. D. Pearlson, and K. A. Kiehl, "fMRI analysis with the general linear model: Removal of latency-induced amplitude bias by incorporation of hemodynamic derivative terms," *NeuroImage*, vol. 22, pp. 252-257, 2004.

- [25] J. S. Kim, S. A. Reading, T. Brashers-Krug, V. D. Calhoun, C. A. Ross, and G. D. Pearlson, "Functional MRI study of a serial reaction time task in Huntington's disease," *Psychiatry Res.*, vol. 131, pp. 23-30, 2004.
- [26] M. A. Mohamed, D. M. Yousem, A. Tekes, N. Browner, and V. D. Calhoun, "Correlation between the amplitude of cortical activation and reaction time: a functional MRI study," *AJR Am.J.Roentgenol.*, vol. 183, pp. 759-765, 2004.
- [27] R. S. Astur, S. Germain, E. Baker, V. D. Calhoun, G. D. Pearlson, and R. T. Constable, "fMRI Hippocampal Activity During a Virtual Radial Arm Maze," *Applied Psychophysiology and Biofeedback*, vol. 30, pp. 307-317, 2005.
- [28] V. D. Calhoun, T. Adali, M. Stevens, K. A. Kiehl, and J. J. Pekar, "Semi-blind ICA of fMRI: A method for utilizing hypothesis-derived time courses in a spatial ICA analysis," *NeuroImage*, vol. 25, pp. 527-538, 2005.
- [29] V. D. Calhoun, K. Carvalho, R. S. Astur, and G. D. Pearlson, "Using Virtual Reality to Study Alcohol Intoxication Effects on the Neural Correlates of Simulated Driving," *Applied Psychophysiology and Biofeedback*, vol. 30, pp. 285-306, 2005.
- [30] N. Giuliani, V. D. Calhoun, G. D. Pearlson, A. Francis, and R. W. Buchanan, "Voxel-Based Morphometry versus Regions of Interest: A Comparison of Two Methods for Analyzing Gray Matter Disturbances in Schizophrenia," *Schizophr.Res.*, vol. 74, pp. 135-147, 2005.
- [31] B. Hong, G. D. Pearlson, and V. D. Calhoun, "Source-Density Driven Independent Component Analysis Approach for fMRI Data," *Hum.Brain Map.*, vol. 25, pp. 297-307, 2005.
- [32] K. A. Kiehl, M. Stevens, K. R. Laurens, G. D. Pearlson, V. D. Calhoun, and P. F. Liddle, "An adaptive reflexive processing model of neurocognitive function: Supporting evidence from a large scale (n=100) fMRI study of an auditory oddball task," *NeuroImage*, vol. 25, pp. 899-915, 2005.
- [33] H. Snoussi and V. D. Calhoun, "Regularized Spectral Matching for Blind Source Separation. Application to fMRI Imaging," *IEEE Trans.Signal Proc.*, vol. 53, pp. 3373-3383, 2005.
- [34] M. Stevens, V. D. Calhoun, and K. A. Kiehl, "Hemispheric Differences in Hemodynamics Elicited by Auditory Oddball Stimuli," *NeuroImage*, vol. 26, pp. 782-792, 2005.
- [35] M. Stevens, V. D. Calhoun, and K. A. Kiehl, "fMRI in an oddball task: effects of target-to-target interval," *Psychophysiology*, vol. 42, pp. 636-642, 2005.
- [36] A. Tekes, M. Noureldin, M. Kraut, V. D. Calhoun, N. Browner, and D. M. Yousem, "Effect of age on visuomotor functional MR imaging " *Acad.Radiol.*, vol. 12, pp. 739-745, 2005.
- [37] T. Adali and V. D. Calhoun, "Wide Open Window: Theme Issue on fMRI Data Analysis," *IEEE Eng.in Medicine and Biology*, vol. 25, pp. 22-23, 2006.
- [38] M. Assaf, V. D. Calhoun, C. Kuzu, M. A. Kraut, P. Rivkin, J. Hart, Jr., and G. D. Pearlson, "Neural Correlates of Object Recall Process in Semantic Memory," *Psych.Res.Neuroimaging*, vol. 147, pp. 115-126, 2006.
- [39] M. Assaf, P. Rivkin, C. Kuzu, V. D. Calhoun, M. A. Kraut, K. Groth, M. Yassa, J. Hart, Jr., and G. D. Pearlson, "Abnormal Semantic Object-Recall and Anterior Cingulate Overactivation Correlate with Formal Thought Disorder in Schizophrenia," *Biological Psychiatry*, vol. 59, pp. 452-459, 2006.
- [40] V. D. Calhoun and T. Adali, "Complex Infomax: Convergence and Approximation of Infomax with Complex Nonlinearities," *Journal of VLSI Signal Proc.Systems*, vol. 44, pp. 173-190, 2006.

- [41] V. D. Calhoun and T. Adali, "'Unmixing' Functional Magnetic Resonance Imaging with Independent Component Analysis," *IEEE Eng.in Medicine and Biology*, vol. 25, pp. 79-90, 2006.
- [42] V. D. Calhoun, T. Adali, N. Giuliani, J. J. Pekar, G. D. Pearlson, and K. A. Kiehl, "A Method for Multimodal Analysis of Independent Source Differences in Schizophrenia: Combining Gray Matter Structural and Auditory Oddball Functional Data," *Hum.Brain Map.*, vol. 27, pp. 47-62, 2006.
- [43] V. D. Calhoun, T. Adali, K. A. Kiehl, R. S. Astur, J. J. Pekar, and G. D. Pearlson, "A Method for Multi-task fMRI Data Fusion Applied to Schizophrenia," *Human Brain Mapping*, vol. 27, pp. 598-610, 2006, PMC2751648.
- [44] V. D. Calhoun, G. D. Pearlson, and K. A. Kiehl, "Neuronal Chronometry of Target Detection: Fusion of Hemodynamic and Event-related Potential Data," *NeuroImage*, vol. 30, pp. 544-553, 2006.
- [45] K. Carvalho, G. D. Pearlson, R. S. Astur, and V. D. Calhoun, "Simulated Driving and Brain Imaging: Combining Behavior, Brain Activity, and Virtual Reality," *CNS Spectrum*, vol. 11, pp. 52-62, 2006.
- [46] K. A. Celone, V. D. Calhoun, B. C. Dickerson, A. Atri, E. F. Chua, S. Miller, K. DePeau, D. M. Rentz, D. Selkoe, M. S. Albert, and R. A. Sperling, "Alterations in Memory Networks in Mild Cognitive Impairment and Alzheimer's Disease: An Independent Component Analysis," *Journal of Neuroscience*, vol. 26, pp. 10222-10231, 2006.
- [47] M. R. Johnson, N. Morris, R. S. Astur, V. D. Calhoun, D. H. Mathalon, K. A. Kiehl, and G. D. Pearlson, "A Functional Magnetic Resonance Imaging Study of Working Memory Abnormalities in Schizophrenia," *Biological Psychiatry*, 2006.
- [48] M. A. Kraut, J. Pitcock, V. D. Calhoun, J. Li, T. Freeman, and J. Hart, Jr., "Neuroanatomic Organization of Sound Memory in Humans," *J Cogn Neurosci.*, vol. 18, pp. 1877-1888, 2006.
- [49] Z. Wang, J. Wang, V. D. Calhoun, H. Rao, J. A. Detre, and A. R. Childress, "Strategies for reducing large fMRI data sets for ICA," *Mag.Res.Imag.*, vol. 24, pp. 591-596, 2006.
- [50] T. Adali and V. D. Calhoun, "Complex ICA of Brain Imaging Data," *IEEE Signal Proc. Magazine*, vol. 24, pp. 136-139, 2007.
- [51] V. D. Calhoun and G. D. Pearlson, "Recent Developments in Brain Imaging of Schizophrenia: A Selective Review," *Neuroscience Imaging*, vol. 1, pp. 279-294, 2007.
- [52] N. Correa, T. Adali, and V. D. Calhoun, "Performance of Blind Source Separation Algorithms for fMRI Analysis," *Mag.Res.Imag.*, vol. 25, p. 684, 2007, PMC2358930.
- [53] A. Garrity, G. D. Pearlson, K. McKiernan, D. Lloyd, K. A. Kiehl, and V. D. Calhoun, "Aberrant 'default mode' functional connectivity in schizophrenia," *Am.J.Psychiatry*, vol. 164, pp. 450-457, 2007.
- [54] M. P. Hejnar, K. A. Kiehl, and V. D. Calhoun, "Interparticipant Correlations: A Model Free FMRI Analysis Technique," *Hum.Brain Map.*, vol. 28, pp. 860-867, 2007.
- [55] Y. Li, T. Adali, and V. D. Calhoun, "Estimating the number of independent components for fMRI data," *Human Brain Mapping*, vol. 28, pp. 1251-1266, 2007.
- [56] Y. Li, T. Adali, and V. D. Calhoun, "A Feature-selective Independent Component Analysis Method for Functional MRI," *Int. J. Biomed. Imaging*, 2007.
- [57] Q. Lin, Y. Zheng, F. Yin, H. Liang, and V. D. Calhoun, "A Fast Algorithm for One-unit ICA-R," *Information Sciences*, vol. 177, pp. 1265-1275, 2007.
- [58] G. D. Pearlson and V. D. Calhoun, "Structural and Functional Magnetic Resonance Imaging In Psychiatric Disorders," *Can. J Psychiatry*, vol. 52, 2007.
- [59] C. Sorg, V. Riedl, M. Muhlau, V. D. Calhoun, L. L., A. Drzezga, H. Forstl, A. Kurz, C. Zimmer, and A. Wohlschlager, "Selective changes of resting-state networks in patients at

- high risk for Alzheimer's disease – an example for profiling functional brain disorders," *Proc Natl Acad Sci U S A*, vol. 104, pp. 18760-18765, 2007.
- [60] M. Stevens, K. A. Kiehl, G. D. Pearlson, and V. D. Calhoun, "Functional neural circuits for mental timekeeping," *Hum. Brain Map.*, vol. 28, pp. 394-408, 2007.
- [61] M. Stevens, K. A. Kiehl, G. D. Pearlson, and V. D. Calhoun, "Functional neural networks underlying response inhibition in adolescents and adults," *Behavior and Brain Sciences*, vol. 181, pp. 12-22, 2007, PMC2266817.
- [62] T. Adali, Z. J. Wang, M. J. McKeown, P. Ciuciu, L. K. Hansen, A. Cichocki, and V. D. Calhoun, "Introduction to the Issue on fMRI Analysis for Human Brain Mapping," *IEEE JSTSP*, vol. 2, pp. 813-816, 2008, PMC pending #163062.
- [63] V. D. Calhoun, K. A. Kiehl, and G. D. Pearlson, "Modulation of Temporally Coherent Brain Networks Estimated using ICA at Rest and During Cognitive Tasks," *Human Brain Mapping*, vol. 29, pp. 828-838, 2008, PMC pending #162999.
- [64] V. D. Calhoun, G. D. Pearlson, P. Maciejewski, and K. A. Kiehl, "Temporal Lobe and 'Default' Hemodynamic Brain Modes Discriminate Between Schizophrenia and Bipolar Disorder," *Hum. Brain Map.*, vol. 29, pp. 1265-1275, 2008, PMC2665178.
- [65] A. Caprihan, G. D. Pearlson, and V. D. Calhoun, "Application of Principal Component Analysis to Distinguish Patients with Schizophrenia from Healthy Controls Based on Fractional Anisotropy Measurements," *NeuroImage*, vol. 42, pp. 675-682, 2008, PMC2566788.
- [66] Z. Chen and V. D. Calhoun, "Compensating the intensity falling-off effect in cone-beam tomography by an empirical weight formula," *Applied Optics*, vol. 47, pp. 6033-6039, 2008, PMC pending #163061.
- [67] N. Correa, Y. Li, T. Adali, and V. D. Calhoun, "Canonical correlation analysis for feature-based fusion of biomedical imaging modalities to detect associative networks in Schizophrenia," *IEEE JSTSP*, vol. 2, pp. 998-1007, 2008, PMC2761661.
- [68] O. Demirci, V. P. Clark, and V. D. Calhoun, "A Projection Pursuit Algorithm to Classify Individuals Using fMRI Data: Application to Schizophrenia," *NeuroImage*, vol. 15, pp. 1774-1782, 2008, PMC2764259.
- [69] O. Demirci, V. P. Clark, V. Magnotta, N. C. Andreasen, J. Lauriello, K. A. Kiehl, G. D. Pearlson, and V. D. Calhoun, "A Review of Challenges in the use of fMRI for Disease Classification / Characterization and A Projection Pursuit Application from Multi-site fMRI Schizophrenia Study," *Brain Imaging and Behavior*, vol. 2, pp. 207-226, 2008, PMC2701746.
- [70] N. Driesen, H. C. Leung, V. D. Calhoun, R. T. Constable, R. Gueorguieva, R. Hoffman, P. Skudlarski, P. Goldman-Rakic, and J. Krystal, "Impairment of Working Memory Maintenance and Response in Schizophrenia: Functional Magnetic Resonance Imaging Evidence," *Biological Psychiatry*, vol. 64, pp. 1026-1034, 2008, PMC pending #163006.
- [71] T. Eichele, V. D. Calhoun, M. Moosmann, K. Specht, M. Jongsma, R. Quiroga, H. Nordby, and K. Hugdahl, "Unmixing concurrent EEG-fMRI with parallel independent component analysis," *Int. J. Psych.*, vol. 67, pp. 222-234, 2008, PMC2649878.
- [72] T. Eichele, S. Debener, V. D. Calhoun, K. Specht, A. K. Engel, K. Hugdahl, D. Y. Cramon, and M. Ullsperger, "Prediction of human errors by maladaptive changes in event-related brain networks," *Proc Natl Acad Sci U S A*, vol. 105, pp. 6173-6178, 2008, PMC Journal - In Process.
- [73] A. R. Franco, J. Ling, A. Caprihan, V. D. Calhoun, R. Jung, G. L. Heileman, and A. R. Mayer, "Multimodal and Multi-tissue Measures of Connectivity Revealed by Joint Independent Component Analysis," *IEEE JSTSP*, vol. 2, pp. 986-997, 2008, PMC2748354.

- [74] M. Jafri, G. D. Pearlson, M. Stevens, and V. D. Calhoun, "A Method for Functional Network Connectivity Among Spatially Independent Resting-State Components in Schizophrenia," *NeuroImage*, vol. 39, pp. 1666-1681, 2008, PMC pending #40720.
- [75] D. Kim, J. Burge, T. Lane, K. A. Kiehl, G. D. Pearlson, and V. D. Calhoun, "Hybrid ICA-Bayesian Network approach reveals distinct effective connectivity differences in schizophrenia," *NeuroImage*, vol. 42, pp. 1560-1568, 2008, PMC2566775.
- [76] D. I. Kim, G. Pearlson, K. A. Kiehl, E. Bedrick, O. Demirci, and V. D. Calhoun, "A Method for Multi-group Inter-Participant Correlation: Abnormal Synchrony in Patients with Schizophrenia During Auditory Target Detection," *NeuroImage*, vol. 39, pp. 1129-1141, 2008, PMC2751604.
- [77] J. Liu, O. Demirci, and V. D. Calhoun, "A Parallel Independent Component Analysis Approach to Investigate Genomic Influence on Brain Function," *IEEE Signal Proc. Letters*, vol. 15, pp. 413-416, 2008, PMC2761666.
- [78] S. Meda, M. Bhattarai, N. Morris, R. Astur, V. D. Calhoun, D. H. Mathalon, K. A. Kiehl, and G. D. Pearlson, "An fMRI study of working memory in first-degree unaffected relatives of schizophrenia patients," *Schizophrenia Research*, vol. 104, pp. 85-95, 2008, PMC pending #163009.
- [79] S. Meda, J. Gelernter, J. R. Gruen, V. D. Calhoun, H. Meng, N. A. Cope, and G. D. Pearlson, "Polymorphism of DCDC2 reveals differences in cortical morphology of healthy individuals – A preliminary voxel based morphometry study," *Brain Imaging and Behavior*, vol. 2, pp. 21-26, 2008, PMC2605089.
- [80] S. Meda, N. Giuliani, V. D. Calhoun, K. Jagannathan, D. Schretlen, A. Pulver, N. Cascella, M. Keshavan, W. Kates, R. J. Buchanan, T. Sharma, and G. Pearlson, "A large scale (N=400) investigation of gray matter differences in schizophrenia using optimized voxel-based morphometry," *Schizophrenia Research*, vol. 101, pp. 95-105, 2008, PMC pending #163012.
- [81] M. Moosmann, T. Eichele, H. Nordby, K. Hugdahl, and V. D. Calhoun, "Joint Independent Component Analysis for Simultaneous EEG-fMRI: Principle and Simulation," *Int. J. Psych.*, vol. 67, pp. 212-221, 2008, PMC2649876.
- [82] J. Roffmann, R. L. Gollub, V. D. Calhoun, T. Wassink, A. P. Weiss, B. C. Ho, T. White, V. P. Clark, J. Fries, N. C. Andreasen, D. C. Goff, and D. S. Manoach, "MTHFR 677C->T genotype disrupts prefrontal function in schizophrenia through an interaction with COMT 158Val->Met," *Proc Natl Acad Sci U S A*, 2008, PMC Journal - In Process.
- [83] L. R. Skelly, V. D. Calhoun, S. A. Meda, J. Kim, D. H. Mathalon, and G. D. Pearlson, "Diffusion Tensor Imaging in Schizophrenia: Relationship to Symptoms," *Schizophrenia Research*, vol. 98, pp. 157-162, 2008, PMC2668961.
- [84] P. Skudlarski, K. Jagannathan, V. D. Calhoun, M. Hampson, B. A. Skudlarski, and G. D. Pearlson, "Measuring Brain Connectivity : Diffusion Tensor Imaging Validates Resting State Temporal Correlations," *NeuroImage*, vol. 43, pp. 554-561, 2008, PMC pending #78507.
- [85] A. Windemuth, V. D. Calhoun, G. D. Pearlson, M. Kocherla, K. Jagannathan, and G. Ruano, "Physiogenomic Analysis of Localized fMRI Brain Activity in Schizophrenia," *Annals of Biomedical Engineering*, vol. 36, pp. 877-888, 2008, PMC2669662.
- [86] A. J. Allen, S. Meda, P. Skudlarski, V. D. Calhoun, R. Astur, K. Ruopp, and G. D. Pearlson, "Effects of alcohol on performance on a distraction task during simulated driving," *Alcoholism: Clinical & Experimental Research*, vol. 33, pp. 1-9, 2009, PMC2753192.
- [87] M. Assaf, K. Jagannathan, V. D. Calhoun, M. Kraut, J. Hart, and G. D. Pearlson, "Temporal Sequence of Hemispheric Network Activation during Semantic Processing: A

- Functional Network Connectivity Analysis " *Brain and Cognition*, vol. 70, pp. 238-246, 2009, PMC2680694.
- [88] M. Assaf, I. Kahn, G. D. Pearlson, M. R. Johnson, Y. Yeshurun, V. D. Calhoun, and T. Hendler, "Brain Activity Dissociates Mentalization from Motivation during an Interpersonal Competitive Game," *Brain Imaging and Behavior*, vol. 3, pp. 24-37, 2009, PMC pending #163069.
- [89] G. Brown, G. McCarthy, D. N. Greve, S. Potkin, J. Turner, A. Bischoff-Grethe, J. M. Ford, D. Mathalon, R. Notestine, S. Gadde, V. D. Calhoun, G. H. Glover, C. G. Wible, A. Belger, R. L. Gollub, J. Lauriello, D. O'Leary, and K. Lim, "Brain-Performance Correlates of Working Memory Retrieval in Schizophrenia: A Cognitive Modeling Approach," *Schizophr Bull*, vol. 35, pp. 32-46, 2009, PMC Journal - In Process.
- [90] V. D. Calhoun and T. Adali, "Feature-based Fusion of Medical Imaging Data," *IEEE Transactions on Information Technology in Biomedicine*, vol. 13, pp. 1-10, 2009, PMC2737598.
- [91] V. D. Calhoun, T. Eichele, and G. Pearlson, "Functional Brain Networks in Schizophrenia: A Review," *Frontiers in Neuroscience*, vol. 3, pp. 1-12, 2009, PMC Journal - In Process.
- [92] V. D. Calhoun, J. Liu, and T. Adali, "A Review of Group ICA for fMRI Data and ICA for Joint Inference of Imaging, Genetic, and ERP data," *NeuroImage*, vol. 45, pp. 163-172, 2009, PMC2651152.
- [93] O. Demirci and V. D. Calhoun, "Functional Magnetic Resonance Imaging - Implications for Detection of Schizophrenia," *European Neurological Review*, vol. 4, pp. 103-106, 2009, PMC pending #184791.
- [94] O. Demirci, M. C. Stevens, N. C. Andreasen, A. Michael, J. Liu, T. White, G. D. Pearlson, V. P. Clark, and V. D. Calhoun, "Investigation of relationships between fMRI brain networks in the spectral domain using ICA and Granger causality reveals distinct differences between schizophrenia patients and healthy controls," *NeuroImage*, vol. 46, pp. 419-431, 2009, PMC2713821.
- [95] T. Eichele, V. D. Calhoun, and S. Debener, "Mining EEG-fMRI using independent component analysis," *Int. J. Psych.*, vol. 73, pp. 53-61, 2009, PMC2693483.
- [96] Z. Feng, A. Caprihan, K. Blagoev, and V. D. Calhoun, "Biophysical Modeling of Phase Changes in BOLD fMRI," *NeuroImage*, vol. 47, pp. 540-548, 2009, PMC pending #115413.
- [97] J. M. Ford, B. J. Roach, K. W. Jorgensen, J. A. Turner, G. G. Brown, R. Notestine, A. Bischoff-Grethe, D. N. Greve, C. G. Wible, J. Lauriello, A. Belger, B. Mueller, V. D. Calhoun, A. Preda, D. Keator, D. O'Leary, K. O. Lim, G. Glover, S. Potkin, FBIRN, and D. Mathalon, "Tuning in to the Voices: A Multisite fMRI Study of Auditory Hallucinations," *Schizophr Bull*, vol. 35, pp. 58-66, 2009, PMC Journal - In Process.
- [98] A. R. Franco, A. Pritchard, V. D. Calhoun, and A. R. Mayer, "Inter-rater and Inter-method Reliability of Default Mode Network Selection," *Human Brain Mapping*, vol. 30, pp. 2293-2303, 2009, PMC2751639.
- [99] G. Goldstein, K. Panchalingam, R. J. McClure, J. A. Stanley, V. D. Calhoun, G. D. Pearlson, and J. W. Pettegrew, "Molecular Neurodevelopment: An in vivo 31 P - 1 H MRSI Study," *Journal of the International Neuropsychological Society*, vol. 15, pp. 671-683, 2009, PMC2773163.
- [100] C. C. Hong, J. C. Harris, G. D. Pearlson, J. S. Kim, V. D. Calhoun, J. H. Fallon, X. Golay, J. S. Gillen, D. J. Simmonds, P. C. M. van zijl, D. S. Zee, and J. J. Pekar, "fMRI Evidence for Multisensory Recruitment Associated with Rapid Eye Movements during Sleep," *Hum Brain Mapp*, vol. 30, pp. 1705-1722, 2009, PMC2753360.

- [101] D. Kim, D. S. Manoach, D. Mathalon, J. Turner, G. Brown, J. M. Ford, R. L. Gollub, T. White, C. G. Wible, A. Belger, H. J. Bockholt, V. P. Clark, J. Lauriello, D. O'Leary, G. McCarthy, B. Mueller, K. Lim, N. C. Andreasen, S. Potkin, and V. D. Calhoun, "Dysregulation of working memory and default-mode networks in schizophrenia during a Sternberg item recognition paradigm: an independent component analysis of the multisite Mind and fBIRN studies," *Hum Brain Mapp*, vol. 30, p. 3795, 2009, PMC pending #120389.
- [102] D. Kim, D. Mathalon, J. M. Ford, M. Mannell, J. Turner, G. Brown, A. Belger, R. L. Gollub, J. Lauriello, C. G. Wible, D. O'Leary, K. Lim, S. Potkin, and V. D. Calhoun, "Auditory Oddball Deficits in Schizophrenia: An Independent Component Analysis of the fMRI Multisite Function BIRN Study," *Schizophr Bull*, vol. 35, pp. 67-81, 2009, PMC Journal - In Process.
- [103] Y. Li, T. Adali, W. Wang, and V. D. Calhoun, "Joint Blind Source Separation by Multi-set Canonical Correlation Analysis," *IEEE Trans. Signal Processing*, vol. 57, pp. 3918-3929, 2009, PMC pending #110331.
- [104] J. Liu, K. A. Kiehl, G. D. Pearlson, N. I. Perrone-Bizzozero, and V. D. Calhoun, "Genetic Determinants of Target and Novelty Processing," *NeuroImage*, vol. 46, pp. 809-816, 2009, PMC2676714.
- [105] J. Liu, G. D. Pearlson, A. Windemuth, G. Ruano, N. I. Perrone-Bizzozero, and V. D. Calhoun, "Combining fMRI and SNP data to investigate connections between brain function and genetics using parallel ICA," *Hum. Brain Map.*, vol. 30, pp. 241-255, 2009, PMC2668960.
- [106] S. Meda, V. D. Calhoun, R. Astur, B. Turner, K. Ruopp, and G. D. Pearlson, "Alcohol dose effects on brain circuits during simulated driving: An fMRI study," *Hum Brain Mapp*, vol. 30, pp. 1257-1270, 2009, PMC2751645.
- [107] S. Meda, M. C. Stevens, B. S. Folley, V. D. Calhoun, and G. D. Pearlson, "Evidence for anomalous network connectivity during working memory in schizophrenia: An ICA based analysis," *PLoS ONE*, vol. 4, pp. 1-11, 2009, PMC Journal - In Process.
- [108] A. Michael, S. Baum, J. Fries, B. C. Ho, R. Pierson, N. C. Andreasen, and V. D. Calhoun, "A Method to Fuse fMRI Tasks Through Spatial Correlations: Applied to Schizophrenia," *Human Brain Mapping*, vol. 30, pp. 2512-2529, 2009, PMC2711995.
- [109] G. D. Pearlson and V. D. Calhoun, "Convergent Approaches for Defining Functional Imaging Endophenotypes in Schizophrenia," *Frontiers in Neuroscience*, vol. 3, pp. 1-11, 2009, PMC Journal - In Process.
- [110] P. Rodriguez, N. Correa, T. Adali, T. Eichele, and V. D. Calhoun, "Quality Map Thresholding for De-Noising of Complex-Valued fMRI Data and its Application to ICA of fMRI," *Journal of Signal Processing Systems*, pp. 1-16, 2009, PMC pending #255551.
- [111] J. M. Segall, J. T. Turner, T. Van Erp, T. White, H. J. Bockholt, R. L. Gollub, B. C. Ho, V. Magnotta, R. Jung, R. McCarley, S. C. Schulz, J. Lauriello, V. P. Clark, J. Voyvodic, M. T. Diaz, and V. D. Calhoun, "Voxel-based Morphometric Multi-site Collaborative Study on Schizophrenia," *Schizophr Bull*, vol. 35, pp. 82-95, 2009, PMC Journal - In Process.
- [112] M. Stevens, V. D. Calhoun, G. D. Pearlson, and K. A. Kiehl, "Brain network dynamics during error commission," *Hum. Brain Map.*, vol. 30, pp. 24-37, 2009, PMC2669663.
- [113] M. Stevens, G. D. Pearlson, and V. D. Calhoun, "Changes in the interaction of resting-state neural networks from adolescence to adulthood.," *Human Brain Mapping*, vol. 30, pp. 2356-2366, 2009, PMC pending #132927.

- [114] M. Stevens, P. Skudlarski, G. D. Pearlson, and V. D. Calhoun, "Age-related cognitive gains mediated by the effects of white matter development on brain network integration," *NeuroImage*, vol. 48, pp. 738-746, 2009, PMC2753497.
- [115] J. Sui, T. Adali, V. P. Clark, G. Pearlson, and V. D. Calhoun, "A Method for Accurate Group Difference Detection by Constraining the Mixing Coefficients in an ICA Framework," *Human Brain Mapping*, vol. 30, pp. 2953-2970, 2009, PMC2733923.
- [116] J. Sui, T. Adali, G. Pearlson, and V. D. Calhoun, "An ICA-based Method for the Identification of Optimal fMRI Features and Components Using Combined Group-Discriminative Techniques," *NeuroImage*, vol. 46, pp. 73-86, 2009, PMC pending #95972.
- [117] L. Xu, K. Groth, G. Pearlson, D. Schretlen, and V. Calhoun, "Source Based Morphometry: The Use of Independent Component Analysis to Identify Gray Matter Differences with Application to Schizophrenia," *Human Brain Mapping*, vol. 30, pp. 711-724, 2009, PMC2751641.
- [118] L. Xu, G. Pearlson, and V. Calhoun, "Joint Source Based Morphometry to Identify Relative Gray Matter and White Matter Group Differences," *NeuroImage*, vol. 44, pp. 777-789, 2009, PMC2669793.
- [119] C. Abbott, D. I. Kim, S. Sponheim, J. R. Bustillo, and V. D. Calhoun, "Decreased Default Mode Neural Modulation with Age in Schizophrenia," *American Journal of Geriatric Psychiatry*, vol. 18, pp. 897-907, 2010, PMC Pending #202225.
- [120] S. Arja, Z. Feng, Z. Chen, A. Caprihan, K. A. Kiehl, T. Adali, and V. D. Calhoun, "Changes in fMRI Magnitude Data and Phase Data Observed in Block-Design and Event-Related Tasks," *NeuroImage*, vol. 49, pp. 3149-3160, 2010, PMC pending #180288.
- [121] J. Arribas, V. D. Calhoun, and T. Adali, "Automatic Bayesian classification of healthy controls, bipolar disorder and schizophrenia using intrinsic connectivity maps from fMRI data," *IEEE Trans Biomed Eng*, vol. 57, pp. 2850-2860, 2010, PMC Pending #241486.
- [122] M. Assaf, K. Jagannathan, V. D. Calhoun, L. Miller, M. C. Stevens, R. Sahl, J. O'Boyle, R. Schultz, and G. D. Pearlson, "Abnormal Functional Connectivity of Default Mode Sub-Networks in Autism Spectrum Disorder Patients," *NeuroImage*, vol. 53, pp. 247-256, 2010, PMC pending #210802.
- [123] H. J. Bockholt, M. Scully, W. Courtney, S. Rachakonda, A. Scott, A. Caprihan, J. Fries, R. Kalyanam, J. Segall, R. De la Garza, S. Lane, and V. D. Calhoun, "Mining the Mind Research Network: A Novel framework for exploring large scale, heterogeneous translational neuroscience research data sources," *Frontiers in Neuroinformatics*, vol. 3, pp. 1-10, 2010, PMC Journal - In Process.
- [124] V. D. Calhoun, L. Wu, K. A. Kiehl, T. Eichele, and G. D. Pearlson, "Aberrant Processing of Deviant Stimuli in Schizophrenia Revealed by Fusion of fMRI and EEG Data," *Acta Neuropsychiatria*, vol. 22, pp. 127-138, 2010, PMC pending #184787.
- [125] Z. Chen and V. D. Calhoun, "Magnitude and phase behaviors of multiresolution BOLD signal refinement " *Concepts in Magnetic Resonance Part B*, vol. 37b, pp. 129-145, 2010, PMC Pending #194758.
- [126] Z. Chen, A. Caprihan, and V. D. Calhoun, "Effect of surrounding vasculature on intravoxel BOLD signal," *Med.Phys.*, vol. 37, pp. 1778-1787, 2010, PMC Journal - In Process.
- [127] L. M. Cope, J. Schaich Borg, C. L. Harenski, W. Sinnott-Armstrong, D. Lieberman, P. K. Nyalakanti, V. D. Calhoun, and K. A. Kiehl, "Hemispheric asymmetries during processing of immoral stimuli," *Frontiers in Evolutional Neurobiology*, vol. 2, pp. 1-14, 2010, PMC Pending#249926.

- [128] N. Correa, T. Adali, Y. Li, and V. D. Calhoun, "Canonical Correlation Analysis for Data Fusion and Group Inferences: Examining applications of medical imaging data," *IEEE Signal Proc. Magazine*, vol. 27, pp. 39-50, 2010, PMC Pending #202222.
- [129] N. Correa, T. Eichele, T. Adali, Y. Li, and V. D. Calhoun, "Multi-set canonical correlation analysis for the fusion of concurrent single trial ERP and functional MRI," *NeuroImage*, vol. 50, pp. 1438-1445, 2010, PMC pending #180189.
- [130] E. Damaraju, J. Phillips, J. R. Lowe, R. Ohl, V. D. Calhoun, and A. Caprihan, "Resting-state Functional Connectivity Differences in Premature Children," *Frontiers in Systems Neuroscience*, vol. 4, pp. 1-13, 2010, PMC Journal - In Process.
- [131] M. Eckert, N. Keren, D. Roberts, V. D. Calhoun, and K. Harris, "Age-related changes in processing speed; unique contributions of cerebellar and prefrontal cortex," *Frontiers in Human Neuroscience*, vol. 4, pp. 1-14, 2010, PMC Journal - In Process.
- [132] S. Ehrlich, E. E. Morrow, J. L. Roffman, S. Wallace, M. Naylor, H. J. Bockholt, A. Lundquist, A. Yendiki, B. C. Ho, T. White, D. S. Manoach, V. P. Clark, V. D. Calhoun, R. L. Gollub, and D. Holt, "The COMT Val108/158Met Polymorphism and Medial Temporal Lobe Volumetry in Patients with Schizophrenia and Healthy Adults," *NeuroImage*, vol. 53, pp. 992-1000, 2010, PMC pending #166341.
- [133] B. S. Folley, R. Astur, K. Jagannathan, V. D. Calhoun, and G. D. Pearlson, "Anomalous neural circuitry function in schizophrenia during a virtual Morris water task," *Arch Gen Psychiatry*, vol. 49, pp. 3373-3384, 2010, PMC pending #184503.
- [134] M. Havlicek, J. Jan, M. Brazdil, and V. D. Calhoun, "Dynamic Granger causality based on Kalman filter for evaluation of functional network connectivity in fMRI data," *NeuroImage*, vol. 53, pp. 65-77, 2010, PMC pending #210804.
- [135] K. Hugdahl and V. D. Calhoun, "An update on neurocognitive impairment in schizophrenia and depression," *Frontiers in Human Neuroscience*, vol. 4, pp. 1-3, 2010.
- [136] K. Jagannathan, V. D. Calhoun, J. Gelernter, M. Stevens, J. Liu, F. Bolognani, A. Windemuth, G. Ruano, and G. D. Pearlson, "Genetic associations of brain structural networks in schizophrenia: a preliminary study using parallel ICA," *Biological Psychiatry*, vol. 68, pp. 657-666, 2010, PMC pending #211358.
- [137] D. Kim, J. Sui, S. Rachakonda, T. White, D. S. Manoach, V. P. Clark, B. C. Ho, S. C. Schulz, and V. D. Calhoun, "Identification of imaging biomarkers in schizophrenia: A coefficient-constrained independent component analysis of the Mind multi-site schizophrenia study," *Journal of Neuroinformatics*, vol. 8, pp. 213-229, 2010, PMC Pending #278802.
- [138] M. Kim, E. Tura, S. Potkin, J. H. Fallon, D. S. Manoach, V. D. Calhoun, FBIRN, and J. A. Turner, "Working memory circuitry in schizophrenia shows widespread cortical inefficiency and compensation," *Schizophr Res*, vol. 117, pp. 42-51, 2010, PMC pending #184508.
- [139] Q. Lin, J. Liu, Y. Zheng, H. Liang, and V. D. Calhoun, "Semi-blind Spatial ICA of fMRI Using Spatial Constraints," *Hum. Brain Map.*, vol. 31, 2010, PMC pending #164327.
- [140] J. Liu, K. Hutchison, M. Morgan, N. I. Perrone-Bizzozero, J. Sui, and V. D. Calhoun, "Identification of Genetic and Epigenetic Factors Contributing to Population Structure," *PLoS ONE*, vol. 5, pp. 1-8, 2010, PMC Pending #241489.
- [141] J. Liu, M. Morgon, K. Hutchison, E. Claus, and V. D. Calhoun, "A Study of the Influence of Sex on Genome Wide Methylation," *PLoS ONE*, vol. 5, pp. 1-8, 2010, PMC Journal - In Process.
- [142] M. Mannell, A. R. Franco, V. D. Calhoun, J. M. Canive, R. J. Thoma, and A. R. Mayer, "Resting state and task-induced deactivation: A methodological comparison in patients

- with schizophrenia and healthy controls," *Hum Brain Mapp*, vol. 31, pp. 424-437, 2010, PMC pending #132340.
- [143] S. Meda, K. Jagannathan, J. Gelernter, V. D. Calhoun, J. Liu, M. Stevens, and G. D. Pearlson, "A pilot multivariate parallel ICA study to investigate differential linkage between neural networks and genetic profiles in schizophrenia," *NeuroImage*, vol. 53, pp. 1007-1015, 2010, PMC pending #161905.
- [144] A. Michael, S. Baum, T. White, O. Demirci, N. C. Andreasen, J. M. Segall, R. E. Jung, G. D. Pearlson, V. P. Clark, R. L. Gollub, S. C. Schulz, J. Roffmann, K. O. Lim, B. C. Ho, H. J. Bockholt, and V. D. Calhoun, "Does Function Follow Form?: Methods to Fuse Structural and Functional Brain Images Show Decreased Linkage in Schizophrenia," *Human Brain Mapping*, vol. 49, pp. 2626-2637, 2010, PMC pending #184511.
- [145] S. M. Plis, V. D. Calhoun, M. P. Weisend, and T. Lane, "MEG and fMRI fusion for nonlinear estimation of neural and BOLD signal changes," *Frontiers in Neuroinformatics*, vol. 4, pp. 1-17, 2010, PMC Journal - In Process.
- [146] C. I. Rzepecki, S. A. Meda, V. D. Calhoun, M. J. Jafri, R. S. Astur, and G. D. Pearlson, "Disruptions in Functional Network Connectivity during Alcohol Intoxicated Driving," *Alcoholism: Clinical and Experimental Research*, vol. 34, pp. 479-487, 2010, PMC pending #161788.
- [147] U. Sakoglu, G. D. Pearlson, K. A. Kiehl, Y. Wang, A. Michael, and V. D. Calhoun, "A Method for Evaluating Dynamic Functional Network Connectivity and Task-Modulation: Application to Schizophrenia," *MAGMA*, vol. 23, pp. 351-366, 2010, PMC pending #180300.
- [148] P. Skudlarski, K. A. Jagannathan, K. Anderson, M. C. Stevens, V. D. Calhoun, and G. D. Pearlson, "Brain connectivity is not only lower but also different in schizophrenia: a combined anatomical and functional approach," *Biological Psychiatry*, vol. 68, pp. 61-69, 2010, PMC Pending #193102.
- [149] J. Sui, T. Adali, G. Pearlson, H. Yang, S. Sponheim, T. White, and V. D. Calhoun, "A CCA+ICA Based Model for Multi-Task Brain Imaging Data Fusion And Its Application to Schizophrenia," *NeuroImage*, vol. 51, pp. 123-134, 2010, PMC pending #180309.
- [150] L. Wu, T. Eichele, and V. D. Calhoun, "Reactivity of hemodynamic responses and functional connectivity to different states of alpha synchrony: a concurrent EEG-fMRI study," *NeuroImage*, vol. 52, pp. 1252-1260, 2010, PMC pending #248905.
- [151] W. Xiong, T. Adali, Y. Li, and V. D. Calhoun, "On entropy rate for the complex domain and its application to i.i.d. sampling," *IEEE Transactions on Signal Processing*, vol. 58, pp. 2409-2414, 2010, PMC pending #184519.
- [152] H. Yang, J. Liu, J. Sui, G. Pearlson, and V. D. Calhoun, "A Hybrid Machine Learning Method for Fusing fMRI and Genetic Data to Classify Schizophrenia," *Frontiers in Human Neuroscience*, vol. 4, pp. 1-9, 2010, PMC Journal - In Process.
- [153] C. Abbott, M. Juarez, T. White, R. L. Gollub, G. D. Pearlson, J. R. Bustillo, J. Lauriello, B. C. Ho, H. J. Bockholt, V. P. Clark, V. Magnotta, and V. D. Calhoun, "Antipsychotic Dose and Diminished Neural Modulation: A Multi-Site fMRI Study," *Progress in Neuro-Psychopharmacology & Biological Psychiatry*, vol. 35, pp. 473-482, 2011, PMC Pending #255577.
- [154] E. Allen, E. Erhardt, E. Damaraju, W. Gruner, J. Segall, R. Silva, M. Havlicek, S. Rachakonda, J. Fries, R. Kalyanam, A. Michael, J. Turner, T. Eichele, S. Adelsheim, A. Bryan, J. R. Bustillo, V. P. Clark, S. Feldstein, F. M. Filbey, C. Ford, K. Hutchison, R. Jung, K. A. Kiehl, P. Kodituwakku, Y. Komesu, A. R. Mayer, G. D. Pearlson, J. Phillips, J. Sadek, M. Stevens, U. Teuscher, R. J. Thoma, and V. D. Calhoun, "A baseline for the

- multivariate comparison of resting state networks," *Frontiers in Systems Neuroscience*, vol. 5, p. 12, 2011, PMC Journal - In Process.
- [155] E. A. Allen, J. Liu, K. A. Kiehl, J. Gelernter, G. D. Pearlson, N. I. Perrone-Bizzozero, and V. D. Calhoun, "Components of cross-frequency modulation in health and disease," *Frontiers in Systems Neuroscience*, vol. 5, pp. 1-16, 2011, PMC Journal - In Process.
- [156] B. Anderson, M. C. Stevens, S. Meda, M. Jordan, V. D. Calhoun, and G. D. Pearlson, "Functional Imaging of Cognitive Control During Acute Alcohol Intoxication," *Alcoholism: Clinical and Experimental Research*, vol. 35, pp. 156-165, 2011, PMC Pending #228121.
- [157] A. Caprihan, C. Abbott, J. Yamamoto, G. D. Pearlson, N. Bizzozero, J. Sui, and V. D. Calhoun, "Source-based morphometry analysis of group differences in fractional anisotropy in schizophrenia," *Brain Connectivity*, vol. 1, pp. 133-145, 2011, PMC Pending #304239.
- [158] E. Castro, M. Martinez-Ramon, G. L. Heileman, and V. D. Calhoun, "Characterization of groups using composite kernels and multi-source fMRI analysis data: Application to Schizophrenia," *NeuroImage*, vol. 58, pp. 526-536, 2011, PMC Pending #313196.
- [159] Z. Chen and V. D. Calhoun, "Two pitfalls of BOLD fMRI magnitude-based neuroimage analysis: non-negativity and edge effect," *Journal of Neuroscience Methods*, vol. 199, pp. 363-369, 2011, PMC Pending #299490.
- [160] Z. Chen and V. D. Calhoun, "A computational multiresolution BOLD fMRI model," *IEEE Trans Biomed Eng*, vol. 58, pp. 2995-2999, 2011, PMC Pending #304230.
- [161] T. Eichele, S. Rachakonda, B. Brakedal, R. Eikeland, and V. D. Calhoun, "EEGIFT: Group independent component analysis for event-related EEG data," *Computational Intelligence and Neuroscience*, vol. 2011, pp. 1-9, 2011, PMC Journal - In Process.
- [162] E. Erhardt, E. Allen, E. Damaraju, and V. D. Calhoun, "On network derivation, classification, and visualization: a response to Habeck and Moeller," *Brain Connectivity*, vol. 1, pp. 1-19, 2011, PMC Pending #304235.
- [163] E. Erhardt, S. Rachakonda, E. Bedrick, T. Adali, and V. D. Calhoun, "Comparison of multi-subject ICA methods for analysis of fMRI data," *Human Brain Mapping*, vol. 12, pp. 2075-2095, 2011, PMC Pending #240665.
- [164] G. Gasparovic, E. Bedrick, A. R. Mayer, R. A. Yeo, H. Chen, E. Damaraju, V. D. Calhoun, and R. E. Jung, "Test-Retest Reliability of Short-Echo-Time Spectroscopic Imaging of Human Brain at 3T," *Magnetic Resonance in Medicine*, vol. 66, pp. 324-332, 2011, PMC Pending #264108.
- [165] D. Greve, B. Mueller, T. Liu, J. Turner, J. Voyvodic, E. Yetter, M. Diaz, G. McCarthey, S. Wallace, B. J. Roach, J. M. Ford, D. Mathalon, V. D. Calhoun, C. Wible, S. Potkin, G. Glover, and FBIRN, "A novel method for quantifying scanner instability in fMRI," *Magnetic Resonance in Medicine*, vol. 65, pp. 1053-1061, 2011, PMC pending #247443.
- [166] M. Havlicek, K. Friston, J. Jan, M. Brazdil, and V. D. Calhoun, "Dynamic modeling of neuronal responses in fMRI using cubature Kalman filtering," *NeuroImage*, vol. 56, pp. 2109-2128, 2011, PMC pending #281157.
- [167] E. Karageorgiou, S. C. Schulz, R. Gollub, N. C. Andreasen, B. C. Ho, J. Lauriello, V. D. Calhoun, H. J. Bockholt, S. Sponheim, and A. Georgopoulos, "Neuropsychological Testing and Structural Magnetic Resonance Imaging as Diagnostic Biomarkers Early in the Course of Schizophrenia and Related Psychoses," *Neuroinformatics*, vol. 9, pp. 321-333, 2011, PMC Pending #272182.
- [168] S. Khullar, A. Michael, N. Cahill, K. A. Kiehl, G. Pearlson, S. A. Baum, and V. D. Calhoun, "ICA-fNORM: Spatial normalization of fMRI data using intrinsic group-ICA networks," *Frontiers in Systems Neuroscience*, pp. 1-18, 2011, PMC Journal - In Process.

- [169] S. Khullar, A. Michael, N. Correa, T. Adali, S. Baum, and V. D. Calhoun, "Wavelet-based fMRI analysis: 3-D denoising, signal separate, and validation metrics," *NeuroImage*, vol. 54, pp. 2867-2884, 2011, PMC Pending #247445.
- [170] H. Li, N. Correa, V. D. Calhoun, and T. Adali, "Application of Independent Component Analysis with Adaptive Density Model to Complex-valued fMRI Data," *IEEE Trans Biomed Eng*, vol. 58, pp. 2794-2803, 2011, PMCID pending #297947.
- [171] S. Ma, N. Correa, X. Li, T. Eichele, V. D. Calhoun, and T. Adali, "Automatic Identification of Functional Clusters in fMRI Data using Spatial Information," *IEEE Trans Biomed Eng*, vol. 58, pp. 3406-3417, 2011, PMC Pending #317706.
- [172] A. Michael, M. D. King, S. Ehrlich, G. Pearlson, T. White, D. Holt, N. C. Andreasen, U. Sakoglu, B. C. Ho, S. C. Schulz, and V. D. Calhoun, "A data-driven investigation of gray matter–function correlations in schizophrenia during a working memory task," *Frontiers in Human Neuroscience*, vol. 5, pp. 1-14, 2011, PMC Journal - In Process.
- [173] J. R. Petrella, F. C. Sheldon, S. E. Prince, V. D. Calhoun, and P. M. Doraiswamy, "Default Mode Network Connectivity in Stable versus Progressive Mild Cognitive Impairment," *Neurology*, vol. 76, pp. 511-517, 2011, PMC Journal - In Process.
- [174] S. M. Plis, M. P. Weisend, E. Damaraju, T. Eichele, A. Mayer, V. P. Clark, T. Lane, and V. D. Calhoun, "Effective connectivity analysis of fMRI and MEG data collected under identical paradigms," *Computers in Biology and Medicine*, vol. 41, pp. 1156-1165, 2011, PMC Pending #292265.
- [175] J. Schaich Borg, W. Sinnott-Armstrong, V. D. Calhoun, and K. A. Kiehl, "Neural basis of moral verdict and moral deliberation," *Social Neuroscience*, vol. 6, pp. 398-413, 2011, PMC Journal - In Process.
- [176] A. Scott, W. Courtney, D. Wood, R. De la Garza, S. Lane, R. Wang, J. Roberts, J. A. Turner, and V. D. Calhoun, "COINS: An innovative informatics and neuroimaging tool suite built for large heterogeneous datasets," *Frontiers in Neuroinformatics*, vol. 5, pp. 1-15, 2011, PMC Journal - In Process.
- [177] B. J. Shannon, M. E. Raichle, A. Z. Snyder, D. Fair, K. L. Mills, D. Zhang, K. Bache, V. D. Calhoun, J. T. Nigg, B. J. Nagel, A. A. Stevens, and K. A. Kiehl, "Premotor functional connectivity predicts impulsivity in juvenile offenders " *PNAS*, vol. 108, pp. 11241-11245, 2011, PMC Journal - In Process.
- [178] J. Sheng, H.-W. Deng, V. D. Calhoun, and Y.-P. Wang, "Integrated Analysis of Gene Expression and Copy Number Data Using ICA-shaving Method," *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, vol. 8, pp. 1568-1579, 2011, PMC pending #254353.
- [179] J. M. Shoemaker, M. T. Holdsworth, C. J. Aine, V. D. Calhoun, R. De la Garza, S. Feldstein Ewing, R. Hayak, A. R. Mayer, K. A. Kiehl, L. Petree, P. Sanjuan, A. Scott, J. Stephen, and J. Phillips, "A practical approach to incidental findings in neuroimaging research," *Neurology*, vol. 77, pp. 2123-2127, 2011.
- [180] J. Sui, G. D. Pearlson, T. Adali, K. A. Kiehl, A. Caprihan, J. Liu, J. Yamamoto, and V. D. Calhoun, "Discriminating Schizophrenia and Bipolar Disorder by Fusing FMRI and DTI in A Multimodal CCA+Joint ICA Based Model," *NeuroImage*, vol. 57, pp. 839-855, 2011, PMC Pending #297883.
- [181] N. Swanson, T. Eichele, G. D. Pearlson, K. A. Kiehl, and V. D. Calhoun, "Lateral Differences in the Default Mode Network in Healthy Controls and Schizophrenia Patients," *Hum Brain Mapp*, vol. 32, pp. 654-664, 2011, PMC pending #180312.
- [182] J. Turner, S. R. Lane, H. J. Bockholt, and V. D. Calhoun, "The Clinical Assessment and Remote Administration Tablet," *Frontiers in Neuroinformatics*, vol. 5, pp. 1-8, 2011, PMC Journal - In Process.

- [183] T. White, V. Magnotta, H. J. Bockholt, S. Williams, R. L. Gollub, B. Mueller, B. C. Ho, R. Jung, V. P. Clark, J. Lauriello, J. R. Bustillo, S. C. Schulz, N. C. Andreasen, V. D. Calhoun, and K. O. Lim, "Global White matter abnormalities in schizophrenia: A multicenter diffusion tensor imaging study," *Schizophr Bull*, vol. 37, pp. 222-232, 2011, PMC Journal - In Process.
- [184] T. White, M. Schmidt, D. Kim, and V. D. Calhoun, "Disrupted Functional Brain Connectivity during Verbal Working Memory in Children and Adolescents with Schizophrenia," *Cereb Cortex*, vol. 21, pp. 510-518, 2011, PMC Journal - In Process.
- [185] R. A. Yeo, S. W. Gangestad, G. Gasparovic, J. Liu, V. D. Calhoun, R. J. Thoma, R. Kalyanam, and K. H. Hutchison, "Rare copy number deletions predict individual variation in human brain metabolite concentrations in individuals with alcohol use disorders" *Biological Psychiatry*, vol. 15, pp. 537-544, 2011, PMC Pending #294619.
- [186] R. A. Yeo, S. W. Gangestad, J. Liu, V. D. Calhoun, and K. E. Hutchison, "Rare copy number deletions predict individual variation in intelligence," *PLoS ONE*, vol. 6, p. e16339, 2011, 3027642.
- [187] Q. Yu, J. Sui, S. Rachakonda, H. He, W. Gruner, G. D. Pearlson, K. A. Kiehl, and V. D. Calhoun, "Altered topological properties of functional network connectivity in schizophrenia during resting state: a small-world brain network study," *PLoS ONE*, vol. 6, pp. 1-12, 2011, PMC Journal - In Process.
- [188] Q. Yu, J. Sui, S. Rachakonda, H. He, G. D. Pearlson, and V. D. Calhoun, "Altered small-world brain networks in temporal lobe in patients with schizophrenia performing an auditory oddball task," *Frontiers in Systems Neuroscience*, vol. 5, pp. 1-13, 2011, PMC Journal - In Process.
- [189] C. Abbott, F. Merideth, D. Ruhl, Z. Yang, V. P. Clark, V. D. Calhoun, F. M. Hanlon, and A. R. Mayer, "Auditory orienting and inhibition of return in schizophrenia: A functional magnetic resonance imaging study," *Progress in Neuro-Psychopharmacology & Biological Psychiatry*, vol. 37, pp. 161-168, 2012, PMC Pending #346258.
- [190] E. A. Allen, E. Erhardt, Y. Wei, T. Eichele, and V. D. Calhoun, "Capturing inter-subject variability with group independent component analysis of fMRI data: a simulation study," *NeuroImage*, vol. 59, pp. 4141-4159, 2012, PMC Pending #327594.
- [191] V. D. Calhoun and G. D. Pearlson, "A Selective Review of Simulated Driving Studies: Combining Naturalistic and Hybrid Paradigms, Analysis Approaches, and Future Directions," *NeuroImage*, vol. 59, pp. 25-35, 2012, PMC Pending #304243.
- [192] V. D. Calhoun, J. Sui, K. A. Kiehl, J. A. Turner, E. A. Allen, and G. D. Pearlson, "Exploring the Psychosis Functional Connectome: Aberrant Intrinsic Networks in Schizophrenia and Bipolar Disorder," *Frontiers in Neuropsychiatric Imaging and Stimulation*, vol. 2, pp. 1-13, 2012, PMC Journal - In Process.
- [193] V. P. Clark, B. A. Coffman, A. Mayer, M. P. Weisend, T. Lane, V. D. Calhoun, E. Raybourn, C. Garcia, and E. Wassermann, "TDCS guided using fMRI significantly accelerates learning to identify concealed objects," *NeuroImage*, vol. 59, pp. 117-128, 2012.
- [194] B. Edwards, V. D. Calhoun, and K. A. Kiehl, "Joint ICA of ERP and fMRI during Error-Monitoring," *NeuroImage*, vol. 59, pp. 1896-1903, 2012, PMC Pending #321832.
- [195] E. Erhardt, E. Allen, Y. Wei, T. Eichele, and V. D. Calhoun, "SimTB, a simulation toolbox for fMRI data under a model of spatiotemporal separability," *NeuroImage*, vol. 59, pp. 4160-4167, 2012, PMC Pending #340872.
- [196] S. Meda, B. Narayanan, J. Liu, N. I. Perrone-Bizzozero, M. Stevens, V. D. Calhoun, D. C. Glahn, L. Shen, S. L. Risacher, A. J. Sayking, and G. D. Pearlson, "A large scale multivariate parallel ICA method reveals novel imaging-genetic relationships for

- Alzheimer's Disease in the ADNI cohort," *NeuroImage*, vol. 60, pp. 1608-1621, 2012, Pubmed Journal - In Process.
- [197] P. Rodriguez, V. D. Calhoun, and T. Adali, "Phase Ambiguity Correction and Visualization Techniques for Complex-Valued ICA of Group fMRI Data," *Pattern Recognition*, vol. 45, pp. 2050-2063, 2012, PMC pending #279885.
- [198] J. Sui, T. Adali, Q. Yu, and V. D. Calhoun, "A Review of Multivariate Methods for Multimodal Fusion of Brain Imaging Data," *Journal of Neuroscience Methods*, vol. 204, pp. 68-81, 2012, PMC Pending #334691.
- [199] L. Xu, T. Adali, D. Schretlen, G. D. Pearlson, and V. D. Calhoun, "Structural Angle and Power Images Reveal Interrelated Gray and White Matter Abnormalities in Schizophrenia," *Neurology Research International*, vol. 2012, pp. 1-18, 2012, PMC Journal - In Process.
- [200] Q. Yu, S. M. Plis, E. Erhardt, E. A. Allen, J. Sui, K. A. Kiehl, G. D. Pearlson, and V. D. Calhoun, "Modular organization of functional network connectivity in healthy controls and patients with schizophrenia during the resting state," *Frontiers in Systems Neuroscience*, vol. 5, pp. 1-16, 2012, PMC Journal - In Process.

In Press Journal Articles:

- [1] E. Allen, E. Erhardt, and V. D. Calhoun, "Data visualization in the neurosciences: overcoming the curse of dimensionality," *Neuron*, in press, PMC Journal - In Process.
- [2] M. Arbabshirani, M. Havlicek, K. A. Kiehl, G. D. Pearlson, and V. D. Calhoun, "Functional network connectivity during rest and task conditions: A comparative study," *Human Brain Mapping*, in press, PMC Journal - In Process.
- [3] D. Boutte, V. D. Calhoun, J. Chen, A. Sabbineni, K. Hutchison, and J. Liu, "Connections Between Brain Structural Differences and Copy Number Variations in Various Stages of Alcohol Use Disorder.," *Alcohol*, in press, PMC Journal - In Process.
- [4] V. D. Calhoun and T. Adali, "Analysis of Complex-Valued Functional Magnetic Resonance Imaging Data: Are We Just Going Through a "Phase",", *Special Issue of the Bulletin of the Polish Academy of Sciences*, in press, Pubmed Journal - In Process.
- [5] V. D. Calhoun and T. Adali, "Multi-subject Independent Component Analysis of fMRI: A Decade of Intrinsic Networks, Default Mode, and Neurodiagnostic Discovery," *IEEE Reviews in Biomedical Engineering*, in press, PMC Journal - In Process.
- [6] V. D. Calhoun, T. Adali, T. Eichele, and E. Allen, "Decomposing the brain: components and modes, networks and nodes," *Trends Cogn Sci*, in press, PMC Journal - In Process.
- [7] V. D. Calhoun and E. Allen, "Extracting Intrinsic Functional Networks with Feature-based Group Independent Component Analysis," *Psychometrika*, in press, PMC Journal - In Process.
- [8] J. Chen, V. D. Calhoun, G. D. Pearlson, S. Ehrlich, J. Turner, B. C. Ho, T. Wassink, A. Michael, and J. Liu, "Multifaceted genomic risk for brain function in schizophrenia," *NeuroImage*, in press, PMC Journal - In Process.
- [9] Z. Chen and V. D. Calhoun, "BOLD fMRI signal turbulence due to ultra-high spatial resolution: numerical simulation and theoretical explanation," *NMR Biomed*, in press, PMC Journal - In Process.
- [10] Z. Chen and V. D. Calhoun, "Computed inverse MRI for magnetic susceptibility map reconstruction," *Journal of Computer Assisted Tomography*, in press.
- [11] Z. Chen and V. D. Calhoun, "Volumetric BOLD fMRI simulation: from neurovascular coupling to multivoxel imaging," *BMC Neuroscience*, in press, PMC Journal - In Process.

- [12] Z. Chen and V. D. Calhoun, "Computed diffusion contribution in the complex BOLD fMRI signal," *concepts in Magnetic Resonance Part A*, in press, PMC Journal - In Process.
- [13] V. P. Clark, G. K. Beatty, R. E. Anderson, P. Kodituwakku, J. Phillips, T. Lane, K. A. Kiehl, and V. D. Calhoun, "Reduced fMRI activity predicts relapse in patients recovering from stimulant dependence," *Human Brain Mapping*, in press, PMC Journal - In Process.
- [14] K. R. Cullen, S. Wallace, V. Magnotta, H. J. Bockholt, S. Ehrlich, R. L. Gollub, D. S. Manoach, B. C. Ho, V. P. Clark, J. Lauriello, J. Bustillo, S. C. Schultz, N. C. Andreasen, V. D. Calhoun, K. O. Lim, and T. J. White, "Cigarette Smoking and White Matter Microstructure in Schizophrenia," *Psych.Res.Neuroimaging*, in press, PMC Pending #320492.
- [15] P. Das and V. D. Calhoun, "Understanding brain dynamics with independent component analysis," *Acta Neuropsychiatria*, in press.
- [16] P. Das, V. D. Calhoun, and G. S. Malhi, "Mentalizing in male schizophrenia patients is compromised by virtue of dysfunctional connectivity between task-positive and task-negative networks," *Schizophrenia Research*, in press, PMC Journal - In Process.
- [17] W. Du, V. D. Calhoun, H. Li, S. Ma, T. Eichele, K. A. Kiehl, G. D. Pearlson, and T. Adali, "High Classification Accuracy for Schizophrenia with Rest and Task fMRI Data," *Frontiers in Human Neuroscience*, in press, PMC Journal - In Process.
- [18] S. Ehrlich, S. Brauns, A. Yendiki, B. C. Ho, V. D. Calhoun, S. C. Schulz, R. Gollub, and S. Sponheim, "Associations of cortical thickness and cognition in patients with schizophrenia and healthy controls," *Schizophr Bull*, in press, PMC Journal - In Process.
- [19] E. Ermer, L. M. Cope, P. K. Nyalakanti, V. D. Calhoun, and K. A. Kiehl, "Aberrant Paralimbic Gray Matter in Criminal Psychopathy," *Journal of Abnormal Psychology*, in press.
- [20] G. Glover, B. Mueller, T. Van Erp, T. Liu, D. Greve, J. Voyvodic, J. Rasmussen, J. Turner, G. Brown, D. Keator, V. D. Calhoun, H. J. Lee, J. Ford, D. Mathalon, M. Diaz, D. O'Leary, S. Gadde, A. Preda, C. Wible, H. Stern, G. McCarthy, and B. Ozyurt, "Function Biomedical Informatics Research Network Recommendations for Prospective Multi-Center Functional Neuroimaging Studies," *Journal of Magnetic Resonance Imaging*, in press, PMC Journal - In Process.
- [21] H. He, J. Sui, Q. Yu, J. A. Turner, B. C. Ho, S. Sponheim, D. S. Manoach, V. P. Clark, and V. D. Calhoun, "Altered Small-World Brain Networks in Schizophrenia Patients during the Working Memory Performance," *PLoS ONE*, in press, PMC Journal - In Process.
- [22] S. Jamadar, N. Powers, S. Meda, V. D. Calhoun, J. Gelernter, J. R. Gruen, and G. Pearlson, "Genetic Influences of Resting State fMRI Activity in Language-Related Brain Regions in Healthy Controls and Schizophrenia Patients: A Pilot Study," *Brain Imaging and Behavior*, in press.
- [23] O. Jeromine, M. Pattichis, and V. D. Calhoun, "Optimal compressed sensing reconstructions of fMRI using deterministic and stochastic sampling geometries," *BioMedical Engineering OnLine* in press, PMC Journal - In Progress.
- [24] M. Juarez, K. A. Kiehl, and V. D. Calhoun, "Intrinsic limbic and paralimbic networks are associated with criminal psychopathy," *Hum Brain Mapp*, in press, PMC Journal - In Process.
- [25] R. C. Kluetsch, C. Schmahl, I. Niedtfeld, M. Densmore, V. D. Calhoun, J. Daniels, A. Kraus, M. Bohus, and R. Lanius, "Alterations in default mode network connectivity during pain processing in borderline personality disorder," *Archives of General Psychiatry*, in press, PMC Journal: In Process.

- [26] Y. Li, T. Adali, T. Eichele, and V. D. Calhoun, "Group study of simulated driving fMRI data by multiset canonical correlation analysis," *IEEE Journal of Signal Proc Sys*, in press, PMC pending #255550.
- [27] J. Liu, V. D. Calhoun, J. Chen, E. Claus, and K. E. Hutchison, "Effect of homozygous deletions at 22q13.1 on alcohol dependence severity and cue-elicited BOLD response in the precuneus," *Addiction Biology*, in press, PMC pending #321831.
- [28] J. Liu, M. Ghassemi, A. Michael, D. Boutte, W. Wells, N. I. Perrone-Bizzozero, F. Macciardi, D. Mathalon, J. Ford, S. Potkin, J. Turner, FBIRN, and V. D. Calhoun, "Identification of Brain Functional Networks Linked to Genetic Variation in Schizophrenia: A Guided ICA Approach," *Frontiers in Human Neuroscience*, in press, PMC Journal: In Process.
- [29] L. Luo, L. Xu, R. Jung, G. D. Pearlson, T. Adali, and V. D. Calhoun, "Constrained Source Based Morphometry Identifies Structural Networks Associated with Default Mode Network," *Brain Connectivity*, in press, Pubmed Journal - In Process.
- [30] S. Ma, T. Eichele, V. D. Calhoun, W. Du, and T. Adali, "Modulations of functional connectivity in the healthy and schizophrenia groups during task and rest," *NeuroImage*, in press, PMC Journal - In Process.
- [31] S. Meda, A. Gill, M. C. Stevens, R. P. Lorenzoni, D. C. Glahn, V. D. Calhoun, J. A. Sweeney, C. A. Tamminga, M. Keshavan, G. Thaker, and G. G. Pearlson, "Differences in resting-state fMRI functional network connectivity between schizophrenia and psychotic bipolar probands and their unaffected first-degree relatives," in press, PMC Journal: In Process.
- [32] K. B. Nooner, S. Colcombe, L. Maayan, R. Tobe, M. Mennes, M. Benedict, A. Moreno, L. Panek, S. Zavitz, Q. Li, S. Sikka, D. Gutman, S. Bangaru, S. A. Brown, R. Schlachter, S. Kamiel, A. Anwar, C. Hinz, M. Kaplan, A. Rachlin, S. Adelsberg, B. Cheung, R. Khanuja, C. Yan, R. C. Craddock, V. D. Calhoun, W. Courtney, M. D. King, D. Wood, A. Scott, C. Cox, C. Kelly, A. Di Martino, B. Biswal, B. Coffey, M. J. Hoptman, D. Javitt, N. Pomara, J. Sidic, H. Koplewicz, F. X. Castellanos, B. L. Leventhal, and M. P. Milham, "The NKI-Rockland Sample: A Model for Accelerating the Pace of Discovery Science in Psychiatry," *Frontiers in Brain Imaging Methods*, in press, PMC Journal - In Process.
- [33] I. Pitas, V. D. Calhoun, and K. Diamantaras, "Guest Editorial: Special Issue on Machine Learning for Signal Processing," *Journal of Signal Processing Systems*, in press, PMC pending #184517.
- [34] S. M. Plis, V. Potluru, V. D. Calhoun, and T. Lane, "Correlated Noise: How It Breaks NMF, And What To Do About It," *Journal of Signal Processing Systems*, in press, PMC Pending #202119.
- [35] J. Segall, E. A. Allen, R. E. Jung, E. Erhardt, S. Arja, K. A. Kiehl, and V. D. Calhoun, "Correspondence between Structure and Function in the Human Brain at Rest," *Frontiers in Neuroinformatics*, in press.
- [36] G. Sugranyes, M. Kyriakopoulos, D. Dima, J. O'Muircheartaigh, G. Pendelbury, V. D. Calhoun, and S. Frangou, "Linked functional and white matter abnormalities within the working memory network in schizophrenia," *Schizophrenia Research*, in press, PMC Journal - In Process.
- [37] J. Sui, Q. Yu, H. He, and V. D. Calhoun, "A Selective Review of Multimodal Fusion Methods in Schizophrenia," *Frontiers in Human Neuroscience*, in press, PMC Journal - In Process.
- [38] D. F. Tolin, M. C. Stevens, A. L. Villavicencio, M. M. Norberg, V. D. Calhoun, R. O. Frost, G. Steketee, S. L. Rauch, and G. D. Pearlson, "Neural Mechanisms of Decision-

- Making in Hoarding Disorder," *Archives of General Psychiatry*, in press, PMC Pending #336967.
- [39] J. Turner, H. Chen, D. Mathalon, E. Allen, A. Mayer, C. Abbott, V. D. Calhoun, and J. Bustillo, "Reliability of the amplitude of low-frequency fluctuations in resting state in chronic schizophrenia," *Psych.Res.Neuroimaging*, in press, PMC Pending #326593.
- [40] G. van den Bosch, H. El Marroun, M. Schmidt, D. Tibboel, D. S. Manoach, V. D. Calhoun, and T. White, "Brain Connectivity during Verbal Working Memory in Children and Adolescents," *Human Brain Mapping*, in press, PMC Journal - In Process.
- [41] E. Walton, J. Turner, R. L. Gollub, D. S. Manoach, A. Yendiki, B. C. Ho, S. Sponheim, V. D. Calhoun, and S. Ehrlich, "Cumulative genetic risk and prefrontal activity in patients with schizophrenia," *Schizophr Bull*, in press, PMC Journal - In Process.
- [42] T. White, H. J. Bockholt, S. Ehrlich, B. C. Ho, D. S. Manoach, V. P. Clark, R. Gollub, V. D. Calhoun, S. C. Schulz, N. C. Andreasen, K. O. Lim, and V. A. Magnotta, "Spatial Characteristics of White Matter Abnormalities in Schizophrenia," *Schizophr Bull*, in press, PMC Journal - In Process.
- [43] P. D. Worhunsky, M. C. Stevens, K. M. Carroll, B. J. Rounsaville, V. D. Calhoun, G. D. Pearlson, and M. N. Potenza, "Functional Brain Networks during Stroop Task Performance are Associated with Impairment of Cognitive Control and Treatment Outcome in Cocaine Dependence," *Psychol Addict Behav*, in press, Pubmed Journal: In Process.
- [44] W. Xiong, N. Correa, T. Adali, and V. D. Calhoun, "Order Selection of the Linear Mixing Model for Complex-valued fMRI Data," *Journal of Signal Processing Systems*, in press, PMC Pending #225466.
- [45] R. A. Yeo, R. J. Thoma, C. Gasparovic, M. Monig, N. Harlaar, V. D. Calhoun, R. Kalyanam, and K. E. Hutchison, "Neurometabolite concentration and clinical features of alcohol use disorders: A proton magnetic resonance spectroscopy study," *Psych.Res.Neuroimaging*, in press, PMC Journal - In Process.

Book Chapters/Reviews:

- [1] V. D. Calhoun and B. Hong, "Independent component analysis of functional magnetic resonance imaging data," in *Handbook of Pattern Recognition and Computer Vision*. vol. 3rd, C. H. Chen, Ed.: World Scientific Publishing, 2005.
- [2] M. Assaf, P. Rivkin, M. Kraut, V. D. Calhoun, J. Hart, G. D. Pearlson, J. Hart, and M. Kraut, "Schizophrenia and Semantic Memory," in *The Neural Basis of Semantic Memory*: Cambridge University Press, 2006.
- [3] V. D. Calhoun, M. Rizzo, and R. Parasuraman, "Investigation of Brain Networks Involved in Simulated Driving Using Functional Magnetic Resonance Imaging," in *NeuroErgonomics: The Brain at Work*: Oxford University Press, 2006.
- [4] V. D. Calhoun, G. D. Pearlson, F. Hillary, and J. DeLuca, "Alcohol Intoxication Effects on fMRI Activation," in *Functional Neuroimaging in Clinical Populations*: Guilford Press, 2007.
- [5] V. D. Calhoun and T. Adali, "ICA for Fusion of Brain Imaging Data," in *Signal Processing Techniques for Knowledge Extraction and Information Fusion*, D. Mandic, M. Golz, A. Kuh, D. Obradovic, and T. Tanaka, Eds.: Springer, 2008.
- [6] D. Lloyd, V. D. Calhoun, R. Astur, and G. D. Pearlson, "Functional brain imaging and the problem of other minds," in *Theory of Mind in Literature and Cognitive Science*, 2008.

- [7] N. Swanson, T. Eichele, G. D. Pearlson, and V. D. Calhoun, "Lateral Differences in the Default Mode Network in Schizophrenia," in *The two halves of the brain: Information processing in the cerebral hemispheres*: MIT Press, In Press.

Conference Publications

- [1] B. Reisfeld, S. Blackband, V. D. Calhoun, S. Grossman, and S. Eller, "Use of MRI for Tracking Controlled Drug Release and Transport in the Brain," in *Proc.SMRM*, 1992, p. 1012.
- [2] V. D. Calhoun, S. Kalyanasundaram, S. Eller, S. Grossman, and K. Leong, "3D T1 Mapping of a Contrast Agent Concentration Gradient: Quantifying the Transport of an Intracranial Delivery of Gd-DTPA to the Parenchyma of the Rabbit Brain," in *Proc.SMRM*, 1993, p. 630.
- [3] V. D. Calhoun, V. Truong, B. Reisfeld, J. Williams, and K. Leong, "Magnetic Resonance Imaging of Active Targeting Using Immuno-Microspheres," in *Proc.SMRM*, 1993, p. 493.
- [4] S. Kalyanasundaram, B. Reisfeld, V. D. Calhoun, and K. Leong, "Polymeric Controlled Release and Transport in the Brain - A Mathematical Model," in *Proc.Controlled Release Society*, 1993.
- [5] S. Kalyanasundaram, V. D. Calhoun, and K. Leong, "Coupled Convective-Diffusive Mass Transport in the Brain," in *Proc.AICHE*, 1994.
- [6] V. D. Calhoun, T. Adali, M. Kraut, P. Rivkin, and G. D. Pearlson, "Visualizing Spatially Distributed Hemodynamic Lag Times In Event-Related Functional MRI: Estimation Of A Characteristic Visual "Impulse Response"," in *Proc.EMBS*, 1998, pp. 2124-2127.
- [7] V. D. Calhoun, T. Adali, and G. D. Pearlson, "A frequency-space approach for motion correction in fMRI," in *Proc.IMDSP*, 1998, p. 229.
- [8] V. D. Calhoun and G. D. Pearlson, "Spatially-Distributed Lag Time Estimation In Event-Related fMRI Via Adaptive Filtering," in *Proc.BMES*, 1998, p. 1110.
- [9] S. Eleff, P. Rivkin, M. Grygorcewicz, V. D. Calhoun, Y. Chen, B. Chance, and G. D. Pearlson, "A novel non-invasive phase modulated near-Infrared Imaging method demonstrates abnormal cortical activation in schizophrenics during cognitive testing," in *Proc.Soc.for Neuroscience*, 1998.
- [10] G. D. Pearlson, V. D. Calhoun, D. Wong, A. Marusic, M. Grygorcewicz, S. Nicastrì, L. Ellison, and T. E. Schlaepfer, "The Effects on Cerebral Blood Flow and Time Estimation " in *Proc.ACNP*, 1998.
- [11] G. D. Pearlson, T. E. Schlaepfer, A. Marusic, V. D. Calhoun, J. Brandt, and C. Lyketsos, "SPECT RCBF Pattern and Prediction of 2-year cognitive outcome in early Alzheimer's Disease," in *Biological Psychiatry*, 1998.
- [12] V. D. Calhoun, T. Adali, and G. D. Pearlson, "(Non)Stationarity Of Temporal Dynamics In fMRI," in *Proc.EMBS/BMES Joint Meeting*, 1999, p. 1079.
- [13] V. D. Calhoun, T. Adali, and G. D. Pearlson, "Adaptive Filtering Of Visual Evoked Responses In fMRI: Variability Of Response," in *Proc.IASTED-SIP*, 1999.
- [14] M. Kraut, V. D. Calhoun, and A. Mandir, "Regional Segregation of Task-Timing Related Activation in Human Supplementary Motor Area, Studies by fMRI," in *Proc.Soc.for Neuroscience*, 1999.
- [15] M. Kraut, V. D. Calhoun, A. Mandir, L. Marsh, and G. D. Pearlson, "fMRI of Task-Timing Related Activation Patterns in the Human Supplementary Motor Area," in *Proc.RSNA*, 1999.

- [16] S. Nicastrì, V. D. Calhoun, G. D. Pearlson, C. A. Buchpiguel, A. S. Tanaka, M. C. Leite, and A. G. Andrade, "Cortical Blood Flow Abnormalities in Cocaine-Dependent Individuals Evaluated by Single Photon Emission Computed Tomography: A Method of Quantification," in *Proc.NIDA*, 1999.
- [17] G. D. Pearlson, V. D. Calhoun, D. Wong, A. Marusic, M. Grygorcewicz, S. Nicastrì, L. Ellison, S. Dogun, M. Stephane, and T. E. Schlaepfer, "THC effects on cerebral blood flow and time estimation," in *Biological Psychiatry*, 1999.
- [18] L. Amodei, V. D. Calhoun, C. Radu, S. Mori, P. E. Barta, and G. D. Pearlson, "Differences in white matter connectivity in men and women with and without schizophrenia," in *Biological Psychiatry*, 2000.
- [19] V. D. Calhoun, X. Golay, and G. D. Pearlson, "Improved fMRI Slice Timing Correction: Interpolation Errors and Wrap Around Effects," in *Proc.ISMRM*, 2000, p. 810.
- [20] V. D. Calhoun, M. Kraut, T. Adali, and G. D. Pearlson, "A Weighted-Least Squares method for latency estimation in fMRI," in *Proc.ISMRM*, 2000, p. 814.
- [21] V. D. Calhoun, V. McGinty, T. Watson, and G. D. Pearlson, "Insights Into Functional Connectivity During A Driving Simulation Before And After Effects Of Marinol Intoxication On FMRI Activation And Cognitive Performance " in *Proc.ACNP*, 2000.
- [22] V. D. Calhoun and G. D. Pearlson, "The brain as a black-box?: ER-fMRI latency estimation of interleaved responses to short visual, auditory, and motor stimuli," in *Proc.ISMRM*, 2000, p. 983.
- [23] V. D. Calhoun and J. J. Pekar, "Where and Where are Components Independent? On the applicability of spatial- and temporal- ICA to functional MRI Data," in *NeuroImage*, 2000, p. S682.
- [24] M. Kraut, V. D. Calhoun, J. B. Segal, and J. Hart, "Functional MRI of Word Association and the Search for Word Meaning," in *Radiology*, 2000.
- [25] S. Nicastrì, V. D. Calhoun, G. D. Pearlson, C. A. Buchpiguel, A. S. Tanaka, M. C. Leite, and A. G. Andrade, "Cortical Blood Flow Abnormalities in Cocaine-Dependent Individuals Evaluated by Single Photon Emission Computed Tomography: A Method of Quantification," in *Proc.CPDD*, 2000.
- [26] D. M. Yousem, M. A. Kraut, R. J. Geckle, A. S. Mandir, V. D. Calhoun, and G. D. Pearlson, "Effect of Age on motor, visual, and visuomotor fMRI tasks," in *Radiology*, 2000.
- [27] V. D. Calhoun, T. Adali, and G. D. Pearlson, "Independent Components Analysis Applied To fMRI Data: A Natural Model And Order Selection," in *Proc.NSIP*, 2001.
- [28] V. D. Calhoun, T. Adali, and G. D. Pearlson, "Independent Components Analysis Applied to fMRI Data: A Generative Model for Validating Results," in *Proc.NNSP*, 2001.
- [29] V. D. Calhoun, T. Adali, G. D. Pearlson, and J. J. Pekar, "A Method for Making Group Inferences Using Independent Component Analysis of Functional MRI Data: Exploring the Visual System," in *NeuroImage*, 2001, p. S88.
- [30] V. D. Calhoun, T. Adali, G. D. Pearlson, and J. J. Pekar, "Group ICA of Functional MRI Data: Separability, Stationarity, and Inference," in *Proc.Int.Conf.on ICA and BSS*, 2001, pp. 155-160.
- [31] V. D. Calhoun, V. McGinty, and G. D. Pearlson, "Driving and the Brain: An Imaging Study," in *Proc.Human Centered Trans.Sim.Conf.*, 2001.
- [32] V. D. Calhoun, V. McGinty, J. J. Pekar, T. Watson, and G. D. Pearlson, "Investigation of Marinol (THC) Effects upon fMRI Activation During Active and Passive Driving Using Independent Component Analysis and SPM," in *NeuroImage*, 2001, p. S388.

- [33] V. D. Calhoun, J. J. Pekar, T. Adali, and G. D. Pearlson, "fMRI Of Visual Perception: Networks Identified By SPM And Independent Component Analysis," in *Proc.ISMRM*, 2001, p. 1742.
- [34] V. D. Calhoun, J. J. Pekar, T. Adali, and G. D. Pearlson, "An fMRI Analysis of Driving-Related Networks with Independent Component Analysis Applied in a Between-Condition (BC-ICA) and Within-Condition (WC-ICA) Manner," in *Proc.ISMRM*, 2001, p. 668.
- [35] A. Horska, V. D. Calhoun, and P. B. Barker, "A Rapid Method for Correction of CSF Partial Volume in Quantitative Proton MR Spectroscopic Imaging," in *Proc.ISMRM*, 2001, p. 216.
- [36] Y. Matsuyama and S. Imahara, "Independent Component Analysis by Convex Divergence Minimization: Applications to Brain fMRI Analysis " in *Int.Joint.Conf.on Neural Netw.*, 2001, pp. 412-417.
- [37] V. B. McGinty, R. A. Shih, E. S. Garrett, V. D. Calhoun, and G. D. Pearlson, "Assessment of Intoxicated Driving with a Simulator: A Validation Study with on Road Driving," in *Proc.Human Centered Trans.Sim.Conf.*, 2001, pp. 11-19.
- [38] S. Mostofsky, M. Abrams, S. Arnold, Y. Choe, V. D. Calhoun, and J. J. Pekar, "Functional MRI Examination of Motor Response Inhibition," in *Proc.INS*, 2001.
- [39] G. D. Pearlson, J. R. Depaulo, J. B. Potash, H. Strasser, P. E. Barta, V. D. Calhoun, K. O. Yates, P. Rivkin, A. Pulver, E. Miller, and D. Schretlen, "Schizophrenia and psychotic affective disorder: anatomic overlay? ", in *Biological Psychiatry*, 2001.
- [40] J. J. Pekar, V. D. Calhoun, T. Adali, and G. D. Pearlson, "Spatial & Temporal Independent Component Analysis of fMRI Data with Two Task-Related Waveforms," in *Proc.ISMRM*, 2001, p. 24.
- [41] P. Rivkin, J. Hart, V. D. Calhoun, and G. D. Pearlson, "Functional MRI and Formal Thought Disorder," in *Biological Psychiatry*, 2001.
- [42] K. O. Yates, H. M. Morris, H. Strasser, N. A. Honeycutt, D. Schretlen, P. Barta, J. Anthony, V. D. Calhoun, and G. D. Pearlson, "Linear Regression Model Based on Age- and Sex-Related Increase in MRI Volumes of Ventricles," in *Proc.SBP*, 2001.
- [43] V. D. Calhoun and T. Adali, "Complex Infomax: Convergence and Approximation of Infomax with Complex Nonlinearities," in *Proc.NNSP*, 2002.
- [44] V. D. Calhoun, T. Adali, G. D. Pearlson, and J. J. Pekar, "On Complex Infomax Applied to Complex fMRI Data," in *Proc.ICASSP*, 2002.
- [45] V. D. Calhoun, T. Adali, G. D. Pearlson, and J. J. Pekar, "An Infomax Method for Performing ICA of fMRI Data in the Complex Domain," in *Proc.HBM*, 2002.
- [46] V. D. Calhoun, T. Adali, G. D. Pearlson, and J. J. Pekar, "A Generative Approach to Validation and Evaluation of Independent Component Analyses of fMRI Data," in *Proc.HBM*, 2002.
- [47] V. D. Calhoun, T. Adali, G. D. Pearlson, P. C. M. van Zijl, and J. J. Pekar, "Independent Component Analysis of fMRI Data in the Complex Domain," in *Proc.ISMRM*, 2002.
- [48] V. D. Calhoun, T. Adali, J. J. Pekar, and G. D. Pearlson, "Independent Component Analysis Facilitates fMRI of an Naturalistic Behavior: Hypothesized Neural Substrates of Simulated Driving," in *Proc.ISMRM*, 2002.
- [49] V. D. Calhoun, V. McGinty, R. A. Shih, D. Altschul, D. Scott, J. Shaikh, and G. D. Pearlson, "Intoxication Effects on fMRI Studies of Simulated Driving," in *Proc.ACNP*, 2002.
- [50] V. D. Calhoun and G. D. Pearlson, "Using Independent Component Analysis To Study Complex Behaviors With fMRI: Application to Studies of Simulated Driving," in *Society of Biological Psychiatry*, 2002.

- [51] V. D. Calhoun and G. D. Pearlson, "Novel Means for Designing, Analyzing and Interpreting Functional MRI Studies," in *Society of Biological Psychiatry*, 2002.
- [52] A. Horska, M. A. Jacobs, V. D. Calhoun, and P. B. Barker, "A Rapid Method for Brain Tissue Segmentation " in *Proc.RSNA*, 2002.
- [53] J. Kim, R. Kanaan, V. D. Calhoun, S. Mori, and G. D. Pearlson, "More Averages vs. More Gradients: Which is Right for Reliable Diffusion Tensor MRI?," in *Proc.RSNA*, 2002.
- [54] J. T. Little, G. S. Smith, C. C. Meltzer, B. Mulsant, B. G. Pollock, M. D. Miller, V. D. Calhoun, G. D. Pearlson, and C. F. Reynold, "Cerebral metabolic change with paroxetine treatment in geriatric depression," in *Am.J.Geriatric Psych.*, 2002, pp. 73-74.
- [55] S. Mostofsky, M. Abrams, M. Goldberg, J. Schafer, J. J. Pekar, S. M. Courtney, V. D. Calhoun, M. Kraut, and M. Denckla, "Supplementary Motor Area in Motor Response Inhibition and Preparation: Evidence From an fMRI Study of a Go/No-go Task," in *Proc.Amer.Acad.of Neur.*, 2002.
- [56] H. Strasser, N. A. Honeycutt, D. Schretlen, J. R. Depaulo, A. Pulver, J. Anthony, R. Hopokins, P. Barta, V. D. Calhoun, E. Miller, and G. D. Pearlson, "Amygdala volumes in psychotic and nonpsychotic bipolars and schizophrenia," in *Society of Biological Psychiatry*, 2002.
- [57] R. Arya, S. Roys, V. D. Calhoun, T. Adali, J. Greenspan, and R. Gullapali, "Distance Measure for Ranking Spatial ICA Component of Functional MRI Data," in *Proc.ISMRM*, 2003.
- [58] V. D. Calhoun and T. Adali, "Complex ICA for fMRI Analysis: Performance of Several Approaches," in *Proc.ICASSP*, 2003.
- [59] V. D. Calhoun, T. Adali, J. C. Hansen, J. Larsen, and J. J. Pekar, "ICA of fMRI: An Overview," in *Proc.Int.Conf.on ICA and BSS*, 2003.
- [60] V. D. Calhoun, T. Adali, G. D. Pearlson, and J. J. Pekar, "A Method for Testing Conjunctive and Subtractive Hypotheses on Group fMRI Data Using Independent Component Analysis," in *Proc.ISMRM*, 2003.
- [61] V. D. Calhoun, T. Adali, J. J. Pekar, and G. D. Pearlson, "Independent Component Analysis of fMRI Power Spectra: Spatial Grouping and Latency Estimation," in *Proc.ISMRM*, 2003.
- [62] V. D. Calhoun, T. Adali, J. J. Pekar, and G. D. Pearlson, "Latency (in)sensitive Group Independent Component Analysis of fMRI Data in the Temporal Frequency Domain," in *Proc.HBM*, 2003.
- [63] V. D. Calhoun, D. Altschul, V. McGinty, and G. D. Pearlson, "Alcohol Intoxication Effects on A Driving-Related Visual Perception Task: An fMRI Study," in *Society of Biological Psychiatry*, 2003.
- [64] V. D. Calhoun, K. A. Kiehl, K. A. Kiehl, P. F. Liddle, and G. D. Pearlson, "Aberrant Localization of Synchronous fMRI Activity in Temporal Auditory Cortex Reliably Characterizes Schizophrenia," in *Proc.Int.Cong.on Schiz.Res.*, Colorado Springs, CO, 2003.
- [65] V. D. Calhoun, K. A. Kiehl, P. F. Liddle, and G. D. Pearlson, "Aberrant Localization of Temporal Lobe Auditory Cortex Synchronous fMRI Activity Reliably Characterizes Schizophrenia," in *Proc.HBM*, 2003.
- [66] V. D. Calhoun, J. Kim, and G. D. Pearlson, "fMRI Connectivity Measured by Mutual Information and Correlation: Linear Dependence vs. General Dependence," in *Proc.ISMRM*, 2003.

- [67] V. D. Calhoun and G. D. Pearlson, "A Novel Approach for Investigative Dose-Response and Case-Control Changes in Multiple Spatially-Independent Networks: Applications to fMRI of Simulated Driving and Alcohol," in *Proc.ACNP*, 2003.
- [68] V. D. Calhoun, P. Rivkin, and G. D. Pearlson, "Synchronous Auditory Cortex Fluctuations in Schizophrenia: An fMRI Study," in *Society of Biological Psychiatry*, 2003.
- [69] V. D. Calhoun, D. Scott, D. Altschul, R. A. Shih, and G. D. Pearlson, "Alcohol Intoxication Effects on A Visual Perception Task: An fMRI Study," in *Proc.ISMRM*, 2003.
- [70] E. Egolf and V. D. Calhoun, "Group ICA of fMRI Toolbox," in *Proc.Biomedical Engineering Alliance and Consortium*, Hartford, CT 2003.
- [71] E. Formisano, V. D. Calhoun, N. van Atteveldt, F. Esposito, F. Di Salle, J. J. Pekar, and R. Goebel, "Analysis of group fMRI data with cortex-based intersubject alignment and independent component analysis," in *Proc.HBM*, Sendai, Japan, 2003.
- [72] A. Horska, M. A. Jacobs, V. D. Calhoun, A. Arslanoglu, and P. B. Barker, "A Fast Method for Image Segmentation: Application to Quantitative Proton MRSI at 3 Tesla," in *Proc.ISMRM*, 2003.
- [73] J. Kim and V. D. Calhoun, "Evaluation of Quantization Error in DICOM images for fMRI Application," in *Proc.RSNA*, 2003.
- [74] J. Kim, V. D. Calhoun, and G. D. Pearlson, "3D Visualization of White Matter Tracts Using LIC," in *Proc.ASNR*, 2003.
- [75] J. Kim, V. D. Calhoun, and G. D. Pearlson, "DTI of Huntington Disease," in *Proc.ISMRM*, 2003.
- [76] M. Noureldin, D. M. Yousem, A. Tekes, N. Browner, and V. D. Calhoun, "Correlation between the amplitude of cortical activation and reaction time: An fMRI Study " in *Proc.ASNR*, 2003.
- [77] G. D. Pearlson, K. A. Kiehl, P. F. Liddle, and V. D. Calhoun, "Abberant Localization of Auditory Cortex Synchronous Hemodynamic Activity Reliably Characterizes Schizophrenia," in *Proc.ACNP*, 2003.
- [78] T. Adali, T. Kim, and V. D. Calhoun, "Independent Component Analysis By Complex Nonlinearities," in *Proc.ICASSP*, 2004, pp. 525-528.
- [79] M. Assaf, C. Kuzu, P. Rivkin, V. D. Calhoun, J. Hart, Jr., M. Kraut, M. Yassa, and G. D. Pearlson, "fMRI Evidence for Abnormal Semantic Processing in Schizophrenia " in *Proc.SBP*, New York, NY, 2004.
- [80] V. D. Calhoun, "Intoxication effects on fMRI studies of simulated driving reveals disruption in specific synchronous networks," in *Proc.SBP*, New York, NY, 2004.
- [81] V. D. Calhoun, T. Adali, and Y. Li, "Independent component analysis of complex-valued functional magnetic resonance imaging data by complex nonlinearities," in *Proc.ISBI*, 2004, pp. 984-987.
- [82] V. D. Calhoun, K. A. Kiehl, and G. D. Pearlson, "Are two tasks better than one?: Multi-task coupling of fMRI independent sources in schizophrenia," in *Proc.Int.Cong.on Schiz.Res.*, 2004.
- [83] V. D. Calhoun and G. D. Pearlson, "Intoxication Effects on fMRI Studies of Simulated Driving: ICA Reveals Disruption in Synchronous Networks," in *Proc.ICANA*, 2004.
- [84] K. Celone, V. D. Calhoun, A. Driscoll, E. Rand-Giovannetti, E. Chua, B. Dickerson, M. Albert, D. Blacker, and R. Sperling, "ICA of fMRI Associative Memory Networks in Normal Aging, MCI and Mild AD," in *Proc.Soc.for Neuroscience*, 2004.
- [85] E. Egolf, K. A. Kiehl, and V. D. Calhoun, "Group ICA of fMRI Toolbox (GIFT)," in *Proc.HBM*, 2004.

- [86] T. Franklin, V. D. Calhoun, K. A. Kiehl, J. A. Gray, N. Sciortino, and A. R. Childress, "An Independent component analysis of BOLD fMRI to cigarette stimuli: Identifying the brain regions that act as a functional unit in response to smoking cues " in *Proc.SRNT*, 2004.
- [87] N. Giuliani, G. D. Pearlson, and V. D. Calhoun, "Alcohol Versus Marinol Intoxication Effects on Visual Perception: An fMRI Study," in *Proc.ICANA*, 2004.
- [88] M. P. Hejnar, M. M. Kurtz, K. A. Keihl, G. D. Pearlson, and V. D. Calhoun, "Performance on the Penn Conditional Exclusion Task (PCET) in Patients with Schizophrenia (SZ) and Healthy Controls: An fMRI Analysis " in *Proc.SBP*, New York, NY, 2004.
- [89] B. Hong and V. D. Calhoun, "On an Adaptive ICA Method with Application to Biomedical Image Analysis," in *Seventh International Conference on Signal Processing*, 2004.
- [90] B. Hong and V. D. Calhoun, "Source Density Driven Adaptive Independent Component Analysis Approach for fMRI Signal Analysis " in *Proc.MLSP*, San Paulo, Brazil, 2004.
- [91] B. Hong, G. D. Pearlson, E. Egolf, and V. D. Calhoun, "Identification of Brain Activity in a Visual Stimulation Task - An Adaptive ICA Approach for fMRI Data " in *Proc.HBM*, Budapest, Hungary, 2004.
- [92] K. A. Kiehl, M. Stevens, K. R. Laurens, G. D. Pearlson, V. D. Calhoun, and P. F. Liddle, "The Amygdala as a salience detector: Evidence from a large-scale study (N=100) of auditory target detection " in *Proc.HBM*, Budapest, Hungary, 2004.
- [93] C. Kuzu, P. Rivkin, G. D. Pearlson, J. Hart, Jr., V. D. Calhoun, M. Kraut, M. Yassa, and M. Assaf, "fMRI activation during a feature-binding semantic task in schizophrenia," in *Proc.APA*, New York, NY 2004.
- [94] Y. Li, T. Adali, and V. D. Calhoun, "Independent component analysis with feature selective filtering," in *Proc.MLSP*, 2004.
- [95] M. A. Mohamed, D. M. Yousem, I. Kusevic, V. D. Calhoun, C. Cristinzio, N. A. Honeycutt, A. El-Deib, M. Yassa, B. Caffo, and S. Basset, "Lack of Education Effect on Brain Activity in a Memory Based Functional MRI Experiment," in *Proc.ASNR*, 2004.
- [96] P. Rivkin, M. Yassa, J. Hart, Jr., M. Kraut, R. Kanaan, V. D. Calhoun, and G. D. Pearlson, "Abnormal rCBF activation in schizophrenic individuals during a semantic feature-binding task " in *Proc.SBP*, New York, NY, 2004.
- [97] A. Tekes, V. D. Calhoun, M. A. Mohamed, B. Yagmurlu, N. Mikhelashvili-Browner, and D. M. Yousem, "Effect of age in volume of activation in block design and single-event paradigms using visuomotor functional MR imaging," in *Proc.ASNR*, 2004.
- [98] A. Tekes, M. A. Mohamed, N. Mikhelashvili-Browner, V. D. Calhoun, and D. M. Yousem, "Effect of age on visuomotor functional MR Imaging," in *Proc.ASNR*, 2004.
- [99] V. D. Calhoun, T. Adali, K. A. Kiehl, R. S. Astur, J. J. Pekar, and G. D. Pearlson, "Are two tasks better than one?: Multi-task coupling of fMRI independent sources in schizophrenia," in *Proc.ISMRM*, 2005.
- [100] V. D. Calhoun, T. Adali, K. A. Kiehl, and G. D. Pearlson, "Neuronal Chronometry Of Target Detection: Fusion Of Hemodynamic And Event-related Potential Data," in *Proc.MLSP*, 2005.
- [101] V. D. Calhoun, T. Adali, and J. Pekar, "Semi-blind ICA of fMRI: A Method for Utilizing Hypothesis-Derived Time Courses in A Spatial ICA Analysis," in *NeuroImage*, 2005.
- [102] V. D. Calhoun, T. Adali, J. Pekar, and K. A. Kiehl, "Semi-blind ICA of fMRI: A method for utilizing hypothesis-derived time courses in a spatial ICA analysis," in *Proc.ISMRM*, 2005.

- [103] V. D. Calhoun, K. A. Keihl, and G. D. Pearlson, "A Method for Multi-task fMRI Data Fusion Applied to Schizophrenia," in *NeuroImage*, 2005.
- [104] V. D. Calhoun, K. A. Keihl, and G. D. Pearlson, "A Method for Multi-task fMRI Data Fusion Applied to Schizophrenia," in *Proc.SBP*, 2005.
- [105] N. Correa, T. Adali, Y. Li, and V. D. Calhoun, "Comparison of blind source separation algorithms for fMRI using a new matlab toolbox: GIFT," in *Proc.IEEE Int.Conf.Acoustics, Speech, Signal Processing (ICASSP)*, Philadelphia, PA, 2005.
- [106] N. Giuliani, V. D. Calhoun, and W. Cunningham, "Similarities between evaluative and non-evaluative judgments: A pluralistic fMRI analysis using SPM and Semi-blind ICA," in *Proc.CNS*, 2005.
- [107] K. Groth, T. Benios, N. Giuliani, V. D. Calhoun, and G. D. Pearlson, "General Intelligence Correlates to Brain Structure Differently in Men and Women," in *Proc.SAGE IV*, 2005.
- [108] C. C. Hong, V. D. Calhoun, and J. J. Pekar, "REM sleep eye movements are associated with oculomotor circuit activation and periventricular deactivation," in *Proc.ISMRM*, 2005.
- [109] M. R. Johnson, N. Morris, R. S. Astur, V. D. Calhoun, K. A. Kiehl, and G. D. Pearlson, "Schizophrenia and Working Memory: A Closer Look at fMRI of the Dorsolateral Prefrontal Cortex During a Working Memory Task," in *Proc.CNS*, 2005.
- [110] M. R. Johnson, N. Morris, R. S. Astur, V. D. Calhoun, K. A. Kiehl, and G. D. Pearlson, "Schizophrenia and Working Memory: A Closer Look at fMRI of the Dorsolateral Prefrontal Cortex During a Working Memory Task," in *Proc.CNS*, 2005.
- [111] Y. Li, T. Adali, and V. D. Calhoun, "Feature-selective ICA and its convergence properties," in *Proc.IEEE Int.Conf.Acoustics, Speech, Signal Processing (ICASSP)*, 2005.
- [112] K. McKiernan, M. Fujimoto, K. March, V. D. Calhoun, and G. D. Pearlson, "Independent Component Analysis Identifies a Resting State Neural Network in Healthy Adults," in *Proc.CNS*, 2005.
- [113] R. Mutihac, J. G. Schafer, C. K. Jones, B. A. Chodkowski, J. Gillen, S. Mostofsky, A. Boyce, M. Goldberg, M. B. Denckla, S. M. Courtney, M. Kraut, V. D. Calhoun, T. Adali, and J. J. Pekar, "Listening to the Scanner: Modulation of Auditory Perception During Visuo-Motor fMRI," in *Proc.ISMRM*, 2005.
- [114] H. Snoussi and V. D. Calhoun, "Bayesian Blind Source Separation for Brain Imaging," in *Proc.ICIP*, 2005.
- [115] H. Snoussi and V. D. Calhoun, "Bayesian Blind Source Separation for Brain Imaging," in *Proc.SETIT*, 2005.
- [116] M. Stevens, K. A. Kiehl, G. D. Pearlson, and V. D. Calhoun, "Functional neural circuits for mental timekeeping," in *Human Brain Mapping*, Florence, Italy, 2005.
- [117] J. Bentwich, A. Caparelli, C. E. Foerster, B. Maletic-Savatich, V. D. Calhoun, and H. Benveniste, "'More' may be 'less': deficient dichotic listening performance in hfa is associated with hyperactivation of bilateral language brain areas," in *Proc.ISMRM*, 2006.
- [118] J. Bentwich, A. Caparelli, C. E. Foerster, B. Maletic-Savatich, V. D. Calhoun, and H. Benveniste, "'More' may be 'less': deficient dichotic listening performance in hfa is associated with hyperactivation of bilateral language brain areas," in *Proc.IMFAR*, 2006.
- [119] V. D. Calhoun, "A Feature-based Approach to Combine Multimodal Brain Imaging Data," in *Proc.ISMRM*, Seattle, WA, 2006.
- [120] V. D. Calhoun and T. Adali, "Fusion of Multisubject Functional MRI and Event-Related Potential Data Using Independent Component Analysis," in *Proc.ICASSP*, 2006.

- [121] V. D. Calhoun, T. Adali, K. A. Kiehl, and G. D. Pearlson, "Classification of Schizophrenia and Bipolar Disorder using Temporally Coherent Functional Networks," in *Proc.ACNP*, 2006.
- [122] V. D. Calhoun, T. Adali, and J. Liu, "A Feature-based Approach to Combine Functional MRI, Structural MRI, and EEG Brain Imaging Data," in *Proc.EMBS*, 2006.
- [123] T. Eichele, M. Moosmann, V. D. Calhoun, K. Specht, H. Nordby, and K. Hugdahl, "Joint ICA of Simultaneous Single Trial ERP-fMRI," in *Proc.HBM*, 2006.
- [124] A. Garrity, G. D. Pearlson, K. McKiernan, D. Lloyd, K. A. Kiehl, and V. D. Calhoun, "Aberrant functional connectivity of the 'default mode' in schizophrenia," in *Trinity Papers*, 2006.
- [125] A. Garrity, G. D. Pearlson, K. McKiernan, D. Lloyd, K. A. Kiehl, and V. D. Calhoun, "Aberrant functional connectivity of the 'default mode' in schizophrenia," in *Neuron*, 2006.
- [126] M. Jafri and V. D. Calhoun, "Functional Classification of Schizophrenia Using Feed Forward Neural Networks," in *Proc.EMBS*, 2006.
- [127] Y. Li, T. Adali, and V. D. Calhoun, "Sample Dependence Correction For Order Selection In fMRI Analysis," in *Proc.ISBI*, 2006.
- [128] J. Liu and V. D. Calhoun, "A novel approach to analyzing fMRI and SNP data via parallel independent component analysis," in *Proc.SPIE*, 2006, pp. 1301-1311.
- [129] D. H. Mathalon, K. A. Kiehl, V. D. Calhoun, T. McGlashan, G. D. Pearlson, and S. W. Woods, "Abnormal fronto-temporal cortical activation during fMRI attention and working memory tasks in prodromal and early illness patients with schizophrenia," in *Proc.ACNP*, 2006.
- [130] G. D. Pearlson, D. A. Wallace, V. D. Calhoun, M. Assaf, M. C. Stevens, S. Meda, and J. Gelernter, "Alpha7 nicotinic cholinergic receptor (CHRNA7) polymorphisms discriminate figural memory abilities in healthy adults and influence related structural and functional MRI patterns," in *Proc.ACNP*, 2006.
- [131] Q. Wang, V. Megalooikonomou, D. Kontos, M. Erickson, and V. D. Calhoun, "Similarity Searches in Brain Image Databases," in *Proc.HBM*, 2006.
- [132] A. J. Allen, S. Meda, R. Astur, V. D. Calhoun, K. Ruopp, B. Cuadra, and G. D. Pearlson, "Effect of alcohol on performance on visual oddball task: an fMRI study," in *Proc.ICANA*, 2007.
- [133] M. Assaf, M. Johnson, R. Schultz, R. Sahl, V. D. Calhoun, T. Hendler, and G. D. Pearlson, "Abnormal Brain Activation During Implicit Mentalization in Autism Spectrum," in *Society of Biological Psychiatry*, 2007.
- [134] G. K. Beatty, R. A. Anderson, W. Kodituwakku, V. D. Calhoun, and V. P. Clark, "Response time variability and fMRI signal changes during a cognitive interference task in stimulant dependent patients," in *Proc. Society for Neuroscience*, San Diego, CA, 2007.
- [135] M. Benavidez, V. P. Clark, G. Kuperberg, K. Lim, and V. D. Calhoun, "Functional Networks Identified in an Auditory Oddball Task of Chronic and First Episode Schizophrenia Patients (N=261) Collected from the MIND Clinical Imaging Consortium," in *Proc. Society for Neuroscience*, San Diego, CA, 2007.
- [136] H. J. Bockholt, J. Turner, D. L. Johnson, V. D. Calhoun, D. N. Greve, A. W. Toga, C. G. Wible, K. Lim, B. Mueller, J. Lauriello, D. S. O'Leary, G. H. Glover, J. T. Voyvodic, G. McCarthy, J. M. Ford, S. Potkin, and FBIRN, "Morphometric analysis of a multi-site study of schizophrenia using freesurfer," in *Proc. Society for Neuroscience*, San Diego, CA, 2007.

- [137] V. D. Calhoun, G. D. Pearlson, P. Maciejewski, and K. A. Kiehl, "Use of Hemodynamic Brain Modes vs Conventional fMRI Analysis and Structural Brain Measures In Schizophrenia and Bipolar Disorder," in *Proc. ICOSR*, 2007.
- [138] V. D. Calhoun, R. Silva, and J. Liu, "Identification of Multimodal MRI and EEG Biomarkers Using Joint-ICA and Divergence Criteria," in *Proc.MLSP*, 2007.
- [139] V. P. Clark, D. S. Manoach, R. L. Gollub, B. C. Ho, K. Lim, J. Burge, T. Lane, P. Lesnik, V. D. Calhoun, and N. C. Andreasen, "A Multi-site fMRI Study of Schizophrenia: Effects of Illness type and Duration on Brain Function and Connectivity," in *Proc. ICOSR*, 2007.
- [140] K. P. Cosgrove, J. K. Staley, F. Wang, V. D. Calhoun, I. L. Petrakis, E. Perry, E. Frohlich, E. Ruff, H. P. Blumberg, and J. Krystal, "Decreased gray and white matter volume in alcohol dependent subjects: a voxel based morphometry study," in *Proc.ICANA*, 2007.
- [141] O. Demirci and V. D. Calhoun, "Detection of Schizophrenia using fMRI Data via Projection Pursuit," in *Proc.MLSP*, 2007.
- [142] R. L. Gollub, D. S. Manoach, J. Fries, M. Vangel, T. White, N. C. Andreasen, and V. D. Calhoun, "Multi-site fMRI study of DLPFC activation differences between subjects with schizophrenia and controls," in *Proc. Society for Neuroscience*, San Diego, CA, 2007.
- [143] M. Jafri and V. D. Calhoun, "Interdependencies among Resting-State networks in Schizophrenia using Independent Component Analysis," in *Proc.ISMRM*, 2007.
- [144] M. Jafri, G. D. Pearlson, and V. D. Calhoun, "A maximal-correlation approach using ICA for testing functional network connectivity applied to Schizophrenia," in *Proc.ISBI*, 2007.
- [145] M. Jafri, G. D. Pearlson, and V. D. Calhoun, "Resting State Functional Network Connectivity among ICA Components using Bayesian Networks," in *Proc.HBM*, 2007.
- [146] Y. Li, T. Adali, and V. Calhoun, "A multivariate model for comparison of two datasets and its application to fMRI analysis," in *Proc.MLSP*, 2007.
- [147] Y. Li, T. Adali, and V. D. Calhoun, "A Model For Comparison Of Two Functional MRI Datasets By Canonical Correlation Analysis And Independent Component Analysis," in *Proc.MLSP*, 2007.
- [148] Y. Li, W. Wang, T. Adali, and V. D. Calhoun, "CCA for Joint Blind Source Separation of Multiple Datasets with Application to Group fMRI Analysis," in *Proc.MLSP*, 2007.
- [149] J. Liu and V. D. Calhoun, "Parallel independent component analysis for multimodal analysis: Application to fMRI and EEG Data," in *Proc.ISBI*, Washington, D. C., 2007, pp. 1028-1031.
- [150] J. Liu, G. D. Pearlson, and V. D. Calhoun, "Investigation of Multiple Brain Imaging and Genetic Modalities via Parallel Independent Component Analysis," in *Proc. HBM*, Chicago, Il, 2007.
- [151] G. Machado, M. Juarez, V. P. Clark, R. L. Gollub, V. Magnotta, T. White, and V. D. Calhoun, "Probing Schizophrenia With A Sensorimotor Task: Large-Scale (N=273) Independent Component Analysis Of First Episode And Chronic Schizophrenia Patients," in *Proc. Society for Neuroscience*, San Diego, CA, 2007.
- [152] S. Meda, J. R. Gruen, V. D. Calhoun, J. Gelernter, and G. D. Pearlson, "Single Nucleotide Polymorphism in DCDC2 affects Brain Morphology -A Voxel Based Morphometric Study," in *Proc.ISMRM*, 2007.
- [153] J. Roffmann, R. L. Gollub, D. S. Manoach, and V. Calhoun, "Interactive effects of MTHFS C677T and COMT Val158Met on executive function and prefrontal activation in schizophrenia," in *Proc.SIRS*, 2007.
- [154] P. Skudlarski, V. D. Calhoun, and G. D. Pearlson, "Disruption of connectivity in schizophrenia measured by Diffusion Tensor Imaging fiber tracking and resting correlation," in *Proc. HBM*, 2007.

- [155] M. Stevens, K. A. Kiehl, G. D. Pearlson, and V. D. Calhoun, "Functional neural networks underlying response inhibition in adolescents and adults," in *Human Brain Mapping*, 2007.
- [156] T. Van Erp, J. B. Segall, J. Turner, D. N. Greve, A. W. Toga, C. G. Wible, K. Lim, B. Mueller, J. Lauriello, D. S. O'Leary, G. H. Glover, G. Brown, J. T. Voyvodic, G. McCarthy, S. Potkin, and V. D. Calhoun, "Voxel-Based Morphometric analysis of a multi-site study on schizophrenia," in *Proc. Society for Neuroscience*, San Diego, CA, 2007.
- [157] L. Xu, J. Liu, and V. D. Calhoun, "Functional Connectivity Among Spatially Independent Brain Regions During a VR Task," in *Proc. HBM*, Chicago, IL, 2007.
- [158] A. J. Allen, S. Meda, R. Astur, V. D. Calhoun, P. Skudlarski, and G. D. Pearlson, "Effect of alcohol on performance on secondary task while driving," in *Proc. CNS*, 2008.
- [159] H. J. Bockholt, J. Ling, M. Scully, A. Scott, S. Lane, V. Magnotta, T. White, K. Lim, R. L. Gollub, and V. D. Calhoun, "Real-time Web-scale Image Annotation for Semantic-based Retrieval of Neuropsychiatric Research Images," in *Proc.HBM*, 2008.
- [160] H. J. Bockholt, S. Williams, M. Scully, V. Magnotta, R. L. Gollub, J. Lauriello, K. Lim, T. White, R. Jung, S. C. Schulz, N. C. Andreasen, and V. D. Calhoun, "The MIND Clinical Imaging Consortium as an application for novel comprehensive quality assurance procedures in a multi-site heterogeneous clinical research study," in *Proc.HBM*, 2008.
- [161] G. Book, K. A. Kiehl, V. D. Calhoun, M. Stevens, and G. D. Pearlson, "Fusion of fMRI and the Pupil Response During an Auditory Oddball Task," in *Proc. CNS*, Portland, OR, 2008.
- [162] V. D. Calhoun, "Does the Brain Rest?: An Independent Component Analysis of Temporally Coherent Brain Networks at Rest and During a Cognitive Task," in *Proc. IEEE SSIAI*, Santa Fe, NM, 2008.
- [163] V. D. Calhoun, K. A. Kiehl, G. D. Pearlson, and J. Liu, "Moving Beyond Single Candidate Genes: A Parallel ICA Approach for Joint Analysis of SNP, fMRI, and ERP Data," in *Proc.ACNP*, Scottsdale, AZ, 2008.
- [164] A. Caprihan, G. Pearlson, and V. Calhoun, "Discriminatory PCA applied to Schizophrenia DTI Data," in *Proc.ISMRM*, Toronto, Canada, 2008.
- [165] V. P. Clark, G. K. Beatty, R. E. Anderson, P. Kodituwakku, V. D. Calhoun, and J. Phillips, "fMRI Activity in Cingulate and insular cortex predicts relaps in recovering stimulant addicts," in *Proc. Society for Neuroscience*, San Diego, CA, 2008.
- [166] N. Correa, T. Adali, Y. Li, and V. D. Calhoun, "Examining associations between fMRI and EEG data using canonical correlation analysis," in *Proc. ISBI*, Washington, D.C., 2008, pp. 1251-1254.
- [167] T. Eichele, V. Calhoun, M. Moosmann, K. Specht, L. A. Jongsma, R. Quiroga, H. Nordby, and K. Hugdahl, "Unmixing concurrent EEG-fMRI with parallel independent component analysis," in *Proc.HBM*, 2008.
- [168] T. Eichele, S. Debener, V. Calhoun, K. Specht, A. K. Engel, K. Hugdahl, D. Von Cramon, and M. Ullsperger, "Prediction of human errors by maladaptive changes in event-related brain networks " in *Proc.HBM*, 2008.
- [169] T. Eichele, S. Rachakonda, and V. D. Calhoun, "EEGIFT: A Toolbox for Group Independent Component Analysis of Event-Related EEG," in *Proc. SPR*, Austin, TX, 2008.
- [170] T. Eichele, R. Scheeringa, V. Calhoun, K. Hugdahl, and M. Bastiaansen, "Deconvolution of Hemodynamic Responses from Alpha-band EEG," in *Proc.HBM*, 2008.

- [171] Z. Feng, A. Caprihan, K. Blagoev, F. Zhao, and V. D. Calhoun, "Modeling of Phase Changes in BOLD fMRI," in *Proc.ISMRM*, Toronto, Canada, 2008.
- [172] K. E. Hild and V. D. Calhoun, "The Fourth Annual MLSP Competition," in *International Workshop on Machine Learning for Signal Processing (MLSP)*, Cancun, Mexico, 2008, pp. 38-42.
- [173] K. E. Hild, M. Kurimo, and V. D. Calhoun, "The Sixth Annual MLSP Competition," in *International Workshop on Machine Learning for Signal Processing (MLSP)*, Kittila, Finland, 2008, pp. 107-111.
- [174] B. C. Ho, T. White, L. M. Rohrer, E. Epping, T. Wassink, V. Magnotta, H. J. Bockholt, K. O. Lim, V. D. Calhoun, J. Roffmann, R. L. Gollub, S. C. Schulz, and N. C. Andreasen, "Associations between DISC1 and White Matter Abnormalities in Schizophrenia: A Diffusion Tensor Imaging Study," in *Proc. ACNP*, Scottsdale, AZ, 2008.
- [175] K. Jagannathan, M. Assaf, V. D. Calhoun, and G. D. Pearlson, "Functional network connectivity in semantic object recall task using independent component analysis," in *Proc.ISMRM*, Toronto, Canada, 2008.
- [176] K. Jagannathan, M. Assaf, V. D. Calhoun, and G. D. Pearlson, "Functional network connectivity in semantic memory," in *Proc.CNS*, San Francisco, CA, 2008.
- [177] O. Jeromine, V. D. Calhoun, and M. Pattichis, "Optimal Sampling Geometries for TV-Norm Reconstruction of fMRI Data," in *Asiolar Conference on Signals, Systems, and Computers*, Pacific Grove, CA, 2008.
- [178] C. Kim, D. Spring, J. Kroger, V. D. Calhoun, and V. P. Clark, "Exogenously Cued Attention Switching Recruits Frontal Pole: an fMRI Study," in *Proc. CNS*, San Francisco, CA, 2008.
- [179] J. Kroger, D. Spring, C. Kim, V. P. Clark, and V. D. Calhoun, "Double Dissociations between Lateral and Medial Frontopolar Cortex for Maintenance and Manipulation of Integrated Information: An fMRI Study," in *Proc.CNS*, San Francisco, CA, 2008.
- [180] Y. Li, W. Wang, T. Adali, and V. D. Calhoun, "CCA for Joint Blind Source Separation of Multiple Datasets with Application to Group fMRI Analysis," in *Proc. ICASSP*, 2008.
- [181] J. Liu, J. N. Bixler, and V. D. Calhoun, "A multimodality ICA study-integrating genomic single nucleotide polymorphisms with functional neuroimaging data," in *Proc. Bioinformatics and Biomedicine (BIBM)*, Philadelphia, PA, 2008, pp. 151-157.
- [182] J. Liu, L. Xu, A. Caprihan, and V. Calhoun, "Extracting Principle Components for Discriminant Analysis of fMRI Images," in *Proc. ICASSP*, 2008.
- [183] S. Meda, V. D. Calhoun, and G. D. Pearlson, "Diffusion Tensor Analysis in Schizophrenia and First Degree Relatives," in *Proc. SOBP*, 2008.
- [184] S. Meda, M. Stevens, B. S. Folley, V. D. Calhoun, and G. D. Pearlson, "Evidence for anomalous network connectivity during working memory in schizophrenia: an ICA based analysis," in *Proc. SOBP*, 2008.
- [185] A. Michael, S. Baum, V. D. Calhoun, and A. Caprihan, "Correlations of Diffusion Tensor Imaging Values and Symptom Scores in Patients with Schizophrenia," in *Proc. EMBC*, 2008.
- [186] A. Michael, V. D. Calhoun, S. Baum, and N. C. Andreasen, "A Method to Classify Schizophrenia using Inter-Task Spatial Correlations of Functional Brain Images," in *Proc. EMBC*, 2008.
- [187] A. Michael, J. Fries, S. Baum, B. C. Ho, N. C. Andreasen, and V. D. Calhoun, "A Method to Analyze Correlations between Multiple Brain Imaging Tasks to Characterize Schizophrenia," in *Proc. IEEE SSIAP*, Santa Fe, NM, 2008.
- [188] V. Potluru and V. D. Calhoun, "Group Learning using NMF Variants," in *Proc.ISCAS*, 2008.

- [189] V. Potluru, S. M. Plis, and V. D. Calhoun, "Sparse shift-invariant NMF," in *Proc. IEEE SSIAI*, Santa Fe, NM, 2008.
- [190] C. C. Schultz, A. Georgopoulos, R. L. Gollub, N. C. Andreasen, B. C. Ho, J. Lauriello, and V. D. Calhoun, "Linear Discriminate Analysis Applied to a Multicenter First Episode Schizophrenia Sample," in *Winter Workshop on Schizophrenia*, 2008.
- [191] M. Scully, B. Anderson, T. Lane, H. J. Bockholt, J. Burge, V. P. Clark, R. L. Gollub, J. Lauriello, C. C. Schultz, V. D. Calhoun, and R. Jung, "A Dynamic Bayesian Network Analysis of Functional Network Difference During the Oddball Task, Related To General Intelligence," in *Proc. Society for Neuroscience*, San Diego, CA, 2008.
- [192] R. Silva and V. D. Calhoun, "Identification of Brain Image Biomarkers by Optimized Selection of Multimodal Datasets," in *Proc.ISMRM*, Toronto, 2008.
- [193] R. F. Silva and V. D. Calhoun, "Identification of Brain Imaging Biomarkers by Optimized Selection of Multimodal Independent Components," in *Proc. IEEE SSIAI*, Santa Fe, NM, 2008.
- [194] P. Skudlarski, K. Jagannathan, V. D. Calhoun, B. Skulkarska, and G. D. Pearlson, "Measuring Brain Connectivity using Diffusion Tensor Imaging and Resting State Temporal Correlations," in *Proc.HBM*, 2008.
- [195] P. Skudlarski, S. Meda, V. Calhoun, and G. Pearlson, "Effect of alcohol on the resting state correlations," in *Proc.HBM*, 2008.
- [196] J. Sui and V. D. Calhoun, "A Method for Group Difference Enhancement by Constraining Mixing Coefficients of ICA Framework," in *Proc.ISMRM*, Toronto, 2008.
- [197] J. Sui and V. D. Calhoun, "Exploration of Optimal Group-Discriminating Features Using CC-ICA," in *Proc.Asilomar*, Pacific Grove, CA, 2008.
- [198] J. Sui, J. Liu, L. Wu, A. Michael, L. Xu, T. Adali, and V. D. Calhoun, "A Constrained Coefficient ICA Algorithm For Group Difference Enhancement," in *Proc. ICASSP*, 2008.
- [199] J. Turner, H. J. Bockholt, J. B. Segal, and V. D. Calhoun, "A comparison of volumetric methods in a multi-site study of schizophrenia," in *Proc. Society for Neuroscience*, San Diego, CA, 2008.
- [200] T. van Erp, M.-C. Chiang, D. Sun, M.-C. E. Hardt, J. H. Bockholt, J. A. Turner, V. D. Calhoun, H. J. Johnson, D. N. Greve, S. Williams, D. O'Leary, J. Lauriello, C. G. Wible, K. O. Lim, B. A. Mueller, G. G. Brown, J. Voyvodic, G. McCarthy, D. Mathalon, J. M. Ford, S. G. Potkin, T. D. Cannon, P. M. Thompson, A. W. Toga, and F. ;, "3D Pattern of Brain Abnormalities in Chronic Schizophrenia Visualized Using Tensor-Based Morphometry: a Multi-Site Structural Imaging Study," in *Proc.HBM*, 2008.
- [201] T. White, V. Magnotta, H. J. Bockholt, S. Williams, R. Pierson, H. Johnson, S. Wallace, R. L. Gollub, V. D. Calhoun, and K. Lim, "Frontal and age-related white matter abnormalities in schizophrenia: a multi-site diffusion tensor imaging study," in *Winter Workshop on Schizophrenia*, 2008.
- [202] L. Wu and V. D. Calhoun, "An Approach for Fusion between EEG and fMRI Data," in *Proc.ISMRM*, Toronto, Canada, 2008.
- [203] W. Xiong, Y.-O. Li, H. Li, T. Adali, and V. D. Calhoun, "On ICA of Complex-Valued fMRI: Advantages and Order Selection," in *Proc. ICASSP*, Las Vegas, NV, 2008.
- [204] L. Xu, J. Liu, T. Adali, and V. D. Calhoun, "Source Based Morphometry And Its Application To Identify Relative Gray Matter And White Matter Differences In Schizophrenia Versus Controls," in *Proc. ICASSP*, 2008.
- [205] L. Xu, G. D. Pearlson, and V. D. Calhoun, "Joint Source Based Morphometry to Identify Sources of Gray Matter and White Matter Relative Differences in Schizophrenia Versus Healthy Controls," in *Proc.ISMRM*, Toronto, Canada, 2008.

- [206] H. J. Bockholt, M. Scully, W. Courtney, S. Rachakonda, A. Scott, A. Caprihan, J. Fries, R. Kalyanam, J. Segall, R. de la Garza, S. Lane, and V. D. Calhoun, "Mining the Mind Research Network: A Novel framework for exploring large scale, heterogeneous translational neuroscience research data sources," in *Proc. HBM*, San Francisco, CA, 2009.
- [207] V. D. Calhoun, H. Yang, G. D. Pearlson, and J. Liu, "Classification of Schizophrenia Using fMRI and Genetic Data," in *Proc. ACNP*, Hollywood, CA, 2009.
- [208] Z. Chen, V. D. Calhoun, and A. Caprihan, "Realistic modeling of intravoxel phase dispersion in the presence of surrounding voxels," in *Proc. HBM*, San Francisco, CA, 2009.
- [209] V. P. Clark, G. K. Beatty, R. E. Anderson, P. Kodituwakku, J. Phillips, K. A. Kiehl, and V. D. Calhoun, "Cingulate and insula activity predicts relapse in recovering stimulant addicts," in *Proc. HBM*, San Francisco, CA, 2009.
- [210] V. P. Clark, B. Coffman, C. Garcia, M. P. Weisend, A. Vandermerwe, E. Browning, T. Lane, K. Kelly, A. R. Mayer, A. Puffer, E. Rayborn, V. D. Calhoun, M. Bikson, E. Wassermann, and J. Phillips, "Transcranial Direct Current Stimulation (TDCS) Targeted Using Brain Imaging Greatly Accelerates Visual Learning," in *Proc.SFN*, 2009.
- [211] B. Coffman, V. P. Clark, C. Garcia, M. P. Weisend, R. Barrow, A. Vandermerwe, A. R. Mayer, E. Browning, D. Puffer, V. D. Calhoun, E. Wassermann, J. P. Phillips, T. Lane, K. Kelly, M. Bickson, and E. M. Rayborn, "Changes in Brain Networks with Learning of Covert Threat Cues," in *Proc.SFN*, 2009.
- [212] N. Correa, Y. Li, T. Adali, and V. D. Calhoun, "Fusion of fMRI, sMRI, and EEG Data Using Canonical Correlation Analysis," in *Proc.IEEE Int.Conf.Acoustics, Speech, Signal Processing (ICASSP)*, Taiwan, 2009.
- [213] N. Correa, Y. Li, T. Adali, and V. D. Calhoun, "Investigating associations across fMRI, sMRI, and EEG data for the auditory oddball task using canonical correlation analysis," in *Proc. HBM*, San Francisco, CA, 2009.
- [214] N. Driesen, G. McCarthy, Z. Bhagwager, V. D. Calhoun, D. C. D'Souza, J. Holub, P. T. Morgan, and J. K. Krystal, "NMDA Receptor Antagonist Ketamine Produces Opposing Effects on Resting and Task-Related Brain Activation During Working Memory in Humans," in *Proc. HBM*, San Francisco, CA, 2009.
- [215] S. Ehrlich, E. E. Morrow, S. Wallace, M. Naylor, H. J. Bockholt, D. Holt, A. Lundquist, A. Yendiki, J. Roffmann, T. White, V. P. Clark, V. D. Calhoun, and R. L. Gollub, "The COMT Val158Met Polymorphism and Temporal Lobe Volumetry in Patients with Schizophrenia and Healthy Adults," in *Proc. HBM*, San Francisco, CA, 2009.
- [216] T. Eichele, S. Rachakonda, and V. D. Calhoun, "EEGIFT: A toolbox for group temporal ICA event-related EEG," in *Proc. HBM*, San Francisco, CA, 2009.
- [217] Z. Feng, Z. Chen, A. Caprihan, K. Blagoev, and V. D. Calhoun, "Predicting Phase Changes Patterns in BOLD fMRI," in *Proc. HBM*, San Francisco, CA, 2009.
- [218] J. M. Ford, B. J. Roach, K. W. Jorgensen, J. A. Turner, G. G. Brown, R. Notestine, A. Bischoff-Grethe, D. N. Greve, C. G. Wible, J. Lauriello, A. Belger, B. Mueller, V. D. Calhoun, A. Preda, D. Keator, D. O'Leary, K. O. Lim, G. Glover, S. Potkin, F. BIRN, and D. Mathalon, "Functional pathology progresses with age in schizophrenia," in *Proc. HBM*, San Francisco, CA, 2009.
- [219] A. R. Franco, M. Mannell, J. Ling, B. Bedrick, V. D. Calhoun, and A. R. Mayer, "Connectivity Between Consistent Resting State Networks and Fractional Anisotropy Revealed by Joint Independent Component Analysis," in *Proc. HBM*, San Francisco, CA, 2009.

- [220] M. Havlicek, J. Jan, and V. Calhoun, "Evaluation of Functional Network Connectivity in Event-related fMRI Data Based on ICA and Time-frequency Granger Causality," in *Proc. World Congress on Medical Physics and Biomedical Engineering*, 2009.
- [221] M. Havlicek, J. Jan, and V. Calhoun, "Extended Time-frequency Granger Causality for Evaluation of Functional Network Connectivity in Event-related fMRI Data," in *Proc. EMBS*, 2009.
- [222] K. Jagannathan, V. D. Calhoun, J. Liu, S. Meda, and G. D. Pearlson, "Combining sMRI and SNP data to investigate genetic influences on brain structure using parallel ICA in healthy controls & schizophrenia," in *Proc. HBM*, San Francisco, CA, 2009.
- [223] M. Juarez, T. White, G. D. Pearlson, J. R. Bustillo, J. Lauriello, B. C. Ho, H. J. Bockholt, V. P. Clark, R. Gollub, V. Magnotta, G. Machado, and V. D. Calhoun, "Functional connectivity differences in first episode and chronic schizophrenia patients during an auditory sensorimotor task revealed by independent component analysis of a large multisite study," in *Proc. HBM*, San Francisco, CA, 2009.
- [224] E. Karageorgiou, R. L. Gollub, N. C. Andreasen, B. C. Ho, J. Lauriello, V. D. Calhoun, S. C. Schulz, and A. Georgopoulos, "Neuropsychological Testing and Structural Magnetic Resonance Imaging in the Diagnosis of Schizophrenia after a First Psychotic Episode," in *Proc. ICOSR*, 2009.
- [225] Y. Li, T. Adali, and V. D. Calhoun, "A group study of simulated driving fMRI data by multi-set canonical correlation analysis," in *Proc. HBM*, San Francisco, CA, 2009.
- [226] J. Liu, K. E. Hutchison, and V. D. Calhoun, "A simple yet effective analysis on genome-wide association using fMRI brain activation on alcohol abuse," in *Proc. HBM*, San Francisco, CA, 2009.
- [227] S. Meda, J. Gelernter, J. Liu, M. Stevens, V. D. Calhoun, and G. D. Pearlson, "A Multivariate Parallel ICA Approach to Investigate Relationships Between Functional Neural Networks and Genetic Profiles in Schizophrenia " in *Proc. ACNP*, Hollywood, CA, 2009.
- [228] A. Michael, S. Baum, and V. D. Calhoun, "A Technique to Detect Outliers Automatically in Multi-Site fMRI Data," in *Proc. ISMRM*, Honolulu, Hawaii, 2009.
- [229] A. Michael, S. Baum, V. P. Clark, R. Jung, K. O. Lim, T. White, B. C. Ho, R. L. Gollub, and V. D. Calhoun, "Fusion of Structural-Functional Brain Images Reveals Differences in Schizophrenia in a Multi Site Study," in *Proc. ISMRM*, Honolulu, Hawaii, 2009.
- [230] A. Michael, S. Baum, T. J. White, N. C. Andreasen, J. M. Segall, R. E. Jung, V. P. Clark, R. L. Gollub, S. C. Schulz, J. L. Roffman, B. C. Ho, K. O. Lim, H. J. Bockholt, and V. D. Calhoun, "Inter-voxel Cross-Correlation Reveals Aberrantly Low Structural and Functional Linkage in Schizophrenia in a Multi-Site Study," in *Proc. HBM*, San Francisco, CA, 2009.
- [231] A. Michael, V. D. Calhoun, G. Pearlson, S. Baum, and A. Caprihan, "Application of Canonical Correlation Analysis to Identify Regions of Significant Correlation between Symptom Scores and DTI Measures in Schizophrenia," in *Proc. ISMRM*, Honolulu, Hawaii, 2009.
- [232] A. Michael, V. D. Calhoun, G. D. Pearlson, S. Baum, and A. Caprihan, "An Analysis of using Diffusion Tensor Imaging Measures and Symptom Scores to Classify Patients with Schizophrenia," in *Proc. HBM*, San Francisco, CA, 2009.
- [233] S. M. Plis, T. Lane, M. P. Weisend, and V. D. Calhoun, "MEG and fMRI for nonlinear estimation of neural activity," in *Proc. Asilomar*, Pacific Grove, CA, 2009.
- [234] S. M. Plis, V. Potluru, V. D. Calhoun, and T. Lane, "Correlated Noise: How it Breaks NMF, and What to Do About It," in *Proc. MLSP*, Grenoble, France, 2009.

- [235] V. Potluru, S. M. Plis, M. Morup, V. D. Calhoun, and T. Lane, "Efficient Multiplicative updates for Support Vector Machines," in *Proc. SDM*, Sparks, NV, 2009.
- [236] P. Rodriguez, N. M. Correa, T. Adali, and V. D. Calhoun, "Quality map thresholding for de-Noiseing of complex-valued fMRI data and its application to ICA of fMRI," in *Proc. MLSP*, Grenoble, France, 2009.
- [237] U. Sakoglu and V. D. Calhoun, "Dynamic windowing reveals task-modulation of functional network connectivity in schizophrenia patients vs healthy controls," in *Proc. ISMRM*, Honolulu, Hawaii, 2009.
- [238] U. Sakoglu and V. D. Calhoun, "Functional network connectivity with temporal derivatives of sICA time-courses in schizophrenia patients vs healthy controls," in *Proc. ISMRM*, Honolulu, Hawaii, 2009.
- [239] U. Sakoglu and V. D. Calhoun, "Temporal Dynamics of Functional Network Connectivity at Rest: A Comparison of Schizophrenia Patients and Healthy Controls " in *Proc. HBM*, San Francisco, CA, 2009.
- [240] U. Sakoglu, A. Michael, and V. D. Calhoun, "Classification of schizophrenia patients vs healthy controls based on dynamic functional network connectivity," in *Proc. HBM*, San Francisco, CA, 2009.
- [241] R. Silva and V. D. Calhoun, "Divergence Measurements for the Optimal Identification of Multimodal Biomarkers," in *Proc. HBM*, San Francisco, CA, 2009.
- [242] J. Sui, T. Adali, Y. Li, H. Yang, and V. D. Calhoun, "A review of multivariate methods in brain imaging data fusion," in *Proc. SPIE*, San Diego, CA, 2009.
- [243] J. Sui and V. D. Calhoun, "An Automatic Artifact Removal Method for Independent Components Derived from Second-level FMRI Analysis," in *Proc. HBM*, San Francisco, CA, 2009.
- [244] J. Sui and V. D. Calhoun, "Identification of Optimal FMRI Components Using Combined Group-Discriminative Techniques," in *Proc. HBM*, San Francisco, CA, 2009.
- [245] J. Sui, Y. Li, T. Adali, and V. D. Calhoun, "A New Joint Blind Source Separation Model for Two Datasets and Its Application to Second-level FMRI Group Analysis," in *Proc. HBM*, San Francisco, CA, 2009.
- [246] J. Turner, J. Segall, G. Guffanti, V. D. Calhoun, H. J. Bockholt, and S. Potkin, "Structural Imaging Reveals Novel Genetic Influences in Schizophrenia," in *Proc. WCPG*, San Diego, CA, 2009.
- [247] T. White, L. Leybya, B. C. Ho, V. P. Clark, V. D. Calhoun, S. Wallace, H. J. Bockholt, R. Gollub, N. C. Andreasen, S. C. Schulz, V. Magnotta, and K. O. Lim, "Cigarette Smoking Disrupts White Matter Integrity in Patients with Schizophrenia," in *Proc. HBM*, San Francisco, CA, 2009.
- [248] T. White, V. Magnotta, H. J. Bockholt, S. Williams, R. Gollub, B. Mueller, B. C. Ho, R. Jung, V. P. Clark, J. Lauriello, J. R. Bustillo, S. C. schulz, N. C. Andreasen, V. D. calhoun, and K. O. Lim, "Evidence for Progressive White Matter Abnormalities in Schizophrenia: A Multi-site diffusion tensor imaging study," in *ICOSR*, 2009.
- [249] L. Wu, V. D. Calhoun, and T. Eichele, "Functional connectivity in eyes open vs. eyes closed resting state fMRI," in *Proc. HBM*, San Francisco, CA, 2009.
- [250] L. Xu and V. D. Calhoun, "sMRI Complex Framework For Evaluating Relative Gray And White Matter Group Differences," in *Proc. ISMRM*, Honolulu, Hawaii, 2009.
- [251] L. Xu and V. D. Calhoun, "Source Based Morphometry: Approaches to Identify Gray and White Matter Group Differences with Application to Schizophrenia," in *Proc. HBM*, San Francisco, CA, 2009.

- [252] E. Allen, E. Erhardt, T. Eichele, A. R. Mayer, and V. D. Calhoun, "Comparison of pre-normalization methods on the accuracy of group ICA results," in *Proc. HBM*, Barcelona, Spain, 2010.
- [253] E. A. Allen, E. B. Erhardt, E. Damaraju, W. Gruner, J. M. Segall, R. F. Silva, M. Havlicek, S. Rachakonda, J. Fries, R. Kalyanam, A. M. Michael, A. Caprihan, J. A. Turner, T. Eichele, S. Adelsheim, A. Bryan, J. Bustillo, V. P. Clark, S. Feldstein-Ewing, F. M. Filbey, C. Ford, K. Hutchison, R. E. Jung, K. A. Kiehl, P. Kodituwakku, Y. Komesu, A. R. Mayer, G. D. Pearlson, P. J., J. Sadek, M. Stevens, U. Teuscher, R. J. Thoma, and V. D. Calhoun, "A baseline for the multivariate comparison of resting state networks," in *Biennial International Conference on Resting State Connectivity*, Milwaukee, WI, 2010.
- [254] M. Arbabshirani and V. D. Calhoun, "ICA-SVM approach for discrimination between healthy subjects and schizophrenia patients based on resting state functional network connectivity," in *Biennial International Conference on Resting State Connectivity*, Milwaukee, WI, 2010.
- [255] J. Chen, J. Liu, and V. D. Calhoun, "A Pipeline for Copy Number Variation Detection based on Principal Component Analysis," in *Proc. IEEE Bioinformatics and Biomedicine*, Hong Kong, China, 2010.
- [256] J. Chen, J. Liu, and V. D. Calhoun, "Correction of copy number variation data using principal component analysis," in *Proc. Bioinformatics and Biomedicine (BIBM)*, Hong Kong, 2010.
- [257] V. P. Clark, B. Coffman, C. Garcia, M. P. Weisend, T. Lane, A. R. Mayer, E. Raybourn, V. D. Calhoun, and E. Wassermann, "Transcranial Direct Current Stimulation (TDCS) Targeted Using Brain Imaging Accelerates Learning," in *Proc. HBM*, Barcelona, Spain, 2010.
- [258] B. Coffman, V. P. Clark, C. Garcia, M. P. Weisend, R. Barrow, A. Vandermerwe, E. Browning, D. Puffer, E. Rayborn, V. D. Calhoun, E. Wassermann, J. P. Phillips, and R. Jung, "TDCS accelerated learning of covert threat detection is influenced by current strength and stimuli familiarity," in *Proc. Biomag*, 2010.
- [259] N. Correa, T. Eichele, T. Adali, Y. Li, and V. D. Calhoun, "Fusion of Concurrent single Trial EEG Data and fMRI Data Using Multi-set Canonical Correlation Analysis," in *Proc. ICASSP*, Dallas, TX, 2010.
- [260] P. Das, J. Lagopoulos, V. D. Calhoun, A. Henderson, C. M. Coulston, and G. S. Malhi, "Schizophrenia and Theory of Mind deficit: A functional network connectivity approach," in *Proc. HBM*, Barcelona, Spain, 2010.
- [261] E. Erhardt, S. Rachakonda, E. Bedrick, T. Adali, and V. D. Calhoun, "Comparison of multi-subject ICA methods for analysis of fMRI data," in *Proc. HBM*, Barcelona, Spain, 2010.
- [262] M. Havlicek, J. Jan, and V. Calhoun, "Dynamic Granger causality with embedded hemodynamic model," in *Proc. HBM*, Barcelona, Spain, 2010.
- [263] H. Li, T. Adali, N. Correa, P. Rodriguez, and V. D. Calhoun, "Flexible Complex ICA of fMRI Data," in *Proc. ICASSP*, Dallas, TX, 2010.
- [264] J. Liu and V. D. Calhoun, "An algorithm for informed genome wide association studies— Integrating targeted gene studies and data-driven factorization by reference ICA," in *Workshop on Genomic Signal Processing and Statistics (GENSIPS)*, Cold Spring Harbor, NY, 2010.
- [265] S. Ma, X. Li, N. Correa, T. Adali, and V. D. Calhoun, "Independent Subspace Analysis with Prior Information for fMRI Data," in *Proc. ICASSP*, Dallas, TX, 2010.

- [266] S. M. Plis, V. D. Calhoun, M. P. Weisend, T. Eichele, E. Besada-Portas, and T. Lane, "MEG and fMRI for nonlinear estimation of neural activity," in *Proc. NIPS Workshop on Connectivity Inference and NeuroImaging*, Whistler, CO, 2010.
- [267] S. M. Plis, V. D. Calhoun, M. P. Weisend, and T. Lane, "Permutations as angular data: efficient inference in factorial spaces," in *IEEE-ICDM*, Sydney, Australia, 2010.
- [268] P. Rodriguez, T. Adali, H. Li, N. Correa, and V. D. Calhoun, "Phase Correction and Denoising for ICA of Complex fMRI Data," in *Proc. ICASSP*, Dallas, TX, 2010.
- [269] R. Silva and V. D. Calhoun, "Evaluating Joint Histograms in a Joint ICA Fusion Framework: Methods for Feature Extraction and Component Selection," in *Human Brain Mapping*, Barcelona, Spain, 2010.
- [270] T. White, H. J. Bockholt, A. Caprihan, S. Ehrlich, D. S. Manoach, B. Mueller, B. C. Ho, V. P. Clark, J. Lauriello, J. R. Bustillo, N. C. Andreasen, R. Gollub, V. D. Calhoun, K. O. Lim, S. C. Schulz, and V. Magnotta, "A combined voxel-based and pothole approach to evaluate the spatial characteristics of white matter deficits in schizophrenia," in *Proc. HBM*, Barcelona, Spain, 2010.
- [271] S. T. Witt, V. D. Calhoun, G. D. Pearlson, and M. C. Stevens, "The effects of task context and brain injury on default mode network brain functional connectivity," in *Proc. ISMRM*, Stockholm, Sweden, 2010, p. 3505.
- [272] S. T. Witt, Lovejoy, V. D. Calhoun, G. D. Pearlson, and M. Stevens, "Changes in frequency power spectrum observed as result of mild traumatic brain injury," in *Proc. HBM*, Barcelona, Spain, 2010, p. 439.
- [273] L. Wu, T. Eichele, and V. D. Calhoun, "Alpha Hemodynamic Responses in Eyes Open vs. Eyes Closed Resting State EEG-fMRI," in *Proc. HBM*, Barcelona, Spain, 2010.
- [274] L. Xu, J. Segall, R. Jung, and V. D. Calhoun, "Constrained Source Based Morphometry Identifies Structural Network Underlying the Default Mode Network," in *Proc. HBM*, Barcelona, Spain, 2010.
- [275] C. Abbott, A. Caprihan, J. Yamamoto, N. I. Perrone-Bizzozero, G. Pearlson, and V. D. Calhoun, "Source Based Morphometry Analysis of Group Differences in Fractional Anisotropy in Schizophrenia," in *Proc. HBM*, Quebec City, Canada, 2011.
- [276] E. Aharoni, D. Kosson, V. D. Calhoun, and K. A. Kiehl, "Neural Mechanisms of Passive Avoidance Learning in Psychopathy," in *Society for the Scientific Study of Psychopath* Montreal, Canada, 2011.
- [277] E. A. Allen, E. Erhardt, Y. Wei, T. Eichele, and V. D. Calhoun, "Capturing inter-subject variability with group independent component analysis of fMRI data: a simulation study," in *Proc. HBM*, Quebec City, Canada, 2011.
- [278] M. Anderson, N. Correa, V. D. Calhoun, and T. Adali, "Joint Blind Source Separation for Multi-modality Data Fusion through Subject Co-variations," in *Proc. Learning Workshop*, Fort Lauderdale, FL, 2011.
- [279] M. Arbabshirani and V. D. Calhoun, "Functional Network Connectivity during Rest and Task: Comparison of Healthy Controls and Schizophrenic Patients," in *Proc. EMBS*, Boston, MA, 2011.
- [280] V. Calhoun, A. Mayer, J. Stephen, F. M. Hanlon, J. M. Houck, R. Jung, and N. Bizzozero, "A network approach to multimodal imaging and genetics in schizophrenia: Strategies, challenges, and findings," in *13th International Congress on Schizophrenia Research*, Colorado Spring, CO, 2011.
- [281] E. Castro, M. Martinez-Ramon, A. Caprihan, K. A. Kiehl, and V. D. Calhoun, "Complex fMRI data classification using composite kernels: application to schizophrenia," in *Proc. HBM*, Quebec City, Canada, 2011.

- [282] J. Chen, J. Liu, D. Boutte, and V. D. Calhoun, "A Pipeline for Copy Number Variation Detection based on Principal Component Analysis," in *Proc. EMBS*, Boston, MA, 2011.
- [283] J. Chen, J. Liu, and V. D. Calhoun, "Genomic risk for schizophrenic brain function analyzed by Parallel-ICA," in *Proc. HBM*, Quebec City, Canada, 2011.
- [284] Z. Chen, A. Caprihan, and V. D. Calhoun, "BOLD susceptibility map reconstruction from fMRI by 3D total variation regularization," in *Proc. ISMRM*, Montreal, Canada, 2011.
- [285] Z. Chen, Z. Chen, and V. D. Calhoun, "Voxel magnetic field disturbance from remote vasculature in BOLD fMRI," in *Proc. SPIE*, Orlando, FL, 2011.
- [286] Z. Chen, Z. Chen, and V. D. Calhoun, "Multiresolution voxel decomposition complex-valued BOLD signals reveals phasor turbulence," in *Proc. SPIE*, Orlando, FL, 2011.
- [287] Z. Chen, Q. He, and V. D. Calhoun, "The impact of respiratory and cardiac effects on the phase and magnitude of resting-state fMRI data," in *Proc. SPIE*, Orlando, FL, 2011.
- [288] J. T. Dea, M. Anderson, E. Allen, V. D. Calhoun, and T. Adali, "A maximum likelihood approach for independent vector analysis of Gaussian data sets," in *Proc. IEEE Workshop on Machine Learning for Signal Processing (MLSP)*, Beijing, China, 2011.
- [289] W. Du, H. Li, X.-L. Li, V. D. Calhoun, and T. Adali, "ICA of fMRI data: Performance of Three ICA Algorithms and the Importance of Taking Correlation Information into Account," in *IEEE Symp. on Biomedical Imaging*, Chicago, IL, 2011.
- [290] E. Erhardt, E. A. Allen, Y. Wei, T. Eichele, and V. D. Calhoun, "A simulation toolbox for fMRI data: simtb," in *Proc. HBM*, Quebec City, Canada, 2011.
- [291] M. Havlicek, J. Jan, M. Brazdil, and V. D. Calhoun, "Deconvolution of neuronal signal from hemodynamic response," in *Proc. ICASSP*, Prague, Czech Republic, 2011.
- [292] M. Havlicek, J. Jan, M. Brazdil, and V. D. Calhoun, "Estimation of neuronal responses from fMRI data," in *Proc. EMBS*, Boston, MA, 2011.
- [293] S. Khullar, A. Michael, N. Cahill, S. A. Baum, and V. D. Calhoun, "Functional Normalization through ICA (ICA-fNORM) with Intrinsic Networks as Functional Templates," in *Proc. HBM*, Quebec City, Canada, 2011.
- [294] S. Khullar, A. Michael, N. Correa, T. Adali, S. Baum, and V. D. Calhoun, "Wavelet-based denoising and independent component analysis for improving multi-group inference in fMRI data," in *IEEE Symp. on Biomedical Imaging*, Chicago, IL, 2011.
- [295] S. Khullar, A. M. Michael, N. Correa, T. Adali, S. Baum, and V. D. Calhoun, "Improved 3-D Wavelet-based De-noising of fMRI data," in *Proc. SPIE*, Orlando, FL, 2011.
- [296] S. Khullar, A. M. Michael, N. Correa, T. Adali, S. Baum, and V. D. Calhoun, "A new metric to measure shape differences in fMRI activity," in *Proc. SPIE*, Orlando, FL, 2011.
- [297] M. A. King, W. Courtney, R. De la Garza, S. Lane, A. Scott, D. Wood, and V. D. Calhoun, "An innovative neuroinformatics tool suite built for large heterogeneous datasets," in *Proc. HBM*, Quebec City, Canada, 2011.
- [298] X.-L. Li, V. D. Calhoun, and T. Adali, "Order detection for fMRI analysis: Joint estimation of Downsampling depth and order by information theoretic criteria," in *IEEE Symp. on Biomedical Imaging*, 2011.
- [299] D. Lin, H. Cao, V. D. Calhoun, and Y.-P. Wang, "Classification of schizophrenia patients with combined analysis of SNP and fMRI data based on sparse representation," in *Proc. Bioinformatics and Biomedicine (BIBM)*, Philadelphia, PA, 2011.
- [300] Q. Lin, J. Wang, X. Gong, J. Wu, J. Chen, and V. Calhoun, "Semi-blind Kurtosis Maximization Algorithm Applied to Complex Valued fMRI Data," in *Proc. MLSP*, Beijing, China, 2011.
- [301] S. Ma, T. Eichele, N. Correa, V. D. Calhoun, and T. Adali, "Hierarchical and graphical analysis of fMRI network connectivity in healthy and schizophrenic groups," in *IEEE Symp. on Biomedical Imaging*, Chicago, IL, 2011.

- [302] A. Michael, M. A. King, and V. D. Calhoun, "Gray Matter Concentration and Functional Activation for a Working Memory Task Shows Inverse Correlation in Schizophrenia," in *Proc. ICOSR*, Colorado Springs, CO, 2011.
- [303] S. M. Plis, R. Jung, L. Petree, C. L. Wootton, L. M. Bullard, A. Van der Merwe, K. Paulson, A. Vakhtin, A. Jaramillo, V. D. Calhoun, and M. P. Weisend, "Effective connectivity estimation from somatosensory MEG data: a study of the tDCS effect," in *Proc. HBM*, Quebec City, Canada, 2011.
- [304] S. M. Plis, S. McCracken, T. Lane, and V. D. Calhoun, "Directional statistics on permutations," in *Proc. Learning Network*, Fort Lauderdale, FL, 2011.
- [305] S. M. Plis, S. McCracken, T. Lane, and V. D. Calhoun, "Directional statistics on permutations," in *Proc. Artificial Intelligence and Statistics*, Fort Lauderdale, FL, 2011.
- [306] V. Potluru, S. M. Plis, S. Luan, V. D. Calhoun, and T. Hayes, "Sparseness and a Reduction from Totally Nonnegative Least Squares to SVM," in *Proc. IJCNN*, San Jose, CA, 2011.
- [307] J. Segall and V. D. Calhoun, "Structural and Functional Networks in the Human Brain," in *Proc. HBM*, Quebec City, Canada, 2011.
- [308] R. Silva and V. D. Calhoun, "Validating Divergence as a Tool for Assessment of Group Differences in a JICA Fusion Framework," in *Proc. HBM*, Quebec City, Canada, 2011.
- [309] J. Sui and V. D. Calhoun, "Discriminating Schizophrenia and Bipolar Disorder by Unique Patterns of Brain Function and Structure," in *Proc. ISMRM*, Montreal, Canada, 2011.
- [310] J. Turner, M. A. King, A. Belger, V. D. Calhoun, S. Ehrlich, J. G. Csernansky, S. G. Potkin, R. L. Gollub, D. H. Mathalon, J. M. Segall, R. Kikinis, J. M. Ford, F. Macciardi, M. Morgan, K. O. Lim, D. S. O'Leary, A. W. Toga, T. Van Erp, L. Wang, and C. G. Wible, "Heritability and genetics of source based morphometry in schizophrenia," in *Proc. ICOSR*, Colorado Springs, CO, 2011.
- [311] A. M. Ward, A. P. Schultz, D. G. McLauren, C. A. Sullivan, J. A. Becker, K. A. Johnson, V. D. Calhoun, and R. A. Sperling, "Amyloid deposition demonstrates differential effect in normal elderly and MCI subjects across task and rest in the default mode network," in *Proc. HBM*, Quebec City, Canada, 2011.
- [312] A. M. Ward, A. P. Schultz, D. G. McLauren, C. A. Sullivan, J. A. Becker, K. A. Johnson, V. D. Calhoun, and R. A. Sperling, "Amyloid burden displays a differential effect in the default mode network (DMN) across clinically normal (CN) and mild cognitive impairment (MCI) subjects," in *Proc. SFN*, Washington, D. C., 2011.
- [313] L. Wu, T. Eichele, and V. D. Calhoun, "Parallel Independent Component Analysis using an Optimized Neurovascular Coupling for Concurrent EEG-fMRI Sources," in *Proc. EMBS*, Boston, MA, 2011.
- [314] R. A. Yeo, S. W. Gangestad, J. Liu, T. Wassink, and V. D. Calhoun, "Rare copy number deletions and intelligence in schizophrenic patients and healthy controls," in *Proc. Behavior Genetics Association*, Newport, RI, 2011.
- [315] E. Allen and V. D. Calhoun, "Extracting intrinsic functional networks with feature-based group independent component analysis," in *Proc. HBM*, Beijing, China, 2012.
- [316] E. Allen, E. Damaraju, S. M. Plis, E. Erhardt, T. Eichele, and V. D. Calhoun, "Tracking whole-brain connectivity dynamics in the resting-state," in *Proc. HBM*, Beijing, China, 2012.
- [317] E. Allen, E. Erhardt, and V. D. Calhoun, "Data visualization in the neurosciences: overcoming the curse of dimensionality," in *Proc. HBM*, Beijing, China, 2012.
- [318] M. Arbabshirani, M. Pattichis, and V. D. Calhoun, "Functional Volumetric Brain Abnormalities in Schizophrenia Patients," in *ICIP*, Orlando, FL, 2012.

- [319] V. D. Calhoun, J. Sui, E. Allen, K. A. Kiehl, and G. G. Pearlson, "Aberrant Intrinsic Networks in Schizophrenia and Bipolar Disorder in An Auditory Oddball Task," in *Proc. HBM*, Beijing, China, 2012.
- [320] J. Chen, V. D. Calhoun, and J. Liu, "Parallel Independent Component Analysis with Reference," in *Proc. HBM*, Beijing, China, 2012.
- [321] J. Chen, V. D. Calhoun, and J. Liu, "ICA Order Selection Based on Consistency: Application to Genotype Data," in *Proc. EMBS*, San Diego, CA, 2012.
- [322] Z. Chen, A. Caprihan, and V. D. Calhoun, "MR magnitude image shrinkage due to BOLD fMRI nonlinearity," in *Proc. HBM*, Beijing, China, 2012.
- [323] Z. Chen, J. Liu, and V. D. Calhoun, "Susceptibility-based functional neuroimaging: A simulation study," in *Proc. HBM*, Beijing, China, 2012.
- [324] Z. Chen, J. Liu, A. Caprihan, and V. D. Calhoun, "Bidirectional BOLD activation depiction by jointly using the MR magnitude and phase response maps," in *Proc. HBM*, Beijing, China, 2012.
- [325] E. Damaraju, J. Phillips, J. Lowe, E. Allen, V. D. Calhoun, and A. Caprihan, "Functional Connectivity Changes in a Developing Brain of Healthy Infants," in *Proc. HBM*, Beijing, China, 2012.
- [326] M. Havlicek, K. Uludag, K. J. Friston, V. D. Calhoun, and A. Roebroeck, "Validation of stochastic DCM for network discovery: A simulation study," in *Proc. HBM*, Beijing, China, 2012.
- [327] M. King, W. Courtney, S. Lane, A. Scott, J. Turner, R. Wang, D. Wood, and V. D. Calhoun, "COINS (Collaborative Informatics Neuroimaging Suite): Give, Get, Collect," in *Proc. NeuroInformatics*, Munich, Germany, 2012.
- [328] S. M. Plis, J. Sui, T. Lane, S. Roy, V. P. Clark, V. Potluru, A. Michael, M. P. Weisend, and V. D. Calhoun, "Capturing high-order interactions in neuroimaging data," in *Proc. HBM*, Beijing, China, 2012.
- [329] P. Rodriguez, V. D. Calhoun, and T. Adali, "Complex-valued analysis and visualization of fMRI data for event-related and block-design paradigms," in *Proc. MLSP*, Santander, Spain, 2012.
- [330] R. Silva and V. D. Calhoun, "An Assessment of the Limitations of Joint ICA in Multimodal Data Fusion," in *Proc. HBM*, Beijing, China, 2012.
- [331] J. Sui, H. He, J. Liu, Q. Yu, T. Adali, G. Pearlson, and V. D. Calhoun, "Three-Way FMRI-DTI-Methylation Data Fusion Based on mCCA+jICA and Its Application to Schizophrenia," in *Proc. EMBS*, San Diego, CA, 2012.
- [332] J. Sui, H. He, Q. Yu, T. Adali, G. D. Pearlson, and V. D. Calhoun, "A Novel N-Way Brain Imaging Data Fusion Model And Its Application to Schizophrenia," in *Proc. HBM*, Beijing, China, 2012.
- [333] J. Sui, G. D. Pearlson, A. Caprihan, T. Adali, K. A. Kiehl, and V. D. Calhoun, "Discriminating Schizophrenia and Bipolar Disorder by Fusion of FMRI and DTI Data," in *Proc. HBM*, Beijing, China, 2012.
- [334] J. Turner, H. Chen, V. D. Calhoun, C. Abbott, C. Gasparovic, and J. Bustillo, "Glutamatergic Metabolism and Resting State Connectivity in Schizophrenia," in *SIRS*, 2012.
- [335] J. Vogelstein, S. Sikka, B. Cheung, R. Khanuja, Q. Li, Y. Chao-Gan, C. Priebe, V. D. Calhoun, and R. Burns, "BRAINSTORM Towards Clinically and Scientifically Useful NeuroImaging Analytics," in *Proc. NeuroInformatics*, Munich, Germany, 2012.
- [336] Q. Yu, J. Sui, E. Allen, K. A. Kiehl, G. D. Pearlson, and V. D. Calhoun, "Disrupted Correlation between Low Frequency Power and Connectivity Strength in Schizophrenic Brain," in *Proc. HBM*, Beijing, China, 2012.

Educational Activities: Teaching/Lecturing (not comprehensive)

At UNM:

ECE Seminar “Data Driven Brain Image Analysis: Algorithms & Applications”	4/2006
ECE Seminar “Data Driven Brain Image Analysis: Algorithms & Applications: Part II”	6/2006
2-day ICA and GIFT Software Workshop The Mind Research Network	4/2006
Organized 4-part mini-series on biomedical imaging ECE Seminar	Fall 2006
Neuroscience Seminar “Fusion of multi-task and multi-modal brain imaging data: An integrated approach and several examples”	9/2007
ECE 595: Analysis Methods in fMRI (18 students) [ICES overall avg 5.5]	Spring 2007
ECE 510: Medical Imaging (33 students) [WebCT Avg 4.75/5.0, IDEA 4.9/5.0 raw; 4.6/5.0 adj]	Fall 2007
CS/591C 004, Stat/579D 004, Math/579D 004, Anthro 560, Bio 503 004 Topics in Interdisciplinary Biology and Biological Sciences: Functional Imaging of the Brain	Fall 2007
ECE 340: Probabilistic Methods in Engineering (45 students) [ICES overall avg 3.14, 40-50% rated 4 or higher]	Spring 2008
3-day fMRI Acquisition and Analysis Course 40 attendees	2/2008
Lecturing for Undergraduate survey in Bioengineering	Spring 2008
3-day fMRI Acquisition and Analysis Course 30 attendees	5/2008
ECE 510: Medical Imaging (12 students)	Fall 2008
3-day fMRI Acquisition and Analysis Course 30 attendees	8/2008
ECE 595: Analysis Methods in fMRI (10 students)	Spring 2009
3-day fMRI Acquisition and Analysis Course	3/2009

30 attendees

3-day fMRI Acquisition and Analysis Course 6/2009
30 attendees

ECE 510: Medical Imaging (20 students) Fall 2009

ECE 511: Analysis Methods in fMRI (10 students) Spring 2010

ECE 510: Medical Imaging (18 students) Fall 2010

ECE 510: Medical Imaging (22 students) Fall 2011

Outside UNM:

Instructor, Course on MEASURE, volumetric analysis of structural MRI 10/1995
Johns Hopkins Division of Psychiatric Neuro-Imaging
Development of Software Manuals, Training Material, and Course Syllabi

Instructor, Course on MEASURE, volumetric analysis of structural MRI 8/1996
Johns Hopkins Division of Psychiatric Neuro-Imaging
Development of Software Manuals, Training Material, and Course Syllabi

Organizer of Functional Imaging Journal Club 1996-2002
Johns Hopkins Division of Psychiatric Neuro-Imaging
FM Kirby Center for Functional Brain Imaging

Lecturer at Graduate Seminar, University of Maryland, Baltimore County 4/1998
“Motion Correction in functional MRI (fMRI)”

Lecturer at Psychiatry Research Potpourri, Johns Hopkins University 5/1998
“Movies of the brain: Simultaneous display of spatial and temporal functional MRI data”

Lecturer at Psychiatry Research Seminar, Johns Hopkins University 11/1998
“Visual Evoked Responses in fMRI”

Guest Instructor: Computer Visualization 11/1998
University of Maryland, Baltimore County

Statistics Grand Rounds Presentation at Johns Hopkins Public Health School 5/1999
“Methods for Exploring Temporal Dynamics of fMRI of the Visual System”

Speaker at Opening Symposium for FM Kirby Center for Functional Brain Imaging 5/1999
“Temporal Dynamics of Functional MRI in the Visual System”

Organizer and Instructor: Course on fMRI Analysis Methods 9/1999
Johns Hopkins Division of Psychiatric Neuro-Imaging

Presenter at Psychiatry Research Potpourri, Johns Hopkins University “Brain Networks activated during a Motor-Free Visual Perception Task: An fMRI Analysis of Functional Connectivity”	5/2000
Presenter at Graduate Seminar, University of Maryland, Baltimore County “A Weighted-Least Squares Method for Estimating Latencies in functional MRI”	5/2000
Invited Panelist and Speaker, NINDS Workshop "Opportunities in Cognitive Neuroscience Research: Neuroimaging and Beyond"	11/2000
Presenter at Graduate Seminar, University of Maryland, Baltimore County “An ICA Model for Application to fMRI: Application to a Simulated Driving Paradigm”	4/2001
Presenter at Psychiatry Research Seminar, Johns Hopkins University “An Introduction to fMRI and its Use in the Study of Complex Behaviors”	5/2001
Organizer and Instructor: Course on SPM Analysis of PET and fMRI Data Johns Hopkins Division of Psychiatric Neuro-Imaging	8/2001
Guest Instructor: Neural Networks University of Maryland, Baltimore County	10/2001
Presenter at Psychiatry Research Seminar, Johns Hopkins University “Simulated Driving and the Effects of Marinol: An fMRI Study”	11/2001
Organizer and Instructor: Course on SPM Analysis of PET and fMRI Data Johns Hopkins Division of Psychiatric Neuro-Imaging	1/2002
Invited Course: Statistical Parametric Mapping analysis of fMRI Data National Institute of Health Gerontology Research Center	2/2002
Chairman’s Grand Rounds Presentation at Wayne State University “Simulated Driving: Quantification, Validation and fMRI Studies of Driving While Intoxicated”	3/2002
Co-chair and organizer, workshop on “Novel Methods for processing fMRI Data” Annual meeting of the Society of Biological Psychiatry	5/2002
Invited Speaker, Human Brain Mapping “An Infomax Method for Performing ICA of fMRI Data in the Complex Domain”	6/2002
Presenter at Neuropsychopharmacology Grand Rounds, Institute of Living “Intoxication Effects on Simulated Driving”	10/2002
Invited co-organizer, workshop on “Independent Component Analysis of fMRI Data” Annual meeting on Independent Component Analysis (ICA 2003)	5/2003
Guest Instructor: Biomedical Engineering Seminar (BENG480a) Yale University School of Biomedical Engineering	10/2003

Lecturer at fMRI Seminar Series: “Independent Component Analysis for fMRI” Yale University School of Medicine	10/2003
Guest Instructor: Neuroscience Seminar Trinity College School of Engineering	10/2003
Lecturer at Bioimaging Seminar Series: “Complex-valued fMRI data analysis” Yale University School of Medicine	11/2003
Lecturer for Statistics Series: “The use of higher order statistics for the analysis of functional brain imaging data” Yale University School of Medicine	11/2003
Invited Panelist and Speaker, workshop on virtual reality Society of Biological Psychiatry	12/2003
Lecturer: Neuroimaging in Neuropsychiatry Yale University School of Medicine	4/2004
Invited Speaker, University of Toronto “Independent Component Analysis of fMRI: What?, When?, and How?”	7/2004
Training and initial release of GIFT Software Software available at: http://icatb.sourceforge.net	7/2004
Lecturer: Neuroimaging in Neuropsychiatry Yale University School of Medicine	11/2004
Psychiatry Grand Rounds: “Update on the Olin Center: Medical Image Analysis Lab” Yale University School of Medicine	11/2004
Instructor: Independent Component Analysis for fMRI Olin Neuropsychiatry Research Center Attended by 20 individuals from multiple labs	11/2004
Lecturer at fMRI Seminar Series: “Fusion of multi-task and multi-modal imaging data: joint-ICA modeling approaches” Yale University School of Medicine	12/2004
Organizer/Lecturer: Neuroimaging in Neuropsychiatry I: Methods This is a course on neuroimaging methods and techniques targeted at residents, clinical interns, and neuroscience graduate students	7/2005-12/2005
Guest Instructor: Neuroscience Seminar Trinity College School of Engineering	11/2005

Invited Speaker, BIRN All Hands Meeting “Applications of Independent Component Analysis to fMRI”	11/2005
Organizer and Lecturer, 3-day course on fMRI Data Acquisition and Analysis Olin Neuropsychiatry Research Center, Hartford, CT 30 attendees from around the world	6/2005
Organizer, workshop on “Mining the Complexity of Functional MRI Data” Organization for Human Brain Mapping	5/2005
Organizer and Lecturer, 3-day course on fMRI Data Acquisition and Analysis Olin Neuropsychiatry Research Center, Hartford, CT 50 attendees from around the world	11/2005
Organizer/Lecturer: Neuroimaging in Neuropsychiatry II: Applications This is a course on neuroimaging applications targeted at residents, clinical interns, and neuroscience graduate students	1/2006-5/2006
Organizer and Lecturer, 3-day course on fMRI Data Acquisition and Analysis Olin Neuropsychiatry Research Center, Hartford, CT 50 attendees from around the world	3/2006
Organizer and Lecturer: Workshop on GIFT Software MIND Institute, University of New Mexico, Albuquerque, New Mexico 15 attendees	4/2006
Instructor: International Society for Magnetic Resonance in Medicine “Multi-Modal fMRI: Physiology, Acquisition, and Analysis”	5/2006
Instructor: Mining Brain Dynamics A Tutorial Workshop on Independent Component Analysis in Neuroimaging Bergen, Norway	9/2006
ICA and GIFT Software Workshop MGH and MIT 40 attendees	3/2007
Instructor: International Society for Magnetic Resonance in Medicine “Multi-Modal fMRI: Physiology, Acquisition, and Analysis”	6/2007
Instructor: Course on Mining Brain Dynamics Bergen, Norway	8/2009
Plenary Lecture: Default Mode Network Workshop Barcelona, Spain	6/2010
Morning Workshop at Human Brain Mapping Conference From basepairs to epigenetics: Multivariate methods for identifying genetic effects on brain imaging measures Ontario, CA	6/2011

Morning Workshop at Human Brain Mapping Conference 6/2011
Comparison of multi-subject ICA methods for analysis of fMRI data: Consistency and
Variability of Intrinsic Networks in the Healthy and Diseased Brain
Ontario, CA

Educational Activities: Training/Mentoring

Faculty

Dr. Alireza Atri, M.D., Ph.D., Harvard
Mentor for NIH K32: Modeling cholinergic modulation of fMRI memory networks

Dr. Judy Ford: Professor, Yale University
Mentor for NIH K02: FMRI Analysis

Dr. Michael Stevens, Assistant Professor, Yale University
Mentor for NIH K02 award: FMRI Analysis

Dr. Julie Staley: Assistant Professor, Yale University
Training in SPM and Voxel-based Morphometry

Dr. Robert Schultz: Associate Professor, Yale University
Training in Voxel-based Morphometry, Pulse Sequence Setup for 3T Siemens Trio

Dr. Wil Cunningham: Assistant Professor, University of Toronto
Training in Group ICA of fMRI

Dr. David Schretlen, Associate Professor, Johns Hopkins University
Training in SPM and Voxel-based Morphometry

Dr. Reisa Sperling, Assistant Professor, Harvard University
Training on Independent Component Analysis of FMRI data and the GIFT software

Dr. Chris Abbott, Assistant Professor, University of New Mexico
Training on Independent Component Analysis of FMRI data and the GIFT software
Mentor on K Award

Dr. Robert Thoma, Associate Professor, University of New Mexico
Mentor for COBRE project

Post Doctoral Fellows (not comprehensive)

Dr. Jean Liu: Postdoctoral Fellow in the Medical Image Analysis Lab, on fusion of
functional MRI, genetics, and EEG data

Dr. Madiha Jafri: Postdoctoral Fellow in the Medical Image Analysis Lab, on multivariate
functional connectivity in schizophrenia

Dr. Baoming Hong: Postdoctoral Fellow in the Medical Image Analysis Lab, on the signal properties of fMRI, ICA, and the development of realistic constraints for ICA analysis.

Dr. Jinsuh Kim: Postdoctoral Fellow in the Medical Image Analysis Lab.

Dr. Mona Noureldin: JHU Radiology fellow, on using SPM to analyze fMRI to study normal motor paradigms and Parkinson disease.

Dr. Nina Mikhelashvili: JHU Radiology fellow, on using SPM to analyze fMRI to study normal motor paradigms and Parkinson disease.

Dr. Kader Karli Oguz: JHU Radiology, on using SPM to analyze fMRI of normal motor paradigms.

Students (not comprehensive)

Li Yiou (PhD, Graduated 2006)

Nicole Correa (MS, Graduated 2006, post-qualifying PhD)

Karyn Backus (MS, Graduated 2006)

Xiaoyang Cheng (PhD, Graduated 2006)

Zhao Juan (PhD, Graduated 2007)

Matt Sutherland (PhD, Graduated 2007)

Matthias Moosman (PhD, Graduated 2007)

Tom Eichele (PhD, Graduated 2007)

Lai Xu (ECE PhD, Graduated 2009)

Lei Wu (ECE PhD, post-qualifying)

Vamsi Potluru (CS PhD, post-qualifying)

Eduardo Castro (ECE PhD, post-qualifying)

William Gruner (ECE PhD, post-qualifying)

Rogers Silva (ECE PhD, pre-qualifying)

Sid Siddarth (RIT PhD, pre-qualifying)

Michelle Juarez (ECE MS, graduated 2011)

Andrew Michaels (RIT ECE PhD, graduated 2009)

Joel Bixler (UTexas ECE Undergrad)

Guilherme Machado: Senior undergraduate student, UNM ECE, 2006

Jeffrey Lie: Senior undergraduate student, UNM ECE, 2007
Worked with me as part of the EYES program

Chris Parchert: Senior undergraduate student, UNM ECE, 2007-2008

Janet Nguyen: Senior undergraduate student, UNM ECE 2007-2008

Michelle Juarez: Senior undergraduate student, UNM ECE 2006-2007

Doris Nguyen: Undergraduate Student (via the TBP mentor program), 2003-2005.

Samara Reynolds: Undergraduate Student, Trinity College: Matlab toolbox for 1) timing correction, 2) laterality analysis, and 3) latency estimation for fMRI

Abbie Garrity: Undergraduate Student, Trinity College: differences in the default mode network in schizophrenia, Fall/Spring 2004-2006

Christina Davidson: High school senior, Albuquerque, 2007

Nicole Giuliani: Accepted to Stanford Graduate School PhD Program, Fall 2005.

David Schneider: Graduate Student, University of Connecticut: Accepted to PhD program in Biomedical Engineering at Columbia University, Spring 2006

Kim Celone: PhD Student, Boston College

Alvin Chon: Undergraduate Student, Trinity College, senior project in informatics: multimodality database and data mining techniques applied to functional MRI, structural MRI, diffusion tensor MRI, and EEG, Fall 2003.

Deanna McDevitt: Undergraduate Student, Yale University, Directed Reading in Psychology on a Depression and the Christian Psychologist, Spring 2003.

Eric Egolf: Undergraduate Computer Science Student: Trinity College, senior project: development of functional connectivity toolbox for SPM99, 2002-2003.

Adam Dziorny: Undergraduate Biomedical Engineering Student, Johns Hopkins University, fMRI processing strategies and research skills, 2001-2002.

Mayur Pandya: Third Year Medical Student, Ohio University College of Osteopathic Medicine, doing neuro-imaging research elective, 2001.

Joseph Hong, High School Student, learning research skills in the Psychiatric Neuro-

Imaging Lab, 2000.

Daniel Hong, High School Student, learning research skills in the Psychiatric Neuro-Imaging Lab, 1999.

Annotated list of Trainees (not comprehensive):

Peer-reviewed publications with students are listed. Student's names are highlighted in bold font.

Chris Abbott, MD

Clinician, Dept. of Psychiatry, University of New Mexico

Role: Mentor on K award

Dr. Abbott is a current CTSC scholar at UNM. He has been working closely with Dr. Calhoun for year, and as part of his training, he spent a year interacting with lab members in Dr. Calhoun's group and learning how to work with brain imaging data.

Publications:

- [1] C. Abbott, A. Caprihan, J. Yamamoto, N. I. Perrone-Bizzozero, G. Pearlson, and V. D. Calhoun, "Source Based Morphometry Analysis of Group Differences in Fractional Anisotropy in Schizophrenia," in *Proc. HBM*, Quebec City, Canada, 2011.
- [2] C. Abbott, D. I. Kim, S. Sponheim, J. R. Bustillo, and V. D. Calhoun, "Decreased Default Mode Neural Modulation with Age in Schizophrenia," *American Journal of Geriatric Psychiatry*, vol. 18, pp. 897-907, 2010, PMC Pending #202225.
- [3] C. Abbott, M. Juarez, T. White, R. L. Gollub, G. D. Pearlson, J. R. Bustillo, J. Lauriello, B. C. Ho, H. J. Bockholt, V. P. Clark, V. Magnotta, and V. D. Calhoun, "Antipsychotic Dose and Diminished Neural Modulation: A Multi-Site fMRI Study," *Progress in Neuro-Psychopharmacology & Biological Psychiatry*, vol. 35, pp. 473-482, 2011, PMC Pending #255577.
- [4] C. Abbott, F. Merideth, D. Ruhl, Z. Yang, V. P. Clark, V. D. Calhoun, F. M. Hanlon, and A. R. Mayer, "Auditory orienting and inhibition of return in schizophrenia: A functional magnetic resonance imaging study," *Progress in Neuro-Psychopharmacology & Biological Psychiatry*, In Press, PMC Pending #346258.
- [5] A. Caprihan, C. Abbott, J. Yamamoto, G. D. Pearlson, N. Bizzozero, J. Sui, and V. D. Calhoun, "Source-based morphometry analysis of group differences in fractional anisotropy in schizophrenia," *Brain Connectivity*, In Press, PMC Pending #304239.
- [6] J. Turner, H. Chen, D. Mathalon, E. Allen, A. Mayer, C. Abbott, V. D. Calhoun, and J. Bustillo, "Reliability of the amplitude of low-frequency fluctuations in resting state in chronic schizophrenia," *Psych.Res.Neuroimaging*, In Press, PMC Pending #326593.

Lai Xu

PhD Student, University of New Mexico, Dept. of ECE, post-proposal

Role: Advisor for PhD

Ms. Xu is a current PhD student, post proposal, expected to defend her thesis in May 2010. She won a fellowship funded by Howard Hughes as part of the Program in Interdisciplinary Biology and Biological Sciences (PIBBS) program at UNM. She also had multiple posters presented at conferences and has two published journal articles and another submitted.

Publications:

- [1] **L. Xu**, J. Liu, and V. D. Calhoun, "Functional Connectivity among Spatially Independent Brain Regions During a VR Task," in *Proc. HBM*, Chicago, IL, 2007.
- [1] J. Liu, **L. Xu**, A. Caprihan, and V. Calhoun, "Extracting Principle Components for Discriminant Analysis of fMRI Images," in *Proc. ICASSP*, 2008.
- [2] J. Sui, J. Liu, L. Wu, A. Michael, **L. Xu**, T. Adali, and V. D. Calhoun, "A Constrained Coefficient ICA Algorithm For Group Difference Enhancement," in *Proc. ICASSP*, 2008.
- [3] **L. Xu**, J. Liu, T. Adali, and V. D. Calhoun, "Source Based Morphometry And Its Application To Identify Relative Gray Matter And White Matter Differences In Schizophrenia Versus Controls," in *Proc. ICASSP*, 2008.

- [4] **L. Xu**, G. D. Pearlson, and V. D. Calhoun, "Joint Source Based Morphometry to Identify Sources of Gray Matter and White Matter Relative Differences in Schizophrenia Versus Healthy Controls," in Proc.ISMRM, Toronto, Canada, 2008.
- [5] **L. Xu** and V. D. Calhoun, "sMRI Complex Framework For Evaluating Relative Gray And White Matter Group Differences," in Proc. ISMRM, Honolulu, Hawaii, 2009.
- [6] **L. Xu** and V. D. Calhoun, "Source Based Morphometry: Approaches to Identify Gray and White Matter Group Differences with Application to Schizophrenia," in Proc. HBM, San Francisco, CA, 2009.
- [2] **L. Xu**, K. Groth, G. Pearlson, D. Schretlen, and V. Calhoun, "Source Based Morphometry: The Use of Independent Component Analysis to Identify Gray Matter Differences with Application to Schizophrenia," Hum Brain Mapp, Under revision.
- [3] **L. Xu**, G. Pearlson, and V. Calhoun, "Joint Source Based Morphometry to Identify Relative Gray Matter and White Matter Group Differences," NeuroImage, vol. 44, pp. 777-789, 2009.

Rogers Silva

PhD Student, University of New Mexico, Dept. of ECE, pre-qualifying

Role: Advisor for MS, Advisor for PhD

Mr. Silva is a currently a PhD student funded from my NIH R01 grant. He contributed to a technical paper published this year, and is currently working on a journal article on the selection of imaging biomarkers from multimodal data.

Publications:

- [1] V. D. Calhoun, R. **Silva**, and J. Liu, "Identification of Multimodal MRI and EEG Biomarkers Using Joint-ICA and Divergence Criteria," in Proc.MLSP, 2007.
- [2] R. F. **Silva** and V. D. Calhoun, "Identification of Brain Imaging Biomarkers by Optimized Selection of Multimodal Independent Components," in Proc. IEEE SSIAM, Santa Fe, NM, 2008.
- [3] R. **Silva** and V. D. Calhoun, "Identification of Brain Image Biomarkers by Optimized Selection of Multimodal Datasets," in Proc.ISMRM, Toronto, 2008.
- [4] R. **Silva** and V. D. Calhoun, "Divergence Measurements for the Optimal Identification of Multimodal Biomarkers," in Proc. HBM, San Francisco, CA, 2009.
- [5] R. **Silva** and V. D. Calhoun, "Evaluating Joint Histograms in a Joint ICA Fusion Framework: Methods for Feature Extraction and Component Selection," in Human Brain Mapping, Barcelona, Spain, 2010.

Vamsi Potluru

MS/PhD Student, University of New Mexico, Dept. of CS, post-qualifying

Role: Advisor for PhD

Vamsi completed his Masters with me and now is working on his PhD thesis and expects to finish next year. During his time with me he has published multiple refereed conference papers and is working on several journal articles.

Publications:

- [1] **V. Potluru** and V. D. Calhoun, "Group Learning using NMF Variants," in Proc.ISCAS, 2008.
- [2] **V. Potluru**, S. M. Plis, and V. D. Calhoun, "Sparse shift-invariant NMF," in Proc. IEEE SSIAM, Santa Fe, NM, 2008.
- [3] S. M. Plis, **V. Potluru**, V. D. Calhoun, and T. Lane, "Correlated Noise: How it Breaks NMF, and What to Do About It," in Proc. MLSP, Grenoble, France, 2009.
- [4] **V. Potluru**, S. M. Plis, M. Morup, V. D. Calhoun, and T. Lane, "Efficient Multiplicative updates for Support Vector Machines," in Proc. SDM, Sparks, NV, 2009.

Lei Wu

PhD Student, University of New Mexico, post-qualifying

Role: Advisor for PhD

Publications:

- [1] J. Sui, J. Liu, L. **Wu**, A. Michael, L. Xu, T. Adali, and V. D. Calhoun, "A Constrained Coefficient ICA Algorithm For Group Difference Enhancement," in Proc. ICASSP, 2008.
- [2] L. **Wu** and V. D. Calhoun, "An Approach for Fusion between EEG and fMRI Data," in Proc.ISMRM, Toronto, Canada, 2008.
- [3] L. **Wu**, V. D. Calhoun, and T. Eichele, "Functional connectivity in eyes open vs. eyes closed resting state

- fMRI," in Proc. HBM, San Francisco, CA, 2009.
- [4] L. **Wu**, T. Eichele, and V. D. Calhoun, "Alpha Hemodynamic Responses in Eyes Open vs. Eyes Closed Resting State EEG-fMRI," in Proc. HBM, Barcelona, Spain, 2010.
- [5] V. D. Calhoun, L. **Wu**, K. A. Kiehl, T. Eichele, and G. D. Pearlson, "Aberrant Processing of Deviant Stimuli in Schizophrenia Revealed by Fusion of fMRI and EEG Data," *Acta Neuropsychiatria*, In Press, PMC pending #184787.
- [6] L. **Wu**, T. Eichele, and V. D. Calhoun, "Reactivity of hemodynamic responses and functional connectivity to different states of alpha synchrony: a concurrent EEG-fMRI study," *NeuroImage*, Submitted.

Michelle Juarez

MS Student, University of New Mexico

Role: Advisor for MS

Publications:

- [1] G. Machado, M. **Juarez**, V. P. Clark, R. L. Gollub, V. Magnotta, T. White, and V. D. Calhoun, "Probing Schizophrenia With A Sensorimotor Task: Large-Scale (N=273) Independent Component Analysis Of First Episode And Chronic Schizophrenia Patients," in Proc. Society for Neuroscience, San Diego, CA, 2007.
- [2] M. **Juarez**, T. White, G. D. Pearlson, J. R. Bustillo, J. Lauriello, B. C. Ho, H. J. Bockholt, V. P. Clark, R. Gollub, V. Magnotta, G. Machado, and V. D. Calhoun, "Functional connectivity differences in first episode and chronic schizophrenia patients during an auditory sensorimotor task revealed by independent component analysis of a large multisite study," in Proc. HBM, San Francisco, CA, 2009.
- [3] M. **Juarez**, C. Abbott, T. White, R. L. Gollub, G. D. Pearlson, J. R. Bustillo, J. Lauriello, B. C. Ho, H. J. Bockholt, V. P. Clark, V. Magnotta, and V. D. Calhoun, "Sensory deficits in schizophrenia with a large-scale independent component analysis of schizophrenia patients," *Hum. Brain Map.*, Submitted.

Alex Franco

PhD Student, University of New Mexico (defended 2009)

Role: Served on PhD Committee

Currently post-doc at Emory University

Publications:

- [1] A. R. **Franco**, M. Mannell, J. Ling, B. Bedrick, V. D. Calhoun, and A. R. Mayer, "Connectivity Between Consistent Resting State Networks and Fractional Anisotropy Revealed by Joint Independent Component Analysis," in Proc. HBM, San Francisco, CA, 2009.
- [2] A. R. **Franco**, J. Ling, A. Caprihan, V. D. Calhoun, R. Jung, G. L. Heileman, and A. R. Mayer, "Multimodal and Multi-tissue Measures of Connectivity Revealed by Joint Independent Component Analysis," *IEEE JSTSP*, vol. 2, pp. 986-997, 2008, PMC2748354.
- [3] A. R. **Franco**, A. Pritchard, V. D. Calhoun, and A. R. Mayer, "Inter-rater and Inter-method Reliability of Default Mode Network Selection," *Hum Brain Mapp*, vol. 30, pp. 2293-2303, 2009, PMC2751639.
- [4] M. Mannell, A. R. **Franco**, V. D. Calhoun, J. M. Canive, R. J. Thoma, and A. R. Mayer, "Resting state and task-induced deactivation: A methodological comparison in patients with schizophrenia and healthy controls," *Hum Brain Mapp*, In Press, PMC pending #132340.
- [5] M. Mannell, A. R. **Franco**, V. D. Calhoun, and A. R. Mayer, "Reproducibility, Reliability and Connectivity of Resting State Networks," *NeuroImage*, Submitted.

Andrew Michael

PhD Student, Rochester Institute of Technology (defended 2009).

Role: Advisor for PhD

Andrew came to Albuquerque to work with me, but chose to maintain his academic affiliation with RIT.

Publications:

- [1] A. **Michael**, J. Fries, S. Baum, B. C. Ho, N. C. Andreasen, and V. D. Calhoun, "A Method to Analyze Correlations between Multiple Brain Imaging Tasks to Characterize Schizophrenia," in Proc. IEEE SSIAI, Santa Fe, NM, 2008.
- [2] A. **Michael**, V. D. Calhoun, S. Baum, and N. C. Andreasen, "A Method to Classify Schizophrenia using Inter-Task Spatial Correlations of Functional Brain Images," in Proc. EMBC, 2008.
- [3] A. **Michael**, S. Baum, V. D. Calhoun, and A. Caprihan, "Correlations of Diffusion Tensor Imaging Values

- and Symptom Scores in Patients with Schizophrenia," in Proc. EMBC, 2008.
- [4] J. Sui, J. Liu, L. Wu, A. **Michael**, L. Xu, T. Adali, and V. D. Calhoun, "A Constrained Coefficient ICA Algorithm For Group Difference Enhancement," in Proc. ICASSP, 2008.
 - [5] A. **Michael**, S. Baum, V. P. Clark, R. Jung, K. O. Lim, T. White, B. C. Ho, R. L. Gollub, and V. D. Calhoun, "Fusion of Structural-Functional Brain Images Reveals Differences in Schizophrenia in a Multi Site Study," in Proc. ISMRM, Honolulu, Hawaii, 2009.
 - [6] A. **Michael**, S. Baum, T. J. White, N. C. Andreasen, J. M. Segall, R. E. Jung, V. P. Clark, R. L. Gollub, S. C. Schulz, J. L. Roffman, B. C. Ho, K. O. Lim, H. J. Bockholt, and V. D. Calhoun, "Inter-voxel Cross-Correlation Reveals Aberrantly Low Structural and Functional Linkage in Schizophrenia in a Multi-Site Study," in Proc. HBM, San Francisco, CA, 2009.
 - [7] A. **Michael**, V. D. Calhoun, G. D. Pearlson, S. Baum, and A. Caprihan, "An Analysis of using Diffusion Tensor Imaging Measures and Symptom Scores to Classify Patients with Schizophrenia," in Proc. HBM, San Francisco, CA, 2009.
 - [8] A. **Michael**, V. D. Calhoun, G. Pearlson, S. Baum, and A. Caprihan, "Application of Canonical Correlation Analysis to Identify Regions of Significant Correlation between Symptom Scores and DTI Measures in Schizophrenia," in Proc. ISMRM, Honolulu, Hawaii, 2009.
 - [9] A. **Michael**, S. Baum, and V. D. Calhoun, "A Technique to Detect Outliers Automatically in Multi-Site fMRI Data," in Proc. ISMRM, Honolulu, Hawaii, 2009.
 - [10] U. Sakoglu, A. **Michael**, and V. D. Calhoun, "Classification of schizophrenia patients vs healthy controls based on dynamic functional network connectivity," in Proc. HBM, San Francisco, CA, 2009.
 - [11] O. Demirci, M. C. Stevens, N. C. Andreasen, A. **Michael**, J. Liu, T. White, G. D. Pearlson, V. P. Clark, and V. D. Calhoun, "Investigation of relationships between fMRI brain networks in the spectral domain using ICA and Granger causality reveals distinct differences between schizophrenia patients and healthy controls," *NeuroImage*, vol. 46, pp. 419-431, 2009, PMC2713821.
 - [12] A. **Michael**, S. Baum, J. Fries, B. C. Ho, R. Pierson, N. C. Andreasen, and V. D. Calhoun, "A Method to Fuse fMRI Tasks Through Spatial Correlations: Applied to Schizophrenia," *Human Brain Mapping*, vol. 30, pp. 2512-2529, 2009, PMC2711995.
 - [13] A. **Michael**, S. Baum, T. White, O. Demirci, N. C. Andreasen, J. M. Segall, R. E. Jung, G. D. Pearlson, V. P. Clark, R. L. Gollub, S. C. Schulz, J. Roffmann, K. O. Lim, B. C. Ho, H. J. Bockholt, and V. D. Calhoun, "Does Function Follow Form?: Methods to Fuse Structural and Functional Brain Images Show Decreased Linkage in Schizophrenia," *Hum Brain Mapp*, In Press, PMC pending #184511.
 - [14] U. Sakoglu, G. D. Pearlson, K. A. Kiehl, Y. Wang, A. **Michael**, and V. D. Calhoun, "A Method for Evaluating Dynamic Functional Network Connectivity and Task-Modulation: Application to Schizophrenia," *MAGMA*, In Press, PMC pending #180300.

Nicolle Correa

PhD Student, University of Maryland Baltimore County, Dept. of CSEE, post-proposal
 Role: co-advisor (with Tülay Adalı) for Master's thesis (received 2006), co-advisor for PhD
 (expected in 2010)

Ms. Correa is currently a PhD student funded from an NIH R01 grant. This training occurs via e-mail, phone conference, and monthly travel between Baltimore and Hartford and now Albuquerque. Nicolle's defense is scheduled for April 2010.

Publications:

- [1] N. **Correa**, T. Adali, Y. Li, and V. D. Calhoun, "Comparison of blind source separation algorithms for fMRI using a new matlab toolbox: GIFT," in Proc. IEEE Int. Conf. Acoustics, Speech, Signal Processing (ICASSP), Philadelphia, PA, 2005.
- [2] N. **Correa**, T. Adali, Y. Li, and V. D. Calhoun, "Examining associations between fMRI and EEG data using canonical correlation analysis," in Proc. ISBI, Washington, D.C., 2008, pp. 1251-1254.
- [3] N. **Correa**, Y. Li, T. Adali, and V. D. Calhoun, "Fusion of fMRI, sMRI, and EEG Data Using Canonical Correlation Analysis," in Proc. IEEE Int. Conf. Acoustics, Speech, Signal Processing (ICASSP), Taiwan, 2009.
- [4] N. **Correa**, Y. Li, T. Adali, and V. D. Calhoun, "Investigating associations across fMRI, sMRI, and EEG data for the auditory oddball task using canonical correlation analysis," in Proc. HBM, San Francisco, CA, 2009.
- [5] P. Rodriguez, N. M. **Correa**, T. Adali, and V. D. Calhoun, "Quality map thresholding for de-Noiseing of complex-valued fMRI data and its application to ICA of fMRI," in Proc. MLSP, Grenoble, France, 2009.
- [6] N. **Correa**, T. Eichele, T. Adali, Y. Li, and V. D. Calhoun, "Fusion of Concurrent single Trial EEG Data

- and fMRI Data Using Multi-set Canonical Correlation Analysis," in Proc. ICASSP, Dallas, TX, 2010.
- [7] H. Li, T. Adali, N. **Correa**, P. Rodriguez, and V. D. Calhoun, "Flexible Complex ICA of fMRI Data," in Proc. ICASSP, Dallas, TX, 2010.
 - [8] S. Ma, X. Li, N. **Correa**, T. Adali, and V. D. Calhoun, "Independent Subspace Analysis with Prior Information for fMRI Data," in Proc. ICASSP, Dallas, TX, 2010.
 - [9] P. Rodriguez, T. Adali, H. Li, N. **Correa**, and V. D. Calhoun, "Phase Correction and Denoising for ICA of Complex fMRI Data," in Proc. ICASSP, Dallas, TX, 2010.
 - [10] N. **Correa**, T. Adali, and V. D. Calhoun, "Performance of Blind Source Separation Algorithms for fMRI Analysis," *Mag.Res.Imag.*, vol. 25, p. 684, 2007, PMC2358930.
 - [11] N. **Correa**, Y. Li, T. Adali, and V. D. Calhoun, "Canonical correlation analysis for feature-based fusion of biomedical imaging modalities to detect associative networks in Schizophrenia," *IEEE JSTSP*, vol. 2, pp. 998-1007, 2008, PMC2761661.
 - [12] N. **Correa**, T. Eichele, T. Adali, Y. Li, and V. D. Calhoun, "Multi-set canonical correlation analysis for the fusion of concurrent single trial ERP and functional MRI," *NeuroImage*, In Press, PMC pending #180189.
 - [13] P. Rodriguez, N. **Correa**, T. Adali, T. Eichele, and V. D. Calhoun, "Quality Map Thresholding for Denoising of Complex-Valued fMRI Data and its Application to ICA of fMRI," *Journal of Signal Processing Systems*, Submitted.
 - [14] W. Xiong, N. **Correa**, T. Adali, and V. D. Calhoun, "Order Selection of the Linear Mixing Model for Complex-valued fMRI Data," *IEEE JSTSP*, Submitted.

Yiou Li

PhD, University of Maryland Baltimore County, Dept. of CSEE (defended 2008)

Role: co-advisor (with Tülay Adalı) for PhD thesis

Dr. Li was funded from an NIH R01 grant. This training occurred via e-mail, phone conferences, and monthly travel between Baltimore and Hartford and Albuquerque.

Publications:

- [1] V. D. Calhoun, T. Adali, and Y. **Li**, "Independent component analysis of complex-valued functional magnetic resonance imaging data by complex nonlinearities," in Proc.ISBI, 2004, pp. 984-987.
- [2] Y. **Li**, T. Adali, and V. D. Calhoun, "Independent component analysis with feature selective filtering," in Proc.MLSP, 2004.
- [3] N. Correa, T. Adali, Y. **Li**, and V. D. Calhoun, "Comparison of blind source separation algorithms for fMRI using a new matlab toolbox: GIFT," in Proc.IEEE Int.Conf.Acoustics, Speech, Signal Processing (ICASSP), Philadelphia, PA, 2005.
- [4] Y. **Li**, T. Adali, and V. D. Calhoun, "Feature-selective ICA and its convergence properties," in Proc.IEEE Int.Conf.Acoustics, Speech, Signal Processing (ICASSP), 2005.
- [5] Y. **Li**, T. Adali, and V. D. Calhoun, "Sample Dependence Correction For Order Selection In fMRI Analysis," in Proc.ISBI, 2006.
- [6] Y. **Li**, T. Adali, and V. D. Calhoun, "A Model For Comparison Of Two Functional MRI Datasets By Canonical Correlation Analysis And Independent Component Analysis," in Proc.MLSP, 2007.
- [7] Y. **Li**, W. Wang, T. Adali, and V. D. Calhoun, "CCA for Joint Blind Source Separation of Multiple Datasets with Application to Group fMRI Analysis," in Proc.MLSP, 2007.
- [8] Y. **Li**, T. Adali, and V. Calhoun, "A multivariate model for comparison of two datasets and its application to fMRI analysis," in Proc.MLSP, 2007.
- [9] N. Correa, T. Adali, Y. **Li**, and V. D. Calhoun, "Examining associations between fMRI and EEG data using canonical correlation analysis," in Proc. ISBI, Washington, D.C., 2008, pp. 1251-1254.
- [10] Y. **Li**, W. Wang, T. Adali, and V. D. Calhoun, "CCA for Joint Blind Source Separation of Multiple Datasets with Application to Group fMRI Analysis," in Proc. ICASSP, 2008.
- [11] W. Wang, Y. **Li**, H. Li, T. Adali, and V. D. Calhoun, "On ICA of Complex-Valued fMRI: Advantages and Order Selection," in Proc. ICASSP, 2008.
- [12] N. Correa, Y. **Li**, T. Adali, and V. D. Calhoun, "Fusion of fMRI, sMRI, and EEG Data Using Canonical Correlation Analysis," in Proc.IEEE Int.Conf.Acoustics, Speech, Signal Processing (ICASSP), Taiwan, 2009.
- [13] N. Correa, Y. **Li**, T. Adali, and V. D. Calhoun, "Investigating associations across fMRI, sMRI, and EEG data for the auditory oddball task using canonical correlation analysis," in Proc. HBM, San Francisco, CA, 2009.
- [14] Y. **Li**, T. Adali, and V. D. Calhoun, "A group study of simulated driving fMRI data by multi-set canonical correlation analysis," in Proc. HBM, San Francisco, CA, 2009.

- [15] J. Sui, Y. Li, T. Adali, and V. D. Calhoun, "A New Joint Blind Source Separation Model for Two Datasets and Its Application to Second-level fMRI Group Analysis," in Proc. HBM, San Francisco, CA, 2009.
- [16] J. Sui, T. Adali, Y. Li, H. Yang, and V. D. Calhoun, "A review of multivariate methods in brain imaging data fusion," in Proc. SPIE, San Diego, CA, 2009.
- [17] N. Correa, T. Eichele, T. Adali, Y. Li, and V. D. Calhoun, "Fusion of Concurrent single Trial EEG Data and fMRI Data Using Multi-set Canonical Correlation Analysis," in Proc. ICASSP, Dallas, TX, 2010.
- [18] Y. Li, T. Adali, and V. D. Calhoun, "Estimating the number of independent components for fMRI data," Hum.Brain Map., vol. 28, pp. 1251-1266, 2007.
- [19] Y. Li, T. Adali, and V. D. Calhoun, "A Feature-selective Independent Component Analysis Method for Functional MRI," Int. J. Biomed. Imaging, 2007.
- [20] N. Correa, Y. Li, T. Adali, and V. D. Calhoun, "Canonical correlation analysis for feature-based fusion of biomedical imaging modalities to detect associative networks in Schizophrenia," IEEE JSTSP, vol. 2, pp. 998-1007, 2008, PMC2761661.
- [21] N. Correa, T. Eichele, T. Adali, Y. Li, and V. D. Calhoun, "Multi-set canonical correlation analysis for the fusion of concurrent single trial ERP and functional MRI," NeuroImage, In Press, PMC pending #180189.
- [22] Y. Li, T. Adali, W. Wang, and V. D. Calhoun, "Joint Blind Source Separation by Multi-set Canonical Correlation Analysis," IEEE Trans. Signal Processing, In Press, PMC pending #110331.
- [23] W. Xiong, T. Adali, Y. Li, and V. D. Calhoun, "On entropy rate for the complex domain and its application to i.i.d. sampling," IEEE Transactions on Signal Processing, In Press, PMC pending #184519.

Eduardo Castro

PhD Student, University of New Mexico, post-qualifying.

Role: Advisor for PhD

Publications:

- [1] E. Castro, M. Martinez-Ramon, G. L. Heileman, and V. D. Calhoun, "Characterization of groups using composite kernels and multi-source fMRI analysis data: Application to Schizophrenia," NeuroImage, Submitted.

Guilherme Machado

Undergraduate Exchange Student, University of New Mexico, Dept. of ECE

Role: Advisor for senior project

Guilherme was an undergraduate student from Brazil who spent the semester at UNM. He worked with me on a project which resulting in a publication. He is currently applying for the MS program at UNM.

Publications:

- [1] G. Machado, V. P. Clark, R. L. Gollub, V. Magnotta, T. White, and V. D. Calhoun, "Probing Schizophrenia with a Sensorimotor Task: Large-Scale (N=273) Independent Component Analysis of First Episode and Chronic Schizophrenia Patients," in Proc. Society for Neuroscience San Diego, CA, 2007.

Michael Benevidez

Medical Student, University of New Mexico

Michael worked with me in 2007 on a research project with me. He has an abstract accepted and is working on a journal article.

Publications:

- [1] M. Benevidez, V. P. Clark, G. Kuperberg, K. Lim, and V. D. Calhoun, "Functional Networks Identified in an Auditory Oddball Task of Chronic and First Episode Schizophrenia Patients (N=261) Collected from the Mind Clinical Imaging Consortium," in Proc. Society for Neuroscience San Diego, CA, 2007.

Madiha Jafri

PhD Student, University of Virginia (defended 2008)

Madiha worked with me as a PhD student and has now graduated. Madiha has published multiple conference papers and a journal article.

Publications:

- [1] **M. Jafri** and V. D. Calhoun, "Interdependencies among Resting-State Networks in Schizophrenia Using Independent Component Analysis," in *Proc. ISMRM*, 2007.
- [2] **M. Jafri**, G. D. Pearlson, and V. D. Calhoun, "A Maximal-Correlation Approach Using Ica for Testing Functional Network Connectivity Applied to Schizophrenia," in *Proc.ISBI*, 2007.
- [3] **M. Jafri** and V. D. Calhoun, "Functional Classification of Schizophrenia Using Feed Forward Neural Networks," in *Proc.EMBS*, 2006.
- [4] **M. Jafri**, G. D. Pearlson, and V. D. Calhoun, "Resting State Functional Network Connectivity among Ica Components Using Bayesian Networks," in *Proc.HBM*, 2007.
- [5] **M. Jafri**, G. D. Pearlson, M. Stevens, and V. D. Calhoun, "Aberrant Connectivity among Spatially Independent Resting-State Networks in Schizophrenia," *Hum.Brain Map.*, Under revision.

Matt Sutherland

PhD Student, University of New Mexico, Dept. of Psychology

Role: Served on dissertation committee (defended 2007)

Tom Eichele

PhD, University of Bergen, Norway

Role: Served on PhD committee

Currently: Faculty member at University of Bergen

Mr Eichele defended his PhD in 2007. He visited me for three weeks in 2005 and Aug 2007 and summer 2009 and since then we have been collaborating closely and also I regularly visit Norway to give an educational course.

Publications:

- [1] N. Swanson, T. **Eichele**, G. D. Pearlson, and V. D. Calhoun, "Lateral Differences in the Default Mode Network in Schizophrenia," in *The two halves of the brain: Information processing in the cerebral hemispheres: MIT Press*, 2009.
- [2] T. **Eichele**, M. Moosmann, V. D. Calhoun, K. Specht, H. Nordby, and K. Hugdahl, "Joint ICA of Simultaneous Single Trial ERP-fMRI," in *Proc.HBM*, 2006.
- [3] T. **Eichele**, S. Debener, V. Calhoun, K. Specht, A. K. Engel, K. Hugdahl, D. Von Cramon, and M. Ullsperger, "Prediction of human errors by maladaptive changes in event-related brain networks " in *Proc.HBM*, 2008.
- [4] T. **Eichele**, R. Scheeringa, V. Calhoun, K. Hugdahl, and M. Bastiaansen, "Deconvolution of Hemodynamic Responses from Alpha-band EEG," in *Proc.HBM*, 2008.
- [5] T. **Eichele**, V. Calhoun, M. Moosmann, K. Specht, L. A. Jongsma, R. Quiroga, H. Nordby, and K. Hugdahl, "Unmixing concurrent EEG-fMRI with parallel independent component analysis," in *Proc.HBM*, 2008.
- [6] T. **Eichele**, S. Rachakonda, and V. D. Calhoun, "EEGIFT: A Toolbox for Group Independent Component Analysis of Event-Related EEG," in *Proc. SPR*, Austin, TX, 2008.
- [7] T. **Eichele**, S. Rachakonda, and V. D. Calhoun, "EEGIFT: A toolbox for group temporal ICA event-related EEG," in *Proc. HBM*, San Francisco, CA, 2009.
- [8] L. Wu, V. D. Calhoun, and T. **Eichele**, "Functional connectivity in eyes open vs. eyes closed resting state fMRI," in *Proc. HBM*, San Francisco, CA, 2009.
- [9] E. Allen, E. Erhardt, T. **Eichele**, A. R. Mayer, and V. D. Calhoun, "Comparison of pre-normalization methods on the accuracy of group ICA results," in *Proc. HBM*, Barcelona, Spain, 2010.
- [10] N. Correa, T. **Eichele**, T. Adali, Y. Li, and V. D. Calhoun, "Fusion of Concurrent single Trial EEG Data and FMRI Data Using Multi-set Canonical Correlation Analysis," in *Proc. ICASSP*, Dallas, TX, 2010.
- [11] S. M. Plis, V. D. Calhoun, M. P. Weisend, T. **Eichele**, E. Besada-Portas, and T. Lane, "MEG and fMRI for nonlinear estimation of neural activity," in *Proc. NIPS Workshop on Connectivity Inference and NeuroImaging*, Whistler, CO, 2010.
- [12] L. Wu, T. **Eichele**, and V. D. Calhoun, "Alpha Hemodynamic Responses in Eyes Open vs. Eyes Closed

- Resting State EEG-fMRI," in Proc. HBM, Barcelona, Spain, 2010.
- [13] T. **Eichele**, V. D. Calhoun, M. Moosmann, K. Specht, M. Jongsma, R. Quiroga, H. Nordby, and K. Hugdahl, "Unmixing concurrent EEG-fMRI with parallel independent component analysis," *Int. J. Psych.*, vol. 67, pp. 222-234, 2008, PMC2649878.
 - [14] T. **Eichele**, S. Debener, V. D. Calhoun, K. Specht, A. K. Engel, K. Hugdahl, D. Y. Cramon, and M. Ullsperger, "Prediction of human errors by maladaptive changes in event-related brain networks," *Proc Natl Acad Sci U S A*, vol. 105, pp. 6173-6178, 2008, PMC Journal - In Process.
 - [15] M. Moosmann, T. **Eichele**, H. Nordby, K. Hugdahl, and V. D. Calhoun, "Joint Independent Component Analysis for Simultaneous EEG-fMRI: Principle and Simulation," *Int. J. Psych.*, vol. 67, pp. 212-221, 2008, PMC2649876.
 - [16] V. D. Calhoun, T. **Eichele**, and G. Pearlson, "Functional Brain Networks in Schizophrenia: A Review," *Frontiers in Neurosciences*, vol. 3, pp. 1-12, 2009, PMC Journal - In Process.
 - [17] T. **Eichele**, V. D. Calhoun, and S. Debener, "Mining EEG-fMRI using independent component analysis," *Int. J. Psych.*, vol. 73, pp. 53-61, 2009, PMC2693483.
 - [18] V. D. Calhoun, L. Wu, K. A. Kiehl, T. **Eichele**, and G. D. Pearlson, "Aberrant Processing of Deviant Stimuli in Schizophrenia Revealed by Fusion of FMRI and EEG Data," *Acta Neuropsychiatria*, In Press, PMC pending #184787.
 - [19] N. Correa, T. **Eichele**, T. Adali, Y. Li, and V. D. Calhoun, "Multi-set canonical correlation analysis for the fusion of concurrent single trial ERP and functional MRI," *NeuroImage*, In Press, PMC pending #180189.
 - [20] N. Swanson, T. **Eichele**, G. D. Pearlson, K. A. Kiehl, and V. D. Calhoun, "Lateral Differences in the Default Mode Network in Healthy Controls and Schizophrenia Patients," *Hum Brain Mapp*, In Press, PMC pending #180312.

Nicole Giuliani

Role: Primary supervisor of post-graduate training period, 2003-2005

Currently PhD Student at Stanford University.

Publications:

- [1] V. D. Calhoun, T. Adali, N. **Giuliani**, J. J. Pekar, G. D. Pearlson, and K. A. Kiehl "A Method for Multimodal Analysis of Independent Source Differences in Schizophrenia: Combining Gray Matter Structural and Auditory Oddball Functional Data," *Hum.Brain Map.*, 2005 (in press).
- [2] N. **Giuliani**, G. D. Pearlson, and V. D. Calhoun, "Alcohol Versus Marinol Intoxication Effects on Visual Perception: An FMRI Study," in Proc. ICANA, New Haven, CT, 2004.
- [3] N. **Giuliani**, V. D. Calhoun, G. D. Pearlson, A. Francis, and R. W. Buchanan, "Voxel-Based Morphometry Versus Regions of Interest: A Comparison of Two Methods for Analyzing Gray Matter Disturbances in Schizophrenia," *Schizophr. Res.*, vol. 74, pp. 135-147, 2005.
- [4] K. Groth, T. Benios, N. **Giuliani**, V. D. Calhoun, and G. D. Pearlson, "General Intelligence Correlates to Brain Structure Differently in Men and Women," in Proc. SAGE IV, Winston-Salem, NC, 2005.

Matthais Moosman

PhD, University of Bergen, Norway

Role: Member of PhD committee

Mr Moosman completed his PhD dissertation in medical physics.

Publications:

- [1] T. Eichele, M. **Moosmann**, V. D. Calhoun, K. Specht, H. Nordby, and K. Hugdahl, "Joint ICA of Simultaneous Single Trial ERP-fMRI," in Proc.HBM, 2006.
- [2] T. Eichele, V. Calhoun, M. **Moosmann**, K. Specht, L. A. Jongsma, R. Quiroga, H. Nordby, and K. Hugdahl, "Unmixing concurrent EEG-fMRI with parallel independent component analysis," in Proc.HBM, 2008.
- [3] T. Eichele, V. D. Calhoun, M. **Moosmann**, K. Specht, M. Jongsma, R. Quiroga, H. Nordby, and K. Hugdahl, "Unmixing concurrent EEG-fMRI with parallel independent component analysis," *Int. J. Psych.*, vol. 67, pp. 222-234, 2008.
- [4] M. **Moosmann**, T. Eichele, H. Nordby, K. Hugdahl, and V. D. Calhoun, "Joint Independent Component Analysis for Simultaneous EEG-fMRI: Principle and Simulation," *Int. J. Psych.*, vol. 67, pp. 212-221, 2008.

David Schneider:

Masters Graduate Student in Biomedical Engineering, University of Connecticut
Role: co-advisor, 2004-2005
Accepted to Columbia PhD Graduate Program, Fall 2006

Abbie Garrity:

Undergraduate Student, Trinity College
Role: Advisor for volunteer project, 2005-
Differences in the default mode network in schizophrenia, Fall/Spring 2004
2006 Brain Dance Research Award

Publications:

- [1] A. **Garrity**, G. D. Pearlson, K. McKiernan, D. Lloyd, K. A. Kiehl, and V. D. Calhoun, "Aberrant functional connectivity of the 'default mode' in schizophrenia," in Trinity Papers, 2006.
- [2] A. **Garrity**, G. D. Pearlson, K. McKiernan, D. Lloyd, K. A. Kiehl, and V. D. Calhoun, "Aberrant functional connectivity of the 'default mode' in schizophrenia," in Neuron, 2006.
- [3] A. **Garrity**, G. D. Pearlson, K. McKiernan, D. Lloyd, K. A. Kiehl, and V. D. Calhoun, "Aberrant 'default mode' functional connectivity in schizophrenia," *Am.J.Psychiatry*, vol. 164, pp. 450-457, 2007.

Samara Reynolds:

Undergraduate Student, Trinity College
Role: Advisor for senior project, 2004-2005

Publications:

- [1] M. **Assaf**, S. Reynolds, V. Calhoun "Laterality changes in verbal binding associated with schizophrenia" *Biol. Psych.*, 2006.

Hichem Snoussi

Post-doctoral fellow
Role: Primary mentor

Publications:

- [1] H. **Snoussi** and V. D. Calhoun, "Bayesian Blind Source Separation for Brain Imaging," in Proc. SETIT, SUSA, Tunisia, 2005.
- [2] H.**Snoussi** and V. D. Calhoun, "Regularized Spectral Matching for Blind Source Separation. Application to FMRI Imaging," *IEEE Trans. Signal Proc.*, 2005.
- [3] H. **Snoussi** and V. D. Calhoun, "Bayesian Blind Source Separation for Brain Imaging," in Proc. ICIP, Genova, Italy, 2005.

Michael Stevens, Ph.D.

Appointed junior faculty in the Olin Neuropsychiatry Research Center, 2002-2004
Role: co-advisor 2002-2004; co-mentor on K-Award (2005-2009).
Currently an independent investigator

Publications:

- [1] V. D. Calhoun, M. **Stevens**, G. D. Pearlson, and K. A. Kiehl, "Fmri Analysis with the General Linear Model: Removal of Latency-Induced Amplitude Bias by Incorporation of Hemodynamic Derivative Terms," *NeuroImage*, vol. 22, pp. 252-257, 2004.
- [2] K. A. Kiehl, M. **Stevens**, K. R. Laurens, G. D. Pearlson, V. D. Calhoun, and P. F. Liddle, "The Amygdala as a Salience Detector: Evidence from a Large-Scale Study (N=100) of Auditory Target Detection " in *Proc.HBM*, Budapest, Hungary, 2004.
- [3] V. D. Calhoun, T. Adali, M. **Stevens**, K. A. Kiehl, and J. J. Pekar, "Semi-Blind Ica of Fmri: A Method for Utilizing Hypothesis-Derived Time Courses in a Spatial Ica Analysis," *NeuroImage*, vol. 25, pp. 527-538, 2005.
- [4] K. A. Kiehl, M. **Stevens**, K. R. Laurens, G. D. Pearlson, V. D. Calhoun, and P. F. Liddle, "An Adaptive Reflexive Processing Model of Neurocognitive Function: Supporting Evidence from a Large Scale (N=100) Fmri Study of an Auditory Oddball Task," *NeuroImage*, vol. 25, pp. 899-915, 2005.
- [5] M. **Stevens**, V. D. Calhoun, and K. A. Kiehl, "Hemispheric Differences in Hemodynamics Elicited by Auditory Oddball Stimuli," *NeuroImage*, vol. 26, pp. 782-792, 2005.

- [6] **M. Stevens**, V. D. Calhoun, and K. A. Kiehl, "Fmri in an Oddball Task: Effects of Target-to-Target Interval," *Psychophysiology*, vol. 42, pp. 636-642, 2005.
- [7] **M. Stevens**, K. A. Kiehl, G. D. Pearlson, and V. D. Calhoun, "Functional Neural Circuits for Mental Timekeeping," in *Human Brain Mapping*, Florence, Italy, 2005.
- [8] G. D. Pearlson, D. A. Wallace, V. D. Calhoun, M. Assaf, M. C. Stevens, S. Meda, and J. Gelernter, "Alpha7 Nicotinic Cholinergic Receptor (Chrna7) Polymorphisms Discriminate Figural Memory Abilities in Healthy Adults and Influence Related Structural and Functional Mri Patterns," in *Proc.ACNP*, 2006.
- [9] M. C. Stevens, K. A. Kiehl, G. Pearlson, and V. D. Calhoun, "Functional Neural Circuits for Mental Timekeeping," *Hum Brain Mapp*, Aug 30 2006.
- [10] **M. Stevens**, K. A. Kiehl, G. D. Pearlson, and V. D. Calhoun, "Functional Neural Circuits for Mental Timekeeping," *Hum.Brain Map.*, vol. 28, 2007.
- [11] **M. Stevens**, K. A. Kiehl, G. D. Pearlson, and V. D. Calhoun, "Functional Neural Networks Underlying Response Inhibition in Adolescents and Adults," *Behavior and Brain Sciences*, vol. 181, 2007.
- [12] **M. Stevens**, K. A. Kiehl, G. D. Pearlson, and V. D. Calhoun, "Functional Neural Networks Underlying Response Inhibition in Adolescents and Adults," in *Human Brain Mapping*, 2007.
- [13] **M. Stevens**, V. D. Calhoun, G. D. Pearlson, and K. A. Kiehl, "Brain Network Dynamics During Error Commission," *Hum.Brain Map.*, In Press.
- [14] M. Jafri, G. D. Pearlson, **M. Stevens**, and V. D. Calhoun, "Aberrant Connectivity among Spatially Independent Resting-State Networks in Schizophrenia," *Hum.Brain Map.*, Submitted.
- [15] **M. Stevens**, G. D. Pearlson, V. D. Calhoun, and K. A. Kiehl, "Are Separate Neural Networks Specialized for Regular Movement Timing? An Examination of Brain Hemodynamics During Regularly-Paced Finger Tapping," *Neuropsychologia*, Submitted.

Mona Noureldin Mohamed, M.D.

Postdoc, Johns Hopkins University

Role: co-advisor for post graduate training period, primary mentor for fMRI training.

Publications:

- [1] **M. A. Mohamed**, D. M. Yousem, A. Tekes, N. M. Browner, and V. D. Calhoun, "Timing of Cortical Activation: a Latency-Resolved Event-Related Functional MR Imaging Study," *AJNR Am. J. Neuroradiol.*, vol. 24, pp. 1967-1974, 2003.
- [2] **M. Noureldin**, D. M. Yousem, A. Tekes, N. Browner, and V. D. Calhoun, "Correlation Between the Amplitude of Cortical Activation and Reaction Time: An FMRI Study," in *Proc. ASNR*, Washington, D.C., 2003.
- [3] A. Tekes, **M. Noureldin**, M. Kraut, V. D. Calhoun, N. Browner, and D. M. Yousem, "Effect of Age on Visuomotor Functional MR Imaging," in *Proc. ASNR*, Washington, D.C., 2003.
- [4] **M. A. Mohamed**, D. M. Yousem, A. Tekes, N. Browner, and V. D. Calhoun, "Correlation Between the Amplitude of Cortical Activation and Reaction Time: a Functional MRI Study," *AJR Am. J. Roentgenol.*, vol. 183, pp. 759-765, 2004.
- [5] **M. A. Mohamed**, D. M. Yousem, I. Kusevic, V. D. Calhoun, C. Cristinzio, N. A. Honeycutt, A. El-Deib, M. Yassa, B. Caffo, and S. Basset, "Lack of Education Effect on Brain Activity in a Memory Based Functional MRI Experiment," in *Proc. ASNR*, 2004.
- [6] A. Tekes, V. D. Calhoun, **M. A. Mohamed**, B. Yagmurlu, N. Mikhelashvili-Browner, and D. M. Yousem, "Effect of Age in Volume of Activation in Block Design and Single-Event Paradigms Using Visuomotor Functional MR Imaging," in *Proc. ASNR*, 2004.
- [7] A. Tekes, **M. A. Mohamed**, N. Mikhelashvili-Browner, V. D. Calhoun, and D. M. Yousem, "Effect of Age on Visuomotor Functional MR Imaging," in *Proc. ASNR*, 2004.
- [8] A. Tekes, **M. Noureldin**, M. Kraut, V. D. Calhoun, N. Browner, and D. M. Yousem, "Effect of Age on Visuomotor Functional MR Imaging," to appear *Acad. Radiol.*, 2005.

Kim Celone

Role: tutor for post-graduate training period, 2003-2005

Accepted to PhD Program, Boston College

Publications:

- [1] **K. Celone**, V. D. Calhoun, A. Driscoll, E. Rand-Giovannetti, E. Chua, B. Dickerson, M. Albert, D. Blacker, and R. Sperling "ICA of fMRI Associative Memory Networks in Normal Aging, MCI and Mild AD," 2005. (in preparation).

- [2] R. Sperling, E. Chua, B. Dickerson, D. Blacker, M. Albert, V. D. Calhoun, and **K. Celone**, "Compensatory Recruitment of Memory and Attentional Networks in Mild Cognitive Impairment," in Proc. Amer. Acad. of Neur., San Diego, CA, 2005.
- [3] **K. Celone**, V. D. Calhoun, A. Driscoll, E. Rand-Giovannetti, E. Chua, B. Dickerson, M. Albert, D. Blacker, and R. Sperling, "ICA of FMRI Associative Memory Networks in Normal Aging, MCI and Mild AD," in Proc. Soc. for Neuroscience, San Diego, CA, 2004.

Martin Hejnar

Role: Primary supervisor of post-graduate training period, 2003-2004

Publications:

- [1] **M. P. Hejnar**, M. M. Kurtz, K. A. Keihl, G. D. Pearlson, and V. D. Calhoun, "Performance on the Penn Conditional Exclusion Task (PCET) in Patients With Schizophrenia (SZ) and Healthy Controls: An FMRI Analysis," in Proc. SBP, 2004.
- [2] D. Kim, **M. P. Hejnar**, K. A. Kiehl, E. Bedrick, and V. D. Calhoun "Interparticipant Correlations: A Model Free FMRI Analysis Technique," Hum.Brain Map., 2007 (in press).

Eric Egolf:

Role: co-advisor senior project

Publications:

- [1] **E. Egolf** and V. D. Calhoun, "Group ICA of FMRI Toolbox," in *Proc. Biomedical Engineering Alliance and Consortium*, 2003.
- [2] **E. Egolf**, K. A. Kiehl, and V. D. Calhoun, "Group ICA of FMRI Toolbox (GIFT)," in *Proc. HBM*, Budapest, Hungary, 2004.
- [3] B. Hong, G. D. Pearlson, **E. Egolf**, and V. D. Calhoun, "Identification of Brain Activity in a Visual Stimulation Task - An Adaptive ICA Approach for FMRI Data," in *Proc. HBM*, 2004.

Jinsuh Kim, M.D.:

Post doctoral fellow

Role: primary supervisor 2002-2004

Joined faculty at University of Wisconsin

Publications:

- [1] **J. Kim**, R. Kanaan, V. D. Calhoun, S. Mori, and G. D. Pearlson, "More Averages Vs. More Gradients: Which Is Right for Reliable Diffusion Tensor MRI?," in Proc. RSNA, Chicago, IL, 2002.
- [2] V. D. Calhoun, **J. Kim**, and G. D. Pearlson, "FMRI Connectivity Measured by Mutual Information and Correlation: Linear Dependence Vs. General Dependence," in Proc. ISMRM, Toronto, Canada, 2003.
- [3] **J. Kim**, V. D. Calhoun, and G. D. Pearlson, "DTI of Huntington Disease," in Proc. ISMRM, Toronto, Canada, 2003.
- [4] **J. Kim**, V. D. Calhoun, and G. D. Pearlson, "3D Visualization of White Matter Tracts Using LIC," in Proc. ASNR, Washington, D.C., 2003.
- [5] **J. Kim** and V. D. Calhoun, "Evaluation of Quantization Error in DICOM Images for FMRI Application," in Proc. RSNA, Chicago, IL, 2003.