

# Richard Cameron Craddock

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## Education

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**PhD in Electrical and Computer Engineering** 05/2003 – 12/2009

Georgia Institute of Technology, Atlanta, GA

*Dissertation:* Support Vector Classification Analysis of Resting State Functional Connectivity fMRI

*Specializations:* MR Physics, Bioengineering, and Digital Signal Processing

*Minor:* Mathematics

*Advisors:* Xiaoping Hu, PhD and Helen Mayberg, MD

**MS in Electrical and Computer Engineering** 01/2001 – 05/2003

Georgia Institute of Technology, Atlanta, GA

*Specializations:* Bioengineering and Digital Signal Processing

*Minor:* Mathematics

*Advisor:* Linda Wills, PhD

**Bachelor of Computer Engineering** 06/1995 – 08/1999

Georgia Institute of Technology, Atlanta, GA

*Specializations:* Telecommunications and Digital Signal Processing

## Experience

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**Director, Computational Neuroimaging Lab** 08/2014 – present

Center for Biomedical Imaging and Neuromodulation,

Nathan S. Kline Institute for Psychiatric Research, Orangeburg, NY

**Director of Imaging** 07/2012 – present

Center for the Developing Brain, Child Mind Institute, New York, NY

**Research Scientist VI** 07/2012 – 11/2015

Research Foundation for Mental Health, Inc.,

Nathan S. Kline Institute for Psychiatric Research, Orangeburg, NY

**Postdoctoral Associate** 10/2010 – 06/2012

Virginia Tech Carilion Research Institute, Roanoke, VA

*Supervisor:* Stephen M. LaConte, PhD

**Research Associate** 10/2009 – 10/2010  
Computational Psychiatry Unit, Department of Neuroscience, Baylor College of Medicine, Houston, TX  
*Supervisor:* Stephen M. LaConte, PhD

**Supervising Research Specialist** 01/2007 – 10/2009  
Department of Psychiatry and Behavioral Sciences, Emory University School of Medicine, Atlanta, GA  
*Supervisors:* Helen Mayberg, MD and Paul Holtzheimer, MD

**Guest Researcher** 06/2004 – 01/2007  
Centers for Disease Control and Prevention, Atlanta, GA  
*Supervisors:* Brian Gurbaxani, PhD and Suzanne Vernon, PhD

**Research Assistant** 11/2001 – 05/2004  
School of Electrical and Computer Engineering, Georgia Institute of Technology, Atlanta, GA  
*Supervisor:* Linda Wills, PhD

**Engineer** 01/2000 – 09/2001  
Opuswave Networks Inc., Colorado Springs, CO

**Junior Systems Engineer** 08/1998 – 12/1998  
Lucent Technologies Product Realization Center, Atlanta, GA

**Stokes Undergraduate Scholar** 08/1995 – 12/1999  
Central Intelligence Agency, Washington DC

## Active Grant Support

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1R01MH101555: Real-time fMRI Neurofeedback Based Stratification of Default Network Regulation  
*Principle Investigator:* R. Cameron Craddock, PhD  
*Funding Source:* National Institute of Mental Health BRAINS Award  
*Support Period:* 08/2013 – 08/2017  
*Funding Amount:* \$400,000 USD per year

## Previous Grant Support

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Neuro-Feedback for Default Mode Network Regulation in Major Depressive Disorder  
*Principle Investigator:* R. Cameron Craddock, PhD  
*Mentors:* Stephen LaConte, PhD and Helen Mayberg, MD  
*Funding Source:* The Brain and Behavior Research Fund NARSAD Young Investigator Award  
*Support Period:* 01/2011 – 01/2013  
*Funding Amount:* \$60,000 USD

## Patents

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European Patent 11188849.1 – 1560

11/11/11

*Inventors:* R. Cameron Craddock, Yating Lv, Daniel Margulies, Arno Villringer

*Title:* Method and apparatus for visualization of tissue perfusion by means of assessing BOLD signal fluctuations

## Open Science

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**[Open Source]** Configurable Pipeline for the Analysis of Connectomes

A python-based open source software package for performing connectivity analyses using functional MRI data on high-performance computing architectures.

*Address:* <http://fcp-indi.github.io>

*Role:* Project Director, Co-Principal Investigator

**[Open Source]** pyClusterROI

An open source python library for parcellating functional MRI data using spatially constrained normalized-cut spectral clustering.

*Address:* [http://ccraddock.github.io/cluster\\_roi](http://ccraddock.github.io/cluster_roi)

*Role:* Primary Developer

*Impact:* 2,329 downloads from nitrc.org, 7 Github forks

**[Open Source]** The Preprocessed Connectomes Project Quality Assessment Protocol

An open source python library for estimating several different quality measures from functional and structural MRI data.

*Address:* <http://preprocessed-connectomes-project.github.io/quality-assessment-protocol/>

*Role:* Project Director, Developer

**[Data Sharing]** Intrinsic Brain Activity Test-Retest Dataset

This dataset consists of two ten-minute resting state fMRI scans and two multi source interference task fMRI scans acquired during the same scanning session for thirty-six adults (20-48 years old). 14 of the participants returned for a second scanning session using the same scanning procedures.

*Address:* [http://fcon\\_1000.projects.nitrc.org/indi/CoRR/html/ibatrt.html](http://fcon_1000.projects.nitrc.org/indi/CoRR/html/ibatrt.html)

*Role:* Donor

**[Data Sharing]** ADHD-200 Preprocessed Data

Preprocessed functional and structural data for 374 children and adolescents who suffer from ADHD and 598 typically developing controls from the ADHD-200 sample. Data was processed using three different software pipelines.

*Address:* <http://neurobureau.projects.nitrc.org/ADHD200/Introduction.html>

*Role:* Co-founder, Contributor

*Impact:* 8,730 downloads from nitrc.org, used in 26 peer reviewed publications and 2 dissertations

**[Data Sharing]** ABIDE Preprocessed Data

Preprocessed functional and structural data for 539 individuals suffering from autism and 573 typical controls from the ABIDE dataset. Data was processed using four different functional processing pipelines and three different structural processing pipelines.

*Address:* <http://preprocessed-connectomes-project.github.io/abide/>

*Role:* Co-founder, Contributor

## Journal Publications

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- [1] A. Opitz, M. D. Fox, **R. Cameron Craddock**, S. Colcombe, and M. P. Milham. An Integrated Framework For Targeting Functional Networks via Transcranial Magnetic Stimulation. *Neuroimage*, Nov 2015.
- [2] **R. Cameron Craddock**, Rosalia L Tungaraza, and Michael P Milham. Connectomics and new approaches for analyzing human brain functional connectivity. *GigaScience*, 4(1):13, March 2015. [DOI:10.1186/s13742-015-0045-x] [\[Open Access\]](#).
- [3] Pierre Bellec, Yassine Benhajali, Felix Carbonell, Christian Dansereau, Geneviève Albouy, Maxime Pelland, **R. Cameron Craddock**, Oliver Collignon, Julien Doyon, Emmanuel Stip, et al. Impact of the resolution of brain parcels on connectome-wide association studies in fmri. *NeuroImage*, 2015.
- [4] TD Satterthwaite, SN Vandekar, DH Wolf, DS Bassett, K Ruparel, Z Shehzad, **RC Craddock**, RT Shinohara, TM Moore, ED Gennatas, et al. Connectome-wide network analysis of youth with psychosis-spectrum symptoms. *Molecular psychiatry*, 2015.
- [5] Krishna Somandepalli, Clare Kelly, Philip T Reiss, Xi-Nian Zuo, **R. Cameron Craddock**, Chao-Gan Yan, Eva Petkova, F Xavier Castellanos, Michael P Milham, and Adriana Di Martino. Short-term test-retest reliability of resting state fmri metrics in children with and without attention-deficit/hyperactivity disorder. *Developmental Cognitive Neuroscience*, 2015.
- [6] Zhen Yang, Devika R Jutagir, Maki Koyama, **R. Cameron Craddock**, Chao-Gan Yan, Zarrar Shehzad, F Xavier Castellanos, Adriana Di Martino, and Michael P Milham. Intrinsic brain indices of verbal working memory capacity in children and adolescents. *Developmental Cognitive Neuroscience*, 2015.
- [7] Gonzalo M Rojas, Marcelo Gálvez, Natan Vega Potler, **R. Cameron Craddock**, Daniel S Margulies, F Xavier Castellanos, and Michael P Milham. Stereoscopic three-dimensional visualization applied to multimodal brain images: Clinical applications and a functional connectivity atlas. *Frontiers in Neuroscience*, 8(328), Oct 2014. [DOI:10.3389/fnins.2014.00328] [\[Open Access\]](#).
- [8] A. Di Martino, D. A. Fair, C. Kelly, T. D. Satterthwaite, F. X. Castellanos, M. E. Thomason, **R. C. Craddock**, B. Luna, B. L. Leventhal, X. N. Zuo, and M. P. Milham. Unraveling the Miswired Connectome: A Developmental Perspective. *Neuron*, 83(6):1335--1353, Sep 2014. [DOI:10.1016/j.neuron.2014.08.050] [PMID:25233316] [\[Open Access\]](#).
- [9] Z. Shehzad, C. Kelly, P. T. Reiss, **R. Cameron Craddock**, J. W. Emerson, K. McMahon, D. A. Copland, F. X. Castellanos, and M. P. Milham. A multivariate distance-based analytic framework for connectome-wide association studies. *NeuroImage*, 93 Pt 1:74--94, Jun 2014. [DOI:10.1016/j.neuroimage.2014.02.024] [PMID:24583255] [\[Open Access\]](#) [\[Open Source\]](#).
- [10] Z. Yang, **R. C. Craddock**, D. S. Margulies, C. G. Yan, and M. P. Milham. Common intrinsic connectivity states among posteromedial cortex subdivisions: Insights from analysis of temporal dynamics. *NeuroImage*, 93 Pt 1:124--137, Jun 2014. [DOI:10.1016/j.neuroimage.2014.02.014] [PMID:24560717] [\[Open Access\]](#).
- [11] C. Eierud, **R. C. Craddock**, S. Fletcher, M. Aulakh, B. King-Casas, D. Kuehl, and S. M. LaConte. Neuroimaging after mild traumatic brain injury: Review and meta-analysis. *NeuroImage: Clinical*, 4:283--294, 2014. [DOI:10.1016/j.nicl.2013.12.009] [PMID:25061565] [\[Open Access\]](#).
- [12] K. J. Gorgolewski, D. Lurie, S. Urchs, J. A. Kipping, **R. C. Craddock**, M. P. Milham, D. S. Margulies, and J. Smallwood. A correspondence between individual differences in the brain's

- intrinsic functional architecture and the content and form of self-generated thoughts. *PLoS ONE*, 9(5):e97176, 2014. [DOI:10.1371/journal.pone.0097176] [PMID:24824880] [\[Open Access\]](#).
- [13] L. E. Stoeckel, K. A. Garrison, S. Ghosh, P. Wighton, C. A. Hanlon, J. M. Gilman, S. Greer, N. B. Turk-Browne, M. T. deBettencourt, D. Scheinost, **R. C. Craddock**, T. Thompson, V. Calderon, C. C. Bauer, M. George, H. C. Breiter, S. Whitfield-Gabrieli, J. D. Gabrieli, S. M. LaConte, L. Hirshberg, J. A. Brewer, M. Hampson, A. Van Der Kouwe, S. Mackey, and A. E. Evins. Optimizing real time fMRI neurofeedback for therapeutic discovery and development. *NeuroImage: Clinical*, 5:245--255, 2014. [DOI:10.1016/j.nicl.2014.07.002] [PMID:25161891] [\[Open Access\]](#).
- [14] Zhen Yang, **R. Cameron Craddock**, and Michael P. Milham. Impact of hematocrit on measurements of the intrinsic brain. *Frontiers in Neuroscience*, 8(452), 2014. [DOI:10.3389/fnins.2014.00452] [PMID:25653582] [\[Open Access\]](#).
- [15] Xi-Nian Zuo, Jeffrey S Anderson, Pierre Bellec, Rasmus M Birn, Bharat B Biswal, Janusch Blautzik, John C. S Breitner, Randy L Buckner, Vince D Calhoun, F. Xavier Castellanos, Antao Chen, Bing Chen, Jiangtao Chen, Xu Chen, Stanley J Colcombe, William Courtney, **R. Cameron Craddock**, Adriana Di Martino, Hao-Ming Dong, Xiaolan Fu, Qiyong Gong, Krzysztof J Gorgolewski, Ying Han, Ye He, Yong He, Erica Ho, Avram Holmes, Xiao-Hui Hou, Jeremy Huckins, Tianzi Jiang, Yi Jiang, William Kelley, Clare Kelly, Margaret King, Stephen M LaConte, Janet E Lainhart, Xu Lei, Hui-Jie Li, Kaiming Li, Kuncheng Li, Qixiang Lin, Dongqiang Liu, Jia Liu, Xun Liu, Yijun Liu, Guangming Lu, Jie Lu, Beatriz Luna, Jing Luo, Daniel Lurie, Ying Mao, Daniel S Margulies, Andrew R Mayer, Thomas Meindl, Mary E Meyerand, Weizhi Nan, Jared A Nielsen, David O'Connor, David Paulsen, Vivek Prabhakaran, Zhigang Qi, Jiang Qiu, Chunhong Shao, Zarrar Shehzad, Weijun Tang, Arno Villringer, Huiling Wang, Kai Wang, Dongtao Wei, Gao-Xia Wei, Xu-Chu Weng, Xuehai Wu, Ting Xu, Ning Yang, Zhi Yang, Yu-Feng Zang, Lei Zhang, Qinglin Zhang, Zhe Zhang, Zhiqiang Zhang, Ke Zhao, Zonglei Zhen, Yuan Zhou, Xing-Ting Zhu, and Michael P Milham. An open science resource for establishing reliability and reproducibility in functional connectomics. *Scientific Data*, 1:140049, 12 2014. [DOI:10.1038/sdata.2014.49] [\[Open Access\]](#).
- [16] **R. Cameron Craddock**, Michael P. Milham, and Stephen M. LaConte. Predicting intrinsic brain activity. *NeuroImage*, 82:127--136, Nov 2013. [DOI:10.1016/j.neuroimage.2013.05.072] [PMID:23707580].
- [17] F. Xavier Castellanos, Adriana Di Martino, **R. Cameron Craddock**, Ashesh D. Mehta, and Michael P. Milham. Clinical applications of the functional connectome. *NeuroImage*, 80:527--540, Oct 2013. [DOI:10.1016/j.neuroimage.2013.04.083] [PMID:23631991] [\[Open Access\]](#).
- [18] Gaël Varoquaux and **R. Cameron Craddock**. Learning and comparing functional connectomes across subjects. *NeuroImage*, 80:405--415, Oct 2013. [DOI:10.1016/j.neuroimage.2013.04.007] [PMID:23583357] [\[Open Access\]](#).
- [19] Chao-Gan Yan, **R. Cameron Craddock**, Xi-Nian Zuo, Yue-Feng Zang, and Michael P. Milham. Standardizing the intrinsic brain: towards robust measurement of inter-individual variation in 1000 functional connectomes. *NeuroImage*, 80:246--262, Oct 2013. [DOI:10.1016/j.neuroimage.2013.04.081] [PMID:23631983] [\[Open Access\]](#).
- [20] Callie L. McGrath, Mary E. Kelley, Paul E. Holtzheimer III, Boadie W. Dunlop, W. Edward Craighead, Alexandre R. Franco, **R. Cameron Craddock**, and Helen S. Mayberg. Toward a neuroimaging treatment selection biomarker for major depressive disorder. *JAMA Psychiatry*, 70(8):821--829, Aug 2013. [DOI:10.1001/jamapsychiatry.2013.143] [PMID:23760393] [\[Open Access\]](#).

- [21] C. G. Yan, B. Cheung, C. Kelly, S. Colcombe, **R. C. Craddock**, A. Di Martino, Q. Li, X. N. Zuo, F. X. Castellanos, and M. P. Milham. A comprehensive assessment of regional variation in the impact of head micromovements on functional connectomics. *NeuroImage*, 76:183--201, Aug 2013. [DOI:10.1016/j.neuroimage.2013.03.004] [PMID:23499792] [\[Open Access\]](#).
- [22] **R. Cameron Craddock**, Saad Jbabdi, Chao-Gan Yan, Joshua Vogelstein, F. Xavier Castellanos, Adriana Di Martino, Clare Kelly, Keith Heberlein, Stan Colcombe, and Michael P. Milham. Imaging human connectomes at the macroscale. *Nature Methods*, 10(6):524--539, Jun 2013. [DOI:10.1038/nmeth.2482] [PMID:23722212] [\[Open Access\]](#).
- [23] C. J. Keller, S. Bickel, C. J. Honey, D. M. Groppe, L. Entz, **R. C. Craddock**, F. A. Lado, C. Kelly, M. Milham, and A. D. Mehta. Neurophysiological investigation of spontaneous correlated and anticorrelated fluctuations of the BOLD signal. *Journal of Neuroscience*, 33(15):6333--6342, Apr 2013. [DOI:10.1523/JNEUROSCI.4837-12.2013] [PMID:23575832] [\[Open Access\]](#).
- [24] Yating Lv, Daniel S. Margulies, **R. Cameron Craddock**, Xiangyu Long, Benjamin Winter, Daniel Gierhake, Matthias Endres, Kersten Villringer, Jochen Fiebach, and Arno Villringer. Identifying the perfusion deficit in acute stroke with resting-state functional magnetic resonance imaging. *Annals of Neurology*, 73(1):136--140, Jan 2013. [DOI:10.1002/ana.23763] [PMID:23378326].
- [25] Christiane S. Rohr, Hadas Okon-Singer, **R. Cameron Craddock**, Arno Villringer, and Daniel S. Margulies. Affect and the brain's functional organization: a resting-state connectivity approach. *PLoS ONE*, 8(7):e68015, 2013. [DOI:10.1371/journal.pone.0068015] [PMID:23935850] [\[Open Access\]](#).
- [26] Chao-Gan Yan, **R. Cameron Craddock**, Yong He, and Michael P. Milham. Addressing head motion dependencies for small-world topologies in functional connectomics. *Frontiers in Human Neurosci*, 7:910, 2013. [DOI:10.3389/fnhum.2013.00910] [PMID:24421764] [\[Open Access\]](#).
- [27] **R. Cameron Craddock**, G. Andrew James, Paul E. Holtzheimer, Xiaoping P. Hu, and Helen S. Mayberg. A whole brain fMRI atlas generated via spatially constrained spectral clustering. *Human Brain Mapping*, 33(8):1914--1928, Aug 2012. [DOI:10.1002/hbm.21333] [PMID:21769991] [\[Open Access\]](#) [\[Open Source\]](#).
- [28] C. Kelly, B. B. Biswal, **R. C. Craddock**, F. X. Castellanos, and M. P. Milham. Characterizing variation in the functional connectome: promise and pitfalls. *Trends in Cognitive Science (Regular Edition)*, 16(3):181--188, Mar 2012. [DOI:10.1016/j.tics.2012.02.001] [PubMed:PMID:22341211] [\[Open Access\]](#).
- [29] S. Lavoie-Courchesne, P. Rioux, F. Chouinard-Decorte, T. Sherif, M.-E. Rousseau, S. Das, R. Adalat, J. Doyon, **R. C. Craddock**, D. Margulies, O. Lyttelton C. Chu, A. C. Evans, and P. Bellec. Integration of a neuroimaging processing pipeline into a pan-canadian computing grid. *Journal of Physics: Conference Series*, 341(1), 2012. [doi:10.1088/1742-6596/341/1/012032] [\[Open Access\]](#).
- [30] Kate Brody Nooner, Stanley J. Colcombe, Russell H. Tobe, Maarten Mennes, Melissa M. Benedict, Alexis L. Moreno, Laura J. Panek, Shaquanna Brown, Stephen T. Zavitz, Qingyang Li, Sharad Sikka, David Gutman, Saroja Bangaru, Rochelle Tziona Schlachter, Stephanie M. Kamiel, Ayesha R. Anwar, Caitlin M. Hinz, Michelle S. Kaplan, Anna B. Rachlin, Samantha Adelsberg, Brian Cheung, Ranjit Khanuja, Chaogan Yan, **R. Cameron Craddock**, Vincent Calhoun, William Courtney, Margaret King, Dylan Wood, Christine L. Cox, A. M. Clare Kelly, Dawn Thomsen, Bharat Biswal, Barbara Coffey, Matthew J. Hoptman, Daniel C. Javitt, Nunzio Pomara, John J. Sidtis, Harold S. Koplewicz, Francisco Xavier Castellanos, Bennet L. Leventhal, and Michael P. Milham. The NKI-Rockland Sample: A Model for Accelerating the Pace of Discovery Science in Psychiatry. *Frontiers in Neuroscience*, 6:152, 2012. [DOI:10.3389/fnins.2012.00152] [PMID:23087608] [\[Open Access\]](#).



- [31] Christopher B. Glielmi, Qin Xu, **R. Cameron Craddock**, and Xiaoping P. Hu. Simultaneous acquisition of gradient echo/spin echo BOLD and perfusion with a separate labeling coil. *Magnetic Resonance in Medicine*, 64(6):1827--1831, Dec 2010. [DOI:10.1002/mrm.22554] [PMID:20648682] [\[Open Access\]](#).
- [32] **R. Cameron Craddock**, Paul E. Holtzheimer, Xiaoping P. Hu, and Helen S. Mayberg. Disease state prediction from resting state functional connectivity. *Magnetic Resonance in Medicine*, 62(6):1619--1628, Dec 2009. [DOI:10.1002/mrm.22159] [PMID:19859933] [\[Open Access\]](#).
- [33] G. Andrew James, Mary E Kelley, **R. Cameron Craddock**, Paul E Holtzheimer, Boadie W Dunlop, Charles B Nemeroff, Helen S Mayberg, and Xiaoping P Hu. Exploratory structural equation modeling of resting-state fMRI: applicability of group models to individual subjects. *NeuroImage*, 45(3):778--787, Apr 2009. [DOI:10.1016/j.neuroimage.2008.12.049] [PMID:19162206] [\[Open Access\]](#).
- [34] Andres M. Lozano, Helen S. Mayberg, Peter Giacobbe, Clement Hamani, **R. Cameron Craddock**, and Sydney H Kennedy. Subcallosal cingulate gyrus deep brain stimulation for treatment-resistant depression. *Biological Psychiatry*, 64(6):461--467, Sep 2008. [DOI:10.1016/j.biopsych.2008.05.034] [PMID:18639234] [\[Open Access\]](#).
- [35] Lucile Capuron, Leonie Welberg, Christine Heim, Dieter Wagner, Laura Solomon, Dimitris A. Papanicolaou, **R. Cameron Craddock**, Andrew H Miller, and William C. Reeves. Cognitive dysfunction relates to subjective report of mental fatigue in patients with chronic fatigue syndrome. *Neuropsychopharmacology*, 31(8):1777--1784, Aug 2006. [DOI:10.1038/sj.npp.1301005] [PMID:16395303] [\[Open Access\]](#).
- [36] Gordon Broderick, **R. Cameron Craddock**, Toni Whistler, Renee Taylor, Nancy Klimas, and Elizabeth R Unger. Identifying illness parameters in fatiguing syndromes using classical projection methods. *Pharmacogenomics*, 7(3):407--419, Apr 2006. [DOI:10.2217/14622416.7.3.407] [PMID:16610951].
- [37] **R. Cameron Craddock**, Renee Taylor, Gordon Broderick, Toni Whistler, Nancy Klimas, and Elizabeth R Unger. Exploration of statistical dependence between illness parameters using the entropy correlation coefficient. *Pharmacogenomics*, 7(3):421--428, Apr 2006. [DOI:10.2217/14622416.7.3.421] [PMID:16610952].
- [38] Toni Whistler, Renee Taylor, **R. Cameron Craddock**, Gordon Broderick, Nancy Klimas, and Elizabeth R. Unger. Gene expression correlates of unexplained fatigue. *Pharmacogenomics*, 7(3):395--405, Apr 2006. [DOI:10.2217/14622416.7.3.395] [PMID:16610950].

## Invited Talks

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- [1] **R. Cameron Craddock**. Analyzing Connectomes in the Cloud. In *Brainhacking educational course, Proceedings Organization of Human Brain Mapping 21<sup>st</sup> Annual Meeting, Honolulu, Hawaii*, Honolulu, Hawaii, 2015.
- [2] **R. Cameron Craddock**. Open science resources for analyzing brain connectivity. In *OHBM Hackathon, Proceedings Organization of Human Brain Mapping 21<sup>st</sup> Annual Meeting, Honolulu, Hawaii*, Honolulu, Hawaii, 2015.
- [3] **R. Cameron Craddock**. The Preprocessed Connectomes Project Quality Assessment Protocol - a resource for measuring the quality of MRI data. Number 47, 2015.
- [4] **R. Cameron Craddock**. Using realtime fmri based neurofeedback to probe default network regulation. In *Proceedings of the 62<sup>nd</sup> Annual Meeting of the American Academy of Child and Adolescent Psychiatry*, San Antonio, Texas, 2015.

- [5] **R. Cameron Craddock.** Using real-time fmri based neurofeedback to probe default network regulation. In *Pioneering Frontiers in Functional Brain Imaging for Psychiatry Symposium, Society of Biomedical Psychiatry 69th Annual Meeting, New York, NY, New York, NY, 2014.*
- [6] **R. Cameron Craddock.** Using realtime fmri based neurofeedback to probe default network regulation. In *Yale University Magnetic Resonance Research Center fMRI Speaker Series, New Haven, Connecticut, 2014.*
- [7] **R. Cameron Craddock.** The configurable pipeline for the analysis of connectomes. In *Neuroimaging ``Big Data'' Challenges and Computational Workflow Solutions Educational Workshop, Proceedings Organization of Human Brain Mapping 19th Annual Meeting, Seattle, WA, Seattle, 2013.*
- [8] **R. Cameron Craddock.** The Neuro Bureau Preprocessing Initiative: open sharing of preprocessed neuroimaging data and derivatives. In *Neuroinformatics 2013, Stockholm, Sweden, Stockholm, Sweden, 2013.*
- [9] **R. Cameron Craddock.** The current state of resting state literature. In *The systematic and automated analysis of the large functional brain databases of papers, Paris, France, 2012.*
- [10] **R. Cameron Craddock.** Tracking resting state networks in real time. In *Educational Workshop, Proceedings Organization of Human Brain Mapping 18th Annual Meeting, Beijing, Beijing, 2012.*
- [11] **R. Cameron Craddock,** Jonathan M. Lisinski, Pearl Chiu, Helen S. Mayberg, and Stephen M. LaConte. Real-time tracking and biofeedback of the default mode network. In *Proceedings Organization of Human Brain Mapping 18th Annual Meeting, Beijing, Beijing, 2012.*
- [12] **R. Cameron Craddock,** Jonathan M. Lisinski, and Stephen LaConte. Online denoising strategies for real-time tracking default mode network activity. In *Proceedings Third Biennial International Conference on Resting-State Functional Connectivity, Magdeburg, Germany, 2012.*
- [13] **R. Cameron Craddock.** Applications of mvpa to the analysis of resting state fmri data: Disease state prediction, brain state prediction, and real-time fmri. In *Max Planck Institute, Leipzig, Germany, 2010.*
- [14] **R. Cameron Craddock.** Applications of mvpa to the analysis of resting state fmri data: Disease state prediction, brain state prediction, and real-time fmri. In *Otto von Guericke University, Magdeburg, Germany, 2010.*
- [15] **R. Cameron Craddock.** Applications of mvpa to the analysis of resting state fmri data: Disease state prediction, brain state prediction, and real-time fmri. In *University of Modena and Reggio Emilia, Modena, Italy, 2010.*
- [16] **R. Cameron Craddock.** Applications of mvpa to the analysis of resting state fmri data: Disease state prediction, brain state prediction, and real-time fmri. In *Brain Imaging Series Lecture, Center for Advanced Brain Imaging, Atlanta, GA, 2010.*
- [17] **R. Cameron Craddock.** Applying mvpa to fmri. In *New York University Child Study Center, New York, NY, 2010.*
- [18] **R. Cameron Craddock** and Daniel S. Margulies. What is the neuro bureau? In *Proceedings Second Biennial International Conference on Resting State Connectivity, Milwaukee, MI, 2010.*
- [19] **R. Cameron Craddock,** Paul E. Holtzheimer, Xiaoping P. Hu, and Helen S. Mayberg. Disease state prediction from resting state fmri. In *Proceedings OHBM 15th Annual Meeting, San Francisco., 2009.*



- [20] **R. Cameron Craddock**. Computing for public health. In *Intel Opportunities Scholars Program, Georgia Institute of Technology, Atlanta, GA*, 2006.
- [21] **R. Cameron Craddock**, Brian M. Gurbaxani, and Suzanne D. Vernon. Evaluation of single channel oligonucleotide preprocessing pipelines using predictability and reproducibility. In *BioInfoSummer, Canberra, AU*, 2006.
- [22] **R. Cameron Craddock**, Renee Taylor, Gordon Broderick, Toni Whistler, Nancy Klimas, and Elizabeth R. Unger. Exploration of statistical dependence between illness parameters using the entropy correlation coefficient. In *CFS Computation Challenge, Banbury Conference Center, Cold Springs Harbor Lab, Cold Spring Harbor, NY*, 2006.
- [23] **R. Cameron Craddock**. Computing in biology. In *Intel Opportunity Scholars Program, Georgia Institute of Technology, Atlanta, GA*, 2005.

## Conference Abstracts

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- [1] Daniel Clark, Christian Haselgrove, David Kennedy, Zhizhong Liu, Michael Milham, Petros Petrosyan, Carinna Torgerson, John Van Horn, and **R. Cameron Craddock**. Harnessing cloud computing for high capacity analysis of neuroimaging data from NDAR. In *Proceedings Organization of Human Brain Mapping 21<sup>st</sup> Annual Meeting, Honolulu, Hawaii*, Honolulu, Hawaii, 2015.
- [2] Daniel Clark, Christian Haselgrove, David N Kennedy, Zhizhong Liu, Michael Milham, Petros Petrosyan, Carinna Torgerson, John Van Horn, and **R. Cameron Craddock**. Harnessing cloud computing for high capacity analysis of neuroimaging data from NDAR. *Frontiers in Neuroscience*, (21), 2015.
- [3] Stan Colcombe, Michael Milham, Anna MacKay-Brandt, **R. Cameron Craddock**, Phillip Reiss, and Rong Jiao. Leveraging t2\* properties of functional MRI to image iron; you can do it too! In *Proceedings Organization of Human Brain Mapping 21<sup>st</sup> Annual Meeting, Honolulu, Hawaii*, Honolulu, Hawaii, 2015.
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- [67] **R. Cameron Craddock**, Eric Aslakson, and Suzanne D. Vernon. Development of a gene expression microarray database for flexible data processing, analysis, and archiving. In *CDC Genomics Day*, Atlanta, 2005.
- [68] Matthew Tiller, Eric Aslakson, **R. Cameron Craddock**, and Suzanne D. Vernon. Development of a text mining tool that provides gene informatino in specific disease and biological context. In *13<sup>th</sup> Annual International Conference on Intelligent Systems for Molecular Biology*, Detriot, 2005.

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## Service

*Advisor*, 2011 - 2014, Child Mind Institute Endeavor Scientist Program

*Video Advisor*, 2010 - 2011, Neurolmage YouTube Channel

*Co-founder*, The Neuro Bureau

*Journal Reviewer*, Neurolmage, Human Brain Mapping, Journal of Neuroscience Methods, Frontiers in Systems Neuroscience, IEEE Transactions in Medical Imaging, Magnetic Resonance Imaging, Biological Psychiatry, Frontiers in Neuroanatomy, Neuroinformatics, JAMA Psychiatry

*Conference Organizer*, 2012 BrainHack and UnConference, Brainhack 2013, Brainhack EDT 2014, 2015 OHBM Hackathon, Brainhack Americas 2015, Brainhack MX 2015

*Conference Reviewer*, 17<sup>th</sup> Meeting of the Organization for Human Brain Mapping (2011), 16<sup>th</sup> Meeting of the Organization for Human Brain Mapping (2010), 13<sup>th</sup> International Conference on Medical Image Computing and Computer Assisted Intervention (2010)

*Judge*, 2005 Georgia State Science and Engineering Fair, Athens, GA

*Mentor*, 2002-2003, Georgia Tech Intel Opportunity Scholars, Atlanta, GA

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## Honors and Awards

2013, Biobehavioral Research Awards for Innovative New Scientists (BRAINS), NIH/NIMH

2011, Poster Award, 1<sup>st</sup> Place Functional Imaging, 19<sup>th</sup> Scientific Meeting of the International

Society for Magnetic Resonance in Medicine, Montreal  
2010, NARSAD Young Investigator Award, Brain and Behavior Research Foundation  
2010, Philips Travel Stipend Award, Second Biennial International Conference on Resting-State Functional Brain Connectivity  
2009, Organization of Human Brain Mapping Trainee Abstract Award  
2008, CCB/IPAM MBI Summer Fellow  
2008, ISMRM Educational Stipend  
2007, ISMRM Educational Stipend  
2006, BioInfoSummer 2006 Travel Scholarship  
2006, ISMRM Educational Stipend  
2003, Georgia Tech Office of Minority Education Tower Award  
2000-2001, Opuswave Networks INC.: numerous individual/team awards  
1998, CIA Meritorious Unit Citation  
1998, Lucent Technologies Achievement Award  
1995-1999, Stokes Undergraduate Scholarship  
1995-1999, Georgia Tech Dean's List seven times  
1995-1999, Georgia Tech Faculty Honors twice

## **Professional Memberships**

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International Society for Magnetic Resonance in Medicine  
Organization for Human Brain Mapping

## **Other Education/Certifications**

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2010, Siemens ICE and SDE programming courses

## **For More Information:**

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Google Scholar Citations: <http://tinyurl.com/CameronCraddockCitations>  
Impact Story: <https://impactstory.org/CameronCraddock>  
Github: <https://github.com/ccraddock>  
ResearchGate: [https://www.researchgate.net/profile/Cameron\\_Craddock](https://www.researchgate.net/profile/Cameron_Craddock)  
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