Javier Gonzalez-Castillo, Ph.D.
Staff Scientist, National Institute of Mental Health, NIH
Washington Metro Area, USA
javiergcas@gmail.com

EDUCATION

2009 Ph.D., Biomedical Engineering, **Purdue University**, West Lafayette, IN, USA.

2001 BS. & MS., Electrical and Computer Engineering, **Universidad Politécnica de Madrid**, Madrid, Spain.

RESEARCH EXPERIENCE

2014-Present *Staff Scientist*
Section on Functional Imaging Methods, National Institute of Mental Health, **National Institutes of Health**, Bethesda, MD.

2011-2014 *Research Fellow*
Section on Functional Imaging Methods, National Institute of Mental Health, **National Institutes of Health**, Bethesda, MD.

2009-2011 *Post-doctoral Visiting Fellow*
Section on Functional Imaging Methods, National Institute of Mental Health, **National Institutes of Health**, Bethesda, MD.

TECHING EXPERIENCE

2014-Present *Guest Lecturer at the NIH fMRI Summer Course*
National Institute of Mental Health, Bethesda, MD

2008 *Graduate Course Instructor*
Weldon School of Biomedical Engineering, Purdue University, West Lafayette
- (BME501) Medical Device Accidents and Engineering Analysis

2005-2007 *Teaching Assistant*
Weldon School of Biomedical Engineering, Purdue University, West Lafayette
- (BME501) Medical Device Accidents and Engineering Analysis
- (ECE528) Measurement and Stimulation of the Nervous System

INDUSTRY EXPERIENCE

2001-2004 *Associate Consultant*
Hewlett Packard Consulting & Integration, Hewlett-Packard, Madrid, Spain
- Project manager for medium size projects ($50,000-$100,000).
- Prepare commercial proposals on IT management solutions.

- Manage communication with HP R&D business unit.

2000-2001 *Research Engineer*
Hewlett Packard Labs, Hewlett-Packard, Bristol, UK
- Research Semantic Web Technologies and applications to e-commerce.

MENTORSHIP EXPERIENCE

Ph.D. Students	Xia Hue – Texas Tech University, Lubbock, TX (2017 – 2018) Sara Kimmich – NIH/University College of London, London, UK (2017)
NIH Post-bac Fellows	Isabel Fernandez (2020 – Present), Ramya Varadarajan (2019 – 2020), Michel Elishama (2018 – 2019), Natasha Topolski (2016 - 2018), Puja Panwar (2016), Laura Buchanan (2014 – 2015), Colin Hoy (2013 - 2014), Kristen Duthie (2011).
NIH Summer Students	James Brown (2016), Devon Shook (2013), Meghan Robinson (2011)

HONORS AND DISTINCTIONS

2009 *Bilsland Dissertation Fellowship, Purdue University*

2008-2009 *Magoon Award for Excellence in Teaching, Purdue University*

2004-2005 ***Fulbright Fellowship***

PROFESSIONAL MEMBERSHIPS

2012-Present *Society for Neuroscience (sfn)*

2011-Present *International Society for Resonance Magnetic Imaging in Medicine (ISMRM)*

2011-Present *Organization for Human Brain Mapping (OHBM)*

HONORARY SOCIETY MEMBERSHIPS

2008-Present *Tau Beta Pi, Engineering Honor Society*

2008-Present *Golden Key, International Honor Society*

GRANTS

2019 - 2020 *NIMH Scientific Director's call for Scientific Workshops and Talk Series*
"Talk Series on Machine Learning in Brain Imaging and Neuroscience"

Support: $20,000

2018 - 2019 *NIMH Scientific Director's call for Scientific Workshops and Talk Series*
"Talk Series on Machine Learning in Brain Imaging and Neuroscience"
Support: $20,000

2017 - 2018 *NIMH Scientific Director's call for Scientific Workshops and Talk Series*
"Talk Series on Machine Learning in Brain Imaging and Neuroscience"
Support: $20,000

PROFESSIONAL/LEADERSHIP ACTIVITIES

2018-2019 *Heliyon Editoral Board Member*

2018 *Symposium Chair*
The Dynamic Brain: signatures of fast functional reconfiguration, their interpretability and clinical value
48th Annual Meeting for the Society for Neuroscience, San Diego, CA

2017 *Local Chair/Organizer for Brainhack Global @ NIMH*
Two-day Brainhack event held on NIH campus. Projects included: fMRI data denoising, fMRI-based neurofeedback, ME-ICA reporting, AFNI-AROMA integration, and creation of course materials.

2016 - Present *NeuroImage Editorial Board Member*

2015 - Present *Machine Learning-Brain Imaging Special Interest Group Organizer*
National Institute of Mental Health
Selected Speakers: Dr. Tulay Adali (University of Maryland), Dr. Joshua Vogelstein (John Hopkins University), Dr. Mikail Rubinov (Janelia Farm), Yoshua Bengio (Montreal University), Dr. Niko Kriegeskorte (Columbia University).

2015 *Grant Review Panelist*
National Science Foundation (**NSF**) & National Institutes of Health (**NIH**)
Panel: Collaborative Research in Computational Neuroscience

2014 *Grant Review Panelist*
Army Research Lab (**ARL**)
Panel: Cognition and Neuroergonomics Collaborative Technology Alliance.

2012-Present *Abstract Reviewer*
Annual Meeting of the International Society for Magnetic Resonance in Medicine (ISMRM)

2009-Present *Abstract Reviewer*
Annual Meeting of the Organization for Human Brain Mapping (OHBM)

2009-Present *Scientific Journal Reviewer*

PNAS, Journal of Neuroscience, NeuroImage, Human Brain Mapping, Magnetic Resonance in Medicine, IEEE Transactions in Biomedical Engineering, Frontiers in Neuroscience, Frontiers in Brain Imaging Methods, Artificial Intelligence in Medicine, Neuroscience Letters, Cognitive Neuroscience, Neuroscience Research, SPIE Journal of Medical Imaging, Brain Structure and Function.

BOOK CHAPTERS

[1] Malaia E, **Gonzalez-Castillo J**, Webber-Fox C, Talavage TM, Wilbur B. Neuronal processing of verbal event structure: temporal and functional dissociation between telic and atelic verbs. In: de Almeida RG, Manouilidou C, eds. Cognitive science perspectives on verb representation and processing. Cham: Springer International Publishing; **2015**:131–140.

[2] Talavage TM, Johnsrude IS, **Gonzalez-Castillo J**. Hemodynamic Imaging: Functional Magnetic Resonance Imaging. In: Poeppel D, Overath T, Popper AN, Fay RR, eds. The Human Auditory Cortex.Vol 43. Springer Handbook of Auditory Research. New York, NY: Springer New York; **2012**:129–162.

PUBLICATIONS

[1] **Gonzalez-Castillo J,** Kam JWY, Hoy CW, Bandettini PA. "How to interpret resting-state fMRI: ask your participants" *Journal of Neuroscience* (Under review)

[2] Rolinski R, You X, **Gonzalez-Castillo J**, Norato G, Reynolds RC, Inati SK, Theodore WH. "Language lateralization from task-based and resting-state functional MRI in patients with epilepsy". *Human Brain Mapping*, **2020** (In Press)

[3] **Gonzalez-Castillo J**, Caballero-Gaudes C, Topolski N, Handwerker DA, Pereira F, Bandettini PA. "Imaging the spontaneous flow of thought: distinct periods of cognition contribute to dynamic functional connectivity during rest". *NeuroImage,* **2019**; 202, 116129

[4] Chai Y, Handwerker DA, Marrett S, **Gonzalez-Castillo J,** Merriam EP, Hall A, Molfese PJ, Bandettini PA. "Visual temporal frequency shows a distinct cortical architecture using fMRI" *NeuroImage,* **2019**; 197, 13-23

[5] Caballero-Gaudes C, Moia S, Panwar PA, Bandettini PA, **Gonzalez-Castillo J**. "A deconvolution algorithm for multi-echo functional MRI: multi-echo sparse paradigm free mapping" *NeuroImage,* **2019**; 202, 116081

[6] Xie H, Zheng CY, Handwerker DA, Bandettini PA, Calhoun VD, Mitra S, **Gonzalez-Castillo J.** "Efficacy of different dynamic functional connectivity methods to capture cognitively relevant information". *NeuroImage,* **2019**; 188, 502-514

[7] Ramot M, **Gonzalez-Castillo J**. "A framework for offline evaluation and optimization of real-time algorithms for use in neurofeedback, demonstrated on an instantaneous proxy for correlations" *NeuroImage,* **2019**; 188, 322-334

[8] Handwerker DA, Ianni G, Gutierrez B, Roopchansingh V, **Gonzalez-Castillo J**, Chen G, Bandettini PA, Ungerleider LG, Pitcher D. "Theta-burst TMS to the posterior superior temporal sulcus decreases resting-state fMRI connectivity across the face processing network". *Network Neuroscience*, **2019**; 4(3), 1-15

[9] Xie H, **Gonzalez-Castillo J**, Damaraju E, Bandettni PA, Calhoun V, Mitra S. "Time-varying whole-brain functional network connectivity coupled to task engagement" *Network Neuroscience* **2018;** 0:1-37

[10] **Gonzalez-Castillo J,** Bandettini PA. "Task-based dynamic connectivity: recent findings and open questions" *NeuroImage,* **2018;** 180, 526-533

[11] Xie H, Calhoun V, **Gonzalez-Castillo J**, Damaraju E, Miller R, Bandettini PA, Mitra S. "Whole-brain connectivity dynamics reflect both task-specific and individual-specific modulation: a multitask study". *NeuroImage*, **2018**; 180 (Part B), 495-504

[12] Saggar M, Sporns O, **Gonzalez-Castillo J**, Bandettini PA, Carlsson G, Glover G, Reiss AL. "Towards a new approach to reveal dynamical organization of the brain using topological data analysis". *Nature Communications,* **2018;** 9(1):1399

[13] Jangraw DC, **Gonzalez-Castillo J**, Handwerker DA, Ghane M, Rosenberg M, Panwar P, Bandettini PA. "A Functional Connectivity-based neuromarker of Sustained Attention Generalizes to Predict Recall in Naturalistic Reading Task" *NeuroImage* **2018**; 166:99-109

[14] Torrisi S, Gorka AX, **Gonzalez-Castillo J**, O'Connell K, Balderston N, Grillon C, Ernst M. "Extended amygdala connectivity changes during sustained shock anticipation" *Translational Psychiatry* **2018**; 8(1):33

[15] Huber L, Handwerker D, Jangraw D, Hall H, Stuber C, **Gonzalez-Castillo J**, Ivanov D, Marrett S, Guidi M, Goense J, Poser BA, Bandettini PA. "High-Resolution CBV-fMRI allows mapping of laminar activity and connectivity of cortical input and output in human M1" *Neuron* **2017**; 96(6):1253-1263.e7

[16] Ramot M, Kimmich S, **Gonzalez-Castillo J**, Roopchansingh V, Popal H, White E, Gotts S, Martin A. "Direct modulation of aberrant brain network connectivity through real-time neurofeedback" *eLife* **2017**; 6:e28974

[17] **Gonzalez-Castillo J,** Gang C, Nichols T, Cox B, Bandettini PA. "Variance Decomposition for multi-session fMRI". NeuroImage, Special Issue on "Cleaning up the fMRI timeseries" In Press, *NeuroImage* **2017**; 154: 206-218

[18] Degryse J, Seurinck R, Durnez J, **Gonzalez-Castillo J**, Bandettini PA, Moerkerke B. "Introducing alternative-based thresholding for defining functional regions of interest in fMRI" *Front. Neurosci.* **2017;** 11:222

[19] Craddock RC, Bellec P, Margules DS, Nichols BN, Pfannmöller JP, Badhwar AP, Kennedy D, Poline JB, Toro R, Cipollini B, Rokem A et al. "2015 Brainhack Proceedings" *GigaScience* **2016**; 5(1): 1 – 26

[20] **Gonzalez-Castillo J,** Caballero Guades C, Panwar P, Buchanan LC, Handwerker DA, Jangraw DC, Zachariou V, Bandettini PA. "Evaluation of Multi-Echo ICA denoising for task based fMRI studies: block designs, rapid event-related designs, and cardiac-gated fMRI". *NeuroImage* **2016**; 141: 452-468.

[21] **Gonzalez-Castillo J**, Hoy CW, Handwerker D, Robinson ME, Buchanan LC, Saad ZS, Bandettini PA. "Tracking ongoing in individuals using brief, whole-brain functional connectivity patterns". *Proc Natl Acad Sci U S A.* **2015;** 112(28): 8762-8767

[22] **Gonzalez-Castillo J,** Bandettini PA. "What cascade spreading models can tell us about the brain". *Neuron*. **2015**; 86(6): 1327-1329

[23] **Gonzalez-Castillo J**, Hoy CW, Handwerker DA, et al. "Task Dependence, Tissue Specificity, and Spatial Distribution of Widespread Activations in Large Single-Subject Functional MRI Datasets at 7T". *Cereb Cortex.* **2015;** 25(12): 4667-4677

[24] Yang Z, Huang Z, **Gonzalez-Castillo J**, Dai R, Northoff G, Bandettini PA. "Using fMRI to decode true thoughts independent of intention to conceal". *NeuroImage*. **2014**; 99: 80–92.

[25] **Gonzalez-Castillo J**, Handwerker DA, Robinson ME, et al. "The spatial structure of resting state connectivity stability on the scale of minutes". *Front Neurosci*. **2014**; 8(June): 138

[26] Talavage TM, **Gonzalez-Castillo J**, Scott SK. "Auditory neuroimaging with fMRI and PET". *Hear Res*. **2014**; 307: 4–15.

[27] Smalt CJ, **Gonzalez-Castillo J**, Talavage TM, Pisoni DB, Svirsky MA. "Neural correlates of adaptation in normal hearing subjects to free learning with cochlear implant acoustic simulations". *NeuroImage*. **2013**; 82: 500-509

[28] Hutchison RM, Womelsdorf T, Allen EA, Bandettini PA, Calhoun VD, Corbetta M, Della Penna, S, Dyun, JH, Glover GH, **Gonzalez-Castillo J**, et al. "Dynamic functional connectivity: Promise, issues, and interpretations". *NeuroImage.* **2013**; 80: 360–378.

[29] Bandettini PA, Kundu P, **Gonzalez-Castillo J**, Misaki M, Guillod P. "Characterizing and utilizing fMRI fluctuations, patterns, and dynamics." In: Weaver JB, Molthen RC, eds. *SPIE Medical Imaging. International Society for Optics and Photonics*; **2013**: 86720T

[30] **Gonzalez-Castillo J**, Duthie KN, Saad ZS, Chu C, Bandettini PA, Luh W-M. "Effects of image contrast on functional MRI image registration". *NeuroImage*. **2012**; 67: 163–174.

[31] Handwerker DA, Roopchansingh V, **Gonzalez-Castillo J**, Bandettini PA. "Periodic changes in fMRI connectivity". *NeuroImage*. **2012**; 63(3): 1712–9.

[32] Handwerker DA, **Gonzalez-Castillo J**, D'Esposito M, Bandettini PA. "The continuing challenge of understanding and modeling hemodynamic variation in fMRI". *NeuroImage*. **2012**; 62(2): 1017–1023.

[33] **Gonzalez-Castillo J**, Saad ZS, Handwerker DA, Inati SJ, Brenowitz N, Bandettini PA. "Whole-brain, time-locked activation with simple tasks revealed using massive averaging and model-free analysis". *Proc Natl Acad Sci U S A.* **2012**; 109(14): 5487–92

[34] **Gonzalez-Castillo J**, Olulade OA, Talavage TM. "Using functional MRI to study auditory comprehension". *Imaging Med.* **2012**; 4(1): 137–143

[35] Olulade O, Hu S, **Gonzalez-Castillo J**, et al. "Assessment of temporal state-dependent interactions between auditory fMRI responses to desired and undesired acoustic sources". *Hear Res.* **2011**; 277(1-2): 67–77.

[36] Soltysik DA, Thomasson D, Rajan S, **Gonzalez-Castillo J**, DiCamillo P, Biassou N. "Head-repositioning does not reduce the reproducibility of fMRI activation in a block-design motor task". *NeuroImage*. **2011**; 56(3): 1329–37.

[37] **Gonzalez-Castillo J**, Roopchansingh V, Bandettini PA, Bodurka J. "Physiological noise effects on the flip angle selection in BOLD fMRI". *NeuroImage*. **2011**; 54(4): 2764–2778.

[38] **Gonzalez-Castillo J**, Talavage TM. "Reproducibility of fMRI activations associated with auditory sentence comprehension". *NeuroImage*. **2011**; 54(3): 2138–2155.

[39] Hu S, Olulade O, **Gonzalez-Castillo J**, et al. "Modeling hemodynamic responses in auditory cortex at 1.5T using variable duration imaging acoustic noise". *NeuroImage*. **2010**; 49(4): 3027–3038.

[40] Kemmerer D, **Gonzalez-Castillo J**. "The Two-Level Theory of verb meaning: An approach to integrating the semantics of action with the mirror neuron system". *Brain Lang.* **2010**; 112(1): 54–76.

[41] Kemmerer D, **Gonzalez-Castillo J**, Talavage T, Patterson S, Wiley C. "Neuroanatomical distribution of five semantic components of verbs: Evidence from fMRI". *Brain Lang.* **2008**; 107(1): 16–43.

[42] **Gonzalez-Castillo J**, Trastour D, Bartolini C. "Description Logics for Matchmaking of Services". In: *KI-2001 Workshop on Applications of Description Logics*, Vienna, Austria. **2001**

[43] Trastour D, Bartolini C, **Gonzalez-Castillo J**. "Semantic Web Approach to Service Description for Matchmaking of Services". In: *Semantic Web Workshop*, Stanford USA. **2001**

CONFERENCE ARTICLES

[1] Caballero-Gaudes C, Moia S, Bandettini, PA, **Gonzalez-Castillo J**. Quantitative deconvolution of fMRI data with multi-echo sparse paradigm free mapping. 21st International Conference on Medical Imaging Computing and Computer Assisted Intervention (MICCAI), Granada, Spain, **2018**, 311-319

[2] Caballero Guades C, Bandettini PA, **Gonzalez-Castillo J**. A temporal deconvolution algorithm for multiecho functional MRI. *IEEE International Symposium on Biomedical Engineering (ISBI)*, Washington DC, **2018**, 608-611.

PRESENTATIONS

Oral Presentations

[1] Gonzalez-Castillo J. "Periods of discernible cognition contribute to dynamic functional connectivity during rest" *27th Annual Meeting of the Society for Magnetic Resonance Imaging in Medicine*, Montreal, May, **2019**.

[2] Gonzalez-Castillo J. "Quantitative deconvolution of neuronal-related BOLD events with multi-echo sparse free paradigm mapping" *26th Annual Meeting of the Society for Magnetic Resonance Imaging in Medicine*, Paris, June, **2018**.

[3] Xie H, Gonzalez-Castillo J. "Efficacy of different functional connectivity methods to capture cognitively relevant information" *26th Annual Meeting of the Society for Magnetic Resonance Imaging in Medicine*, Paris, June, **2018**.

[4] Gonzalez-Castillo J. "Machine Learning in NeuroImaging" *NIH fMRI Summer Course, National Institutes of Health*, Bethesda, MD. August, **2017**.

[5] Gonzalez-Castillo, J. "Unconventional fMRI Methodology: multi-echo fMRI, connectivity dynamics, and fMRI-neurofeedback". *Centro Integral de Neurociencias, Hospital de Madrid*, Madrid, Spain. December, **2016**.

[6] Gonzalez-Castillo, J. Alternative analyses for task-based fMRI. *24th Annual Meeting of the Society for Magnetic Resonance Imaging in Medicine,* Singapore. May, **2016.**

[7] Gonzalez-Castillo, J. Wide-spread brain activation and connectivity dynamics with BOLD fMRI *Indiana University,* Bloomington, IN. April, **2016**.

[8] Gonzalez-Castillo, J. Wide-spread brain activation and connectivity dynamics with BOLD fMRI, *Texas Tech University*, Lubbock, TX. March, **2016**.

[9] Gonzalez-Castillo, J. Multi-echo EPI for resting state and activation-based fMRI, *Texas Tech NeuroImaging Institute*, Lubbock, TX. March, **2016**.

[10] Gonzalez-Castillo, J. The richness of the BOLD signal: Challenges and Opportunities. *Cincinnati Children's Hospital*, Cincinnati, OH. March, **2016.**

[11] Gonzalez-Castillo, J. Wide-spread brain activation and functional connectivity decoding with BOLD fMRI, *National Library of Medicine*, Bethesda, MD. February, **2016**.

[12] Gonzalez-Castillo J. Multi-echo EPI for resting sate and activation based fMRI, *NIH fMRI Summer Course, National Institutes of Health*, Bethesda, MD. August, **2015**.

[13] Gonzalez-Castillo J. Dynamic Resting State fMRI Assessment, *NIH fMRI Summer Course, National Institutes of Health*, Bethesda, MD. August, **2015**.

[14] Gonzalez-Castillo J. fMRI-based functional connectivity: Issues and Applications. Georgetown University, Washington, DC. August, **2015**

[15] Gonzalez-Castillo J. Wide-spread brain activation with BOLD fMRI. *Max Planck Institute,* Leipzig, Germany. July, **2015.**

[16] Gonzalez-Castillo J. Optimizing fMRI data acquisition and analysis. *Basque Center for Brain and Cognition*, San Sebastian, Spain. July, **2015.**

[17] Gonzalez-Castillo J. Realtime fMRI and Neurofeedback at the NIH fMRI Summer Course, National Institutes of Health, Bethesda, MD. August, **2014**.

[18] Gonzalez-Castillo J. BOLD resting state dynamics and its relationship to on-going cognition. *1st International Conference on Brain Development*, Beijing, China. August, **2014**.

[19] Gonzalez-Castillo J. Resting State Connectivity Dynamics: Basic Characterization and Relationship to Cognition. *National Institutes of Health*, Bethesda, MD. August **2013**.

[20] Gonzalez-Castillo J. Understanding Resting State fMRI Connectivity Dynamics. *National Institute of Drug Abuse*, Baltimore, MD. July **2013**.

[21] Gonzalez-Castillo J. When does a task disturb rest? *19th Annual Meeting of the Organization for Human Brain Mapping*, Seattle, WA. June **2013**.

[22] Gonzalez-Castillo J. Optimization of acquisition and analysis procedures for BOLD temporal series. *Fundación Centro Investigación Enfermedades Neurológicas (CIEN)*, Reina Sofia Alzheimer's Research Center, Madrid, Spain. January **2013**.

[23] Gonzalez-Castillo J. Is the sparseness of fMRI activation maps real or a result of insufficient TSNR? *Institute of Psychology, Chinese Academy of Sciences*, Beijing, China. June **2012**.

[24] Gonzalez-Castillo J. What is the ultimate sensitivity of fMRI: Does the whole brain activate? *20th Annual Meeting for the International Society of Magnetic Resonance in Medicine*. Melbourne, Australia. May **2012**.

[25] Gonzalez-Castillo J. fMRI reveals whole-brain time-locked activations to simple tasks using high-order averaging and model-free analysis *John Hopkins University*, Baltimore, MD. April **2012**.

[26] Gonzalez-Castillo J. Dealing with physiological noise, TSNR, and how to easily improve alignment of fMRI and anatomical data. *West Virginia University*, Morgantown, WV. April **2012**.

[27] Gonzalez-Castillo J. Realtime fMRI and fMRI Neurofeedback. *West Virginia University*, Morgantown, WV. April **2012**.

[28] Gonzalez-Castillo J. What is the ultimate sensitivity of fMRI: Does the whole brain activate? *National Institute of Health,* fMRI/MRI Series, Bethesda, MD, **2011**.

[29] Gonzalez-Castillo J. BOLD responses to a simple visual stimulation + attention control task can be detected in over 90% of the brain when TSNR is sufficiently high. *15th Annual NIMH/DIRP Scientific Retreat*, Lancaster, PA, **2011**.

[30] Gonzalez-Castillo J. Longitudinal fMRI Study of Adaptation to Degraded Speech Stimuli. *1st Indiana Neuroimaging Symposium*, Bloomington, IN, **2007**.

[31] Gonzalez-Castillo J. Event related fMRI of Adaptation to Acoustic Simulation of Cochlear Implant Electrical Stimulation. *29th Midwinter Meeting of the Association for Research in Otolaryngology*, Baltimore, MD, **2006.**

Poster Presentations

[1] **Gonzalez-Castillo J**, Handwerker DA, Bandettini PA. "Amplitude of slow fluctuations in CSF as a time-resolved marker of sleep for resting-state fMRI: a validation study". *28th Annual Meeting of the Society for Magnetic Resonance Imaging in Medicine*, Virtual, August, **2019**.

[2] Miyawaki Y, Handwerker DA, **Gonzalez-Castillo J**, Huber L, Khojandi A, Chai Y, Bandettini PA. "Event-related decoding of visual stimulus information using short-TR BOLD fMRI at 7T" *28th Annual Meeting of the Society for Magnetic Resonance Imaging in Medicine*, Virtual, August, **2019**.

[3] Miyawaki Y, Handwerker DA, **Gonzalez-Castillo J**, Huber L, Khojandi A, Chai Y, Bandettini PA. "Decoding of neural information representation independent of hemodynamic delays using the ultra-fast acquisition of ultra-high field fMRI signals" *43rd Annual Meeting of the Japan Neuroscience Society*, July, **2020.**

[4] Miyawaki Y, Handwerker DA, **Gonzalez-Castillo J**, Huber L, Khojandi A, Chai Y, Bandettini PA. "Time-resolved fast neural decoding independent variation in hemodynamic response latency" *26th Annual Meeting of the Organization for Human Brain Mapping*, Virtual, July, **2020**

[5] Bandettini PA , Bottenhorn K, Caballero-Gaudes C, Dowdle L, Dupre E, **Gonzalez-Castillo J**, Handwerker D, Laird A, Lee J, Markello R, Moia S, Salo T, Teves J, Uruñuela E, Vaziri-Pashkam M, Whitaker K. "Tedana: multi-echo software and communal resources". *26th Annual Meeting of the Organization for Human Brain Mapping*, Virtual, July, **2020**.

[6] DuPre E, **Gonzalez-Castillo J**, Handwerker DA, Markello R, Taylor S, Whitaker K "Tedana: robust and extensible software for multi-echo denoising" *25th Annual Meeting of the Organization for Human Brain Mapping,* Rome, **2019**.

[7] **Gonzalez-Castillo J**, Caballero-Gaudes C, Topolski N, Pereira F, Handwerker DA, Bandettini PA "Contributions of covert self-driven cognition to resting state dynamic functional connectivity" *25th Annual Meeting of the Organization for Human Brain Mapping,* Rome, **2019**.

[8] Handwerker DA, Sharon K, Shaik M, Thibodeaux, Montgomery MK, Zhao H, **Gonzalez-Castillo J**, Molfese PJ, Nielson D, Hillman E, Bandettini PA. "Stability of functional connectivity in mice using wide field optical imaging" *25th Annual Meeting of the Organization for Human Brain Mapping,* Rome, **2019**.

[9] Uruñuela-Tremiño E, Moia S, **Gonzalez-Castillo J**, Caballero-Gaudes C "Deconvolution of multi-echo fMRI data with multivariate multi-echo sparse paradigm free mapping" *27th Annual Meeting of the Society for Magnetic Resonance Imaging in Medicine*, Montreal, May, **2019**.

[10] Gonzalez-Castillo J, Caballero-Gaudes C, Bandettini PA. "Pseudo-quantitative deconvolution of neuronal-related BOLD events with unknown timing" *48th Annual Meeting of the Society for Neuroscience*, San Diego, November, **2018.**

[11] Xie H, **Gonzalez-Castillo J**, Handwerker D, Molfese P, Bandettini PA, Calhoun V, Mitra S. "Efficacy of different dynamic functional connectivity methods to capture cognitively relevant information". *26th Annual Meeting of the Society for Magnetic Resonance Imaging in Medicine*, Paris, June, **2018**.

[12] Caballero-Gaudes C, Bandettini PA, **Gonzalez-Castillo J**. "Improved detection of neuronal-related BOLD events of unknown timing with Multi-Echo Sparse Paradigm Free Mapping" *26th Annual Meeting of the Society for Magnetic Resonance Imaging in Medicine*, Paris, June, **2018**.

[13] Handwerker DA, **Gonzalez-Castillo J,** Nielson D, Zheng C, Molfese P, Bandettini PA. "Moving away from ICA in multi-echo fMRI denoising". *24th Annual Meeting of the Organization for Human Brain Mapping*, Singapore, June, **2018.**

[14] Zheng C, Xie H, **Gonzalez-Castillo J**, Bandettini PA. "Robust testing of temporal dynamics in resting-state fMRI". *24th Annual Meeting of the Organization for Human Brain Mapping*, Singapore, June, **2018.**

[15] Jangraw D, Finn ES, **Gonzalez-Castillo J**, Handwerker DA, Ghane M, Rosenberg MD, Panwar P, Bandettini PA. "Functional Connectivity-based predictor of reading recall generalized to multi-task data". *24th Annual Meeting of the Organization for Human Brain Mapping*, Singapore, June, **2018.**

[16] **Gonzalez-Castillo J,** Topolski N, Brown J, Handwerker DA, Bandettini PA. "Spatial extent of task induced connectivity changes and its influence on whole-brain cognitive state decoding". *23rd Annual Meeting of the Organization for Human Brain Mapping*, Vancouver, Canada, June, **2017**.

[17] Jangraw DC, **Gonzalez-Castillo J**, Handwerker DA, Panwar P, Gutierrez B, Bandettini PA "Functional connectivity-based predictors of naturalistic reading comprehension". *23rd Annual Meeting of the Organization for Human Brain Mapping*, Vancouver, Canada, June, **2017**.

[18] Huber L, Handwerker DA, **Gonzalez-Castillo J**, Hall A, Jangraw DC, Guidi M, Ivanov D, Benedikt AP, Bandettini PA. "Cortical depth-dependent fMRI signal can classify sensory motor tasks". *23rd Annual Meeting of the Organization for Human Brain Mapping*, Vancouver, Canada, June, **2017**.

[19] Huber L, Handwerker DA, Hall A, Jangraw DC, **Gonzalez-Castillo J**, Guidi M, Ivanov D, Poser BA, Bandettini PA. "Cortical depth-dependent fMRI: heterogeneity across tasks, across participants, across days and along cortical ribbon". *24th Annual Meeting of the Society for Magnetic Resonance Imaging in Medicine*, Honolulu, USA. April, **2017.**

[20] Xie H, **Gonzalez-Castillo J,** Damaraju E, Bandettini PA, Calhoun V, Mitra S. "Resting-state Functional Network Connectivity Pattern as a Cognitive Marker for Task Performance". *24th Annual Meeting of the Society for Magnetic Resonance Imaging in Medicine*, Honolulu, USA. April, **2017.**

[21] **Gonzalez-Castillo J**, Panwar P, Caballero-Gaudes C, Handwerker DA, Jangraw DC, Zachariou V, Bandettini PA. "Multi-echo fMRI for rapid event related fMRI experiments". *22st Annual Meeting of the Organization for Human Brain Mapping*, Geneva, Switzerland, June, **2016.**

[22] Jangraw DC, Handwerker DA, **Gonzalez-Castillo J**, Panwar P, Zachariou V, Bandettini PA. "FMRI Connectivity Outperforms Magnitude in Classifying Attention to Distracting Speech While Reading". *22st Annual Meeting of the Organization for Human Brain Mapping*, Geneva, Switzerland, June, **2016.**

[23] Handwerker DA, Huber L, Panwar P, Gutierrez B, **Gonzalez-Castillo J**, Bandettini PA. "Cerebrovascular changes during the Valsalva Maneuver measured with VASO". *22st Annual Meeting of the Organization for Human Brain Mapping*, Geneva, Switzerland, June, **2016.**

[24] Huber L, Handwerker DA, **Gonzalez-Castillo J**, Jangraw DC, Ivanov D, Poser B, Goense J, Bandettini PA. "Effective connectivity measured with layer-dependent resting-state blood

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