Last Update: October 13, 2018

JOHN D. MEDAGLIA, Ph.D.

Assistant Professor
Applied Cognitive & Brain Sciences
Department of Psychology
Drexel University
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ACADEMIC PREPARATION & APPOINTMENTS

2017-Present	Assistant Professor Applied Cognitive & Brain Sciences Department of Psychology *Drexel University* Adjunct Assistant Professor Department of Neurology *Perelman School of Medicine* *University of Pennsylvania*
2016-2017	Research Assistant Professor Department of Psychology *University of Pennsylvania*
2014-2016	Research Fellow/Visiting Scholar Translational Neuroscience Fellowship *Moss Rehabilitation Research Institute/University of Pennsylvania*
2014	Doctor of Philosophy, Clinical Psychology Specializations in Cognitive and Affective Neuroscience; Neuropsychology *The Pennsylvania State University*
2011	Master of Science, Clinical Psychology *The Pennsylvania State University*
2004-2008	Bachelor of Science, Psychology Magna Cum Laude, Honors with Distinction *Drexel University*

TEACHING

2018	Undergraduate Courses Cognitive Neuroengineering for Mental Flexibility Neuropsychology Graduate Courses Multilevel Regression *Drexel University*

2014-2017 Guest Lecturer
Neuroscience Core III
Network Neuroscience
The University of Pennsylvania

2012-2013 Undergraduate Courses
Clinical Neuropsychology
The Neural Bases of Behavior
The Pennsylvania State University

2009-2012 Teaching Assistant
Psychology of Adjustment
Physiological Psychology
Research Methods
Cognitive and Affective Neuroscience
The Pennsylvania State University

2007-2008 Course Builder/Teaching Assistant
Drexel University

2005-2006 Teaching Colleague
Drexel University

PUBLISHED MANUSCRIPTS

Medaglia, J.D., Haslam, M., Helion, C., & Yaden, D. (In Press). Moral Attitudes and Willingness to Enhance and Repair Cognition with Brain Stimulation. *Brain Stimulation*. https://doi.org/10.1016/j.brs.2018.09.014

Medaglia, J.D., Huang, W., Karuza, E., Thompson-Schill, S.L., Ribeiro, A., & Bassett, D.S. (2018). Functional Alignment with Anatomical Networks is Associated with Cognitive Flexibility. *Nature Human Behaviour, 2*(2), 156.

Medaglia, J.D., Harvey, D.Y., White, N., Kelkar, A., Zimmerman, J., Bassett, D.S., Hamilton, R.H. (2018). Network Controllability in the Inferior Frontal Gyrus Relates to Controlled Language Variability and Susceptibility to TMS. *The Journal of Neuroscience*, 0092-17.

Bansal, K., **Medaglia, J.D.,** Bassett, D.S., Vettel, J.M., & Muldoon, S.F. (Accepted). Data-driven models of brain dynamics predict individual variability in behavior. *PLOS Computational Biology.*

Fisher, A.F., **Medaglia, J.D.,** & Jeronimus, B. (2018). A lack of group-to-individual generalizability is a threat to human subjects research: Evidence from six independent samples. *Proceedings of the National Academy of Sciences*, 201711978.

Medaglia, J.D., Satterthwaite, T.D., Moore, T.M., Ruparel, K., Gur, R.C., Gur, R.E. Gu, S., Yang, M., Bassett, D.S. (2018). Brain state expression and transitions are related to complex executive cognition in normative neurodevelopment. *NeuroImage, 166*, 293-306.

Medaglia, J.D. (2018). Clarifying Cognitive Control and the Controllable Connectome. *WIRE: Cognitive Science,* doi: 10.1002/wcs.1471.

Khambhati, A., **Medaglia J.D.**, Karuza, E.A., Thompson-Schill, S.T., & Bassett, D.S. (2018). Subgraphs of functional brain networks identify dynamical constraints of cognitive control. *PLOS Computational Biology*, *14*(7), e1006234.

Huang, W., Bolton, T.A.W., **Medaglia, J.D.,** Bassett, D.S., Ribeiro, A., & Van De Ville, D. (2018). A Graph Signal Processing Perspective on Functional Brain Imaging. *Proceedings of the IEEE, 106*(5), 868-885

Kenett, Y., Beaty, R.E., & **Medaglia, J.D.** (In Press). A computational network control theory analysis of depression symptoms. *Personality Neuroscience.*

Kenett, Y.N., **Medaglia, J.D.,** Beaty, R.E., Chen, Q., Thompson-Schill, S.L., & Qiu, J. (In Press). Driving the brain towards creativity and intelligence: A network control theory analysis. *Neuropsychologia.*

Yaden, D.B., Eichstaedt, J., **Medaglia, J.D.** (2018). The Future of Technology in Positive Psychology: Methodological Advances in the Science of Well-being. *Frontiers in Psychology, 9*, 962.

Betzel R., **Medaglia, J.D.,** & Bassett, D.S. (2018). The diversity of connectome meso-scale architecture. *Nature Communications, 9*(1), 346.

Medaglia, J.D., Zurn, P., Sinnott-Armstrong, W. & Bassett, D.S. (2017). Mind Control as a Guide for the Mind. *Nature Human Behaviour,* 0119.

Medaglia, J.D., Huang, W., Segarra, S., Olm, C., Gee., J., Grossman, M., Ribeiro, A., McMillan, C. Bassett, D.S. (2017). Brain network efficiency is influenced by the pathologic source of corticobasal syndrome, *Neurology, 89*(13), 1373-1381.

Gu, S., Yang, M., **Medaglia, J.D.,** Gur, R.C., Gur, R.E., Satterthwaite, T.D.[†], Bassett, D.S[†]. (2017). Functional Hypergraph Uncovers Novel Covariant Structures over Neurodevelopment. *Human Brain Mapping, 38*(8), 3823-3835. [†] Co-senior author.

Medaglia, J.D. (2017). Functional Neuroimaging in TBI: From Nodes to Networks. *Frontiers in Neurology, 8,* 407.

Medaglia, J.D., (2017). Graph Theoretic Analysis of Resting State fMRI. *Neuroimaging Clinics of North America, 27,* 593-607.

Medaglia, J.D., Pasqualetti, F., Hamilton, R.H., Thompson-Schill, S.L, Bassett, D.S. (2017). Brain and Cognitive Reserve: Translation via Network Control Theory. *Neuroscience & Biobehavioral Reviews, 75*, 53-64.

Pustina, D., Coslett, H. B., Ungar, L., Faseyitan, O. K., **Medaglia, J. D.,** Avants, B., & Schwartz, M. F. (2017). Enhanced estimations of post-stroke aphasia severity using stacked multimodal predictions. *Human Brain Mapping*, *38*(11), 5603-5615.

Pustina, D., Avants, B., Faseyitan, O., **Medaglia, J.D.,** Schwartz, M., Coslett, H.B. (2018). Improved accuracy in lesion to symptom mapping with multivariate sparse canonical correlations. *Neuropsychologia, 115,* 154-166.

Fisher, A.F., Reeves, J.W., Lawyer, G., **Medaglia, J.D.,** & Rubel, J.A. (2017). Exploring the Idiographic Dynamics of Mood and Anxiety via Network Analysis. *Journal of Abnormal Psychology,* 126(8):1044-1056

Betzel, R.F., **Medaglia, J.D.,** Papadopoulos, L., Baum, G., Gur, R., Gur, R., Roalf, D., Satterthwaite, T.D., Bassett, D.S. (2017). The modular organization of human anatomical brain networks: Accounting for the cost of wiring. *Network Neuroscience, 1*(1), 42-68.

Betzel, R., Gu, S., **Medaglia, J.D.,** Pasqualetti, F., Bassett., D.S. (2016). Optimally controlling the human connectome: the role of network topology. *Scientific Reports*, *6*.

Karuza, E. A., Balewski, Z. Z., Hamilton, R. H., **Medaglia, J. D.,** Tardiff, N., & Thompson-Schill, S. L. (2016). Mapping the parameter space of tDCS and cognitive control via manipulation of current polarity and intensity. *Frontiers in Human Neuroscience*, *10*.

Medaglia, J.D., Lynall, M.E., & Bassett, D.S. (2015). Cognitive Network Neuroscience. *The Journal of Cognitive Neuroscience*, *27*(8): 1471-1491.

Gu, S., Satterthwaite, T.D., **Medaglia, J.D.,** Gur, R.E., Gur, R.C., Bassett, D.S. (2015*).* Emergence of System Roles in Normative Neurodevelopment. *Proceedings of the National Academy of Sciences. 112*(44), 13681-13686.

Gu, S., Pasqualetti, F., Cieslak, M., Telesford, Q., Yu, A., Kahn, A., **Medaglia, J.D.,** Vettel, J., Miller, M., Grafton, S.T., & Bassett, D.S. (2015). Controllability of Structural Brain Networks. *Nature Communications, 6,* 8114.

Medaglia, J.D. VanKirk, K.K., Oswald, C.B., & Church, L.W.P. (2015). Interdisciplinary Differential Diagnosis and Care of a Patient with Atypical Delusional Parasitosis due to early HIV-related Dementia. *The Clinical Neuropsychologist, 29*(4): 559-569.

Medaglia, J.D., McAleavey, A.A., Rostami, S., Slocomb, J. & Hillary, F.G. (2015). Modeling distinct imaging hemodynamics early after TBI: the relationship between signal amplitude and connectivity. *Brain Imaging and Behavior, 9*(2): 285-301.

Hillary, F.G., Rajtmajer, S.M., Roman, C., **Medaglia, J.D.,** Slocomb, J., Good, D.C., & Wylie, G.R. (2014). The rich get richer: brain injury elicits hyperconnectivity in core subnetworks. *PLoS ONE, 9*(8), e104021.

Hillary, F.G., **Medaglia, J.D.**, Gates, K.M., & Good, D.C. (2014). Examining network dynamics after traumatic brain injury using the extended unified SEM approach. *Brain Imaging and Behavior, 8*(3), 435-445.

Bryer, E.J., **Medaglia, J.D.,** Rostami, S., & Hillary, F.G. (2013). Neural recruitment after mild traumatic brain injury is task dependent: A meta-analysis. *Journal of the International Neuropsychological Society, 19*(7), 751-762.

Medaglia, J.D., Chiou, K.S., Slocomb, J., Fitzpatrick, N.M., Wardecker, B.M., Ramanathan, D., Vesek, J., Good, D.C., & Hillary, F.G. (2012). The less BOLD, the wiser: support for latent resource hypothesis after neurotrauma. *Human Brain Mapping, 33*(4), 979-993.

Medaglia, J.D., Ramanathan, D., Venkatesan, U.M., & Hillary, F.G. (2011a). Non-Ergodicity in Neural Networks. *Network: Computation in Neural Systems, 22* (1-4), 148-153.

Hillary, F.G., Slocomb, J., Hills, E., Fitzpatrick, N., **Medaglia, J.D.**, Wang, J., Good, D., & Wylie, G. (2011). Changes in Resting Connectivity during Recovery from Severe Traumatic Brain Injury. *International Journal of Psychophysiology*, *82*(1), 115-123.

Hillary, F.G., **Medaglia, J.D.**, Gates, K., Molenaar, P., Slocomb, J., Peechatka, A., Good, D. (2011). Examining working memory task acquisition in a disrupted neural network. *Brain, 134*(5), 1555-1570.

Hillary, F.G., Genova, H.M., **Medaglia, J.D.,** Fitzpatrick, N.M., Chiou, K.S., Wardecker, B.M., Franklin, R.G., Wang, J., & DeLuca, J. (2010). The Nature of Processing Speed Deficits in Traumatic Brain Injury: is Less Brain More? *Brain Imaging and Behavior, 4*(2), 141-154.

Ruocco, A.C., **Medaglia, J.D.,** Ayaz, H., & Chute, D.L. (2010). Abnormal prefrontal cortical response during affective processing in borderline personality disorder. *Psychiatry Research: Neuroimaging, 182*(2), 117-122.

Ruocco, A.C., **Medaglia, J.D.,** Tinker, J.R., Ayaz, H., Forman, E. M., Williams, J. M., Hillary, F.G., Platek, S., Onaral, B., & Chute, D.L. (2010). Medial Prefrontal Cortex Hyperactivation during Social Exclusion in Borderline Personality Disorder. *Psychiatry Research: Neuroimaging, 181*(3), 233-236.

MANUSCRIPTS IN REVIEW AND REVISION

Medaglia, J.D., Erickson, B., Zimmerman, J., & Kelkar, A. (In revision). Personalizing Neuromodulation.

Medaglia, J.D., Hamilton, R.H., & Kuersten, A. (In revision). Protecting Autonomy in the Era of Neural Control.

Hillary, F.G. & **Medaglia, J.D.** (Submitted). What the Replication Crisis Means for Interventional Science.

Wang, Y., Metoki, A., Smith, D.V., **Medaglia, J.D.,** Zang, Y., Benear, S., Lin, Y., & Olson, I.R. (In review). Multimodal Mapping of the Face Connectome.

Erickson, B., Hamilton, R.H., & **Medaglia, J.D.** (In preparation). Lost in Space and Time: A Systematic Framework for Parameter Selection and Mechanism Detection in TMS-EEG and Neuroimaging.

Haslam, M., Yaden, D., & **Medaglia, J.D.** (In preparation). Moral Framing and Mechanisms Influence Public Willingness to Optimize Cognition

Solomon, S., **Medaglia, J.D.,** & Thompson-Schill, S.T. (Resubmitted). Implementing the Concept Network Model.

Betzel, R.F., **Medaglia, J.D.,** Kahn, A.E., Soffer, J., Schonhaut, D. R., & Bassett, D.S. (Submitted). Inter-regional ECoG correlations predict by communication dynamics, geometry, and gene co-expression.

Mathersul, D., **Medaglia, J.D.,** Haijing, W., Weber, M., Thompson-Schill, S.L., Rauch, S., Pizzagalli, D., & Ruscio, A. (Submitted). Neural Reactivity to Monetary Loss but Not Gain Differentiates Major Depressive Disorder and Generalized Anxiety Disorder.

BOOK CHAPTERS AND ENCYCLOPEDIA ENTRIES

Kelkar, A., & **Medaglia, J.D.** (2018). Evidence of Brain Modularity. *Encyclopedia of Evolutionary Psychological Science.* Springer Press.

Medaglia, J.D. (2018). Networks of cognitive processes: functional and anatomical correlates of cognition, emotions and social cognition. In Baune & Harmer (Eds.*) Cognitive Dimensions of Major Depressive Disorder.* Oxford, UK: Oxford University Press.

Medaglia, J.D., & Bassett, D.S. (In Press). Network Analysis in Nervous System Disorders. *Oxford Research Encyclopedias.* Oxford University Press.

Schatz, P., Ruocco, A.C., **Medaglia, J.D.**, & Chute, D.L. (2008). Observing Neural Networking In Vivo. In Benjamin, L., et. al. (Eds.) *Activities Handbook for the Teaching of Psychology, Volume 5*. Washington, DC: American Psychological Association.

PEER-REVIEWED CONFERENCE PROCEEDINGS

Medaglia, J.D. (In Review). Cognitive Neuroengineering: Defining a New Paradigm.

Yaden, D.Y., Eichstaedt, J.C., **Medaglia, J.D.** (2018). Emerging Technology in Positive Psychology. MindCare: Pervasive Computing Paradigms for Mental Health, 253, 1-5.

GRANTS

R01 DC16800-01A1 Coslett (PI) September 2018 – September 2023
NIDCD Total cost: $3,000,000
Transcranial Magnetic Stimulation for Aphasia: Efficacy and Neural Basis
Role (Medaglia): Co-investigator

R01-DC-014960-01A1 Turkeltaub (PI) September 2017-September 2022
NIDCD Total costs: $3,500,000
Contributions of Spared Brain Structures and Connections to Aphasia Recovery
Role (Medaglia): Co-investigator

NIH Director's Early Independence Award (EIA)
DP5-OD-021352-01 Medaglia (PI) September 2015-September 2020
NIH Office of the Director Total costs: $2,000,000
Dynamic Network Neuroscience and Cognitive Control: Network Control Theory as a Mediator of Transcranial Magnetic Stimulation Effects
Role (Medaglia): Principal Investigator

Translational Neuroscience Initiative April 2016-April 2019
Penn Medicine Translational Neuroscience Center Total costs: $400,000
University of Pennsylvania
Role (Medaglia): Co-Principal Investigator

F31-NS-080574-01A1 Medaglia (PI) April 2013-July 2013
National Institute of Mental Health Total costs: $58,540
The Cerebellum as a Latent Resource During Working Memory Following Traumatic Brain Injury.
Ruth H. Kirschstein National Research Service Award (NRSA)
Role (Medaglia): Principal Investigator

Research Voucher November 2013
Awarded by the South Carolina Clinical and Translational Research Institute
Amount Awarded: $1000

COGDOP Dissertation Support Award December 2012
Awarded by the American Psychological Foundation
Amount Awarded: $1000

RGSO Dissertation Support Award November 2012
Awarded by the Department of Liberal Arts at Pennsylvania State University
Amount Awarded: $2500

HONORS AND AWARDS

2016 Meritorious Research, Travel Award
Selected for meritorious work: New Insights into Psychiatric Disorders through Computational, Biological, and Developmental Approaches
IBRO-PERC, The Brain Prize, and FENS

2016 Loan Repayment Program Awardee
National Institutes of Mental Health

2014 Runner Up – Psychology Internship Paper Competition
Awarded by the Charleston Consortium
The Medical University of South Carolina

2014 Meritorious Presentation
Awarded by the Student Liaison Committee
International Neuropsychological Society

2011 Marty T. Murphy Award for Excellence
Awarded "to honor and recognize outstanding achievement by a graduate student in Clinical Psychology" once annually.
The Pennsylvania State University

2008-2013 Enhanced Graduate Scholar Fellowship
The Pennsylvania State University

CONFERENCE TALKS

Medaglia, J.D. (2018, August) Cognitive Neuroengineering: How Control Theory May Resolve Fundamental Problems in Brain Stimulation. Talk at Neuromodec in New York, New York.

Medaglia, J.D. (2018, June) Closing the Loop Between Network Neuroscience, Neuromodulation, and Cognitive Optimization. Talk at the Second International Neuroergonomics Conference at Drexel University, Philadelphia.

Medaglia, J.D. (2018, June) Technology and Neuropsychology. Invited Talk at the Future of Neuropsychology Panel at Drexel University, Philadelphia.

Medaglia, J.D., Yaden, D.B., Helion, C., & Haslam, M. (2018, April). Ceremode: How the Public Views Cognitive Repair and Enhancement with Noninvasive Brain Stimulation. Paper presented at the American Psychological Association's conference on Technology, Mind, and Society.

Medaglia, J.D., & Kuersten, A. (2017, October). Protecting Autonomy in the Era of Neural Control. Paper presented at the Inaugural Junior Faculty Forum for Law and STEM, University of Pennsylvania Law School.

Medaglia, J.D., Huang, W., Karuza, E., Thompson-Schill, S.L., Ribeiro, A., & Bassett, D.S. (2017, May). Functional signal alignment with network anatomy is a trait associated with cognitive flexibility. Symposium talk presented at the Association for Psychological Science in Boston, MA.

Medaglia, J.D., Olm, C., McMillan, C.T., Grossman, M. Anatomical Network Degeneration in Primary Progressive Aphasia. (2017, April). Platform talk presented at the annual meeting of the American Academy of Neurology, Boston, MA.

Wurzman, R., Wiener, M., Hamilton, R.H., Coslett, H.B., **Medaglia, J.D.** (2017, April). System-level network integration predicts TMS effects on time perception. Platform talk presented at the annual meeting of the American Academy of Neurology, Boston, MA.

Medaglia, J.D., Huang, W., Karuza, E., Thompson-Schill, S.L., Ribeiro, A., & Bassett, D.S. (2016, September). Functional Flexibility in the Structural Connectome Promotes Cognitive Flexibility. Talk presented at the meeting of the Federation of European Neuroscience Societies New Insights into Psychiatric Disorders through Computational, Biological, and Developmental Approaches, Copenhagen, Denmark.

Medaglia, J.D., Hamilton, R. H., Bassett, D.S., & Williams, K. (2016, April). CONNECTS: A Translational Neuroscience Initiative in Networks and Neurorehabilitation. Poster presented at the Philadelphia Institute of Research Medicine Research Day, Philadelphia, PA.

Medaglia, J.D., Huang, W., Segarra, S., Olm, C., Gee, J., Grossman, M., Ribeiro, A., McMillan, C.T., Bassett, D.S. (2015, October). Fronto-parietal network efficiency accurately classifies underlying pathology in corticobasal syndrome. Talk presented in a nanosymposium at the Society for Neuroscience, Chicago, IL.

Medaglia, J.D. & Bassett, D.S. (2015, May). Graph Theoretical Methods. Workshop talk presented at the International Society for Magnetic Resonance in Medicine. Toronto, Canada.

Medaglia, J.D., Hamilton, R.H., Thompson-Schill, S.T., Gu, S., & Bassett, D.S. (2015, April). Network Control Theory as a Mediator of Transcranial Magnetic Stimulation Effects. Paper presented at the American Academy of Neurology.

Medaglia, J.D., Motter, J.N., Dougherty, C., Bryer, E., Hillary, F.G. (2014, February). The Cerebellum Differentially Contributes to Working Memory Function Follow Moderate to Severe Traumatic Brain Injury. Paper presented at the International Neuropsychological Society, Seattle, WA.

Venkatesan, U.M, **Medaglia, J.D.,** Ram, N., Good, D.C., & Hillary, F.G. (2013, August). Dynamics in goal-directed and default mode networks during new learning after moderate or severe TBI. Paper presented at the annual meeting of Division 40 of the American Psychological Association. *Recipient of the Blue Ribbon Award.*

Roman, C.A., Rajtmajer, S.M., **Medaglia, J.D.,** Venkatesan, U.M., Wylie.G.R., Hillary, F.G. The Rich Get Richer: Brain Injury Elicits Hyperconnectivity in Core Subnetworks. Paper presented at the International Neuropsychological Society, Seattle, WA.

Medaglia, J.D., Peechatka, A., Hasse, M., Ferrante, L., & Hillary, F.G. (2012, October). Prefrontal-cerebellar functional connectivity as a latent support mechanism in traumatic brain injury. Paper presented in a nanosymposium at the Society for Neuroscience, New Orleans, Louisiana.

Medaglia, J.D., Peechatka, A., Hasse, M., Ferrante, L., & Hillary, F.G. (2012, February). Effective Connectivity Findings Suggest a Role of the Cerebellum in Cognitive Control. Paper presented at the 40th meeting of the International Neuropsychological Society, Montreal, Quebec.

Bryer, E.J., **Medaglia, J.D.,**Rostami, S., & Hillary, F.G. (2012, February). Patterns of Brain Activation in Individuals with Mild TBI during Executive Working Memory Tasks. Paper presented at the 40th meeting of the International Neuropsychological Society, Montreal, Quebec.

Medaglia, J.D., Gates, K., Peechatka, A., Hasse, M., & Hillary, F.G. (2011, February). Examining Network Change with Extended Unified Structural Equation Modeling: Implications for the Latent Support Hypothesis in Brain Trauma. Paper presented at the International Neuropsychological Society, Boston.

Ruocco, A. C., **Medaglia, J. D.**, & Chute, D. L. (2008, May). *Right prefrontal cortex function during interpersonal inclusion and exclusion in borderline personality disorder*. Paper presented at the annual meeting of the Society for Interpersonal Theory and Research, Tempe.

CONFERENCE POSTERS

Mass, J., Harvey, D.S., Kelkar, A., **Medaglia, J.D.,** Hamilton, R.H. (Submitted). Network-Based Approach to the Role of the Inferior Frontal Gyrus in Retrieval and Selection. Poster submitted to the American Academy of Neurology Conference in Philadelphia, PA.

Medaglia, J.D. (2018, August). Cognitive Neuroengineering: Defining a New Paradigm. Poster presented at the NANS Neuromodulation Conference in New York, New York.

Medaglia, J.D., Harvey, D.Y., White, N., Kelkar, A., Zimmerman, J., Bassett, D.S., Hamilton, R.H. (2018, June). Network Controllability in the Inferior Frontal Gyrus Relates to Controlled Language Variability and Susceptibility to Neuromodulation. Poster presented at the NIH High-Risk/High-Reward Research Symposium, Bethesda, MD.

Bansal, K., **Medaglia, J.D.,** Bassett, D.S., Vettel, J.M., & Muldoon, S.F. (2017, November). Using data-driven models of brain dynamics to predict individual performance differences in cognitively demanding tasks. Poster presented at the annual meeting of the Society for Neuroscience.

Wurzman, R., Wiener, M., Hamilton, R.H., Coslett, B., & **Medaglia, J.D.** (2017, November). System-level network integration predicts trial-wise TMS effects on temporal perception. Poster presented at the annual meeting of the Society for Neuroscience.

Solomon, S., **Medaglia, J.D.,** & Thompson-Schill, S.T. (2017, November). Modeling Individual Concepts as Graph Theoretical Networks. Poster presented at the annual meeting of the Psychonomic Society.

Medaglia, J.D., Harvey, D.S., White, N., Bassett, D.S., & Hamilton, R.H. (2016, November). Network controllability underlies the role of the inferior frontal gyrus in word selection processes. Poster presented at the meeting of the Society for Neuroscience, San Diego, California.

Medaglia, J.D., Pasqualetti, F., Gu., S., Kable, J., Lerman, C., & Bassett, D.S. (2016, April). Network Controllability as a mediation mechanism for cognitive control. Poster presented at the annual meeting of the Cognitive Neuroscience Society, New York, NY.

Medaglia, J.D., Bassett, D.S., Hamilton, R.H., Pasqualetti, F., & Gu, S. (2015, December). The Foundations and Repair of Cognitive Control in Human Brain Networks. Poster presented at the NIH High-Risk High-Reward Research Symposium, Bethesda, MD.

Baum, G.B., Roalf, D., Kahn, A., **Medaglia, J.D.,** Ciric, R., Ruparel, K., Gur, R.E, Gur., R.C., Bassett, D.S., & Satterthwaite, T.S. (2016, June). Confounds in Charting the Development of the Structural Connectome. Poster presentation at Human Brain Mapping, Geneva, Switzerland.

Medaglia, J.D., Satterthwaite, T.S., Yang, M., Gu, S., Telesford, Q., Gur, R. C., Gur, R.E., and Bassett, D.S. (2015, October). Brain State Flexibility Predicts Diverse Cognitive Functions During Critical Periods in Neurodevelopment. Poster presented at the Society for Neuroscience, Chicago, IL.

Medaglia, J.D., Pasqualetti, F., Gu, S., Bassett, D.S. (2015, February). Addressing Cognitive and Brain Reserve with Network Control Theory. Poster presented at the International Neuropsychological Society, Denver, CO.

Medaglia, J.D., Pasqualetti, F., Gu, S., Bassett, D.S. (2014, November). Grounding Cognitive and Brain Reserve in Network Control Theory. Poster presented at Cell: Translational Neuroscience, Arlington, VA.

Medaglia, J.D., McAleavey, A.A., Rostami, S., Slocomb, J., & Hillary, F.G. (2014, February). The Relationship Between Blobs and Connections in Early Traumatic Brain Injury. Poster presented at the International Neuropsychological Society, Seattle, WA.

Medaglia, J.D., DePinto, N., Motter, J., Bryer, E.J., Dougherty, C., & Hillary, F.G. (2013, March). The Cerebellum as a Latent Support Following Traumatic Brain Injury. Poster presented at the annual Graduate Exhibition at The Pennsylvania State University.

Medaglia, J.D., Dancy, C., Bochnakova, T., DePinto, N., & Hillary, F.G. (2013, February). An Automated Person-Specific Approach to Region of Interest Selection in fMRI Data. Poster presented at the International Neuropsychological Society, Waikoloa, Hawaii.

Maclean, R.R., **Medaglia, J.D.,** Hillary, F.G., & Wilson, S.J. (2012, October). Resting state-functional connectivity associated with abstinence-induced craving in nicotine addiction. Poster presented at the Society for Neuroscience, New Orleans, Louisiana.

Peechatka, A., **Medaglia, J.D.,** Chiou, K.S., Slocomb, J., Ramanathan, D.M., & Hillary, F.G. (2012, February). A Longitudinal Study of Working Memory in Neurotrauma using functional MRI. Poster presented at the 40th annual meeting of the International Neuropsychological Society, Montreal, Quebec.

Rostami, S., **Medaglia, J.D.,** Bryer, E.J., & Hillary, F.G. (2012, February). Functional Imaging Findings of Working Memory after Traumatic Brain Injury: a Meta-analysis. Poster presented at the International Neuropsychological Society, Montreal, Quebec.

Venkatesan, U.M., Shanz, O.A., **Medaglia, J.D.,** Chiou, K.S., Slocomb, J., Franklin, R.G., & Hillary, F.G. (2012, February). Is Right *Right?* Hemispheric Differences During Visuospatial Working Memory in TBI. Poster presented at the International Neuropsychological Society, Montreal, Quebec.

Vargas, G.A., Zakrzewski, C., Genova, H., **Medaglia, J.D.,** Chiaravalloti, N., & Hillary, F.G. (2011, November). Does losing gray make you blue? Gray Matter Atrophy and Depression in Multiple Sclerosis. Poster presented at the National Academy of Neuropsychology, Marco Island, Florida.

Medaglia, J.D., Molenaar, P.C.M., & Gates, K.M. (2011, June). Space Modeling as dimension reduction and effective connectivity for neural systems. Poster presented at the Organization for Human Brain Mapping, Quebec City, Quebec.

Gates, K.M., Molenaar, P.C.M., & **Medaglia, J.D.** (2011, June). Seeing the Forest from the Trees: How to Make Meaningful Group Inferences from Individual Connectivity Maps Using GIMME. Poster presented at the Organization for Human Brain Mapping, Quebec City, Quebec.

Venkatesan, U.M., **Medaglia, J.D.,** Slocomb, J., Hills, E.C., Fitzpatrick, N.M., Wang, J., Good, D.C., Wylie, G.R., & Hillary, F.G. (2011). Changes in Resting State Functional Connectivity during Recovery from Traumatic Brain Injury.

Medaglia, J.D., Chiou, K.S., Slocomb, J., & Hillary, F.G. (2011, February). Functional Connectivity Between the Cerebellum and Neocortex during Working Memory. Poster presented at the International Neuropsychological Society, Boston.

Wardecker, B.M., **Medaglia, J.D.,** Ramanathan, D., Chiou, K.S., Slocomb, J., Hills, E., Good, B., & Hillary, F.G. (2010, March). *Location of Functional Activation Changes During Recovery from Traumatic Brain Injury.* Poster presented at the International Brain Injury Association's Eighth World Congress on Brain Injury, Washington, D.C.

Medaglia, J.D., Wardecker, B.M., Ramanathan, D., Chiou, K.S., Vesek, J., Good, D., Hills, E.C., & Hillary, F.G. (2010, February). Involvement of the Cerebellum in Task Proceduralization and Speeded Performance in Adult TBI. Poster presented at the 38th annual meeting of the International Neuropsychological Society, Acapulco, Mexico.

Wardecker, B.M., Ramanathan, D., **Medaglia, J.D.,** Chiou, K.S., Slocomb, J., & Hillary, F.G. (2010, February). *The Influence of Cognitive Functioning and Dispositional Optimism on Psychological Distress after Traumatic Brain Injury.* Poster presented at the 38th annual meeting of the International Neuropsychological Society, Acapulco, Mexico.

Ramanathan, D., Wardecker, B.M., **Medaglia, J.D.,** Chiou, K.S., Slocomb, J., Vesek, J., Wang, J., Hills, E., Good, D.C., & Hillary, F.G. (2010, February). *Axial Diffusivity and Fractional Anisotropy Correlate With Performance Following Traumatic Brain Injury.* Poster presented at the 38th annual meeting of the International Neuropsychological Society, Acapulco, Mexico.

Ramanathan, D., **Medaglia, J.D.,** Wardecker, B.M., Pardini, J., Lovell, M., Welling, J., & Hillary, F.G. (2010, February). *A Longitudinal fMRI Investigation of Recovery from Concussion.* Poster presented at the 38th annual meeting of the International Neuropsychological Society, Acapulco, Mexico.

Medaglia, J.D., Ramanathan, D., Chiou, K., Wardecker, B., Franklin, R., Genova, H., Deluca, J., Hillary, F. (2009, October). Performance Predicts Increased Frontal Cortex Activation in TBI in Spatial Working Memory. Poster presented at the annual meeting of the National Academy of Neuropsychology, New Orleans.

Ramanathan, D., **Medaglia, J.D.**, Chiou, K.S., Wardecker, B.M., Slocomb, J., Vesek, J., Wang, J., Hills, E., Good, D.C., Hillary, F.G. (2009, October). The Relationship between Injury Severity and Recovery Following Traumatic Brain Injury Using Diffusion Tensor Imaging. Poster presented at the annual meeting of the National Academy of Neuropsychology, New Orleans.

Chiou, K.S., Slocomb, J., Ramanathan, D., **Medaglia, J.D.**, Wardecker, B., Vesek, J., Wang, J., Hills, E., Good, D., Hillary, F. (2009, October). Longitudinal Investigation of White Matter Focal Lesions in Moderate to Severe TBI Using DTI. Poster presented at the annual meeting of the National Academy of Neuropsychology, New Orleans.

Zelechoski, A. D., Goldstein, N. E. S., Feehan, J., Brammell, A., **Medaglia, J.D.,** Sierra, S., & Taylor, J. (2009, March). The Content of Child Custody Evaluations: A Forensic Assessment Principles-Based Analysis. Paper present as part of a symposium at the annual conference of the *American Psychology-Law Society*, San Antonio, TX.

Medaglia, J.D., Ruocco, A.C., & Chute, D.L. (2008, October). *Performance on the Tower of London-Drexel University and Barratt Impulsiveness Scale-11 in Borderline Personality Disorder.* Poster presented at the annual meeting of the National Academy of Neuropsychology, New York.

Ruocco, A.C., **Medaglia, J.D.,** & Chute, D. L. (2008, October). Hemodynamic and Neuropsychological Relationships Using a Social Exclusion Protocol in Borderline Personality Disorder. Poster presented at the annual meeting of the National Academy of Neuropsychology, New York.

Medaglia, J. D., Ruocco, A. C., & Chute, D. L. (2008, April). *Relations between the Tower of London and Barratt Impulsiveness Scale in Borderline Personality Disorder.* Poster presented at Drexel University's annual College of Arts and Sciences Research Day, and the fourth annual Psi Chi Research Conference, Philadelphia.

Medaglia, J. D., & Chute, D. L. (2008, April). *Doing Real Science in a Virtual Environment: Online Learning with Drexel's ePsychology Program.* Poster presented at the fourth annual Psi Chi Research Conference, Philadelphia.

Medaglia, J. D., Ruocco, A. C., & Swirsky-Sacchetti, T. (2007, November). *Relations between fine motor functions and personality disorder traits in patients with mild-moderate traumatic brain injury.* Poster presented at the annual meeting of the National Academy of Neuropsychology, Scottsdale.

Medaglia, J. D., & Chute, D. L. (2007, May). *Behavioral Neuroscience in Online Education*. Poster presented at the first annual meeting of the Canadian Association for Neuroscience, Toronto.

Medaglia, J. D., Sestito, N., Da Silva, F., Jones, E., & Chute, D. L. (2007, April). *Teaching Methods in Psychology: Online Education*. Poster presented at Drexel University's annual College of Arts and Sciences Research Day, Philadelphia.

Medaglia, J. D., Sestito, N., Da Silva, F., Jones, E., & Chute, D. L.(2007, March). *Teaching Methods in Psychology: Online Education*. Poster presented at third annual Philadelphia Psi Chi Research Conference, Philadelphia.

INVITED LECTURES, GRAND ROUNDS, WORKSHOPS, AND SEMINARS

2018 The Foundations of Cognitive Neuroengineering
Department of Psychology
Temple University

2018 The Foundations and Frontiers of Cognitive Neuroengineering
Department of Mathematics
University of Buffalo

2018 Toward Cognitive Neuroengineering for TMS Therapies
Swartz Center for Computational Neuroscience
University of California-San Diego

2018 The Future of Technology in Neuropsychology
Drexel University

2018 Network Neuroscience and Brain Stimulation in Neurorehabilitation
Grand Rounds
Center for Brain Plasticity and Recovery
Georgetown University & National Rehabilitation Hospital, Washington DC

2017 Leveraging Modern Brain Connectomics to Guide Therapeutic Brain Stimulation
Grand Rounds
Hershey Medical Center

2017 Realizing Personalized Noninvasive Brain Stimulation Treatments
Biomedical Engineering Seminar Series
Drexel University

2017 Closing the loop in neurorehabilitation: integrating brain stimulation and bioinformatics to promote recovery
Biological Data Sciences Program
Drexel University

2017 The Moral Distribution of Mind Control
Boston Area Moral Cognition Group
Harvard University

2017 Alzheimer's Disease: Clinical Considerations and Frontiers
Business Professional Women of West Chester

2017 Connecting the Connectome to the Clinic
Perelman School of Medicine, Clinical Neurosciences Training Program
University of Pennsylvania

2016 The Connectome and Cognitive Neuropsychology
Drexel University

2016 Connecting Connectomics to Neuropsychology
Philadelphia Neuropsychological Society

2015 Brain State Flexibility Predicts Global Cognitive Function in Development
Perelman School of Medicine, Department of Psychiatry
University of Pennsylvania

2015 Neurorehabilitation, Network Science, and Brain Stimulation
Moss Rehabilitation Research Institute

2014 Neuroplasticity and the Injured Brain: Working Memory Function and Failure
Louisiana State University Department of Psychology

2013 Neuroplasticity in Working Memory: Representation and Cognitive Remediation
The University of Pennsylvania/Moss Rehabilitation Research Institute

Neuroplasticity in Traumatic Brain Injury: from Networks to Cognitive Repair
The University of Pennsylvania/Moss Rehabilitation Research Institute

Dismantling Working Memory Representation in the Brain Using Exogenous Stimulation Approaches
The Medical University of South Carolina

2009-2013 The Cerebellum and Cognition
Extended Unified Structural Equation Modeling and Group Iterative Multiple Model Estimation
Preprocessing, First, and Second Level Analytics for fMRI
The Pennsylvania State University

NATIONAL PROFESSIONAL COMMITTEES & LEADERSHIP

2018-Current Neuroscience Liaison
Continuing Education Task Force
Society for a Science of Clinical Psychology (SSCP) &
Coalition for the Advancement and Application of Psychological Science (CAAPS)

2018 Scientific Review Committee Member
2nd International Neuroergonomics Conference, Philadelphia, PA

UNIVERSITY ACADEMIC SERVICE, COMMITTEES, AND OUTREACH

2018-Current **Founder & Faculty Sponsor**
Power, Privilege, and Professional Psychology Series
A discussion series about current issues in professional development in psychology and how to develop a more equitable field.
Drexel University & the Greater Philadelphia Area

2018-Current **Co-Chair**
Drexel Neuroimaging Initiative
A committee to form a campus-wide interdisciplinary community and develop neuroimaging infrastructure.
Drexel University

2018-Current **Faculty Chair**
Academic Resource Planning Committee
(1) Develop transparent analytic tools to evaluate academic program quality, cost, and demand, including, but not limited to, data on program-level revenues and expenses. (2) Recommend best practices for utilizing such performance metrics to drive resource allocation (and re-allocation) within an RCM framework.
Drexel University

2018 **Research Supervisor**
Ahmad Alsibai, M.D.
Neurology Research Elective
Drexel Neurosciences Institute
Drexel University

2017-Current **Dissertation & Thesis Committees**
Alexandra Muratore (Ph.D. in Clinical Psychology)
Victoria Grunberg (Ph.D. in Clinical Psychology)
Ann-Marie Raphail (Ph.D. in Clinical Psychology/Neuropsychology)
Drexel University

Weiyu Huang (Ph.D. in Electrical and Systems Engineering)
Kevin Bui (Ph.D. in Biomedical Engineering)
Catherine Norise (M.S. in Translational Research)
University of Pennsylvania

2016-2017 Organizing Committee for the Interdisciplinary Mind/Brain seminar series
University of Pennsylvania

CLINICAL EXPERIENCE

2013-2014 Predoctoral Neuropsychology Intern
The Medical University of South Carolina
Department of Psychiatry
Rotations: VA Neuropsychology
MUSC Neuropsychology
Cognitive Behavioral Therapy
Behavioral Medicine

2012 Clinical Rotation: Acute Stroke and Rehabilitation
Hershey Medical Center

2010-2012 Clinical Assistant
The Pennsylvania State University
Rotation: Personality Disorders

2009-2013 Staff Therapist
The Pennsylvania State University
Rotations: Neuropsychology
Cognitive Behavioral Therapy
Psychodynamic Psychotherapy

RESEARCH POSITIONS

2007-2008 Research Coordinator
Drexel University

2008 Research Assistant
Drexel University

2006 - 2007 Research Intern
The School District of Philadelphia

Summer 2007 Research Fellowship
Drexel University

OTHER FUNDING

2008-2013 Travel Awards
Awarded by Pennsylvania State University and the Bruce V. Moore Fund
Value: $2650

2008 Psychology Senior Research Award
Awarded by Drexel University, Department of Psychology
Value: $200

2007 Travel Awards
Awarded by Drexel University, Department of Psychology.
Value: $800

2006 Johnston Scholarship Award in Psychology
Awarded by Drexel University, Department of Psychology.
Value: $1635

2006, 2007 Alice Troth Drexel Scholarship
Awarded by Drexel University
Value: $5000

AFFILIATIONS

Member, Association for Psychological Science (2018-)
Member, American Academy of Neurology (2015-)
Member, Cognitive Neuroscience Society (2015-)
Member, Society for Neuroscience (2012-)
Member, International Neuropsychological Society (2010-)

PEER REVIEW ACTIVITIES

Ad hoc reviewer for: *Behavioural Brain Research; Brain; Brain & Language; Brain Imaging and Behavior; Brain Injury; Brain Structure and Function; Biological Psychiatry; Brain Research; Cortex; Cerebral Cortex; Frontiers in Human Neuroscience; Human Brain Mapping; Journal of Cognitive Neuroscience; Journal of Complex Networks; Nature Communications; Network Neuroscience; NeuroImage; Neurology; PLOS Computational Biology; Psychopathology and Behavioral Assessment; Psychophysiology; Restorative Neurology and Neuroscience; Psychoneuroendocrinology; Scientific Reports; The Journal of Neuroscience*