Theresa **Jones**

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Publications

Journal Articles

1. Engelmann, S. A., Zhou, A., Hassan, A. M., Williamson, M. R., Jarrett, J. W., Perillo, E. P., Tomar, A., Spence, D. J., Jones, T. A., & Dunn, A. K. (2022). Diamond raman laser and yb fiber amplifier for in vivo multiphoton fluorescence microscopy. *Biomedical Optics Express*, *13*(4), 1888. https://doi.org/10.1364/boe.448978
2. Mihelic, S. A., Sikora, W. A., Hassan, A. M., Williamson, M. R., Jones, T. A., & Dunn, A. K. (2021). Segmentation-less, automated, vascular vectorization. *PLOS Computational Biology*, *17*(10), e1009451. https://doi.org/10.1371/journal.pcbi.1009451
3. Williamson, M. R., Fuertes, C. J. A., Dunn, A. K., Drew, M. R., & Jones, T. A. (2021). Reactive astrocytes facilitate vascular repair and remodeling after stroke. *Cell Reports*, *35*(4), 109048. https://doi.org/10.1016/j.celrep.2021.109048
4. Hirsch, T., Barthel, M., Aarts, P., Chen, Y.-A., Freivogel, S., Johnson, M. J., Jones, T. A., Jongsma, M. L. A., Maier, M., Punt, D., Sterr, A., Wolf, S. L., & Heise, K.-F. (2021). A first step toward the operationalization of the learned non-use phenomenon: A delphi study. *Neurorehabilitation and Neural Repair*, *35*(5), 383–392. https://doi.org/10.1177/1545968321999064
5. Williamson, M. R., Franzen, R. L., Fuertes, C. J. A., Dunn, A. K., Drew, M. R., & Jones, T. A. (2020). A window of vascular plasticity coupled to behavioral recovery after stroke. *The Journal of Neuroscience*, *40*(40), 7651–7667. https://doi.org/10.1523/jneurosci.1464-20.2020
6. Dutcher, A. M., Truong, K. V., Miller, D. D., Allred, R. P., Nudi, E., & Jones, T. A. (2020). Training in a cooperative bimanual skilled reaching task, the popcorn retrieval task, improves unimanual function after motor cortical infarcts in rats. *Behavioural Brain Research*, *396*, 112900. https://doi.org/10.1016/j.bbr.2020.112900
7. He, F., Sullender, C. T., Zhu, H., Williamson, M. R., Li, X., Zhao, Z., Jones, T. A., Xie, C., Dunn, A. K., & Luan, L. (2020). Multimodal mapping of neural activity and cerebral blood flow reveals long-lasting neurovascular dissociations after small-scale strokes. *Science Advances*, *6*(21). https://doi.org/10.1126/sciadv.aba1933
8. Estrada-Bonilla, Y. C., Souza-Tomé, P. A. C. de, Faturi, F. M., Mendes-Zambetta, R., Lepesteur-Gianlorenço, A. C., Croti, G., Jones, T. A., & Russo, T. L. (2020). Compensatory neuromuscular junction adaptations of forelimb muscles in focal cortical ischemia in rats. *Brain and Behavior*, *10*(3). https://doi.org/10.1002/brb3.1472

Preprints

1. Williamson, M. R., Le, S. P., Franzen, R. L., Donlan, N. A., Rosow, J. L., Dunn, A. K., Jones, T. A., & Drew, M. R. (2022). *Subventricular zone cytogenesis provides trophic support for neural repair*. https://doi.org/10.1101/2022.06.14.496078
2. Engelmann, S. A., Zhou, A., Hassan, A. M., Williamson, M. R., Jarrett, J. W., Perillo, E. P., Spence, D. J., Jones, T. A., & Dunn, A. K. (2021). *Diamond raman laser and yb fiber amplifier for in vivo multiphoton fluorescence microscopy*. https://doi.org/10.1101/2021.10.20.464141
3. Mihelic, S. A., Sikora, W. A., Hassan, A. M., Williamson, M. R., Jones, T. A., & Dunn, A. K. (2020). *Segmentation-less, automated vascular vectorization robustly extracts neurovascular network statistics from in vivo two-photon images*. https://doi.org/10.1101/2020.06.15.151076
4. He, F., Sullender, C., Zhu, H., Williamson, M. R., Li, X., Zhao, Z., Jones, T. A., Xie, C., Dunn, A. K., & Luan, L. (2020). *Multimodal mapping of neural activity and cerebral blood flow reveals long-lasting neurovascular dissociations after small-scale strokes*. https://doi.org/10.1101/2020.03.04.977322
5. Hirsch, T., Barthel, M., Aarts, P., Chen, Y.-A., Freivogel, S., Johnson, M. J., Jones, T. A., Jongsma, M. L. A., Maier, M., Punt, D., Sterr, A., Wolf, S. L., & Heise, K.-F. (2020). *Operationalization of the learned non-use phenomenon - a delphi study*. https://doi.org/10.1101/2020.03.18.20037374

Books

Book Chapters

Professional Presentations

Basic Science, Lessons Learned: Lab Leaders & Management Symposium

American Society for Neurorehabilitation *2022*

Brain Reoganization after stroke- Learning to drive it in optimal directions

9th Annual International Regenerative Rehabilitation Symposium *2022*

Experience-driven competition in brain reorganization after stroke – Insights from rodent models

American Society for Neurorehabiliation 2022 *2022*

Changing behavior to shape brain reorganization after stroke

West Virginia University *2021*

Experience-driven competition in neural reorganization after stroke

University of Alberta *2021*

How brain reorganization is shaped by behavioral compensation

University of Alberta *2021*

Conference Abstracts

Bimanual training improves unimanual task performance after motor cortical infarcts in mice

Socieity for Neuroscience *2022*

Bimanual vs unimanual rehabilitative training: patterns of activity-dependent structural plasticity after stroke

Society for Neuroscience *2022*

Subventricular zone cytogenesis is a source of trophic support for neural repair after stroke

Society for Neuroscience *2022*

Poststroke vascular repair and remodeling are facilitated by reactive astrocytes

American Society for Neurorehabilitation *2021*

Age-related diminishment of subventricular zone cytogenic response and its contribution to motor recovery after cortical infarcts

. International Stroke Conference *2020*

Honors

Funding

NEURAL MECHANISMS OF COMPENSATING FOR BRAIN DAMAGE

National Institute of Neurological Disorders and Stroke, R37NS056839

Funding: $1,903,816

2007 - 2025

Sex-Dependent Aging Effects on Cortical Reorganization after Stroke

National Institute of Neurological Disorders and Stroke, R21NS101564

Funding: $417,653

2017 - 2020

Service

Stroke (journal) American Heart Association

Dallas, DK

Consulting Editor

2020 - present

NIH

Bethesda, US

Reviewer

2004 - present

Editorial Boards:Behavioral Neuroscience, Frontiers in Behavioral Neuroscience Frontiers in Systems Neuroscience, Neural Plasticity, Restorative Neurology and Neuroscience

Zona Incerta, KW

2001 - present

Mentoring and Teaching

Mentoring

Michela Fracassi

Dissertation Supervisor *2022 - present*

Victoria Nemchek

Dissertation Supervisor *2021 - present*

Michael Williamson

Dissertation Supervisor *2016 - 2022*

Michela Fracassi

INS program grad rotation mentor *2021 - 2021*

Evan Nudi

Dissertation Supervisor *2014 - 2021*

Bryan Barksdale

MD/PhD program - Dissertation Supervisor *2015 - 2020*

Teaching

PSY394P/NEU 385L Quantifying Brain Structure

Instructor *2022 - 2022*

PSY359H&PSY379H Honors Research I & II (2 course series)

instructor *2021 - 2021*

PSY332P Neural Plasticity & Behavior

instructor *2020 - 2020*

PSY/NEU 394P Adv in Neural Plasticity & Behavior

instsructor *2020 - 2020*

PSY379H Honors Research I&II (2 semester series)

instructor *2019 - 2020*