

# Kathleen E. Hupfeld

POSTDOCTORAL FELLOW · JOHNS HOPKINS SCHOOL OF MEDICINE · FORBES 30 UNDER 30

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## Education

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### Postdoctoral Fellow

JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE  
• Department of Radiology and Radiological Sciences  
• Advisor: Richard Edden, PhD

*Baltimore, MD*  
2022-present

### PhD in Health and Human Performance

UNIVERSITY OF FLORIDA  
• Concentration: Biobehavioral Sciences - Motor Control and Learning  
• GPA: 4.00; Advisor: Rachael Seidler, PhD  
• Thesis: Brain metabolite and structural correlates of mobility in aging

*Gainesville, FL*  
2021

### B.S. in Exercise Science, Neuroscience Minor

ELON UNIVERSITY  
• GPA: 3.99 (summa cum laude)  
• Advisor: Caroline Ketcham, PhD  
• Honors thesis: The effects of transcranial direct current stimulation (tDCS) on motor behaviors  
• Study abroad: Curtin University, Perth, Western Australia (Fall 2014); International Studies in Ghana (Winter 2014); Science Education and Development in India (Winter 2015)

*Elon, NC*  
2016

## Research Fellowships

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### NIH/NIA: F99/K00 Transition to Aging Research Award

FELLOWSHIP RECIPIENT | F99AG068440 | K00AG068440  
• F99: \$83,994 total, 2 years; selected as 1 of 9 students nationally  
• K00: ~\$296,000 total, 4 years

*Baltimore, MD*  
F99: 2020-2022

### Phi Kappa Phi Dissertation Fellowship

FELLOWSHIP RECIPIENT  
• \$10,000 towards graduate study; selected as 1 of 10 students nationally

*Gainesville, FL*  
2021

### T32 Interdisciplinary Training in Movement Disorders

FUNDED TRAINEE | T32NS082128  
• \$26,316 stipend, plus full tuition, 1 year

*Gainesville, FL*  
2019-2020

### NSF Graduate Research Fellowship

FELLOW | DGE-1315138, DGE-1842473  
• ~\$144,000 total, 3 years; ~12% acceptance rate nationally

*Gainesville, FL*  
2016-2020

### Phi Kappa Phi Marcus L. Urann Fellowship

FELLOWSHIP RECIPIENT  
• \$15,000 towards graduate study; selected as 1 of 6 students nationally

*Gainesville, FL*  
2016

### Olin Fellowship for Women in Graduate Study

FELLOWSHIP RECIPIENT  
• ~\$140,000 total, 4 years; declined in favor of NSF GRFP

*St. Louis, MO*  
2016

### Elon University Lumen Fellow

FELLOW  
• \$15,000 research and travel funding; selected as 1 of 15 students university-wide

*Elon, NC*  
2014-2016

### Elon University Kenan Scholar

SCHOLARSHIP RECIPIENT  
• ~\$120,000 total, 4 years: full tuition for undergraduate study  
• Sole recipient among the Elon University Class of 2016

*Elon, NC*  
2012-2016

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Estimated Total Fellowship Awards: **\$850,310**

## Publications

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**15 first author; 17 coauthor; (6 under review)**

\*Undergraduate and post-bac mentees; †Co-first authorship

34. Song Y, **Hupfeld KE**, Davies-Jenkins CW, Zöllner HJ, Murali-Manohar S, Abdul-Nashirudeen M, Crocetti D, Yedavalli V, Oeltzschner G, Alessi N, Batschelett MA, Puts NAJ, Mostofsky SH, Edden RAE. (2024). Brain glutathione and GABA+ levels in autistic children. *Autism Research*.
33. **Hupfeld KE**, Zöllner HJ, Hui SCN, Song Y, Murali-Manohar S, Yedavalli V, Oeltzschner G, Prisciandaro JJ, Edden RAE. (2023). Impact of acquisition and modeling parameters on test-retest reproducibility of edited GABA+. *NMR in Biomedicine*. e5076.
32. Gudmundson AT, Davies-Jenkins CW, Özdemir I, Murali-Manohar S, Zöllner HJ, Song Y, **Hupfeld KE**, Schnitzler A, Oeltzschner G, Stark CEL, Edden RAE. (2023). Application of a 1H Brain MRS Benchmark Dataset to Deep Learning for Out-of-Voxel Artifacts. *Imaging Neuroscience*. 1:1-15.
31. Hui SCN, Zöllner HJ, Gong T, **Hupfeld KE**, Gudmundson AT, Murali-Manohar S, Davies-Jenkins CW, Song Y, Chen Y, Oeltzschner G, Wang G, Edden RAE. (2023). sLASER and PRESS perform similarly at revealing metabolite-age correlations at 3 T. *Magnetic Resonance in Medicine*. 91(2):431-442.
30. McGregor HR, **Hupfeld KE**, Pasternak O, Beltran NE, De Dios YE, Bloomberg JJ, Wood SJ, Mulavara AP, Riascos RF, Reuter-Lorenz PA, Seidler RD. (2023). Impacts of spaceflight experience on human brain structure. *Scientific Reports*, 13:7878.
29. Tays GD, **Hupfeld KE**, McGregor HR, Beltran NE, Kofman IS, De Dios YE, Mulder ER, Bloomberg JJ, Mulavara AP, Wood SJ, Seidler RD. (2023). Daily artificial gravity is associated with greater neural efficiency during sensorimotor adaptation. *Cerebral Cortex*, 33(12):8011–8023.
28. Fettrow TF, **Hupfeld KE**, Hass CJ, Pasternak O, Seidler RD. (2023). Neural correlates of gait adaptation in younger and older adults. *Scientific Reports*, 13:3842.
27. **Hupfeld KE**, Zöllner HJ, Oeltzschner G, Hyatt HW, Herrmann O, Gallegos J, Hui SCN, Harris AD, Edden RAE, Tsapkini K. (2022). Brain total creatine differs between Primary Progressive Aphasia (PPA) subtypes and correlates with disease severity. *Neurobiology of Aging*, 122:65-75.
26. Gong T, Hui SCN, Zöllner HJ, Britton M, Song Y, Chen Y, Gudmundson AT, **Hupfeld KE**, Davies-Jenkins CW, Murali-Manohar S, Porges EC, Oeltzschner G, Chen W, Guangbin W, Edden RAE. (2022). Neurometabolic timecourse of healthy aging. *NeuroImage*, 264(1):119740.
25. **Hupfeld KE**, Hass CJ, Pasternak O, Seidler RD. (2022). Sensory-specific associations between brain structure and balance. *Neurobiology of Aging*, 119:102-116.
24. Song Y, Zöllner HJ, Hui SCN, **Hupfeld KE**, Oeltzschner G, Edden RAE. (2022). Impact of gradient scheme and shimming on out-of-voxel echo artifacts in edited MRS. *NMR in Biomedicine*, e4839.
23. Song Y, Zöllner HJ, Hui SCN, **Hupfeld KE**, Oeltzschner G, Prisciandaro JJ, Edden RAE. (2022). Importance of linear combination modeling for quantification of glutathione and  $\gamma$ -aminobutyric acid levels using Hadamard-edited magnetic resonance spectroscopy. *Frontiers in Psychiatry*, 13(1664-0640).
22. Salazar AP, McGregor HR, **Hupfeld KE**, Beltran NE, Kofman IS, De Dios YE, Riascos RF, Reuter-Lorenz PA, Bloomberg JJ, Mulavara AP, Wood SJ, Seidler RD. (2022). Changes in working memory brain activity and task-based connectivity after long-duration spaceflight. *Cerebral Cortex*, bhac232.
21. **Hupfeld KE**<sup>†</sup>, Richmond SB<sup>†</sup>, McGregor HR, Schwartz DL, Luther MN, Beltran NE, Kofman IS, De Dios YE, Riascos RF, Wood SJ, Bloomberg JJ, Mulavara AP, Silbert LC, Iliff JJ, Seidler RD, Piantino

- J. (2022). Longitudinal MRI-visible perivascular space (PVS) changes with long-duration spaceflight. *Scientific Reports*, 12(1):1–13.
20. **Hupfeld KE**, Geraghty J\*, McGregor HR, Hass CJ, Pasternak O, Seidler RD. (2022). Differential relationships between brain structure and dual task walking in young and older adults. *Frontiers in Aging Neuroscience*, 14:809281.
  19. **Hupfeld KE**, McGregor HR, Koppelmans V, Beltran NE, Kofman IS, De Dios YE, Riascos RF, Reuter-Lorenz PA, Wood SJ, Bloomberg JJ, Mulavara AP, Seidler RD. (2021). Brain and behavioral evidence for reweighting of vestibular inputs with long-duration spaceflight. *Cerebral Cortex*, bhab239.
  18. McGregor HR, **Hupfeld KE**, Pasternak O, Wood SJ, Mulavara AP, Bloomberg JJ, Hague NT, Seidler RD. (2021). Case report: No evidence of brain changes or fluid shifts in an astronaut following an aborted launch. *Frontiers in Neurology: Applied Neuroimaging*, 12:2296.
  17. Fettrow TF, **Hupfeld KE**, Reimann H, Choi J, Hass CJ, Seidler RD. (2021). Age differences in adaptation of medial-lateral gait parameters during split-belt treadmill walking. *Scientific Reports*, 11(1):1–17.
  16. Tays GD, **Hupfeld KE**, McGregor HR, Salazar AP, De Dios YE, Beltran NE, Reuter-Lorenz PA, Wood SJ, Bloomberg JJ, Mulavara AP, Seidler RD. (2021). The effects of long-duration spaceflight on cognition and sensorimotor control. *Frontiers in Neural Circuits*, 15:110.
  15. Russo M, Engelhard N, **Hupfeld KE**, Thibault S, Nettekoven C, Nejad ES, Buchwald D, Xing D, Zobieri O, Kilteni K, Albert S, Ariani G. (2021). Highlights from the 30th Annual Meeting of the Society for the Neural Control of Movement. *Invited contribution; Journal of Neurophysiology*. 126:967–975.
  14. Mahadevan A\*, **Hupfeld KE**, Lee JK, De Dios YE, Kofman IS, Beltran NE, Mulder E, Bloomberg JJ, Mulavara AP, Seidler RD. (2021). Head-down-tilt bed rest with elevated CO<sub>2</sub>: Effects of a pilot spaceflight analog on neural function and performance during a cognitive-motor dual task. *Frontiers in Physiology*, 12:654906.
  13. Fettrow T, **Hupfeld KE**, Tays G, Clark DJ, Reuter-Lorenz PA, Seidler RD. (2021). Brain activity during walking in older adults: Implications for compensatory versus dysfunctional accounts. *Neurobiology of Aging*, 105:349–364.
  12. Salazar AP, **Hupfeld KE**, Lee JK, Banker LA, Tays GT, Beltran NE, Kofman IS, De Dios YE, Mulder E, Bloomberg JJ, Mulavara AP, Seidler RD. (2021). Visuomotor adaptation brain changes during a spaceflight analog with elevated carbon dioxide (CO<sub>2</sub>): A pilot study. *Frontiers in Neural Circuits*, 15:51. *Selected for Editor's Pick 2021 Collection*.
  11. **Hupfeld KE**, Hyatt HW, Alvarez Jerez P\*, Mikkelsen M, Hass CJ, Edden RAE, Seidler RD, Porges EC. (2021). *In vivo* brain glutathione is higher in older age and correlates with mobility. *Cerebral Cortex*, 31(10):4576–4594.
  10. **Hupfeld KE**, McGregor HR, Reuter-Lorenz PA, Seidler RD. (2021). Microgravity effects on the human brain: Adaptive plasticity and dysfunction. *Neuroscience and Biobehavioral Reviews*, 122:176–189.
  9. **Hupfeld KE**, Swanson C, Fling BW, Seidler RD. (2020). TMS-induced silent periods: A review of methods and call for consistency. *Journal of Neuroscience Methods*, 346:108950.
  8. **Hupfeld KE**, McGregor HR, Lee JK, Beltran NE, Kofman IS, De Dios YE, Reuter-Lorenz PA, Riascos R, Pasternak O, Wood SJ, Bloomberg JJ, Mulavara AP, Seidler RD. (2020). The impact of 6 and 12 months in space on human brain structure and intracranial fluid shifts. *Cerebral Cortex Communications*, 1(1):tgaa023
  7. Salazar AP, **Hupfeld KE**, Lee JK, Beltran NE, Kofman IS, De Dios YE, Mulder E, Bloomberg JJ, Mulavara AP, Seidler RD. (2020). Neural working memory changes during a spaceflight analog with elevated

carbon dioxide: A pilot study. *Frontiers in Systems Neuroscience*, 14:48.

6. **Hupfeld KE**, Lee JK, Gadd NE, Kofman IS, De Dios YE, Bloomberg JJ, Mulavara AP, Seidler RD. (2020). Neural correlates of vestibular processing during a spaceflight analog with elevated carbon dioxide (CO<sub>2</sub>): A pilot study. *Frontiers in Systems Neuroscience*, 13:80.
5. **Hupfeld KE**, Abagis TR, Shah P. (2019). Living “in the zone”: Hyperfocus in adult ADHD. *ADHD Attention Deficit and Hyperactivity Disorders*, 11(2): 191–208.
4. **Hupfeld KE**, Vaillancourt DE, Seidler RD. (2018). Genetic markers of dopaminergic transmission predict performance for older males but not females. *Neurobiology of Aging*, 66: 180–e11.
3. **Hupfeld KE**, Ketcham CJ, Schneider HD. (2017). Transcranial direct current stimulation (tDCS) to the supplementary motor area (SMA) influences performance on motor tasks. *Experimental Brain Research*, 235(3): 851–859.
2. **Hupfeld KE**, Ketcham CJ, Schneider HD. (2017). Transcranial direct current stimulation (tDCS) to Broca’s area: Persisting effects on non-verbal motor behaviors. *Neurological Disorders and Therapeutics*, 1(1): 1–5.
1. **Hupfeld KE**, Ketcham CJ. (2016). Behavioral effects of transcranial direct current stimulation on motor and language planning in minimally verbal children with autism spectrum disorder (ASD): feasibility, limitations and future directions. *Journal of Childhood and Developmental Disorders*, 2(10.4172): 2472–1786.

## Manuscripts Under Review and In Preparation \_\_\_\_\_

### Under Review

7. Hui SCN, Murali-Manohar S, Zöllner HJ, **Hupfeld KE**, Davies-Jenkins CW, Gudmundson AT, Song Y, Yedavalli V, Wisnowski JL, Gagoski B, Oeltzschner G, Edden RAE. (*under review at Magnetic Resonance in Medicine*). Integrated Short-TE and Hadamard-edited Multi-Sequence (ISTHMUS) for Advanced MRS.
6. Tays GT, **Hupfeld KE**, McGregor HR, Beltran NE, De Dios YE, Mulder E, Bloomberg JJ, Mulavara AP, Wood SJ, Seidler RD. (*under review at npj Microgravity*). Daily artificial gravity partially mitigates vestibular processing changes associated with head-down tilt bed rest. 10.21203/rs.3.rs-3157785/v1
5. Davies-Jenkins CW, Zöllner HJ, Simicic D, **Hupfeld KE**, Hui SCN, Song Y, Edden RAE, Oeltzschner G. (*under review at Magnetic Resonance in Medicine*). GABA-edited MEGA-PRESS at 3T: Does a measured MM background improve linear combination modeling?.
4. Davies-Jenkins CW, **Hupfeld KE**, Zöllner HJ, Leoutsakos JM, Kraut MA, Barker PB, Workman CI, Smith GS, Oeltzschner G. (*under review at Neurobiology of Aging*). Multimodal investigation of neuropathology and neurometabolites in mild cognitive impairment and late-life depression with <sup>11</sup>C-PiB beta-amyloid PET and 7T magnetic resonance spectroscopy.
3. Wang T, Fettrow TD, **Hupfeld KE**, McGregor HR, Bloomberg JJ, Wood SJ, Mulavara AP, De Dios YE, Beltran NE, Reuter-Lorenz PA, Seidler RD. (*under review at Journal of Neuroscience*). Predicted brain age increases with six months of human spaceflight.
2. Murali-Manohar S, Gudmundson AT, **Hupfeld KE**, Zöllner HJ, Hui SCN, Song Y, Davies-Jenkins CW, Gong T, Wang G, Oeltzschner G, Edden RAE. (*under review at Magnetic Resonance in Medicine*). Metabolite T1 relaxation times decrease across the adult lifespan. <https://doi.org/10.1101/2023.01.06.522927>

1. McGregor HR, **Hupfeld KE**, Pasternak O, Smith SM, Zwart SR, Beltran NE, De Dios YE, Bloomberg JJ, Wood SJ, Mulavara AP, Riascos RF, Reuter-Lorenz PA, Seidler RD. (*under review at Cerebral Cortex*). Spaceflight-induced brain changes are not associated with astronaut age, sex, or SANS.

### **In Preparation**

2. **Hupfeld KE**, Zöllner HJ, Song Y, Carter EE, Murali-Manohar S, Gudmundson AT, Hui SCN, Yedavalli V, Oeltzschner G, Porges EC, Edden RAE. (*in prep; full draft available*). Metabolite T2 relaxation times decrease across the adult lifespan in a large multi-site cohort.
1. **Hupfeld KE**, Osborne JA, Tran QT, Hyatt HW, Abagis TR, Shah P. (*in prep; full draft available*). Validation of the Dispositional Adult Hyperfocus Questionnaire (AHQ-D).

## **Published Commentary**

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1. **Hupfeld KE**, McGregor HR, Reuter-Lorenz PA, Seidler RD. (2020). RE: Macro- and microstructural changes in cosmonauts' brains after long duration spaceflight. *Science Advances*.

## **Popular Media Writing**

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\* Undergraduate mentee

### **Books**

1. Wisner SA (book author), Lee P (lead developmental editor), **Hupfeld KE** (lead scientific editor), and others. (2022). Building Backwards to Biotech: How entrepreneurship can drive cutting-edge science from bench to bedside. *New Degree Press*.

### **Articles**

5. **Hupfeld KE**, McGregor HR, Tays GD, Seidler RD. (2023). What happens to astronauts' brains when they travel to space?. *Frontiers for Young Minds*. doi: 10.3389/frym.2023.918925
4. **Hupfeld KE**. (27 January 2022). Others helped me become a scientist. Now, I'm paying it forward. *Science*. Working Life Section. <https://www.science.org/content/article/others-helped-me-become-scientist-now-i-m-paying-it-forward>
3. **Hupfeld KE**, Abagis TR, Osborne JB, Tran Q\*, Shah P. (2022). Hyperfocus: The ADHD Superpower. *Frontiers for Young Minds*. doi:10.3389/frym.2021.625433
2. **Hupfeld KE**, Seidler RD. (March 2020). Don't fret about aging: Benefits of music for the aging brain. *New Horizons International Music Association Biannual Newsletter (invited contribution)*.
1. **Hupfeld KE**. (June 2017). Cliff notes on a top attraction of Ireland's scenic Western coast. *The Washington Post*. Travel Section.

## **Research Awards**

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\* Awarded to undergraduate mentee

2021	<b>Cluff Aging Research Award</b> , UF Institute for Learning in Retirement	\$1,500
2020	<b>Toffler Leadership Award</b> , University of Florida McKnight Brain Institute	\$1,500
2019	<b>University Scholars Program*</b> , University of Florida	\$1,750
2018	<b>Preregistration Challenge Award</b> , Center for Open Science	\$1,000
2018	<b>Rackham Training Grant</b> , University of Michigan	\$200
2018	<b>Rackham Student Research Grant</b> , University of Michigan	\$1,500
2015	<b>Summer Undergraduate Research Experience Award</b> , Elon University	\$3,000
2015	<b>Honors Fellows Research Grant</b> , Elon University	\$1,000

## Travel Support

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2021	<b>Office of Research Travel Award</b> , University of Florida	\$400
2020	<b>Graduate Student Council Travel Grant</b> , University of Florida	\$350
2019	<b>Office of Research Travel Award</b> , University of Florida	\$400
2018	<b>Graduate Student Council Travel Grant</b> , University of Florida	\$350
2018	<b>Trainee Professional Development Award</b> , Society for Neuroscience	\$1,000
2018	<b>Society for Neuroscience Travel Award</b> , North Central FL Chapter, SfN	\$1,000
2017	<b>Graduate Student Council Travel Grant</b> , University of Florida	\$350
2017	<b>Rackham Conference Travel Grant</b> , University of Michigan	\$350
2012	<b>Kenan Scholar Study Abroad Grant</b> , Elon University	\$3,000

## Honors and Awards

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2023	<b>Forbes 30 Under 30 - Science List</b> , Forbes	
2021	<b>Allen-Holyoak-Varnes Scholarship</b> , University of Florida	\$2,000
2021	<b>Trainee Award</b> , Society for the Neural Control of Movement	
2021	<b>Graduate School Mentoring Award</b> , University of Florida	\$500
2020	<b>Dr. Patrick J. Bird Dissertation Scholarship</b> , University of Florida	\$2,000
2020	<b>Assoc. for Academic Women Emerging Scholar</b> , University of Florida	\$1,000
2019	<b>Thomas F. Hayes IV Memorial Scholarship</b> , University of Florida	\$1,000
2018	<b>Dr. Christian W. Zauner Scholarship</b> , University of Florida	\$1,500
2016	<b>Exercise Science Major of the Year</b> , Elon University	
2016	<b>Provost Scholar</b> , Elon University	
2015	<b>Powell Scholar</b> , Elon University	
2015	<b>Trey Halker Memorial Scholarship</b> , Elon University	\$1,500
2012-15	<b>Academic Scholarship</b> , GEBA Foundation (4-time winner)	\$10,000
2012-15	<b>Academic Scholarship</b> , Credit Union Foundation MD-DC (3-time winner)	\$4,000
2012	<b>Academic Scholarship</b> , St. Paul Scholarship Fund	\$1,000
2011	<b>Academic Scholarship</b> , Wellesley College Book Award	\$500
2011	<b>AP Scholar Award</b> , AP Scholar with Distinction	
2011	<b>National Merit Scholarship</b> , Commended Student	

Total Awards: **\$43,650**

### Honor Societies:

2016	<b>Phi Beta Kappa</b>
2015	<b>Psi Chi National Honor Society in Psychology</b>
2015	<b>Kappa Omicron Nu Honor Society for the Human Sciences</b>
2014	<b>Phi Kappa Phi</b>
2013	<b>Phi Eta Sigma</b> , Elon University Chapter Vice President

## Invited Talks

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4. **Hupfeld KE**, Porges EC, Seidler RD. (May 2020). Neurochemical correlates of mobility in aging. *University of Florida Cognition and Emotion Neuroscience Seminar*. Gainesville, FL.
3. **Hupfeld KE**, Porges EC, Hass CJ, Seidler RD. (Feb. 2020). Neurotransmitter markers of mobility declines in aging. *University of Florida Movement Disorders T32 Seminar*. Gainesville, FL.
2. **Hupfeld KE**, McGregor HR, Lee JK, Reuter-Lorenz PA, Riascos RF, Pasternak O, Bloomberg JJ, Mulavara AP, Seidler RD. (Feb. 2019). The impact of one year in space on human brain structure. *University of Florida Applied Physiology & Kinesiology Graduate Student Forum*. Gainesville, FL.
1. **Hupfeld KE** & Ketcham CJ. (April 2016). Motor matters in Autism Spectrum Disorders. *Durham-Orange-Chatham North Carolina Association for the Education of Young Children*. Durham, NC.

## Conference Presentations

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\* Undergraduate and post-bac mentees

### Oral Presentations

18. Edden RAE, Hui SCN, **Hupfeld KE**, Murali-Manohar S, Zöllner HJ, Song Y, Davies-Jenkins C, Gudmundson AT, Oeltzschner G. (Dec. 2022). Integrated short-TE and Hadamard-edited multi-sequence (ISTHMUS) for advanced MRS. *Australia & New Zealand Society for Magnetic Resonance*. Marysville, Victoria, Australia.
17. **Hupfeld KE**, Song Y, Zöllner HJ, Hui SCN, Oeltzschner G, Prisciandaro JJ, Edden RAE. (Nov. 2022). Factors affecting test-retest reproducibility of edited GABA+. *International Symposium on GABA and Advanced MRS*. Playa del Carmen, Mexico.
16. Song Y, Zöllner HJ, Hui SCN, **Hupfeld KE**, Oeltzschner G, Edden RAE. (Nov. 2022). Impact of gradient scheme and shimming on out-of-voxel echo artifacts in edited MRS. *International Symposium on GABA and Advanced MRS*. Playa del Carmen, Mexico.
15. Hui SCN, Gong T, Zöllner HJ, **Hupfeld KE**, Gudmundson AT, Song Y, Murali-Manohar S, Davies-Jenkins C, Oeltzschner G, Wang G, Edden RAE. (Nov. 2022). sLASER performed similarly to PRESS at revealing metabolite-age correlations. *International Symposium on GABA and Advanced MRS*. Playa del Carmen, Mexico.
14. Gudmundson A, **Hupfeld KE**, Song Y, Zöllner HJ, Davies-Jenkins C, Özdemir I, Oeltzschner G, Edden RAE. (Nov. 2022). Using Convolutional Neural Networks to detect and remove out-of-voxel MRS artefacts. *Johns Hopkins Radiology Research Day*. Baltimore, MD.
13. McGregor HR, **Hupfeld KE**, Pasternak O, Beltran NE, De Dios YE, Wood SJ, Bloomberg JJ, Riascos RF, Reuter-Lorenz PA, Seidler RD. (Feb. 2022). Individual differences in spaceflight-induced brain changes. *NASA Human Research Program Investigators' Workshop*. Conference held virtually due to COVID-19.
12. Richmond SB, **Hupfeld KE**, McGregor HR, Schwartz DL, Luther M, Beltran NE, Kofman IS, De Dios YE, Riascos RF, Wood SJ, Bloomberg JJ, Mulavara AP, Silbert LC, Iliff JJ, Seidler RD, Piantino J. (Feb. 2022). Effects of spaceflight on perivascular morphology. *NASA Human Research Program Investigators' Workshop*. Conference held virtually due to COVID-19.
11. Tays GD, **Hupfeld KE**, McGregor HR, Beltran NE, Kofman IS, De Dios YE, Wood SJ, Mulder ER, Bloomberg JJ, Mulavara AP, Seidler RD. (Feb. 2022). Artificial gravity affects basic motor control processes. *NASA Human Research Program Investigators' Workshop*. Conference held virtually due to COVID-19.
10. **Hupfeld KE**, Hyatt HW, Alvarez Jerez P, Mikkelsen M, Hass CJ, Edden RAE, Seidler RD, Porges EC. (Nov. 2021). *In vivo* brain glutathione is higher in older age and correlates with mobility. *International Symposium on GABA and Advanced MRS*. Playa Del Carmen, Mexico.
9. **Hupfeld KE**, McGregor HR, Koppelmans V, Beltran NE, Kofman IS, De Dios YE, Riascos RF, Reuter-Lorenz PA, Wood SJ, Bloomberg JJ, Mulavara AP, Seidler RD. (April 2021). Brain and behavioral evidence for reweighting of vestibular inputs with long-duration spaceflight. *Society for the Neural Control of Movement*. Conference held virtually due to COVID-19.
8. **Hupfeld KE**, McGregor HR, Koppelmans V, Beltran NE, Kofman IS, De Dios YE, Riascos RF, Reuter-Lorenz PA, Wood SJ, Bloomberg JJ, Seidler RD. (Feb. 2021). Neural bases of vestibular changes and recovery with long-duration spaceflight. *NASA Human Research Program Investigators' Workshop*. Conference held virtually due to COVID-19.
7. Salazar AP, **Hupfeld KE**, Lee JK, McGregor HR, Gadd NE, Kofman IS, De Dios YE, Mulder E, Bloomberg JJ, Mulavara AP, Seidler RD. (Jan. 2020). Neural spatial working memory changes during a spaceflight analog with elevated carbon dioxide. *NASA Human Research Program Investigators' Work-*

shop. Galveston, TX.

6. Seidler RD, Ruitenberg MFL, Cassady KE, **Hupfeld KE**. (June 2019). Age-related reductions in tactile and motor inhibitory function start early: Implications for gait and balance. *International Society of Posture and Gait Research*. Edinburgh, Scotland.
5. Lee JK, **Hupfeld KE**, Banker LB, Mahadevan A, De Dios YE, Kofman IS, Gadd NE, Bloombeg JJ, Seidler RD. (Jan. 2019). Bedrest combined with 0.5% CO<sub>2</sub> as a spaceflight analog to study neurocognitive changes: Extent, longevity, and neural bases. *NASA Human Research Program Investigators' Workshop*. Galveston, TX.
4. Seidler RD, Mulavara AP, Koppelmans V, Lee JK, **Hupfeld KE**, Banker LB, Kofman IS, De Dios YE, Gadd NE, Riascos RF, Bloombeg JJ. (Jan. 2019). Spaceflight effects on neurocognitive performance: Extent, longevity and neural bases. *NASA Human Research Program Investigators' Workshop*. Galveston, TX.
3. **Hupfeld KE** & Seidler RD. (May 2017). Association of BDNF and dopaminergic polymorphisms with memory and mobility in older adults. *Society for the Neural Control of Movement*. Dublin, Ireland.
2. **Hupfeld KE**, Ketcham CJ, Schneider HD. (June 2016). Transcranial direct current stimulation (tDCS) to Broca's area: Persisting effects on non-verbal motor behaviors. *American College of Sports Medicine Annual Meeting*. Boston, MA.
1. **Hupfeld KE**, Ketcham CJ, Schneider HD. (April 2016). Transcranial direct current stimulation (tDCS) to Broca's area: Persisting effects on non-verbal motor behaviors. *Elon University Spring Undergraduate Research Forum*. Elon, NC.

### **Poster Presentations**

39. Song Y, Hui SCN, **Hupfeld KE**, Murali-Manohar S, Zöllner HJ, Davies-Jenkins C, Oeltzschner G, Edden RAE. (May 2024). A water relaxometry atlas for tissue correction of MRS data. *ISMRM*. Singapore.
38. Gudmundson A, **Hupfeld KE**, Simegn G, Song Y, Zöllner HJ, Davies-Jenkins C, Özdemir I, Schar M, Oeltzschner G, Ganji S, Edden RAE. (May 2024). AI-integrated MRS scan identifies and updates scan parameters in the presence of OOV artifacts. *ISMRM*. Singapore.
37. Tays G, Fettrow TD, McGregor HR, **Hupfeld KE**, Beltran NE, De Dios YE, Wood SJ, Reuter-Lorenz PA, Mulavara AP, Bloomberg JJ, Seidler RD. (Feb. 2024). Functional brain network segregation predicts post-flight balance impairments. *NASA Human Research Program Investigators' Workshop*. Galveston, TX.
36. Tays G, **Hupfeld KE**, McGregor HR, Beltran NE, De Dios YE, Wood SJ, Reuter-Lorenz PA, Mulavara AP, Bloomberg JJ, Seidler RD. (Aug. 2023). Microgravity affects explicit visuomotor strategies and results in increased sensorimotor brain activation post-flight. *Military Health System Research Symposium*. Kissimmee, FL.
35. Tays GD, **Hupfeld KE**, McGregor HR, Beltran NE, De Dios YE, Wood SJ, Reuter-Lorenz PA, Bloomberg JJ, Seidler RD. (April 2023). Sensorimotor adaptation in microgravity requires increased neural resources to maintain performance. *Society for the Neural Control of Movement*. Victoria, Canada.
34. Gudmundson A, **Hupfeld KE**, Song Y, Zöllner HJ, Davies-Jenkins C, Özdemir I, Oeltzschner G, Edden RAE. (June 2023). Using Convolutional Neural Networks to detect and remove out-of-voxel MRS artefacts. *ISMRM*. Toronto, Canada.
33. Song Y, **Hupfeld KE**, Davies-Jenkins C, Zöllner HJ, Crocetti D, Hui SCN, Yedavalli V, Oeltzschner G, Alessi N, Puts NAJ, Batschelett MA, Mostofsky SH, Edden RAE. (June 2023). In vivo primary sensorimotor cortex glutathione does not differ in autistic children. *ISMRM*. Toronto, Canada.



32. Davies-Jenkins C, **Hupfeld KE**, Zöllner HJ, Smith GS, Oeltzschner G. (June 2023). Neuropathology and neurometabolites in mild cognitive impairment investigated with <sup>11</sup>C-PiB amyloid PET and 7T MRS. *ISMRM*. Toronto, Canada.
31. Murali-Manohar S, Gudmundson AT, **Hupfeld KE**, Zöllner HJ, Hui SCN, Song Y, Davies-Jenkins C, Gong T, Wang G, Oeltzschner G, Edden RAE. (June 2023). Metabolite T1 relaxation times differ across the adult lifespan. *ISMRM*. Toronto, Canada.
30. Hui SCN, Gong T, Zöllner HJ, **Hupfeld KE**, Gudmundson AT, Song Y, Murali-Manohar S, Davies-Jenkins C, Oeltzschner G, Wang G, Edden RAE. (June 2023). sLASER performed similarly to PRESS at revealing metabolite-age correlations. *ISMRM*. Toronto, Canada.
29. Tays G, **Hupfeld KE**, McGregor HR, Beltran NE, De Dios YE, Wood SJ, Reuter-Lorenz PA, Mulavara AP, Bloomberg JJ, Seidler RD. (Feb. 2023). Increased brain activation for sensorimotor adaptation post-flight. *NASA Human Research Program Investigators' Workshop*. Galveston, TX.
28. Hui SCN, **Hupfeld KE**, Murali-Manohar S, Zöllner HJ, Song Y, Davies-Jenkins C, Gudmundson AT, Oeltzschner G, Edden RAE. (Nov. 2022). Integrated short-TE and Hadamard-edited multi-sequence (ISTHMUS) for advanced MRS. *Johns Hopkins Radiology Research Day*. Baltimore, MD.
27. Murali-Manohar S, Gudmundson AT, **Hupfeld KE**, Zöllner HJ, Hui SCN, Song Y, Davies-Jenkins C, Gong T, Wang G, Oeltzschner G, Edden RAE. (June 2023). Metabolite T1 relaxation times differ across the adult lifespan. *Johns Hopkins Radiology Research Day*. Baltimore, MD.
26. Hui SCN, Gong T, Zöllner HJ, **Hupfeld KE**, Gudmundson AT, Song Y, Murali-Manohar S, Davies-Jenkins C, Oeltzschner G, Wang G, Edden RAE. (June 2023). sLASER performed similarly to PRESS at revealing metabolite-age correlations. *ISMRM*. Toronto, Canada.
25. Wang T, Fettrow TF, **Hupfeld KE**, Bloomberg JJ, Wood SJ, Mulavara AP, De Dios YE, Beltran NE, Reuter-Lorenz PA, Seidler RD. (Nov. 2022). Predicted brain age increases with human spaceflight and remains affected six months after return. *Society for Neuroscience*. San Diego, CA.
24. **Hupfeld KE**, Zöllner HJ, Oeltzschner G, Hyatt HW, Herrmann O, Gallegos J, Hui SCN, Harris AD, Edden RAE, Tsapkini K. (Oct. 2022). Brain total creatine differs between Primary Progressive Aphasia (PPA) subtypes and correlates with disease severity. *Society for the Neurobiology of Language*. Philadelphia, PA.
23. Tays GD, **Hupfeld KE**, McGregor HR, Beltran NE, Kofman IS, De Dios YE, Wood SJ, Mulder E, Bloomberg JJ, Mulavara AP, Seidler RD. (July 2022). Daily artificial gravity is associated with reduced brain activity during sensorimotor adaptation. *Society for the Neural Control of Movement*. Dublin, Ireland.
22. Gong T, Hui SCN, Zollner HJ, Britton M, Song Y, Gudmundson A, **Hupfeld KE**, Porges EC, Oeltzschner G, Guangbin W, Edden RAE. (May 2022). Metabolic timecourse of healthy aging. *International Society for Magnetic Resonance in Medicine*. London, UK.
21. Song Y, Zöllner HJ, Hui SCN, **Hupfeld KE**, Oeltzschner G, Edden RAE. (May 2022). Impact of gradient scheme and shimming on out-of-voxel echo artifacts in edited MRS. *International Society for Magnetic Resonance in Medicine*. London, UK.
20. Fettrow TF, **Hupfeld KE**, Reimann H, Choi J, Hass CJ, Seidler RD. (Nov. 2021). Age differences in adaptation of medial-lateral gait parameters during split-belt treadmill walking. *Society for Neuroscience*. Conference held virtually due to COVID-19.
19. Tays G, **Hupfeld KE**, McGregor HR, Salazar AP, De Dios YE, Beltran NE, Reuter-Lorenz PA, Kofman IS, Wood S, Bloomberg JJ, Mulavara AP, Seidler RD. (April 2021). Sensorimotor and cognitive changes as a result of long duration spaceflight. *Society for the Neural Control of Movement*. Conference held virtually due to COVID-19.

18. Salazar AP, **Hupfeld KE**, McGregor HR, Beltran NE, Kofman IS, De Dios YE, Wood S, Mulavara AP, Bloomberg JJ, Seidler RD. (June 2020). Neural spatial working memory changes during spaceflight. *Organization for Human Brain Mapping*. Conference held virtually due to COVID-19.
17. **Hupfeld KE**, Porges EC, Hass CJ, Seidler RD. (May 2020). Neurochemical correlates of gait coordination and adaptation. *Society for the Neural Control of Movement*. Conference cancelled due to COVID-19.
16. Geraghty JG\*, **Hupfeld KE**, Seidler RD. (Feb. 2020). Relationship of brain structure with cognitively-demanding walking in older adults. *University of Florida 2020 Virtual Research Symposium*. Gainesville, FL. Conference held online due to COVID-19.
15. Geraghty JG\*, **Hupfeld KE**, Seidler RD. (Feb. 2020). Neural predictors of cognitively-demanding walking performance in young and older adults. *Florida Undergraduate Research Conference*. Fort Myers, FL.
14. Mahadevan AD\*, **Hupfeld KE**, Lee JK, De Dios YE, Gadd NE, Bloomberg JJ, Mulavara AP, Seidler RD. (Oct. 2019). Functional neural changes in response to head-down tilt bedrest with elevated (CO<sub>2</sub>) during a sensorimotor dual task. *Society for Neuroscience*. Chicago, IL.
13. **Hupfeld KE**, Porges EC, Hass CJ, Seidler RD. (May 2019). Association of cortical inhibition with gait and balance. *Society for the Neural Control of Movement*. Toyama, Japan.
12. **Hupfeld KE**, Lee JK, Gadd NE, Kofman IS, De Dios YE, Riascos RF, Bloomberg JJ, Mulavara AP, Seidler RD. (Jan. 2019). The impact of one year in space on brain structure. *NASA Human Research Program Investigators' Workshop*. Galveston, TX.
11. **Hupfeld KE**, Lee JK, Gadd NE, Kofman IS, De Dios YE, Riascos RF, Bloomberg JJ, Mulavara AP, Seidler RD. (Nov. 2018). Neural correlates of vestibular processing during exposure to a spaceflight analog with elevated carbon dioxide. *Society for Neuroscience*. San Diego, CA.
10. **Hupfeld KE**, Koppelmans V, Lee JK, Gadd NE, Kofman IS, De Dios YE, Riascos RF, Bloomberg JJ, Mulavara AP, Seidler RD. (May 2018). Functional vestibular cortical changes with spaceflight. *Society for the Neural Control of Movement*. Santa Fe, NM.
9. **Hupfeld KE**, Koppelmans V, Lee JK, Gadd NE, Kofman IS, De Dios YE, Riascos RF, Bloomberg JJ, Mulavara AP, Seidler RD. (March 2018). Vestibular brain and behavioral changes with spaceflight. *North Florida Society for Neuroscience*. Gainesville, FL.
8. **Hupfeld KE**, Vaillancourt DE, Seidler RD. (Feb. 2018). Genetic markers of dopaminergic transmission predict 20 year motor and cognitive decline differentially for older males and females.. *Institute for Learning in Retirement Poster Exhibition*. Gainesville, FL.
7. **Hupfeld KE**, Koppelmans V, Kofman IS, De Dios YE, Riascos RF, Bloomberg JJ, Mulavara AP, Seidler RD. (Jan. 2018). Neural bases of vestibular changes with spaceflight.. *NASA Human Research Program Investigators' Workshop*. Gainesville, FL.
6. **Hupfeld KE**, Ketcham CJ. (Nov. 2016). Effects of transcranial direct current stimulation (tDCS) to the dorsolateral prefrontal cortex (DLPFC) on neurocognitive performance and balance in combat military personnel. *Society for Neuroscience*. San Diego, CA.
5. **Hupfeld KE**, Ketcham CJ, Schneider HD. (April 2016). Lasting improvement of non-verbal motor behaviors with transcranial direct current stimulation (tDCS) to Broca's area. *Colonial Athletic Association Conference on Undergraduate Research*. Williamsburg, VA.
4. **Hupfeld KE**, Ketcham CJ, Schneider HD. (April 2016). Persisting effects of transcranial direct current stimulation (tDCS) to Broca's area on planning and non-verbal motor behaviors. *National Conference on Undergraduate Research*. Asheville, NC.

3. **Hupfeld KE**, Ketcham CJ, Schneider HD. (Oct. 2015). Behavioral effects of transcranial direct current stimulation to the supplementary motor area during motor tasks. *Society for Neuroscience*. Chicago, IL.
2. **Hupfeld KE**, Ketcham CJ, Schneider HD. (Sept. 2015). Anodal transcranial direct current stimulation (tDCS) to the supplementary motor area (SMA) improves performance on complex motor tasks. *Furman University Undergraduate Public Health Research Collaboration*. Greenville, SC.
1. **Hupfeld KE**, Ketcham CJ, Schneider HD. (July 2015). Anodal transcranial direct current stimulation (tDCS) to the supplementary motor area (SMA): Effects on reaction time and complex balance tasks. *Elon University Student Undergraduate Research Experience Poster Session*. Elon, NC.

## Teaching Experience & Training

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### Graduate Level

#### **Mentored Teaching**

*Spring 2020, Spring 2021*

##### BIOMECHANICAL INSTRUMENTATION

*APK 6265*

- Department of Applied Physiology and Kinesiology, University of Florida
- Under Dr. Rachael Seidler's mentorship, I co-taught a 3-week graduate course unit on transcranial magnetic stimulation. This included developing student learning objectives, lecture material, a hands-on lab, and data analysis assignment
- We held the course in-person in 2020; in 2021, due to COVID-19, I reformatted all materials to deliver the course virtually

#### **Guest Lecturer**

*Spring 2021, Spring 2022*

##### GRANT WRITING

*PET 5936*

- Lecture: "Grant Writing: A Trainee Perspective"
- Department of Applied Physiology and Kinesiology, University of Florida

### Undergraduate Level

#### **Guest Lecturer**

*Fall 2019*

##### MOVEMENT NEUROSCIENCE

*APK 4144*

- Department of Applied Physiology and Kinesiology, University of Florida

#### **Graduate Student Instructor**

*Spring 2017*

##### INTRODUCTION TO COGNITIVE PSYCHOLOGY

*PSYCH 240*

- Department of Psychology, University of Michigan

#### **Guest Lecturer**

*Spring 2017*

##### BIOLOGICAL AND BEHAVIORAL BASES OF HUMAN MOVEMENT

*MOVSCI 110*

- Department of Kinesiology, University of Michigan

#### **Teaching Assistant**

*Spring 2014, Spring 2015*

##### HUMAN PHYSIOLOGY LAB

*BIO 264*

- Department of Biology, Elon University

#### **Teaching Assistant**

*Fall 2013*

##### GENERAL BIOLOGY LAB

*BIO 102*

- Department of Biology, Elon University

#### **Tutor**

*Fall 2013-2015*

##### HUMAN PHYSIOLOGY

*BIO 264*

- Department of Biology, Elon University

### Specialty Training

#### **Trainee**

*Fall 2016*

##### PSYCHOLOGY TEACHING ACADEMY

*PSYCH 609*

- Department of Psychology, University of Michigan
- Completed a semester-long training course on best practices for teaching in higher education settings

## Student Teacher

Fall 2015/Winter 2016

### SCIENCE EDUCATION AND DEVELOPMENT IN INDIA

GBL 136/236

- Department of Education, Elon University
- Completed two semesters of science education and pedagogy training
- Completed one semester of supervised teaching of middle school science in India

## Mentorship

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### Justin Geraghty

2019-2021

#### UNDERGRADUATE RESEARCH ASSISTANT

- Mentor for JG's project: "Association of brain structure with cognitively demanding walking in older adults"; he also co-authored a manuscript on this project
- Funding: JG received a University Scholars Program grant **(\$1,750)** and Wentworth Travel Scholarship **(\$350)** for this work
- Current: Medical Student, University of Central Florida

### Quynh Tran

2020-2021

#### UNDERGRADUATE HONORS STUDENT

- Mentor for QT's honors thesis: "Flowing into Hyperfocus: Hyperfocus and Cognition in Adult ADHD"; QT will co-author two manuscripts on this work (one published; one in progress)
- Current: Medical Student, Drexel University College of Medicine

### Pilar Alvarez Jerez

2019-2020

#### UNDERGRADUATE RESEARCH ASSISTANT / INTERN

- Mentor for PAJ's project: "Relationship of brain oxidative stress with motor performance in older age"; PAJ co-authored a manuscript on this work
- Current: PhD Student, NIA Center for Alzheimer's and Related Dementias

### Aakash Anandjiwala

2019-2020

#### UNDERGRADUATE RESEARCH ASSISTANT

- Trained AA in multiple data collection methods with older adults, including gait testing (motion capture, inertial measurement units, split belt treadmill operation), transcranial magnetic stimulation, EMG preparation, manual motor testing, and cognitive testing
- Current: Medical Student, William Carey University College of Osteopathic Medicine

### Aditya Mahadevan

2017-2019

#### UNDERGRADUATE RESEARCH INTERN

- Mentor for AM's project: "Effects of spaceflight analogs on the neural correlates of dual task performance"; AM first-authored a paper on this work
- Current: MD-PhD Student, University of Florida

## Technical Skills

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### Neuroimaging

- Magnetic resonance spectroscopy (Osprey, Gannet, LCModel)
- Task-based fMRI (SPM12), resting-state fMRI (CONN)
- Structural MRI: voxel-based morphometry, ROI, and surface analyses (CAT12, FSL, FreeSurfer)
- Diffusion-weighted imaging (FSL-TBSS, free-water correction)
- Advanced Normalization Tools (ANTs); longitudinal MRI analyses
- Cerebellar analyses: SUIT, CERES
- pCASL (ASL-MRICloud)
- Statistical toolboxes: SwE, TFCE, SnPM

## Data Collection

- MRI scanner operation (Philips)
- Transcranial magnetic stimulation (MagStim: double cone, figure-of-8 coil, and circular coil)
- Surface EMG (Biopac)
- Muscle force recording (Neuroimaging Solutions)
- Motion capture (Vicon Nexus; Qualisys QTM)
- Instrumented split-belt treadmill (Bertec)
- Inertial measurement units (Opal ADPM)
- Cognitive testing (MoCA, NIH toolbox)

## Programming Languages and Statistical Packages

- MATLAB, Bash (Linux Shell), LaTeX, Python, SQL
- R, SPSS, Stata

## Genetic Analyses

- PLINK, GWAS, polygene score construction

## Survey Design and Distribution

- Qualtrics, Prolific, MTurk

## Website Design and Management

- WordPress | kathleenhupfeld.com | >1,000 clicks per month to blog

## Specialty Training

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**Philips Clinical Science Workshop on Pulse Programming** 2022  
VIRTUAL | 1 WEEK

**Philips Clinical Science Workshop on Sequence Development** 2022  
VIRTUAL | 1 WEEK

**Magnetic Resonance Spectroscopy EDITING SCHOOL** 2022  
PLAYA DEL CARMEN, MEXICO | 3 DAYS

**Magnetic Resonance Spectroscopy EDITING SCHOOL** 2021  
PLAYA DEL CARMEN, MEXICO | 3 DAYS

**NeuroAI T32 Machine Learning Workshop** 2021  
UNIVERSITY OF FLORIDA | 3 WEEKS

**Rigor and Reproducibility Seminar Series** 2021  
UNIVERSITY OF FLORIDA | MONTHLY MEETING FOR 6 WEEKS

**Magnetic Resonance Spectroscopy EDITING SCHOOL** 2020  
GABA SYMPOSIUM COMMITTEE; HOSTED ONLINE (COVID-19) | 1 WEEK

**R Programming Training: An Intro. for Data Analysis and Graphics** 2020  
UNIVERSITY OF FLORIDA | 8 WEEKS

**FMRIB Software Library (FSL) Course** 2020  
UNIVERSITY OF OXFORD; HOSTED ONLINE (COVID-19) | 2 WEEKS

**Grant Writing** 2020  
UNIVERSITY OF FLORIDA | PET 5936 | 3 CREDIT HOURS

**Intro. to Python, Databases, and R for Bioinformatics Workshop** 2017  
UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE | 1 WEEK

**Introduction to Stata** 2017  
STATA NETCOURSE | 6 WEEKS

**Genomics for Social Scientists Workshop** 2017  
UNIVERSITY OF MICHIGAN INSTITUTE FOR SOCIAL RESEARCH | 1 WEEK

## Professional Issues in Psychology (Ethics Course)

2017

UNIVERSITY OF MICHIGAN | PSYCH 506 | 1 CREDIT HOUR

## Training Course in Functional MRI

2016

UNIVERSITY OF MICHIGAN | PSYCH 840 | 3 CREDIT HOURS

## Ad Hoc Reviewing

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### Independent

*Neurobiology of Aging*

*Scientific Reports*

*NMR in Biomedicine*

*Frontiers in Psychiatry*

*Frontiers in Nutrition*

*Frontiers in Aging Neuroscience*

*Psychology of Consciousness: Theory, Research, and Practice*

### Mentored

*Neuroimage: Clinical*

*npj Microgravity*

*Experimental Brain Research*

*Journal of the American Geriatrics Society*

*Journal of Clinical Medicine*

*Movement Disorders*

## Professional Memberships

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**International Society for Magnetic Resonance in Medicine**

2022-

**Society for the Neurobiology of Language**

2022-

**Society for Neuroscience, North Florida Chapter**

2018-2021

**Society for the Neural Control of Movement**

2016-2021

**Society for Neuroscience**

2015-2020

**American College of Sports Medicine**

2015-2016

## Selected Press Coverage and Media Features

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See here for a complete list of media features: <https://kathleenhupfeld.com/curriculum-vitae/>

Astronauts' brains take a hit during long spaceflights. 2023.

*CNN*. <https://www.cnn.com/2023/06/08/world/astronaut-brain-ventricle-study-scn/index.html>

Time in space leads to changes in astronauts' brains. 2022.

*The Weather Channel*. <https://weather.com/science/space/video/time-in-space-leads-to-changes-in-astronauts-brains>

New astronauts have changes in their brains after their first long-duration mission. 2022.

*Space.com*. <https://www.space.com/spaceflight-brain-impact-fluid>

Extended trips to space alter the brains of astronauts. 2022.

*Universe Today*. <https://www.universetoday.com/155820/extended-trips-to-space-alter-the-brains-of-astronauts/>

Space 'warps astronauts brains' leaving 'concerning' changes even when they're back on Earth, study reveals. 2022.

*The Sun*. <https://www.thesun.co.uk/tech/18487611/space-warps-astronauts-brains-leaving-changes/>

1 Million Women in STEM: Kathleen Hupfeld. 2020.

*1MWIS*. <https://www.1mwis.com/profiles/Kathleen-Hupfeld/>

Bringing hyperfocus into research focus. 2019.

*Cognitive Neuroscience Society Blog*. <https://www.cogneurosociety.org/bringing-hyperfocus-into-research-focus/>

SfN members discuss importance of public outreach. 2019.

*Society for Neuroscience*. <https://www.youtube.com/watch?v=oVNqaXb9pwc/>

Discover your next inspiration at Neuroscience 2019 (Kathleen Hupfeld). 2019.

*Society for Neuroscience*. <https://www.youtube.com/watch?v=lj3yASc0tz8/>

New study links hyperfocus and ADHD. 2018.

*ADDitude Magazine*. <https://www.additudemag.com/hyperfocus-adhd-study-news/>

I Am Elon: Kathleen Hupfeld. 2015.

*Elon University Promotional Campaign*. [https://www.youtube.com/watch?v=dsr0vH\\_pcio/](https://www.youtube.com/watch?v=dsr0vH_pcio/)

## Diversity, Equity, & Inclusion Involvement

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### Positions & Memberships

**National Center for Faculty Development & Diversity**

2020-2021

MEMBER

**College of Health and Human Performance Inclusion, Diversity, Equity, and Access (IDEA) Graduate Student Committee**

2020-2021

FOUNDING MEMBER | *Gainesville, FL*

### Workshops & Training

**Diversity, Equity and Inclusion for Students**

2021

UNIVERSITY OF FLORIDA | 1 WORKSHOP

**Turning Chutes into Ladders for Women Faculty: A Roadmap to Equity in Academia**

2021

UNIVERSITY OF FLORIDA | 1 WORKSHOP

## Selected Community Involvement

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**SfN Brain Awareness Week: Live Kids Review Event**

2021

SCIENCE PRESENTER | *Virtual National Event*

**Junior Science, Engineering and Humanities Symposium**

2021

JUDGE, PAPER REVIEWER, & GRAD STUDENT PANELIST | *Gainesville, FL*

**Brain Awareness Week**

2018, 2019, 2021

VOLUNTEER | *Gainesville, FL*

**Girls with Nerve Summer Camp**

2019 (2020 cancelled)

VOLUNTEER TEACHER | *Gainesville, FL*

**National Biomechanics Day**

2018, 2019 (2020 cancelled)

VOLUNTEER | *Gainesville, FL*

**Adaptive Gymnastics**

2019

VOLUNTEER | *Gainesville, FL*

**Applied Physiology & Kinesiology High School Summer Research Experience**

2019

MENTOR | *Gainesville, FL*

**Applied Physiology & Kinesiology Research Symposium**

2019

JUDGE | *Gainesville, FL*

<b>American Association of University Women Tech Trek Camp</b> MENTOR   <i>Boca Raton, FL</i>	2018
<b>Women in Science and Engineering Girlz Spring Camp</b> MENTOR   <i>Gainesville, FL</i>	2018
<b>Michigan Association of Psychological Scholars</b> MENTOR   <i>Ann Arbor, MI</i>	2016-2017
<b>Best Buddies International</b> EXECUTIVE BOARD MEMBER   <i>Elon, NC</i>	2013-2016
<b>Special Olympics</b> SWIMMING, VOLLEYBALL, & BOWLING COACH   <i>Elon, NC; Columbia, MD</i>	2011-2016
<b>Western Alamance High School</b> MATH & SCIENCE TUTOR   <i>Elon, NC</i>	2015
<b>Stephanie Alexander Kitchen Garden Project</b> VOLUNTEER TEACHER   <i>Bentley, Western Australia</i>	2014
<b>Laverton Youth Center</b> VOLUNTEER   <i>Laverton, Western Australia</i>	2014
<b>Avalon Refugee Center</b> ELEMENTARY/MIDDLE SCHOOL TUTOR   <i>Elon, NC</i>	2012-2014
<b>North Carolina Therapeutic Riding Center</b> THERAPY VOLUNTEER   <i>Mebane, NC</i>	2013-2014
<b>Open Door Free Medical Clinic of Alamance County</b> TRIAGE VOLUNTEER   <i>Burlington, NC</i>	2012-2013
<b>Global Medical Brigades</b> PUBLIC HEALTH & DENTAL VOLUNTEER   <i>Elon, NC; Tegucigalpa, Honduras</i>	2012-2013
<b>Atholton HS Intellectual Disabilities Academic Life Skills Program</b> CLASSROOM ASSISTANT   <i>Columbia, MD</i>	2011-2012
<b>Howard County General Hospital</b> REHABILITATION SERVICES VOLUNTEER   <i>Columbia, MD</i>	2011

## Related Work Experience

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<b>Basic and Applied Cognition Lab, University of Michigan</b> GRADUATE RESEARCH ASSISTANT   MENTOR: PRITI SHAH, PHD	<i>Ann Arbor, MI</i> 2016-2017
<b>Kernodle Clinic Neurology</b> MEDICAL SCRIBE	<i>Burlington, NC</i> 2015-2016
<b>Neurosciences Research Lab, Curtin University</b> RESEARCH INTERN   MENTOR: ANDREW LAVENDER, PHD	<i>Perth, Australia</i> Fall 2014
<b>Mt. Washington Pediatric Hospital</b> REHABILITATION TECHNICIAN	<i>Baltimore, MD</i> Summer 2013 & 2014
<b>Central Maryland Rehabilitation Center</b> NEUROLOGIC PHYSICAL THERAPY INTERN	<i>Columbia, MD</i> 2011-2012
<b>Peer2Peer Tutors</b> SCIENCE, MATH, & STUDY SKILLS TUTOR	<i>Columbia, MD</i> 2010-2011