

STEVEN L. SMALL

Department of Neuroscience
School of Behavioral and Brain Sciences
University of Texas at Dallas

Tuesday, February 4, 2025

CONTACT

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EDUCATION

Postdoctoral, University of Pittsburgh (Neurology)
M.D., University of Rochester
Ph.D. University of Maryland (Artificial Intelligence/Computer Science)
A.B. Dartmouth College (Mathematics)

PROFESSIONAL EXPERIENCE

Present

University of Texas at Dallas

Ashbel Smith Professor of Neuroscience
Special Advisor to the President for UTD – UTSW Collaborations

University of Texas Southwestern Medical School

Professor of Neurology

The University of Chicago

Professor Emeritus of Neurology and Psychology

Previous

University of Texas at Dallas

Dean, School of Behavioral and Brain Sciences
Aage and Margareta Møller Distinguished Professor

University of California, Irvine

Founder, Director, and Chief Scientific Officer, Medical Innovation Institute
Chair, Department of Neurology
Professor of Neurology
Professor of Neurobiology and Behavior
Professor of Cognitive Sciences
Director, Neuroscience Imaging Center

The University of Chicago

Vice Chair for Research, Department of Neurology
Senior Fellow, Computation Institute
Professor of Neurology and Psychology
Associate Professor with Tenure, Neurology and Psychology
Co – Founder / Co – Director, Brain Research Imaging Center
Member, Committee on Neurobiology
Member, Committee on Computational Neuroscience

University of Maryland

Associate Professor with Tenure, Neurology and Physiology
Founder, MRI Research Program

University of Pittsburgh

Assistant Professor of Neurology and Intelligent Systems
Assistant Professor of Communication Sciences and Disorders
Assistant Professor of Psychology
Member, Center for Neuroscience
Founding Member, Center for Neural Basis of Cognition
Adjunct Assistant Professor of Intelligent Systems

University of Rochester

Adjunct Assistant Professor of Computer Science
Assistant Professor of Computer Science and Psychology

Université de Paris VIII

Fulbright Lecturer in Artificial Intelligence

MEDICAL TRAINING AND APPOINTMENTS

Postgraduate Training

Lean Six Sigma Two-Day Workshop, Johns Hopkins Medicine
Program for Chairs of Clinical Services, Harvard School of Public Health

Chief Resident in Neurology, UPMC Presbyterian, Pittsburgh
Resident in Neurology, UPMC Presbyterian, Pittsburgh
Intern, UPMC Shadyside, Pittsburgh

Board Certification

American Board of Psychiatry and Neurology
National Board of Medical Examiners

Active Licensure

Texas
California

ACADEMIC RECORD

Academic Fields of Specialization

Topic areas: Neurobiology of Language, Brain Connectivity, Neurobiology of Sports, Preventive Neurology and Brain Health, Computational Neuroscience, Aphasia, Brain Recovery and Repair after Stroke and TBI
Methods: Structural Magnetic Resonance Imaging (MRI), functional MRI (fMRI), Diffusion Imaging, Neural Networks, Machine Learning, Human Neurophysiology

Honors and Awards

Ashbel Smith Endowed Chair, University of Texas at Dallas
LEAD Award (Inclusive Team), University of Texas at Dallas
Elected Fellow, American Association for the Advancement of Science
Phi Kappa Phi
Aage and Margareta Møller Endowed Chair, University of Texas at Dallas
Distinguished Career Award, Society for the Neurobiology of Language
Estabrook Distinguished Research Lectureship, Kessler Foundation
John and Toni Balatincz Endowed Lecture, Rotman Research Institute
Theodore von Kármán Fellow, RWTH Aachen University
Elected Fellow, American Neurological Association
Stanley van den Noort Endowed Chair, University of California, Irvine
Elected Fellow, American Academy of Neurology
Charles van Riper Lecturer, Western Michigan University
Mary Law Lecturer, Speakability Foundation (United Kingdom)
Clinical Investigator Development Award, NIDCD, NIH
George H. Whipple Award of the Rochester Academy of Medicine

Fulbright Scholar (Lecturer in Artificial Intelligence), Université de Paris VIII
Magna Cum Laude with Distinction in Mathematics, Dartmouth College

Editorial Responsibilities

Editor

Active

Neurobiology of Language (MIT Press)
Founding Co-Editor-in-Chief

Previous

Brain and Language (Academic Press / Elsevier)
Editor-in-Chief
Co-Editor
Associate Editor

Proceedings of the National Academy of Sciences of the United States of America
Direct Submission Editor (*ad hoc*): On behalf of Peter Strick
Direct Submission Editor (*ad hoc*): On behalf of Michael Gazzaniga (x 3)

Journal of Speech, Language, and Hearing Research (ASHA)
Guest Associate Editor: On behalf of Sean Redmond

Brain and Cognition
Action Editor

Editorial Consultation

Annals of Neurology
Archives of Neurology
Behavioral and Brain Sciences
Brain
Brain and Cognition
Brain and Language
Brain Research
Cerebral Cortex
Cognitive Science
Computational Intelligence
European Journal of Neurology
Human Brain Mapping
IEEE Transactions on Pattern Analysis and Machine Intelligence
JAMA Neurology
Journal of the Acoustical Society of America
Journal of Cognitive Neuroscience

Journal of Nervous and Mental Diseases
Journal of Neurophysiology
Journal of Neuroscience
Journal of Neurosurgery
Journal of Speech and Hearing Research
Lancet Neurology
Nature Medicine
NeuroCase
Neuroimage
Neurobiology of Language
Neurology
Neuropsychology
Neurorehabilitation and Neural Repair
NeuroRx
Neuroscience Letters
New England Journal of Medicine
Proceedings of the National Academy of Sciences of the United States of America
Stroke
Social, Cognitive, and Affective Neuroscience
Social Neuroscience
Trends in Cognitive Science

Publications

Journals

1. Drijvers, L., Small, S. L., & Skipper, J. I. (2025). Language is widely distributed throughout the brain. *Nature Reviews Neuroscience*. <https://doi.org/10.1038/s41583-024-00903-0>
2. Small, S. L. (2024). Precision neurology. *Ageing Research Reviews*, 104, 102632. <https://doi.org/10.1016/j.arr.2024.102632>
3. Small, S. L., Bayda, E., & Bara, B. G. (2024). Kindness: Research, Education, and Practice. *Cogntivismo Clinico*, 21(2), 192-208.
4. Jirsaraie, R. J., Palma, A. M., Small, S. L., Sandman, C. A., Davis, E. P., Baram, T. Z., Stern, H., Glynn, L. M., & Yassa, M. A. (2024). Prenatal Exposure to Maternal Mood Entropy Is Associated With a Weakened and Inflexible Salience Network in Adolescence. *Biol Psychiatry Cogn Neurosci Neuroimaging*, 9(2), 207-216. <https://doi.org/10.1016/j.bpsc.2023.08.002>
5. Davis, E. P., Leonard, B. T., Jirsaraie, R. J., Keator, D. B., Small, S. L., Sandman, C. A., Risbrough, V. B., Stern, H. S., Glynn, L. M., Yassa, M. A., Baram, T. Z., &

- Rasmussen, J. M. (2024). Sex-Specific Effects of Early Life Unpredictability on Hippocampal and Amygdala Responses to Novelty in Adolescents. *bioRxiv*. <https://doi.org/10.1101/2024.09.20.614130>
6. Aliko, S., Wang, B., Small, S. L., & Skipper, J. I. (2023). The entire brain, more or less, is at work: 'Language regions' are artefacts of averaging. *bioRxiv*, 2023.2009.2001.555886. <https://doi.org/10.1101/2023.09.01.555886>.
7. Bornkessel-Schlesewsky, I., Alday, P. M., Corcoran, A. W., Wilkinson, E. M., Sharrad, I., Kliegl, R., Lewis, R. L., Small, S. L., & Schlesewsky, M. (2023). Effects of neural noise on predictive model updating across the adult lifespan. *bioRxiv*, 2022.2012. 2014.520501. doi:10.1101/2022.12.14.520501.
8. Monroe, D. C., Thomas, E. A., Cecchi, N. J., Granger, D. A., Hicks, J. W., & Small, S. L. (2022). Salivary S100 calcium-binding protein beta (S100B) and neurofilament light (NfL) after acute exposure to repeated head impacts in collegiate water polo players. *Scientific Reports*, 12(1), 3439.
9. Cecchi, N. J., Monroe, D. C., Fote, G. M., Small, S. L., & Hicks, J. W. (2022). Head impact exposure and concussion in women's collegiate club lacrosse. *Research in Sports Medicine*, 30(6), 677-682.
10. Ting, C. M., Skipper, J. I., Noman, F., Small, S. L., & Ombao, H. (2022). Separating Stimulus-Induced and Background Components of Dynamic Functional Connectivity in Naturalistic fMRI. *IEEE transactions on medical imaging*, 41(6), 1431-1442.
11. Bornkessel-Schlesewsky, I., Sharrad, I., Howlett, C. A., Alday, P. M., Corcoran, A. W., Bellan, V., Wilkinson, E., Kliegl, R., Lewis, R. L., Small, S. L., & Schlesewsky, M. (2022). Rapid adaptation of predictive models during language comprehension: Aperiodic EEG slope, individual alpha frequency and idea density modulate individual differences in real-time model updating. *Frontiers in Psychology*, 13.
12. Duncan, E. S., Shereen, A. D., Gentimis, T., & Small, S. L. (2021). Identifiable Patterns of Trait, State, and Experience in Chronic Stroke Recovery. *Neurorehabilitation and Neural Repair*, 35(2), 158-168.
13. Demir-Lira, Ö. E., Asaridou, S. S., Nolte, C., Small, S. L., & Goldin-Meadow, S. (2021). Parent Language Input Prior to School Forecasts Change in Children's Language-Related Cortical Structures During Mid-Adolescence. *Frontiers in Human Neuroscience*, 15(362).
14. Granger, S. J., Glynn, L. M., Sandman, C. A., Small, S. L., Obenaus, A., Keator, D. B., Baram, T. Z., Stern, H., Yassa, M. A., & Davis, E. P. (2021). Aberrant Maturation of the Uncinate Fasciculus Follows Exposure to Unpredictable Patterns of Maternal Signals. *Journal of Neuroscience*, 41(6), 1242-1250.

15. Monroe, D. C., Blumenfeld, R. S., Keator, D. B., Solodkin, A., & Small, S. L. (2020). One season of head-to-ball impact exposure alters functional connectivity in a central autonomic network. *Neuroimage*, 223, 117306.
16. Duncan, E. S., Pradeep, A. A., & Small, S. L. (2020). A review of biological interventions in chronic aphasia. *Annals of Indian Academy of Neurology*, 23(8), S82-S94.
17. Cecchi, N. J., Monroe, D. C., Phreaner, J. J., Small, S. L., & Hicks, J. W. (2020). Patterns of head impact exposure in men's and women's collegiate club water polo. *Journal of Science and Medicine in Sport*, 23(10), 927-931.
18. Small, S. L., & Watkins, K. E. (2020). Neurobiology of Language: Editorial. *Neurobiology of Language*, 1(1), 1-8.
19. Cecchi, N. J., Monroe, D. C., Oros, T. J., Small, S. L., & Hicks, J. W. (2020). Laboratory evaluation of a wearable head impact sensor for use in water polo and land sports. *Proceedings of the Institution of Mechanical Engineers, Part P: Journal of Sports Engineering and Technology*, 234(2), 162-169.
20. Asaridou, S. S., Demir-Lira Ö, E., Goldin-Meadow, S., Levine, S. C., & Small, S. L. (2020). Language development and brain reorganization in a child born without the left hemisphere. *Cortex*, 127, 290-312.
21. Monroe, D. C., Cecchi, N. J., Gerges, P., Phreaner, J., Hicks, J. W., & Small, S. L. (2020). A Dose Relationship Between Brain Functional Connectivity and Cumulative Head Impact Exposure in Collegiate Water Polo Players. *Frontiers in Neurology*, 11, 218.
22. Cecchi, N. J., Monroe, D. C., Fote, G. M., Small, S. L., Hicks, J. W. (2019). Head impacts sustained by male collegiate water polo athletes. *PLoS One*. 14(5): e0216369.
23. Bonilha, L., Small, S. L., Lin, J. J. (2019). Editorial for the special issue on language and epilepsy. *Brain and Language*.193:1-3. Epub 2019/04/02.
24. Wallace, S. J., Worrall, L., Rose, T., Le Dorze, G., Breitenstein, C., Hilari, K., Babbitt, E., Bose, A., Brady, M., Cherney, L. R., Copland, D., Cruice, M., Enderby, P., Hersh, D., Howe, T., Kelly, H., Kiran, S., Laska, A.-C., Marshall, J., Nicholas, M., Patterson, J., Pearl, G., Rochon, E., Rose, M., Sage, K., Small, S., Webster, J. (2018). A core outcome set for aphasia treatment research: The ROMA consensus statement. *International Journal of Stroke*.14(2): 180-185.
25. Demir-Lira, O. E., Asaridou, S. S., Raja Beharelle, A., Holt, A. E., Goldin-Meadow, S., Small, S. L. (2018). Functional neuroanatomy of gesture-speech integration in children varies with individual differences in gesture processing. *Developmental Science*. 21 (5): e12648.

26. Santhanam, P., Duncan, E. S., Small, S. L. (2018). Therapy-induced plasticity in chronic aphasia is associated with behavioral improvement and time since stroke. *Brain Connectivity*. 8(3): 179-88.
27. Duncan, E. S., Small, S. L. (2018). Changes in dynamic resting state network connectivity following aphasia therapy. *Brain imaging and behavior*. 12(4): 1141-9.
28. Riley, J. D., Chen, E. E., Winsell, J., Davis, E. P., Glynn, L. M., Baram, T. Z., Sandman, C. A., Small, S. L., & Solodkin, A. (2018). Network specialization during adolescence: Hippocampal effective connectivity in boys and girls. *Neuroimage*, 175, 402-412.
29. Keator, D. B., Chen, J., Nichols, N., Fana, F., Stern, H., Baram, T. Z., & Small, S. L. (2017). A semantic cross-species derived data management application. *Data Science Journal*, 16.
30. Asaridou, S. S., Demir-Lira, O. E., Goldin-Meadow, S., & Small, S. L. (2017). The pace of vocabulary growth during preschool predicts cortical structure at school age. *Neuropsychologia*, 98, 13-23.
31. Duncan, E. S., & Small, S. L. (2017). Imitation-based aphasia therapy increases narrative content: a case series. *Clinical rehabilitation*, 31(11), 1500-1507.
32. Hong, D., Stradling, D., Dastur, C. K., Akbari, Y., Groysman, L., Al-Khoury, L., Chen, J., Small, S. L., & Yu, W. (2017). Resistant Hypertension after Hypertensive Intracerebral Hemorrhage Is Associated with More Medical Interventions and Longer Hospital Stays without Affecting Outcome. *Frontiers in Neurology*, 8, 184.
33. Wu, J., Srinivasan, R., Burke Quinlan, E., Solodkin, A., Small, S. L., & Cramer, S. C. (2016). Utility of EEG measures of brain function in patients with acute stroke. *Journal of Neurophysiology*, 115(5), 2399-2405.
34. Tune, S., Schlesewsky, M., Nagels, A., Small, S. L., & Bornkessel-Schlesewsky, I. (2016). Sentence understanding depends on contextual use of semantic and real world knowledge. *Neuroimage*, 136, 10-25.
35. Duncan, E. S., Tune, S., & Small, S. L. (2016). The neurobiology of language: Relevance to linguistics. *Yearbook of the Poznan Linguistic Meeting*, 2(1), 49-66.
36. Duncan, E. S., & Small, S. L. (2016). Increased Modularity of Resting State Networks Supports Improved Narrative Production in Aphasia Recovery. *Brain Connectivity*, 6(7), 524-529.
37. Duncan, E. S., Schmah, T., & Small, S. L. (2016). Performance Variability as a Predictor of Response to Aphasia Treatment. *Neurorehabilitation and Neural*

Repair, 30(9), 876-882.

38. Blumenfeld, R. S., Winsell, J. C., Hicks, J. W., & Small, S. L. (2016). The epidemiology of sports-related head injury and concussion in water polo. *Frontiers in Neurology*, 7, 98.
39. Andric, M., Goldin-Meadow, S., Small, S. L., & Hasson, U. (2016). Repeated movie viewings produce similar local activity patterns but different network configurations. *Neuroimage*, 142, 613-627.
40. Roehrich-Gascon, D., Small, S. L., & Tremblay, P. (2015). Structural correlates of spoken language abilities: A surface-based region-of interest morphometry study. *Brain and Language*, 149, 46-54.
41. Bornkessel-Schlesewsky, I., Schlewsky, M., Small, S. L., & Rauschecker, J. P. (2015). Response to Skeide and Friederici: the myth of the uniquely human 'direct' dorsal pathway. *Trends in Cognitive Science*, 19(9), 484-485.
42. Bornkessel-Schlesewsky, I., Schlewsky, M., Small, S. L., & Rauschecker, J. P. (2015). Neurobiological roots of language in primate audition: common computational properties. *Trends in Cognitive Science*, 19(3), 142-150.
43. Adhikari, M. H., Raja Beharelle, A., Griffa, A., Hagmann, P., Solodkin, A., McIntosh, A. R., Small, S. L., & Deco, G. (2015). Computational modeling of resting-state activity demonstrates markers of normalcy in children with prenatal or perinatal stroke. *The Journal of Neuroscience*, 35(23), 8914-8924.
44. Tune, S., Schlewsky, M., Small, S. L., Sanford, A. J., Bohan, J., Sassenhagen, J., & Bornkessel-Schlesewsky, I. (2014). Cross-linguistic variation in the neurophysiological response to semantic processing: evidence from anomalies at the borderline of awareness. *Neuropsychologia*, 56, 147-166.
45. Sarasso, S., Maatta, S., Ferrarelli, F., Poryazova, R., Tononi, G., & Small, S. L. (2014). Plastic Changes Following Imitation-Based Speech and Language Therapy for Aphasia: A High-Density Sleep EEG Study. *Neurorehabilitation and Neural Repair*, 28(2), 129-138.
46. Mikami, K., Jorge, R. E., Moser, D. J., Arndt, S., Jang, M., Solodkin, A., Small, S. L., Fonzetti, P., Hegel, M. T., & Robinson, R. G. (2014). Prevention of post-stroke generalized anxiety disorder, using escitalopram or problem-solving therapy. *Journal of Neuropsychiatry and Clinical Neurosciences*, 26(4), 323-328.
47. Goldin-Meadow, S., Levine, S. C., Hedges, L. V., Huttenlocher, J., Raudenbush, S. W., & Small, S. L. (2014). New evidence about language and cognitive development based on a longitudinal study: hypotheses for intervention. *American Psychologist*, 69(6), 588-599.

48. Dick, A. S., Mok, E. H., Raja Beharelle, A., Goldin-Meadow, S., & Small, S. L. (2014). Frontal and temporal contributions to understanding the iconic co-speech gestures that accompany speech. *Human Brain Mapping*, 35(3), 900-917.
49. Bornkessel-Schlesewsky, I., Schlewewsky, M., & Small, S. L. (2014). Implementation is crucial but must be neurobiologically grounded. Comment on "Toward a computational framework for cognitive biology: unifying approaches from cognitive neuroscience and comparative cognition" by W. Tecumseh Fitch. *Physics of Life Reviews*, 11(3), 365-366.
50. Tremblay, P., Dick, A. S., & Small, S. L. (2013). Functional and structural aging of the speech sensorimotor neural system: functional magnetic resonance imaging evidence. *Neurobiology of Aging*, 34(8), 1935-1951.
51. Small, S. L., Buccino, G., & Solodkin, A. (2013). Brain repair after stroke--a novel neurological model. *Nature Reviews Neurology*, 9(12), 698-707.
52. Mikami, K., Jorge, R. E., Moser, D. J., Arndt, S., Jang, M., Solodkin, A., Small, S. L., Fonzetti, P., Hegel, M. T., & Robinson, R. G. (2013). Prevention of poststroke apathy using escitalopram or problem-solving therapy. *American Journal of Geriatric Psychiatry*, 21(9), 855-862.
53. Dick, A. S., Raja Beharelle, A., Solodkin, A., & Small, S. L. (2013). Interhemispheric functional connectivity following prenatal or perinatal brain injury predicts receptive language outcome. *Journal of Neuroscience*, 33(13), 5612-5625.
54. Argyropoulos, G. P., Tremblay, P., & Small, S. L. (2013). The neostriatum and response selection in overt sentence production: an fMRI study. *Neuroimage*, 82, 53-60.
55. Andric, M., Solodkin, A., Buccino, G., Goldin-Meadow, S., Rizzolatti, G., & Small, S. L. (2013). Brain function overlaps when people observe emblems, speech, and grasping. *Neuropsychologia*, 51(8), 1619-1629.
56. Tremblay, P., Sato, M., & Small, S. L. (2012). TMS-induced modulation of action sentence priming in the ventral premotor cortex. *Neuropsychologia*, 50(2), 319-326.
57. Small, S. L., Buccino, G., & Solodkin, A. (2012). The mirror neuron system and treatment of stroke. *Developmental Psychobiology*, 54(3), 293-310.
58. Mashal, N., Solodkin, A., Dick, A. S., Chen, E. E., & Small, S. L. (2012). A network model of observation and imitation of speech. *Frontiers in Psychology*, 3, 84.
59. Dick, A. S., Goldin-Meadow, S., Solodkin, A., & Small, S. L. (2012). Gesture in the developing brain. *Developmental Science*, 15(2), 165-180.

60. Campbell, T. F., Dollaghan, C., Janosky, J., Rusiewicz, H. L., Small, S. L., Dick, F., Vick, J., & Adelson, P. D. (2012). Consonant Accuracy after Severe Pediatric Traumatic Brain Injury: A Prospective Cohort Study. *Journal of Speech, Language, and Hearing Research*, 56(3), 1023-1034.
61. Baram, T. Z., Davis, E. P., Obenaus, A., Sandman, C. A., Small, S. L., Solodkin, A., & Stern, H. (2012). Fragmentation and unpredictability of early-life experience in mental disorders. *American Journal of Psychiatry*, 169(9), 907-915.
62. Mashal, N., Solodkin, A., Dick, A. S., Chen, E. E., & Small, S. L. (2012). A network model of observation and imitation of speech. *Frontiers in Psychology*, 3, 84.
63. Andric, M., & Small, S. L. (2012). Gesture's Neural Language. *Frontiers in Psychology*, 3, 99.
64. Cherney, L. R., Harvey, R. L., Babbitt, E. M., Hurwitz, R., Kaye, R. C., Lee, J. B., & Small, S. L. (2012). Epidural cortical stimulation and aphasia therapy. *Aphasiology*, 26(9), 1192-1217.
65. Cooper, E. A., Hasson, U., & Small, S. L. (2011). Interpretation-mediated changes in neural activity during language comprehension. *NeuroImage*, 55(3), 1314-1323.
66. Tremblay, P., & Small, S. L. (2011). From language comprehension to action understanding and back again. *Cerebral Cortex*, 21(5), 1166-1177.
67. Mikami, K., Jorge, R. E., Moser, D. J., Arndt, S., Jang, M., Solodkin, A., Small, S. L., Fonzetti, P., Hegel, M. T., & Robinson, R. G. (2011). Increased frequency of first-episode poststroke depression after discontinuation of escitalopram. *Stroke*, 42(11), 3281-3283.
68. Tremblay, P., & Small, S. L. (2011). The First Neurobiology of Language Conference: NLC 2009. *Brain and Language*, 117(3), 101-102.
69. Tremblay, P., & Small, S. L. (2011). On the context-dependent nature of the contribution of the ventral premotor cortex to speech perception. *Neuroimage*, 57(4), 1561-1571.
70. Small, S. L., Hickok, G., Nusbaum, H. C., Blumstein, S., Coslett, H. B., Dell, G., Hagoort, P., Kutas, M., Marantz, A., Pytkkanen, L., Thompson-Schill, S., Watkins, K., & Wise, R. J. (2011). The neurobiology of language: Two years later. *Brain and Language*, 116(3), 103-104.
71. Tremblay, P., & Small, S. L. (2011). Motor response selection in overt sentence production: a functional MRI study. *Frontiers in Psychology*, 2, 253.
72. Yourganov, G., Chen, X., Lukic, A. S., Grady, C. L., Small, S. L., Wernick, M. N., & Strother, S. C. (2011). Dimensionality estimation for optimal detection of

- functional networks in BOLD fMRI data. *Neuroimage*, 56(2), 531-543.
73. Solodkin, A., Hasson, U., Siugzdaite, R., Schiel, M., Chen, E. E., Kotter, R., & Small, S. L. (2010). Virtual brain transplantation (VBT): a method for accurate image registration and parcellation in large cortical stroke. *Archives Italiennes de Biologie*, 148(3), 219-241.
 74. Gee, T., Kenny, S., Price, C. J., Seghier, M. L., Small, S. L., Leff, A. P., Pacurar, A., & Strother, S. C. (2010). Data warehousing methods and processing infrastructure for brain recovery research. *Archives Italiennes de Biologie*, 148(3), 207-217.
 75. Yourganov, G., Schmah, T., Small, S. L., Rasmussen, P. M., & Strother, S. C. (2010). Functional connectivity metrics during stroke recovery. *Archives Italiennes de Biologie*, 148(3), 259-270.
 76. Sarasso, S., Santhanam, P., Maatta, S., Poryazova, R., Ferrarelli, F., Tononi, G., & Small, S. L. (2010). Non-fluent aphasia and neural reorganization after speech therapy: insights from human sleep electrophysiology and functional magnetic resonance imaging. *Archives Italiennes de Biologie*, 148(3), 271-278.
 77. Price, C. J., Crinion, J. T., Leff, A. P., Richardson, F. M., Schofield, T. M., Prejawa, S., Ramsden, S., Gazarian, K., Lawrence, M., Ambridge, L., Andric, M., Small, S. L., & Seghier, M. L. (2010). Lesion sites that predict the ability to gesture how an object is used. *Archives Italiennes de Biologie*, 148(3), 243-258.
 78. Cherney, L. R., Erickson, R. K., & Small, S. L. (2010). Epidural cortical stimulation as adjunctive treatment for non-fluent aphasia: preliminary findings. *Journal of Neurology, Neurosurgery and Psychiatry*, 81(9), 1014-1021.
 79. Schmah, T., Yourganov, G., Zemel, R. S., Hinton, G. E., Small, S. L., & Strother, S. C. (2010). Comparing classification methods for longitudinal fMRI studies. *Neural Computation*, 22(11), 2729-2762.
 80. Raja Beharelle, A., Dick, A. S., Josse, G., Solodkin, A., Huttenlocher, P. R., Levine, S. C., & Small, S. L. (2010). Left hemisphere regions are critical for language in the face of early left focal brain injury. *Brain*, 133(Pt 6), 1707-1716.
 81. Lyons, I. M., Mattarella-Micke, A., Cieslak, M., Nusbaum, H. C., Small, S. L., & Beilock, S. L. (2010). The role of personal experience in the neural processing of action-related language. *Brain and Language*, 112(3), 214-222.
 82. Lee, J., Fowler, R., Rodney, D., Cherney, L., & Small, S. L. (2010). IMITATE: An intensive computer-based treatment for aphasia based on action observation and imitation. *Aphasiology*, 24(4), 449-465.
 83. Andric, M., & Small, S. L. (2010). Functional imaging of putative human mirror neuron systems in neurological disease. *Experimental Neurology*, 221(1), 5-9.

84. Dick, A. S., Solodkin, A., & Small, S. L. (2010). Neural development of networks for audiovisual speech comprehension. *Brain and Language*, 114(2), 101-114.
85. Hasson, U., Nusbaum, H. C., & Small, S. L. (2009). Task-dependent organization of brain regions active during rest. *Proceedings of the National Academy of Sciences of the United States of America*, 106(26), 10841-10846.
86. Small, S. L., & Llano, D. A. (2009). Biological approaches to aphasia treatment. *Current Neurology and Neuroscience Reports*, 9(6), 443-450.
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Hickok, G., & Small, S. L. (Eds.). (2016). *Neurobiology of Language* (1st Edition). San Diego, California: Academic Press.

The Chicago Social Brain Network (2010). *Invisible Forces and Powerful Beliefs: Gravity, Gods, and Minds*. Upper Saddle River, New Jersey: FT Press. (All authors participated in editing).

Small, S. L., G. C. Cottrell, and M. K. Tanenhaus (eds.) (1988), *Lexical Ambiguity Resolution: Perspectives from Psycholinguistics, Neuropsychology, and Artificial Intelligence*, Morgan Kaufmann Publishers, Los Altos, California.

Federal Extramural Funding

National Institutes of Health: 78 award years (one current award)

National Science Foundation: 5 awards

Mentored Awards: 6 awards (4 K, 1 F, 1 CIHR)

TEACHING EXPERIENCE

Course Participation

(* = course director)

University of Texas at Dallas

Neurology of Cognition (Department of Neuroscience)

Brain and Language (Department of Psychology)

*Aging and the Nervous System

*Neuroscience and Brain Health

University of California, Irvine

Human Biology, School of Biological Sciences

Medical Neuroscience, School of Medicine
Kindness Curriculum, School of Medicine
Clinical Foundations II, School of Medicine
Neuroscience Proseminar, Interdepartmental Neuroscience Program
*Professor Rounds, Department of Neurology, School of Medicine

The University of Chicago

Computational Neuroscience: Language, Department of Psychology
Biological Basis of Psychiatry, Biological Sciences Collegiate Division
Psychology Pro-Seminar, Department of Psychology
Child Development, Department of Psychology
Neurobiology Pro-Seminar, Committee on Neurobiology
*Brain Imaging Roundtable, Committee on Neurobiology and Department of Psychology
*fMRI Methods, Committee on Neurobiology and Department of Psychology
Medical Neurobiology, Pritzker School of Medicine
Cognitive Neuroscience, Departments of Organismal Biology and Neurobiology
MIND, Department of Psychology
Systems Neuroscience, Biological Sciences Collegiate Division
Neurosurgical Resident Lecture Series, Department of Neurosurgery
Radiology Resident Lecture Series, Department of Radiology
Cognitive Linguistics, Department of Linguistics
Vertebrate Neuroanatomy, Department of Neurobiology
Neurobiology of Disease, Departments of Neurology and Neurobiology

University of Maryland

Neuroscience, School of Medicine
Cognitive Neuroscience, Program in Cognitive and Neural Science
Neuroscience of Cognition, Program in Cognitive and Neural Science
*fMRI Roundtable, Department of Neurology

University of Pittsburgh

Neuropathology, School of Medicine
Graduate Seminar in Intelligent Systems, Program in Intelligent Systems
Introduction to Medical Neuroscience, School of Medicine
Language and the Brain, Department of Psychology (with Carnegie-Mellon University)
Neuroscience: The Mind, School of Medicine
Neuropsychology, Program in Neural Basis of Cognition
*Aphasia Center, Department of Communication Sciences and Disorders
Biological Bases of Neuropsychiatric Disorders, Department of Neurobiology
Integrated Case Studies Course, School of Medicine

Advanced Pharmacy Practice, School of Pharmacy
Seminar in Neuroimaging, Department of Psychology
Integrated Life Sciences: Clinical Pharmacology, School of Medicine

University of Rochester

- *Artificial Intelligence, Department of Computer Science
- *Non-Numerical Computing, Department of Computer Science
- *Introduction to Artificial Intelligence Programming, Department of Computer Science
- *Artificial Intelligence in Medicine, Department of Computer Science

Université de Paris VIII

- *Introduction à l'Intelligence Artificielle, Département d'Informatique
- *La Mécanique Cognitive, Département d'Informatique
- *Recherche de l'Intelligence Artificielle, Département d'Informatique

Course Participation Elsewhere

- *Parsing Natural Language, Institut Dalle Molle pour les Etudes Sémantiques et Cognitives de l'Université de Genève, Lugano, Switzerland (one week advanced course)

Postdoctoral Supervision

(with current position)

Derek Monroe (Assistant Professor, Kinesiology, University of North Carolina, Chapel Hill)

Salomi Asaridou (Departmental Lecturer, Experimental Psychology, Oxford University)

Maria Inez Falcon-Haus (Licensing Manager, Boston Children's Hospital)

Jie Yang (Researcher, Macquarie University, Sydney)

Robert Blumenfeld (Associate Professor, California Polytechnic Institute, Pomona)

Sarah Tune (Assistant Professor, Institut für Psychologie, Universität zu Lübeck)

Giorgos P. Argyropoulos (Lecturer in Psychology, University of Stirling)

Michael Grosvald (Assistant Professor, Linguistics, Qatar University)

Anna Holt (Director of Evaluation and Impact, UTEC, Boston)

Patrick Wong (Associate Vice-President for Research, Stanley Ho Professor of Cognitive Neuroscience, Director of the Brain and Mind Institute, The Chinese University of Hong Kong)

E Elinor Chen (Director, Training & Education, Benchmark Analytics, Chicago)

Frederic Dick (Professor, University College London)

Goulven Josse (Freelance Consultant / Media Analyst, LexisNexis Benelux)

Uri Hasson (Associate Professor, Università degli Studi di Trento)

Rositsa Poryazova (Physician-Scientist, University of Zürich)
Nira Mashal (Professor, Bar Ilan University, Tel Aviv)
Anthony Dick (Professor, Florida International University, Miami)
Pascale Tremblay (Professor, Université Laval, Quebec City)
Roma Siugzdaite (Research Associate, Cambridge University)
Eva Mok (Principal Data and Applied Scientist, Microsoft, San Francisco)
Leonardo Fernandino (Assistant Professor, Medical College of Wisconsin)
Priya Santhanam (Image Analysis Specialist, Lovelace Biomedical Research Institute)
Petr Hlustik (Professor, Palacky University, Olomouc, Czech Republic)
Robin Wellington (Associate Professor, St. Johns College, NY)
Martha Burton (Assistant Professor of Neurology, University of Maryland; deceased)

Doctoral Supervision

(with current position)

Annette Glotfelty (Postdoctoral Fellow, University of Texas at Dallas)
E. Susan Duncan (Associate Professor, City University of New York)
Sarah Tune (Assistant Professor, Institut für Psychologie, University of Lübeck)
Anjali Raja (Chief Scientific Officer, Collabree Medical Software, Zürich)
Michael Andric (Data Science Manager, Beyond Limits, Los Angeles)
Jeremy Skipper (Senior Lecturer, University College London)
Petr Hlustik (Professor, Palacky University, Olomouc, Czech Republic)
Anthony Harris (Neurosurgeon, Tacoma, Washington)