Curriculum Vitae: updated November 15, 2026

I. Identifying Data

Name	M. Brandon Westover, MD, PhD
Current Position	Professor of Neurology and Neurological Sciences, Stanford University
Current Affiliation	Stanford University

II. Education History

Colleges and Universities Attended

7/1999	BS in Physics, Brigham Young University
7/2006	PhD, Physics, Washington University in St. Louis
7/2006	MD, Washington University School of Medicine

Residency and Fellowship Training

2006 – 2007	Internship, Barnes Jewish Hospital, Washington University School of Medicine, St. Louis, MO
2007 – 2010	Residency, Partners Neurology Program (Massachusetts General Hospital and Brigham and Women's Hospital), Boston, MA
2010 – 2012	Fellowship, Epilepsy and Clinical Neurophysiology, Massachusetts General Hospital, Boston, MA

Board Certification

2011	American Board of Psychiatry and Neurology (No. 56586)

III. Employment

Academic Appointments:

07/12-05/14	Instructor in Neurology, Harvard Medical School, Boston, MA
05/14-05/18	Assistant Professor in Neurology, Harvard Medical School, Boston, MA
05/18-10/22	Associate Professor of Neurology, Harvard Medical School, Boston, MA
10/22 – 5/26	Professor of Neurology, Harvard Medical School, Boston, MA
11/22 – 5/26	Emily Fisher Landau Professor of Neurology, Harvard Medical School, Boston, MA
5/26 – present	Professor of Neurology and Neurological Sciences, Stanford University, Stanford, CA

Other Appointments:

2022 to present	Director, Critical Care EEG Monitoring Service, BIDMC

IV. Honors and Awards

2011	Best Paper Award	Statistical Literacy (www.statlit.org)	Statistical Education
2012	Best Paper Award	Association for Computing Machinery: Special Interest Group on Knowledge Discovery and Data Mining (SIGKDD)	Basic Research
2014	Rappaport Fellowship	Massachusetts General Hospital	Nominated award
2018	#1 Most Disruptive AI Innovator	Partners Healthcare	Partners World Innovation Forum
2018	Innovation Discovery Grant	Partners Innovation Office	Artificial Intelligence Research / Development
2018	MGH-MIT Grand Challenge Winner	ECOR	Artificial Intelligence Research
2018	Best Neurology Clinical Research Abstract	MGH Neurology Department	Clinical Research
2018	Best Paper Award	CyberWorlds 2018, Singapore	Computer Science
2019	Disruptive Dozen AI Innovator	Massachusetts General Hospital Partners Healthcare	World Innovation Forum
2019	Innovation Discovery Award (IDG)	Partners Healthcare	World Innovation Forum
2019	Innovative Applications in Analytics Award (IAAA)	INFORMS Conference on Business Analytics & Operations Research	For achievements featuring novel combinations of descriptive, predictive and prescriptive analytics.
2019	Best Oral Abstract: Translational	American Delirium Society (ADS)	ADS annual meeting
2019	Derek Denny-Brown Young Neurological Scholar Award	American Neurological Association	ANA's Highest award. For outstanding scientific advances toward the prevention, diagnosis, treatment, and cure of neurological diseases

V. BIBLIOGRAPHY

Peer-reviewed original research (448 total, 5 in press, 10 submitted, 5 in review)

1. Eliasmith C, **Westover MB**, Anderson CH. "A general framework for neurobiological modeling: An application to the vestibular system." *Neurocomputing*. 2002. 46:1071-1076. PMCID: PMC6788744.
2. **Westover MB**, Eliasmith C, Anderson CH. "Linearly decodable functions from neural population codes." *Neurocomputing*. 2002. 45: 691-696. PMCID: PMC7062372.
3. Fischer B, **Westover MB**. "The neural multiple access channel." *Neurocomputing*. 2003. 52-54: 512-518. PMCID: PMC7062373.
4. **Westover MB**, Anderson CH. "Layer 4C of monkey V1 may linearize the output of the LGN." *Neurocomputing*. 2003. 52-54: 671-676. PMCID: PMC7062374.
5. **Westover MB**, O'Sullivan, JA. "Achievable rates for pattern recognition." *IEEE Transactions on Information Theory*, Jan 2008; 54(1): 299-320. PMCID: PMC7062371.
6. **Westover, MB**. "Asymptotic geometry of multiple hypothesis testing." *IEEE Transactions on Information Theory*, July 2008; 54(7): 3327-3329. PMCID: PMC6788803.
7. Woeltje KF, Butler AM, Goris AJ, Tutlam NT, Doherty JA, **Westover MB**, Ferris B, Bailey TC. "Automated Surveillance for Central Line Associated Bloodstream Infection in Intensive Care Units." *Infection Control and Hospital Epidemiology*, Sept.2008; 29:842-846. PMCID: PMC6788749.
8. Mueen A, Keogh E, Zhu Q, Cash SS, **Westover MB**. "Exact Discovery of Time Series Motifs." *Proceedings of the SIAM International Conference on Data Mining*, SDM 2009, April 30-May 2, 2008, Reno Nevada USA. SIAM 2008. PMCID: PMC6814436.
9. Chu-Shore J, **Westover MB**, Bianchi MT. "Power Law versus Exponential State Transition Dynamics: Application to Sleep-Wake Architecture." *PLoSONE* 5(12): e14204. Dec. 2, 2010. PMCID: PMC2996311.
10. Mueen A, Keogh E, Zhu Q, Cash SS, **Westover MB**, Bigdely-Shamlo N. "A disk-aware Algorithm for Time Series Motif Discovery." *DataMining and Knowledge Discovery*, 2011, 22(1-2): 73-105. PMCID: PMC7062370.

11. Zhang W-J, Keary C, **Westover MB**. "Premortem diagnosis of sporadic Creutzfeldt-Jakob disease aided by positron-emission tomography imaging." *American Journal of Neuroradiology*, Neuroradiology. 2011 Jan;32(1):E18. doi: 10.3174/ajnr.A2292. Epub 2010 Nov 11. PMCID: PMC6788750.
12. **Westover MB** , Bianchi MT, Eckman MH, Greenberg SM. "Statin Use Following Intracerebral Hemorrhage: A Decision Analysis." *Archives of Neurology*. 2011;68(5):573-579. PMCID: PMC3158138.
    - ***Featured article with accompanying editorial:*** *Arch Neurol. 2011;68(5):565-566. "Statins After Intracerebral Hemorrhage: To Treat or Not to Treat".*
    - ***Covered in over 150 news feeds****, including CBS News, ABC News, US News and World Report, and Medscape Medical News.*
13. **Westover MB**, Westover KD, Bianchi MT. "Significance Testing as Perverse Probabilistic Reasoning." *BMC Medicine*, 9(20). Published Online Feb. 28, 2011. PMCID: PMC3058025.
14. Westover KD, **Westover MB**, Winer EP, Richardson AL, Iglehart JD, Punglia RS. "Should a sentinel node biopsy be performed in patients with high risk breast cancer?" *International Journal of Breast Cancer*. 2011;2011:973245. doi: 10.4061/2011/973245. PMCID: PMC3262582.
15. Eiseman NA, **Westover MB**, Mietus JE, Thomas RJ, Bianchi MT. "Classification algorithms for predicting sleepiness and sleep apnea severity." *Journal of Sleep Research.* 2012 Feb;21(1):101-12. PMCID: PMC3698244.
16. Pascual-Leone A, Freitas C, Oberman L, Horvath JC, Halko M, Eldaief M, Bashir S, Vernet M, Shafi M, **Westover MB**, Vahabzadeh-Hagh AM, Rotenberg A. "Characterizing Brain Cortical Plasticity and Network Dynamics Across the Age-Span in Health and Disease with TMS-EEG and TMS-fMRI." *Brain Topography*, 2011 Oct;24(3-4):302-15. PMCID: PMC3374641.
17. Thakur K, **Westover MB**, "Cerebral Infarction Due to Smoker's Polycythemia." *BMJ Case Reports* 2011; doi:10.1136/bcr.08.2011.4714. PMCID: PMC3207785.
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19. **Westover MB**, Bianchi MT. "Should risky treatments be reserved for secondary prevention? A decision theory approach to risk-benefit balance." *Journal of Clinical Epidemiology,* Aug 2012; 65(8):877-86. PMCID: PMC6794097.
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22. Rakthanmanon T, Campana B, Mueen A, Batista G, **Westover MB**, Zhu Q, Zakaria J, Keogh E, "Searching and Mining Trillions of Time Series Subsequences under Dynamic Time Warping". *Proceedings of ACM SIGKDD 2012*. PMCID: PMC6816304.
    - ***Best Paper Award at Association for Computing Machinery's annual SIGKDD (Special Interest Group on Knowledge Discovery and Data Mining) meeting, 2012.***
23. Eiseman NA, **Westover MB**, Ellenbogen JM, Bianchi MT, "The Impact of Body Posture and Sleep Stages on Sleep Apnea Severity in Adults". *Journal of Clinical Sleep Medicine*. 2012 Dec 15;8(6):655-66A. PMCID: PMC3501662.
24. Van Esbroeck A, **Westover MB**, "Data-Driven Modeling of Sleep States from EEG". *Proceedings of the International Conference of the IEEE Engineering in Medicine and Biology Society* (EMBC'12). 2012;2012:5090-3. PMCID: PMC6788787.
25. Shafi, MM*, **Westover MB*,** Cole AJ, Kilbride RD, Hoch DB, Cash SS. "Absence of Early Epileptiform Abnormalities Predicts Lack of Seizures on Continuous *EEG". Neurology. Oct 2012; 79:1796-801.* PMCID: PMC3475619. ***joint first authorship.***
26. *Srinivasan P,* ***Westover*** **MB**, Bianchi MT. "Propagation of Uncertainty in Bayesian Diagnostic Test Interpretation". *Southern Medical Journal.* 2012 Sep;105(9):452-9. PMCID: PMC6785978.

27. **Westover MB**, Eiseman NA, Cash SS, Bianchi MT. "An Information Theoretic Approach to Uncertainty in Diagnostic Test Interpretation." *The Open Medical Informatics Journal.* 2012 Dec; 6: 36–50. PMCID: PMC3537080.
28. **Westover MB,** Cohen AB. "Reversible Vasoconstriction Syndrome with Bilateral Basal Ganglia Hemorrhages". *Journal of Neuroimaging*. 2013 Jan; 23(1): 122-125. PMCID: PMC6788746.
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    - ***Featured article with accompanying editorial**: Neurology. 2013 Apr 9;80(15):1358-9, "Cerebral Microinfarcts: Enumerating the Innumerable".*
    - ***Recognized as work of special significance by Faculty of 1000**: Baird A and Adamski M: F1000Prime Recommendation of [Westover MB et al., Neurology 2013, 80(15):1365-9]. In F1000Prime, 30 Apr 2013; DOI: 10.3410/f.718000104.793474863. F1000Prime.com/718000104#eval793474863.*
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41. Kheder A, Bianchi MT, **Westover MB.** "Burst Suppression in Sleep in a Routine Outpatient EEG." *Epilepsy and Behavior Case Reports* 2014 Jan; 2:71-74. PMCID: PMC4308090.
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    - ***Reviewed in Epilepsy Currents, official journal of the American Epilepsy Society:*** *Epilepsy Currents. 2015 Jan-Feb;15(1):24-5. doi: 10.5698/1535-7597-15.1.24. PMCID: PMC4320952.*
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    - ***Featured article with accompanying editorial****: Neurology 2014; 83:1–2. "Expanding antiplatelet use for patients with stroke: The case for stroke of unknown type*."
45. Gaspard N, Hirsch LJ, LaRoche SM, Hahn CD, **Westover MB.** "Inter-rater agreement for Critical Care EEG Terminology." *Epilepsia*. 2014 Sep;55(9):1366-73. PMCID: PMC4879939.
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53. **Westover MB***, Shafi MM*, Bianchi MT, Moura LMVR, O'Rourke D, Rosenthal ES, Chu CJ, Donovan S, Hoch DB, Kilbride RD, Cole AJ, Cash SS. "The Probability of Seizures During EEG Monitoring in Critically Ill Adults." *Clinical Neurophysiology*. 2014 Jul 11. pii: S1388-2457(14)00362-9. doi: 10.1016/j.clinph.2014.05.037. [Epub ahead of print]. PMCID: PMC4289643. ***joint first authorship.***
    - ***Featured article with accompanying editorial****: "Early epileptiform discharges and the yield of prolonged EEG monitoring."* Dangayach N, Claassen J., *Clinical Neurophysiology* (2014), doi: http://dx.doi.org/10.1016/j.clinph.2014.07.002.
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55. Alvarez V, **Westover MB**, Drislane FW, Dworetzky BA, Curley D, Lee JW, Rossetti AO. "Evaluation of a clinical tool for early etiology identification in status epilepticus." *Epilepsia*. 2014 Dec;55(12):2059-2068. PMCID: PMC4870016.
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59. de Gusmão CM, Berkowitz AL, Hung AY, **Westover MB**. "Cerebrospinal fluid shunt-induced chorea: case report and review of the literature on shunt-related movement disorders." Practical Neurology. 2015 Feb;15(1):42-4. PMCID: PMC4870013.
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Neurophysiology. 2015 Oct;126(10):1901-1914. PMCID: PMC4504839.

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1. **Westover MB**, Thomas TT, Greer DM, "Delirium" in Pocket Neurology, ed. Westover MB, Choi E, Awad KM, and Greer DM, Lippincott Williams & Wilkins, 2010, 86-89.
2. **Westover MB**, Choi E, Awad KM, Greer DM, Editors. Pocket Neurology. Lippincott Williams & Wilkins, 2010.
3. **Westover MB**, Peters JM, Bromfield EB, "Seizures and Other Spells" in Pocket Neurology, ed. Westover MB, Choi E, Awad KM, and Greer DM, Lippincott Williams & Wilkins, 2010, 57-79.
4. **Westover MB,** Xia, Z, Cho TA, "Meningitis, Encephalitis, & Brain Abscesses" in Pocket Neurology, ed. Westover MB, Choi E, Awad KM, and Greer DM, Lippincott Williams & Wilkins, 2010, 136-149.
5. Thomas TT, **Westover MB**, "Rapidly Progressive Dementia" in Pocket Neurology, ed. Westover MB, Choi E, Awad KM, and Greer DM, Lippincott Williams & Wilkins, 2010, 89-96.
6. Kummer TT, **Westover MB**, "Central Nervous System Vasculitis" in Pocket Neurology, ed. Westover MB, Choi E, Awad KM, and Greer DM, Lippincott Williams & Wilkins, 2010, 175-177.
7. **Westover MB,** Awad K, "Ischemic Stroke, Muscular Dystrophy and Friedreich's Ataxia" in MGH Cardiology Board Review. Springer-Verlag, London, 2013.
8. **Westover MB,** Edlow BL, Greer DM, "Coma After Cardiac Arrest: Management and Neurological Prognostication" in MGH Cardiology Board Review. Springer-Verlag, London, 2013.
9. **Westover MB,** Shafi MM, "Seizures" in Pocket ICU, Lippincott Williams & Wilkins, 2013.

VI. Grant Funding

Current:

09/2021 – 05/2026 Funder: NIH-NINDS (R01 AG073410)
Title: Comparative Safety of Seizure Prophylaxis within the Medicare Program

Role: Co-Investigator (PI: Lidia Maria Moura)

05/2021 – 04/2026
Funder: NIH-NINDS (R01 NS120947)
Title: Establishing a Brain Health Index from the Sleep Electroencephalogram
Role: PI

09/2022 – 08/2027
Funder: NIH-NHLBI (R01 HL161253)
Title: Data-Driven Sleep Biomarkers of Brain Health, Heart Health, and Mortality
Role: PI

08/2022 – 04/2027
Funder: NIH-NIA (R01 AG073598)
Title: Low Neurophysiologic Resistance to Anesthetics as a Marker of Preclinical/Prodromal Alzheimer's Disease and Neurovascular Pathology, Delirium Risk and Inattention
Role: Co-Investigator (PI: Miles Berger, via Duke subcontract)

01/2023 – 12/2027
Funder: NIH-NINDS (R01 NS126282)
Title: Prospective Validation of Neurophysiologic Outcome Prediction in Acute Brain Injury
Role: PI

09/2023 – 05/2028
Funder: NIH-NINDS (R01 NS130119)
Title: Late-Onset Unexplained Epilepsy as a Risk Factor for Dementia
Role: Co-PI (with Alice D. Lam)

12/2023 – 11/2028
Funder: NIH-NINDS (R01 NS131347)
Title: Comparative Effectiveness of EEG-Guided Anti-Seizure Treatment in Acute Brain Injury
Role: Co-Investigator (PI: Sahar F. Zafar)

11/2023 – 10/2028
Funder: NIH-NIA (R01 AG078261)
Title: Delirium Dynamics: Understanding Causes and Effects
Role: Co-Investigator (PI: Eyal Kimchi, via Northwestern subcontract)

09/2023 – 09/2025
Funder: NIH-NIA (R21 AG085495)
Title: Development of Novel Polysomnography-Based Digital Biomarkers to Predict Alzheimer's Disease and Parkinson's Disease
Role: Co-Investigator (PI: Yue Leng, via UCSF subcontract)

02/2025 – 02/2026
Funder: Takeda (PO8001791544)
Title: Analysis of Risk of Narcolepsy through Clinical Notes
Role: PI

Submitted:

12/2025 – 11/2030
Funder: NIH (Pending)
Title: Leveraging Clinical Data and Automation to Predict Epilepsy After TBI
Role: Co-Investigator (PI: Jennifer Kim)

12/2025 – 11/2030
Funder: NIH (Pending)
Title: De-Biasing Effect Assessment of Seizure Effects on Neurologic Outcomes (DEBIAS)

Role: Co-Investigator (PI: Adrian Dalca)

12/2025 – 11/2030
Funder: NIH-NINDS (Pending)
Title: Automating Critical Care Electroencephalography Using AI Foundation Models
Role: PI

12/2027 – 11/2030
Funder: NIH (Pending)
Title: *Tana Mu Na?* Feasibility of Mobile EEG and Automated Intelligence to Diagnose Epilepsy in Children in Guinea-Bissau
Role: Co-Investigator (PI: Farrah Mateen)

07/2025 – 06/2030
Funder: NIH-NINDS (1UG3NS143749-01)
Title: Continuous Monitoring of Pain Using Facial Expressions in the ICU Environment (COMPANION)
Role: Co-Investigator (PI: Hao Deng)

Completed:

2012 – 2014
Funder: American Brain Foundation Clinical Research Training Fellowship
Title: Early Detection of Delayed Cerebral Ischemia After Subarachnoid Hemorrhage Using Context-Sensitive Computational EEG
Role: PI

2014 – 2019
Funder: NIH-NINDS (K23 NS090900)
Title: Quantitative Neurophysiological Monitoring and Control of Sedation-Analgesia in the ICU Environment
Role: PI

2017 – 2019
Funder: SAGE Therapeutics
Title: Automated Detection of Seizure-Spectrum Patterns and Quantitative Neurological Outcome Prediction
Role: PI

2018 – 2019
Funder: Partners Healthcare Innovation
Title: Artificial Intelligence-Based Seizure Detection and Classification
Role: PI

2018 – 2019
Funder: MGH-MIT Grand Challenge
Title: Big Data and Deep Learning for the Interictal-Ictal-Injury Continuum
Role: PI

2018 – 2021
Funder: Glenn Foundation for Medical Research
Title: Electroencephalogram-Based Brain Age and Its Relationship with Cognitive Function and Sleep Quality
Role: PI

2018 – 2023
Funder: NIH-NINDS (R01 NS102190)
Title: Investigation of Sleep in the Intensive Care Unit
Role: PI

2019 – 2024	Funder: NIH-NINDS (R01 NS107291) Title: Deep Learning for the Ictal-Interictal-Injury Continuum Role: PI
2018 – 2023	Funder: NIH-NINDS (R01 NS102574) Title: Multimodal Network Connectivity Architecture (MOCA) of the Brain and Its Role in Recovery of Consciousness in Comatose Cardiac Arrest Patients Role: Co-Investigator (PI: Ona Wu)
2019 – 2024	Funder: NIH-NIA (R01 AG060987) Title: Treating Hyperexcitability in Alzheimer's Disease with Levetiracetam to Improve Brain Function and Cognition Role: Co-Investigator (PI: Mouhsin Shafi)
2019 – 2024	Funder: NIH-NIA (RF1 AG064312) Title: Integrated Motor Activity Biomarker for Risk of Alzheimer's Dementia Role: Co-Investigator (PI: Kun Hu)

VII. Professional Activities

Editorial Service

2010	Editor, Pocket Neurology, Lippincott Williams & Wilkins
2016	Editor, Pocket Neurology, 2nd Edition; Wolters Kluwer
2019-2024	Editorial Board Member, Journal of Clinical Neurophysiology

Ad Hoc Reviewer

2010- present	Neurology
2010- present	JAMA Neurology (formerly Archives of Neurology)
2006- present	Philosophical Psychiatry
2010- present	Journal of Clinical Epidemiology
2010- present	BMJ Case Reports
2010- present	IEEE Transactions on Information Theory
2010- present	IEEE Transactions on Signal Processing
2010- present	Journal of Medical Engineering
2010- present	Journal of Clinical Neurophysiology
2010- present	Journal of Neuroscience
2010- present	European Journal of Neurology
2010- present	Critical Care Medicine
2010- present	Annals of Clinical and Translational Neurology
2010- present	Journal of Neural Engineering
2010- present	Journal of Cerebral Blood Flow & Metabolism
2010- present	Computers in Biology and Medicine
2010- present	Proceedings of the National Academy of Sciences (PNAS)
2010- present	Brain
2010- present	Epilepsy Research
2010- present	American Journal of Respiratory and Critical Care Medicine
2010- present	SLEEP

Service as Grant Reviewer

2018-2020	Ad Hoc Member, Acute Neural Injury & Epilepsy (ANIE), NIH
2021- 2025	Permanent Member, Acute Neural Injury & Epilepsy (ANIE), NIH

University Administrative Service

2011-2017	Critical Care Informatics Committee Massachusetts General Hospital
2011-2022	Neurocritical Care Clinical Review Committee Massachusetts General Hospital
2011-2022	Co-director, MGH Neuromonitoring Committee Massachusetts General Hospital
2010-2016	Member, MGH EEG Reporting System Redesign Committee, MGH
2013-2017	MGH Infusion Pump Committee Massachusetts General Hospital
2014-2022	MGH Cooling Committee Massachusetts General Hospital
2015-2018	Member, PhD Thesis Committee (Candidate: Mohammad Ghassemi), MIT
2015-2019	Member, PhD Thesis Committee (Candidate: Jing Zhi An), MIT
2017-2019	Chair, Data Safety Monitoring Board (DSMB) for R01 (PI: Ken Solt), MGH
2018-2020	Member, DSMB for R01 (PI: Alvaro Pascual Leone), BIDMC

Service to Professional Organizations

2011-2014	TRENdS (Treatment of Recurrent Nonconvulsive SeizureS) Clinical Trial Investigators Committee, Duke University / Duke Clinical Research Institute (DCRI)
2015-2017	Member at Large Critical Care EEG Monitoring Research Consortium (CCEMRC)
2016	Co-Chair, 7th International Conference on Extreme Learning Machines (ELM2016). Singapore, December 13-15, 2016.
2017-2019	Vice-Chair, Critical Care EEG Monitoring Research Consortium (CCEMRC)
2017	Co-Chair, The 8th International Conference on Extreme Learning Machines (ELM2017). Yantai, China, October 4-7, 2017.
2019-2021	Chair, Critical Care EEG Monitoring Research Consortium (CCEMRC)
2025-2029	Chair, International League Against Epilepsy (ILAE) – Commission on Big Data and AI
2025-	Committee Member, NINDS Common Data Elements (CDE) in Epilepsy Research Oversight Committee.

Community Service

2012 Christ Lutheran Nursery School, Belmont, MA	Educational Speaker
2014 Boy Scout Troop 66, Belmont, MA. Belmont, MA	Educational Speaker
2014 Butler Elementary School, Belmont, MA,	Educational Speaker
2016 Butler Elementary School, Belmont, MA,	Educational Speaker

VIII. Invited Presentations (Since 2020)

Grand Rounds:

1. "Monitoring and Closed-Loop Control of Burst Suppression." Neurology Grand Rounds, Massachusetts General Hospital, Boston, MA (2013)
2. "Continuous Brain Monitoring in Critical Care." Anesthesia, Critical Care and Pain Medicine Grand Rounds, Massachusetts General Hospital, Boston, MA (2013)
3. "Why Brains Need Computers." Neurology Grand Rounds, Massachusetts General Hospital, Boston, MA (2016)
4. "Towards Personalized Critical Care Brain Monitoring." Neurology Grand Rounds, Stanford University, Palo Alto, CA (2017)
5. "Machine Learning in Neurology." Neurology Grand Rounds, University of Wisconsin, Madison, WI (2019)

6. “Early Ischemia Detection Using EEG in Subarachnoid Hemorrhage.” Neurology Grand Rounds, University Hospitals Cleveland Medical Center, Cleveland, OH (2019)
7. “Automating Clinical Neurophysiology.” Neurology Grand Rounds, Stanford University, Palo Alto, CA (2019)
8. “AI in Clinical Neurophysiology.” Neurology Grand Rounds, Massachusetts General Hospital, Boston, MA (2020)
9. “Covid-19 Outcome Risk Prediction.” Neurology Grand Rounds, Massachusetts General Hospital, Boston, MA (2020)
10. “Automated EEG Analysis in Clinical Care.” Neurology Grand Rounds, University of California San Diego, San Diego, CA (2020)
11. “Denoising the Diagnosis of Epilepsy.” Neurology Grand Rounds, Einstein Medical Center Philadelphia, Philadelphia, PA (2022)
12. “Quantifying the Ictal-Interictal-Injury Continuum.” Neurocritical Care Grand Rounds, University of Washington, Seattle, WA (2022)
13. “Superhuman Management of Seizures in the ICU.” Neurology Grand Rounds, Yale School of Medicine, New Haven, CT (2023)
14. “Optimizing Detection and Treatment of Nonconvulsive Status Epilepticus.” Geschwind Pan-Harvard Grand Rounds, Harvard Medical School, Boston, MA (2023)
15. “Big Data and AI to Achieve Superhuman Detection and Treatment of Seizures in ICU Patients.” Healthcare Delivery Science Grand Rounds, Beth Israel Deaconess Medical Center / Harvard Medical School, Boston, MA (2023)
16. “Toward Optimal Treatment of Harmful Brain Activity in Critical Illness.” Neurology Grand Rounds, University Hospital Cleveland Medical Center, Cleveland, OH (2024)
17. “Reducing Noise in the Diagnosis of Epilepsy.” Neurology Grand Rounds, University of Texas Houston, Houston, TX (2024)
18. “Reducing Noise in the Diagnosis of Epilepsy.” Neurology Grand Rounds, University of Pennsylvania, Philadelphia, PA (2024)
19. “Reducing Diagnostic Noise in Neurology: Lessons from Epilepsy.” Neurology Grand Rounds, Beth Israel Deaconess Medical Center / Harvard Medical School, Boston, MA (2025)
20. “Reducing Noise in Neurology: Lessons from Epilepsy.” Neurology Grand Rounds, University of Michigan, Ann Arbor, MI (2025)
21. “Reducing Diagnostic Noise in Neurology: Lessons from Epilepsy.” Neurology Grand Rounds, Stanford University, Palo Alto, CA (2025)
22. “Designing Randomized Trials for Nonconvulsive Status Epilepticus Using Observational Data.” Neurology Grand Rounds, Montefiore Einstein, Bronx, NY (2026)

Local Invited Presentations:

1. “What is monkey cortex layer four for?” Neuroanatomy & Neurobiology Department, Washington University School of Medicine, St. Louis, MO (2002)
2. “EEG Patterns in the Neurological ICU.” MGH Neurosciences ICU, Boston, MA (2010)
3. “Should Statins Be Avoided After Intracerebral Hemorrhage? Implications of SPARCL.” MGH Stroke Research Center, Boston, MA (2010)
4. “Fundamentals of ICU EEG Monitoring.” Nursing Skills Day, MGH Neurosciences ICU, Boston, MA (2012)
5. “Status Epilepticus and the Ictal–Interictal Continuum: Introduction to ICU EEG.” MGH Critical Care Center, Boston, MA (2012)
6. “Neurological Prognostication in Coma After Cardiac Arrest.” MGH Critical Care Center, Boston, MA (2013)
7. “Monitoring and Closed-Loop Control of Burst Suppression.” Department of Brain & Cognitive Sciences, MIT, Cambridge, MA (2014)

8. “EEG-Related Skin Lesions: Statistical Process Monitoring & Risk Reduction.” MGHfC Quality & Safety Operations Lead Team Meeting, Boston, MA (2014)
9. “Fundamentals of Continuous EEG Monitoring in Neurocritical Care; Quantitative Clinical EEG Fundamentals.” MGH Neurosciences ICU & BWH/MGH Clinical Neurophysiology Fellows Didactic Conference, Boston, MA (2014)
10. “Automated Surveillance for Ventilator-Associated Pneumonia.” MGH Infection Control Committee, Boston, MA (2015)
11. “The Role of Continuous EEG in Coma After Cardiac Arrest: Prognostic Value.” MGH EEG Technologist Training Meeting, Boston, MA (2015)
12. “Quantitative Electroencephalography.” Epilepsy Fellows Training Conference, MGH Neurology, Boston, MA (2017)
13. “CDAC: Bringing Big Clinical Data to Life.” MGH Neurosurgery Faculty Meeting, Boston, MA (2018)
14. “Landmark Project #4: Clinical Time Series Data.” Partners HealthCare EDMT Meeting, Boston, MA (2018)
15. “Validating the Brain Age Index: Modifying Brain Aging Through Exercise.” McCance Center for Brain Health Faculty Meeting, Boston, MA (2019)
16. “Automating Clinical Neurophysiology.” Special Seminar, Department of Brain & Cognitive Sciences, MIT, Cambridge, MA (2020)
17. “Automatic Detection of Nonconvulsive Seizures.” BIDMC Research Day, Boston, MA (2023)
18. “Are We Still Worried AI Might Kill Us All? Yeah.” (with Alek Westover) BIDMC NeuroAI Special Interest Group, Boston, MA (2026)

National and Regional Meetings:

1. “Automatic Detection of Beta Amyloid in Digital Images Using Visual Texture.” Alzheimer’s Disease Research Center, Washington University, St. Louis, MO (2005)
2. “EEG Monitoring and Closed-Loop Control of Burst Suppression.” American Clinical Neurophysiology Society Annual Meeting, Miami, FL (2013)
3. “Early Detection of Delayed Cerebral Ischemia Using EEG.” Greater Boston Epilepsy Society, Boston, MA (2015)
4. “Why Brains Need Computers: How Computer Science and Engineering Can Improve Neurology.” Computational Health Distinguished Lecture Series, Georgia Institute of Technology, Atlanta, GA (2016)
5. “Polysomnographic Signatures of Brain Age.” Massachusetts Sleep Society, Westborough, MA (2017)
6. “Artificially Intelligent Brain Monitoring.” World Medical Innovation Forum, Boston, MA (2019)
7. “Expert-Level Automatic Detection of Epileptiform Discharges.” American Neurological Association, St. Louis, MO (2019)
8. “Quantitative EEG for Ischemia Detection.” American Clinical Neurophysiology Society Annual Meeting, Las Vegas, NV (2019)
9. “EEG Monitoring for Early Detection of Cerebral Ischemia.” American Clinical Neurophysiology Society Annual Meeting, New Orleans, LA (2020)
10. “Automating Clinical Neurophysiology.” Duke Comprehensive Epilepsy Center Quarterly Research Symposium, Durham, NC (2020)
11. “Big Data and Machine Learning to Advance Status Epilepticus Research.” American Neurological Association, Virtual Meeting (2020)
12. “Automated Detection of Seizures and Ictal–Interictal Continuum Patterns Using Deep Learning.” American Clinical Neurophysiology Society Annual Meeting, Virtual (2021)
13. “Sleep as a Window into Brain Health.” Harvard Sleep Grand Rounds, Virtual (2021)
14. “Avoiding Pitfalls in EEG Interpretation.” American Academy of Neurology Annual Meeting, Seattle, WA (2022)

15. “Artificial Intelligence in Sleep Medicine.” American Neurological Association Annual Meeting, Chicago, IL (2022)
16. “Addressing Problems in Critical Care Neurophysiology Using Machine Learning.” Machine Learning in Medicine Seminar Series, Carnegie Mellon University, Pittsburgh, PA (2022)
17. “Electroencephalogram-Based Brain Age and Its Relation with Cognitive Function and Sleep Quality.” American Federation for Aging Research (AFAR) Grantee Conference, Santa Barbara, CA (2022)
18. “Spectrograms in ICU EEG.” American Clinical Neurophysiology Society Fall Course: ICU EEG Monitoring, San Diego, CA (2022)
19. “Denoising and Debiasing the Diagnosis of Epilepsy.” NESET Fall Educational Meeting, Quincy, MA (2022)
20. “Epileptiform and Non-Epileptiform Findings in ICU Electroencephalography.” American Academy of Neurology Annual Meeting, Boston, MA (2023)
21. “Neurophysiological Grading of Encephalopathy.” American Academy of Neurology Annual Meeting, Boston, MA (2023)
22. “Identifying and Overcoming Barriers for Clinical Use of Artificial Intelligence in Sleep Medicine.” American Academy of Sleep Medicine Annual Meeting, Indianapolis, IN (2023)
23. “Optimizing Treatment of Nonconvulsive Status Epilepticus.” American Epilepsy Society Annual Meeting, Orlando, FL (2023)
24. “Multimodal Monitoring and Brain Monitoring for Ischemia.” American Clinical Neurophysiology Society Annual Meeting, Austin, TX (2023)
25. “Hot Topics in AI and ICU EEG.” American Clinical Neurophysiology Society Annual Meeting, Austin, TX (2023)
26. “Collaborating with Industry.” American Clinical Neurophysiology Society Annual Meeting, Orlando, FL (2024)
27. “Quantitative EEG.” American Clinical Neurophysiology Society Annual Meeting, Orlando, FL (2024)
28. “The EEG Map of Everything (MOE).” Critical Care EEG Monitoring Research Consortium Meeting, Orlando, FL (2024)
29. “AI in ICU EEG.” American Epilepsy Society Annual Meeting, Los Angeles, CA (2024)
30. “Machine Learning Approaches to Studying Neurophysiology in LoUE.” Defining the Landscape of Late-Onset Unexplained Epilepsy Conference, South Casco, ME (2025)
31. “Data-Driven Biomarkers for Brain Health from Sleep.” SLEEP 2025 Annual Meeting, Seattle, WA (2025)
32. “Big Data in Epilepsy Research.” NINDS Curing the Epilepsies Conference, Bethesda, MD (2026)

International Meetings:

1. “Opportunities for Intelligent Computing in Clinical Neurophysiology.” Nanyang Technical University Symposium on Novel Technologies for Clinical Practice in Neurology, Singapore (2012)
2. “Real-Time Measurement and Closed-Loop Control of Burst Suppression.” IEEE Engineering in Medicine and Biology Society Conference, Osaka, Japan (2013)
3. “Optimizing the Treatment of Refractory Status Epilepticus.” Networks in Epilepsy Conference, Beijing, China (2015)
4. “Engineering in Neurocritical Care: Modeling & Control of Refractory Status Epilepticus.” International Symposium on EEG Signal Analysis, Xi’an, China (2015)
5. “Quantitative Electroencephalography for Detection of Seizures and Ischemia.” Beijing ICU Neuroelectrophysiological Monitoring Forum, Beijing, China (2015)
6. “Why Brains Need Computers: How Machine Learning and Big Data Can Help Neurology.” Extreme Learning Machines Annual Conference, Singapore (2016)
7. “Machine Learning in Neurocritical Care.” Northwestern University International Forum on Big Data in Healthcare, Xi’an, China (2017)
8. “Quantitative EEG: Detecting Ischemia and Seizures.” International Congress of Clinical Neurophysiology, Washington, DC (2018)

9. “Removing the Confusion from Toxic-Metabolic Encephalopathy.” University of Twente Mini-Symposium, Enschede, Netherlands (2018)
10. “Mapping the Ictal–Interictal–Injury Continuum.” Neurocritical Care Society Annual Meeting, Vancouver, Canada (2019)
11. “Superhuman Detection of Seizures, Rhythmic and Periodic Patterns in ICU EEG.” International Congress on Clinical Neurophysiology (ICCN), Geneva, Switzerland (2022)
12. “Quantifying the Ictal–Interictal Continuum.” International Conference on Technology and Analysis for Seizures (ICTALS), Bern, Switzerland (2022)
13. “The Brain Data Science Platform.” (with Junior Moura) International Epilepsy Data Ecosystem Workshop, Neuroscience School of Advanced Studies, Crans-Montana, Switzerland (2023)
14. “Quantitative EEG Primer.” Teaching Course: Continuous EEG Monitoring, International Congress of Clinical Neurophysiology (ICCN), Jakarta, Indonesia (2024)
15. “Urgent Treatment for Periodic Discharges in Critically Ill Patients Is Essential.” Controversies Session, International Congress of Clinical Neurophysiology (ICCN), Jakarta, Indonesia (2024)
16. “Using AI in Continuous EEG Monitoring.” Symposium: Using Artificial Intelligence in Clinical EEG, International Congress of Clinical Neurophysiology (ICCN), Jakarta, Indonesia (2024)
17. “Denoising the Diagnosis of Epilepsy.” AI in Epilepsy Conference, Breckenridge, CO (2025)
18. “MORGOTH: Automating the Interpretation of Clinical Neurophysiology Tests.” International Conference on Technology and Analysis for Seizures (ICTALS), Montreal, Canada (2025)
19. “Artificial Intelligence in Neurology: Promise and Peril.” Donald Baxter Lecture, Montreal Neurological Institute, Montreal, Canada (2025)

IX. Teaching

Teaching during Stanford appointment:

None.

Teaching prior to Stanford:

Courses

2001–2002	Instructor for Computational Neuroscience, Washington University School of Medicine, Department of Anatomy and Neurobiology.
2003	Instructor for Detection and Estimation Theory, Washington University, Department of Electrical and Systems Engineering.
2004	Instructor for Information Theory, Washington University, Department of Electrical and Systems Engineering.
2008–2009	Instructor for Neuroanatomy Laboratory, Harvard Medical School.
2012–2025	Lecturer for Medical Decision Analysis and Diagnostic Test Interpretation (HST-192.0), Harvard–MIT Program in Health Sciences and Technology.
2013–2017	Course Director and Lecturer for Medical Decision Analysis and Diagnostic Test Interpretation (HST-192.0), Harvard–MIT Program in Health Sciences and Technology.

Tutorials and Lectures

10/2009	Granger Causality Analysis Techniques for EEG Data. Clinical Neurophysiology Research Group, MGH, Boston, MA.
5/2010	Synchronization Likelihood for Functional Connectivity Analysis of EEG Data. Clinical Neurophysiology Research Group, MGH, Boston, MA.
7/2008	Probability in Medical Reasoning. Neurology Residents, Brigham and Women’s Hospital, Boston, MA.
9/2009	Invited lecturer, Bayes’ Rule for Physicians. Partners Neurology, MGH/BWH, Boston, MA.
6/2010	EEG Alphabet Soup: GCSE, NCSE, PLEDs, BIPLEDs, GPEDs, & DEADs. Partners Neurology, MGH/BWH, Boston, MA.

8/2011	Status Epilepticus: Diagnosis and Management. Partners Neurology, MGH/BWH, Boston, MA.
9/2012	Introduction to ICU EEG: Seizures, Spikes, PEDs, Ischemia, and Coma. Partners Neurology, MGH/BWH, Boston, MA.
7/2018	Quantitative Electroencephalography. Neurophysiology and Epilepsy Fellows, MGH Epilepsy Division, Boston, MA.
7/2019	Recognizing Seizures and Ischemia in Critical Care EEG Monitoring. Neurophysiology and Epilepsy Fellows, MGH Epilepsy Division, Boston, MA.
6/2020	Emergency Electroencephalography. Emergency Medicine Residents, Massachusetts General Hospital, Boston, MA.
7/2020	Introduction to Spectrograms in ICU EEG. Neurophysiology and Epilepsy Fellows, MGH Epilepsy Division, Boston, MA.

Clinical Supervisory and Training

2012–	Supervisor, MGH Adult Epilepsy Clinic (½-day session per week).
2012–	Attending Physician, MGH Inpatient Neurology Service (2-week block per year), supervising neurology residents and Harvard medical students.
2012–	Attending Physician, MGH General Neurology Consult Service (2-week block per year), supervising neurology residents.
2012–	Director, MGH Critical Care EEG Monitoring Service (≈10 weeks per year), supervising Epilepsy and Clinical Neurophysiology Fellows.
2012–	Attending, MGH Epilepsy Monitoring Unit (≈6 weeks per year), supervising Epilepsy and Clinical Neurophysiology Fellows.
2012–	Faculty, Outpatient EEG Reading Service (≈2 days per month), supervising Epilepsy and Clinical Neurophysiology Fellows.

Research Supervisory and Training Responsibilities

2012–	Supervisor of postdoctoral research fellows (average 5–10 fellows per year), Massachusetts General Hospital.
2012–	Supervisor of graduate students (average 2–4 per year), Massachusetts General Hospital and MIT.

X. Trainees

Postdoctoral Fellows

Sahar Zafar, MD (K23)	2015–present
Jennifer Kim, MD, PhD (K23)	2014–2020
Edilberto Amorim, MD (K23)	2014–2019
Marta Priscila Bento Fernandes, PhD	2019–present
Rajesh Amerineni, PhD	2020–2022
Wendong Ge, PhD	2019–2022
Weilong Zheng, PhD	2019–2022
Yalda Amidi, PhD	2022–2024
Samaneh Nasiri, PhD	2021–2023
Wolfgang Ganglberger, PhD	2019–present
Shadi Sartipi, PhD	2024–present
Alexandra Tautan, PhD	2024–present
Ayush Tripathi, PhD	2024–present
Samuel Waters, PhD	2024–present
ChenXi Sun, PhD	2024–present
Charlotte Maschke, PhD	2024–present
Bruce Nearing, PhD	2024–present
Ayan Mitra, PhD	2024–present

Sungtae An, MS / PhD	2016–2018
Haoqi Sun, MD	2016–present
Jing Jin, PhD	2013–present

Graduate Students

Jingzhi An, PhD	2014–2020
Mohammad Ghassemi, PhD	2014–2019
Jefferson T. Oliva, PhD	2016–2017
Qiang Li, PhD	2018–2020
Arnav Gupta	2024–present
Thijs Nassi, MSc	2021–2025

Medical Students / Residents / Fellows

Elliott Akama-Garren	2014–2015
Jennifer Kim, MD, PhD	2014–2020
Eyal Kimchi, MD, PhD (K23)	2018–present
Daniel Goldenholz, MD, PhD (K23)	2022–present
Peter Hadar, MD, PhD	2022–present
Wan Yee Kong, MD, MSc	2022–2025
James Lucarelli, MD, PhD	2022–present
Callison Alcott, MD, PhD	2023–present
Sarah Wahlster, MD	2011–2012
Craig Williamson, MD	2011–2012
Lidia Moura, MD	2013–2014
Marcus Ng, MD	2013–2014
Patrick Chen, MD	2013–2014
Deirdre O'Rourke, MD	2013–2014
Sandipan Pati, MD	2013–2014
Ammar Kheder, MD	2013–2014
Aaron Berkowitz, MD, PhD	2013–2014
Luis Paixao, MD	2017–2019
Aline Herlopian, MD	2017–present
Nitish Harid, MD	2020–2021

Undergraduate Students

Nathaniel Eiseman	2010–2011
Wade Whitt	2017–2019
Jacob Hogan	2018–2020
Alek Westover	2018–2023
Danny Jones	2021–2022
Jaden Barfuss	2021–2022
Jayme Banks	2021–2023
Leia Jekel	2023–2024
Rebecca Milde	2023–2024
Moritz Alkofer	2023–2024
Elijah Davis	2023–2024
Dan Sumsion	2023–present
Lydia Petersen	2023–present
Kiwi (Yiwen) Xiong	2023–present
Luke Jackson	2024–present
Carlos Nuñez-Sosa	2024–present

Amber Peng	2024–present
Mitchell McCauley	2024–present
Patrick Wynn	2024–present
Elijah Keldsen	2024–present

High School Students

Sophia Bechek	2016–2017
Samvrit Rao	2023–2024