GLADIA HOTAN

EDUCATION

MASSACHUSETTS INSTITUTE OF TECHNOLOGY Cambridge, MA, USA

PhD, Brain and Cognitive Sciences *Sep 2014 - Aug 2020*
Thesis: State-space Modeling and Electroencephalogram Source Localization of Slow Oscillations with Applications to the Study of General Anesthesia, Sedation and Sleep **GPA**: 4.9/5.0
Thesis Advisors: Dr Patrick Purdon, Dr Emery Brown

MIT Sloan Healthcare Certificate *Sep 2019 - May 2020*
H-Lab Action Learning Project: Quality Predictive Modeling for Diabetes and Hypertension

CALIFORNIA INSTITUTE OF TECHNOLOGY Pasadena, CA, USA

BS, Physics (with Honor) *Sep 2009 - May 2013*
Thesis: Experimental Analysis of Dynamic Interactions between Micrometer-Scale Stainless Steel Spheres **GPA**: 3.9/4.0
Thesis Advisor: Dr Chiara Daraio

WORK EXPERIENCE

Research Scientist, Institute of High Performance Computing *Nov 2020 - present*
Research Engineer, Inst. for Infocomm Research & Inst. of Microelectronics *Jul 2013 - Jul 2014*

AWARDS

A*STAR National Science Scholarship (BS *2009*, PhD *2014*)

PUBLICATIONS

- Manzano GS, Holroyd KB, Kaplan T, Bhattacharyya S, Chitnis T, Hotan GC, Zurawski J, Galetta KM, Mateen FJ. **Disease Modifying Therapy Management of Multiple Sclerosis after Stem Cell Therapies: A Retrospective Case Series.** Multiple Sclerosis and Related Disorders 2022, 63:103861. [Link]
- Rice DR, Kaplan TB, Hotan GC, Vogel AC, Matiello M, Gillani RL, Hutto SK, Ham AS, Klawiter EC, George IC, Galetta K, Mateen FJ. **Electronic pill bottles to monitor and promote medication adherence for people for multiple sclerosis: A randomized, virtual clinical trial.** Journal of the Neurological Sciences 2021, 428:117612. [Link]
- Stephen EP, Hotan GC, Pierce ET, Harrell G, Walsh JL, Brown EN, Purdon PL. **Broadband slow-wave modulation in posterior and anterior cortex tracks distinct states of propofol-induced unconsciousness.** Scientific Reports 2020, 10:13701. [Link]
- Sokolov E, Bachir DHA, Sakadi F, Williams J, Vogel AC, Schaekermann M, Tassiou N, Bah AK, Khatri V, Hotan GC, Ayub N, Leung E, Fantaneanu TA, Patel A, Vyas M, Milligan T, Villamar MF, Hoch D, Purves S, Esmaeili B, Stanley M, Lehn-Schioler T, Tellez-Zenteno J, Gonzalez-Giraldo E, Tolokh I, Heidarian L, Worden L, Jadeja N, Fridinger S, Lee L, Law E, Cissé FA, Mateen FJ. **Tablet-based EEG diagnostics for epilepsy patients in the West African Republic of Guinea.** European Journal of Neurology 2020, 27(8):1570–1577. [Link]
- Mateen FJ, Vogel AC, Kaplan TB, Hotan GC, Grundy SJ, Holroyd K, Manalo N, Stauder M, Videnovic A. **Light therapy for the treatment of multiple sclerosis-associated fatigue: A randomized, controlled phase-II trial.** Journal of Neurology 2020, 267(8):2319–2327. [Link]

- Anand P, Hotan GC, Vogel A, Venna N, Mateen FJ. **Progressive multifocal leukoencephalopathy: A 25-year retrospective cohort study.** Neurology: Neuroimmunology and Neuroinflammation 2019, 6(6):e618. [Link]
- Williams J, Cisse FA, Schaekermann M, Sakadi F, Rahamatou T, Hotan GC, Bah AK, Hamani ABD, Lim A, Leung ECW, Fantaneau TA, Milligan T, Khatri V, Hoch D, Vyas M, Lam A, Cohen J, Vogel A, Law E, Mateen FJ. **Utilizing a wearable smartphone-based EEG for pediatric epilepsy patients in the resource poor environment of Guinea: A prospective study.** Seizure 2019, 71:93–99. [Link]
- Mateen FJ, Manalo NC, Grundy SJ, Houghton MA, Hotan GC, Erickson H, Videnovic A. **Light therapy for multiple sclerosis-associated fatigue: Study protocol for a randomized control trial.** Medicine 2017, 96(36):e8037. [Link]
- Hotan GC, Struck AF, Bianchi MT, Eskandar EN, Cole AJ, Westover MB. **Decision analysis of intracranial monitoring in non-lesional epilepsy.** Seizure 2016, 40:59–70. [Link]

TEACHING

GRADUATE TEACHING

HST.S56: Introduction to Closed-Loop Control of Physiological Systems, Massachusetts Institute of Technology (2019, 2020) (Course Instructor)
I worked with a 5-person team to design this course. 2020: I gave lectures on deterministic estimation, stochastic estimation (Kalman filter) and Linear Quadratic Gaussian control. 2019: I gave lectures on linear algebra, phase portraits, controllability and observability.

9.014: Quantitative Methods for Neuroscience, Massachusetts Institute of Technology (2016) (Teaching Assistant)

9.00: Introduction to Psychological Science, Massachusetts Institute of Technology (2015) (Teaching Assistant)

HIGH SCHOOL OUTREACH

Introduction to Neuroscience, Seoul High School (2021, 2018), Seoul Science High School (2018, 2015), Myeonmok High School (2015) (Korea) (Course Instructor)
I designed and taught a 5-day course covering cellular and molecular, systems, cognitive, computational and clinical neuroscience to high school students in Korea.

Introduction to University-Level Mathematics Techniques, Temasek Junior College (2013) (Singapore) (Course Instructor)
I designed and taught an 8-week course on introductory university-level applied mathematics to high school students in Singapore.

ACTIVITIES

LEADERSHIP

President of MIT Singaporean Students' Society (MITSSS) *Apr 2016 - Mar 2017*
Led a 5-person executive committee to organize 7 social events for Singaporeans in Boston and the MIT community. Our largest event had 50 volunteers cooking Singaporean food for 200 guests.

VOLUNTEERING

Massachusetts General Hospital (MGH Volunteer Department) *Nov 2018 - Nov 2019*
Collected Patient Reported Outcome Measures surveys from arthroplasty patients (4 hours/week)

OTHERS

Languages: English, Chinese (Mandarin)
Programming languages: Python, R, Matlab, Mathematica