

# GLADIA HOTAN

<https://gladiahotan.github.io/> ◊ [LinkedIn: gladia-hotan](#)

## EDUCATION

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### NATIONAL UNIVERSITY OF SINGAPORE

Singapore

MBA, Specializations in Healthcare Management and Consulting

*Aug 2023–present*

### 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

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Research Scientist, Institute of High Performance Computing

*Nov 2020–present*

Computational neuroscience, cognitive science, neuroimaging, clinical data analysis

Research Engineer, Inst. for Infocomm Research & Inst. of Microelectronics

*Jul 2013–Jul 2014*

Cognitive science, medical device engineering

## AWARDS

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NUS Part-Time MBA Scholarship (2023)

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

## ACTIVITIES

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### LEADERSHIP

NUS MBA Healthcare Club Vice-President

*Sep 2023–present*

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

CDAC Supervised Homework Group (SHG)

*Mar 2023–Nov 2023*

Giving free tuition and organizing fun activities for low-income students aged 10 to 12 years old (3 hours/week)

Joined the Mid-Year Camp Committee and organised camp games

Massachusetts General Hospital (MGH Volunteer Department)

*Nov 2018–Nov 2019*

Collected Patient Reported Outcome Measures surveys from arthroplasty patients (4 hours/week)

## PUBLICATIONS

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- He M, Das P, Hotan G, Purdon PL. **Switching state-space modeling of neural signal dynamics.** PLOS Computational Biology. 2023 Aug 28;19(8):e1011395. [\[Link\]](#)
- Manzano GS, Holroyd KB, Kaplan T, Bhattacharyya S, Chitnis T, Hotan G, 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 Jul 1;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. **Electronic pill bottles to monitor and promote medication adherence for people with multiple sclerosis: a randomized, virtual clinical trial.** Journal of the Neurological Sciences. 2021 Sep 15;428:117612. [\[Link\]](#)
- Stephen EP, Hotan GC, Pierce ET, Harrell PG, Walsh JL, Brown EN, Purdon PL. **Broad-band slow-wave modulation in posterior and anterior cortex tracks distinct states of propofol-induced unconsciousness.** Scientific reports. 2020 Aug 13;10(1):13701. [\[Link\]](#)
- Sokolov E, Abdoul Bachir DH, Sakadi F, Williams J, Vogel AC, Schaekermann M, Tassiou N, Bah AK, Khatri V, Hotan GC, Ayub N. **Tablet-based electroencephalography diagnostics for patients with epilepsy in the West African Republic of Guinea.** European journal of neurology. 2020 Aug;27(8):1570-7. [\[Link\]](#)
- Mateen FJ, Vogel AC, Kaplan TB, Hotan GC, Grundy SJ, Holroyd KB, Manalo N, Stauder M, Videnovic A. **Light therapy for multiple sclerosis-associated fatigue: a randomized, controlled phase II trial.** Journal of Neurology. 2020 Aug;267:2319-27. [\[Link\]](#)
- Anand P, Hotan GC, Vogel A, Venna N, Mateen FJ. **Progressive multifocal leukoencephalopathy: A 25-year retrospective cohort study.** Neurology-Neuroimmunology Neuroinflammation. 2019 Nov 1;6(6). [\[Link\]](#)
- Williams J, Cisse FA, Schaekermann M, Sakadi F, Tassiou NR, Bah AK, Hamani AB, Lim A, Leung EC, Fantaneau TA, Milligan T. **Utilizing a wearable smartphone-based EEG for pediatric epilepsy patients in the resource poor environment of Guinea: A prospective study.** Neurology. 2019 Apr;92(15 Supplement):N5.001. [\[Link\]](#)
- 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 controlled trial.** Medicine. 2017 Sep;96(36). [\[Link\]](#)
- Hotan GC, Struck AF, Bianchi MT, Eskandar EN, Cole AJ, Westover MB. **Decision analysis of intracranial monitoring in non-lesional epilepsy.** Seizure. 2016 Aug;40:59-70. [\[Link\]](#)

## TEACHING

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### GRADUATE TEACHING

**HST.S56: Introduction to Closed-Loop Control of Physiological Systems**, Massachusetts Institute of Technology (2019, 2020) (Course Instructor)  
Worked as part of a 5-person team to design and teach this course.

**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) (Course Instructor)

Designed and taught a 5-day course introducing 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)

(Course Instructor)

Designed and taught an 8-week course introducing linear algebra, vector calculus, Fourier series and differential equations to high school students in Singapore.

## SKILLS

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**Languages:** English, Chinese (Mandarin)

**Programming languages:** Python, R, Matlab, Mathematica