



IN-PERSON

CME/CE-ACCREDITED SYMPOSIUM

BRAIN STIMULATION CME COURSE 2026



OCTOBER 29-30, 2026

THURSDAY: 9:00 AM - 5:30 PM

FRIDAY: 9:00 AM - 12:30 PM

Gaulton Auditorium, KRB Building
Perelman School of Medicine
University of Pennsylvania
421 Curie Blvd, Philadelphia, PA 19104

COURSE DIRECTOR:

Roy Hamilton, MD, MS, Professor of Neurology

COURSE COMMITTEE:

Lauren Hammer, MD, PhD, Assistant Professor of Neurology

Golkoo Hosseini, MD, Assistant Professor of Clinical Psychiatry

Baochan Tran, PsyD, Associate Professor of Clinical Neurology

Olufunsho Faseyitan, MS, Managing Executive Director, Penn brainSTIM Center

Theresa Tritto, PhD, Executive Director, Penn Translational Neuroscience Center

PROGRAM OVERVIEW AND TARGET AUDIENCE

The Brain Stimulation CME Course is a comprehensive, multidisciplinary educational program designed to equip clinicians with the knowledge and practical frameworks needed to evaluate, select, and implement neuromodulation therapies across neurologic and psychiatric conditions. Over one and a half days, the course provides an integrated overview of invasive and noninvasive brain stimulation modalities, including deep brain stimulation (DBS), vagus nerve stimulation (VNS), responsive and adaptive neurostimulation (RNS, adaptive DBS), transcranial magnetic stimulation (TMS), transcranial direct current stimulation (tDCS), low-intensity focused ultrasound (LIFU) and electroconvulsive therapy (ECT).

This CME course is geared to physicians and psychologists including neurologists, neurosurgeons, psychiatrists, and neuropsychologists as well as other healthcare professionals caring for patients with neurologic and psychiatric diseases. Through expert lectures, panels, and case-based discussions, learners will gain practical guidance on selecting, personalizing, and implementing stimulation therapies. Regular Q&A sessions and breaks during the course encourage reflection, review, and interactive discussion.

LEARNING OBJECTIVES

Upon conclusion of this educational activity, the participant will be better able to:

- Improve clinical knowledge, skills, and decision-making related to neuromodulation by enhancing the ability of healthcare teams to select, personalize, and implement invasive and noninvasive brain stimulation therapies.
- Improve care delivery and patient outcomes across neurologic and psychiatric conditions.
- Describe the mechanisms, clinical indications, and limitations of invasive neuromodulation modalities including DBS, VNS, and RNS, across neurologic and psychiatric disorders.
- Compare and contrast noninvasive neuromodulation techniques (TMS, tDCS, LIFU, and ECT) with respect to mechanisms of action, evidence base, safety considerations, and appropriate clinical use.
- Integrate multidisciplinary perspectives from neurology, psychiatry, neurosurgery, and neuropsychology to inform clinical decision-making and case-based selection among neuromodulation treatment options.
- The learner will have a better understanding of how to determine which techniques are suitable to which patients and conditions, and be more comfortable offering these various neuromodulation options to their patients.



ACCREDITATION

In support of improving patient care, Penn Medicine is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

DESIGNATION OF CREDIT

Physicians: Penn Medicine designates this live activity for a maximum of 10.0 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Physician Assistants: AAPA accepts certificates of participation for educational activities certified for *AMA PRA Category 1 Credit™* from organizations accredited by ACCME or a recognized state medical society. PAs may receive a maximum of 10.0 Category 1 credits for completing this activity.

Psychologists: Continuing Education (CE) credits for psychologists are provided through the co-sponsorship of the American Psychological Association (APA) Office of Continuing Education in Psychology (CEP). The APA CEP Office maintains responsibility for the content of the programs. This activity awards up to 10.0 credits for Psychologists.

Credits by Day: Day One: 6.5 • Day Two: 3.5 • Total: 10

Certificates and Transcripts: After the conference has concluded, all participants will receive a follow-up email with a link and instructions on how to claim their credit. Once participants submit the request for credit, the earned credits will be available for viewing on your transcript or available for printing at <https://upenn.cloud-cme.com>. Please note that the individual certificate will not be mailed.

LIVE PRESENTATIONS

Brain Stimulation CME Course 2026 will be held Thursday-Friday, October 29-30, 2026 by in-person attendance. The live presentations will follow the scheduled agenda in real time (EDT).

MEETING LOCATION

Gaulton Auditorium, KRB (Kelley Research Building) (formerly Biomedical Research Building, BRB), Perelman School of Medicine, University of Pennsylvania, 421 Curie Blvd, Philadelphia, PA 19104

PARKING & TRANSPORTATION: You may park at the 3600 Civic Center Parking Garage. Parking is \$20 per day but is not included in your registration fee and will not be validated or reimbursed. University public transportation options can be found here: <http://www.upenn.edu/services/transportation>.

SERVICES FOR THE DISABLED If special arrangements are required for an individual with a disability to attend this meeting, please contact the Office of Continuing Medical and Interprofessional Education no later than October 14, 2026 at 215-898-6400.

NONDISCRIMINATION STATEMENT

The University of Pennsylvania seeks talented students, faculty, and staff with a wide variety of backgrounds, experiences, and perspectives. The University of Pennsylvania does not discriminate on the basis of race, color, sex, sexual orientation, religion, creed, national origin (including shared ancestry or ethnic characteristics), citizenship status, age, disability, veteran status or any other class protected under applicable federal, state, or local law in the administration of its admissions, financial aid, educational or athletic programs, or other University-administered programs or in its employment practices. Questions or complaints regarding this policy should be directed to: The Executive Director of the Office of Equal Opportunity Programs, Franklin Building, Suite 421, 3451 Walnut Street, Philadelphia, PA 19104-6205, (215) 898-6993. <https://oeop.upenn.edu/>

REGISTRATION

Please register online at: <https://upenn.cloud-cme.com/BrainStim2026>

Registration Fees

The fees to attend in-person are as follows:

- \$295 for Physicians/Industry attendees
- \$125 for Psychologists, Nurse Practitioners, Physician Assistants, Nurses and Healthcare Professionals
- \$99 for Residents, Fellows, and Students.

Penn Medicine Employees, Faculty and Staff can register at the following rates:

- \$199 for Physicians
- \$99 for Psychologists, Nurse Practitioners, Physician Assistants, Nurses and Healthcare Professionals
- \$75 for Residents, Fellows, and Students

You must register using a valid Penn Medicine email address to receive the discounted rates intended for Penn Medicine attendees. All pre-registered attendees will receive access to the conference, attendee booklet, continental breakfast, lunch and refreshments during breaks. Registration also includes access to view the presentations online for one year.

Mailed Registration: Note that mailed registrations may take more than 5-10 business days before they are received because we continue to experience longer delays in receiving mail. We encourage all attendees to register online. See the registration form for mailing instructions. All registrations will be confirmed by email as long as your registration is received no later than October 14, 2026. **BE SURE TO CHECK YOUR SPAM BOX FOR EMAILS REGARDING THIS CONFERENCE.**

CANCELLATION POLICY

In order to process refunds for course withdrawals, cancellations must be received in writing by **October 14, 2026 (subject to a service charge equivalent to 10% of the registration fee, but no less than \$25.00)**. No refunds will be issued thereafter.

The University reserves the right to cancel or postpone any course due to unforeseen circumstances. In the event of cancellation or postponement, the University will refund registration fees but is not responsible for related costs or expenses to participants, including cancellation fees assessed by hotels, airlines, and travel agencies.

Overnight Accommodations within Walking Distance:

- ✦ The Inn at Penn, a Hilton Hotel, 3600 Sansom Street, Philadelphia, PA; 215-222-0200
<https://www.hilton.com/en/hotels/phlidhh-the-inn-at-penn/>
- ✦ The Study at University City Hotel, 20 South 33rd Street, Philadelphia, PA 19104; 215-387-1400;
<https://www.thestudyatuniversitycity.com/>
- ✦ The Sheraton Philadelphia University City Hotel, 3549 Chestnut Street, Philadelphia; 215-387-8000; <https://www.marriott.com/en-us/hotels/phlus-sheraton-philadelphia-university-city-hotel/overview/>

Note: There are no room blocks or discounted rates for this event; rooms are subject to availability.



FACULTY

Planning Committee

Roy Hamilton, MD, MS**

Professor of Neurology, Psychiatry, and Physical Medicine & Rehabilitation

Lauren Hammer, MD, PhD*

Assistant Professor of Neurology

Golkoo Hosseini, MD*

Assistant Professor of Psychiatry

Baochan Tran, PsyD*

Associate Professor of Clinical Neurology, Neuropsychology

Olufunsho Faseyitan, MS

Managing Executive Director, Penn brainSTIM Center

Theresa Tritto, PhD

Executive Director, Penn Translational Neuroscience Center

***course director and speaker*

**planning committee member and speaker*

Penn Faculty Speakers

Nicholas Balderston, PhD, Associate Professor of Psychiatry

Iahn Cajigas, MD, PhD, Assistant Professor of Neurosurgery and Bioengineering

H. Branch Coslett, MD, Professor of Neurology

Mario A. Cristancho, MD, Associate Professor of Clinical Psychiatry

Taneeta Mindy Ganguly, MD, Associate Professor of Clinical Neurology

Tara D. Jennings, CRNP, Epilepsy Nurse Practitioner – Neurology

Desmond J. Oathes, PhD, Associate Professor of Psychiatry

Charles Palmer III, MD, Assistant Professor of Neurology

Katherine Scangos, MD, PhD, Associate Professor of Neurosurgery

Yvette Sheline, MD, McLure Professor of Psychiatry and Behavioral Research

Kelly Sloane, MD, Assistant Professor of Neurology

Meredith Spindler, MD, Professor of Clinical Neurology

Ramya Raghupathi, MD, Associate Professor of Clinical Neurology

Zachary Rosenthal, MD, PhD, Attending Psychiatrist/Postdoctoral Researcher

Bethany Thomas, DNP, Epilepsy Nurse Practitioner - Neurology

Pavan Vaswani, MD, PhD, Assistant Professor of Clinical Neurology

Non-Penn Faculty Guests

Andre Brunoni, MD, PhD, Sherry Gold Knopf Crasilneck Distinguished Chair in Psychiatry, UT Southwestern Medical Center

Jennifer Tinker, PhD, Clinical Associate Professor Neuropsychology, Thomas Jefferson University

AGENDA

Brain Stimulation CME Course

Thursday and Friday
October 29-30, 2026

Day 1: Thursday, October 29, 2026

08:30 am – 09:00 am Check-in & Breakfast

I. Welcome and Course Overview

09:00 am – 09:10 am Course goals & learning objectives
CME requirements, disclosures, logistics
Roy Hamilton, MD, MS, Professor of Neurology

INVASIVE NEUROMODULATION

II. Surgical Foundations of Invasive Neuromodulation

9:10 am – 9:30 am Principles of device implantation
Iahn Cajigas, MD, PhD, Assistant Professor of Neurosurgery and Bioengineering

III. Invasive Neuromodulation Modalities – Part 1: DBS

9:30 am – 09:45 am Technology and mechanisms
Iahn Cajigas, MD, PhD, Assistant Professor of Neurosurgery and Bioengineering

9:45 am – 10:10 am Movement disorders
Meredith Spindler, MD, Professor of Clinical Neurology

10:10 am – 10:30 am Epilepsy indications & programming
Ramya Raghupathi, MD, Associate Professor of Clinical Neurology

10:30 am – 10:45 am BREAK

III. Invasive Neuromodulation Modalities – Part 1: DBS (Cont'd)

10:45 am – 11:05 am Psychiatric applications (depression, OCD)
Katherine Scangos, MD, PhD, Associate Professor of Neurosurgery

11:05 am – 11:25 am Future directions: pain, biomarkers, image-guided & adaptive DBS
Pavan Vaswani, MD, PhD, Assistant Professor of Clinical Neurology

11:25 am – 11:40 am Panel Discussion (Sessions II & III)



IVa. Invasive Neuromodulation Modalities – Part 2: Vagus Nerve Stimulation (VNS)

11:40 am – 11:55 am	Technology and Mechanisms <i>Taneeta Mindy Ganguly, MD, Associate Professor of Clinical Neurology</i>
11:55 am – 12:10 pm	Epilepsy programming <i>Bethany Thomas, DNP, Epilepsy Nurse Practitioner - Neurology</i>
12:10 pm – 12:25 pm	Psychiatric applications of VNS: unipolar and bipolar depression <i>Yvette Sheline, MD, McLure Professor of Psychiatry and Behavioral Research</i>
12:25 pm – 12:35 pm	Panel Discussion (Session IV – Part 2 - VNS)

12:35 pm – 1:35 pm LUNCH BREAK

(Informal discussion / networking; industry tables)

IVb. Invasive Neuromodulation Modalities – Part 2 (Cont'd): Closed-Loop Invasive Neuromodulation

01:35 pm – 01:55 pm	Responsive Neurostimulation (RNS) <i>Taneeta Mindy Ganguly, MD, Associate Professor of Clinical Neurology</i>
01:55 pm – 02:10 pm	Adaptive DBS <i>Lauren Hammer, MD, PhD, Assistant Professor of Neurology</i>
02:10 pm – 02:25 pm	Panel Discussion (Session IVb – Part 2 cont'd - RNS, adaptive DBS)

NONINVASIVE NEUROMODULATION – TMS FOCUS

Va. Noninvasive Neuromodulation – Part 1: TMS (Foundations & Current Indications)

02:25 pm – 02:40 pm	TMS technology & mechanisms <i>H. Branch Coslett, MD, Professor of Neurology</i>
02:40 pm – 03:00 pm	TMS for Depression: treatment resistance and personalized neuromodulation <i>Yvette Sheline, MD, McLure Professor of Psychiatry and Behavioral Research</i>
03:00 pm – 03:25 pm	TMS in OCD, anxiety disorders, and smoking cessation <i>Nicholas Balderston, PhD, Associate Professor of Psychiatry</i>

03:25 pm – 03:40 pm BREAK

Vb. Noninvasive Neuromodulation – Part 2: TMS (Current and Emerging Treatment Approaches)

03:40 pm – 03:55 pm	Practical treatment selection & sequencing <i>Mario A. Cristancho, MD, Associate Professor of Clinical Psychiatry</i>
03:55 pm – 04:15 pm	Accelerated & novel protocols (iTBS, SAINT, multi-session/day) <i>Mario A. Cristancho, MD, Associate Professor of Clinical Psychiatry</i>



04:15 pm – 04:35 pm Targeting strategies: anatomical landmarks and brain networks
Desmond J. Oathes, PhD, Associate Professor of Psychiatry

04:35 pm – 04:50 pm Panel Discussion (Sessions Va and Vb)

VI. Low-Intensity Focused Ultrasound

4:50 pm – 5:20 pm Technology, mechanisms, neurologic & psychiatric applications
Charles Palmer III, MD, Assistant Professor of Neurology

5:20 pm – 5:30 pm Q&A: LIFU Only

5:30 pm Day 1 Adjourn

Day 2: Friday, October 30, 2026

08:30 am – 09:00 am Check-in & Breakfast

VII. Welcome and Course Overview

09:00 am – 09:05 am Day 2 Welcome and Announcements/Reminders
Roy Hamilton, MD, MS, Professor of Neurology

VIII. tDCS

9:05 am – 09:20 am Technology, mechanisms, at-home stimulation
Kelly Sloane, MD, Assistant Professor of Neurology

9:20 am – 09:40 am tDCS use in depression
Andre Brunoni, MD, PhD; Sherry Gold Knopf Crasilneck Distinguished Chair in Psychiatry, UT Southwestern Medical Center (talk via zoom)

IX. Electroconvulsive Therapy

9:40 am – 09:50 am Technology and mechanisms
Mario A. Cristancho, MD, Associate Professor of Clinical Psychiatry

9:50 am – 10:10 am Clinical indications
Mario A. Cristancho, MD, Associate Professor of Clinical Psychiatry

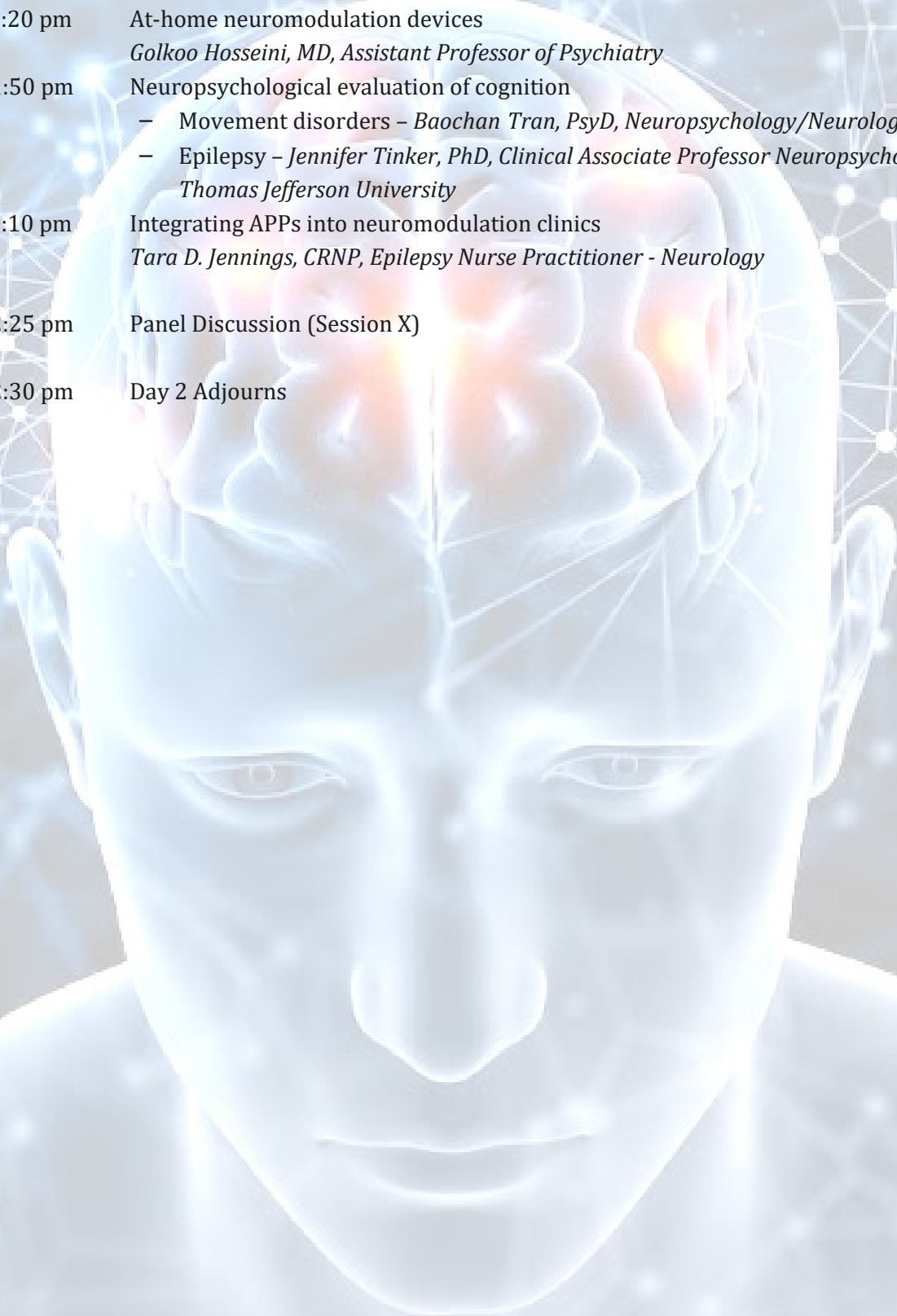
10:10 am – 10:20 Emerging scientific insights/Cortical spreading depolarization
Zachary Rosenthal, MD, PhD, Attending Psychiatrist/Postdoctoral Researcher

10:20 am – 10:35 am Panel Discussion (Sessions VIII and IX)

10:35 am – 10:50 am BREAK



X. Implementing Neuromodulation in Clinical Practice



10:50 am – 11:05 am	Multidisciplinary presurgical assessments <i>Pavan Vaswani, MD, PhD, Assistant Professor of Clinical Neurology</i>
11:05 am – 11:20 pm	At-home neuromodulation devices <i>Golkoo Hosseini, MD, Assistant Professor of Psychiatry</i>
11:20 pm – 11:50 pm	Neuropsychological evaluation of cognition – Movement disorders – <i>Baochan Tran, PsyD, Neuropsychology/Neurology</i> – Epilepsy – <i>Jennifer Tinker, PhD, Clinical Associate Professor Neuropsychology, Thomas Jefferson University</i>
11:50 am – 12:10 pm	Integrating APPs into neuromodulation clinics <i>Tara D. Jennings, CRNP, Epilepsy Nurse Practitioner - Neurology</i>
12:10 pm – 12:25 pm	Panel Discussion (Session X)
12:25 pm – 12:30 pm	Day 2 Adjourns