Curriculum Vitae

Date Prepared:	October 2025
Name:	**David J. Lin, MD**
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Work Phone:	626-375-4171
Work Email:	dlin7@mgh.harvard.edu
Place of Birth:	Montreal, Canada

Education:

06/2006	BS	Mathematical and Computational Science *with Honors*	Stanford University
06/2013	MD	Doctor of Medicine, *Magna Cum Laude*	Harvard Medical School

Postdoctoral Training:

07/13-06/14	Intern	Internal Medicine	Massachusetts General Hospital/Harvard Medical School
07/14-06/17	Resident	Neurology	Massachusetts General Hospital/Brigham & Women's Hospital/Harvard Medical School
07/17-06/18	Fellow	Neurorecovery	Massachusetts General Hospital/Spaulding Rehabilitation Hospital/Harvard Medical School
07/18-06/20	Fellow	Neurocritical Care	Massachusetts General Hospital/Brigham & Women's Hospital/Harvard Medical School

Faculty Academic Appointments:

07/20-01/22	Instructor	Neurology	Harvard Medical School
01/22-	Assistant Professor (Part-Time)	Neurology	Harvard Medical School
03/23-	Associate	School of Engineering and Applied Sciences	Harvard University

05/25-	Faculty Affiliate	Program in Neuroscience	Harvard University

Appointments at Hospitals/Affiliated Institutions:

09/19-	Assistant Professor (Adjunct Faculty)	Rehabilitation Sciences	MGH Institute of Health Professions
11/14-	Visiting Scientist	Engineering	Brown University
07/20-	Assistant in Neurology	Neurology	Massachusetts General Hospital
10/20-	Staff Neurologist, Core Investigator	Neurology, Research, Center for Neurorestoration and Neurotechnology (C*f*NN)	Providence VA Medical Center

Other Professional Positions:

2017-2019	Consultant	Boehringer Ingelheim Int.	
2020-pres	Consultant	MGH Translational Research Center	1 day per year
2022-	Consultant	Neurotrauma Sciences	
2023	Consultant	Motric Bio	
2024	Consultant	MedRhythms	
2024	Consultant	Reeve	
2024	Advisory Board	Johnson & Johnson	
2024-pres	Consultant	Iota Biosciences	1 day per year
2024-2025	Consultant	BlueRock	
2025-pres	Advisory Board	Stroke Onward	1 days per year

Major Administrative Leadership Positions:

Local

2020-	Director, MGH Neurorecovery Clinic	Department of Neurology, Massachusetts General Hospital
2020-	Director, MGH Neurorecovery Fellowship	Department of Neurology, Massachusetts General Hospital
2023-	Associate Program Director, T32 Postdoctoral Training Program in Recovery and Restoration of CNS Health and Function	Massachusetts General Hospital

Regional

2025-	Deputy Director, New England Regional Coordinating Center	National Institutes of Health, StrokeNet

Committee Service:

Local

2015-2016	Residency Selection Committee	Partners Neurology Residency, Massachusetts General Hospital, Brigham and Women's Hospital Trainee Member
2016-2018	Educational Leadership Committee	Brigham and Women's Hospital Trainee Member
2017-2019	Graduate Medical Education Committee	Massachusetts General Hospital Trainee Member

Professional Societies:

2015-	American Academy of Neurology	Member
2025	Research Program Review Committee	Grant review
2025	American Academy of Neurology Annual Meeting Program Review Committee (Abstract Reviewer, Neurorehabilitation)	Meeting abstract review
2016-	Society for Neuroscience	Member
2017-2018	American Congress of Rehabilitation Medicine	Member
2018-	American Heart Association	Member
2024	International Stroke Conference Program Review Committee (Abstract Reviewer, Clinical Rehabilitation and Recovery)	Meeting abstract review
2025	International Stroke Conference Program Review Committee (Abstract Reviewer, Clinical Rehabilitation and Recovery)	Meeting abstract review
2019-	American Society of Neurorehabilitation	Member

Grant Review Activities:

2019	Swiss National Science Foundation Sinergia Funding	Swiss National Science Foundation External Reviewer

2022	Clinical Translational Science Awards (University of California, Irvine)	NIH National Center for Advancing Translational Sciences (NCATS) External Reviewer
2022	CHHD-K Function, Integration, and Rehabilitation Sciences Study Section October 7, 2022	NIH Ad hoc Member
2023	Future Leaders Fellowships (FLF)	UK Research and Innovation, Medical Research Council External Reviewer
2023	Neurological Sciences and Disorders C Study Section June 6-7, 2023	NIH Ad hoc Member
2023	National Institute of Neurological Disorders and Stroke (NINDS), StrokeNet Trials Network Special Emphasis Panel July 17-18, 2023	NIH Ad hoc Member
2023-2025	CHHD-K Function, Integration, and Rehabilitation Sciences Study Section October 3, 2023 April 8-9, 2024 June 27-28, 2024 October 15-16, 2024 March 17-18, 2025	NIH Standing Member Standing Member Standing Member Standing Member Standing Member
2024	RRDS-SPiRE Spring 2024	Department of Veterans Affairs Correspondence Review
2025	Swiss National Science Foundation January 15, 2025	Swiss National Science Foundation Ad-Hoc Reviewer
2025	Rehabilitation Research and Development, RRD1 February 20 – 21, 2025	Department of Veterans Affairs Temporary Member
2025	Campus for Research Excellence and Technological Enterprise (CREATE), Singapore-ETH Zurich	National Research Foundation, Singapore

2025	Career Development for Early Investigators, Clinicians, and Career/Research Transition Awards, ZRG1 BP-R (81) September 29 – 30, 2025	Center for Scientific Review, NIH

Editorial Activities:

- **Ad hoc**

Annals of Medicine; Annals of Clinical and Translational Neurology; BMJ Open; Brain; Brain Communications; IEEE Transactions on Neural Systems and Rehabilitation Engineering; Journal of Neuroengineering; Journal of Neuroengineering and Neurorehabilitation; Journal of Neurology, Neurosurgery, Pysychiatry; Journal of Stroke and Cerebrovascular Disease; Lancet Neurology; Nature Medicine; Nature Neuroscience; Nature Scientific Reports; Neurology; Neurology Clinical Practice; Neurorehabilitation and Neural Repair; Neural Regeneration Research; Stroke

- **Other Editorial Roles**

2018-2019	Invited Guest Editor	*Frontiers in Neurology*, Performance and Participation Outcomes for Individuals with Neurological Conditions, Special Issue
2024-2025	Invited Editor in Chief	*IEEE Transactions on Neural Systems and Rehabilitation Engineering*, Transformative Opportunities for Modeling in Neurorehabilitation, Special Issue

Honors and Prizes:

2006	Mathematical and Computational Science Departmental Honors	Stanford University	Undergraduate scholastic achievement
2010	Elizabeth D. Hay Prize for Basic Science	Harvard Medical School	Research
2010	Nancy Lurie Marks Scholar in Medicine	Harvard Medical School	Research
2010	Howard Hughes Medical Institute Fellowship	Howard Hughes Medical Institute	Research
2011	Martha Gray Prize in Physiology and Systems Biology	Harvard-MIT	Research
2012	Medical Student Travel Award	American Academy of Neurology	Research
2013	Medical Student Prize for Excellence	American Academy of Neurology	Clinical
2013	Magna Cum Laude	Harvard Medical School	Research

2014	Travel Award	American Neurological Association	Research
2016	Medical Education Champion	Partners Neurology Residency	Clinical teaching
2016	NIH R25 Research Education Program for Residents and Fellows Awardee	National Institutes of Health, National Institute of Neurological Disorders and Stroke	Research
2017	Travel Award	American Neurological Association	Research
2017	Clinical Research Award	Massachusetts General Hospital, Department of Neurology	Research
2017	Resident Teaching Award	Massachusetts General Hospital, Department of Neurology	Clinical teaching
2018	Travel Award	American Neurological Association	Research
2018	Clinical Research Award	Massachusetts General Hospital, Department of Neurology	Research
2018	Poster Award	American Congress of Rehabilitation Medicine	Research
2018	Stroke Tank "Pitch it to the Judges" Winner	American Heart Association/American Stroke Association, Northeast Cerebrovascular Consortium	Research
2020	NIH Loan Repayment Program Awardee	National Institutes of Health, National Institute of Neurological Disorders and Stroke	Research
2020	K12 Scholar	Neurorehabilitation and Restorative Neuroscience Training Network (NRNTN)	Research
2021	Leadership Development Program for Researchers	Massachusetts General Hospital Center for Faculty Development	Research
2021	Training in Grantsmanship for Rehabilitation Research Awardee	Medical University of South Carolina	Research
2021	Ally for Women Award Nominee	Massachusetts General Hospital Center for Faculty Development	Clinical
2022	Neurocritical Fellowship Class Faculty Appreciation Award	Massachusetts General Hospital, Brigham and Women's Hospital, Neurocritical Care Divisions	Clinical
2023	Disability and Rehabilitation Engineering (DARE) Fellow	National Science Foundation	Research
2023	Mass General Brigham Pillars in Excellence	Mass General Brigham	Clinical/Research

Award ("Optimizing Teamwork")

Report of Funded and Unfunded Projects

Past

2018-2021 Defining Stroke Recovery Across the Post-Acute Care Continuum
American Heart Association/American Stroke Association/Northeast Cerebrovascular Consortium
PI ($1000 – total direct costs)
The goals of this project are to develop a model to predict recovery of upper extremity impairment after stroke using clinically available data and to define relationships between upper extremity impairment/activity measures and stroke outcome/quality metrics.

2020-2021 Scalable Prediction of Arm Motor Recovery after Stroke and Comprehensive Assessments of its Impact on Disability
American Society of Neurorehabilitation, Seed Funding for Collaboration
PI ($5000 – total direct costs)
The goals of this project are to (1) develop analytic models to predict arm motor recovery with our data and (2) refine optimal measures of stroke recovery across ICF domains. This is a collaborative ASNR seed project.

2020-2021 Defining the Neuroanatomy and Neurophysiology of Recovery after Brain Hemorrhage
Heitman Foundation, Young Investigator Award
PI ($86,957 – total direct costs)
The goals of this project are to (1) define how structural topography of primary ICH influences trajectory of arm recovery and (2) determine how EEG spectral slowing correlates cross-sectionally and longitudinally with arm motor recovery scores.

2020-2022 Integrating Measures of Neuroanatomy and Neurophysiology to Decipher Motor Recovery after Stroke
American Academy of Neurology, Clinical Research Training Scholarship
PI ($150,000 – total direct costs)
The goals of this project are to (1) determine which neurophysiologic measures of motor cortical function and functional connectivity best explain arm motor recovery after stroke and (2) define how neuroanatomic measures of CST injury and neurophysiologic measures of motor cortical circuits together explain arm motor recovery.

2020-2022 Targeting Neuroplasticity with Brain Computer Interfaces to Maximize Motor Recovery for Veterans with Stroke
Department of Veterans Affairs Career Development Award 1, IK1 RX003563
PI ($400,419 – total direct costs)
The goals of this project are to (1) identify longitudinal changes in cortical functional connectivity induced by EEG-BCI arm orthosis training and (2) evaluate how baseline motor severity and neuroanatomy of stroke injury modulates the effects of EEG-BCI arm orthosis training on cortical functional connectivity.

2021-2023 Determining the Implicit and Rule-Based Learning Ability of Individuals with Aphasia to Better Align Learning Ability and Intervention

NIH R21, DC019203
Consultant (PI Sofia Vallila Rohter) ($480,000 – total direct costs)
The objectives of the proposed study are to (1) determine the learning phenotype of individuals with aphasia, and (2) examine how lesion characteristics (size and location of damage to the brain), language ability, and cognitive ability relate to learning ability.

2021-2023 A Portable fNIRS-based Brain-Computer Interface to Augment Post-Stroke Motor Rehabilitation
Axem Neurotechnology Inc
PI ($141,573 – total direct costs)
The present study will help determine how a novel, portable fNIRS-based BCI system may be utilized clinically to promote upper-extremity recovery in chronic stroke survivors.

2022-2023 NSF Convergence Accelerator: Restoring Arm Function with Connected Assistant and Rehabilitation Systems
National Science Foundation (NSF 22-583)
Co-I ($50,204 – total direct costs)
This Phase I Convergence Accelerator grant supports the development of a connected soft wearable rehabilitation and assistance platform to restore arm function to those without use of their upper limbs. This project aims to develop and validate a soft wearable robot to improve stroke rehabilitation of the upper limb.

2022-2025 Functional Connectivity Correlates of Subacute to Early Post-Stroke Aphasia Recovery
National Institutes of Health, R21, DC020546
Consultant (PI Erin Meier) ($354,468 – total direct costs)
The aims of this study are to determine the subacute rs-fNIRS functional connectivity patterns that are (1) are associated with subacute language deficits, (2) change over time and are related to longitudinal language changes, and (3) predict language gains by the early chronic stroke stage.

Current

2021-2026 Validation of Early Prognostic Data for Recovery Outcomes after Stroke for Future, Higher Yield Trials (VERIFY)
National Institutes of Health, StrokeNet 1U01NS120910-01
Massachusetts General Hospital Site-PI
The goal of this project is to validate the most biologically relevant and primed biomarkers of 90-day UE motor outcomes after ischemic stroke in the first large-scale, prospective, acute dataset of clinical, transcranial magnetic stimulation (TMS), and MRI measures.

2022-2026 Predictability in Complex Object Control
National Institutes of Health, R37, HD087089
Co-I (PI Dagmar Sternad) ($333,583 – subaward total direct costs)
The goals of this project are to objectively quantify upper extremity coordination challenges in stroke patients and phenotype profiles of recovery.

2022-2027 Deconstructing Post-Stroke Hemiparesis for Precision Neurorehabilitation
Department of Veterans Affairs Career Development Award 2, IK2 RX004237

PI ($1,388,948 – total direct costs)
The goals of this project are to (1) Deconstruct post-stroke hemiparesis into its individual components (2) Map descending motor tract anatomy onto distinct components of post-stroke hemiparesis and (3) Map descending motor tract physiology onto distinct components of post-stroke hemiparesis.

2024-2026 NSF Convergence Accelerator: Restoring Arm Function with Connected Assistant and Rehabilitation Systems
National Science Foundation (NSF 22-583)
Co-I (PI Conor Walsh) ($324,367 – subaward total direct costs)
The aims of this project are to (1) quantify upper extremity biomechanics and arm use after stroke, (2) optimize technology for at-home rehabilitation, and (3) evaluate and pilot technologies with stroke survivors and therapists. Building on low-fidelity prototypes co-created with end users, this project will optimize the technology-its mechanical design, estimation and control algorithms, and hardware, apparel, and software system parameters, and co-create advanced prototypes that will be evaluated in both lab and home-based settings.

2025-2030 Defining the Neurological Substrates of Proximal Upper Extremity Motor Control and Recovery after Stroke
National Institutes of Health, R01NS142153
PI ($2,033,264– total direct costs)
The goals of this project are to investigate whether intensive, targeted training improves proximal upper extremity motor control and induces corresponding anatomical and physiological changes of the corticospinal tract. Specifically, we will (1) Determine baseline relationships between the corticospinal tract and proximal upper extremity motor control (2) Define changes in proximal upper extremity motor control induced by targeted rehabilitation training and (3) Define changes in corticospinal tract anatomy and physiology induced by targeted rehabilitation training.

Training Grants and Mentored Trainee Grants

2020-2021 Advancing Stroke Research through Remote Assessment of Upper Extremity Impairment
MGH Institute of Health Professions Faculty Research Fellowship Grant
Mentor of Kimberly Erler, PhD
The major goal of this project is to develop a telehealth assessment package of motor outcomes after stroke to facilitate the remote delivery of rehabilitation and to inform novel personalized intervention strategies.

2022-2023 Adequacy of Nutritional Intake During Intensive Care Hospitalization in Patients with Brain Injury and its Association with Acute and Post-Discharge Clinical Outcomes
Department of Nutrition Services Member Research Grant
Mentor of Kaman Lo, LD
The major goals of this project are to (1) characterize changes in nutritional status and clinical outcomes of patients with brain injury between baseline and ninety day follow-up and (2) assess for associations between nutritional intake adequacy during NSICU hospitalization in patients after acute brain injury and clinical outcomes.

2024-2025 Decoding movement after Stroke: Developing Sensitive Neurorehabilitation Outcome Measures
StrokeNet Fellowship/Southern New England Partnership in Stroke Research, Innovation and Treatment (Spirit)
Mentor of Liqi Shu, MD
The major goals of this career development project is to develop more sensitive rehabilitation outcome measures with robot- and video-based kinematics as well as machine learning tools.

2024-2025 Establishing Real-time, Mechanistic Biomarkers of Vagus Nerve Stimulation for Stroke Motor Rehabilitation
MGH ECOR Fund for Medical Discovery (FMD)
Mentor of Richard Hardstone, PhD
The major goals of this career development project are to develop real-time (1) physiologic and (2) kinematic markers of vagus nerve stimulation that predict therapy response.

2025-2027 Advanced Prognostic Tools for Hemiparesis Evaluation and Clinical Analysis through Neuroanatomical Integration (APOTHECARI)
Patterson Trust Mentored Research Award
Mentor of Liqi Shu, MD
The major goals of this career development project are to develop and validate advanced neuroimaging and video-based assessment tools that accurately predict functional motor outcomes in stroke patients, thereby enhancing the precision of prognosis and the personalization of rehabilitation strategies.

2025-2028 The role of reticulospinal outflow in determining motor impairment after stroke
American Heart Association, Career Development Award
Mentor of Alkis Hadjiosif, PhD
The major goal of this career development project is to test the hypothesis that resting posture abnormalities in patients with hemiparesis after stroke arise from excessive corticoreticulospinal outflow. The specific aims are to (1) explain heterogeneity in posture abnormalities across stroke patients using neurophysiological and neuroanatomical markers of excessive CRST outflow to (2) Assess changes in resting posture abnormalities after stroke induced by experimental manipulations that increase CRST outflow.

Unfunded Current Projects

2017- Stroke Motor Rehabilitation and Recovery Study (SMaHRT)
Massachusetts General Hospital
PI
The goal of this IRB-approved study (MGH IRB 2017P000868) is to understand the neuroanatomic and neurophysiologic correlates of the natural history of upper extremity motor recovery after stroke.

Report of Local Teaching and Training

Teaching of Students in Courses:

2015	Neuroanatomy 2nd year medical students	Harvard Medical School 3-hr session / week for 4 weeks
2016	Neuroanatomy (HST 130) 2nd year medical students	Harvard-MIT 2 x 3-hr sessions / week for 6 weeks
2020	Neurobiology of Disease (NBD 209), Stroke Session Graduate students	Harvard University 3-hr session
2020-	Neuroanatomy (HST 130) 2nd year medical students	Harvard-MIT 3 x 3-hr sessions / week for 6 weeks

Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs):

2017-	Neurorehabilitation and Stroke Recovery Neurology Residents and Fellows	Partners (Massachuestts General Hospital / Brigham and Women's Hospital) Core Resident Education Conference 1 hour lecture / year
2019-	Stroke Recovery Spaulding PM&R Residents	Spaulding Rehabilitation Hospital Core Resident Education Conference 1 hour lecture / year
2020-	Neurorecovery after the NeuroICU Neurology fellows and residents	MGH Neurocritical Care Didactice & Case Review Conference 1 hour lecture / year
2022-	Upper Extremity Motor Recovery after Stroke: Clinical Trial Update and Novel Approaches Neurology fellows and residents	MGH Stroke Service Conference 1 hour lecture / year

Clinical Supervisory and Training Responsibilities:

2020-	Attending Physician, MGH Neurocritical Care Unit Mass General Brigham Neurology Residents and Fellows	Massachusetts General Hospital 40 hours / month
2020-	Attending Physician, Acute Stroke Service	Massachusetts General Hospital

	Mass General Brigham Neurology Residents and Fellows	10 hours / month
2020-	Attending Physician, Neurotrauma Consultation Service	Massachusetts General Hospital
	Mass General Brigham Neurology Residents and Fellows	1 hour / month
2020-	Neurology Residency Clinic Clinic Preceptor	Massachusetts General Hospital
	Mass General Brigham Neurology Residents	10 hours / month
2020-	Neurorecovery Clinic Clinic Preceptor	Massachusetts General Hospital
	Mass General / Spaulding Neurorecovery Fellows	10 hours / month

Research Supervisory and Training Responsibilities:

2019-	Supervision of graduate student trainees	Massachusetts General Hospital
	1-2 trainees per year	1.5 hour lab meeting per week, 1:1 supervision one hour per week per trainee

Formally Mentored Harvard Medical, Dental and Graduate Students:

2018-2019 Galina Gheihman, HMS Class of 2019

Conducted research with me during her final year of medical school. Hosted a national workshop and published a paper with me in Archives of Physical Medicine and Rehabilitation entitled, “Reimagining Stroke Rehabilitation and Recovery Across the Care Continuum”

2022-pres Sarah Cavanagh, Harvard Bioengineering PhD Student

Currently conducting thesis research in my laboratory. Co-advised with Dr. Conor Walsh (Harvard John A. Paulson School of Engineering and Applied Sciences)

Other Mentored Trainees and Faculty:

2017-2018 Shirin Toolee, BS, MS / Industry

Career Stage: Masters student (Brown University). Mentoring role: Brown University thesis co-advisor. Thesis title “Understanding how cognitive deficits influence motor recovery in patients with acute ischemic stroke”

2017-2020 Lauren Ostrowski, BS / MD PhD Student

Career Stage: post-undergraduate research. Mentoring role: Research co-mentor. Accomplishments: multiple first-author presentations at national conferences based on mentored research- American Society of Neurorehabilitation 2019, Society for Neuroscience 2019

2020-2021 Sarah Cavanagh, BS / Health Science Specialist, Providence VA Medical Center

Career Stage: Masters student (Brown University). Mentoring role: Brown University thesis co-advisor

2019-pres Nicole Dusang, BS

Career Stage: PhD student (Brown University). Mentoring role: Brown University thesis co-advisor, Member of dissertation committee.

2020-2023 Rashida Nayeem, BS

Career Stage: PhD student (Northeastern University). Mentoring role: Northeastern University thesis co-advisor. Member of dissertation committee.

2020-2022 Julia Carlson, MD

Career Stage: MGH Neurology Fellow. Mentoring role: Fellowship mentor. Accomplishments: First author paper in Neurology Clinical Practice

2020-2024 Galina Gheihman, MD

Career Stage: MGH Neurology Resident. Mentoring role: Residency mentor. Accomplishments: Hosted multiple patient-facing conferences bringing together interdisciplinary community in stroke recovery

2021-pres Richard Hardstone, PhD

Career Stage: Postdoctoral Fellow. Mentoring role: Postdoctoral Fellow Advisor Accomplishments: MGH Executive Committee on Research (ECOR) Fund for Medical Discovery Award.

2021-2024 Priya Srikanth, MD PhD

Career Stage: MGB Neurology Fellow. Mentoring role: Fellowship Program Director and Mentor.

2021-2023 Isha Vora, MS, SLP

Career Stage: PhD student (MGH Institute of Health Professions Rehabilitation Sciences). Mentoring role: PhD Co-Advisor (w/ Dr. Teresa Kimberley, MGH-IHP), Member of thesis committee. Accomplishments: Winner of Fletcher H. McDowell Award for Best Clinical Science at American Society of Neurorehabilitation.

2023-pres	Julie Dicarlo, MS Career Stage: PhD student, Psychology (Tufts University). Mentoring role: Advisor (Joint with Nathan Ward)	
2023-pres	Liqi Shu, MD Career Stage: Vascular Neurology Fellow (New England Regional Coordinating Center StrokeNet Fellowship) Mentoring role: Fellowship Research Mentor. Accomplishments: StrokeNet Fellowship Recipient (Southern New England Partnership in Stroke Research, SPIRIT). Patterson Trust Mentored Research Award Recipient.	
2023-pres	Krishna (Vani) Desabhotla, BS Career Stage: PhD student (Northeastern University). Mentoring role: Northeastern University thesis co-advisor. Member of dissertation committee.	
2023-pres	Savetrie Bachan, BA Career Stage: PhD student (MGH-IHP). Mentoring role: Member of dissertation committee (MGH-IHP).	
2024-2025	Alkis Hadjiosif, PhD Career Stage: Postdoctoral Fellow (T32). Mentoring role: Postdoctoral Fellow Advisor	
2024-2025	Deena Godfrey, MD Career Stage: Neurology Fellow. Mentoring role: Fellowship Program Director and Clinical Mentor.	
2025-pres	Alkis Hadjiosif, PhD Career Stage: Instructor (HMS). Mentoring role: Early career faculty advisor. Accomplishments: American Heart Association Career Development Award	

Formal Teaching of Peers (e.g., CME and other continuing education courses):

No presentations below were sponsored by 3rd parties/outside entities

2019	Models for Monitoring Stroke Recovery Neurorehabilitation, Harvard CME Course	Lecture Waltham, MA
2019	Proportional Recovery of the Arm after Stroke Neurorehabilitation, Harvard CME Course	Lecture Waltham, MA
2021	Models for Monitoring Stroke Recovery, Part 1	Lecture

	Neurorehabilitation, Harvard CME Course	Waltham, MA
2021	Models for Monitoring Stroke Recovery, Part 2	Lecture
	Neurorehabilitation, Harvard CME Course	Waltham, MA
2022	Stroke Recovery, The Cutting Edge	Lecture
	Neurorehabilitation, Harvard CME Course	Via Zoom
2023	Models for Monitoring Stroke Recovery, The Cutting Edge	Lecture
	Neurorehabilitation, Harvard CME Course	Via Zoom
2024	Models for Monitoring Stroke Recovery, The Cutting Edge	Lecture
	Neurorehabilitation, Harvard CME Course	Via Zoom

Local Invited Presentations:

No presentations below were sponsored by 3rd parties/outside entities

3/2017	A Proposal to Define the Trajectory of Motor Recovery after Ischemic Stroke / Weekly Conference Stroke Service, Massachusetts General Hospital
10/2017	Stroke Motor Rehabilitation and Recovery Study / In-Service Lecture Physical and Occupational Therapy Departments, Massachusetts General Hospital
11/2017	Towards Brain-Computer Interfaces for Stroke Rehabilitation / Lecture Series Spaulding Stroke Research and Recovery Institute, Spaulding Rehabilitation Hospital
2/2018	Stroke Recovery: A Comprehensive View Across the Post-Acute Care Continuum / Speaker Series Center of Neurotechnology and Neurorecovery, Massachusetts General Hospital
4/2018	Stroke Recovery: A Comprehensive Perspective / Speaker Series White Matter Hyperintensity-Imaging Ischemic Stroke Research Group, Massachusetts General Hospital
4/2018	Stroke Recovery / Seminar Seminar in Recovery and Restoration of CNS Health and Function, Massachusetts General Hospital & Brown University
4/2018	Stroke Recovery, Clinical Translation / Speaker Series

Technology for Equitable and Accessible Medicine (TEAM), Harvard School of Engineering and Applied Sciences

6/2018 SMaHRT, Preliminary Results and Insights / Speaker Series
Neurostatistics Working Group, Harvard T.H. Chan School of Public Health

6/2018 Stroke Motor Rehabilitation and Recovery Study, An Update / In-Service Lecture
Occupational and Physical Therapy Departments, Massachusetts General Hospital

6/2018 Stroke Recovery: A Quantitative Approach / Grand Rounds
MGH Behavioral Neurology and Neuropsychiatry Division

10/2018 The SMaHRT Study (Perspectives on Year One) / Speaker Series
Spaulding Stroke Institute, Spaulding Rehabilitation Hospital

2/2019 Deciphering Spontaneous Recovery After Stroke / Research Seminar
MGH Institute of Health Professions

4/2019 Stroke Recovery: A Quantitative Clinical-Scientific Model / Grand Rounds
Brigham and Women's Hospital Rehabilitation Services & Therapy

8/2019 Corticospinal Tract Injury Estimated from Acute Stroke Imaging Predicts Upper Extremity Motor Recovery After Stroke
Spaulding-Labuschagne Neuromodulation Center

8/2020 Stroke Recovery: From Health Systems to Meaningful Outcomes and Biomarkers for Neurotechnological Treatments
Center *for* Neurorestoration and Neurotechnology Virtual Seminar
Providence Veterans Affairs Medical Center
Providence, RI (Virtual presentation)

11/2020 Tracking Development in Spasticity Following a New Stroke
MGH-Spaulding-Harvard Paralysis Center (Virtual presentation)

1/2021 Stroke Neurorehabilitation: The Cutting Edge
Updates in Internal Medicine
Providence Veterans Affairs Medical Center Accreditation Outreach Network
Providence, RI (Virtual presentation)

5/2021 Stroke Recovery: Cutting Edge Treatments
MGH Interprofessional Educational Series (Virtual presentation)

8/2021	Neurorecovery and COVID-19 CHANT Summer Series, MGH Division of Infectious Disease (Virtual presentation)
6/2022	Arm and Hand Motor Recovery after Stroke Summer Learning Series, MGH Stroke Center Summer Learning Series (Virtual presentation)
11/2022	Nutrition Support from Neurosciences ICU to Neurorecovery – Establishing a Framework Longwood Nutrition Conference, Harvard Medical School (Virtual presentation)
2/2023	Translational Perspectives on Neuroplasticity and Motor Recovery after Stroke Boston Children's Hospital, F.M. Kirby Neurobiology Center, Harvard Medical School
7/2023	Arm and Hand Motor Recovery after Stroke Summer Learning Series, MGH Stroke Center Summer Learning Series
11/2023	Is there a role for brain mapping in recovery and rehabilitation after stroke BrainMap Seminar Series, Athinoula A. Martinos Center for Biomedical Imaging, Harvard Medical School (Virtual presentation) Boston, MA
12/2023	Deconstructing Poststroke Hemiparesis for Precision Neurorehabilitation (TRACTs) Veterans Research Engagement Committee Meeting, Center for Neurorestoration and Neurotechnology, Providence VA Medical Center Providence, RI
3/2024	Promising New Approaches for Stroke Recovery Stroke Faculty Expert Series, MGH Stroke Service Boston, MA
4/2024	"A 21 year old man with seizure" Grand Rounds, Harvard Emergency Medicine Clinicopathologic Conference: Case Records of the Massachusetts General Hospital Boston, MA
8/2024	Arm and Hand Motor Recovery after Stroke Summer Learning Series, MGH Stroke Center Summer Learning Series Boston, MA
2/2025	Recovery after Stroke: Patient, Clinician, Scientist perspectives

Educational Series, Maxwell & Eleanor Blum Patient and Family Learning Center, Massachusetts General Hospital
Boston, MA (Virtual presentation)

7/2025 Center for Neurotechnology & Neurorecovery Research Highlights Panel
Neurology Research Retreat, Mass General Brigham
Boston, MA

9/2025 "PI Tapas"
Harvard-MIT Program in Health Sciences and Technology, Harvard Medical School
Boston, MA

Report of Regional, National and International Invited Teaching and Presentations

Those presentations below sponsored by outside entities are so noted and the sponsor(s) is (are) identified.

Regional

10/2017 Understanding Stroke Motor Recovery / Invited Presentation
Opening Ceremony of the Center for Neurotechnology, University of Albany
Albany, NY

4/2018 Stroke Recovery: Towards Stratified Neurorehabilitation / Grand Rounds
Braintree Rehabilitation Hospital
Braintree, MA

4/2018 Recovery after Stroke: Bridging the Clincial-Translational Gap / Invited Presentation
ACTION Lab, Northeastern University
Boston, MA

10/2018 Stroke Motor Recovery: Insights from Neural Structure and Function to Inform Health Systems / Invited Speaker
Boston ACTION Club, Northeastern University
Boston, MA

10/2018 A Solution for Stroke Recovery / Podium Presentation
Northeast Cerebrovascular Consortium 13th Annual Summit
Newport, RI

10/2019 Stroke Recovery Design Innovation Workshop

Northeast Cerebrovascular Consortium 14th Annual Summit
Boston, MA (NECC, American Stroke Association)

10/2019 Defining Stroke Recovery Across the Care Continuum
Northeast Cerebrovascular Consortium 14th Annual Summit, Stroke Tank Presentation
Boston, MA

11/2020 Stroke Recovery Biomarkers and Cutting Edge Treatments
Encompass Health, 41st Annual Neurorehabilitation Conference
Braintree, MA (Virtual presentation)

3/2022 Stroke Neurology: From Mechanisms of Prevention to Models of Recovery
Brown Neuroscience Bench-Bedside Seminar Series
Providence, RI (Virtual presentation)

3/2022 Stroke Outcomes and Predictors: where acute stroke meets stroke rehabilitation
Paul Coverdell National Acute Stroke Program Learning Session Series
Boston, MA (Virtual presentation)

11/2022 The Clinical Neuroscience of Neurotechnology for Neurorehabilitation
Tufts University NeuroNetwork Keynote Presentation
Medford, MA

11/2022 Predictors of Recovery after Stroke
Encompass Health, 43rd Annual Neurorehabilitation Conference
Braintree, MA (Virtual presentation)

11/2022 Rationale and Design of an Interdisciplinary Neurorecovery Clinic
Encompass Health, 43rd Annual Neurorehabilitation Conference
Braintree, MA (Virtual presentation)

12/2022 Systems Neuroscience for Stroke Recovery: New Outcomes and Novel Treatments
ACTION Lab, Northeastern University
Boston, MA

3/2023 Spinal Cord Injury: Circuits to Clinical Translation through Neurotechnology
Brown Neuroscience Bench-Bedside Seminar Series. (co-presented with David Borton, PhD, and Jared Fridley, MD)

Providence, RI

3/2024 Brain Power Hour talks Stroke with a focus on personal experiences, brain health, and brain science
BrainWaves Rhode Island. (Co-presented with Benjamin Greenberg, MD PhD, Kelly Rishe OT, and Joshua Bessette)
Providence, RI

10/2024 Recovery after Stroke: From Bench to Bedside and Back
"In First Person", Harvard Brain Sciences, Harvard Medical School
Boston, MA

National

10/2017 Leveraging Apple Technology to Define and Improve Recovery for Stroke Patients / Invited Presentation
Apple Inc.
Cupertino, CA (*Sponsored by Apple, Inc*)

5/2018 Clinical Perspectives on Neurotechnology for Stroke Rehabilitation / Invited Presentation
International Brain-Computer Interface Meeting
Monterey, CA

6/2018 Stroke Recovery: A Patient Centered Approach
Grand Rounds, Department of Neurology (Massachusetts General Hospital)
Boston, MA

10/2019 Stroke Recovery: Development of a Learning Healthcare System / Invited Presentation
University of Southern California Neurorehabilitation Seminar
Los Angeles, CA

2/2020 Corticospinal Tract Injury Estimated From Acute Stroke Imaging Predicts Upper Extremity Motor Recovery After Stroke (Oral Abstract)
International Stroke Conference
Los Angeles, CA

8/2020 Stroke Recovery: Biomarkers and Outcomes of Motor Recovery after Stroke / Invited Presentation
H. Ben Taub Department of Physical Medicine & Rehabilitation Grand Rounds
Baylor College of Medicine
Houston, TX (Virtual presentation)

9/2020	Clinically Relevant Biomarkers and Outcomes for Motor Recovery after Stroke The Department of Physical Medicine and Rehabilitation Grand Rounds Johns Hopkins University Baltimore, MD (Virtual presentation)
3/2021	Stroke Neurorecovery: How Natural History Can Inform Novel Treatments University of Massachusetts Neurology Grand Rounds Worcester, MA (Virtual presentation)
4/2021	From Neurocritical Illness to Neurorecovery Columbia University Neurocritical Care Teaching Conference New York, New York (Virtual presentation)
10/2021	A Neurological Approach to Stroke Recovery Brown University Neurology Grand Rounds Providence, RI (Virtual presentation)
1/2022	A Neurologist's Perspectives on Stroke Recovery and Rehabilitation Center for Biomedical Research Excellence (COBRE) in Stroke Recovery, Medical University South Carolina Charleston, South Carolina (Virtual presentation)
3/2022	Stroke Recovery and Rehabilitation: Let's Get Really Specific Neurology Grand Rounds, University of Michigan Ann Arbor, MI (Virtual presentation)
3/2023	Modeling Brain-Behavior Relationships to Advance Neurorehabilitation after Stroke National Science Foundation Disability and Rehabilitation Engineering (DARE) Conference (University of Southern California) Los Angeles, CA
4/2023	Towards Neurologically-Based Targets for Stroke Motor Rehabilitation Neurorehabilitation: Creating a Vision for the Future (University of Southern California Division of Biokinesiology and Physical Therapy) Los Angeles, CA
8/2023	Outcome Measures in Neurocritical Care Neurocritical Care Society Conference Phoenix, AZ

9/2023 Defining Neurological Targets for Upper Extremity Stroke Motor Recovery
Rehab Neural Engineering Labs Symposium (University of Pittsburgh)
Pittsburgh, PA

11/2023 Is there a role for understanding the brain in rehabilitation after stroke?
Grand Rounds, Department of PM&R (University of Pennsylvania)
Philadelphia, PA (Virtual presentation)

1/2024 Towards Precision Neurorehabilitation
Faculty Seminar, Department of Neurology (University of Pittsburgh)
Pittsburgh, PA

2/2024 A Framework for Precision Neurorehabilitation after Stroke
Grand Rounds, Department of Neurology (Massachusetts General Hospital)
Boston, MA

2/2024 Mirror Mirror on the Wall: Stroke Recovery Prediction
International Stroke Conference
Phoenix, AZ

5/2024 Does Neuroanatomy and Neurophysiology have a Role in Stroke Rehabilitation?
Neurological Sciences Grand Rounds, University of Texas Health San Antonio
San Antonio, TX (Virtual presentation)

10/2024 A Precision Medicine Framework for Stroke Rehabilitation
Neurology Grand Rounds, University of Massachusetts
Worcester, MA

11/2024 Learning Healthcare for Translation of Rehabilitation Technology
American College of Rehabilitation Medicine 2025 (Invited Presentation)
Dallas, TX

1/2025 Building Learning Healthcare Systems for Stroke Neurorecovery
Neurology Grand Rounds, Oregon Health and Sciences University (OHSU)
Portland, OR

4/2025 AI and Emerging Technologies in Neurorehabilitation

American Academy of Neurology Annual Meeting
San Diego, CA

10/2025 Current Landscape and Opportunities for Neurotechnology in Stroke Recovery
Iota (sponsored by Astellas Pharmaceuticals)
San Francisco, CA (virtual presentation)

10/2025 Deconstructing the Black Box of Neurorecovery after Stroke
Neurology Grand Rounds, University of Pennsylvania
Philadelphia, PA (virtual presentation)

10/2025 High dose, high intensity rehabilitation: why aren't we giving it?
World Stroke Day Symposium, TIRR Memorial Hermann
Houston, TX

International

4/2021 BCI-Neurotechnology for Stroke Recovery: Clinical Relevance
International BCI & Neurotechnology Spring School (BCIs for Stroke Rehabilitation)
Schiedlberg, Austria (Virtual presentation)

5/2022 Clinical Relevance of BCI for Stroke
International BCI & Neurotechnology Spring School (BCIs for Stroke Rehabilitation)
Schiedlberg, Austria (Virtual presentation)

4/2023 BCI-Neurotechnology for Stroke Recovery: Clinical Translation
International BCI & Neurotechnology Spring School (BCIs for Stroke Rehabilitation)
Schiedlberg, Austria (Virtual presentation)

Report of Clinical Activities and Innovations

Current Licensure and Certification:

2016 Massachusetts Medical License
2017 Board Certification, Neurology, American Board of Psychiatry and Neurology
2018 Subspecialty Certification, Brain Injury Medicine, American Board of Psychiatry and Neurology

2022	Subspecialty Certification, Neurocritical Care, American Board of Psychiatry and Neurology

Practice Activities:

2020-	Neurocritical Care	MGH Neurosciences Intensive Care Unit	10 weeks / year
2020-	Neurorecovery Clinic	Neurorecovery Clinic, MGH	Two half day sessions / month
2020-	Acute Stroke Service	Stroke Service, MGH	10 hours / month
2020-	Neurology Clinic	Providence VA Medical Center	4 hours / month

Clinical Innovations:

Covid-19 Critical Illness and Neurorecovery Clinical Program (2020 – 2023)	During the first wave of the Covid-19 pandemic, I developed a follow-up program for patients with COVID with critical illness and neurologic complications. This outpatient program brought together specialists from multiple departments across the hospital (e.g., pulmonology, psychiatry) and received wide ranging referrals, locally and nationally. We disseminated experiences and findings from our program in national presentations and journal publications.
Stroke Motor Recovery and Rehabilitation (2020 –)	As a world leader in motor recovery and rehabilitation after stroke, my translational research group has investigated neurological mechanisms that enable post-stroke motor recovery and leveraged these findings to inform approaches to clinical neurorehabilitation. Our work has been funded by the NIH, AHA, and AAN, published in journals including Neuron, Neurology, and Stroke, and presented at numerous Grand Rounds and national and international conferences. Our findings have identified new phenotypic patterns of recovery after stroke and their underlying brain mechanisms. I actively serve as the PI for multiple NIH and industry-funded stroke rehabilitation clinical trials and have served as a scientific advisor for a number of companies who are developing new approaches to enhance recovery after stroke.
Neurorecovery Clinic (2020 –)	As a pioneer in neurorecovery after critical neurologic illness, I developed and now lead the MGH Neurorecovery Clinic, an innovative outpatient program that serves patients recovering from acute neurologic injuries including subarachnoid hemorrhage, traumatic brain injury, intracerebral hemorrhage, stroke, encephalitis, seizures, and spinal cord injury. Our clinic has representatives from neurology, physical, occupational, speech therapy, pharmacy, physiatry, and clinical psychology and receives wide-ranging referrals locally, regionally, nationally, and internationally. The MGH Neurorecovery Clinic also houses and serves as an incubator for new and innovative clinical programs that serve patients recovering after acute neurological injuries such as the *Emerging Consciousness Program* and the *Brain Computer Interface Clinic*. I have

	presented our experiences developing this innovative clinic in Grand Rounds and national conference venues and published data and experiences from the clinic in journals such as Neurology Clinical Practice and Archives of Physical Medicine and Rehabilitation. As an indication of the impact of these clinical innovations, other centers around the country have established and modeled Neurorecovery clinics based on MGH. These include Brigham and Women's Hospital, Hartford Healthcare, University of North Carolina, and Oregon Health and Sciences University, and these centers have maintained ongoing partnership with our MGH Neurorecovery clinic.
Clinical Translation of Rehabilitation Technologies (2020 –)	I am dedicated to the clinical translation of novel technologies to assess, restore, and rehabilitate upper limb function for patients with neurological injuries (stroke, spinal cord injury, ALS). I collaborate with multiple engineering groups who are developing new robotic technologies to assess and enhance upper limb function, serve as a Co-Investigator on grants from the NIH and National Science Foundation, and have presented our ongoing work at invited national and international conferences. As a thought leader in this translational area, I have published primary research and editorials in journals such as Nature Communications, Science Translational Medicine, JAMA Neurology, and IEEE Transactions in Neural Systems and Engineering.
Outcomes after Brain Injury (2020 –)	Another long-standing area of clinical innovation has focused on outcomes after stroke and other forms of brain injury. I have devoted substantial effort to quantitative analyses of existing classes of outcomes (patient-reported outcomes versus performance-based outcomes) as well as the development of new and innovative methods to measure outcomes (i.e., via digital health). I have presented findings at national and international conferences and published findings in journals such as Annals of Neurology, Neurology, and Neurorehabilitation and Neural Repair.
Acute Stroke Care Redesign Task Force (2025 –)	Member of task force to redesign acute stroke care across Mass General Brigham.

Educational Material for Patients and the Lay Community:

Patient educational material

2019	Understanding Stroke: A Guide to Your Care in the Hospital and Beyond	Co-Author	Patient Education Material, Massachusetts General Hospital

<u>Report of Scholarship</u>

ORCID ID: 0000-0002-6575-9849

Peer-Reviewed Scholarship in print or other media:

Research Investigations

1. **Lin D**, Stahl DC, Ikle D, Grannis FW, Jr. Employee attitudes and smoking behavior at the City of Hope National Medical Center smoke-free campus. J Natl Compr Canc Netw. 2006;4(6):535-42. Epub 2006/07/04. PubMed PMID: 16813723.
2. **Lin D**, Najbauer J, Salvaterra PM, Mamelak AN, Barish ME, Garcia E, Metz MZ, Kendall SE, Bowers M, Kateb B, Kim SU, Johnson M, Aboody KS. Novel method for visualizing and modeling the spatial distribution of neural stem cells within intracranial glioma. Neuroimage. 2007;37 Suppl 1:S18-26. Epub 2007/06/15. doi: 10.1016/j.neuroimage.2007.03.076. PubMed PMID: 17560798.
3. Klin A, **Lin DJ**, Gorrindo P, Ramsay G, Jones W. Two-year-olds with autism orient to non-social contingencies rather than biological motion. Nature. 2009;459(7244):257-61. Epub 2009/03/31. doi: 10.1038/nature07868. PubMed PMID: 19329996; PMCID: PMC2758571.
4. Vander Wyk BC, Ramsay GJ, Hudac CM, Jones W, **Lin D**, Klin A, Lee SM, Pelphrey KA. Cortical integration of audio-visual speech and non-speech stimuli. Brain Cogn. 2010;74(2):97-106. Epub 2010/08/17. doi: 10.1016/j.bandc.2010.07.002. PubMed PMID: 20709442; PMCID: PMC3869029.
5. **Lin DJ**, Kang E, Chen C. Changes in input strength and number are driven by distinct mechanisms at the retinogeniculate synapse. J Neurophysiol. 2014;112(4):942-50. Epub 2014/05/23. doi: 10.1152/jn.00175.2014. PubMed PMID: 24848465; PMCID: PMC4122736.
6. **Lin DJ**, Hermann KL, Schmahmann JD. The Diagnosis and Natural History of Multiple System Atrophy, Cerebellar Type. Cerebellum. 2016;15(6):663-79. Epub 2015/10/16. doi: 10.1007/s12311-015-0728-y. PubMed PMID: 26467153; PMCID: PMC4833693.
7. Bonin Pinto C, Morales-Quezada L, de Toledo Piza PV, Zeng D, Saleh Velez FG, Ferreira IS, Lucena PH, Duarte D, Lopes F, El-Hagrassy MM, Rizzo LV, Camargo EC, **Lin DJ**, Mazwi N, Wang QM, Black-Schaffer R, Fregni F. Combining Fluoxetine and rTMS in Poststroke Motor Recovery: A Placebo-Controlled Double-Blind Randomized Phase 2 Clinical Trial. Neurorehabil Neural Repair. 2019;33(8):643-55. Epub 2019/07/10. doi: 10.1177/1545968319860483. PubMed PMID: 31286828; PMCID: PMC6688938.
8. **Lin DJ**, Cloutier AM, Erler KS, Cassidy JM, Snider SB, Ranford J, Parlman K, Giatsidis F, Burke JF, Schwamm LH, Finklestein SP, Hochberg LR, Cramer SC. Corticospinal Tract Injury Estimated From Acute Stroke Imaging Predicts Upper Extremity Motor Recovery After Stroke. Stroke. 2019:STROKEAHA119025898. Epub 2019/10/28. doi: 10.1161/STROKEAHA.119.025898. PubMed PMID: 31648631.
9. Ciarán O'Neill, Tommaso Proietti, Kristin Nuckols, Megan E. Clarke, Cameron J. Hohimer, Alison Cloutier, **David J. Lin**, Conor J. Walsh. Inflatable Soft Wearable Robot for Reducing Therapist Fatigue During Upper Extremity Rehabilitation in Severe Stroke. IEEE Robotics and Automation Letters. 2020; 5(3):3899 - 3906.
10. Nuckols K, Hohimer CJ, Glover C, Lucena DSd, Moyo W, Wagner D, Cloutier A, **Lin DJ**, Walsh CJ, editors. Effects of a Soft Robotic Glove using a High Repetition Protocol in Chronic Stroke: A Pilot Study. 2020 8th IEEE RAS/EMBS International Conference for Biomedical Robotics and Biomechatronics (BioRob); 2020 29 Nov.-1 Dec. 2020.
11. Tomasso Proietti, Ciarán O'Neill, Cameron Hohlmer, Kristin Nuckols, Megan Clarke, Yu Meng Zhou, **David Lin**, Conor James Walsh. Sensing and Control of a Multi-Joint Soft Wearable Robot for Upper-Limb Assistance and Rehabilitation. IEEE Robotics and Automation Letters. 2021; 6(2): 2381-2388.
12. Kline DK, **Lin DJ**, Cloutier A, Sloane K, Parlman K, Ranford J, Picard-Fraser M, Fox AB, Hochberg LR, Kimberley TJ. Arm Motor Recovery After Ischemic Stroke: A Focus on Clinically Distinct Trajectory Groups. J Neurol Phys Ther. 2021;45(2):70-8. Epub 2021/03/13. doi: 10.1097/NPT.0000000000000350. PubMed PMID: 33707402.
13. **Lin DJ**, Erler KS, Snider SB, Bonkhoff AK, DiCarlo JA, Lam N, Ranford J, Parlman K, Cohen A, Freeburn J, Finklestein SP, Schwamm LH, Hochberg LR, Cramer SC. Cognitive Demands Influence Upper Extremity Motor Performance During Recovery From Acute Stroke. Neurology. 2021. Epub 2021/04/17. doi: 10.1212/WNL.0000000000011992. PubMed PMID: 33858997.

14. Liew SL, Zavaliangos-Petropulu A, Schweighofer N, Jahanshad N, Lang CE, Lohse KR, Banaj N, Barisano G, Baugh LA, Bhattacharya AK, Bigjahan B, Borich MR, Boyd LA, Brodtmann A, Buetefisch CM, Byblow WD, Cassidy JM, Charalambous CC, Ciullo V, Conforto AB, Craddock RC, Dula AN, Egorova N, Feng W, Fercho KA, Gregory CM, Hanlon CA, Hayward KS, Holguin JA, Hordacre B, Hwang DH, Kautz SA, Khlif MS, Kim B, Kim H, Kuceyeski A, Lo B, Liu J, **Lin D**, Lotze M, MacIntosh BJ, Margetis JL, Mohamed FB, Nordvik JE, Petoe MA, Piras F, Raju S, Ramos-Murguialday A, Revill KP, Roberts P, Robertson AD, Schambra HM, Seo NJ, Shiroishi MS, Soekadar SR, Spalletta G, Stinear CM, Suri A, Tang WK, Thielman GT, Thijs VN, Vecchio D, Ward NS, Westlye LT, Winstein CJ, Wittenberg GF, Wong KA, Yu C, Wolf SL, Cramer SC, Thompson PM, Group ESRW. Smaller spared subcortical nuclei are associated with worse post-stroke sensorimotor outcomes in 28 cohorts worldwide. Brain Commun. 2021;3(4):fcab254. Epub 2021/11/23. doi: 10.1093/braincomms/fcab254. PubMed PMID: 34805997; PMCID: PMC8598999.
15. Bonkhoff AK, Hope T, Bzdok D, Guggisberg AG, Hawe RL, Dukelow SP, Chollet F, **Lin DJ**, Grefkes C, Bowman H. Recovery after stroke: the severely impaired are a distinct group. J Neurol Neurosurg Psychiatry. 2021. Epub 2021/12/24. doi: 10.1136/jnnp-2021-327211. PubMed PMID: 34937750.
16. Kuo YL, **Lin DJ**, Vora I, DiCarlo JA, Edwards DJ, Kimberley TJ. Transcranial magnetic stimulation to assess motor neurophysiology after acute stroke in the United States: Feasibility, lessons learned, and values for future research. Brain Stimul. 2022;15(1):179-81. Epub 2021/12/11. doi: 10.1016/j.brs.2021.12.001. PubMed PMID: 34890840.
17. Erler KS, Wu R, DiCarlo JA, Petrilli MF, Gochyyev P, Hochberg LR, Kautz SA, Schwamm LH, Cramer SC, Finklestein SP, **Lin DJ**. Association of Modified Rankin Scale With Recovery Phenotypes in Patients With Upper Extremity Weakness After Stroke. Neurology. 2022. Epub 2022/03/13. doi: 10.1212/WNL.0000000000200154. PubMed PMID: 35277444.
18. Zavaliangos-Petropulu A, Lo B, Donnelly MR, Schweighofer N, Lohse K, Jahanshad N, Barisano G, Banaj N, Borich MR, Boyd LA, Buetefisch CM, Byblow WD, Cassidy JM, Charalambous CC, Conforto AB, DiCarlo JA, Dula AN, Egorova-Brumley N, Etherton MR, Feng W, Fercho KA, Geranmayeh F, Hanlon CA, Hayward KS, Hordacre B, Kautz SA, Khlif MS, Kim H, Kuceyeski A, **Lin DJ**, Liu J, Lotze M, MacIntosh BJ, Margetis JL, Mohamed FB, Piras F, Ramos-Murguialday A, Revill KP, Roberts PS, Robertson AD, Schambra HM, Seo NJ, Shiroishi MS, Stinear CM, Soekadar SR, Spalletta G, Taga M, Tang WK, Thielman GT, Vecchio D, Ward NS, Westlye LT, Werden E, Winstein C, Wittenberg GF, Wolf SL, Wong KA, Yu C, Brodtmann A, Cramer SC, Thompson PM, Liew SL. Chronic Stroke Sensorimotor Impairment Is Related to Smaller Hippocampal Volumes: An ENIGMA Analysis. J Am Heart Assoc. 2022;11(10):e025109. Epub 2022/05/17. doi: 10.1161/JAHA.121.025109. PubMed PMID: 35574963.
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22. Proietti T, O'Neill C, Gerez L, Cole T, Mendelowitz S, Nuckols K, Hohimer C, **Lin D**, Paganoni S, Walsh C. Restoring arm function with a soft robotic wearable for individuals with amyotrophic lateral sclerosis. Science translational medicine. 2023;15(681):eadd1504. Epub 2023/02/02. doi: 10.1126/scitranslmed.add1504. PubMed PMID: 36724237.

23. DiCarlo JA, Erler KS, Petrilli M, Emerson K, Gochyyev P, Schwamm LH, **Lin DJ**. SMS-text messaging for collecting outcome measures after acute stroke. Front Digit Health. 2023;5:1043806. Epub 2023/03/14. doi: 10.3389/fdgth.2023.1043806. PubMed PMID: 36910572; PMCID: PMC9996089.
24. Liew SL, Schweighofer N, Cole JH, Zavaliangos-Petropulu A, Lo BP, Han LKM, Hahn T, Schmaal L, Donnelly MR, Jeong JN, Wang Z, Abdullah A, Kim JH, Hutton AM, Barisano G, Borich MR, Boyd LA, Brodtmann A, Buetefisch CM, Byblow WD, Cassidy JM, Charalambous CC, Ciullo V, Conforto AB, Dacosta-Aguayo R, DiCarlo JA, Domin M, Dula AN, Egorova-Brumley N, Feng W, Geranmayeh F, Gregory CM, Hanlon CA, Hayward K, Holguin JA, Hordacre B, Jahanshad N, Kautz SA, Khlif MS, Kim H, Kuceyeski A, **Lin DJ**, Liu J, Lotze M, MacIntosh BJ, Margetis JL, Mataro M, Mohamed FB, Olafson ER, Park G, Piras F, Revill KP, Roberts P, Robertson AD, Sanossian N, Schambra HM, Seo NJ, Soekadar SR, Spalletta G, Stinear CM, Taga M, Tang WK, Thielman GT, Vecchio D, Ward NS, Westlye LT, Winstein CJ, Wittenberg GF, Wolf SL, Wong KA, Yu C, Cramer SC, Thompson PM. Association of Brain Age, Lesion Volume, and Functional Outcome in Patients With Stroke. Neurology. 2023. Epub 2023/04/05. doi: 10.1212/WNL.0000000000207219. PubMed PMID: 37015818.
25. Meng Z, Guo R, Wang T, Bo B, Lin Z, Li Y, Zhao Y, Yu X, **Lin DJ**, Nachev P, Liang ZP, Li Y. Prediction of Stroke Onset Time with Combined Fast High-Resolution Magnetic Resonance Spectroscopic and Quantitative T2 Mapping. IEEE Trans Biomed Eng. 2023;PP. Epub 2023/05/18. doi: 10.1109/TBME.2023.3277546. PubMed PMID: 37200119.
26. **Lin DJ**, Hardstone R, DiCarlo JA, McKiernan S, Snider SB, Jacobs H, Erler KS, Rishe K, Boyne P, Goldsmith J, Ranford J, Finklestein SP, Schwamm LH, Hochberg LR, Cramer SC. Distinguishing Distinct Neural Systems for Proximal vs Distal Upper Extremity Motor Control After Acute Stroke. Neurology. 2023. Epub 2023/06/03. doi: 10.1212/WNL.0000000000207417. PubMed PMID: 37268437.
27. Huynh BP, DiCarlo JA, Vora I, Ranford J, Gochyyev P, **Lin DJ***, Kimberley TJ*. Sensitivity to Change and Responsiveness of the Upper Extremity Fugl-Meyer Assessment in Individuals With Moderate to Severe Acute Stroke. Neurorehabil Neural Repair. 2023:15459683231186985. Epub 20230724. doi: 10.1177/15459683231186985. PubMed PMID: 37483132. **Co-senior author*
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30. Fasoli SE, Mazariegos J, Rishe K, Blanton S, DiCarlo JA, **Lin D**, Rowe VT. Interpreting Variations in Fugl-Meyer Assessment Protocols: Results and Recommendations from a Nominal Group Consensus Process. Arch Phys Med Rehabil. 2024. Epub 20241024. doi: 10.1016/j.apmr.2024.10.004. PubMed PMID: 39461495.
31. DiCarlo JA, Jaywant A, Gochyyev P, Bonkhoff AK, Hardstone R, Erler KS, Ranford J, Cloutier A, Ward N, Sloane KL, Schwamm LH, Cramer SC, **Lin DJ**. Distinct Constructs Underlie Patient-Reported and Performance-Rated Outcomes after Stroke. Ann Neurol. 2024. Epub 20241114. doi: 10.1002/ana.27129. PubMed PMID: 39540288.
32. Rose DK, Winstein CJ, Lewek MD, Plummer P, **Lin DJ**, Roberts H, Raghavan P, Taylor SR, Smayda KE, O'Dell MW. Multidisciplinary Delphi Panel on Rehabilitation Approaches and Unmet Needs for Chronic Stroke Walking Impairment and the Role of Rhythmic Auditory Stimulation. Cureus. 2024;16(8):e68336. Epub 20240831. doi: 10.7759/cureus.68336. PubMed PMID: 39355085; PMCID: PMC11443502.

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37. Cavanagh SK, Gochyyev P, Nayeem R, Dusang AN, Hamilton T, DiCarlo JA, Kautz SA, Sternad D, Walsh C, Hochberg L, **Lin DJ**. Trial-By-Trial Variation In Upper Extremity Movement Smoothness After Acute Stroke Relates To Clinical Assessments And Corticospinal Tract Injury. Neurorehabil Neural Repair. 2025:15459683251340916. Epub 20250531. doi: 10.1177/15459683251340916. PubMed PMID: 40448525.
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41. Hardstone R, Ostrowski L, Nicole Dusang A, López-Larraz E, Jesser J, Cash SS, Cramer SC, Hochberg LR, Ramos-Murguialday A, **Lin DJ**. Scientific Reports. 2025. *Accepted Manuscript*

Other peer-reviewed scholarship

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D.J. Lin, A.M. Cloutier, S. Snider, F. Giatsidis, J. Ranford, K. Parlman, S. Fasoli, N. Mazwi, S. Finklestein, L.R. Hochberg. Clinical Translation of Early Clinical and Neuroimaging Biomarkers to Predict Stroke Motor Recovery. American Neurological Association Annual Meeting, 2018 (*American Neurological Association Travel Award*)

D.J. Lin, C. Feng, L.E. Skolarus, J.F. Burke. Clinical Characteristics and Therapy Time of Stroke Patients admitted to Inpatient Rehabilitation Facility versus Skilled Nursing Facility. International Stroke Conference 2019

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I. Vora, **D.J. Lin**, Y.K. Kuo, R.E. Banks, J.A. DiCarlo, L.R. Hochberg, T.J. Kimberley. The Use of Transcranial Magnetic Stimulation for Upper Extremity Motor Assessment at the Bedside During Acute Stroke Hospitalization: A Feasibility Study. American Society of Neurorehabilitation, 2022. (*Fletcher H. McDowell Award for Best Clinical Science)*

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K. Andrew, M. Costello, E. Gillan, E. Greenler, K. Parlman, P. Plummer, J. Strom, J. DiCarlo, **D. Lin**. Functional Ambulation Category in Acute Stroke Predicts Disability at 3 Months. Academy of Neurologic Physical Therapy, 2022. (*Best Poster – Stroke Related*)

Narrative Report

Introduction

I am a neurologist with board certification in Neurology, Neurocritical Care, and Brain Injury Medicine. I specialize in the care of patients recovering after acute neurological injuries throughout the post-acute care continuum. As a physician-scientist and faculty member in the Mass General Brigham Department of Neurology and Harvard Medical School, I provide clinical care and supervise trainees in the MGH Neurosciences Intensive Care Unit, serve as Director of the MGH Neurorecovery clinic and MGB Neurorecovery Fellowship, serve as Associate Director of the MGH T32 Postdoctoral Training Program in Recovery and Restoration of CNS Health and Function, and conduct NIH-funded translational research on stroke motor recovery and rehabilitation.

Area of Excellence

My clinical expertise and innovation focus on (a) Neurorecovery, (b) Stroke Motor Rehabilitation, (c) Rehabilitation Technologies, and (d) Outcomes after Brain Injury. As a clinical pioneer in neurorecovery after critical neurologic illness, I developed and now lead the MGH Neurorecovery Clinic, an innovative outpatient program that serves patients recovering from acute neurologic injuries including subarachnoid hemorrhage, traumatic brain injury, intracerebral hemorrhage, stroke, encephalitis, seizures, and spinal cord injury. Our interdisciplinary clinic includes representatives from neurology, physical, occupational, speech therapy, pharmacy, physiatry, and clinical psychology and receives wide-ranging referrals locally, regionally, nationally, and internationally. The MGH Neurorecovery Clinic also houses and serves as an incubator for new and innovative clinical programs such as the *Emerging Consciousness Program* and the *Brain Computer Interface Clinic*. As an indication of the impact of these innovations, other centers around the country have established and modeled Neurorecovery clinics based on MGH. These include Brigham and Women's Hospital, Hartford Healthcare, University of North Carolina, and Oregon Health and Sciences University, and these centers have maintained ongoing partnership with our MGH Neurorecovery clinic.

As a world leader in stroke motor rehabilitation, my translational research group investigates neurological mechanisms that enable post-stroke motor recovery and leverages these findings to inform approaches to clinical neurorehabilitation. Our findings have identified new phenotypic patterns of recovery after stroke and their underlying brain mechanisms. I actively serve as the PI for multiple NIH and industry-funded stroke rehabilitation clinical trials and have served as a scientific advisor for a number of companies who are developing new approaches to enhance recovery after stroke. I am also dedicated to the clinical translation of novel technologies to assess, restore, and rehabilitate upper limb function for patients with neurological injuries (stroke, spinal cord injury, ALS). I collaborate with multiple engineering groups who are developing new robotic technologies to assess and enhance upper limb function, serve as a Co-Investigator on grants from the NIH and National Science Foundation, and have presented our ongoing work at invited national and international conferences.

A final long-standing area of clinical innovation has focused on outcomes after stroke and other forms of brain injury. I have devoted substantial effort to quantitative analyses of existing classes of outcome measures (patient-reported outcomes versus performance-based outcomes) as well as the development of new and innovative methods to measure outcomes (i.e., via digital health). Together, my focus on these areas of clinical innovation have resulted in 69 peer-reviewed publications (41 primary research investigations) in highly reputable journals such as Annals of Neurology, JAMA Neurology, and Nature Communications, 28 national and international lectures, 6 current R01-level grants (3 Federal and 3 Industry), and 14 invitations to serve on national grant review committees (NIH, AAN, and AHA), including being a standing member on an NIH study section for two years (2023-2025).

Investigation
As a physician-investigator, the mission of my laboratory is to transform stroke rehabilitation by advancing our understanding of fundamental neuroscience mechanisms that enable post-stroke recovery. We study the systems neuroscience of stroke recovery (using neuroimaging, EEG, and TMS) related to quantitative measures of motor control in order to inform novel treatment strategies. I have published over 60 peer reviewed publications in high profile journals such as *Neuron*, *Stroke*, and *Neurology*. I serve as a faculty member in the Harvard Program in Neuroscience, where I am active in recruiting graduate students and postdoctoral fellows. My laboratory has been the recipient of numerous grants from sources that include the National Institutes of Health (including a recent R01) and the Department of Veterans Affairs as well as foundations, industry, and philanthropic sources. I have a broad and rich network of local, national, and international collaborators.

Education
I have been actively involved in and have won awards for my teaching and supervision of medical students, residents, and fellows. I designed and successfully completed the MGH/Spaulding Neurorecovery Fellowship. I now direct this fellowship and am dedicated to continuing to grow and develop this unique educational pathway to train future residents and fellows as leaders in neurorecovery. I also serve as Associate Director of the MGH T32 Postdoctoral Training Program in Recovery and Restoration of CNS Health and Function, a pathway for PhDs and MDs to receive advanced training in the science of neural repair. These efforts total more than 50 hours per year dedicated to teaching and supervising Harvard learners.

Summary
I am a faculty member in the MGH Department of Neurology and Harvard Medical School. I seek to improve the care of patients with acute neurologic injuries throughout all phases of their care as a neurointensivist focused on neurorecovery. My goals are to continue to grow a world-class, clinical research-educational program in Neurorecovery at MGB and serve as an international leader in the practice and science of neurorecovery and neurorehabilitation.