# CURRICULUM VITAE

## JING XU

**CONTACT INFO**
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**Lab website**
http://codexlab.org
**Google scholar page**
https://scholar.google.com/citations?user=jKcs76MAAAAJ&hl=en
H-index: 19 I-index: 22
**Citizenship**
United States

## EDUCATION

Ph.D. Psychology, University of California, Berkeley, 2011
Advisors: Richard B. Ivry, Ph.D., Thomas L. Griffiths, Ph.D.
Thesis committee: Thomas L. Griffiths, Ph.D.,
Richard B. Ivry, Ph.D.,
Terry Regier, Ph.D
Dissertation title: *Flexibility and Biases in Cognitive Control and Categorization*
Emphasis: motor control and computational modeling of human memory and categorization
M.S. Psychology, Iowa State University, 2005
Emphasis: computational modeling of human memory
B.S. Computer Science, Iowa State University, 2003

## PROFESSIONAL APPOINTMENTS

**Assistant Professor,** Department of Kinesiology, Mary Frances Early College of Education, The University of Georgia, 2020 - present
**Faculty member**, Neuroscience, Integrated Life Sciences, University of Georgia, 2020–present
**Faculty member**, Owens Institute for Behavioral Research, University of Georgia, 2022–present
**Faculty member**, Center for Regenerative Bioscience, University of Georgia, 2022–present

**Assistant Research Scientist,** The Malone Center for Engineering in Healthcare, Writing School of Engineering, Johns Hopkins University, 2017- 2022
Focus: Neurobiology of dexterous control of the hand and recovery of skilled motor function after brain injury such as stroke.

**Post-doc Research Fellow,** Department of Neurology, Johns Hopkins University, 2011-2017
Focus: Recovery of upper-limb motor function after stroke, motor skill learning.
Advisor: John W. Krakauer, M.D.

**Junior Specialist Researcher,** Cognition Action Laboratory, University of California, Berkeley, 2005–2006
Focus: Inhibitory control and category learning in Parkinson's Disease.
Supervisor: Richard B. Ivry, Ph.D.

## FUNDING SUPPORT

**Active funding**

National Institute of Health 2023 – 2028, $2,736,478
(Grant#: R01NS130210, **PI: Xu**)
Role: PI
Title: *Dissecting Behavioral and Neural Mechanisms of Hand Dexterity after Stroke for Effective Rehabilitation*.
Summary: To investigate behavioral and neural mechanisms of hand dexterity and its impairment and recovery after stroke with the central hypothesis that three essential components of hand function, finger individuation, precision grip, and power grip, largely rely on three distinct control variables, flexibility, coordination, and strength, and separable descending pathways: direct- and indirect-corticospinal tract, and reticulospinal tract.

NIH Georgia CTSA Pilot Grant 2022-2024, $70,370.30
(Grant#: NIH CTSA UL1 award 2UL1TR002378-06, **Co-PI: Xu,** Wolf)
Role: Co-PI
Title: *Building a Stroke Patient Research Network in Athens and Northeast Georgia*.
Summary: To develop effective and sustainable patient recruitment strategies for conducting a UGA-based translational research project on motor skill recovery after stroke and establish UGA as a site for interdisciplinary collaborations across multiple institutes in Georgia to conduct research aimed to improve stroke prevention, treatment, recovery, and education.

National Center of Neuromodulation for Rehabilitation 2023-2024, $37,500
(Grant#: FP00028032, PI: Deborah Fiorella)
Role: Co-I
Title: *The Effect of Mild Traumatic Brain Injury on Corticospinal Excitability During Complex Action Preparation.*

**Past funding**

The Malone Seed Fund (Grant#: 80046364, **PI: Xu**) 2018-2019, $64,850
Role: PI
Title: *Developing and Piloting Therapies for Hand Dexterity Rehabilitation.*

## HONORS AND AWARDS

National Institute of Health R01 Award, 2023
National Institute of Health Georgia CTSA Pilot Grant, 2022
Teaming for Interdisciplinary Research Pre-Seed Program Award, University of Georgia, 2021
Department of Kinesiology Seed Grant, University of Georgia, 2021
Travel Award, 16th Karniel Computational Motor Control Workshop, 2020
Travel Award, Gordon Research Conference for Neurobiology of Cognition, 2014
Travel Award, 32nd Annual Conference of the Cognitive Science Society, 2010
Travel Award, Neural Information Processing Systems Conference, 2008
Diabold Fellowship, Department of Psychology, University of California, Berkeley, 2006
Power Award, Department of Psychology, University of California, Berkeley, 2006
Outstanding Senior Award, Computer Science Department, Iowa State University, 2002
Upsilon Pi Epsilon Honor Society for the Computing Science, 2002
The Phi Beta Kappa Society, 2002

## TEACHING SERVICES

**Instructor,** Department of Kinesiology, University of Georgia
Course title: Biomechanics (Fall 2020, Spring 2021, Fall 2021, Spring 2022, Fall 2022, Spring 2023)

Course title: Neural Foundations of Motor Control and Motor Learning (Spring 2022)
Course title: Study Design and Statistics in Kinesiology (Spring 2023)
Course title: Neural Control of Human Movement and Skill Learning (Fall 2023, Fall 2024, Spring 2025)
Course title: Clinical Neuroscience and Neurorehabilitation (Spring 2024)

**Guest Lecturer,** Department of Neuroscience, Johns Hopkins University.
Course title: Neuroscience and Cognition II (Fall 2019, Spring 2020)
Duties: Designing lecture material, exam questions; presenting the lecture and grading

**Graduate Student Instructor,** Department of Psychology, University of California, Berkeley.
Course title 1: *Introduction to Cognitive Science* (2007)
Course title 2: *Cognitive Neuroscience* (2009)
Duties: Designing and conducting weekly discussion/practice sessions; assisting for preparing for course reading and examination materials, grading

**Teaching Assistant**, Computer Science Department, Iowa State University.
Course title: *Data Structures Using C++* (2001 – 2003)
Duties: Designing course homework and examination materials; holding lab hours for assisting with programming problems; grading

**Instructor**, Department of English, School of Foreign Languages and Literature, Shandong University, China.
Course title: *Extensive Reading for Second-year English Majors* (1997 – 1998)
Duties: Teaching two classes independently; preparing for teaching materials; conducting examinations and grading

## PUBLICATIONS

*An asterisk (*) indicates equal contribution.*

### Journal articles

Byrd, C., **Xu, J.** (manuscript in preparation). Hand dominance relies on precise spatiotemporal coordination of finger control rather than finger flexibility.

Ma, T., Kumar, S., Olds, K., Brown, J., Carducci, J., Forrence, A., Krakauer, J.W. **Xu, J.** (manuscript in preparation) Finger individuation is only partially needed and introduces a cost in precision grip.

**Xu**, J., Yu, M., Vess, M., Haith, A. (manuscript in preparation) Dynamics of action preparation in conflicting environments.

Ihejirika, P., Rosenberg, M., Ting, L.H., **Xu, J.** (manuscript in preparation) Individual, task, and disease-specific spatiotemporal structures can be identified from 3D fingertip forces during individuated finger control.

Khan, O.A., Crabtree, B., Whitten, S.V., Colquitt, G., Modlesky, C.M., **Xu, J.** (under review) A sensitive assessment of finger individuation abilities in 3-dimensional force production in children with cerebral palsy.

Kadry, A., Solomonow-Avnon, D., Norman, S., **Xu, J.**, Mawase, F. (2024). An ANN models cortical-subcortical interaction during post-stroke recovery of finger dexterity. *Journal of Neural Engineering.*

Ting*, LH., Gick, B, Kesar, T., **Xu*, J.** (2024) Ethnokinesiology: towards a neuromechanical understanding of cultural differences in movement. *Philosophical Transactions of the Royal Society B.*

**Xu*, J.**, Mawase*, F., Shieber, M. (2024). Evolution, biomechanics, and neurobiology converge to explain selective finger motor control. *Physiological Reviews*.

**Xu, J.**, Ma, T., Kumar, S., Olds, K., Brown, J., Carducci, J., Forrence, A., Krakauer, J.W. (2023) Loss of finger control complexity and intrusion of flexor biases are dissociable in finger individuation impairment after stroke. *eLife*.

Mirdamadi, J.L., **Xu, J.**, Arevalo-Alas, K.M., Kam, L.K., Borich, M.R. (2023). State-dependent interhemispheric inhibition reveals individual differences in motor behavior in chronic stroke. *Clinical Neurophysiology*.

Cherry-Allen, K.M., French, M.A., Stenum, J., **Xu, J.**, Roemmich, R.T. (2023). Opportunities for improving motor assessment and rehabilitation after stroke by leveraging video-based pose estimation. *American Journal of Physical Medicine & Rehabilitation*.

Carducci J, Olds K, Krakauer JW, **Xu J.**, Brown JD. (2022). Novel Planar Strain Sensor Design for Capturing 3-Dimensional Fingertip Forces from Patients Affected by Hand Paralysis. *Sensors*.

Brancheidt, M, Ejaz, N., **Xu, J.**, Widmer, M., Harran, M.D., Cortés, J.C., Kitago, T., Celnik, P.A., Hernandez-Castillo, C., Diedrichsen, J., Luft, A.R., Krakauer, J.W. (2021). No evidence for motor recovery-related cortical connectivity changes after stroke using resting-state fMRI. *Journal of Neurophysiology*.

Krakauer, J.W.; Kitago, T.; Goldsmith, J., and 26 others (2021). Comparing a novel neuroanimation experience to conventional therapy for high-dose intensive upper-limb training in subacute stroke: The SMARTS2 randomized trial. *Neurorehabilitation and Neural Repair.*

Mawase, F., Cherry-Allen, K., **Xu, J.**, Uehara, Shintaro, Celnik, P.A. (2020). Pushing the rehabilitation boundaries: hand motor impairment can be reduced in chronic stroke. *Neurorehabilitation and Neural Repair.*

**Xu*, J.**, Branscheidt*, M., Schambra, HM., Steiner L., Widmer, M., Diedrichsen, J., Goldsmith, J., Lindquist, M., Kitago, T., Luft, A.R., Krakauer J.W., Celnik, P.A., and the SMARTS Study Group (2019). Rethinking interhemispheric imbalance as a target for neurorehabilitation. *Annals of Neurology.*

Schambra, HM, **Xu*, J.**, Branscheidt*, M, Linquidst, M., Kim, N., Harran, M., Luft, A., Krakauer J.W., Celnik, P.A. (2019). Differential post-stroke motor recovery in an arm versus hand muscle in the absence of motor evoked potentials. *Neurorehabilitation and Neural Repair*.

Krakauer, J.W, Hadjiosif, A., **Xu, J.**, Wong, A. Haith, A. Motor Learning (2019). *Comprehensive Physiology*.

Ejaz*, N, **Xu*, J**, Branscheidt M, Hertler B, Schambra H, Widmer M, Faria AV, Harran M, Cortes JC, Kim N, Celnik PA, Kitago T, Luft A, Krakauer JW, Diedrichsen J. (2019). Reply: Further evidence for a non-cortical origin of mirror movements after stroke. *Brain*.

Ejaz*, N., **Xu*, J.**, Hertler, B., Branscheidt, M., Widmer, M., Kim, N., Harran, M., Cortes, J.C., Celnik, P.A., Kitago, T., Luft, A.R., Krakauer J.W., Diedrichsen, J. (2018). Evidence for subcortical origin

of mirror movements: a longitudinal stroke study. *Brain*.

**Xu*, J.**, Ejaz*, N., Hertler, B., Branscheidt, M., Widmer, M., Faria, A.F., Harran, M., Cortes, J.C., Kim, N., Celnik, P.A., Kitago, T., Luft, A.R., Krakauer J.W., Diedrichsen, J. (2017). Separable systems for recovery of finger strength and control after stroke. *Journal of Neurophysiology.*

Cortes, J.C., Goldsmith J., Harran, M.D., **Xu, J.**, Kim, N., Luft, A.R., Celnik, P., Krakauer, J.W., Kitago, T. (2017). A short and distinct time window for recovery of arm motor control early after stroke revealed with a global measure of trajectory kinematics. *Neurorehabilitation and Neural Repair*.

**Xu, J.**, Westrick, Z., Ivry, R.B. (2014). Selective Inhibition of a Multi-Component Response Can Be Achieved Without Cost. *Journal of Neurophysiology*.

**Xu, J.**, Dowman, M., & Griffiths, T.L. (2013). Replicating color term universals through human iterated learning. *Proceedings of the Royal Society, Series B*.

Shlerf, J.E., **Xu, J.**, Klemfuss, N.M., Griffiths, T.L., & Ivry, R.B. (2013). Individuals with cerebellar degeneration show similar learning adaptation deficits with large and small visuomotor errors. *Journal of Neurophysiology*.

Stoloff, R.H., Taylor, J.A., **Xu, J.**, Ridderikhoff, A., Ivry, R.B. (2011). Effect of reinforcement history on hand choice in an unconstrained reaching task. *Frontiers in Neuroscience*, 5, 1-14.

**Xu, J.**, & Griffiths, T.L. (2010). A rational analysis of the effects of memory biases on serial reproduction. *Cognitive Psychology*.

**Xu, J.** & Malmberg, K.J. (2007). Modeling the effects of verbal- and nonverbal-pair strength on associative recognition, *Memory & Cognition*.

Malmberg, K. J. & **Xu, J.** (2007). On the flexibility and on the fallibility of associative memory, *Memory & Cognition*. 35(3), 545-556.

Malmberg, K.J. & **Xu, J.** (2006). The Influence of Averaging and Noisy Decision Strategies on the Recognition Memory ROC. *Psychonomic Bulletin & Review*.

**Book Chapters**

Griffiths, T.L., Sanborn, A.N., Marjieh, R., Langlois, T., **Xu, J.**, & Jacoby, N. (2024). Estimating subjective probability distribution. In Griffiths, T.L., Chater, N., & Tenenbaum, J.B. (Eds.) Reverse engineering the mind: Probabilistic models of cognition. MIT Press.

**Xu, J.**, Haith, A., Krakauer, J.W. (2015). Motor control of the hand before and after stroke. In: Kansaku, K., Cohen, L.G., Birbaumer, N. ed. *Systems Neuroscience: From Laboratory to Clinical Practice*. First Ed. Springer.

**Peer-reviewed conference proceedings**

Pimpalkar, A., West, A. M., **Xu, J**., & Brown, J. D. (2025). Optimizing Cross-Modal Matching for Multimodal Motor Rehabilitation. International Consortium for Rehabilitation Robotics (ICORR).

Khan, M., George, T., Carducci, J., Ma, T., Krakauer, J., **Xu, J.**, Brown, J. D. (2021). Exploring the efficacy of cutaneous haptic feedback in post-stroke rehabilitation. International Conference on Rehabilitation Robotics (virtual conference).

**Xu, J.**, Ejaz, N., Hertler, B., Branscheidt, M., Widmer, M., Faria, A.F., Harran, M., Cortes, J.C., Kim, N., Celnik, P.A., Kitago, T., Luft, A.R., Krakauer J.W., Diedrichsen, J. (2015). Two systems mediating hand recovery after stroke. *Translational and Computational Motor Control (TCMC).*

Carstensen, A., **Xu, J.**, Smith, C., and Regier, T. (2015). Language evolution in the lab tends toward informative communication. In R. Dale et al. (Eds.), Proceedings of the 37th Annual Meeting of the Cognitive Science Society.

**Xu, J.**, Griffiths, T.L., & Dowman, M. (2010). Replicating color term universals through human iterated learning. *Proceedings of the 32nd Annual Conference of the Cognitive Science Society.*

**Xu, J.** & Griffiths, T.L. (2009, Spotlight). How memory biases affect information transmission: A rational analysis of serial reproduction. *Advances in Neural Information Processing Systems 21.*

**Xu, J.**, Reali, F., & Griffiths, T.L. (2008). A formal analysis of cultural evolution by replacement. *Proceedings of the 30th Annual Conference of the Cognitive Science Society.*

**INVITED TALKS AND CONFERENCE PRESENTATIONS**

The 6th International Brain Stimulation Conference, Kobe, Japan, February 2025
Title: Abnormal Premovement Interhemispheric Interactions Post-Stroke and Implications to Stroke Recovery.

Shirley Ryan AbilityLab, Chicago, January 2025
Title: Dissecting Behavioral and Neural Mechanisms of Hand Dexterity after Stroke for Effective Rehabilitation.

St. Mary's Hospital Stroke Center, Athens, GA, December 2024
Title: In Search of Effective Therapies for Hand Dexterity Rehabilitation after Stroke.

Osher Lifelong Learning Institute at UGA, Athens, GA, March 2024
Title: Stroke Prevention, Treatment, and Recovery

Georgia Stroke Professional Alliance, Athens, GA, March 2024
Title: In Search of Effective Therapies for Hand Dexterity Rehabilitation after Stroke.

Georgia Institute of Technology, Atlanta, GA, February 2024
Title: Dissecting Hand Dexterity: From Individuated Finger Movements to the Complexity of Human Behavior.

University of Texas, Austin, Movement and Cognitive Rehabilitation Science Graduate Seminar, (Virtual) February 2024
Title: Dissecting Hand Dexterity: Loss of Complexity and Intrusion of Flexor Bias are Dissociable in Finger Individuation Impairment after Stroke

Osher Lifelong Learning Institute at UGA, Athens, GA, August 2023
Title: Stroke Prevention, Treatment, and Recovery

University of Georgia Mary Frances Early College of Education Fall Meeting, Athens, GA, August 2023
Title: The Future of COE: what's new and exciting (research highlight)

Emory University Center for Mind, Brain, and Culture (CMBC) Minds in Movement Workshop, Atlanta, GA, May 2023

Title: What do flexible fingers give humans: a case for moving between the lab and the world.

Simons-Emory International Consortium on Motor Control, Atlanta, GA, October 2022
Title: Delineating Origins of Human Finger Individuation in Health and Disease.

University of Leeds, School of Psychology & Immersive Cognition Laboratory, (Virtual) May 2022
Title: Elucidating the Role of Finger Individuation in Dexterous Manipulation.

Georgia Cerebral Palsy Symposium, University of Georgia, April 2022
Title: Assessing Finger Dexterity in Children with Cerebral Palsy.

University of Georgia Neuroscience Mini Symposium (featured speaker), University of Georgia (Virtual), October 2021
Title: Dissecting Hand Dexterity and Recovery Processes for Effective Rehabilitation.

Action Club: Interactive Seminars in Motor Control & Coordination, Penn State University (Virtual), October 2021
Title: Dissecting Hand Dexterity and Recovery Processes for Effective Rehabilitation.

Progress of Motor Control XIII, Auckland, New Zealand (Virtual), August 2021
Title: Do We Need Finger Individuation for Precision Grip?

30th Neural Control of Movement (NCM), Virtual Conference, April 2021
Title: Characterization of Finger Enslavement Patterns after Stroke in 3D.

Georgia Tech Neuro Seminar, Georgia Institute of Technology (Virtual), Atlanta, GA, April 2021
Title: Dissecting Hand Dexterity and Recovery Processes for Effective Rehabilitation.
ATL Neuromechanics Group Seminar (Virtual), Georgia Institute of Technology and Emory University, Atlanta, GA, March 2021
Title: Characterization of Finger Individuation in 3D after Stroke Reveals Qualitative Differences in Enslavement Patterns for Healthy and Paretic Hands.

Center for Visual & Neurocognitive Rehabilitation Seminar (Virtual), Atlanta VA Medical Center, Atlanta, GA, February 2021
Title: Dissecting Hand Dexterity and Recovery Processes for Effective Rehabilitation after Stroke.

Augusta University – University of Georgia Medical Partnership Mechanisms of Disease Seminar (Virtual), Athens, GA, September 2020
Title: Dissecting Hand Dexterity and Recovery Processes for Better Rehabilitation.

The Malone Center for Engineering and Healthcare Faculty Retreat, Baltimore, MD, May 2019
Title: Tracking and Rehabilitating Hand Dexterity After Stroke.

29th Neural Control of Movement (NCM) (Panel leader and presenter), Toyama, Japan, April 2019
Panel title: *Multi-dimensional Dexterous Hand Function and Recovery*
Presentation title: *Finger individuation as a hallmark for hand dexterity.*

Johns Hopkins Sensorimotor Research Day, Johns Hopkins University, Baltimore, MD, December 2016
Title: *Rethinking interhemispheric imbalance as a target for neurorehabilitation*.

Partnering toward Discovery – Postdoctoral Lecture Series, Johns Hopkins University, Baltimore, MD, 2016

Title: *Two systems mediating hand recovery after stroke*.

Translational and Computational Motor Control (TCMC), Chicago, IL, 2015
Title: *Tracking the recovery of fine finger control and strength after stoke*.

Gordon Research Seminar for the Neurobiology of Cognition, Sunday Rivers, MA, 2014
Title: *Tracking spontaneous recovery of finger individuation after stroke*.

Cognitive Seminar, Department of Psychology, Stanford University, CA. 2010
Title: *Using iterated learning to assess human mental biases and color term universals*.

32th Annual Conference of the Cognitive Science Society, Portland, OG. 2010
Title: *Replicating color term universals through human iterated learning.*

**CONFERENCE POSTERS/PRESENTATIONS** (past 8 years)

Moore, A., Rhangos, I., Shabbir., K., Dry, R., Bushra, A., Xu, J., & Barany, D.A. (September 2024). A Single-Center, Retrospective Analysis of Ischemic Stroke Patient Characteristics Before and After the COVID-19 Pandemic. Annual Meeting of the American Neurological Association, Orlando, FL.

Ihejirika, P., Rosenberg, M., Xu, J. (August 2024) Reduced complexity and altered spatiotemporal coordination of fingertip forces after stroke (selected as an oral podium presentation). The Steven L. Wolf Research Symposium, Atlanta.

Rai, D., Noorani, A., Verstynan, T., Xu, J. (August 2024) Delineating the human direct and indirect motor descending pathways using high-resolution tractography with diffusion imaging. The Steven L. Wolf Research Symposium, Atlanta.

Rhangos, I., Shabbir., K., Dry, R., Moore, A., Bushra, A., Xu, J., & Barany, D.A. (August 2024). Lesion Location Influences on Stroke Recovery: A Single-Center Retrospective Analysis. The Steven L. Wolf Research Symposium, Atlanta, GA.

Nestlehutt, H., Mahajan, S., Sequeira, M., Jarvis, B., Frazier, W., Castellano, E., Bushra, A., Xu, J., & Barany, D.A. (August 2024). A Retrospective Analysis of the Relationship between Pre-Existing Hypertension and Outcomes After Ischemic Stroke. The Steven L. Wolf Research Symposium, Atlanta, GA.

Pimpalkar, A. Rai, D., Bartels, JU, Xu, J., Brown, J. (October 2024). Visual-haptic feedback enhances finger individuation in a virtual precision grip neurotraining task (selected as an oral presentation). Biomedical Engineering Society 2024 Annual Meeting, Baltimore.

Ihejirika, P., Rosenberg, M., Xu, J. (April 2024) Reduced complexity and altered spatiotemporal coordination of fingertip forces after stroke. The Society for the Neural Control of Movement, Dubrovnic.

Ihejirika, P., Rosenberg, M., Ting, L., Xu, J. (November 2023) Spatiotemporal coordination of fingertip forces during isometric finger individuation reveals individual and group differences across healthy and stroke hands. The 52nd Annual Meeting of Society of Neuroscience 2023, Washington DC.

Rai, D., Noorani, A., Verstynan, T., Xu, J. (November 2023) Delineating the human direct and indirect motor descending pathways using high-resolution tractography with diffusion imaging. The 52nd Annual Meeting of Society of Neuroscience 2023, Washington DC.

Lee, S., Xu, J., Haith, A. (November 2023) Corticospinal excitability while preparing interception movements depends on the visual motion properties of the target. The 52nd Annual Meeting of Society of Neuroscience 2023, Washington DC.

McCurdy, J.R., Xu, J., Barany, D. (November 2023) Assessing the dynamics of conflict resolution and conflict adaptation through a forced-response task. The 52nd Annual Meeting of Society of Neuroscience 2023, Washington DC.

Crabtree, B., Khan, OA., Hines, D., Barnes, SV., Colquitt, G., Modlesky, C., Xu.J. (July 2022) Assessing impaired finger individuation abilities in children with cerebral palsy. The Society for the Neural Control of Movement, Dublin.

Xu, J., Ma, T., Kumar, S., Olds, K., Brown, J., Carducci, J., Forrence, A., Krakauer, J.W. (July 2022) How do we make smooth movement? The Society for the Neural Control of Movement, Dublin.

Crabtree, B., Khan, OA., Wilhoite, SV., Pascal, J., Iyer, P., Colquitt, G., Modlesky, C., Xu.J. (November 2021) Assessing finger individuation abilities in cerebral palsy using a 3D force device. The 50th Annual Meeting of Society of Neuroscience 2021, Chicago.

Xu, J., Ma, T., Kumar, S., Olds, K., Brown, J., Carducci, J., Forrence, A., Krakauer, J.W. (November 2021) Individuated finger control in fine manipulation introduces a cost of increased trajectory jerkiness. The 50th Annual Meeting of Society of Neuroscience 2021, Chicago.

Khan, M., George, T., Carducci, J., Ma, T., Krakauer, J.W., Xu, J., Brown, J.D. (September, 2021) Exploring the Efficacy of Cutaneous Haptic Feedback in Post-Stroke Rehabilitation. The IEEE International Conference on Rehabilitation Robotics (ICORR).

Xu, J., Ma, T., Kumar, S., Olds, K., Brown, J., Carducci, J., Forrence, A., John W. Krakauer, (October 2020). Enslavement patterns after stroke are from a different origin than finger coupling in healthy hand. NIH Rehabilitation Research 2020: Envisioning a Functional Future.

Xu, J., Kumar, S., Ma, T., Olds, K., Brown, J., Carducci, J., Forrence, A., John W. Krakauer, (October 2019). Assessing hand dexterity after stroke in 3D (dynamic poster). The Society for Neuroscience Annual Meeting, Chicago.

Xu, J., Yu, M., Haith, A., (November 2018). Level of conflict influences action initiation but not action preparation. The Society for Neuroscience Annual Meeting, San Diego.

Mawase, F., Cherry-Allen, K., Xu, J., Uehara, S., Celnik, P., (November 2018). Training out of abnormal hand synergy patterns improves dexterity in patients with chronic stroke.

Xu, J., Elphage, L., Haith, A., (May 2018). Action selection under conflict: replacement versus suppression of competing response options. The Society for the Neural Control of Movement, Santa Fe.

Xu*, J., Branscheidt*, M., Schambra, HM., Kim, N., Steiner L., Kitago, T., Luft, A.R., Krakauer J.W., Celnik, P.A., (November 2016). Abnormal interhemispheric interactions after stroke emerge only in the chronic phase. The Society for Neuroscience Annual Meeting, San Diego.

Akazawa, K, Xu, J, Branscheidt, M., Kitago, T., Luft, A.R., Celnik, P.A., Krakauer J.W., Faria, A.F., (November 2016). Changes in cortical connectivity revealed by resting-state fMRI in acute subcortical stroke correlate with long-term motor recovery. The Society for Neuroscience Annual

Meeting, San Diego.

## ACADEMIC SERVICE

**Grant Reviewer**
NIH (US) Panelist, Sensory-Motor Neuroscience (SMN) Study Section, 2023, 2025
NIH (US) Panelist, NV-C(10) Clinical Neurophysiology, Devices, Neuroprosthetics and Biosensors Small Business Panel, 2024
Swiss National Science Foundation (SNSF), 2024
Israel Science Foundation (ISF), 2024
US-Israel Binational Science Foundation, 2023
FSR Incoming Post-doc Fellowships, The Research Council of the Université Catholique de Louvain (UCLouvain), 2023
NSF (US) Panelist, HER Core Research (ECR), 2019
Agence Nationale De La Recherche (ANR) (France), 2019

**Journal Editorial Board**
IEEE Transactions on Cognitive and Developmental Systems
Philosophical Transactions of Royal Society, B (guest editor)
Frontiers in Systems Neuroscience

**Journal Reviewer**
American Journal of Physical Medicine & Rehabilitation
Behavioral Neuroscience
Brain
Cortex
Cerebral Cortex
Communicative Biology
eLife
European Journal of Neuroscience
Experimental Brain Research
Frontiers in Systems Neuroscience
IEEE Transactions on Neural Systems and Rehabilitation Engineering
Journal of Experimental Psychology: Human Perception and Performance
Journal of Experimental Psychology: Learning, Memory, and Cognition
Journal of Cognitive Neuroscience
Journal of Neurophysiology
Journal of Neuroscience
Journal of Physiology
Neuron
NeuroImage
Neurorehabilitation and Neural Repair
NPJ Parkinson's Disease
PLoS Biology
PLoS One
Sensors
Translational Neural Systems Rehabilitation Engineering

## PROFESSIONAL MEMBERSHIPS
American Physiological Society
Society for Neuroscience
Society for the Neural Control of Movement
American Society of Neurorehabilitation

Progress of Motor Control
Cognitive Science Society
Cognitive Neuroscience Society
Society for Mathematical Psychology
Women in Cognitive Science