Claudio Luis Ferre, PhD

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EDUCATION AND TRAINING

2015-2019	Postdoctoral Research Fellow, Burke Neurological Institute, Weill Cornell Medicine, White Plains, NY
2015	PhD, Kinesiology, Columbia University, New York, NY
2008	MA**,** Developmental Psychology, UNC-Greensboro, Greensboro, NC
2005	BS, Psychology, DePaul University, Chicago, IL,

ACADEMIC APPOINTMENTS

2019 - present	Assistant Professor, Dept. of Occupational Therapy, College of Health & Rehabilitation Sciences: Sargent College, Boston University, Boston, MA
2019 - present	Faculty, Neurophotonics Center, Boston University, Boston, MA
2018-2019	TL1 Postdoctoral Fellow, Weill Cornell Medicine, New York, NY
2017-2019	Adjunct Instructor, Dept. of Physical Therapy, New York University, New York, NY

SPECIAL POSITIONS, HONORS, AND AWARDS

2024	Nominee, Whitney R. Powers Award for Teaching Excellence
2023	Finalist, Gayle Arnold Award, American Academy of Cerebral Palsy and Developmental Medicine
2021-2023	NIH Pediatric Loan Repayment Program Award (Renewal)
2022	NIH Ad-hoc Reviewer, Motor Function and Speech Rehabilitation Study Section
2021	NIH Early Career Reviewer
2021-2022	BU CTSI PRIME: Pathways to Research Independence and Mentoring Excellence
2019-2021	NIH Pediatric Loan Repayment Program Award
2018	Training in Grantsmanship for Rehabilitation Research, Medical Uni. of South Carolina
2017	Diversity Travel Award, American Society for Neurorehabilitation
2015	Finalist, Gayle Arnold Award, American Academy of Cerebral Palsy and Developmental Medicine
2013	Student Scholarship, American Academy of Cerebral Palsy and Development al Medicine
2013	Teachers College, Columbia University Minority Scholarship
2009	Office of Policy and Research Fellowship, Teachers College, Columbia University
2008	NIH/Sackler Institute Travel Award
2007	NIH/Sackler Institute Travel Award

RESEARCH FUNDING

Active

NIH NINDS K01NS117659 2021 – 2026
Faculty Development Award to Promote Diversity in Neuroscience
Title: Codevelopment of Sensory and Motor Function in Infants At-risk for Cerebral Palsy
Role: Principal Investigator
$971,557 direct + $77,750 indirect = $1,049,307

NIH NICHD R03HD114194 2024 – 2026
NCMRR Early Career Research Award
Title: Multimodal Characterization of Cerebral Reorganization in Children with Unilateral Cerebral Palsy
Role: Principal Investigator
$200,000 direct + $130,000 indirect = $330,000

BU Institute for Early Childhood and Well-being 2022 – 2024
Title: Motor Function and Language Development in Infant At-risk for Neurodevelopmental Disorders
Role: Co-Principal Investigator
$15,00 direct + 0 indirect = $15,000

Pending

NIH NINDS R01 2025 – 2030
Title: Cortical Function and Infant Manual Skills: Tracking Sensorimotor Development in Infants At-risk for Cerebral Palsy
Role: PI
$2,471,410 direct + 1,315,405 indirect = $3,786,815

Completed

NIH/NCATS TL1-TR-002386 2018 - 2019
Clinical & Translational Science Postdoctoral Training Award,
Title: Combined tDCS and Bimanual Therapy in Children with Cerebral Palsy
Role: Trainee

Children's Hemiplegic and Stroke Association 2014 - 2015
Title: Comparison of Home-based bimanual training and Lower-Limb Functional Training Using Caregivers as Interventionists
Role: Co-Principal Investigator

Teachers College, Columbia University 2014
Doctoral Dissertation Grant
Title: Caregivers as Interventionists: A randomized-control study of intensive home-based bimanual training for children with hemiplegic cerebral palsy
Role: Principal Investigator

Teachers College, Columbia University 2012-2013
Vice President's Grant for Student Research in Diversity,
Title: Feasibility of a Home-based Intensive Therapy for Young Children with Hemiplegic Cerebral Palsy
Role: Principal Investigator

PUBLICATIONS

Peer Reviewed Articles:

27. Kuo, H-C., **Ferre, C.L.**, Chin, K., Friel, K.M., & Gordon, A.M. (2023). Mirror movements and brain pathology in children with unilateral cerebral palsy: a cross-sectional study. *Developmental Medicine and Child Neurology*. doi: 10.1111/dmcn.15322.
26. Gordon, A.M., **Ferre, C.L.,** Robert, M.T., Chin, K., Brandão, M.B., & Friel, K.M. (2022). HABIT+tDCS:

a study protocol of a randomized controlled trial (RCT) investigating the synergistic efficacy of hand-arm bimanual intensive therapy (HABIT) plus targeted non-invasive brain stimulation to improve upper extremity function in school-age children with unilateral cerebral palsy. *BMJ Open,* doi: 10.1136/bmjopen-2021-052409.

25. Friel, K.M., **Ferre, C.L.,** Brandão, M.B., Kuo, H-S, Chin, K.Y., Hung, Y-C, Robert, M.T., Flamand, V., Smorenburg, A., Bleyenheuft, Y., Carmel, J.B., Campos, T., Gordon, A.M. (2021). Improvements in upper extremity function following intensive training are independent of corticospinal tract organization in children with unilateral spastic cerebral palsy. *Frontiers in Neurology*. doi: 10.3389/fneur.2021.660780.

24. Robert, M.T., Gutterman, J., **Ferre, C.L.,** Chin, K.Y., Brandão, M., Gordon, A.M., Friel, K.M. (2021). Corpus callosum integrity relates to improvement of upper extremity function following intensive rehabilitation in children with unilateral spastic cerebral palsy. *Neurorehabilitation and Neural Repair.* doi: 10.1177/15459683211011220.

23. Robert, M.T., **Ferre, C.L.**, Chin, K.Y., Brandão, M.B., Carmel, J.C., Araneda. R., Bleyenheuft, Y., Friel, K.M., Gordon, A.M. (2021). Intensive bimanual intervention for children who have undergone hemispherectomy surgery: A pilot study. *Pediatric Physical Therapy*, 33(3), 120-127.

22. Figueiredo, P., Mancini, M.C. **Ferre**, **C.L**., Gordon, A.G., Brandão, M. (2020). Effectiveness of hand-arm bimanual training in children with bilateral cerebral palsy: a randomized trial. *Developmental Medicine and Child Neurology,* 62(11), 1274-1282.

21. Dekkers, K.J., Rameckers, E.A, Smeets, R.J., Gordon, A.M., Speth, L.A., **Ferre, C.L.,** Janssen-Potten, Y. (2020). Upper extremity muscle strength in children with unilateral spastic cerebral palsy: A bimanual problem? *Physical Therapy*, 100(12), 2205-2216. DOI: 10.1903/ptj/pzaa155.

20. **Ferre**, **C.L**., Babik, I., Michel, G.F. (2020). A perspective on the development of hemispheric specialization, infant handedness, and cerebral palsy. *Cortex,* 127, 208-220. doi: 10.1016/j.cortex.2020.02.017.

19. **Ferre**, **C.L**., Flamand, V. Carmel, J.B., Friel, K.M. Gordon, A.M. (2020). Anatomical and functional characterization in children with unilateral cerebral palsy: An atlas-based analysis. *Neurorehabilitation and Neural Repair.* 34(2):148-158. doi: 10.1177/1545968319899916.

18. Surana, B., **Ferre**, **C.L**., Brandao, M., Dew, A.P., Moreau, N.G., Gordon, A.M. (2019). Effectiveness of lower extremity functional training (LIFT) in young children with unilateral spastic cerebral palsy: a randomized trial. *Neurorehabilitation and Neural Repair.* doi: 10.1177/1545968319868719

17. Brandao, M.B., Mancini, M.C., **Ferre, C.L.,** Figueiredo, P., Oliveira, R.H., Goncalves, S.C., Dias, M.C., & Gordon, A.M. (2018). Does dosage matter? A feasibility study of Hand-arm Bimanual Intensive Training dose and dosing schedule in children with unilateral cerebral palsy. *Physical and Occupational Therapy in Pediatrics.* 38(3), 227-242.

16. Marneweck, M., Kuo, H-C., Smorenburg, A., **Ferre, C.L.**, Flamand, V.H., Gupta, D., Carmel, J.B., Bleyenheuft, Y., Gordon, A.M., & Friel, K.M. (2018). The relationship between hand function and overlapping motor representations of the hands in the contralesional hemisphere in unilateral spastic cerebral palsy. *Neurorehabilitation and Neural Repair*, 32(1), 62-72.

15. Gupta, D., Barachant, A., Gordon, A.M., **Ferre, C.L**., Kuo, H-C., Carmel, J.B., & Friel, K.M. (2017). Effect of sensory and motor connectivity on hand function in pediatric hemiplegia. *Annals of Neurology*, 82(5), 766-780.

14. **Ferre, C.L.** & Gordon, A.M. (2017). Coaction of Individual and Environmental Factors: A Review of Intensive Therapy Paradigms for Children with Unilateral Spastic Cerebral Palsy. *Developmental Medicine and Child Neurology,* 59(11), 1139-1145.

13. Hung, Y.C., **Ferre, C.L.,** & Gordon, A.M. (2017). Improvements in kinematic performance after home-

based bimanual training for children with unilateral cerebral palsy. *Physical and Occupational Therapy in Pediatrics,* doi: 10.1080/01942638.2017.1337663.

12. **Ferre**, C.L., Brandao, M., Surana, B., Dew, A.P., Moreau, N.G., Gordon, A.M. (2017). Caregiver-directed home-based bimanual training in young children with unilateral spastic cerebral palsy: a randomized trial. *Developmental Medicine and Child Neurology*, 59(5), 497-504.
11. Kuo, H.C., **Ferre C.L.**, Carmel, J.B., Gowatsky, J.L., Stanford, A.D., Rowny, S.B., Lisanby, S.H., Gordon, A.M., & Friel, K.M. (2017). Using diffusion tensor imaging to identify corticospinal tract projection patterns in children with unilateral spastic cerebral palsy. *Developmental Medicine and Child Neurology*, 59(1), 65-71.
10. Smorenburg, A.R., Gordon, A.M., Kuo, H.C., **Ferre, C.L.**, Brandão, M., et. al. (2017). Does corticospinal tract connectivity influence the response to intensive bimanual therapy in children with unilateral cerebral palsy? *Neurorehabilitation and Neural Repair*, 31(3), 250-260.
9. Friel, K.M., Kuo, H.C., Fuller, J., **Ferre, C.L.,** Brandão, M., Carmel, J.B., & Gordon, A.M. (2016). Skilled bimanual training drives motor cortex plasticity in children with unilateral cerebral palsy. *Neurorehabilitation and Neural Repair*, 30(9). 834-844.
8. **Ferre, C.L.**, Brandão, M., Hung, Y.C., Carmel, J.B., Gordon A.M. (2015). Feasibility of caregiver-directed home-based hand-arm bimanual intensive training: A brief report. *Developmental Neurorehabilitation*, 18(1), 69-74.
7. Gelkop, N., Burshtein, D.G., Lahav, A., Brezne, A., Al-Oraibi, S., **Ferre C.L.**, et al. (2015). Efficacy of constraint-induced movement therapy and bimanual training in children with hemiplegic cerebral palsy in an educational setting. *Physical and Occupational Therapy in Pediatrics*, 35(1),24-39.
6. Brandão, M., **Ferre, C.L.**, Kuo, H-C., Rameckers, E.A., Bleyenheuft, Y., Hung, Y-C., Friel, K., & Gordon, A.M. (2014). Comparison of structured skill and unstructured practice during intensive bimanual training in children with unilateral spastic cerebral palsy. *Neurorehabilitation and Neural Repair*, 28, 452-61.
5. Gordon, A.M., Hung, Y.C., Brandão, M., **Ferre, C,L.**, Kuo, H.C., Friel, K., Petra, E., Chinnan, A., & Charles, J.R. (2011). Bimanual training and constraint-induced movement therapy in children with hemiplegic cerebral palsy: a randomized trial. *Neurorehabilitation and Neural Repair*, 25, 692-702.
4. **Ferre, C.L**., Babik, I. & Michel, G.F. (2010). Development of infant prehension handedness: A longitudinal analysis during the 6- to 14-month age period. *Infant Behavior and Development*, 33, 492-502.
3. Kimmerle, M., **Ferre, C.L.**, Kotwica, K.A., & Michel, G.F. (2010). Development of role-differentiated bimanual manipulation during the infant's first year. *Developmental Psychobiology,* 52(2), 168-180.
2. Kotwica, K.A., **Ferre, C.L.**, & Michel, G.F. (2008). Relation of stable hand-use preferences to the development of skill for managing multiple objects from 7- to 13-months of age. *Developmental Psychobiology*, 50(5), 519-529.
1. Michel, G.F., Sheu, C.F., Tyler, A.N., & **Ferre, C.L.** (2006). The manifestation of infant hand-use preferences when reaching for objects during the seven- to thirteen-month age period. *Developmental Psychobiology,* 48,436-443.

Under Review:

- Kim, H.J., Kelly, M.M., Su, X., **Ferre, C.L** Efficacy of transcranial direct current stimulation for improving motor function in children with cerebral palsy: a systematic review and meta-analysis**.**

In Preparation:

- Lee, S., Kim, E., Cha, B., Yücel, M., **Ferre**, **C.L**., Kumar, D. Prefrontal cortex function and gait alterations during single- and dual-task walking in knee osteoarthritis.

- **Ferre**, **C.L**., Gordon, A.M, Friel, K.M. Relationship between sensorimotor tracts and sensorimotor function in children with unilateral spastic cerebral palsy.

- **Ferre**, **C.L**., Clifford, B. Spandrels in Motor Development: Architecture as a Byproduct of Engineering.

Book Chapters:

1. Michel, G.F., Babik, I., Nelson, E.L., **Ferre, C.L.,** Campbell, J.M., Marcinowski, E.C. (In Press). Development of Handedness and Other Lateralized Functions During Infancy and Early Childhood. In *Cerebral Asymmetries*, Elsevier.

2. Friel, K.M., **Ferre, C.L.**, Gordon, A.M. (2020). Diagnosis and Management of Cerebral Palsy and Other Types of Pediatric Brain Injury. In *APA Handbook of Intellectual and Developmental Disabilities (Vol. 2).* American Psychological Association. 153-179.

PROFESSIONAL PRESENATIONS

Peer Reviewed:

Hawe, R., Nemanich, S.T., Surkar, S., & **Ferre, C.L.** (2024). Bimanual Skills in Unilateral Cerebral Palsy: Translating Knowledge of Development and Motor Control into Clinical Application. American Academy of Cerebral Palsy and Developmental Medicine. Quebec City, Canada. Oct. 23-26.

Su, X., Kim, H., Kelly, M., & **Ferre, C.L.** (2024). Exploring the dynamics of spontaneous infant movement: a longitudinal study of movement patterns and cortical activity. American Academy of Cerebral Palsy and Developmental Medicine. Quebec City, Canada. Oct. 23-26.

Su, X., Kim, H., Kelly, M., Yarnall, E. & **Ferre, C.L.** (2024). Spontaneous Movement and Cortical Activity during Early Infancy. American Society of Neurorehabilitation, San Antonio, TX. April 11-13.

Kim, H., Kelly, M., Su, M., & **Ferre, C.L.** (2023). Efficacy of Transcranial Direct Current Stimulation for Improving Motor Function in Children with Cerebral Palsy: A Systematic Review and Meta-analysis. American Academy of Cerebral Palsy and Developmental Medicine. Chicago, IL. Sept. 10-13.

Kelly, M., Kim, H., Su, M., & **Ferre, C.L.** (2023). Improving Motor Function in Children with Cerebral Palsy through Repetitive Transcranial Magnetic Stimulation: A Systematic Review and Meta-Analysis. American Academy of Cerebral Palsy and Developmental Medicine. Chicago, IL. Sept. 10-13.

Kelly, M., Guan, N., Frey, O., Everett, I., **Ferre, C.L.** (2022). Exploration of Space and Self: Tracking Early Motor Experiences to Characterize Typical and Atypical Trajectories of Motor Development. American Academy of Cerebral Palsy and Developmental Medicine. Las Vegas, NE. Sept. 21-24.

Su, X., Kim, H., Kelly, M., & **Ferre, C.L.** (2022). How Does Experience Contribute to Brain Development? - Interrelation between sensorimotor function and brain activation in infants at risk of developing cerebral palsy. American Academy of Cerebral Palsy and Developmental Medicine. Las Vegas, NE. Sept. 21-24.

Kim, H., Kelly, M., Su, X., & **Ferre, C.L.** (2022). Multimodal Measurement of Corticomotor Function in Children with Unilateral Cerebral Palsy. American Academy of Cerebral Palsy and Developmental Medicine. Las Vegas, NE. Sept. 21-24.

Ferre, C.L., Su, X., Kelly, M., Kim, H, & Gao, Y. (2022). Cortical Activation During Proprioceptive Stimulation and Spontaneous Movements in Infants: Preliminary Results. Society for Functional Near Infrared Spectroscopy, Boston, MA. Oct. 9-12.

Ferre, C.L., Erdei, C., Yucel, M. , & Maitre, N.M. (2021). Trajectories of Brain Development in Infants at Risk for Cerebral Palsy: an fNIRS Study of Motor and Sensory Function. Society for Functional Near Infrared Spectroscopy, Virtual Meeting. Oct. 18-22.

Nemanich, S.T., **Ferre, C.L.**, & Papadelis, C., (2020). Progress in Multimodal Brain Imaging for Neurorehabilitation Research in Children with Cerebral Palsy: Towards Reproducible and Open Science. 74th Annual Meeting of the American Academy for Cerebral Palsy and Developmental Medicine, New Orleans, LA. (Virtual Meeting due to COVID-19). Sep. 23-26.

Ferre, C.L., Brandao, M.B., Chin, K., Flamand, V.H., Bonouvrie-Smorenburg, A., Campos, T.C., Robert, M., Bleyenheuft, Y., Carmel, J.B., Gordon, A.M., Friel, K.M., Kuo, H-S. (2020). Improvements in Hand Function After Unimanual or Bimanual Training Are Independent of Corticospinal Tract Laterality. 74th Annual Meeting of the American Academy for Cerebral Palsy and Developmental Medicine, New Orleans, LA. (Virtual Meeting due to COVID-19). Sep. 23-26.

Ferre, C.L., & Friel, K.M. (2019). Brain Anatomy and Hand Function in Children with Unilateral Cerebral Palsy. Combined Meeting of American Academy of Cerebral Palsy and Developmental Medicine and International Alliances of Academies of Childhood Disability, Anaheim, CA, Sept 18-21.

Ferre, C.L., & Friel, K.M. (2019). Brain Wiring and Hand Function in Children with Unilateral CP: Is there a connection? Combined Meeting of American Academy of Cerebral Palsy and Developmental Medicine and International Alliances of Academies of Childhood Disability, Anaheim, CA, Sept 18-21.

Ferre, C.L., Chin, K.Y., Gordon, A.M., & Friel, K.M. (2019). Bilateral Connectivity in Children with Unilateral Brain Injury: Implications for Upper-extremity Function. Combined Meeting of American Academy of Cerebral Palsy and Developmental Medicine and International Alliances of Academies of Childhood Disability, Anaheim, CA, Sept 18-21.

Robert, M.T., **Ferre, C.L.,** Chin, K.Y., Brandao, M., Carmel, J.B., Araneda, R., Bleyenheuft, Y., Friel, K.F., Gordon, A.M. (2019). Hand-Arm Bimanual Intensive Training in Children following Hemispherectomy Surgery. Pediatric Epilepsy Surgery Conference, Cleveland, OH, July 20.

Ferre, C.L., Soles, L.V., Gordon, A.M., & Friel, K.M. (2018). Relationship between sensorimotor tracts and sensorimotor function in children with unilateral spastic cerebral palsy. 72nd Annual Meeting of the American Academy for Cerebral Palsy and Developmental Medicine, Cincinnati, Oct. 09-13.

Robert, M.T., **Ferre, C.L.**, Chin, K.., Brandao, M., Gordon, A.M. & Friel, K.M. (2018). Feasibility of delivering an intensive bimanual intervention to children who have undergone hemisphere cctomy. 72nd Annual Meeting of the American Academy for Cerebral Palsy and Developmental Medicine, Cincinnati, Oct. 09-13.

Robert, M.T., Gutterman, J., **Ferre, C.L.**, Gordon, A.M., & Friel, K.M. (2018). Improvement in upper extremity function in children with unilateral spastic cerebral palsy after intensive training correlates with interhemispheric

connectivity. 72nd Annual Meeting of the American Academy for Cerebral Palsy and Developmental Medicine, Cincinnati, Oct. 09-13.

Ferre, C.L., Carmel, J.B., Gordon, A.M., & Friel, K.M. (2018). Anatomical and Functional Characterization of brain injury subtypes in children with unilateral spastic cerebral palsy: An atlas-based analysis. Progress in Clinical Motor Control I: Neurorehabilitation, University Park, PA. Jul. 23-25.

Ferre. C.L., Gordon, A.M., & Friel, K.M. (2017). Quantitative diffusion tensor tractography of motor and sensory pathways in children with unilateral spastic cerebral palsy and its relation to sensorimotor function. American Society of Neurorehabilitation Annual Meeting, Baltimore, MD. Nov 9-10.

Kuo, H-C, Marneweck, M., **Ferre, C.L**., Flamand, V., Bleyenheuft, Y., Gordon, A.M., & Friel, K.M. (2017). Neurophysiological correlate of mirror movements in children with unilateral spastic cerebral palsy. 71st Annual Meeting of the American Academy for Cerebral Palsy and Developmental Medicine, Montreal, Quebec, Canada. Sep. 13-16.

Marneweck, M., Kuo, H.C., Smorenburg, A., Flamand, V., **Ferre, C.L**., Bleyenheuft, Y., Gordon, A., & Friel, K.M. (2016). Searching for the neural correlates of hand function in unilateral spastic cerebral palsy: Does size and location of movement representations matter? 70th Annual Meeting of the American Academy for Cerebral Palsy and Developmental Medicine Hollywood, FL. Sep. 20-24.

Kuo, H.C., **Ferre, C.L.**, Friel, K.M., Gordon, A.M. (2016). The relationship between mirror movements and corticospinal tract connectivity in children with unilateral spastic cerebral palsy. 70th Annual Meeting of the American Academy for Cerebral Palsy and Developmental Medicine Hollywood, FL. Sep. 20-24.

Flamand, V.H., Smorenburg, A., Kuo, H.S., Marneweck, M., **Ferre, C.L.,** Bleyenheuft, Y., et al., (2016). Underpinnings of Intracortical motor circuits physiology in children with unilateral cerebral palsy. 70th Annual Meeting of the American Academy for Cerebral Palsy and Developmental Medicine Hollywood, FL. Sep. 20-24.

Ferre, C.L., Brandao, M., Surana, B., Dew, A.P., Moreau, N.G., Gordon, A.M. (2015). Caregivers as Interventionist: A randomized trial of home-based intensive bimanual training in young children with hemiplegia. 69th Annual Meeting of the American Academy for Cerebral Palsy and Developmental Medicine, Austin TX. Oct 21-24.

Surana, B., Moreau, N.G., Dew, A.P., **Ferre, C.L**., Brandao, M., Gordon, A.M. (2015). Effectiveness of lower extremity intensive functional training (LIFT) in young children with hemiplegia delivered in the home setting: a randomized control trial. 69th Annual Meeting of the American Academy for Cerebral Palsy and Developmental Medicine, Austin TX. Oct 21-24.

Smorenburg, A., Kuo, H.C., **Ferre, C.L.,** Brandão, M., Bleyenheuft, Y., Carmel, J.B., & Gordon, A.M., & Friel, K.M. (2014). Wired for recovery? How corticospinal tract connectivity influences the efficacy of intensive bimanual therapy in children with unilateral cerebral palsy. 68th Annual Meeting of the American Academy for Cerebral Palsy and Developmental Medicine. San Diego, CA, Sep. 9-13.

Ferre, C.L., Brandão, M., Hung, L. Carmel, J., Gordon, A.M. (2013). Home-based Bimanual Training for Young Children with Hemiplegia: Is it Feasible to Train Caregivers as Interventionists? 67th Annual Meeting of the American Academy for Cerebral Palsy and Developmental Medicine. Milwaukee, WI, Oct. 16-19.

Friel, K., Kuo, H-S., Gowatsky, J., **Ferre, C.L.**, Fuller, J., Carmel, J., Stanford, A., Lisanby, S., Bleyenheuft, Y., Gordon, A.M. (2013). Effects of structured vs. unstructured intensive bimanual training on hand function and

plasticity in motor cortex. 67th Annual Meeting of the American Academy for Cerebral Palsy and Developmental Medicine. Milwaukee, WI, Oct. 16-19.

Gelkop, N., Gol, D.B., Lahav, A., Brezner, A., Oraibi, S., **Ferre, C.L.**, Gordon, A.M. (2013). Constraint-induced movement therapy and bimanual training in children with hemiplegic cerebral palsy provided in a special education preschool and kindergarten setting. 67th Annual Meeting of the American Academy for Cerebral Palsy and Developmental Medicine. Milwaukee, WI, Oct. 16-19.

Ferre, C.L., Brandão, M., Hung, Y.C., Carmel, J.B., & Gordon, A.M. (2012). Caregivers as interventionists: A feasible home-based bimanual therapy for children with hemiplegia. Poster session presented at the 4th Meeting of the International Cerebral Palsy Conference, Pisa, Italy, Oct 11-14th.

Friel K.M., Kuo H.-C., Bassi B., Murphy D.L.K., Luber B.L., Carmel J.B., Gowatsky J.L., **Ferre C.L**., Stanford A.D.,Rowny S.B., Lisanby S.H., Gordon A.M. (2012). Motor cortex representations expand after bimanual training in children with hemiplegia. 4th Meeting of the International Cerebral Palsy Conference, Pisa, Italy, Oct 11-14th.

Kuo H.-C., **Ferre C.L**., Carmel J.B., Gowatsky J.L., Stanford A.D., Rowny S.D., Lisanby S.H., Gordon A.M., Friel K.M. (2012). Using diffusion tensor imaging to visualize physiologically responsive motor pathways in children with hemiplegia. Fourth International Cerebral Palsy Conference.

Friel K.M., Kuo H.-C., Bassi B., Murphy D.L.K., Luber B.L., Carmel J.B., Gowatsky J.L., **Ferre C.L**., Stanford A.D.,Rowny S.B., Lisanby S.H., Gordon A.M. (2012). Changes in the organization and excitability of the corticospinal system associated with intensive bimanual training in children with hemiplegic cerebral palsy. 66th Annual Meeting of the American Academy for Cerebral Palsy and Developmental Medicine. Toronto, ON, Canada.

Ferre, C.L., Hung, Y.C., Carmel, J.B., & Gordon, A.M. (2011). A home-based hand-arm bimanual intensive training for young children. Poster session presented at the 65th Annual Meeting of the American Academy of Cerebral Palsy and Developmental Medicine, Las Vegas, NV, Oct 12-15.

Ferre, C.L., Babik, I., & Michel, GF. (2008). A multilevel model comparison of infant prehension handedness using varying sampling intervals. Poster session presented at the 41st Annual Meeting of the International Society for Developmental Psychobiology, Washington, DC, Nov 12-15.

Ferre, C.L. & Michel, GF. (2007). A mixed models analysis of the developmental relations among infant prehension handedness and handedness for role-differentiated bimanual manipulation. Poster session presented at the 40th Annual Meeting of the International Society for Developmental Psychobiology, San Diego, CA, Oct 31-Nov 3.

Invited Lectures:

"Ontogeny of Motor Behavior: How the Study of Development can Accelerate Clinical Innovation". NIH P20 Center for Pediatric Brain Health Seminar Series. Institute for Human Neuroscience, Boys Town National Research Hospital. Sep 13., 2024.

"Learning to Move: The Road to Accurate Voluntary Movement". The Spectrum of Developmental Disabilities XLV: The First Year. John Hopkins Medicine. Mar. 19, 2024.

"Development of Skilled Motor Control and an Early Career in Clinical Research". Burke Neurological Institute. Feb. 26, 2024.

"Learning to Move: Movement During Infancy". Infant Communication Lab. Boston University, Feb. 20. 2024.

"Learning to Move: From Spontaneous Exploration to Skilled Motor Control". Dean's Advisory Board Meeting. Boston University, Feb. 14. 2024.

"Self-generated Experience: How Spontaneous Movements Shape the Development of Motor Control and Brain Function during Infancy". Columbia University Medical Center, Weinberg Family Cerebral Palsy Center, Movement Recovery Seminar, Apr., 21, 2023.

"From spontaneous exploration to motor control: How self-generated experience drives development of sensorimotor behavior and brain function". NIH C-Progress, Aug. 3, 2023.

"Leveraging Development to Optimize Neurorehabilitation". Pediatric Physical Therapy Research Summit VI: Precision Rehabilitation Research. Alexandria, VA. Oct. 19, 2023.

"Perinatal Brain Injury and Development: Exploring Individual Differences in Motor Function in Children with Cerebral Palsy", University of Southern California, Neurorehabilitation Seminar. November 3, 2023.

"Self-generated Experience Helps Shape Trajectory: Development of Motor Control and Cortical Function during Infancy". Department of Psychology, Florida International University. Feb. 20, 2023.

"Cerebral palsy neurorehabilitation: Forty years of overcoming challenges". The Fletcher McDowell Inaugural Symposium, Burke Neurological Institute, Weill Cornell Medicine. White Plains, NY. (May 2018).

"A home-based model of skill training in children with cerebral palsy: Application to (caregiver) teaching". Ann Gentile Memorial Conference, TC Columbia University, (Nov. 2016).

"The Way Forward: Interventions to Promote Motor Skill Learning", Teachers College, Columbia University Academic Festival, (Apr. 2014).

"Constraint-induced Therapy and Bimanual Training for Children with Hemiplegic Cerebral Palsy", Occupational Therapy Department, Columbia University, (Dec. 2012).

MENTORING

Rehabilitation Sciences PhD
Hyunjoon Kim (2021-present)
Xiwen Su (2021-present)
Evan Yarnall (2023-present)

Doctoral Capstone OTD
Kimberly Chan (2021)
Lauren Gralton (2022)
Sophie Lanzel (2022)
Abigail Williams (2022)
Zara Ahmed (2023)
Andrea Sanchez (2023)
Serena Ranmal (2024)

Dissertation/Comprehensive Examination Committees:

Maria Ayoub
PhD Program in Rehabilitation Science, Boston University

Soyoung Lee
PhD Program in Rehabilitation Science, Boston University

Ruoxi Wang
PhD Program in Rehabilitation Science, Boston University

Undergraduate Students:

Manuel Sobol*, Boston University
Vien Tran*, Boston University
Noelle Guan*, Boston University
Paige Weldon, Boston University
Anna Dudzinski, Boston University
Sajni Shah, Boston University
Mildred Orellana Alvarado, Boston University
Aananya Asarpota Asani, Boston University
Alexis Joyve, Boston University

*Undergraduate Research Opportunities Program (UROP) Awardee

High School Students
Grace DeMilia, Yorktown High School

TEACHING

Department of Occupational Therapy, Boston University
OT520: Evidence Based Practice II *(Fall 2024)*
OT526: Functional Movement Analysis and Assessment (*Fall 2109, Fall 2020)*
OT620: Evidence Based Practice II *(Spring 2022, Spring 2023, Spring 2024)*

PhD Program in Rehabilitation Sciences, Boston University
RS 750: Research Design OT (*Spring 2021)*

PhD Program in Physical Therapy, New York University
Theories of Motor Control (*Fall 2019)*

PROFESSIONAL SERVICE

Internal
Department Level
2020-present EL-OTD Student Advisor, Boston University

College Level
2023-present Member, Steering Committee, PhD in Rehabilitation Sciences, Boston University
2022 Member, Search Committee, Assistant Professor of Nutrition, Dept. of Health Sciences, Boston University.

2021 Member, Search Committee, Endowed Chair of Pediatric Rehabilitation. Dept. of Physical Therapy, Boston University.
2020 Member, Search Committee, Program Director for Entry-level OTD, Dept. of Occupational Therapy, Boston University.

University Level
2022-present Member, Faculty of Color Recruitment Committee, Boston University

External
2022-present Member, Research Committee, American Academy of Cerebral Palsy and Developmental Medicine
2022-2024 Member, Diversity Committee, fNIRS Society

Journal Manuscript Ad-hoc Reviewer
2014-Present Cerebral Cortex, Brain, NPJ Digital Medicine, Neurophotonics, Nature Scientific Reports, Brain Topography, Transactions on Neural Systems & Rehabilitation Engineering, Frontiers in Neuroscience, Neurophotonics, Developmental Neurorehabilitation, Neural Plasticity, Developmental Psychobiology, Neurorehabilitation and Neural Repair, Child Development, Developmental Medicine and Child Neurology, Journal of Neuroengineering and Rehabilitation.

Grant Review
2024 NIH Loan Repayment Program, Pediatrics and Clinical Research
2023-present Sargent College Grant Review
2023-present American Academy of Cerebral Palsy and Developmental Medicine Grant Review
2022 Ad-Hoc Reviewer, Motor Function, Speech, and Rehabilitation Study Section, NIH
2021 NIH Early Career Reviewer, Motor Function, Speech, and Rehabilitation, NIH
2020 - 2022 National Science Foundation
2016 Swiss National Science Foundation, Rehabilitation, Neurophysiology and Brain Research

PROFESSIONAL MEMBERSHIPS

2017- Member, American Society for Neurorehabilitation
2008- Member, American Academy of Cerebral Palsy and Developmental Medicine
2005-2008 Member, International Society of Developmental Psychobiology

OUTREACH

2024 Cerebral Palsy Soccer New England, Volunteer
2024 Play to Thrive Perinatal Stroke Education Community Event, Education Station Host
2019 UMASS-Boston, Exercise Science Department, Increasing Diversity and Inclusion, Invited Speaker