

Virginia Tech Carilion's Fralin Biomedical Research Institute
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EDUCATION

B.S. Cum Laude with Departmental Honors

University of Alabama at Birmingham; Birmingham, Alabama, Psychology Major, December 1991

Master of Arts

University of Alabama at Birmingham; Birmingham, Alabama, Developmental Psychology June 2001
Thesis Titled - Constraint-Induced Movement in Pediatrics: A Review and Case Study.

Doctorate of Philosophy

University of Alabama at Birmingham; Birmingham, Alabama, Developmental Psychology May 2002
Dissertation Titled - Intensive Movement Therapy with Casting for Children with Hemiparetic Cerebral Palsy: A Randomized Controlled Crossover Trial.

EMPLOYMENT & ACADEMIC APPOINTMENTS

Examiner

Fall 1992

Psychometrist Janie Snow, M.S., Birmingham, Alabama.

Responsibilities included:

Administration and rating of achievement tests on elementary school children.

Research Assistant and Project Coordinator

January 1993 - June 2000

University of Alabama at Birmingham, Spain Rehabilitation Center, Birmingham, Alabama.

Responsibilities included:

Treatment of chronic stroke patients via intensive therapies under evaluation in research trials;

Completing motor assessments;

Training and direction of research assistants; and

Screening participants for research eligibility.

Director

June 2000 – December 2012

Pediatric Neuromotor Research Clinic

University of Alabama at Birmingham, Civitan International Research Center, Birmingham, Alabama.

Responsibilities included:

Overseeing all clinic operations;

Treatment of children with hemiparesis using intensive therapies being seen clinical and within research trials;

Completing motor assessments;

Statistical analysis of research data; and

Training and direction of research assistants, occupational and physical therapists.

Assistant Professor

May 2007 – December 2012.

Department of Occupational Therapy

School of Health Related Professions

University of Alabama at Birmingham

Birmingham, Alabama

Teaching Responsibilities included:

Course Instructions (courses listed in later section), and

Supervision of students during fieldwork.

Associate Scientist

July 2011 – December 2012

University of Alabama at Birmingham's Center for Exercise Medicine

University of Alabama at Birmingham

Birmingham, Alabama

Responsibilities included:

Training and mentoring pre- and post-doctoral candidates

Assistant Professor

January 2013 – December 2017

Department of Rehabilitation & Wellness

Jefferson College of Health Sciences

Roanoke, VA

Teaching Responsibilities include:

Graduate course instruction

Associate Professor

June 2019 – Present

January 2013 – May 2019 Assistant Professor

Virginia Tech Carilion Fralin Biomedical Research Institute

Department of Pediatrics Virginia Tech School of Medicine

School of Neuroscience, Virginia Tech

Roanoke, VA

Responsibilities include:

Directing the Neuromotor Research Clinic;

Completing NIH funded research;

Training and direction students (at all levels), research assistants, and occupational and physical therapists;

Development of new funding proposals; and

Dissemination of research findings through publications and presentations.

HONORS

Outstanding Graduate Student

Developmental Psychology, The University of Alabama at Birmingham, 2001-2002.

Elected Director at Large for Board of Directors

American Academy of Cerebral Palsy at Developmental Medicine 2017-2019.

VTC School of Medicine Mentor of the Year Award

VTC School of Medicine Outstanding Research Mentor Award, 2019.

PUBLICATIONS

Taub, E., Crago, J. E., Burgio, L.D., Groomes, T.E., Cook, E.W., **DeLuca, S.C.**, & Miller, N.E. (1994). An operant approach to rehabilitation medicine: Overcoming learned nonuse by shaping. *Journal of Experimental Analysis of Behavior*, 61, 281-293.

Taub, E., Pidikiti, R.D., **DeLuca, S.C.**, & Crago, J.E. (1996). Effects of motor restriction of an unimpaired upper extremity and training on improving functional tasks and altering brain/behaviors. *Imaging in Neurologic Rehabilitation*. Editors Tool and Good. Demos Vernade: NewYork. 133-154.

Morris, D., Crago, J.E., **DeLuca, S.C.**, Pidikiti, R.D., & Taub, E. (1997). Constraint- Induced movement therapy for motor recovery after stroke. *NeuroRehabilitation*. 9, 29- 43.

DeLuca, S.C. (2001) Constraint-induced movement therapy in pediatrics: a review and case study. Master's Thesis, University of Alabama at Birmingham.

- DeLuca, S.C.** (2002) Intensive movement therapy with casting for children with hemiparetic cerebral palsy: a randomized controlled crossover trial. Dissertation, University of Alabama at Birmingham.
- Ramey, S.L., **DeLuca, S.C.**, & Echols, K. (2003) Resilience for Today, in E. Grotberg, (Ed). *Resilience in Families with Children Who Are Exceptional*. Greenwood Publishing Group.
- DeLuca, S.C.**, Echols, K., Ramey, S.L. & Taub, E. (2003). Pediatric constraint-induced movement therapy for a young child: two episodes of care. *Journal of the American Physical Therapy Association*: 83, 11, 1003-13. PMID: 14577827
- Taub, E., Ramey, S.L., **DeLuca, S.C.**, & Echols, K. (2004). Efficacy of constraint-induced (CI) movement therapy for children with cerebral palsy. *Pediatrics*: 113, 2, 305-12. PMID: 14754942
- DeLuca, S.C.**, Echols, K., Law, C & Ramey, S. (2006) Intensive pediatric constraint-induced therapy for children with cerebral palsy: A randomized controlled crossover trial. *Journal of Child Neurology*. 11, 931–38. PMID: 17092457
- DeLuca, S. C.**, Echols, K., & Ramey, S.L. (2007) *ACQUIREc Therapy: A Training Manual for Effective Application of Pediatric Constraint-Induced Movement Therapy*, MindNurture, Hillsborough, NC.
- DeLuca, S.C.**, Case-Smith, J., Stevenson, R., Ramey, S.L. (2012). Constraint-induced movement therapy (CIMT) for young children with cerebral palsy: effects of therapeutic dosage. *J of Ped Rehab Med*. 5, 133-142. DOI: 10.3233/PRM-2012-0206.
- Ramey, S.L., **DeLuca, S.C.**, Case-Smith, J., & Stevenson, R. (2012) Caution is warranted in interpreting data from a recent trial of modified constraint-induced therapy. *Developmental Medicine and Child Neurology*. 54, 5, 477-9. PMID: 22409421.
- Case-Smith, J., **DeLuca, S.C.**, Stevenson, R, & Ramey, S.L. (2012). A multi-center randomized clinical trial of pediatric constraint-induced therapy in children with cerebral palsy. *J of Occup Ther*. 66, 1, 15-23. PMID: 22389937
- Ramey, S.L, & **DeLuca, S.C.** (2013). History and definition of Pediatric Constraint-Induced Therapy (P-CIMT). In *Handbook of Pediatric Constraint-Induced Movement Therapy (CIMT): A Guide for Occupational Therapy and Health Care Clinicians, Researchers, and Educators*. The American Occupational Therapy Association. Bethesda, MD. (peer-reviewed)
- Ramey, S.L, Coker-Bolt, P., & **DeLuca, S.C.** (2013). Operationalizing pediatric constraint-induced movement therapy (P-CIMT): The core principles to inform training P-CIMT therapists, measuring fidelity of implementation, and developing post-treatment plans. In *Handbook of Pediatric Constraint-Induced Movement Therapy (CIMT): A Guide for Occupational Therapy and Health Care Clinicians, Researchers, and Educators*. The American Occupational Therapy Association. Bethesda, MD. (peer-reviewed)
- DeLuca, S.C.**, Ramey, S.L. Trucks, M.R., Lutenbacher, R., & Ainsworth, D. (2013). The ACQUIREc protocol: What we have learned from a decade of delivering a 'signature' form of pediatric constraint-induced movement therapy (P-CIMT). In *Handbook of Pediatric Constraint-Induced Movement Therapy (CIMT): A Guide for Occupational Therapy and Health Care Clinicians, Researchers, and Educators*. The American Occupational Therapy Association. Bethesda, MD. (peer-reviewed)
- Ramey, S.L, & **DeLuca, S.C.** (2013). Research priorities: Understanding and transcending the limits of our current knowledge to inform "best practice". In *Handbook of Pediatric Constraint-Induced Movement Therapy (CIMT): A Guide for Occupational Therapy and Health Care Clinicians, Researchers, and Educators*. The American Occupational Therapy Association. Bethesda, MD. (peer-reviewed)
- Ramey, S.L, Coker-Bolt, P., & **DeLuca, S.C.** (2013). *Handbook of Pediatric Constraint-Induced Movement Therapy (CIMT): A Guide for Occupational Therapy and Health Care Clinicians, Researchers, and Educators*. The American Occupational Therapy Association. Bethesda, MD. (peer-reviewed)
- Coker-Bolt, P. **DeLuca, S.C.**, & Ramey, S.L. (2015) Training pediatric therapists to delivery constraint-induced movement therapy (CIMT) in Sub-Saharan Africa. *Occup Ther International*. Published Online May.

DeLuca, S.C., Ramey, S.L., Trucks, M.R., & Wallace, D.A. (2015). Multiple Treatments of Pediatric Constraint-Induced Movement Therapy (pCIMT): A Clinical Cohort Study. *American Journal of Occupational Therapy*. 69,6. DOI: 10.5014/ajot.2015.019323

Coker-Bolt, P., **DeLuca, S.**, & Ramey, S. (2016). Promoting evidence-based practices abroad: developing a constraint-induced movement therapy program in Ethiopia. *OT Practice*. Feb. 8th.

DeLuca, S.C., Trucks, M.R., Wallace, D., & Ramey, S.L. (2017). Practice-based evidence from a clinical cohort who received pediatric constraint-induced movement therapy. *J of Ped Reh Med*. 10-37-56. DOI 10.3233/PRM-170409.

DeLuca, S.C., Wallace, D., Trucks, M.R., & Mukherjee, K. (2017). A clinical series using intensive neurorehabilitation to promote functional motor and cognitive skills in three girls with CASK mutation. *BMC Research Notes*. 10:743. DOI 10.1186/s13104-017-3065-z.

Lee-Park, J.J., Deshpande, H., Lisinski, J., LaConte, S., Ramey, S., & **DeLuca, S.** (2018). Neuroimaging strategies addressing challenges in using fMRI for the children with cerebral palsy. *Journal of Behavioral and Brain Science*. 8: 306-318. DOI: 10.4236/jbbs.2018.85019.

Bamman M., Cutter, G.R., Brienza, D.M., Chae, J., Corcos, D.M., **DeLuca, S.C.**, Field-Fote, E., Fouad, M.N., Lang, C., Lindblad, A., Motl, R.W., Perna, C.G., Reisman, D., Saag, K.M., Savitz, S.I., Schmitz, K.Z., Stevenms-Lapsley, J.S., Whyte, J., Winstein, C.J., & Michel, M.E. (2018). Medical rehabilitation: guidelines to advance the field with high-impact clinical trials. *Arch of Phy Med and Rehab*. DOI: 10.1016/j.apmr.2018.08.173. PMID: 30148997

LaConte, L.E.W., Chavan, V, **DeLuca, S.C.**, Rubin, K., Malc, J., Berry, S., Summers, C.G, Mukherjee, K. (2018). An N-terminal heterozygous missense CASK mutation is associated with microcephaly and bilateral retinal dystrophy plus optic nerve atrophy. *American Journal of Medical Genetics*. Dec.: 1-10. DOI: 10.1002/ajmg.a.60687.

Ramey, S.L, **DeLuca, S.**, Stevenson, R., Case-Smith, J., Darragh, A. & Conaway, M. (2019). Children with Hemiparesis Arm and Movement Project (CHAMP): A multi-site comparative efficacy trial of pediatric Constraint-Induced Movement Therapy (CIMT) testing effects of dosage and type of constraint for 2 to 8 year olds with hemiparetic cerebral palsy. *BMJ Open*. DOI: 10.1136/bmjopen-2018-023285

Mann, J., Wallace, D. **DeLuca, S.** (2020). Case Study on the use of Intensive Pediatric Neurorehabilitation in the Treatment Kernicterus. *Journal of Clinical Movement Disorders*. DOI: 10.1186/s40734-020-0084-z.

Weatherhead, C., Nash, C., Wade, R., Zablow, S., **DeLuca, S.C.**, Coker-Bolt, P. (2020). Fidelity of Intervention: How Faithful Are We to Treatment Protocols and Guidelines? *Occupational Therapy Practice*. April.

PRESENTATIONS & TALKS

DeLuca, S. C. (1991, May). Spoken Word Recognition for Sports and Musical Terms by 'Expert' and 'Novice' Children and Adults. Undergraduate Research Conference, Montgomery, Alabama.

Taub, E., Ramey, S., Echols, K., & **DeLuca, S.**, (2002, June). Constraint-Induced Movement Therapy for Children with Neuromotor Disabilities. American Physical Therapy Association, Cincinnati, OH.

Echols, K., **DeLuca, S.C.**, Ramey, S., & Taub, E. (2002, September). Constraint-Induced Movement Therapy versus Traditional Therapeutic Services for Young Children with Cerebral Palsy: A Randomized Controlled Trial. American Academy of Developmental Medicine Child Neurology, New Orleans, Louisiana.

Taub, E. & **DeLuca, S.C.** (2002, September). Constraint-Induced (CI) Therapy Applied to Pediatric Patients with Neuromotor Disorders. American Academy of Cerebral Palsy and Developmental Medicine, New Orleans, Louisiana. – Invited Talk

DeLuca, S.C. Echols, K., & Ramey, S., (2003, June). The Acquisition of Upper Extremity Skills In Children Receiving Pediatric CI Therapy. American Physical Therapy Association, Washington, D.C.

DeLuca, S.C. & Echols, K. (2003, September). Pediatric Constraint-Induced Movement Therapy for Young Children with Cerebral Palsy. American Academy of Developmental Medicine Child Neurology, Montreal, Quebec, Canada.

Echols, K., & **DeLuca, S. C.** (2004, March). Pediatric Constraint-Induced Movement Therapy for Young Children, Oregon Physical Therapy Association. Eugene, Oregon. – *Invited Talk*

Trucks, M. R., Echols, K., & **DeLuca, S. C.** (2005, April). Integrating Pediatric Rehabilitation Therapies with Science: Interdisciplinary Research, Alabama Occupational Therapy Association, Birmingham, Alabama. – *Invited Talk*

Echols, K., & **DeLuca, S. C.** (2005, April). Forced Use Movement Therapy, Caddo Public School System, Shreveport, Louisiana. - *Invited Talk*

DeLuca, S. C., Echols, K., & Ramey, S. (2005, September). ACQUIRE_c: A Systematic Approach to Pediatric Constraint-Induced Therapy. American Academy of Cerebral Palsy and Developmental Medicine, Orlando, Florida.

DeLuca, S. C., Echols, K., & Ramey, S.L. (2006, January). ACQUIRE_c Therapy: Training for the Effective Application of Pediatric Constraint-Induced Movement Therapy, Birmingham, Alabama. – *Invited Talk*

Garcia, T., Obst, K., Coker, P., **DeLuca, S.C.**, Echols, K., Allgier, A., Little-Hayes, P., & Chamudot, R. (2008, April). Pediatric Constraint Therapy: A Panel Presentation of Current Models in the US and Israel. American Occupational Therapy Association, Long Beach, California.

Trucks, M., Ainsworth, D.; Lutembacher, R., Echols, K., & **DeLuca, S.C.** (2008, April). ACQUIRE_c Therapy: The Efficacy of Multiple Treatment Sessions. American Occupational Therapy Association Long Beach, California.

DeLuca, S.C. (2009, January). Towards the Development of a Clinical Approach to Pediatric CI Therapy. University of Virginia. Charlottesville, Virginia. – *Invited Talk*

Coker, P., Garcia, T., **DeLuca, S.C.**; Echols, & Trucks, M.R. (2009, April). Practical Treatment Techniques for Various Clinical Models. American Occupational Therapy Association, Houston, Texas.

DeLuca, S.C., Ramey, S., Case-Smith, J. & Stevenson, R. (2009, September). Towards the Development of a Clinical Approach to Pediatric CI Therapy. American Academy of Cerebral Palsy and Developmental Medicine. Scottsdale, Arizona

DeLuca, S.C. (2010, March) An Evidenced-Based Look at Constraint-Induced Therapy (CIT) in Children with Hemiplegic Cerebral Palsy: The Young Child with Special Needs. The National Conference Addressing Issues in Early Development: Birth to Five Years. – *Invited Talk*

DeLuca, S.C. (2010, March) Pediatric Constraint-Induced Therapy (CIT): Clinical Applications: The Young Child with Special Needs. The National Conference Addressing Issues in Early Development: Birth to Five Years. – *Invited Talk*

DeLuca, S.C., Echols, K., Lowenhaupt, S., Stevenson, R., Case-Smith, J., Ramey, S.L., & Lowes, L. (2010, September). A Multi-Center Clinical Trial of Pediatric Constraint-Induced Therapy in Children with CP: What is the Dose? The American Academy of Cerebral Palsy and Developmental Medicine. Washington, DC.

Trucks, M.R., Ainsworth, D.A., **DeLuca, S.C.**, Coker-Bolt, P., & Garcia-Reidy, T. (2011, April). Pediatric Constraint-Induced (CI) Therapy for Diverse Populations. The American Occupational Therapy Association. Philadelphia, Pennsylvania.

DeLuca, S.C. (2011, June). Clinical Implications of Pediatric CI Therapy for the Treatment of Upper Extremity Dysfunction for Children with Hemiplegic Cerebral Palsy. Canadian Pediatric Society. Quebec City, Quebec. – *Invited Talk*

- DeLuca, S.C.** (2011, June). ACQUIREc Therapy: An Effective Clinical Application. Canadian Pediatric Society. Quebec City, Quebec. - *Invited Talk*
- DeLuca, S.C.**, Case-Smith, J., Stevenson, R., & Ramey, S.L. (2011, October). A Multi-Center Randomized Controlled Trial of Pediatric Constraint-Induced Movement Therapy: Six Month Follow Up. The American Academy of Cerebral Palsy and Developmental Medicine. Las Vegas, Nevada.
- Ramey, S.L, Coker-Bolt, P., & **DeLuca, S.C.** (2013, March). Pediatric Constraint-Induced Movement Therapy (CIMT): Theory and Evidence to Inform Today's Practices. International Conference on Cerebral Palsy and Developmental Medicine. Lucknow, India.
- DeLuca, S.C.** & Coker-Bolt, S.C. (2013, March). Constraint-Induced Movement Therapy (CIMT) after Stroke. Indian Federation of Neurorehabilitation. Lucknow, India. – *Invited Talk*
- Coker-Bolt, P., Ramey, S.L., & **DeLuca, S.C.** (2013, April). From Adult to Pediatric Constraint Induced Movement Therapy (CIMT): Theory and Evidence to Inform Today's Practices. American Occupational Therapy Association. San Diego, California
- DeLuca, S.C.** (2013, April). Pediatric Constraint-Induced Movement Therapy: Toward Precision Practice. Mini Conference by Occupational Therapy Roanoke, Virginia – *Invited Talk*
- DeLuca, S.C.**, Butler, C., Shore, B., Krach, L. & Kolaski, K. (2013, October). The ICF in research and clinical practice. The American Academy of Cerebral Palsy and Developmental Medicine. Milwaukee, Wisconsin
- Coker-Bolt, P, **DeLuca, S.C.**, & Ramey, S.L. (2013, December). Evidence-Based Pediatric CIMT for Low Income Counties: An Ethiopian Model. Addis Ababa, Ethiopia – *Invited Course*
- DeLuca, S.C.**, Trucks, M.R., Wallace, D., & Ramey, S.L. (2014, March). Pediatric Constraint-Induced Movement Therapy: Translating Evidence into Practice. Australia Asia Academy of Cerebral Palsy and Developmental Medicine. Sydney, Australia.
- Reidy, T., Cocker-Bolt, P., Case-Smith, J., **DeLuca, S.C.**, & Ramey, S.L. (2014, April). Pediatric Constraint Induced Movement therapy (P-CIMT): How to Implement in Today's Practice environment. The American Occupational Therapy Association. Baltimore, MD.
- Trucks, M.R., Wallace, D., Garrison, S., **DeLuca, S.C.**, & Ramey, S.L. (2014, July). An Introduction to Pediatric Constraint Induced Movement Therapy (P-CIMT) Research and Practice. Virginia Occupational Therapy Association. Roanoke, Virginia. – *Invited Talk*
- Ramey, S.L., **DeLuca, S.C.**, Trucks, M.R., & Wallace, D.A. (October, 2014). A Multi-center Randomized Controlled Trial of Pediatric Constraint-Induced Movement Therapy (P-CIMT) Movement Therapy. American Congress of Rehabilitation Medicine. Toronto, Canada.
- Coker-Bolt, P., **DeLuca, S.C.**, & Ramey, S.L. (2015, April). Pediatric Constraint-Induced Movement Therapy: Innovative Programs for Low-Income Countries and Rural Areas. The American Occupational Therapy Association. Nashville, Tennessee.
- Darragh, A., **DeLuca, S.C.**, & Ramey, S.L. (2015, October). Fidelity Measures for Intervention Integrity: An Innovative Approach to Training. American Academy of Cerebral Palsy and Developmental Medicine. San Antonio, Texas.
- Deshpande, H.U., Parks, J.L., Lisinski, J.M., **DeLuca, S.C.**, Ramey, S.L., & LaConte, S.M. (2015, October). Seed-based Functional Connectivity to Study Motor Function in Children with Cerebral Palsy. Biomedical Engineering Society (BMES) Annual Meeting.
- Coker-Bolt, P., Trucks, M., Wallace, D., Reidy, T. & **DeLuca, S.C.** (2016, April). Emerging topics in Constraint Induced Movement Therapy: Where do we go from here? American Occupational Therapy Association. Chicago, Illinois.

DeLuca, S.C., Ramey, S.L., Cocker-Bolt, P., & Heathcock, J. (2016, June). The Next Generation of Intensive Pediatric Rehabilitation Therapies: Efficacy to Effective Clinical Implementation. European Academy of Cerebral Palsy and Developmental Medicine. Stockholm, Sweden.

Ramey, S.L., **DeLuca, S.C.**, Stevenson, R., & Darragh, A. (2016, September). Constraint-Induced Movement Therapy (CIMT): A New Era of Comparative Effectiveness Research and Documenting Fidelity of Treatment. American Academy of Cerebral Palsy and Developmental Medicine. Hollywood, Florida.

DeLuca, S.C., Ramey, S., Trucks, M.R., & Wallace, D. (2016, September). Constraint-Induced Movement Therapy (CIMT) for Infants and Toddlers. American Academy of Cerebral Palsy and Developmental Medicine. Hollywood, Florida.

DeLuca, S.C., Ramey, S., Trucks, M.R., & Wallace, D. (2016, September). Effects of Multiple 1-month Treatments of Constraint-Induced Movement Therapy (CIMT). American Academy of Cerebral Palsy and Developmental Medicine. Hollywood, Florida.

Fischer, V., Ramey, S.L., Stevenson, R., **DeLuca, S.C.**, & Darragh, A. (2016, September). High Dosage Pediatric Therapy: Does it Cause Stress for Parents of Patients with Cerebral Palsy? American Academy of Cerebral Palsy and Developmental Medicine. Hollywood, Florida.

DeLuca, S.C. & Ramey, S.L. (2016, September). Comparative Effectiveness Research, Implementation Science, & Documenting Fidelity of Implementation. National Center for Medical Rehabilitation Research Resource to Enhance Clinical Trials Workshop: The Future of Medical Rehabilitation Clinical Trials Workshop Bethesda, Maryland. – *Invited Talk*

DeLuca, S.C. (2017, May). How intensive rehabilitation research is shaping the future of rehabilitation. Department of Physical Therapy and Human Movement Sciences, Northwestern University. Chicago, Illinois. – *Invited Talk*

DeLuca, S.C. (2017, May). My Science, My story, My identity. Science, Technology, Engineering, Math and Medicine – STEM conference. Roanoke, Virginia –*Invited Talk*

DeLuca, S.C. (2017, June). How Comparative Effectiveness Research Informs the Use of Intensive Rehabilitation Treatments for Infants and Children. Motor Conference, Shirley Ryan Ability Lab. Chicago, Illinois. –*Invited Talk*

Darragh, A.R., Persch, A.C., Koss, E., **DeLuca, S.**, & Ramey, S.L. (2017, June). Facilitating Parent Participation in Intensive Therapies: the Parents as Partners Approach. Occupational Therapy Summit of Scholars, Boston University, Boston, Massachusetts, June 2 -3, 2017. –*Invited Talk*

Darragh, A., **DeLuca, S.C.**, & Ramey, S.L. (2017, September). Facilitating Parent Participation in Intensive Therapies: the Parents as Partners Approach. American Academy of Cerebral Palsy and Developmental Medicine. Montreal, Canada.

Torbert, P. Endres B., Schram, M., Ramey, S. **DeLuca, S.**, & Heathcock, J. (2018, February). Reach and Grasp in Infants and Toddlers with Hemiparetic Cerebral Palsy. Combined Sections Meeting of the American Physical Therapy Association. New Orleans, Louisiana.

Coker-Bolt, P., Trucks, M., Wallace, D., Reidy, T. & **DeLuca, S.C.** (2018, April). Pediatric CIMT: Important updates in research and clinical practice. American Occupational Therapy Association. Salt Lake City, Utah.

Coker-Bolt P. & **DeLuca, S.C.** (2018, May). Evidence-Based Pediatric CIMT for Low Income Counties: A Vietnamese Model. Huey, Vietnam – *Invited Course*

DeLuca, S.C., Ramey, S.L. Darragh, A., Conaway, & M., Nitkin, R (2018, October). Design and Conduct of Comparative Effectiveness Trials and Practice-based Research in Cerebral Palsy. American Academy of Cerebral Palsy and Developmental Medicine. Cincinnati, Ohio – Preconference Institute – *Invited Talk*

DeLuca, S.C. (2019, March). The Future of Pediatric Neurorehabilitation: The Changing Landscape towards Intensive Therapeutic Bursts of Treatment. Biomedical Frontiers Seminar Series, Liberty University Lynchburg, Virginia – *Invited Talk*

DeLuca, S.C. (2019, April). Treatment of children with Hemiparesis who have Comorbid Cognitive Impairments. VTCAR Conference, Virginia Tech, Blacksburg Virginia, - *Invited Talk*.

DeLuca, S.C., Coker-Bolt, P., Shierk, A., Roberts, H., & Ramey, S.L. (2019, September). Cultural Variations in the Implementation of Pediatric Constraint-Induced Therapy in Developing Countries. American Academy of Cerebral Palsy and Developmental Medicine. Anaheim, CA, and 2nd Annual International Alliance of Academies of Childhood Disabilities, Anaheim, CA.

Wallace, D., Mann, J., Trucks, M.R., & **DeLuca, S.** (2019, September). Therapeutic Activation and Inhibition of Motor Skills via Motor Learning and Operant Conditioning. American Academy of Cerebral Palsy and Developmental Medicine. Anaheim, CA.

Ramey, S.L., **DeLuca, S.C.**, Stevenson, R.D., Darragh, A., Lo, W., & Conaway, M. (2019, September). A multisite blinded comparative efficacy trial of CIMT dose levels and constraint variations for 2 – 8 year olds with hemiparetic cerebral palsy. American Academy of Cerebral Palsy and Developmental Medicine. Anaheim, CA, and 2nd Annual International Alliance of Academies of Childhood Disabilities, Anaheim, CA

DeLuca, S.C. (2019, October). Helping children learn to use damaged portions of their brains. Virginia Tech Hookie Talks. Blacksburg, VA – *Invited Talk*.

DeLuca, S.C. (2019, November). Lessons learned from providing decades of intensive pediatric neurorehabilitation. Grand Rounds Carilion Clinic, Roanoke, VA – *Invited Talk*.

Trucks, M.R., Wallace, D., & **DeLuca, S.** (2020, March). Developing an Individualized Transfer Package after Pediatric Constraint-Induced Movement Therapy to Maintain and Progress Skill. American Occupational Therapy Association, Boston, MA.

Coker-Bolt, P., **DeLuca, S.C.**, Ramey, S.L., Nash, C., Weatherhead, C., Eade, R., Zablow, S., Hoang, K.C. & Tuong, G.L. (2020, March). Cultural Variations in the Implementation of International Pediatric Constraint-Induced Movement Therapy (P-CIMT): Ethiopia & Vietnam. American Occupational Therapy Association, Boston, MA.

Barbosa, G.O., Cabral, T.I., Xu, M., Darragh, A., Ramey, S., **DeLuca, S.C.**, Heathcock, J. (September 2020). Relationship between reaching and type of toys in infants with hemiparetic cerebral palsy. American Academy of Cerebral Palsy and Developmental Medicine. New Orleans, LA (Virtual)

Tripathi, T., Cabral, T.I., Barbosa, G.O., Darragh, A., Ramey, S., **DeLuca, S.C.**, Heathcock, J. (September 2020). Understanding the use of the affected and unaffected arm by mapping simple and complex fine motor skills in children with hemiparesis. American Academy of Cerebral Palsy and Developmental Medicine. New Orleans, LA (Virtual)

Wallace, D., Trucks, M.R., **DeLuca, S.C.** (September 2020). Conceptual framework: Identifying the moving pieces to an intensive behavioral approach to the treatment of children with disabilities. American Academy of Cerebral Palsy and Developmental Medicine. New Orleans, LA (Virtual)

Trucks, M.R., Wallace, D., **DeLuca, S.C.** (September 2020). Maintaining and progressing skills after pediatric constraint induced movement therapy (P-CIMT): Development and use of an individualized transfer package. American Academy of Cerebral Palsy and Developmental Medicine. New Orleans, LA (Virtual)

Poster Presentations

Walley, A. C. & **DeLuca, S. C.** (1991, July). The Perception of Sports and Musical Terms by 'Expert' and 'Novice' Children and Adults. Biennial Meeting of the International Society for the Study of Behavioral Development, Minneapolis., MN.

Crago, J.B., Morris, D.M., Pidikiti, R.D., Uswatte, G., **DeLuca, S.C.**, Goode, S.C., Batchelor, J.L., Chatterjee, A., & Taub, E. (1996, October). Intensive Physical Therapy as a Means of Substantially Increasing Use of the Affected Arm in Chronic Stroke Patients: Results at 4-week Follow-up. Stroke Rehabilitation Conference, Cambridge, MA.

Taub, E., Crago, J. E., Burgio, L.D., Grooms, T.E., Cook, E.W., **DeLuca, S.C.**, & Miller, N.E. (1997, May). An Operant Approach to Rehabilitation Medicine: Overcoming Learned Nonuse by Shaping. UAB Center for Aging Annual Conference, Birmingham, AL.

Pidikiti, R.D., Crago, J.B., Uswatte, G., **DeLuca, S.C.**, Shaw, S., Morris, D.M., & Taub, E. (2000, February). CI Therapy: A Placebo-Controlled Trial of Clinical Efficacy for Patients with Chronic Stroke. National Rehabilitation Research & Development Conference of the VA Rehabilitation Research and Development Service, Washington, D.C.

Echols, K., **DeLuca, S.C.**, Taub, E., & Ramey, S. (2001, February). Constraint-Induced Movement Therapy in Young Children: A Protocol and Outcomes Compared to Traditional Measures. Combined Sections Meeting of the American Physical Therapy Association, San Antonio, TX.

DeLuca, S.C., Taub, E., Echols, K., & Ramey, S. (2001, April). Application of CI Therapy to Treatment of Children's Neuromotor Disorders. Society for Research in Child Development, Minneapolis, MN.

Echols, K., **DeLuca, S.C.**, Ramey, S., & Taub, E. (2001, September). Constraint-Induced Movement Therapy in the Child with Cerebral Palsy. American Academy of Cerebral Palsy and Developmental Medicine, Los Angeles, CA.

Garvey, M. **DeLuca, S.C.**, Echols, K, Ramey, S.L., & Gordon, A. (2005, September) Designing a Multi-center Trial for Pediatric CI Therapy. American Academy of Cerebral Palsy and Developmental Medicine, Orlando FL

Case-Smith, J., **DeLuca, S.C.**, Stevenson, R., & Ramey, S.L. (2011, October). Interdisciplinary/ Multisite Research Collaborations: Implications for Future Research. The American Academy of Cerebral Palsy and Developmental Medicine. Las Vegas, NV.

Lutenbacher, R., Eidson, C., Trucks, M.R., & **DeLuca, S.C.** (2012, April). Training Students in New Paradigms. American Occupational Therapy Association, Indianapolis, IN.

Intagilata, V., **DeLuca, S.C.**, Case-Smith, J., Ramey, S.L., Conaway, M., & Stevenson, R. (2012, September). Do Individual Characteristics Predict the Outcome of Constraint-induced Movement Therapy in Children with Unilateral Cerebral Palsy. The American Academy of Cerebral Palsy and Developmental Medicine. Toronto, CA.

DeLuca, S.C., Ramey, S.L., Trucks, M.R., & Wallace, D.A. (2014, October). Pediatric Constraint-Induced Movement Therapy: The efficacy of multiple treatment sessions. American Congress of Rehabilitation Medicine. Toronto, CA.

DeLuca, S.C., Ramey, S.L., Trucks, M.R., & Wallace, D.A.. (2015, October). Multiple Epochs of P-CIMT are of Greater Importance for children with Greater Impairment. Child Neurology Society, Baltimore, MD.

Cusumano, J.A., Allison-Jones, L. Williams, K., **DeLuca, S.C.**, Vari, R.C., Musiack, D.W., & Trinkle, D.B. (2015, September). Designing an Inter-professional, Intercollegiate Graduate Course. Collaborating Across Borders V. Roanoke, VA.

Lee-Parks, J.J, Deshpande, H.U., Lisinski, J.M., LaConte, S.M., Ramey, S.L., & **DeLuca, S.C.** (2016, March). Addressing Challenges in Using Functional Magnetic Resonance Imaging in Assessing Children. Eastern Pediatric Academic Society. Baltimore, MD.

Fischer, V., Ramey, S.L., **DeLuca, S.C.**, Darragh, A., & Stevenson, R. (2016, March). Novel High Dosage Pediatric Therapy and Parental Report of Stress. Eastern Pediatric Academic Society. Baltimore, MD.

Brown, M., Evans, M., Gibbs, A., Stohler, J., Tousman, S. & **DeLuca, S.C.** (2016, August). Perceptions of Certified Driver Rehabilitation Specialists on the Use of Video Feedback in Driver Rehabilitation Programs. Association for Driver Rehabilitation Specialists. Columbus, OH.

Lee-Parks, J.J, Deshpande, H.U., Lisinski, J.M., LaConte, S.M., Ramey, S.L., & **DeLuca, S.C.** (2016, September). Addressing challenges in using Functional Magnetic Resonance Imaging in Assessing Children with Cerebral Palsy. American Academy of Cerebral Palsy and Developmental Medicine. Hollywood, FL.

DeLuca, S.C., Wallace, D.A. Trucks, M.R., & Mukherjee, K. (2016, October). An Efficacious Therapy for Treating Children with CASK Mutations: Combining Lessons from an Animal Model to a Clinical Setting. Child Neurology Society. British, Columbia, CA.

Wallace, D.A., Trucks, M.R., Mukherjee, K., & **DeLuca, S.C.** (2017, April). Applying the Principles of Behaviorally Based Intensive Therapy for Children with Global Developmental Delays Associated with Genetic Mutations. American Occupational Therapy Association. Philadelphia, PA

Trucks, M.R., Wallace, D.A, Ramey, S.L., & **DeLuca, S.C.** (2017, April). Furthering the Evidence and Clinical Practice of Constraint-Induced Movement Therapy (CIMT): Effects of Multiple Treatment Epochs. American Occupational Therapy Association. Philadelphia, PA

Wallace, D.A., Trucks, M.R., & **DeLuca, S.C.** (2017, May). Benefits of Intensive Therapy for Children with Quadriplegic Cerebral Palsy. European Academy of Cerebral Palsy and Developmental Medicine. Amsterdam, Netherlands.

Trucks, M.R., Wallace, D.A., & **DeLuca, S.C.** (2017, May). Does a Sensory Enhanced Form of Pediatric Constraint Induced Movement Therapy (PCIMT) Enrich Motor Learning in Children with Hemiparesis during an Intensive Episode of Treatment? European Academy of Cerebral Palsy and Developmental Medicine. Amsterdam, Netherlands.

Trucks, M.R., Wallace, D.A., & **DeLuca, S.C.** (2017, May). Constraint-Induced Movement Therapy (CIMT): Effects of Multiple Treatment Episodes. European Academy of Cerebral Palsy and Developmental Medicine. Amsterdam, Netherlands.

Eltahir, A.M., **DeLuca, S.C.**, King-Casas, B., LaConte, S.M., & Ramey, S. L. (2017, May). Assessing Functional Connectivity Changes Induced by CIMT using FNIRS. Virginia Tech/ Wake Forest University 16th Annual Graduate Student Research Symposium.

Salman, O., Trucks, M., Wallace, D., Asbeck, A. & **DeLuca, S.C.** (2017, October). Evaluating the XBOX Kinect as a clinical tool to accurately monitor progress of pediatric rehabilitation patients. Child Neurology Society. Kansas City, MO.

Weller, S. K., Torbet, P.E., Schram, M., Ramey, S., **DeLuca, S C.**, Darragh, A., & Heathcock, J.C. (Jan. 2019). A comparison of horizontal and vertical reaching and grasping in infants with hemiparetic cerebral palsy. Pediatrics Section of the Combined Sections Meeting American Physical Therapy Association. Washington, D.C.

Mann, J., Wallace, D., Mukherjee, K., **DeLuca, S.** (2019, September). A Quantitative and Qualitative Case Report on the Treatment of a Male Child with CASK Mutation related MICPCH using Intensive Neuromotor Rehabilitation. American Academy of Cerebral Palsy and Developmental Medicine. Anaheim, CA.

Mann, J., Wallace, D., Trucks, M.R., **DeLuca, S.** (2019, September). Case Study on the use of Intensive Pediatric Neurorehabilitation in the Treatment Kernicterus. American Academy of Cerebral Palsy and Developmental Medicine. Anaheim, CA.

Wallace, D., Mann, J., Trucks, M.R., **DeLuca, S.** (2019, September). Intensive Therapies for Children with Quadriparetic Cerebral Palsy. American Academy of Cerebral Palsy and Developmental Medicine. Anaheim, CA.

Carbral, T.I., Barbosa, G., Schram, M., Darragh, A., Ramey, S., **DeLuca, S.**, Heathcock, J. (2019, September). Lack of Spontaneous Reaching and Grasping in Infants 8-24 months with Hemiparetic Cerebral Palsy Results in Clear Asymmetry. American Academy of Cerebral Palsy and Developmental Medicine. Anaheim, CA.

GRANTS/CONTRACTS

Completed Funding

HSF

Health Services Foundation funded research grant "Randomized Controlled Trial of Pediatric CI Therapy." September 2000 - April 2001.

Principal Investigator: Sharon Ramey, Ph.D.,

Co-Investigators: Edward Taub, Ph.D., Karen Echols, P.T., Ph.D., P.C.S., Stephanie C. DeLuca, Ph.D., and Alan Percy, M.D.

RO1 Randomized Controlled Trial

NIH funded research grant "Randomized Controlled Trial of Pediatric CI Therapy." September, 2002, - November 2004:

Multiple Principal Investigators: Edward Taub, Ph.D., Sharon Ramey, Ph.D.

Co-Investigators: Karen Echols, P.T., Ph.D., P.C.S., Stephanie C. DeLuca, Ph.D., and Alan Percy, M.D.

Multi-site Trial of ACQUIREc Therapy

Privately funded research effort involving four Universities to replicate previous treatment findings, prepare the infrastructure for a large multi-site trial, and begin an examination of the dosage curve associated with intensive therapies.

June, 2008 – June 2009

Principal Investigator: Stephanie DeLuca, Ph.D.

Co-Investigators: Sharon Ramey, Ph.D., Karen Echols, P.T., Ph.D., P.C.S., Jane Case-Smith, Ph.D., O.T., Richard Stevenson, M.D.

T32 Training Program

Funded by: National Institutes of Health

September 2012 – April 2017 (departed UAB Dec. 2012)

Interdisciplinary Training in Pathobiology and Rehabilitation Medicine

Principal Investigator: Marcus Bauman, Ph.D.

Co-Investigator: Stephanie DeLuca, Ph.D.; Faculty University Center for Exercise Medicine
University Center for Exercise Medicine, University of Alabama at Birmingham

Pediatric Constraint-Induced Movement Therapy in Low Income Countries

Funded by: The Medical University of South Carolina

Focus is on training professionals in Addis Ababa to provided PCIMT treatment.

Principal Investigator: Patty Coker-Bolt, O.T.R./L., Ph.D.

Co-Investigators: Stephanie DeLuca, Ph.D. & Sharon Ramey, Ph.D.

RO1 Multi-Site Randomized Controlled Trial

Funded by: National Institutes of Health

October 2012 – July 2019

Co-Principal Investigators: Sharon Ramey, Ph.D., Stephanie DeLuca, Ph.D., Jane Case-Smith, Ph.D., O.T., Richard Stevenson, M.D.

Title: Multi-site RCT of Pediatric Constraint-Induced Movement Therapy (CIMT)

Investigation of dose-response relationship of rehabilitative therapy in neurodevelopmental disorder

Virginia Tech Adaptive Brain and Behavior Grant

This is a project to examine the scientific validity and indications for specific rehabilitative techniques in cases of neurodevelopmental disorder, specifically children with CASK mutation. We plan to obtain basal fMRI images, which will be used as a biomarker for human subjects in future studies and to obtain comprehensive data on molecular changes in the brain of a murine model for CASK mutation. This combined human and animal data set will serve as useful basal point to observe changes in various pathways in response to different dosages of training.

Role: Lead PI (Multiple Leadership Plan)

MUSC Center for Global Health

Title: Improving Quality of Life for Children with Cerebral Palsy in Vietnam: Implementation of Intensive Models of Rehabilitation

Amount Requested: \$20,000.00

Principal Investigator: Patty Coker-Bolt, O.T.D.

Co-Investigator: Stephanie DeLuca, Ph.D.

RO1 Multi-Site Randomized Controlled Trial

Funded by: Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)

October 1 2013 – December 2019

Title: "Multisite RCT of 3 Neurorehabilitation Therapies for Infants with Asymmetrical CP "

Multiple Principal Investigators: Stephanie DeLuca, Ph.D., Sharon Ramey, Ph.D.,

Jane Case-Smith, Ph.D., O.T. Warren Lo, M.D., & Amy Darragh, O.T.R./L., Ph.D. – In No Cost Extension

Currently Funded

UO1 Randomized Clinical Trial

Funded: The National Institute of Neurological Disorders and Stroke

Title: Perinatal Arterial Stroke: A Multi-site RCT of Infant Rehabilitation (I-ACQUIRE)

Amount: \$13,163,625.00

Feb 2019 – Jan 2024

Multiple Principal Investigator: Sharon Ramey, Ph.D. & Warren Lo, M.D.

Co-Investigators: Stephanie DeLuca, Ph.D., StrokeNet Colleagues

2019 American Academy of Cerebral Palsy and Developmental Medicine Research Grant

Title: Neurorehabilitation for Children with Global Developmental Delay & Hyperkinetic Movements

Amount: \$25,000.00

Principal Investigator: Jessie Mann, PhD candidate (Stephanie DeLuca mentor)

Co-Investigator: Stephanie DeLuca, Ph.D.

UO1 CTSA

1UL1TR003015-01 (MPI: Johnston, Brown) 02/27/2019 – 01/31/2024

Univ. of Virginia (NIH-NCATS Flow-thru)

Title: The Integrated Translational Health Research Institute of Virginia (iTHRIV): Using Data to Improve Health

Role: Consultant for Hub Research Capacity

P2C NICHD

1P2CHD101912-01

05/15/2020 – 04/30/2025

Title: National Pediatric Rehabilitation Resource Center

Amount Requested for Virginia Tech: 5,835,063

Principal Investigator: S.L. Ramey

Stephanie DeLuca, Ph.D. Role - Co-Investigator

PROFESSIONAL ORGANIZATIONS

University of Alabama at Birmingham Center for Clinical and Translational Science

Member since 2009 – 2013

University of Alabama at Birmingham Center for Exercise Medicine

Member since 2011-2013

American Congress of Rehabilitation Medicine

Member since 2014 – 2016

American Academy of Cerebral Palsy and Developmental Medicine (AACPDM)

Member 2003 – 2005;

2009 - current

American Occupational Therapy Association

Member since 2012 – current

Child Neurology Society

Member since 2016 - current

World Federation of Occupational Therapy

Member since 2019 - current

CONTINUING EDUCATION

Clinical Research Training Program

Fall 2003 -2005.

Competitive program designed to train research-oriented individuals in all areas of significance in clinical research. Program funded by the National Institutes of Health headed by Larry Moreland, M.D. University of Alabama at Birmingham, Birmingham, Alabama

Blackboard Vista Online Training

Fall of 2010

Program designed to better prepare Blackboard Users

School of Health Profession's Leadership Program

Sept., 2010 – Present

Competitive Program designed to promote and develop leadership skills by allowing members to participate in readings, lectures, and projects.

ERRIS Grant Writing Workshop

January, 2011

Competitive program designed to promote and develop new investigators in rehabilitation research.

TEACH: How do you know you are teaching effectively?

October, 2017

Virginia Tech Carilion School of Medicine

COURSES TAUGHT

Introductory Psychology

Description - Multiple areas of research and clinical applications involved in psychology including the broadening aspects of psychology in interdisciplinary research and treatment efforts, also the importance of the scientific method in studying, interpreting, and understanding behavior.

Course for undergraduates, Department of Psychology

Developmental Psychology

Description - Human development from the prenatal period to old age. Genetic and environmental determinants of behavior. Developmental aspects involved in language, cognition, personality, social and emotional behavior, intelligence, and physical and sexual development. Applied areas include child rearing, childhood psychoses and child abuse.

Course for undergraduates, Department of Psychology

Cross-Cultural Developmental Psychology

Description - Cultural differences in determinants of child development. Effects of culturally distinct approaches to child rearing and education on infant attachment, temperament, aggression, cognitive development, peer interaction, sex-role socialization, and moral reasoning.

Course for undergraduates, Department of Psychology

Pediatric Constraint-Induced Therapy

Description – Online course for practitioners to understand the background, development and current trends surrounding Pediatric constraint-induced movement therapy. Given for OccupationalTherapy.com.

ACQUIRE_c Therapy Training, Pediatric Neuromotor Research Clinic

Description – Providing ACQUIRE_c Therapy as a clinical application.

Course for Professionals in pediatric rehabilitation fields (OTs, PTs, MDs, and PhDs) to teach the principal components and behavioral techniques used in the clinical implementation of Pediatric constraint-induced movement therapy.

Clinical Research Methods for Health Professionals

Description – Research development, design, techniques and its clinical implications for healthcare professionals.

Course for graduate level healthcare students, Department of Occupational Therapy

Mental Health and Occupational Therapy

Description – Introduction and overview of diagnostics in mental health with introduction to the therapeutic practices associated the mental health profession and occupational therapy.

Course for graduate level healthcare students, Department of Occupational Therapy

Topics in Rehabilitation Science: Research

Description – Interpretation of research topics associated with rehabilitation.
Course for doctoral candidates and co-taught with other faculty.

Topics in Rehabilitation Science: Work and Play

Description – Interpretation of topics associated with rehabilitation surrounding work and play that combines clinical and research efforts.
Course for doctoral candidates and co-taught with other faculty.

Topics in Rehabilitation Science: Motor and Fine Motor Development in Pediatrics

Description – Interpretation of topics associated with rehabilitation surrounding pediatric rehabilitation that combines developmental topics, clinical and research topics.
Course for doctoral candidates and co-taught with other faculty.

Medical Terminology – Online Course

Description – Understanding medical terms with regard to meaning, their breakdown, and composition parts.
Course for graduate students in multiple programs at Jefferson College of Health Sciences.

Clinical Implementation of Pediatric Constraint Induced Therapy: The Advantages and Disadvantages of Various Protocols

Description - CEU presentation for occupational therapists regarding pediatric constraint induced movement therapy for OT.com.

The Clinical Implementation of Pediatric Constraint Induced Therapy: The Advantages and Disadvantages of Various Protocols

Description - CEU presentation for physical therapists regarding pediatric constraint induced movement therapy for PT.com

Ethical and Legal Issues in Practice

Description – Course to develop understanding of ethical and legal issues for clinicians who will be in health care fields.
Course for medical students at the Virginia Tech Carilion School of Medicine and graduate students in multiple programs at Jefferson College of Health Sciences.

Toward Precision Pediatric Therapy through Evidenced-Based Practice: the findings about Pediatric Constraint-Induced Movement Therapy (P-CIMT)

Description - Course to promote the production of precision rehabilitation in pediatrics. CEU course for rehabilitation professionals.

Evidence-Based Pediatric CIMT for Low Income Counties: An Ethiopian Model. Addis Ababa, Ethiopia

Description – Collaboration with CURE International to teach Ethiopian Therapists P-CIMT and to help them develop an efficacious Ethiopian P-CIMT model.

Research Implementation I and II.

Description – Courses to implement and complete research projects for occupational therapy students.

Evidence-Based Pediatric CIMT for Low Income Counties: A Vietnamese Model. Huey, Vietnam

Description – Collaboration with Humanity Inclusion to teach Vietnamese Therapists P-CIMT and to help them develop an efficacious P-CIMT model for use in Vietnam. (To be taught May 2018)

Developmental Cognitive Neuroscience

Description – Presenting evidence-based neuroscience about the processes of developmental in the brain and how it relates to function, activity, and society.

Neurorehabilitation & Neuroscience

Description – Senior seminar designed to develop and prepare future scientists and clinicians about the interchange between neuroscience and rehabilitation for disabilities associated with central nervous system damage.

Fundamentals of Health Implementation Science

Description - Analysis of research and strategies for translating major medical and health discoveries into effective treatment delivery with measurable outcomes at the individual, health systems, and population levels. Theories of health implementation, research design and methodology, health messaging, human behavior change, health care decision-making, health literacy and disparities, community-based participatory research, patient-centered research, and health economics and policy. Research new approaches to improve health outcomes, health care quality, and costs related to recent therapeutic or preventive discoveries.

I-ACQUIRE Therapy Training, StrokeNet Study Training

Description – Providing ACQUIRE Therapy for the largest pediatric rehabilitation trial ever funded by NIH for 30 therapists (occupational and physical) therapists across 13 sites across the United States.

MENTORING

Research Group involving Graduate Level Occupational Therapy Students

Fall 2008 - 2010

Advised - Total Number of Students 5

Topic: Toy Preferences in Children with Down Syndrome

Product: Student Presentation at Occupational Therapy's Annual Research Day 2010

Research Group involving Graduate Level Occupational Therapy Students

Fall 2009 - 2011

Advised - Total Number of Students 4

Topic: Participation of 4th and 5th Graders in Physical Education

Product: Student Presentation at Occupational Therapy's Annual Research Day 2011

Research Group involving Graduate Level Occupational Therapy Students

Fall 2010 -2012

Co-Advised - Total Number of Students 7

Topic: Occupational Therapies Role after Sports Related Concussions

Product: Student Presentation at Occupational Therapy's Annual Research Day 2012

Research Group involving Graduate Level Occupational Therapy Students

Fall 2010 - 2012

Advised - Total Number of Students 4

Topic: Occupational Therapies Role in Hip Replacement

Product: Student Presentation at Occupational Therapy's Annual Research Day 2012

Research Group involving Graduate Level Occupational Therapy Students

Fall 2011 – 2012

Advised - Total Number of Students 7

Topic: Participation of 4th and 5th Graders in Physical Education

Product: Student Presentation at Occupational Therapy's Annual Research Day 2013

Research Group involving Graduate Level Occupational Therapy Students

Fall 2012

Advised - Total Number of Students 4

Topic: Developing normative data surrounding pinch grip

Product: Student Presentation at Occupational Therapy's Annual Research Day 2014

Medical Student (Co-Mentor)

Summer 2013 - 2016

Victoria Fischer

Project Title: Novel High Dosage Pediatric Therapy and Parental Report of Stress

Product: Fischer, V., Ramey, S.L., Stevenson, R., DeLuca, S.C., Darragh, A. (2016, September). High Dosage Pediatric Therapy: Does it Cause Stress for Parents of Patients with Cerebral Palsy? American Academy of Cerebral Palsy and Developmental Medicine. Hollywood, FL.

Medical Student (Co-Mentor)

Summer 2014 - 2017

Benjamin Stephens

Project Title: Development of an fNIRS Protocol for Infants with and without Neuromotor Impairment
Changed to Primary Mentor 2016

Medical Student (Co-Mentor)

Summer 2014 - 2015

Sarah Abdulla

Project Title: Stress in Infants and Parents during Baby CHAMP

Occupational Therapy Students

Summer 2015 - 2016

Meredith Evans

Molly Brown

Anneleigh Gibbs

Project Title: Use of video-feedback in driving rehabilitation

Product: Brown, M., Evans, M., Gibbs, A., Stohler, J., Tousman, S. & DeLuca, S.C. (2016, August). Perceptions of Certified Driver Rehabilitation Specialists on the use of Video Feedback in Driver Rehabilitation Programs. Association for Driver Rehabilitation Specialists. Columbus, OH.

Medical Student

Summer 2014 – 2017

Juniper Lee Parks

Project Title: Development of an fMRI Protocol for School-age Children

Products: Lee-Parks, J.J., Deshpande, H.U., Lisinski, J.M., LaConte, S.M., Ramey, S.L., DeLuca, S.C. (2016, March). Addressing Challenges in Using Functional Magnetic Resonance Imaging in Assessing Children. Eastern Pediatric Academic Society. Baltimore, MD.

Products: Lee-Parks, J.J., Deshpande, H.U., Lisinski, J.M., LaConte, S.M., Ramey, S.L., DeLuca, S.C. (2016, September). Addressing challenges in using Functional Magnetic Resonance Imaging in Assessing Children with Cerebral Palsy. American Academy of Cerebral Palsy and Developmental Medicine. Hollywood, FL.

Lee-Park, J.J., Deshpande, H., Lisinski, J., LaConte, S., Ramey, S., DeLuca, S. (2018). Neuroimaging strategies addressing challenges in using fMRI for the children with cerebral palsy. Journal of Behavioral and Brain Science.

Medical Student

Summer 2016 -2018

Omar Salman

Project Title: Developing a Valid Range of Motion Measurement Tool with the Kinetics System

Product: Salman, O., Trucks, M., Wallace, D., Asbeck, A., DeLuca, S.C. (2017, October). Evaluating the XBOX Kinect as a clinical tool to accurately monitor progress of pediatric rehabilitation patients. Child Neurology Society. Kansas City, MO

Products: Salman, O., Trucks, M., Wallace, D., Asbeck, A. & DeLuca, S.C. (2017, October). Evaluating the XBOX Kinect as a clinical tool to accurately monitor progress of pediatric rehabilitation patients. Child Neurology Society. Kansas City, MO.

American Academy of Cerebral Palsy and Developmental Medicine Assigned Mentee

Pavankumar Pelluru, MD, 2017

Translational Biology, Medicine & Health

Jesse Mann

August 2017 – Present

Project Title: Neurorehabilitation for Children with Global Developmental Delay & Hyperkinetic Movements
Products: Mann, J., Wallace, D., Mukherjee, K., DeLuca, S. (2019, September). A Quantitative and Qualitative Case Report on the Treatment of a Male Child with CASK Mutation related MICPCH using Intensive Neuromotor Rehabilitation. American Academy of Cerebral Palsy and Developmental Medicine. Anaheim, CA.

Mann, J., Wallace, D., Trucks, M.R., DeLuca, S. (2019, September). Case Study on the use of Intensive Pediatric Neurorehabilitation in the Treatment Kernicterus. American Academy of Cerebral Palsy and Developmental Medicine. Anaheim, CA.

Wallace, D., Mann, J., Trucks, M.R., DeLuca, S. (2019, September). Intensive Therapies for Children with Quadriparetic Cerebral Palsy. American Academy of Cerebral Palsy and Developmental Medicine. Anaheim, CA.

Wallace, D., Mann, J., Trucks, M.R., DeLuca, S. (2019, September). Therapeutic Activation and Inhibition of Motor Skills via Motor Learning and Operant Conditioning. American Academy of Cerebral Palsy and Developmental Medicine. Anaheim, CA.

2019 American Academy of Cerebral Palsy and Developmental Medicine Research Grant.

Title: Neurorehabilitation for Children with Global Developmental Delay & Hyperkinetic Movements

Amount: \$25,000.00

Principal Investigator: Jessie Mann, PhD candidate (Stephanie DeLuca mentor)

Medical Student

Jan. 2018 - Present

Sridhar, Vaishnavi

Project Title: Neurological Response to Visual Feedback in Comparison to Motor Actions

Medical Student

Jan. 2018 - Present

Miranda Gerrad

Project Title: Training and Testing P-CIMT in Low Income Countries

Medical Student

Jan. 2018 - Present

Tien Nguyen

Project Title: Psychometric Properties of the Emerging Behaviors Scale

Occupational Therapy Doctoral Candidate

Jan. 2019 – May 2019

Megan Price

Project Title: Assessment of and Efforts to Promote pCIMT Treatment Fidelity.

Medical Student

Jan. 2019 – Present

Alex Atwood

Project Title: Evaluating the Fitbit Alta® as an accurate measurement tool and effective influencer of physical activity in school-aged children with physical disabilities

Translational Biology, Medicine & Health

Hasan Farrah

August 2019 – Present

Project Title: Categorizing the Gross Motor Function Classification System with Biomechanical Data:

Introducing Limb Loading and Load Symmetry

Practicing Occupational Therapist

Heather Roberts, O.T.D, Texas Women's University

November 2019

Grant Submission to American Occupational Therapy Foundation

Undergraduates:

Lynchburg College

Rebecca Bagby, Summer 2013

College of William & Mary

Samantha Leigh, Summer, 2017

Virginia Tech

Candace Davito, Spring 2017

Riley Monroe Spring 2019

Roanoke College Summer 2019

Lynsey Wyatt

COMMITTEE MEMBERSHIP

Department of Occupational Therapy at University of Alabama at Birmingham

Faculty Search Committee

2009 – 2010

Research Development Committee

2009 - 2010

Faculty Search Committee

2010 -2011

Served as Chair

Scholarship Committee

2011 -2012

Civitan Sparks Clinics

Clinical Operations Committee

2009 – Oct. 2012

American Academy of Cerebral Palsy and Developmental Medicine

Treatment Outcomes Committee

2012 – 2014

Scientific Program Committee

2012 – 2013

Advocacy Committee

2014 – 2017 Chair

Common Data Elements Committee/ Engagement and Quality of Life

2014 – 2017

Care Pathways Committee

2019 – Present

Scientific Program Committee

2020 – Present

Diversity and Inclusion Work Group

2020 - Present

American Congress of Rehabilitation Medicine

ACRM Pediatric Rehabilitation Networking Group Task Force

2015 - 2016

ACRM Early Career Monitoring Task Force

2015 - 2016

Department of Occupational Therapy at Jefferson College of Health Sciences

Faculty Search Committee

2014 -2015

Fralin Biomedical Research Institute

Pioneers in Biomedical Research Search Committee

2015

VTCRI Destinations Theme Development Committee

2015

Computational Neuroscience Faculty Search Committee

2017 & 2019

Translational Biology Medicine and Health Admissions Committee

2018 -2019

Translational Biology Medicine and Health Curriculum Committee

2018

VNPN Travel Awards Selection Committee

2018

Brain Awareness Working Group

2019

Neuroscience of Human Development Search Committee

2019

Virginia Tech/Nordic Neuroscience Planning Committee

2019

Virginia Tech Carillion School of Medicine

Neurology Chair Search Committee

2016 – 2017

Virginia Tech

Adaptive Brain and Behavior Development Team

2016 – 2017

University Research Integrity Office Inquiry/Investigative Committee

2017 - 2020

Committee for the Development of Advancing the Human Condition Symposium

2019

Clinical Translational Science Award - iTHRIVE

Clinical Research Access Committee

2019 - Present

I-ACQUIRE

Publication Committee

2019-Present

BOARD MEMBERSHIP

American Academy of Cerebral Palsy and Developmental Medicine

Board of Directors

2016 - 2019

National Center for Medical Rehabilitation Research

National Advisory Board on Medical Rehabilitation Research

2019 - 2023

SERVICE AS A REVIEWER

Journal Review

Article Reviewer: 2010 – 2011:

*Archives of Physical Medicine and Rehabilitation,
Developmental Neuropsychology,
Experimental Medicine and Biology,
Journal of Pediatric Rehabilitation Medicine,
Neurorehabilitation and Neural Repair, &
Pediatrics*

Article Reviewer: 2011 – 2012:

*Developmental Medicine and Child Neurology,
Journal of Pediatric Rehabilitation Medicine, &
Human Movement Science*

Article Reviewer: 2012-2013

*Developmental Medicine and Child Neurology, &
International Journal of Therapy and Rehabilitation*

Article Reviewer: 2013-2014

*Journal of Neuroscience in Rural Practices
Neural Plasticity
Journal of Pediatric Rehabilitation Medicine,
Neurorehabilitation and Neural Repair, & Repair
Journal of Child Neurology*

Article Reviewer: 2014-2015

*Developmental Medicine and Child Neurology,
Journal of Child Neurology
Journal of Occupational Medicine and Health Affairs
Therapeutics and Clinical Risk Management*

Article Reviewer: 2015-2016

*Developmental Medicine and Child Neurology,
Journal of Child Neurology
Neurorehabilitation and Neural Repair, & Repair
Developmental Neurorehabilitation
Journal of Multidisciplinary Healthcare*

Article Reviewer: 2015-2016

Developmental Medicine and Child Neurology,
Journal of Child Neurology
Journal of Multidisciplinary Healthcare

Article Reviewer: 2016-2017

Developmental Medicine and Child Neurology,
Journal of Child Neurology
BMC Research Notes
Developmental Disabilities

Article Reviewer: 2017-2018

Developmental Medicine and Child Neurology,
Journal of Child Neurology
BMC Research Notes
Developmental Disabilities
Journal of Clinical Pediatrics
Cochran Review
Canadian Journal of Occupational Therapy
BMJ Open

Article Reviewer: 2018-2019

Neural Plasticity
Journal of Pediatric Rehabilitation Medicine
American Journal of Occupational Therapy
BMJ Open
JMIR Research Protocols
Neurology and Neurosurgery
Canadian Journal of Occupational Therapy
JMIR Research Protocols
Journal of Pediatric Neurology
Journal of Neurosciences in Rural Practices
Pediatrics
Developmental Neurorehabilitation

Article Reviewer: 2019-2020

Journal of Pediatric Rehabilitation Medicine
International Journal of Developmental Disabilities
Canadian Journal of Occupational Therapy

Article Reviewer: 2020-2021

Journal of Pediatric Rehabilitation Medicine
Cochran Review
Canadian Journal of Occupational Therapy

Grant Reviewer

Grant Reviewer Spring 2009:

Challenge Grants National Institutes of Health

Grant Reviewer Spring 2012:

Cerebral Palsy International Research Foundation

Grant Reviewer Summer 2013:

National Institutes of Health
Motor Function, Speech and Rehabilitation (MFSR) Study Section

Grant Reviewer Fall 2014:

National Institutes of Health
Clinical Trials Special Emphasis Panel

Grant Reviewer Fall 2016

Virginia Department of Rehabilitation Services
University of Virginia and Virginia Tech Carilion Research Seed Funding

Grant Reviewer Fall 2019

Pilot & Translational Clinical Studies Program (PTC) for iTHRIV
CTSA University of Virginia & Virginia Tech

MISCELLANEOUS SERVICE

Science Fair Judge 2009-2010

CORD program
UAB sponsored program to promote science in southeastern high schools

April 2017

West Salem Elementary

May 2017

STEM night

November 2018 – 2019

Burton center for Arts and Education - Center for Engineering
Go Baby Go
Community project and User Friendly Designs Directing High School Students, Salem, VA

Spring of 2019 - Present

Child Health Investment Partnership of Roanoke Valley
Research Committee

Spring 2019 – Present

Smart Health Planning Group, United Way