

Michele A. Lobo, PT, Ph.D

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Physical Therapy Licensure

Delaware: J1-0001384
Pennsylvania: PT011068L



Education

The University of Delaware, Newark, DE

Doctor of Philosophy in Biomechanics & Movement Science
Major advisor: James C. (Cole) Galloway, PT, Ph.D.
Degree conferred summa cum laude in July 2006

Vrije University, Amsterdam, The Netherlands

Visiting graduate student in lab of Professor Geert Savelsbergh, Ph.D.
Department of Movement Science
August 2001-June 2002

Drexel University, Philadelphia, PA

Masters of Physical Therapy
Focus Area: Pediatric Rehabilitation
Degree conferred magna cum laude in May 1997

The College of New Jersey, Trenton, NJ

Bachelor of Science in Biology, Minor in Psychology
Degree conferred summa cum laude in May 1994

Professional Experience

The University of Delaware, Department of Physical Therapy, Newark, DE

Assistant Professor, Physical Therapy Department, 2014-
Director, Move to Learn (M2L) Innovation Lab, 2014-
Founder & Director, Super Suits FUNctional Fashion & Wearable Technology Program, 2014-
Research Scientist, Motor Behavior Lab, 2010-2014
Post-doctoral Researcher, Motor Behavior Lab, 2006-2009
Per Diem Physical Therapist & Clinical Instructor, Physical Therapy Pediatric Clinic & Neurologic & Older Adult Clinic, 2006-2008
Teaching Assistant, Soft Tissue Treatment Techniques & Neurorehabilitation Course, 2002, Anatomy & Physiology, 2000-2001, Biology I, 2000-2001

The University of California, Berkeley, CA

Visiting Researcher, 2010-2011
Participated in seminar meetings of The Institute of Human Development, The Institute of Cognitive and Brain Sciences, and The Gesture Group
Participated in the Action Before Cognition (ABC) weekly discussion group led by Dor Abrahamson in the Department of Education

Hands-on training in relational database development and programming

Austill's Rehabilitation Services, Inc., Exton, PA
Pediatric Physical Therapist, 1998-2008
Early Intervention & School-based Evaluation & Intervention in Delaware, Montgomery,
& Chester Counties

Pediatric Therapeutic Services, Inc., PA
Pediatric Physical Therapist, 2002-2003
School-based Intervention in Pennsylvania & Delaware

St. Christopher's Hospital for Children, Philadelphia, PA
Pediatric Physical Therapist, 1997-1998
Out- & in-patient evaluation and intervention services
Neurology and myopathy clinic consultant
Seating clinic assessments

Burlington County College, Pemberton, NJ
Adjunct Faculty, Anatomy & Physiology, 1997
Adjunct Faculty, Microbiology, 1996

Honors and Awards

- Stephen M. Haley Research Award, American Physical Therapy Association Section on Pediatrics, 2016
- Lolas E. Halverson National Young Investigator Award from The Motor Development & Learning Academy Committee of the National Association for Sport & Physical Education, 2008
- Dorothy Briggs Memorial Scientific Inquiry Award, American Physical Therapy Association, 2006
- University of Delaware Dissertation Fellowship Award, 2005-2006
- Promotion of Doctoral Studies II Award, Foundation for Physical Therapy, 2004-2005
- University Graduate Fellows Award, The University of Delaware, 2004-2005
- American Physical Therapy Association, Pediatric Section Clinical Research Award 2003-2004
- Competitive Fellowship Award, The University of Delaware, 2003-2004
- Promotion of Doctoral Studies II Award, Foundation for Physical Therapy, 2003-2004
- Promotion of Doctoral Studies I Award, Foundation for Physical Therapy, 2002-2003
- McMillan Doctoral Scholarship, American Physical Therapy Association, 2000-2001
- Wyeth-Ayerst Junior Award in Biology, 1994
- Annie F. Stout Scholarship for Study in Biology, 1994
- Phi Kappa Phi National Interdisciplinary Honor Society, Inducted 1993
- Tri Beta Biological Honor Society , Inducted 1993
- Psi Chi Psychological Honor Society, Inducted 1993

Professional Memberships

- American Physical Therapy Association, 1995-present
- American Alliance for Health, Physical Education, Recreation, & Dance & National Association for Sport & Physical Education, 2005-present
- Society for Research in Child Development, 2008-present

- Jean Piaget Society, 2011

Research Interests

- Investigation of the role of perceptual-motor experiences in learning and problem-solving
- Design of early, effective interventions and rehabilitation devices to advance development for infants and children with disabilities
- FUNctional fashions and wearable technology to improve quality of life for people with disabilities

Grant Funding

ACTIVE

Efficacy of the START-Play Program for Infants with Neuromotor Disorders

Role: Co-Investigator, Site Primary Investigator (18% effort); PI: Harbourne, R.

Institute of Education Sciences, Department of Education: R324A150103

07/01/2015-06/30/2019

Our team of pediatric clinical and educational specialists has devised an intervention to advance sitting and reaching ability in the first two years of life in order to advance readiness to learn in school for individuals at risk of or with cerebral palsy. The sites involved in this study include The University of Washington, The University of Nebraska Medical Center, The University of Nebraska at Omaha, The University of Delaware, and Virginia Commonwealth University.
\$3,430,109

Development and Testing of a Smart Garment

Role: PI

State of Delaware Federal Research and Development Grant Program

10/01/2015-12/31/2017 (including no cost extension)

Our team of fashion, engineering, and rehabilitation professionals will enhance our existing exoskeletal garment, the Playskin Lift™, by making it a smart garment that will track data about users' activity. This will address a key need of understanding if and how exoskeletons can affect change in the everyday activity of people in their natural environments.

\$100,000

Lite Run Pediatric Gait Trainer

Role: Consultant

New England Pediatric Device Consortium 2016 Target Challenge Award

09/01/2016-08/31/2017

This project aims to develop and test pediatric clinical and home versions of a pressurized lower body suit and device that provides body weight support for mobility without a harness. My role as consultant is to work with the design team and to connect with families to ensure the device meets the broad needs of users.

\$50,000 direct

The Snuggle Time Garment

Role: Investigator [PI: Abigail Clarke-Sather, PhD, Civil Engineering & Fashion & Apparel Studies; Other Investigators: Kelly Cobb, Fashion & Apparel Studies, Melissa Melby, Anthropology]

NSF I-Corp Training Grant

01/27/2017-05/26/2017

The Snuggle Time Garment is a soft, functional device aiding breastfeeding and skin-to-skin contact for preterm infants in neonatal intensive care units (NICUs). Breastfeeding and skin-to-

skin contact (kangaroo care) are early caregiver-infant behaviors that improve infant motor, cognitive, and social-emotional development including infants at risk. Breastfed infants have reduced incidence of diabetes, obesity, asthma, and leukemia. Breastfeeding of preterm infants leads to improved motor, cognitive, and social-emotional development as toddlers. Kangaroo care improves sleep, emotional regulation, alertness, and 12-month neurodevelopmental outcomes. This soft, functional device addresses privacy, infant fragility, and parent-child comfort, all of which are limitations preventing breastfeeding and skin-to-skin contact in NICUs. \$3000

SCH: GEAR – Grounded Early Adaptive Rehabilitation

Role: Data Safety & Monitoring Board Member

PI: Bert Tanner, PhD

NIH 1R01HD087133-01

This project assesses a new portable motor rehabilitation system with social robotic interfaces that maximizes rehabilitation dosage for children with motor and social disabilities. The project will provide insights into motor development in children with special needs suggesting a new early intervention paradigm for children with motor disabilities.

PENDING

Development and Testing of Wearable Technology to Promote Early Movement and Cognition

Role: PI

University of Delaware Research Foundation (UDRF)

06/01/2017-05/31/2019

At least 1 in 6 children age 3 to 17 years in the US has a disability impacting motor or cognitive development. The way parents handle and position their young infants can impact motor and cognitive development through preschool age. Parents in the US primarily position young infants supported and on their backs and these infants show later milestone achievement than those in other cultures. Nationwide educational campaigns have not been sufficient to change early parent-infant handling and positioning interactions. The current project aims to further develop and test wearable technology to encourage parents to more optimally handle and position their infants. UDRF support will allow this technology to be improved and pilot data to be collected so that federal funds can be sought to measure the impact of this technology on immediate parent-infant interactions and on longer-term health and development. This low-cost technology could be especially beneficially to advance early learning and development for infants at greatest risk of delays due to socioeconomic status or medical risk.

\$35,000

Submitted: January 2017

SCH: INT: Collaborative Research: Smart Wearable Systems to Support and Measure Movement in Children With and Without Mobility Impairments

Role: Co-Investigator, Site Primary Investigator (10% effort); PI: Dunne, L. (University of Minnesota)

National Science Foundation (NSF)

08/15/2016-08/14/2020

Our team of fashion, engineering, and rehabilitation professionals will: 1) test novel movement sensing technology incorporated in soft, comfortable garments on children with and without mobility impairments, 2) create algorithms to analyze the data to categorize behaviors performed, and 3) utilize advances in soft robotics and shape memory alloys to design the first user-controlled exoskeletal garment for children with arm movement impairments.

\$1,512,403 total (\$499,307 to UD)

Original submission: December 2015 (not funded)

Resubmitted: December 2016

COMPLETED

An Innovative Device for Intervention in Infants with Nervous System Injury

Role: PI (10% effort)

NIH 1R21HD076092-01A1

12/09/2013-11/30/2016 (including one no cost extension year)

In collaboration with rehabilitation engineers from A.I Dupont Hospital for Children and neonatologists from Christiana Care Health Services and Thomas Jefferson University, we are testing the effectiveness of exoskeletal rehabilitation devices (P-WREX+ and the Playskin Lift™) to improve limb movement and function for infants born with brain injuries and high risk for movement disorders, such as cerebral palsy, and for toddlers with significant arm movement impairments due to diagnoses such as arthrogryposis multiplex congenita.

Round 1: Priority score 26, percentile 17th

Round 2: Priority score 13, percentile 1st

\$249,154

Motor Learning and Coordination in High-risk Infants

01/01/07-12/31/12

R01 HD051748-01A1

NIH NICHD

Role: Post-doctoral Fellow (2007-2009), Research Scientist (2010-2012)

PI: Galloway, J.C.

We used a variety of learning, memory, and developmental assessments in combination with medical and brain imaging data to compare development of infants born preterm with high-risk to those born full-term from birth through 2 years of age. The goal was to determine early predictors of future delay and need for early intervention.

Does Early Postural Intervention Affect Sitting Balance and Reaching in Infants Born Preterm?

01/01/09-06/30/10, no cost extension through 07/01/11

Section on Pediatrics Planning Grant

American Physical Therapy Association

Role: Co-investigator

PI: Dusing, S.C.

Our team of individuals with expertise in clinical research worked together to design an intervention to advance sitting and object exploration ability in the first years of life for children at risk for cerebral palsy. We submitted a proposal for federal funding using a multiple-site intervention model. There were individuals from 5 different different universities involved in this effort. Proposals for multi-site clinical trials submitted to NIH and the DOE emerged from this collaboration.

Invited Peer-Reviewed Publications

1. **Lobo, M.A.**, Moeyaert, M., Cunha, A.B., Babik, I. (in press). Single-case design, analysis, and quality assessment for intervention research. *Journal of Neurologic Physical Therapy*.
2. **Lobo, M.A.**, Kagan, S.H., & Corrigan, J.D. (in press). Special Communication Reporting on Plenary Session at IV STEP: Design options for intervention research. *Pediatric Physical Therapy*.

3. **Lobo, M.A.**, Galloway, J.C., & Heathcock, J.C. (2015). Characterization and intervention for upper extremity exploration and reaching behaviors in infancy. *Journal of Hand Therapy*, 28(2), 114-125.
4. **Lobo, M.A.** (2014). Invited Commentary: Rethinking computer design from a disabilities rights standpoint. *Developmental Medicine & Child Neurology*, 56(12), 1138-1139.

Peer-Reviewed Publications

1. Greenspan, B., Hall, M.L., Cao, H., & **Lobo, M.A.** (in preparation). Development and testing of a stitched stretch sensor for measuring human movement. *International Journal of Industrial Textiles*.
2. **Lobo, M.A.**, Babik, I., Cunha, A.B., Ross, S.M., Clary, E., Galloway, J.C., & Logan, S. (in review). Exploration, experience, and attention to the goal impact early means end learning across tasks. *Developmental Psychology*.
3. Babik, I., Galloway, J.C., & **Lobo, M.A.** (in review). Infants born preterm demonstrated impaired exploration of their bodies and surfaces throughout the first two years of life. *Physical Therapy*.
4. Hall, M.L. & **Lobo, M.A.** (in review). Design and development of the first exoskeletal garment to enhance arm mobility for children with movement impairments. *Assistive Technology*.
5. Logan, S.W., **Lobo, M.A.**, Feldner, H.A., & Galloway, J.C. (in review). Physical activity and play behaviors in preschoolers relative to presence of disability and type of mobility device. *Pediatric Physical Therapy*.
6. Logan, S.W., **Lobo, M.A.**, Feldner, H.A., Schreiber, M., MacDonald, M., Winden, H.N., Stoner, T., & Galloway, J.C. (2017). Power up: Exploration and play in a novel modified ride-on car for standing. *Pediatric Physical Therapy*, 29, 30-37.
7. Braswell Christy, J., Bjornson, K., Dusing, S., Gannotti, M., Heathcock, J., **Lobo, M.A.**, O'Neil, M., Field-Fote, E., & Rimmer, J. (2016). Technology for children with brain injury and motor disability: Executive Summary from Research Summit IV. *Pediatric Physical Therapy*, 28(4), 483-489.
8. Logan, S.W., Ross, S.M., Schreiber, M., Feldner, H.A., **Lobo, M.A.**, Catena, M.A., MacDonald, M., Galloway, J.C. (2016). Why we move: Social mobility behaviors of children with and without disabilities across childcare contexts. *Frontiers in Public Health*, 4 (204).
9. Babik, I., Kokkoni, E., Cunha, A.B., Galloway, J.C., Rahman, T., & **Lobo, M.A.** (2016). Feasibility and effectiveness of a novel exoskeleton for an infant with arm movement impairments. *Pediatric Physical Therapy*, 28, 338-46.
10. **Lobo, M.A.**, Koshy, J., Hall, M.L., Erol, O., Cao, H., Buckley, Galloway, J.C., & Higginson, J. (2016). Playskin Lift™: Development and initial testing of an exoskeletal garment to assist upper extremity mobility and function. *Physical Therapy*, 96(3), 390-399.
11. Cunha, A.B., **Lobo, M.A.**, Kokkoni, E., Galloway, J.C., & Tudella, E. (2016). Effect of short-term training on reaching behavior in infants: A randomized controlled clinical trial. *Journal of Motor Behavior*, 48(2), 132-142.
12. Logan, S.W., Schreiber, M., **Lobo, M.A.**, Pritchard, B., George, L., & Galloway, J.C. (2015). Real world performance: Physical activity, play, and object-related behaviors of toddlers with and without disabilities. *Pediatric Physical Therapy*, 27, 433-441.
13. **Lobo, M.A.**, Kokkoni, E., Cunha, A.B., & Galloway, J.C. (2015). Infants born preterm demonstrate impaired exploration behaviors throughout infancy and toddlerhood. *Physical Therapy*, 95(1), 51-64.

14. **Lobo, M.A.**, Kokkoni, E., de Campos, A.C., & Galloway, J.C. (2014). Not just playing around: Infants' behaviors with objects reflect ability, constraints, and object properties. *Infant Behavior & Development, 37*(3), 334-351.
15. **Lobo, M.A.**, Paul, D.A., Mackley, A., Maher, J., & Galloway, J.C. (2014). Instability of delay classification and determination of early intervention eligibility in the first two years of life. *Research in Developmental Disabilities, 35*, 117-126.
16. Harbourne, R.T., **Lobo, M.A.**, Karst, G.M., & Galloway, J.C. (2013). Sit happens: Does sitting development perturb reaching development or vice versa? *Infant Behavior & Development, 36*, 438-450.
17. **Lobo, M.A.**, & Galloway, J.C. (2013). Assessment and stability of early learning abilities in preterm and full-term infants across the first two years of life. *Research in Developmental Disabilities, 34* (5), 1721-30.
18. **Lobo, M.A.**, Harbourne, R.T., Dusing, S.C., & Westcott McCoy, S. (2013). Grounding early intervention: Physical therapy cannot just be about motor skills anymore. *Physical Therapy, 93* (1), 94-103.
19. Dusing, S.C., **Lobo, M.A.**, Lee, H., & Galloway, J.C. (2013). Intervention in the first weeks of life for infants born late preterm: A case series report. *Pediatric Physical Therapy, 25* (2), 194-203.
20. **Lobo, M.A.** & Galloway, J.C. (2013). The onset of reaching significantly impacts how infants explore both objects and their bodies. *Infant Behavior and Development, 36* (1), 14-24.
21. Gadin, E., **Lobo, M.A.**, Sem, K., Paul, D., Steiner, K., Mackley, A., Anzillotti, K., & Galloway, J.C. (2012). Volumetric MRI and MRS and early motor development of infants born preterm. *The Journal of Pediatric Physical Therapy, 24* (1), 38-44.
22. **Lobo, M.A.**, & Galloway, J.C. (2012). Enhanced handling and positioning in early infancy advances development throughout the first year. *Child Development, 83*(4), 1290-1302.
23. **Lobo, M.A.** & Galloway, J.C. (2008). Postural and object-oriented experiences advance early reaching, object exploration, and means-end behavior. *Child Development, 79*(6), 1869-1890.
24. Heathcock, J.C., **Lobo, M.A.**, & Galloway, J.C. (2008). Movement training advances the emergence of reaching in infants born at less than 33 weeks of gestational age: A randomized clinical trial. *Physical Therapy, 88*(3), 310-322.
25. Heathcock, J.C., Bhat, A.N., **Lobo, M.A.**, & Galloway, J.C. (2005). The relative kicking frequency of infants born full-term and preterm during learning and short-term and long-term memory periods of the mobile paradigm. *Physical Therapy, 85*(1), 8-18.
26. **Lobo, M.A.**, Galloway, J.C., Savelsbergh, G.J.P. (2004). General & task-related experiences affect early object interaction. *Child Development, 75*(4), 1268-1281.
27. Heathcock, J.C., Bhat, A.N., **Lobo, M.A.**, & Galloway, J.C. (2004). The performance of infants born preterm and full-term in the mobile paradigm: Learning and memory. *Physical Therapy, 84*(9), 808-821.
28. Bhat, A., **Lobo, M.A.**, Heathcock, J., Galloway, J. (2003). Joint excursion combinations during early arm movements in infants. *Journal of Sport & Exercise Physiology, 25*, S27.
29. Heathcock, J., Bhat, A., **Lobo, M.A.**, & Galloway, J. (2003). Exploring and selecting solutions in the mobile paradigm: Full-term and preterm infants. *Journal of Sport & Exercise Physiology, 25*, S69.
30. **Lobo, M.A.**, Galloway, J.C., & Savelsbergh, G.J.P. (2003). Task-specific and generalized movement practice affects the emergence of reaching in infants. *Journal of Sport & Exercise Physiology, 25*, S92.

31. Galloway, J.C., Bhat, A., Heathcock, J., & **Lobo, M.A.** (2002). Shoulder and elbow dynamics during vertical arm movements. *Journal of Sport & Exercise Physiology*, 24, 56-7.
32. Galloway, J.C., Heathcock, J., Bhat, A., & **Lobo, M.A.** (2002). Feet reaching: The interaction of experience and ability in preterm infants. *Journal of Sport & Exercise Physiology*, 24, 57.
33. Galloway, J.C., Heathcock, J., Bhat, A., & **Lobo, M.A.** (2002). Feet reaching: The interaction of experience and ability in full-term infants. *Journal of Sport & Exercise Physiology*, 24, 57-8.

Peer-Reviewed Presentations

1. **Lobo, M.A.**, Heathcock, J.C., Dusing, S.C., & Smith, B. (2017). High- and low-tech approaches to assessing and treating infants with motor delay. Educational session at *Combined Sections Meeting of the American Physical Therapy Association*, San Antonio, TX.
2. Chang, Hui-Ju, Dusing, S., Harbourne, R., Lobo, M., & McCoy, S. (2017). A model for designing and maintaining fidelity for process-based interventions: The START-Play clinical trial. Poster presentation at *Combined Sections Meeting of the American Physical Therapy Association*, San Antonio, TX.
3. Greenspan, B., Hall, M.L., Cao, H., & **Lobo, M.A.** (2016). Development & testing of a stitched stretch sensor for measuring human movement. Poster presentation at *The Fiber Society*, Ithaca, NY.
4. Lobo, M.A. (Chair), Leezenbaum, N., Iverson, J., Babik, I., Movva, N., Lobo, M.A., Kokkoni, E., Galloway, J., Heathcock, J., Capetillo, D., & Durbak, E. (2016). Paper Symposium at *International Conference on Infant Studies*, New Orleans, LA.
5. Babik, I., Movva, N., & **Lobo, M.A.** (2016). Hand use for reaching and object exploration in infants with impaired upper extremity functioning: Preferences v. affordances. Poster presentation at *International Conference on Infant Studies*, New Orleans, LA.
6. **Lobo, M.A.**, Babik, I., & Hall, M.L. (2016). FUNctional fashions & wearable technology for kids with disabilities. Educational Session at *Combined Sections Meeting of the American Physical Therapy Association*, Anaheim, CA.
7. Heathcock, J.C., Gannotti, M.E., **Lobo, M.A.**, Christy, J.B., Bjornson, K., & Dusing, S. (2016). Technology for enhanced movement in pediatrics: An update from Research Summit IV. Educational Session at *Combined Sections Meeting of the American Physical Therapy Association*, Anaheim, CA.
8. Hall, M.L., & **Lobo, M.A.** (2016). Co-designing a rehabilitative device: The Playskin Lift™ project. Poster presentation at *Combined Sections Meeting of the American Physical Therapy Association*, Anaheim, CA.
9. Babik, I., Movva, N., & **Lobo, M.A.** (2016). Novel Playskin Lift™ exoskeletal garment improves multimodal object exploration in infants at risk. Poster presentation at *Combined Sections Meeting of the American Physical Therapy Association*, Anaheim, CA.
10. Hall, M.L., Cao, H., & Lobo, M.A. (2015). Playskin Lift™: An exoskeletal garment for children with limited arm mobility. Poster presentation at *The Fiber Society: Advancing Scientific Knowledge Pertaining to Fibers and Fibrous Materials*, Raleigh, NC.
11. Movva, N., Babik, I., & **Lobo, M.A.** (2015). Effectiveness of the first exoskeletal garment (Playskin Lift™) to improve reaching and object exploration in infants born with brain injury. Poster presentation at *Northeast Regional IDeA Conference*, Bar Harbor, ME.

12. Hall, M.L., & **Lobo, M.A.** (2015). FUNctional design: Exploring design for disability in a childrenswear course. Poster presentation at *International Textile and Apparel Association Annual Conference*, Santa Fe, NM.
13. Greenspan, B., & **Lobo, M.A.** (2015). Developing innovative exoskeletal garments for children with disabilities. Interactive exhibit at *US National Maker-Faire*, Washington, DC.
14. **Lobo, M.A.**, Buckley, J., Doyle, J., Thompson, C., Szczepanek, G., & Marcozzi, A. (2015). Playskin Air™: Pediatric Exoskeletal Garment. Poster and design presentation at *2015 Summer Biomechanics, Bioengineering, and Biotransport Conference – Undergraduate Design Competition*, Snowbird, UT.
15. **Lobo, M.A.**, Buckley, J., Doyle, J., Thompson, C., Szczepanek, G., & Marcozzi, A. (2015). Playskin Air™: Pediatric Exoskeletal Garment. Poster and design presentation at *2015 Design of Medical Devices Conference – International Student Design Showcase*, Minneapolis, MN.
16. Hall, M., Babik, I., Koshy, J., & **Lobo, M.A.** (2015). My exoskeleton has sequins: Merging fashion, engineering, rehabilitation, and child development to design assistive devices. Poster presentation at the *Society for Research in Child Development Biennial Conference*, Philadelphia, PA.
17. Babik, I., Libassi, L., Movva, N., & **Lobo, M.A.** (2015). Rehabilitation intervention changing the dynamics of movement in children with arthrogryposis. Poster presentation at the *Society for Research in Child Development Biennial Conference*, Philadelphia, PA.
18. Hall, M.L., Koshy, J., & **Lobo, M.A.** (2015) Playskin Lift™: Development of a garment-based exoskeleton for children with arm movement impairments. Oral presentation at the *TechStyleLAB Symposium*, Kent, Ohio.
19. Koshy, J., Chang, K., Oblender, R., Olaya, M., Buckley, J.M., Hall, M. & **Lobo, M.A.** (2014). Playskin Lift™: An exoskeletal garment to assist upper extremity mobility and function. Poster presentation at *The 7th World Congress of Biomechanics*, Boston.
20. Rahman, T., Kokkoni, E., Galloway, J.C., & **Lobo, M.A.** (2014). Development and testing of a modular upper extremity exoskeleton for infants. *Biodevices Conference*, France.
21. **Lobo, M.A.** & Heathcock, J. (2014). Early intervention to promote upper extremity function: What's known. Two-hour oral session at the *Combined Sections Meeting of the American Physical Therapy Association*, Las Vegas.
22. **Lobo, M.A.** & Heathcock, J. (2014). Early intervention to promote upper extremity function: What's needed. Two-hour oral session at the *Combined Sections Meeting of the American Physical Therapy Association*, Las Vegas.
23. **Lobo, M.A.** & Galloway, J.C. (2014). I Want It All, and I Want It Now: Pediatric Assistive Technology That Behaves Like a Kid. Two-hour oral session at the *Combined Sections Meeting of the American Physical Therapy Association*, Las Vegas.
24. Baraldi Cunha, A., **Lobo, M.A.**, Kokkoni, E., Galloway, J.C., & Tudella, E. (2014). Effect of short-duration training on reaching behavior in infants. Poster presentation at the *Combined Sections Meeting of the American Physical Therapy Association*, Las Vegas.
25. Kokkoni, E., Cunha, A., Rahman, T., Galloway, J.C., & **Lobo, M.A.** (2014). Use of a novel rehabilitation device to improve upper extremity function and play in an infant with arthrogryposis. Poster presentation at the *Combined Sections Meeting of the American Physical Therapy Association*, Las Vegas.
26. **Lobo, M.A.**, Kokkoni, E., Baraldi Cunha, A. & Galloway, J.C. (2013). Infants born preterm explore objects differently than full-term infants throughout infancy and toddlerhood. Oral presentation at the *Motor Development Research Consortium*, Philadelphia.

27. **Lobo, M.A.** & Galloway, J.C. Assessment and stability of early learning abilities in preterm and full-term infants across the first two years of life. (2013). Oral presentation at the *Motor Development Research Consortium*, Philadelphia.
28. Baraldi Cunha, A., Kokkoni, E., **Lobo, M.A.**, de Almeida Soares, D., Galloway, J.C., & Tudella, E. (2013). Effect of different types of short-duration training on spatio-temporal parameters of reaching in infants. Poster presentation at the *12th Congress of European Forum for Research in Rehabilitation*, Istanbul.
29. Dusing, S., Lobo, M.A., & Galloway, J.C. (2013). Posture and movement experience advance object exploration and motor development in the late preterm infant: A prospective case series report. Poster presentation at the *Combined Sections Meeting of the American Physical Therapy Association*.
30. Kokkoni, E., Paul, D., Mackley, A., Steiner, K., Gadin, E., Anzilotti, K., Galloway, J.C., & Lobo, M.A. (2012) Object exploration in the first years of life may be primarily unimanual for infants with Cerebral Palsy. Preliminary evidence. *AACPDM*
31. Paul, D. A., Mackley, A., Lobo, M.A., Anzilotti, K., Steiner, K., & Galloway, J. C. (2012). Motor delay in preterm infants is not associated with changes in cerebellar volume measured prior to hospital discharge. Poster presentation at the *Pediatric Academic Societies Annual Meeting*.
32. Lobo, M.A., & Galloway, J.C. (2011). Developmental impact of a caregiver-provided postural training program in infancy. Poster presentation at the *Combined Sections Meeting of the American Physical Therapy Association*.
33. Lobo, M.A., Galloway, J.C., Harbourne, R., & Dusing, S. (2011). Intervention to advance sitting and reaching in infants and young children with disabilities: Evidence and clinical decision making principles. Symposium presentation at the *Combined Sections Meeting of the American Physical Therapy Association*.
34. Libertus, K. Lobo, M.A., Schwartz, G., & Galloway, J.C. (2011). Enhancing development? The positive influences of early experiences on development. Paper symposium presentation at *The Society for Research in Child Development*.
35. Lobo, M.A., & Galloway, J.C. (2010). Object exploration behaviors in early infancy: Relationship with age, spontaneous movements, and reaching ability. Poster presentation at the *International Conference on Infant Studies*.
36. Gadin, E., Paul, D.A., Mackley, A., Anzilotti, K., Steiner, K., Lobo, M.A., Sem, K., & Galloway, J.C. (2010). Correlation of proton magnetic resonance spectroscopy (MRS) and volumetric magnetic resonance imaging (MRI) of the preterm white matter. Poster presentation at the *Pediatric Academic Societies' Annual Meeting*.
37. Lobo, M.A., & Galloway, J.C. (2009). Early object exploration in infancy: Effects of the onset of reaching and gestational age at birth. Poster presentation at the *American Physical Therapy Association's Annual Conference and Exposition*.
38. Lobo, M.A., & Galloway, J.C. (2008). Postural and object-oriented experiences advance early reaching, object exploration, and means-end behavior. Poster presentation at the *International Conference on Infant Studies*.
39. Lobo, M.A., & Galloway, J.C. (2006). Postural & task-related experiences advance infants' abilities to contact & explore objects. Poster presentation at the *International Conference on Infant Studies*.
40. Lobo, M.A., Galloway, J.C., & Savelsbergh, G.J.P. (2005). General & task-related experiences affect early object interaction. Poster presentation at the *Motor Development & Learning in Infancy II Conference*.
41. Lobo, M.A., & Galloway, J.C. (2005). Effects of social, postural, & task-related experiences on infants' abilities to contact & explore objects. Poster presentation at the *Motor Development & Learning in Infancy II Conference*.

42. Galloway, J.C., Lobo, M.A., Bhat, A. (2005). The emergence of purposeful control in early infancy: Appreciating Esther Thelen. Symposium at the *NASPSPA Annual Conference*.
43. Lobo, M.A., & Galloway, J.C. (2005). Effects of social, postural, & task-related experiences on infants' abilities to contact & explore objects. Poster presentation at the *Society for Neuroscience 35th Annual Meeting*.
44. Bhat, A., Heathcock, J., Lobo, M., & Galloway, J.C. (2004). Spatio-temporal patterns of early arm movements. Poster presentation at the *International Conference on Infant Studies*.
45. Lobo, M.A., Galloway, J.C., & Savelsbergh, G.J.P. (2004). General & task-related experiences affect early object interaction. Poster presentation at the *International Conference on Infant Studies*.
46. Heathcock, J., Bhat, A., Lobo, M.A., & Galloway, J.C. (2003). Learning in full-term and pre-term infants: Implications for intervention with 'prefunctional' infants. Poster presentation at the *American Physical Therapy Association Combined Sections Meeting*.
47. Galloway, J.C., Bhat, A., Heathcock, J., Manal, K., & Lobo, M.A. (2003). Shoulder & elbow dynamics during vertical arm movements of various directions and speeds. Poster presentation at *Physical Therapy 2003: Annual Conference & Exposition of the American Physical Therapy Association*.
48. Lobo, M.A., Galloway, J.C., Savelsbergh, G.J.P. (2003). General v. specific movement training of hand and foot reaching in infants. Poster presentation at *Physical Therapy 2003: Annual Conference & Exposition of the American Physical Therapy Association*.
49. Lobo, M.A., Galloway, J.C., & Savelsbergh, G.J.P. (2003). Task-specific and generalized movement training affects the development of reaching in infants. Poster presentation at the *NASPSPA Annual Conference*.
50. Galloway, J.C., Heathcock, J., Bhat, A., & Lobo, M.A. (2002). Feet reaching in young infants: the interaction of experience & ability. Poster presentation at the *International Conference on Infant Studies*.
51. Galloway, J.C., Bhat, A., Heathcock, J., Manal, K., & Lobo, M.A. (2002). Shoulder and elbow dynamics during vertical arm movements of various directions and speeds: Implications for infant development and patients with neurologic disorders. Poster presentation at the *American Physical Therapy Association Annual Conference*.
52. Galloway, J.C., Heathcock, J., Bhat, A., & Lobo, M.A. (2002). Development of object exploration with hands and feet in preterm infants. *NASPSPA Annual Conference (motor control and motor development society)*.
53. Galloway, J.C., Heathcock, J., Bhat, A. & Lobo, M.A. (2002). Feet reaching: The interaction of experience and ability in full-term infants. Poster presentation at the *NASPSPA Annual Conference*.
54. Galloway, J.C., Bhat, A., Heathcock, J., Manal, K., & Lobo, M.A. (2001). Shoulder & elbow dynamics during vertical arm movements of various directions & speeds: implications for development. Poster presentation at the *Society for Neuroscience Conference*.

Invited Presentations

1. "FUNctional Fashions to Empower People With Disabilities." Invited speaker for the Opening Ceremony, Second Skin Exhibit, Chemical Heritage Museum, Philadelphia, PA, November 4, 2016.
2. "How Advances in Fashion & Wearable Technology Can Improve Life for People With Disabilities." Invited speaker for the Scholars' Guild of the Arden Club, Wilmington, DE, November 15, 2016.

3. "FUNctional Fashion & Wearable Technology: How Clothing & Soft/DIY Devices Can Improve Function, Independence, and Quality of Life for Individuals With Physical Disabilities." Invited speaker 16th Annual Patricia Leahy Memorial Lecture, University of the Sciences, Philadelphia, PA, October 6, 2016.
4. "Super Suits: Clothing to Make Kids Smarter." Invited lecture for the Cognitive Science Group, University of Delaware, Newark, DE, September 26, 2016.
5. "Inclusive Design, Assistive Technology, and Prosthetics." Invited to present Super Suits Program products at the White House Fashion Show, Washington, DC, September 15, 2016.
6. "The new face of single subject research designs: Causal inference, statistical significance, external validity, and more." Invited plenary speaker and participant, IV STEP: Prevention, Prediction, Plasticity, and Participation, Sponsored by the American Physical Therapy Association's Neurology and Pediatric Sections, Columbus, OH, July 14-19, 2016.
7. "Real world wearable rehabilitative technology for kids with disabilities." Invited featured speaker, Design of Medical Devices Conference, Minneapolis, MN, April 11-14, 2016.
8. "Wearable Technology with a Purpose." Invited talk and panel discussant, Tech2Gether Event, Wilmington, DE, November 18, 2015.
9. "Super Suits Model: Designing Rehabilitative Devices That People Want to Use." Invited Lecture, Consulting, and Judging, Collaborative Design Charrette: Nothing For Us Without Us, Syracuse University, Syracuse, NY, October 9-11, 2015.
10. "Super Suits Model: Designing Rehabilitative Devices That People Want to Use." Invited Lecture, Design & Manufacturing Conference, Philadelphia, PA, October 8, 2016.
11. "Learn to Move, Move to Learn: Pediatric Assistive and Rehabilitative Technology." Invited Inservice, Easter Seals, New Castle County, DE, May 12, 2015.
12. "Build It and They Will Come (or NOT!): A Radical Shift in Process, Prototypes, and Priorities in Pediatric Assistive Technology." Invited Workshop, Advanced Technologies Conference, Kennedy Krieger Institute, Baltimore, MD, Spring 2015.
13. "SewBabySew: Integrating Fashion, Engineering, & Rehabilitation for Wearable Technology & FUNctional Fashions that Get Kids Moving, Playing, & Learning." Invited presentation at the University of Delaware's UD in DC Day. March 25, 2015.
14. "Learn to Move, Move to Learn: Pediatric Assistive and Rehabilitative Technology." Invited presentation for the University of Delaware's Center for Disabilities Studies' Community Workshop on Early Childhood Assistive Technology. December 5, 2014.
15. "I Want It All, and I Want It Now: Pediatric Assistive Technology That Behaves Like a Kid." Invited Lecture, 15th Annual Susan Harryman Cerebral Palsy Lectureship, Kennedy Krieger Institute, Baltimore, MD, November 6, 2014.
16. "Choosing a Path in Physical Therapy: Entrepreneur." American Physical Therapy Association National Student Conclave, Milwaukee, Wisconsin, October 31, 2014.
17. "Recent Insights and Innovations for Early Assessment & Intervention for Infants at Risk." Invited Lecture, Margaret I. Handy Memorial Lectureship, Christiana Care Health System, Newark, DE, September 16, 2014.
18. "I Want it All, I Want it Now: Creating Assistive Technology that Behaves Like a Kid." Educational Preconference Session for the American Physical Therapy Association NEXT Conference, June 14, 2014.
19. "Panel: Designing Meaningful Inter-disciplinary Capstone Projects and Internships." University of Delaware Summer Faculty Institute, June 4, 2014.
20. "GoBabyGo." Invited Lecture for Family SHADE, the Family Support and Healthcare Alliance of Delaware, May 7, 2014.

21. "I Want it All, I Want it Now: Creating Assistive Technology that Behaves Like a Kid." Continuing Education Course for the South Carolina Occupational Therapy Association Conference, March 8, 2014.
22. "I Want it All, I Want it Now: Creating Assistive Technology that Behaves Like a Kid." American Academy for Cerebral Palsy and Developmental Medicine (AACPDM). Webinar for physicians, therapists, educators, and others working with at-risk populations, January 2013.
23. "Grounding Early Intervention: Physical Therapy Cannot Just Be About Motor Skills Anymore." Physical Therapy Journal podcast discussion, January 2013.
24. "A Fresh Perspective for Early Intervention: Using Current Science to Guide Best Practice and How to Collaborate with the Educational System." Gillette Children's Specialty Healthcare Continuing Education Conference, St. Paul, MN, 12.5 continuing education contact hours for occupational, speech, and physical therapists, October 2012.
25. "Creating Development: Insights from Atypical Development." Cognitive Development Society Pre-Conference Event: Creating Development: Integrating Processes over Multiple Timescales. Philadelphia, PA, October 13, 2011.
26. "Roles & Practices of Physical & Occupational Therapists in Early Intervention." Invited lecture in the Individual & Family Studies Department Course IFST: 435: Early Childhood Special Education April 2008, November 2008, April 2009.
27. "Designing & Writing Effective Specially-Designed Instructions: An Important Part of Early Intervention & School-based Pediatric Therapeutic Services." Austill's Rehabilitation Continuing Education Workshop, Exton, PA, 2 continuing education contact hours for occupational & physical therapists, April 2008.

Teaching

- PHYT 811 Pediatric Physical Therapy, Course Coordinator (Spring 2014-) & Instructor (Spring 2004-)
- Grading and administration for Doctoral of Physical Therapy Student Pediatric Clinical Experiences (2014-)
- Invited Lecturer, Clinical Biomechanics, Pediatric Interventions and Developmentally-Inspired Rehabilitation Devices, Spring 2014, 2015, 2017
- Invited Lecturer, NURS 362 Research Concepts in Healthcare, Spring 2015
- Invited Lecturer, KAAP 285 Introduction to Research in Health Sciences, Fall 2014
- Lectures on Motor Learning and the Broad Impact of Physical Activity from the Molecular Level to the Level of Cognition for a Variety of Populations, Clinical Neuroscience, Spring 2014

Service

- Continuing Education Development Committee Member, Physical Therapy, University of Delaware, 2017-
- Pediatric Clinical Experience Reevaluation Committee Member, Physical Therapy, University of Delaware, 2017-
- New Faculty Search Committee Member, Physical Therapy, University of Delaware, 2016-17
- Co-coordinator for the weekly Biomechanics and Movement Science Seminar Series at the University of Delaware, 2015-
- "Solving real problems for real clients." Invited presentation, Winter Faculty Institute, University of Delaware, Newark, DE, January 8, 2016.

- Magic Arms for the World, Advisory Board Member, 2014-
- Adapted Physical Education Provider: Lead physical education groups for students with typical development and with a variety of special needs in kindergarten through 4th grade at the Newark Center for Creative Learning, 2012-
- Invited Interview: Blog aimed at translating child development research for the general public, <http://gestattenmupf.com/>, written by Lilith Scheer, December 2013
- Member: American Physical Therapy Association Section on Pediatrics Research Committee, 2012- ,
 - Research Forum Subcommittee, Chair (2016-)
 - Pediatric Physical Therapy Researcher Development Subcommittee (2015-)
 - Research Summit IV Planning & Dissemination Subcommittee (2013-17)
 - Knowledge Translation Subcommittee (2012-13)
- Participant: National Science Foundation Workshop on “Data Coding, Analysis, Archiving, and Sharing for Open Collaboration: From OpenSHAPA to Open Data Sharing”, September 15-16, 2011
- University of Delaware Service Learning Coordinator for the John R. Downes Elementary School Coordinated Approach to Child Health (CATCH) After School Program for Children at Risk, 2010-2012
- Manuscript Reviewer:
 - Child Development
 - Infant Behavior and Development (2 reviews in 2014; 2 reviews in 2015)
 - Physical Therapy (2 reviews in 2014; 3 reviews in 2015; 1 review in 2016)
 - Developmental Science (2 reviews in 2015)
 - Motor Control
 - Motor Behavior
 - Pediatric Physical Therapy (2 reviews in 2014; 1 review in 2015)
 - Behavior Research Methods
 - Journal of Cross-Cultural Psychology (2 reviews in 2014)
 - Developmental Medicine & Child Neurology (1 review in 2016)
 - Research in Developmental Disabilities (1 review in 2015)
 - Developmental Psychology (1 review in 2014)
 - Early Human Development (1 review in 2014)
 - Developmental Science
- Content Reviewer PTNow, 2013-14: reviewed content on cerebral palsy, Down syndrome, and Duchenne muscular dystrophy
- Invited Participant: The APTA Section on Pediatrics Research Summit II on Early Intervention for Children with or at Risk for Physical Disabilities, 2007
- Graduate Student Representative: Graduate Program in Biomechanics & Movement Science, The University of Delaware, 2002-2003

Mentoring

- I am involved in ongoing mentoring of undergraduate and graduate students participating in experiences including independent study and research courses, entrepreneurial courses, summer scholar programs, winter clinical immersion courses, engineering senior design courses, and volunteering.
- Fulbright Mentor:
 - Klayton Galante, PhD, Associate Professor, Faculty of Health Sciences, Federal University of Rio Grande do Norte, Santa Cruz, Brazil, September-December 2017
- Post-doctoral Advisor:

- Iryna Babik, PhD (May 2014-), Society for Research in Child Development 2017 Early Career Travel Award (\$500)
- Andrea Baraldi Cunha (June 2016-)
- Primary Graduate Advisor:
 - Ben Greenspan, MS (September 2015-)
 - Martha Hall, PhD (September 2015-)
- Graduate Advisor:
 - Samantha Ross, PhD student with Sam Logan, PhD, Oregon State University, “Let’s Go! Pediatric Mobility Devices: A Collaborative Project, Summer Intern (2016) via Travel Award from the President’s Commission on the Status of Women
- Graduate Thesis Committee:
 - Mandy Kaur, PhD (Advisor Bhat, 2016)

Patents

- Provisional Patent: PlaySkin™ Garment-Based Movement Assisting Device, 12/11/2013
- Provisional Patent: Conductive Thread Stitched Stretch Sensor, 06/01/2016, Docket Number UD16-45, Serial Number 62/343,899

Special Skills

- Trained relational database developer using Filemaker Pro
- Basic fluency in Spanish
- Basic fluency in English sign language

In the News

- Learning to Move With Move To Learn (2017). *Distillations*, Chemical Heritage Foundation. <https://www.chemheritage.org/distillations/blog/learning-to-move-with-move-to-learn>
- Super Suits: William’s Robot Shirt (2016, Dec 1st). *University of Delaware College of Health Sciences YouTube Channel*. <https://www.youtube.com/watch?v=35-Xp6e-fm0>
- NIH Showcases ‘Super Suit’ at White House Fashion Show (2016). *NIH Record: Briefs, Vol. LXVIII, No. 22*. https://nihrecord.nih.gov/newsletters/2016/10_21_2016/briefs.htm
- Functional Fashions for People with Disabilities (2016). *Win’s Women of Wisdom, Episode 75*. <http://www.stitcher.com/podcast/wins-women-of-wisdom/e/michele-lobo-e-75-s-2-44093676>
- DIY Super Suits with Michele Lobo of Sew Baby Sew (2016). *PT Pintcast, Episode 80*. <http://blog.ptpintcast.com/ep-80-diy-super-suits-with-michele-lobo-of-sew-baby-sew/>
- ‘Super Suits’ may aid children with developmental delays (2016). *Healio*, <http://www.healio.com/orthotics-prosthetics/health-care-updates/news/online/%7B5fd781f4-5819-4530-8eb0-8082b329d305%7D/super-suits-may-aid-children-with-developmental-delays>
- Researchers combat developmental delays with ‘super suits’ (2016). *Science Daily*, <https://www.sciencedaily.com/releases/2016/05/160517141307.htm>
- Developmental delays will soon be combated with newly designed ‘Super Suits’ (2016). *Med India*, <http://www.medindia.net/news/developmental-delays-will-soon-be-combated-with-newly-designed-super-suits-160019-1.htm>
- Developmental delay treatment breakthrough: ‘Super Suits’ to combat kids’ developmental delays (2016). *Parent Herald*,

<http://www.parentherald.com/articles/44432/20160518/developmental-delay-treatment-breakthrough-super-suits-combat-kids-delays.htm>

- Super Suits: UD researchers combat developmental delays with fashionable exoskeletons (2016). *UDaily*. <http://www.udel.edu/udaily/2016/may/super-suits-051616.html>
- Earleville girl gets runway debut (2016). *Cecil Whig*. http://www.cecildaily.com/news/local_news/article_10234a47-2afa-5a4d-8700-01270127c615.html
- Designer mixes fashion with technology to help disabled children (2016). *The Review*, <http://udreview.com/16448-2/>
- Building functional, fashionable exoskeletons for babies (2016). *WHYY's The Pulse*. <http://www.newsworks.org/index.php/local/the-pulse/89674-building-functional-fashionable-exoskeletons-for-babies>
- UD researchers develop fashionable baby exoskeletons (2015). *WDDE Delaware Public Media*. <http://delawarepublic.org/post/ud-researchers-develop-fashionable-baby-exoskeletons#stream/0>
- UD researchers test intervention program for infants with poor motor skills (2015). *WDDE Delaware Public Media*. <http://delawarepublic.org/post/ud-researchers-test-intervention-program-infants-poor-motor-skills>
- Reaching to learn, learning to reach (2015). *UDaily*. <http://www.udel.edu/udaily/2015/jun/infants-special-needs-060915.html>
- GoBabyGo creates FUNctional Fashion for special needs children (2015). *YouTube*. <https://www.youtube.com/watch?v=cslbDTzCLsl>
- Designs for Healthy Living (2015). *UDaily*. <http://www.udel.edu/udaily/2015/apr/designs-healthy-living-042015.html>
- Designing for health: Interdisciplinary projects yield new engineering designs for better diagnostics, treatment (2015). *UDaily*. <http://www.udel.edu/udaily/2015/jan/engineering-health-010715.html>
- Wearable tech: Supporting limbs, easing Parkinson's (January 16, 2015). *Delaware News Journal*. <http://www.delawareonline.com/story/life/2015/01/15/wearable-tech-supporting-limbs-easing-parkinsons/21826073/>
- Exoskeleton makes moving a bit easier (2014). *Delaware News Journal*. <http://www.delawareonline.com/story/news/health/2014/02/03/exoskeleton-makes-moving-a-bit-easier-/5189895/>
- A stellar resource for students, patients. (2014) *University of Delaware Messenger*, 22(1), 6-7.
- Babies learn while on the go. (2014) *University of Delaware Messenger*, 22(1), 37.
- P-WREX+: Upper extremity exoskeleton to be modified for infants (2014). *UDaily*. <http://www.udel.edu/udaily/2014/dec/infants-exoskeleton-121613.html>

Important Links

- Playskin Lift™ Exoskeletal Garment Do-It-Yourself Manual

Exhibitions

- Playskin Lift™ expressive & fashionable exoskeletal garment for a 6-year-old girl (July 29, 2016 – March 12, 2017). *(dis)ABLED Beauty Exhibit*, Kent State, OH, <https://www.kent.edu/museum/event/disabled-beauty>
- Playskin Lift™: fashion-forward medical device design (October 2016 – May 2017). *Second Skin Exhibit*, Chemical Heritage Museum, Philadelphia, PA, <http://www.chemheritage.org/visit/museum/exhibits/index.aspx>

