CURRICULUM VITAE

GELSY TORRES-OVIEDO, Ph.D.
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CONTACT INFORMATION

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EDUCATION AND TRAINING

Dates Attended	Institution	Degree Received (Year)	Major (Advisor)
2001-2007	Georgia Institute of Technology-Emory University	PhD (2007)	Biomedical Engineering (Prof. Lena H. Ting)
1999-2001	The University of Texas at Austin	B.S. (2001)	Physics

PROFESSIONAL EXPERIENCE

Years Inclusive	Organization/Institution	Rank
2020-Present	Center for the Neural Basis of Cognition	Co-director of the Program in Neural Computation
2012-Present	The University of Pittsburgh	Assistant Professor (Tenure Stream)
2007-2011	Johns Hopkins School of Medicine Kennedy Krieger Institute	Postdoctoral fellow
2001-2007	Georgia Institute of Technology-Emory University	Graduate Research Assistant
1999-2001	The University of Texas at Austin	Undergraduate Research Assistant
1997-1998	ITEMS Campus Monterrey, Mexico	

Undergraduate Research Assistant

HONORS AND AWARDS

Year Received	Award	Organization/Society
2019	NSF CAREER	National Science Foundation
2019	Early Career Award	Neural Control of Movement
2019	Invited Speaker	15th Kerniel Computational Motor Control Workshop, Be'er Sheva Israel
2018	Plenary Speaker	Motor Learning & Motor Control
2010	Student Travel Award	World Congress of Biomechanics
2010	Awarded participant	NSF ADVANCE Junior Faculty Development Workshop
2010	Hon. Ruth D. Vogel Award	Johns Hopkins University
2007	Awarded participant	NSF ADVANCE Women in STEM workshop for Emerging Faculty
2006	Howard Hughes Teacher-Scholar	ORDERS/INSPIRE program at Emory University
1999	Natural Sciences College Scholar	The University of Texas at Austin
1999	Jeannie Hunter Hackett Award	The University of Texas at Austin
1996-1999	Outstanding Scholar	ITESM Campus Monterrey

PUBLICATIONS

REFEREED PUBLICATIONS:

Relative Citation Ratio* (https://icite.od.nih.gov/analysis) (mean across all pubs.): 3.6
H-Index (as of February 2020 via Google Scholar): 14
Total Citations (as of February 2020 via Google Scholar): 1812
PUBLISHED

1. Aucie Y, Zhang X, Sargent R., and **Torres-Oviedo**. Motorized shoes induce robust sensorimotor adaptation in walking. *Frontiers in Neuroscience, 2020 (in press)*
2.
3. de Kam D*., Iturralde P. A*. and **Torres-Oviedo, G.** Cerebral contribution to the execution, but not recalibration, of motor commands in a novel walking environment. *eNeuro,* Feb 24;7(1). pii: ENEURO.0493-19.2020. doi: 10.1523/ENEURO.0493-19.2020. Print 2020 Jan/Feb.

4. Sombric C.J. and **Torres-Oviedo, G.** Split-Belt walking induces changes in active, but not passive, perception of step length. *Scientific Reports -Nature.* 2019 Nov 11;9(1):16442. doi: 10.1038/s41598-019-52860-9.

5. Gonzalez-Rubio, M., Velazques NF and **Torres-Oviedo**. Explicit control of step timing during split-belt walking reveals interdependent recalibration of movements in space and time. *Frontiers Human Neuroscience.* 2019 Jul 3;13:207. doi: 10.3389/fnhum.2019.00207. eCollection 2019

6. Iturralde P. A. and **Torres-Oviedo G.** (2019) Corrective muscle activity reveals subject-specific sensorimotor recalibration. *eNeuro.* May 1;6(2). pii: ENEURO.0358-18.2019.

7. Sombric C.J., Calvert J.S., and **Torres-Oviedo, G.** (2019) Large propulsion demands increase locomotor learning at the expense of step length symmetry *Frontiers in Physiology.* Feb 8;10:60.

8. de Kam D., Geurts A. C., Weerdesteyn V. **Torres-Oviedo G.** (2018) Direction-specific instability post-stroke is associated to deficient motor modules for balance control. *Neurorehabilitation and Neural Repair* 32(6-7) 655–66.

9. Sombric C. J., Harker H. M., Sparto P. J., and **Torres-Oviedo, G.** (2017) Explicit action switching interferes with the context-specificity of motor memories in older adults. *Frontiers in Aging Neuroscience* Mar 6; 9:40

10. Finley J., Long A., Bastian A.J., and **Torres-Oviedo, G.** (2015) Spatial and Temporal Contribute to Step Length Asymmetry During Split-Belt Adaptation and Hemiparetic Gait. *Neurorehabilitation and Neural Repair.* Sep;29(8):786-95.

11. Malone, L. A., Bastian, A. J., and **Torres-Oviedo, G.** (2012). How does the motor system correct for errors in time and space during locomotor adaptation? *Journal of Neurophysiology*. 108(2):672-83.

12. Chvatal SA, Macpherson JM, **Torres-Oviedo G**, Ting LH. (2013) Absence of postural muscle synergies for balance following spinal cord transection. *Journal of Neurophysiology*. 2013 Sep;110(6):1301-10

13. **Torres-Oviedo G.** and Bastian A.J. (2012). Natural error patterns enable transfer of motor learning to novel contexts. *Journal of Neurophysiology.* 107(1):346-56.

14. **Torres-Oviedo G.,** Vasudevan E.V.L., Malone L.A., and Bastian A.J. (2011). Locomotor adaptation. Enhancing Performance for Action and Perception. *Progress in Brain Research.* 191:65-75.

15. Safavynia A.S., **Torres-Oviedo, G.,** and Ting H.L. (2011). Muscle synergies: implications for clinical evaluation and rehabilitation of movement. *Topics in Spinal Cord Injury Rehabilitation.* 17(1):16-24.

16. Chavatal S.A., **Torres-Oviedo G.,** Safavynia A.S., and Ting H.L. (2011). Common muscle synergies for control of center of mass and force in non-stepping and stepping postural behaviors. *Journal of Neurophysiology.* 106(2):999-1015

17. Vasudevan E.V.L, **Torres-Oviedo G.,** Morton S.M., Yang J.F., Bastian A.J. (2011). Younger is not always better: development of locomotor adaptation from childhood to adulthood. *Journal of Neuroscience.* 23;31(8):3055-65

18. **Torres-Oviedo G.** and Bastian A.J. (2010). Seeing is believing: effects of visual contextual cues on learning and transfer of locomotor adaptation. *Journal of Neuroscience.* 30(50):17015-22

19. **Torres-Oviedo G.** and Ting L.H. (2010). Subject-specific muscle synergies in human balance control are consistent across different biomechanical contexts. *Journal of Neurophysiology* 103(6):3084-98

20. **Torres-Oviedo G.** and Ting L.H. (2007). Muscle synergies characterizing human postural responses. *Journal of Neurophysiology* 98(4):2144-2156.

21. **Torres-Oviedo G**, Macpherson JM, Ting LH. (2006). Muscle synergy organization is robust across a variety of postural perturbations. *Journal of Neurophysiology.* 96:1530-1546.

22. Lin A.L., Mann B.A., **Torres-Oviedo G.**, Lincoln B., Käs J., and Swinney H. L. (2004). Localization and Extinction of Bacterial Populations under Inhomogeneous Growth Conditions. *Biophysical Journal* 87: 75-80.

UNDER REVIEW (PREPRINT AVAILABLE IN BIORXIV)

23. Mariscal D.M., Iturralde P.A. and **Torres-Oviedo, G.** Altering attention during split-belt walking increases the generalization of motor memories across walking contexts. https://doi.org/10.1101/470930 *(Journal of Neurophysiology*, *3th review, with minor reviews)*

24. Sombric C.J and **Torres-Oviedo, G.** Augmenting propulsion demands during split-belt walking increases locomotor adaptation in the asymmetric motor system. *(Journal of Neural Engineering and Rehabilitation*, *3th review, with minor reviews)*

25. Nguyen TM, Jackson RW, Aucie Y, de Kam D, Collins SH, and **Torres-Oviedo, G.** Self-selected step length asymmetry is not explained by energy cost minimization in individuals with chronic stroke. (*Journal of Neural Engineering and Rehabilitation*, *under review.)*

IN PREPARATION

25. Iturralde PA and **Torres-Oviedo G.** High-human acuity of speed asymmetry during walking.

26. de Kam D, Sting W, and **Torres-Oviedo G.** The impact of error size and direction in the generalization of locomotor adaptation

27. Sombric CJ and **Torres-Oviedo G**, Strategic cognitive action selection facilitates selection of context-specific motor memories in older adults.

28. Iturralde PA and **Torres-Oviedo G,** Tracking the adaptation of perceived speed asymmetry during walking.

29. Mariscal-Olivares DM., Sombric C.J., Harker H. M., Sparto P.J., and Torres-Oviedo, G. Walking speed and age modulate generalization of walking in older adults.

30. Iturralde PA and **Torres-Oviedo G,** Maximum-likelihood estimation of learning processes underlying the adaptation of muscle activity during split-belt walking.

31. **Torres-Oviedo G,**. Mariscal-Olivares DM, Vasudevan E.V.L., Malone L.A., and Bastian A.J., Context-specificity in motor learning is developed during childhood

32. Iturralde PA and **Torres-Oviedo G,** Low-dimensionality in EMG explained by spectral features of muscle signals, rather than neural constraints.

33. Salatiello AS, Mariscal-Olivares DM, and **Torres-Oviedo G,** Unifying model of savings and interference in locomotor adaptation.

BOOK CHAPTERS:

1. Vasudevan E.V.L, Bastian A.J., and **Torres-Oviedo G.** (2010). Emerging principles in the learning and generalization of new walking patterns. Motor Control: Theories, Experiments, and Applications. Frederic Danion and Mark Latash. Oxford University Press.

PhD DISSERTATION:

Torres-Oviedo, G. Academic Advisor: Lena H. Ting, PhD.; Committee Members: T. Richard Nichols, PhD.; Robert H. Lee, PhD; Young-Hui Chang, PhD., Steve L. Wolf, MD, PhD.
Robust Muscle Synergies for Postural Control, Defended on May 2007, The Georgia Institute of Technology/Emory University, Department of Biomedical Engineering.
EDT URL: http://hdl.handle.net/1853/22691

CONFERENCE PROCEEDINGS:

1. Ting L.H. and **Torres-Oviedo G.,** Muscle synergies simplifying neural control of posture. *FASEB Journal*, 2007 Experimental Biology Annual Meeting on April 28th-May 2nd, 2007; 21(5):A463-A465

2. **Torres-Oviedo G.,** Macpherson J.M., Ting L.H. Muscle synergies robustly control forces for balance control. *Neural Engineering 2005 Conference Proceedings. 2nd International IEEE EMBS* Conference on March 16-19, 2005: 190-191

PEER-REVIEWED ABSTRACTS (last 5 years):

Podium presentations:

1. **Torres-Oviedo G*** (2019) *Sensorimotor adaptation post-stroke through the lens of muscle activity.* Presentation as part of the symposium: "Balance, gait and falls post stroke: steps towards a better future" 27th World Congress of the International Society of Posture and Gait. Edinburgh, Scotland. Podium Presentation

2. **Torres-Oviedo G*** (2018) *The importance of practice condition on the generalization of motor learning.* Presentation as part of the workshop: "The role of practice on motor learning: from motor adaptation to skill" in Neural Control of Movement Annual Conference, Santa Fe, NM. Podium Presentation

3. **Torres-Oviedo G*** (2018) *Low-dimensionality in EMG data reflects (task dependent) spectral features of muscle signals, rather than neural constraints.* Presentation as part of the workshop: "MODULARITY AND COMPOSITIONALITY in MOTOR CONTROL: ISSUES AND PERSPECTIVE" in Satellite of Neural Control of Movement Annual Conference, Santa Fe, NM. Podium Presentation

4. Sombric C.J.*, Calvert J.S., and **Torres-Oviedo, G** (2018). *Propulsion forces, rather than step length symmetry, regulate locomotor learning: implications for post-stroke gait rehabilitation*. World Congress of Biomechanics, Dublin, Ireland. Podium Presentation

5. Nguyen*, Jackson, Aucie, **Torres-Oviedo G**, Collins (2017). *Characterizing the relationship between step length asymmetry and metabolic rate during locomotion in post-stroke individuals*, Dynamic Walking, Stockholm Podium Presentation

6. de Kam D.*, and **Torres-Oviedo, G** (2017). *Muscle synergies for balance control in post-stroke patients.* International Society for Posture and Gait. Pensacola, Florida. Podium Presentation

7. **Torres-Oviedo, G*.** (2016). *Lack of plasticity in muscle synergies post-stroke.* ISEK Conference. Chicago, IL. Podium Presentation

Poster presentations

8. de Kam D.*, String W., and **Torres-Oviedo G.** (2019), Large errors increase the generalization of locomotor learning from treadmill to over ground walking. Progress in Motor Control. Amsterdam, Netherlands. Poster Presentation

9. de Kam D.*, String W., and **Torres-Oviedo G.** (2019), Large errors upon introduction vs. removal of the training environment have distinct effect on the generalization of locomotor adaptation. 27th World Congress of the International Society of Posture and Gait. Edinburgh, Scotland. Poster Presentation

10. Sombric C.J.* and Torres-Oviedo (2019) Large propulsion demands increase locomotor learning at the expense of step length symmetry, Dynamic Walking Conference, Canmore, Canada, Poster Presentation

11. **Torres-Oviedo G.*,** Mariscal DM., Salatiello A. (2018) Unifying model of savings, interference, and generalization of motor learning in locomotion. Society for Neuroscience. San Diego, C. Poster Presentation

12. de Kam D.*, String W., and **Torres-Oviedo G.** (2018), Large errors increase the generalization of locomotor learning from treadmill to over ground walking. Society for Neuroscience. San Diego, C. Poster Presentation

13. Sombric C.J.*, Gonzalez-Rubio M. and **Torres-Oviedo, G** (2018). Changes in perception of step length asymmetry following split-belt walking. Society for Neuroscience. San Diego, CA. Poster Presentation

14. Sombric C.J.*, Gonzalez-Rubio M. and **Torres-Oviedo, G** (2018). Changes in perception of step length asymmetry following split-belt walking. Motor Learning Workshop, Pittsburgh PA. Poster Presentation

15. de Kam D.*, String W., and **Torres-Oviedo G.** (2018), Large errors increase the generalization of locomotor learning from treadmill to over ground walking. Motor Learning Workshop, Pittsburgh PA. Poster Presentation

16. Aucie Y.*, Zhang X, Sargent R., and **Torres-Oviedo G.** (2018). Innovative shoes induce locomotor learning correcting step asymmetry. Motor Learning Workshop, Pittsburgh PA. Poster Presentation

17. Mariscal DM*, Salatiello A and **Torres-Oviedo G.** (2018). Interference between motor memories acquired during split-belt walking. Motor Learning Workshop, Pittsburgh PA. Poster Presentation

18. Aucie Y.*, Zhang X, Sargent R., and **Torres-Oviedo G.** (2017). Innovative shoes induce locomotor learning correcting step asymmetry. Society for Neuroscience. Washington, DC. Poster Presentation

19. Salatiello A and **Torres-Oviedo G*.** (2017). Interference between motor memories acquired during split-belt walking. Society for Neuroscience. Washington, DC. Poster Presentation

20. Song S.*, Aucie Y., and **Torres-Oviedo G.** (2017) Can split-belt treadmill walking be explained with a reflex-based model? Society for Neuroscience. Washington, DC. Poster Presentation

21. Iturralde P. A.* and **Torres-Oviedo G**., (2017) The adaptation of muscle activity during split-belt walking reveals age-dependent decline of motor learning. 3rd Brain Day Conference, Pittsburgh PA. Poster Presentation

22. Aucie Y*, Zhang X, Sargent R., and **Torres-Oviedo**. (2017) Innovative shoes induce locomotor learning correcting step asymmetry. 3rd Brain Day Conference, Pittsburgh PA. Poster Presentation

23. Salatiello A* and **Torres-Oviedo**. (2017) Interference between motor memories acquired during split-belt walking. 3rd Brain Day Conference, Pittsburgh PA. Poster Presentation

24. Aucie Y.*, Zhang X, Sargent R., and **Torres-Oviedo G.** (2017). Innovative shoes induce locomotor learning correcting step asymmetry. Rehabilitation Institute Research Day. Pittsburgh, PA. (FIRST PLACE AWARD) Poster Presentation

25. Velazques NF* and **Torres-Oviedo G.** (2017). Explicit control of step timing during split-belt walking. Rehabilitation Institute Research Day. Pittsburgh, PA. Poster Presentation

26. Salatiello A* and **Torres-Oviedo G.** (2017). Evidence of interference between motor memories acquired during split-belt walking. Rehabilitation Institute Research Day. Pittsburgh, PA. Poster Presentation

27. Aucie Y., Zhang X, Sargent R., and **Torres-Oviedo G.*** (2017). Novel approach to study locomotor learning over ground. 27th Meeting of the Neural Control of Movement. Dublin, Ireland. Poster Presentation

28. Sombric C.J.* and **Torres-Oviedo, G** (2016). Changes in perception of step length asymmetry following split-belt walking. Society for Neuroscience. San Diego, CA. Poster Presentation

29. Iturralde P. A.* and **Torres-Oviedo, G** (2016). Lack of plasticity of muscle synergies post-stroke. Society for Neuroscience. San Diego, CA. Poster Presentation

30. Iturralde P. A.*, de Kam D., and **Torres-Oviedo, G** (2016). Remaining plasticity of muscle coordination for walking is observed in chronic post-stroke patients. Neural Control of Movement. Jamaica. Poster Presentation

INVITED LECTURES (last 5 years)

1. **Torres-Oviedo G** (2020) *Studies in Sensorimotor Adaptation to Advance Motor Rehabilitation.*, Graduate Seminar Series, University of Florida, Geinsville, FL

2. **Torres-Oviedo G** (2019) *Studies in Sensorimotor Adaptation to Advance Motor Rehabilitation.* Ground Rounds, Medical University South Carolina, Charleston, SC

3. **Torres-Oviedo G** (2019) *Studies in Sensorimotor Adaptation to Advance Motor Rehabilitation.* BIOMS seminar speaker, University of Delaware, Newark, DE

4. **Torres-Oviedo G** (2019) *Studies in Sensorimotor Adaptation to Advance Motor Rehabilitation Post-stroke.*

Keynote speaker "Early Career Award", Neural Control of Movement Annual Conference, Toyama Japan

5. **Torres-Oviedo G** (2019) *Sensorimotor Adaptation Through the lens of Muscle Activity.* Action Club, Penn State University, Pennsylvania

6. **Torres-Oviedo G** (2019) *Corrective muscle responses reveal cerebral-independent sensorimotor adaptation.* Presenter at 15th Kerniel Computational Motor Control Workshop, Be'er Sheva Israel

7. **Torres-Oviedo G** (2018) *Sensorimotor Adaptation Through the lens of Muscle Activity.* Plenary speaker to the SfN satellite in advances of motor learning and motor control. San Diego, CA

8. **Torres-Oviedo G** (2018) *Feedback-generated muscle activity reveals aging- and cerebral-dependency of sensorimotor adaptation.* Neural-learning Workshop. Pittsburgh PA

9. **Torres-Oviedo,** G. Aucie Y, Zhang X, Sargent JR (2018). *Motorized shoes induce locomotor learning over ground.* Locomotor Seminar Series. Carnegie Mellon University, Pittsburgh PA

10. Sombric C.J., Calvert J.S., and **Torres-Oviedo, G** (2018). *Propulsion forces, rather than step length symmetry, regulate locomotor learning: implications for post-stroke gait rehabilitation.* Locomotor Seminar Series. Carnegie Mellon University, Pittsburgh PA

11. Iturralde P. A. and **Torres-Oviedo G.,** (2017) *The adaptation of muscle activity during split-belt walking reveals age-dependent decline of motor learning.* Scabby Seminar, Carnegie Mellon University, Pittsburgh PA

12. **Torres-Oviedo, G.,** (2017). *Adaptation of muscle activity reveals post-stroke patients and controls have same expectations of the world but different motor strategies.* Invited speaker at the Sensorimotor Seminar, Department of Biomedical Engineering at Johns Hopkins University, Baltimore, MD.

13. **Torres-Oviedo G** (2017). *Studies in locomotor learning towards improving gait rehabilitation post-stroke.* Department of Neurobiology, The University of Pittsburgh. Pittsburgh PA

14. **Torres-Oviedo, G**. (2016). *Lack of plasticity in muscle synergies post-stroke.* Bipedal locomotor Seminar. Carnegie Mellon University, Pittsburgh PA.

15. **Torres-Oviedo, G.,** (2016). *Understanding locomotor learning to advance gait rehabilitation post-stroke.* Invited speaker at the Seminar Series in the Integrative Physiology Department at the University of Colorado, Boulder, CO.

RESEARCH GRANTS

PEER-REVIEWED:

CURRENT

NSF 1847891 Role- PI 2019-2024
Title: “CAREER: Novel human-in-the loop approach to increase locomotor learning and URM scientists”
These studies are designed to develop a closed-loop controller for investigating motor learning under the perception of more realistic situations

Pepper Center Development Grant Role- PI 2020-2022
NIH/NIA
Title: “Increasing gait automaticity in older adults by exploiting locomotor adaptation”
These studies are designed to study the changes in gait automaticity in older adults following split-belt walking

NSF 1535036 Role- PI 2015-2020
Title: “The role of naturalistic movements in the generalization of locomotor learning”
These studies are designed to investigate the extent to which the generalization of locomotor learning is mediated by the statistics of muscle coordination during natural walking.

NIH/NINDS Role- PI 2016-2020
K01 NS092785-01A1
Title: “Computational framework identifying factors enhancing the generalization of locomotor learning”
In these series of studies, we are developing computational models to understand the effect of error size and walking speed on the generalization of locomotor learning

COMPLETED

American Heart Association Role- PI 2015-2018
Title: “Understanding Patient-Specific Deficits Causing Step Asymmetry Post-Stroke: A Step Toward Personalizing Rehabilitation”
These studies are designed to characterize patient-specific deficits in their muscle coordination and their impact on step asymmetry post-stroke.

Central Research Development Role- PI 2015-2017
Title: “Robotic Gait Training that Increases Patient Engagement”
In these series of studies, we are investigating the effect of conditional assistance during locomotor learning on post-stroke gait.

NSF 1342183 Role- PI 2013-2016
Title: “BRIGE: Understanding the generalization of treadmill-assisted motor learning for gait rehabilitation after stroke”

These studies are designed to investigate the adaptation of muscle coordination during locomotor learning in subjects with and without brain lesions due to a stroke. We also evaluate how these changes in muscle coordination transfer to different walking situations.

Claude Pepper Center Role- PI 2013-2015
Title: “Understanding locomotor plasticity in older adults”
In these studies, we investigate the ability of older adults to learn a new locomotor pattern and generalize it to different walking situations.

Central Research Development Role- PI 2013-2014
Title: “Understanding what forces applied by the motor system restore walking symmetry”
In these series of studies, we are investigating the adaptation of biomechanical variables such as center of mass or joint moments during locomotor learning. We also evaluate how these variables change in response to changes in grand reaction forces.

Reaching for the Stars Foundation Role- co-PI 2008-2010
Title: "Interrelationships among quantitative measures of white matter injury, sensorimotor function, and learning profiles in children with cerebral palsy"In these experiments, we will work to understand the functional consequences in cognition, sensorimotor function and motor learning of anatomical brain lesions characterized by white matter injury. PI: Michael. V. Johnston, MD

FELLOWSHIPS AWARDED TO GRADUATE STUDENTS:

Dulce M. Mariscal (PhD Student); NSF GRFP Award	2019-2022
Marcela Gonzalez-Rubio (PhD Student); Pitt STRIVE Fellowship	2019-2021
Dulce M. Mariscal (PhD Student); Pitt STRIVE Fellowship	2017-2019
Carly J. Sombric (PhD Student); NSF GRFP Award	2015-2018
Yashar Aucie (PhD Student); TRED SysMed GAANN Program Fellowship	2016-2018
Pablo A. Iturralde (PhD Student); Fulbright Scholarship for Doctoral Students	2012-2014

RESEARCH ADVISING

POST-DOCTORAL FELLOWS:

1. Digna de Kam, PhD.
   Project: Characterization of sensorimotor adaptation after stroke
   01/2017 - 12/2018

2. Carly J. Sombric, PhD.
   Project: Characterization of sensorimotor adaptation after stroke
   05/2018 - present

Ph.D. STUDENTS:

GRADUATED

1. Carly J. Sombric, PhD. Department of Bioengineering, University of Pittsburgh, *Effects of Biomechanical and Cognitive Factors on Locomotor Learning.* August 2013- April 2019. (Primary Advisor)
   * Received NSF Graduate Research Fellowship Program
   * Received Bevier Swanson School of Engineering Award
   - Currently applying for industry positions

2. Pablo A. Iturralde, MS, PhD. Department of Bioengineering, University of Pittsburgh, *Computational Models of Motor and Perceptual Adaptation on A Split-Belt Treadmill.* August 2012- November 2019. (Primary Advisor)
   * Received Fulbright Scholarship
   - Currently Faculty at Universidad Católica del Uruguay

CURRENT

3. Yashar Aucie. Department of Bioengineering, University of Pittsburgh, *Biomechanical factors that impact the generalization of locomotor adaptation.* August 2015- present. (Primary Advisor)
   * Received TRED SysMed GAANN Program Fellowship
   * Received Bevier Swanson School of Engineering Award
   - Defended his research proposal

4. Dulce M. Mariscal. Department of Bioengineering, University of Pittsburgh, *Neural Structures Underlying the Adaptation of Motor Patters.* August 2017- present. (Primary Advisor)
   * Received NSF Graduate Research Fellowship Program
   * Received the Pitt STRIVE fellowship
   - Passed her qualifying exam to the PhD candidacy

5. Marcela Gonazalez-Rubio. Department of Bioengineering, University of Pittsburgh, *Effects of Biomechanical and Cognitive Factors on Locomotor Learning.* May 2019- present. (Primary Advisor)
   * Received the Pitt STRIVE fellowship

MASTERS STUDENTS:

GRADUATED

1. Nicolas F. Velasquez. Department of Mechanical Engineering and Material Sciences, University of Pittsburgh, *Explicit Control of Step Timing During Split-Belts Walking.* Aug 2015- Dec 2016. (Primary Advisor)
   - Currently working at Smith&Nephew Robotics, Pittsburgh PA

UNDERGRADUATE TRAINEES:

1. Joshua Poravanthattil (University of Pittsburgh, Bioengineering, ’23)
2. Samir Sherlekar (University of Pittsburgh, Computer Science, ’21)
3. Megan Thorbahn (University of Pittsburgh, Neuroscience, ’20)
4. Madeline Hobbs (University of Pittsburgh, Bioengineering, ’19)
5. Richard Hollenbach (University of Pittsburgh, Mechanical Engineering and Material Science, ’18)
6. Erin N. Yingling (University of Pittsburgh, Bioengineering, ’17)
7. Michelle E. Botyrius (University of Pittsburgh, Bioengineering, ’16)
8. Jonathan Calvert (University of Pittsburgh, Bioengineering, ’15)
9. Harrison M. Harker (University of Pittsburgh, Bioengineering, ’15)
10. Thomas Rotella (University of Pittsburgh, Bioengineering. ’14)

THESIS COMMITTEES:

1. Chris Ayers, Department of Bioengineering, University of Pittsburgh (Primary Advisor- Dr. Douglas Weber)
2. Matthew Bauman. Department of Bioengineering, University of Pittsburgh (Primary Advisor- Dr. Douglas Weber)
3. Kyra Kane. Department of Physical Therapy, College of Kinesiology, University of Saskatchewan (Primary Advisor- Dr. Kristin Musselman)

4. Rachel Jackson. Department of Mechanical Engineering, Carnegie Mellon University (Primary Advisor- Dr. Steven H. Collins)

5. Katrina Nguyen. Department of Biomedical Engineering, University of Pittsburgh. (Primary Advisor- Dr. Aryn Gittis and Dr. Steve Chase)

PROFESSIONAL SERVICE ACTIVITIES

DEPARTMENT, SCHOOL, UNIVERSITY:

Undergraduate Academic Advisor, Department of Bioengineering	(2012 to Present)
Leader in the development of Human Movement Laboratory formed between SSOE and SHRS at the University of Pittsburgh	(2012-2018)
Contributor to creating the DPT/PhD program, Department of Bioengineering and Department of Physical Therapy	(2012-2014)
Undergraduate Academic Advising, Department of Bioengineering	(2012-present)
Faculty member executing qualifying exams in the Neural Engineering and Biomechanics tracks, Department of Bioengineering	(2013-present)
Faculty Search Committee Member, Department of Bioengineering	(2019)
Faculty Search Committee Member, Department of Physical Therapy	(2015)
Faculty Search Committee Member, Department of Neurology	(2015-2017)
Faculty Member in Graduate Admissions Committee, Department of Neuroscience	(2015-2017)

TRAINING GRANTS PARTICIPATION:

Years Inclusive	Committee	Position/Positions Held
2016-Present	Pitt STRIVE, NSF, Alliances for Graduate Education and the Professoriate-Knowledge Adoption and Translation: Transition to the Doctorate by Adaptable Engagement	Mentor

2019-Present	NIH/NIMH Bioengineering in Psychiatry Training Program	Training Faculty
2017-Present	NIH/NINDS Behavioral Brain (B2) Research Training Program	Training Faculty
2015-Present	NIH/NINDS T32 The Neurobiology of Neurological Disease	Executive Committee

CONFERENCES ORGANIZED OR CHAIRED:

2019	"*Complex material properties of muscle: Artifacts or features?*", Society for Neural Control of Movement Annual Meeting	Session Chair
2018	*"Fast but smart enough to teach: rapid sensory feedback to guide motor learning,"* Society for Neural Control of Movement Annual Meeting	Session Chair
2013	*"Simple Models of Bipedal Locomotion,"* Dynamic Walking	Session Chair

SERVICE AS A REFEREE (Grants):

2018, 2017	National Science Foundation, Perception, Action, and Cognition (PAC) program	Reviewer
2015	National Science Foundation, General and Age Related Disabilities Engineering (GARDE) program	Reviewer
2012-2015	College of Reviewers for the Perception, Action, and Cognition (PAC) program in the National Science Foundation.	Reviewer
2014	Central Research Development Funds Small Grants Program University of Pittsburgh	Reviewer

EDITORIAL WORK-Journals:

2012-2015	PLOS in Computational Biology	Guest Associate Editor

SERVICE AS A REFEREE (Journals):

PNAS	Journal of Neuroscience,
Journal of Neurophysiology	Experimental Brain Research
Journal of Biomechanics	Frontiers in Computational Neuroscience
Journal of Motor Control	F1000Research
elife	PLOS Computational Biology
PLOS One	IEEE/Transactions on Neural Systems & Rehabilitation Engineering

MAJOR CONTRIBUTIONS TO DIVERSITY

1. Founded the Pre-PhD Research Experience at Pitt (PREP) program between The Department of Bioengineering and the University of Pittsburgh and the School of Engineering at The University of Turabo, Puerto Rico. This program gave a substantial research experience to two URM students, who subsequently enrolled in the PhD program in Bioengineering at The University of Pittsburgh. The program success was used as preliminary data for initiating Masters-to-PhD BRIDGE program proposed in NSF CAREER award

2. Research Advisor for 3 URM PhD students (2 of which are female) and 1 female engineer. All of whom have received major fellowships and/or awards.

3. Co-authored 10 (out of 12) journal articles and 33 conference abstracts with female or URM trainees since 2012.

4. Provided research internships, training, and mentorship for URM students at either high school or undergraduate level, including students from HBCU and Community Colleges

5. Participated yearly in professional development panels organized by, for example, Pitt EXCEL and Pitt STRIVE, Society of Hispanic Engineer Professionals, The SSOE Diversity Office or Society of Women Engineers.

6. SSOE Pre-PhD Training Program and Pitt STRIVE NSF Training Program Mentor

7. Moderator at 6th Annual Women in STEM Conference hosted by the University of Pittsburgh Society of Women Engineers (SWE)

8. Guest speaker in February 2009 at Ciencia 3x7 radio show promoting the dissemination of science in Mexico.

9. Guest speaker in December 2007 at Ciencia 3x7 radio show promoting the dissemination of science in Mexico.