

LEIA BERNARDI BAGESTEIRO, PhD.

Department of Kinesiology, San Francisco State University, Gym 127, 1600 Holloway Ave., San Francisco, CA 94132, USA.
Mobile: (415) 275-4580. Email: LBB@SFSU.EDU

EDUCATION

- **PhD in Biomedical Engineering.** Division of Mechanical, Medical and Aerospace Engineering. **University of Surrey**, Guildford, England, 2000. Thesis: Development of a Ground Reaction Force-measuring Treadmill for the Analysis of Prosthetic Limbs during Amputee Running. Supervisor: Dr. David Ewins.
- **MSc in Solids Mechanics – Biomechanics.** *Programa de Pós-Graduação em Engenharia Mecânica - PROMEC*. Mechanical Engineering Department, *Universidade Federal do Rio Grande do Sul (UFRGS)*, Porto Alegre, RS, Brazil, 1996. Thesis: The development of a Force Platform for the Measurement of Forces in the Assessment of Gait (*in Portuguese*). Supervisor: Dr. Alberto Tamagna.
- **BEng in Mechanical Engineering.** *UFRGS*, Porto Alegre, RS, Brazil. 1993.

PROFESSIONAL EXPERIENCE

Associate Professor, Department of Kinesiology, San Francisco State University, August/2023 – present.

Assistant Professor, Department of Kinesiology, San Francisco State University, August/2018 – July/2023.

Assistant Professor, Department of Electrical Engineering, *Universidade Federal do Rio Grande do Sul* (Brazil), June/2014 – August/2018.

Assistant Professor, Center of Engineering, Modeling and Applied Social Sciences, *Universidade Federal do ABC* (Brazil), January/2009 – June/2014.

Assistant Professor, Physical Therapy Department, *Universidade Cidade de Sao Paulo* (Brazil), August/2005 – January/2009.

Post-Doctoral Research Fellow, Movement Performance Laboratory, Neurological Institute, Columbia University Medical Center, May/2004 – December/2004.

Post-Doctoral Research Fellow, Movement Neuroscience Laboratory, Department of Kinesiology, The Pennsylvania State University, May/2001 – May/2005.

Graduate Research Fellow, Laboratory for Vibrations and Structural Dynamics, Mechanical Engineering Department, *Universidade Federal do Rio Grande do Sul* (Brazil), May/2000 – May/2001.

Graduate Research Fellow, European Institute of Health and Medical Sciences, Biomedical Engineering Group, University of Surrey (England), November/1999 – February/2000.

Lecturer, Mechanical Engineering Department, *Universidade Federal do Rio Grande do Sul* (Brazil), March/1996 – September/1996.

Research Assistant, Laboratory for Vibrations and Structural Dynamics, Mechanical Engineering Department, *Universidade Federal do Rio Grande do Sul* (Brazil), June/1994 – March/1996.

PUBLICATIONS AND RESEARCH

Authorship Denotations: * Graduate Student, **Undergraduate Student, ***Trainee.

Peer-reviewed Journal Articles

1. Bagesteiro L.B., **Tellini T., and Brown L.E. (2023). Analysis of motor characteristics of reaching movements in children with cerebral palsy. *Heliyon (Neuroscience section)*, 9(2), e13455. <<https://doi.org/10.1016/j.heliyon.2023.e13455>>
2. *Huang, M., and Bagesteiro L. B. (2022). Kinematics comparison of squat (2D vs 3D analysis) for remote learning - pilot study. *Journal of Kinesiology & Wellness*, 11, 3-14. <<https://jkw.wskw.org/index.php/jkw/article/view/100>>
3. Bagesteiro L.B., **Lima K.O. and Wang, J. (2021). Interlimb differences in visuomotor and dynamic adaptation during targeted reaching in children. *Human Movement Science*. < <https://doi.org/10.1016/j.humov.2021.102788>>
4. Bagesteiro, L. B. (2021). Practical experiential learning: a methodology approach for teaching undergraduate biomechanics. *Journal of Kinesiology & Wellness*, 9, 58-68. <<https://jkw.wskw.org/index.php/jkw/article/view/80>>
5. Bagesteiro L.B., *Balthazar R.B. and Hughes C.M.L. (2020). Movement Kinematics and Interjoint Coordination are Influenced by Target Location and Arm in 6-year-old Children. *Frontiers in Human Neuroscience*. <https://doi.org/10.3389/fnhum.2020.554378>
6. *Hua, F. Y., Santos-Galduroz, R. F., Bagesteiro, L. B., and Safons, M. P. (2019). Improvement of balance in healthy elderly after cognitive training of executive function, attention, and memory. (in Portuguese). *Interdisciplinary Studies on Aging*. 24. <https://doi.org/10.22456/2316-2171.97678>
7. *Feng, Y. H., Santos-Galduroz, R. F., *Aman, F. C. S., Rodrigues, S., Bagesteiro, L. B., and Safons, M. P. (2018). Influences of physical activity on cognition and depression in aging. (in Portuguese). *Brazilian Archives of Physical Education*. Vol. 1(1): 157-166. ISSN 2595-0096. <https://doi.org/10.20873/abef.v1i1.6179>
8. **Silva M.V. and Bagesteiro L.B. (2016). Effects of aging on interjoint coordination during arm reaching. *Research on Biomedical Engineering*. Vol. 32 (3): 223-233.
9. **Shiwa S.R., Alouche S.R. and Bagesteiro L.B. (2015) Comparative study of the effects of an unstable surface on gait of ACL post-operative patients. *Brazilian Journal of Medicine*. Vol. 72 (4): 136-140. (in Portuguese).
10. **Tellini T.B., **Lima K.O., Alouche S.R. and Bagesteiro LB. (2013). Compliant surface after ACL reconstruction and its effects on gait. *Acta Scientiarum. Health Sciences*. (Online). Vol. 35 (2): 237-242.
11. Bagesteiro L.B. (2013). Aging related responses to conflicting proprioceptive and visual information about initial position during reaching. *Brazilian Journal of Biomedical Engineering*. Vol. 29 (3): 227-241.
12. Barbara R.C.S., Freitas S.M.S.F., Bagesteiro L.B., Perracini M., and Alouche S.R. (2012) Gait characteristics of younger-old and older-old adults walking overground and on a compliant surface. *Brazilian Journal of Physical Therapy*. Vol. 16: 375-380.
13. Bagesteiro L.B., Gould D., Ewins D.J. (2011). A vertical ground reaction force-measuring treadmill for the analysis of prosthetic limbs. *Brazilian Journal of Biomedical Engineering*, Vol. 27 (1): 1-9.
14. Przybyla A., Haaland K.Y., Bagesteiro L.B., Sainburg R.L. (2011). Motor asymmetry reduction in older adults. *Neuroscience Letters*, Vol. 489: 99-104.
15. Bagesteiro L.B., Sarlegna F. and Sainburg R.L. (2006). Differential influence of vision and proprioception on control of movement distance. *Experimental Brain Research*, Vol. 171 (3): 358-370.
16. Bagesteiro L.B. and Sainburg R.L. (2005). Interlimb transfer of load compensation during rapid elbow joint movements. *Experimental Brain Research*, Vol. 161 (2): 155-165.
17. Bagesteiro L.B. and Sainburg R.L. (2003). Nondominant arm advantages in load compensation during elbow joint movements. *Journal of Neurophysiology*, Vol. 90 (3): 1503-1513.
18. Sainburg, R.L., Lateiner, J.E., Latash, M.L. and Bagesteiro, L.B. (2002). Effects of altering initial position on movement direction and extent. *Journal of Neurophysiology*, Vol. 89: 401-415.
19. Bagesteiro, L.B. and Sainburg, R.L. (2002). Handedness: Dominant arm advantages in control of limb dynamics. *Journal of Neurophysiology*, Vol. 88: 2408-2421.
20. Bagesteiro, L.B.; ***Laranja, R.A.C. and Tamagna, A. (2000). Experimental measurements of the swimming start variations. *Archives of Physiology and Biochemistry*, Vol. 108, No. 1-2, pp. 130-132.
21. Ross, J., Buckley, J.G., Bagesteiro, L.B., Luff, R., Ewins, D.J., Zahedi, M.S. (2000). Evaluation biomecanique et effet du segment jambier telescopique et rotatif "TT Pylon" sur la marche et la course des amputes du membre inferieur. *Le Journal de L'Orthopedie*, Vol. 3, (5).
22. Bagesteiro, L.B.; Hughes, S.C. and Ewins, D.J. (1999). Ground reaction force measuring-treadmill for analysis of prosthetic feet. *Medical & Biological Engineering & Computing*, Vol. 37, Suppl. 2, Part I.

23. Bagesteiro, L.B.; ***Laranja, R.A.C. and Tamagna, A. (1998). The development of a force platform: Numerical and Experimental Analysis. ASME Bioengineering Division BED, 39: 325-329.

Peer-reviewed Book Chapters

1. Bagesteiro L.B. (2021). Chapter 9: Biomechanics. In: M.J. Garver and W. Stone, editors, Practical Content for Beginning Kinesiologists (pp. 197-223). (re:MIND project) Perceivant, LLC., Indianapolis, IN.
2. Bagesteiro, L.B. Upper Arms Function and Aging (2009) In: Monica R. Perracini; Claudia M. Flo. (Org.). Funcionalidade e Envelhecimento. ("Functionality and Aging"). 1ed. Rio de Janeiro: Guanabara Koogan S.A. p. 193-209. (in Portuguese).
3. Bagesteiro, L.B. and Tamagna, A. (1998). Two direction force measurement transducers. In: S.J.Haake, editors, The Engineering of Sport. Cambridge: Blackwell Science. ISBN 0632050489. (Paper presented at the 2nd International Conference on the Engineering of Sport).

Peer-reviewed Proceedings and Presentations

Published Papers in Peer-reviewed Proceedings

1. **Hauptmann M., *Huang M., **Selly G., Bagesteiro L.B. and Quintero D. (2023) Identifying a Upper-Limb Phase-Dependent Variable under Perturbations for Powered Prosthesis Arm Control. EMBC 2023. 45th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. July 24-27, 2023, Sydney, Australia.
2. *Tosin M.C., Bagesteiro L.B. and Balbinot A. (2022) Actor-Critic Reinforcement Learning Based Algorithm for Contaminant Minimization in sEMG Movement Recognition. IEEE (Engineering in Medicine and Biology Society). pp. 3636-3639, DOI: 10.1109/EMBC48229.2022.9871412.
3. *Pedrollo G., Bagesteiro L.B., Franco A.R. and Balbinot A. (2022) Spiking Neural Networks Diagnosis of ADHD subtypes through EEG Signals Evaluation. IEEE (Engineering in Medicine and Biology Society). pp. 3166-3169, DOI: 10.1109/EMBC48229.2022.9871223.
4. *Huang M., Freitas S. and Bagesteiro L.B. (2022) Developing an Upper Limb Kinematics Database of Activities of Daily Living. IEEE (Engineering in Medicine and Biology Society). pp. 1814-1817, DOI: 10.1109/EMBC48229.2022.9871159.
5. *Tosin M.C., Bagesteiro L.B. and Balbinot A. (2021) Actor-Critic Reinforcement Learning Based Algorithm for Contaminant Type Identification in Surface Electromyography Data. IEEE (Engineering in Medicine and Biology Society - EMBC), pp. 186-189, doi: 10.1109/EMBC46164.2021.9629967.
6. *Machado J., *Tosin M.C., Bagesteiro L.B. and Balbinot A. (2020) Recurrent Neural Network for Contaminant Type Detector in Surface Electromyography Signals. IEEE (Engineering in Medicine and Biology Society - EMBC), pp. 3759-3762, doi: 10.1109/EMBC44109.2020.9175348.
7. *Tosin M.C., Bagesteiro L.B. and Balbinot A. (2020) Genetic Algorithm Application to Feature Selection in sEMG Movement Recognition with Regularized Extreme Learning Machine. IEEE (Engineering in Medicine and Biology Society - EMBC), pp. 666-669, doi: 10.1109/EMBC44109.2020.9175365.
8. **Floribal G.C., *Machado J., Bagesteiro L.B. and Balbinot A. (2022) Analysis and classification of EEG signals from passive mobilization in ICU sedated patients and non-sedated volunteers. IFMBE (International Federation for Medical and Biological Engineering - CBEB 2020) Proceedings, Vol. 83, pp. 843-847. Springer, Cham. https://doi.org/10.1007/978-3-030-70601-2_127
9. **Buzacchi S. and Bagesteiro L.B. Evaluation of a Low-Cost Accelerometry System for Analysis of Upper limbs movements. (2016). In: XXV Brazilian Congress of Biomedical Engineering - CBEB, Foz do Iguacu, Brazil. (in Portuguese). p. 400-403.
10. *Rodrigues H.M.G. and Bagesteiro L.B. Relative Interfragmentary Movement in Tibial Osteotomy: Computational Study of a New Implant. (2016). In: XXV Brazilian Congress of Biomedical Engineering - CBEB, Foz do Iguacu, Brazil. (in Portuguese). p. 408-411.
11. Nilson C.P., Bagesteiro L.B. and Balbinot A. Hand-arm Segment Movement Characterization for Amputees and Non-Amputees using Support-Vector Machine. (2016). In: XXV Brazilian Congress of Biomedical Engineering - CBEB, Foz do Iguacu, Brazil. p. 1566-1569.
12. *Rodrigues H.M.G. and Bagesteiro L.B. Stress Analysis of a New Implant for Tibial Osteotomy using Finite Elements. (2014). In: XXIV Brazilian Congress of Biomedical Engineering - CBEB, Uberlândia, Brazil. (in Portuguese). p. 609-612.
13. **Oliveira F.R., Assis N.P., Santana R.F. and Bagesteiro L.B. System for Balance Control Evaluation of Pigeons (Columba livia) after Unilateral Labirintectomy. (2014). In: XXIV Brazilian Congress of Biomedical Engineering - CBEB, Uberlândia, Brazil. (in Portuguese). p. 1378-1381.
14. *Silva ICM and Bagesteiro L.B. Changes in Muscle Activity Pattern for Hand-Arm Movements of Amputees and Non-Amputees. (2014). In: XXIV Brazilian Congress of Biomedical Engineering - CBEB, Uberlândia, Brazil. p. 2572-2575.

15. *Balthazar R.B., Silva-Amann F.C., Santos-Galduróz R.F. and Bagesteiro L.B. Interjoint coordination during reaching in 6-year-old children. (2013). In: 22nd International Congress of Mechanical Engineering - COBEM, Ribeirao Preto, Brazil.
16. **Oliveira F.R., Santana R.F. and Bagesteiro L.B. Design and testing of a balance control system in pigeons. (2012) In: XXIII Brazilian Congress of Biomedical Engineering - CBEB, Porto de Galinhas, Brazil. (in Portuguese)
17. **Marques G.S. and Bagesteiro L.B. A biorobotic model of the larynx. (2012) In: XXIII Brazilian Congress of Biomedical Engineering - CBEB, Porto de Galinhas, Brazil. (in Portuguese)
18. Bagesteiro L.B. and **Silva MV. Joints coordination during arm reaching. (2011) In: 21st International Congress of Mechanical Engineering - COBEM, Natal, Brazil.
19. Malmonge S.M., Daghestanli N.A., Bagesteiro L.B. and Tanaka H. (2010) Bioengineering as an option for post bachelor in science and technology. In: XXII Brazilian Congress of Biomedical Engineering - CBEB, Tiradentes, Brazil. (in Portuguese)
20. Bagesteiro L.B. and Sainburg R.L. (2009) Effects of Aging on Interlimb Coordination - Kinematics and Kinetics Analysis of Arm Reaching. In: 20th International Congress of Mechanical Engineering - COBEM, Gramado, Brazil.
21. Bagesteiro L.B. and Sainburg R.L. (2003) Interlimb Transfer of Load Compensation during Single-joint Movements. IEEE (Engineering in Medicine and Biology Society), Cancun, Mexico.
22. Sainburg R.L., Schaefer S. and Bagesteiro L.B. (2003) Interlimb differences in trajectory and positional control mechanisms. IEEE (Engineering in Medicine and Biology Society), Cancun, Mexico.
23. Balbinot A., Tamagna A., Araujo D. and Bagesteiro L. B. (2001). A preliminary study of the driver/seat interface to driver's shoulder transmissibility on urban buses in Porto Alegre. IX Brazilian Congress of Biomechanics, Gramado, Brazil.
24. Balbinot A., Tamagna A. and Bagesteiro L.B. (2000). A study of the vibration levels on urban buses in Porto Alegre - Brazil. 2nd International Conference on Whole-Body Vibration Injuries, Siena, Italy.
25. ***Laranja R.A.C., Bagesteiro L.B. and Tamagna A. (1997). Numerical and Experimental Analysis of a Force Platform. COBEM 97, XIV Brazilian Congress of Mechanical Engineering, Sao Paulo, Brazil. (in Portuguese)

Peer-reviewed Conference Presentations

1. Bagesteiro L.B. (2020). Practical experiential learning undergraduate biomechanics. 2020 Western Society for Kinesiology & Wellness 65th Annual - Virtual Conference. October 08-09.

Poster Presentations

1. Bagesteiro L.B., **Tellini T., and Brown L.E. (2023). Reaching in Children with Cerebral Palsy: a motor characteristics study. In: 32nd Annual Meeting of the Society for the Neural Control of Movement, Victoria, Canada.
2. Brown L.E., **Phillips M., **Quinlan S., and Bagesteiro L.B. (2023). Reaching Performance Under Stress. In: 32nd Annual Meeting of the Society for the Neural Control of Movement, Victoria, Canada.
3. *Huang C. and Bagesteiro L.B. (2021) Kinematics Comparison of Squat (2D versus 3D analysis) for Asynchronous Laboratory - A Pilot Project. In: 2021 Western Society for Kinesiology & Wellness (WSKW) Conference - Online format. October 06-08.
4. *Huang C., **Wong J. and Bagesteiro L.B. (2020). Hands-on Learning Approach in Biomechanics Lab. 34th Annual CSU, SF State Student Research Competition. (Theme: Education). San Francisco. USA. February 24.
5. Bagesteiro L.B., **Escobar N.C. and Hughes C.M.L. Muscle Activation (EMG) During One Leg Standing. (2019). In: Western Society for Physical Education of College Women - 95th Annual Conference, Pacific Grove. USA. November 21-23.
6. Bagesteiro L.B. and Brown L.E. The effect of tool-vibration on unimanual reaching. (2015). In: *Society for Neuroscience Annual Meeting*, Chicago. USA.
7. *Balthazar R.B., Silva-Amann F.C., Santos-Galduróz R.F. and Bagesteiro L.B. Reaching Coordination Analysis of 6-year-old Children. (2013). In: *XXIV Congress of the International Society of Biomechanics*, Natal, Brazil.
8. *Balthazar R.B., Silva-Amann F.C., Santos-Galduróz R.F. and Bagesteiro L.B. Children arm reaching kinematic analysis. (2013) In: *ENEBI - Brazilian Meeting in Biomechanics Engineering*, Vitoria. Brazil. (in Portuguese)
9. **Silva M.V. and Bagesteiro L.B. Joint kinetic analysis during arm reaching movements. (2011) In: *ENEBI - Brazilian Meeting in Biomechanics Engineering*, Florianopolis. Brazil. (in Portuguese)
10. **Lescura N.S., **Oliveira F.R. and Bagesteiro L.B. Low-cost system for two-dimensional movement analysis. (2010). In: *Brazilian Congress in Biomedical Engineering*, Tiradentes. Brazil. (in Portuguese)
11. **Tellini T.B. and Bagesteiro L.B. Differences in coordination during reaching movements in children with cerebral palsy. (2010). In: *First Brazilian Meeting on Brain and Cognition, BMBC*, Santo Andre, Brazil.

12. Barbara R.C.S., Alouche S.R. and Bagesteiro L.B. Unstable ground influence in elderly women gait patterns. (2010). In: *XVII Brazilian Congress in Geriatrics and Gerontology*. Belo Horizonte, Brazil. (in Portuguese)
13. *Cabral A.A.C.V. and Bagesteiro L.B. Intersegmental changes during reaching in elderly. (2010) In: *XVII Brazilian Congress in Geriatrics and Gerontology*. Belo Horizonte, Brazil. (in Portuguese)
14. ***Fajersztajn L., Sainburg R.L. and Bagesteiro L.B. Visual and inertial adaptations in normal aging. (2009) In: *Progress in Motor Control VII*, Marseille. France.
15. Bagesteiro L.B., **Lima K.O., Sainburg R.L. and ***Fajersztajn L. (2009) Interlimb differences in visual and inertial adaptations in children. In: *Society for Neuroscience Annual Meeting*, Chicago. USA.
16. Bagesteiro L.B., *Oliveira L.C. and Sainburg R.L. (2008) Effects of aging on the kinematics of handedness during arm reaching. In: *18th Annual Meeting of the Society for the Neural Control of Movement*, Naples, USA.
17. Bagesteiro L.B., *Cabral A.A.C.V. and Sainburg R.L. (2008) Motor lateralization and aging during arm reaching. In: *Society for Neuroscience Annual Meeting*, Washington. USA.
18. Cabral A.A.C.V. and Bagesteiro L.B. Aging effects in laterality during reaching. (2008) In: *I Congress IBRO/LARC of Neurosciences for Latin America, Caribbean and Iberian Peninsula*, Buzios, Brazil. (in Portuguese)
19. Bagesteiro L.B. and Sainburg R.L. (2007) Sensory conflict disrupts predictive control mechanisms in elderly, but not young subjects. In: *Society for Neuroscience Annual Meeting*, San Diego, USA.
20. *Oliveira L.C.T., Bagesteiro L.B. and Alouche S.R. (2007) Influence of the environment on posture and gait parameters after stroke. In: *Progress in Motor Control VI*, Santos, Brazil.
21. Godoi, J., Bagesteiro, L.B., Alouche, S.R. (2007) Electromyographic analysis of stroke patients' affected-limb while cycling on an arm ergometer. In: *Progress in Motor Control VI*, Santos, Brazil.
22. **Shiwa S.R., Alouche S.R. and Bagesteiro L.B. (2007) Kinematics analysis of post-surgery ACL patients during unstable gait. In: *XVII Brazilian Congress in Physical Therapy*, Sao Paulo, Brazil. (in Portuguese)
23. Alouche, S.R., *Oliveira, L.C.T. and Bagesteiro L.B. (2007) Trunk movement in stroke patients during unstable gait. In: *XVII Brazilian Congress in Physical Therapy*, Sao Paulo, Brazil. (in Portuguese)
24. *Oliveira L.C.T., Alouche S.R. and Bagesteiro L.B. (2006) Postural and gait changes in stroke patients during unstable gait. In: *InterCOBRAF*, Santos, Brazil. (in Portuguese)
25. Bagesteiro L.B. and Sainburg R.L. (2005) Age-related changes in processing of vision and proprioceptive information during single-joint movements. In: *Society for Neuroscience Annual Meeting*, Washington, USA.
26. Krakauer J.W., Bagesteiro L.B. and Mazzoni P. (2005) Inability to anticipate Arm Biomechanics contributes to reaching deficits in Mild Hemiparesis. In: *International Stroke Conference*. New Orleans, USA.
27. Bagesteiro L.B. and Sainburg R.L. (2004) Mechanisms Underlying Vision and Proprioception Contributions for Specifying Movement Extent. In: *Society for Neuroscience Annual Meeting*, San Diego, CA, USA.
28. Bagesteiro L.B., Sainburg R.L. and Mazzoni P. (2004) Differential contributions of vision and proprioception during arm reaching movements in Parkinson's disease. In: *1st International Congress on Neurosciences and Rehabilitation*, Brasilia, DF, Brazil.
29. Bagesteiro L.B. and Sainburg R.L. (2003) Interlimb Transfer of Load Compensation during elbow joint movements. In: *Society for Neuroscience Annual Meeting*, New Orleans, USA.
30. Sainburg R.L. and Bagesteiro L.B. (2003) Differential effects of vision and proprioception to specification of movement distance. In: *Society for Neuroscience Annual Meeting*, New Orleans, USA.
31. Bagesteiro L.B. and Sainburg R.L. (2002) Interlimb Differences in Kinematic and EMG Responses to Unexpected Inertial Loading in Rapid Elbow Flexion Movements. In: *Society for Neuroscience Annual Meeting*, Orlando, USA.
32. Bagesteiro L.B. (1995). Design and Manufacture of an Octagonal Dynamic Load Cell. Technical Report, DEMEC, UFRGS, Brazil. (in Portuguese)

Grants and Awards

1. NSF ADVANCE program Scholarship Hub - SF State Transforms Fellowship - Faculty Equity in STEM. 2022-2023. \$1,000.
2. NSF ADVANCE program Scholarship Hub - SF State Transforms Fellowship - Equitable Collaboration in STEM. 2021-2022. \$1,000.
3. CHSS HEERF RSCA Recovery Research Award Proposal "Upper-Limb Joint Kinematic and Kinetic Movement Estimation based on a Phase Variable". Role: PI, 12 months. 2021-2022. \$13,921.
4. CHSS Conference Travel Award (HEERF). October/2021. \$520.
5. CHSS - Faculty Travel Award. October/2019. \$1,250.

6. San Francisco State University Development of Research and Creativity (DRC) - Collaborative Grant. "Identification of a Human Phase-Dependent Variable for Upper-Limb Robot Control". Role: Co-PI (PI: David Quintero, SFSU, Mechanical Engineering), 12 months. 2020-2021. \$14,900.
7. Sao Paulo Research Foundation (FAPESP) - Young Investigator Grant in Emerging Research Institution. "Effects of aging on arm trajectory control during reaching". Role: PI, 4 years (2006-2010), (Approx. US\$180,000).
8. Brazilian National Council for Scientific and Technological Development (CNPq) research grant. "Design and Development of Load Cells for Bicycles". Role: Co-PI (PI: Alexandre Balbinot, UFRGS, Electrical Engineering), 4 years (2015-2018), (Approx. US\$69,000)

STUDENT SUPERVISION

Student Trainees Master's Dissertation:

1. Nelly Escobar. (Fall 2020 – present), Kinesiology Graduate Program. SFSU. San Francisco, CA, USA. Tentative Topic: Jump shot practice and performance in youth basketballers.
2. Mia Huang. (Spring 2020 – Fall 2021), Kinesiology Graduate Program. SFSU. San Francisco, CA, USA. "Developing an upper extremity kinematics database of activities of daily living".
3. Henry M. G. Rodrigues. (September/2013 – February/2015), Biomedical Engineering Graduate Program, *UFABC*, Santo Andre/SP. "Finite elements analysis of a new implant for tibial osteotomy".
4. Feng Yu Hua. (March/2012 – February/2014), (co-supervisor), Neuroscience and Cognition Graduate Program, *UFABC*, Santo Andre/SP. "The study of the effect of physical activity in cognitive ability".
5. Isabel C. M. da Silva. (May/2011 – July/2014), Neuroscience and Cognition Graduate Program, *UFABC*, Santo Andre/SP. "EMG activation pattern during upper arm movements in amputees".
6. Rogerio B. Balthazar. (September/2011 – November/2013), Neuroscience and Cognition Graduate Program, *UFABC*, Santo Andre/SP. "A study of upper limb motor coordination in 5-6-year-old children during reaching tasks".
7. Fabia Ammann. (September/2011 – November/2013), (co-supervisor), Neuroscience and Cognition Graduate Program, *UFABC*, Santo Andre/SP. "The study of the possible contributions of psychomotor aspects in the acquisition of reading and writing".
8. Andre A. C. V. Cabral. (March/2007 – March/2009), Physical Therapy, *UNICID*, Sao Paulo/SP. "Effects of aging in the kinematics of reaching movements".
9. Ludmila C. T. de Oliveira. (March/2006 – March/2008) (co-supervisor), Physical Therapy, *UNICID*, Sao Paulo/SP. "Motor behavior analysis of stroke patients on unstable ground".

Graduate Research Practicum:

- Lais Fajersztajn. (January/2009 – December/2009). Physical Therapy. Experimental measurements and inverse dynamics of reaching movements.
- Ludmila C. T. de Oliveira. (January/2007 – December/2007). Physical Therapy. Experimental measurement and kinematic evaluation of reaching in the elderly.

Undergraduate Mentoring:

1. Spring 2022. Boryana Chavdarova, Kaela Garber, Luigi Reyrao (Department of Kinesiology). Biomechanics of a squat: 2D and 3D processing and analysis.
2. Spring 2021. Gillian Grant, Jessica Batres, Katherine Vaccarezza (Department of Kinesiology). Biomechanical study of a squat.
3. Spring 2020. Maria Alexandra Ruiz Garcia (Department of Kinesiology). Biomechanical study of one leg balance
4. Spring 2020. Kristen Elizabeth Wan, Jared B Taylor, Jenna Marie Candelaria Capistrano, Ryota Justin Aizawa (Department of Kinesiology). Setting up a daily activities protocol for upper extremity database
5. Fall 2019. Jason Alan Wong (Department of Kinesiology). KIN 485 (Biomechanics) teaching assistant.
6. Summer – Fall 2019. Nelly Christina Escobar, Jessica Catalbas (Department of Kinesiology). Muscle activation (EMG) during one leg standing.
7. Spring 2019. Nghi (Cindy) Nguyen (Department of Kinesiology). Body sway control when standing on one leg
8. Spring 2019. Natalie Hernandez (Department of Kinesiology). Biomechanical study of one leg balance
9. (March/2017 – July/2018) Gabriel C. de Oliveira (Electrical Engineering). Inertial sensing and surface electromyography for wheelchair control.

10. (March/2016 – December/2016) Romulo B. Raffin (Electrical Engineering). Real-time DTI image corruption detection method.
11. (March/2015 – December/2015) Afonso Menegola (Electrical Engineering). Design of an automatic snoring respiratory event detector in the context of Mobile Health.
12. (March/2015 – December/2015) Sandro Buzacchi (Electrical Engineering). Evaluation of a low cost accelerometry system for upper limbs movement analysis.
13. (July/2013 – June/2014) Felipe R. de Oliveira (Biomedical Engineering). Study of the postural stability of pigeons after injury to the vestibular system.
14. (August/2012 – July/2013) Luciana A. C. Rodrigues (Biomedical Engineering). A kinematic comparison between standard and 360° bicycle handlebars.
15. (August/2011 – July/2012) Eduardo N. Papai (Bachelor in Science and Technology). Kinematics analysis of the lower body joints in healthy subjects during gait.
16. (August/2011 – July/2012) Bruno G. Livio (Neuroscience). Analysis of the energy and power parameters during arm reaching.
17. (August/2011 – July/2012) Natalia de S. Lescura (Biomedical Engineering). Implementation and testing of a low-cost 3D kinematics system for normal gait analysis.
18. (August/2011 – July/2012) Felipe R. de Oliveira (Biomedical Engineering). Design and testing of a balance control system in pigeons.
19. (August/2011 – July/2012) Ligia P. Monzi (Biomedical Engineering). Evaluation of the kinematics of reaching in children from 5 to 6 years.
20. (August/2010 – July/2011) Kalyne T. Chagas (Biomedical Engineering). Study of arm extension movement in 3 different amplitudes.
21. (August/2010 – July/2011) Marcus Vinicius da Silva (Biomedical Engineering). Joint coordination kinetic study during arm reaching.
22. (August/2010 – July/2011) Natalia de S. Lescura (Biomedical Engineering). Design of a 2D kinematics simplified system for normal gait analysis.
23. (August/2010 – July/2011) Felipe L. Reis (Biomedical Engineering). Shoulder movement range measuring systems evaluation.
24. (August/2009 – July/2010) Felipe R. de Oliveira (Biomedical Engineering). Evaluating a 2D movement analysis with low-cost cameras.
25. (August/2009 – July/2010) Natalia de S. Lescura (Biomedical Engineering). 3D and 2D movement analysis systems for evaluating healthy subjects.
26. (August/2009 – July/2010) Guilherme dos S. Marques (Biomedical Engineering). Biomechanical models and applications of the larynx.
27. (August/2008 – July/2009) Karina O. Lima. (Physical Therapy). Visual and inertial adaptations during arm reaching in children.
28. (August/2008 – July/2009) Tamires L. Tellini. (Physical Therapy). Arm reaching analysis on cerebral palsy children.
29. (August/2007 – July/2008) Karina O. Lima. (Physical Therapy). Gait kinematics modifications on ACL patients during repeated unstable walking.
30. (August/2007 – July/2008) Tamires L. Tellini. (Physical Therapy). Gait kinematics adaptation on ACL patients during repeated unstable walking.
31. (August/2006 – July/2007) Silvia R. Shiwa. (Physical Therapy). Gait kinematics and posture modifications on ACL patients during repeated unstable walking.

TEACHING EXPERIENCE

- Advanced Biomechanics (Department of Kinesiology. SFSU) Graduate level course. (Spring 2020 – present).
- Computer Applications in Kinesiology (Department of Kinesiology. SFSU) Upper division undergraduate course. (Summer 2020 – present).
- Biomechanics (Department of Kinesiology. SFSU). Upper division undergraduate course. (Fall 2018 – present).
- Instrumentation (*UFRGS*) Undergraduate course. (July/2014 – July/2018)
- Research Methods (*UFRGS*) Undergraduate course. (July/2015 – July/2018)
- Introduction to Engineering Drawing and Design (*UFABC*) Undergraduate course. (July/2013 – June/2014)

- Advanced Biomedical Instrumentation (*UFABC*) Undergraduate course. (May/2012 – June/2014)
- Neuromechanics of Human Movement (*UFABC*) Undergraduate course. (September/2011 – December/2013)
- Biomechanical Principles and Application (*UFABC*) Undergraduate course. (January/2010 – June/2014)
- Biomedical Instrumentation (*UFABC*) Undergraduate course. (May/2009 – June/2014)
- Experimental Methods in Engineering (*UFABC*) Undergraduate course. (January/2009 – December/2013)
- Human Motor Control (*UFABC*) Graduate course. (September/2012 – December/2012)
- Biomedical systems: modeling and simulation (*UFABC*) Undergraduate course. (January – December/2011)
- Biomechanics (*UNICID*) Undergraduate course. (August/2005 – December/2009)
- Biophysics (*UNICID*) Undergraduate course. (January/2007 – December/2008)
- Introduction to Movement Analysis (*UNICID*) Undergraduate course. (January/2008 – December/2009)
- Biomechanics of the Human Movement (*UNICID*) Graduate course. (January/2006 – June/2009)
- Instrumentation for Movement Analysis (*UNICID*) Graduate course. (August/2006 – December/2009)

UNIVERSITY SERVICE

- Chair, Distinguished Faculty and Staff Awards Committee. SFSU. Spring 2023 – present
- Member, Motor Behavior Faculty Hiring Committee, Department of Kinesiology (SFSU). 2022.
- Faculty Advisor, Kinesiology Student Association (KSA), Department of Kinesiology (SFSU). Fall 2021 – present
- Member, Kinesiology Curriculum Committee. Department of Kinesiology (SFSU). Fall 2021 – present
- Member, Kinesiology Lecturers' Evaluation Committee. Department of Kinesiology (SFSU). 2019 – 2020
- Reviewer, Kinesiology Undergraduate Scholarship, Kinesiology Kasey Miller Fund Scholarship, CHSS Associated Students Scholarship, CHSS Prof. Morris R. Lewenstein Memorial Scholarship. Department of Kinesiology (SFSU). 2019 – present
- Faculty Representative, Athletic Advisory Board, Department of Kinesiology (SFSU). Fall 2019 – Spring 2025
- Faculty Representative, University Interdisciplinary Council, Department of Kinesiology (SFSU). Fall 2022 – Spring 2025
- Judge, CSU Student Research Competition. Department of Kinesiology (SFSU). (2019 – present)
- Member, Mechanical Engineering Department Undergraduate Teaching Committee (*UFRGS*) (2017 – 2018).
- Member, Electrical Engineering Department Personnel Committee (*UFRGS*) (2015 – 2017).
- Vice-coordinator, Master's Program in Biomedical Engineering (*UFABC*) (2012 – 2014).
- Member, Biomedical Engineering Undergraduate Program Board (*UFABC*) (2011 – 2014).
- Member, Neuroscience and Cognition Graduate Program Board (*UFABC*) (2010 – 2014).
- Member, Biomedical Engineering Faculty Search Committee (*UFABC*) (2009 – 2013).
- Member, Center of Engineering, Modeling and Applied Social Sciences (Departmental) Council (*UFABC*) (2011 – 2013).
- Vice-coordinator, Biomedical Engineering Undergraduate Program Board (*UFABC*) (2010 – 2011).
- Chair, *UFABC* Research Ethics Board (*UFABC*) (2012 – 2013).
- Chair, *CECS* Research Commission (*UFABC*) (2012).
- Member, *UFABC* Research Ethics Board (2009 – 2013).
- Member, *UFABC* University First-year Students Advisory Committee (2009 – 2012).
- Member, *UNICID* Research Ethics Board (*UNICID*) (2006 – 2011).
- Member, Faculty Advisory Board, Physical Therapy Master Program (*UNICID*) (2006 – 2008).
- Member, Research Commission (*UNICID*) (2007 – 2008).

PROFESSIONAL AND COMMUNITY SERVICE

- Editorial Review Board. *Frontiers in Human Neuroscience*. Motor Neuroscience Section. (2020 – present)
- Editorial board (Area: Instrumentation and Rehabilitation): *Research on Biomedical Engineering (RBE)* (2011 – present).
- Ad-hoc reviewer: *Journal of Sport Rehabilitation*, *Quest*, *Journal of Motor Behavior*, *Experimental Brain Research*, *Brazilian Journal of Biomedical Engineering*, *Journal of Applied Biomechanics*, *Brazilian Journal of Medical and Biological Research*, *Brazilian Journal of Physical Therapy*, *Journal of Neurophysiology*, *Brain Research*.

- Ad-hoc grant proposal reviewer: University of Wisconsin-Milwaukee (Internal Grant proposals) (2020 – present). Sao Paulo State Research Foundation (Brazil); (Area: Biomechanics, Biomedical Engineering, and Physical Therapy) (2009 – 2018).
- Abstract and Technical Paper reviewer: EMBC/IEEE (Annual International Conference of the IEEE Engineering in Medicine and Biology Society), Progress in Motor Control, Brazilian Congress of Biomedical Engineering (CBEB), ENEBI (National Meeting of Biomechanical Engineering), Brazilian Congress in Motor Behavior, Sao Paulo, International Congress of Mechanical Engineering (COBEM).
- SF SPCA (Adoption Center – Dog Volunteer/Training and Journaling: 2-3hours/week). (2022 – present).
- Community project: Human movement and engineering with the elderly. Voluntary community service (May/2016 – January/2017).