

## CURRICULUM VITAE

**GEORGE J. SALEM, Ph.D.**

**2/8/2018**

### **PERSONAL INFORMATION**

#### **Home Address:**

1017 Pacific St.  
Santa Monica, CA 90405

#### **University Address**

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### **UNIVERSITY EDUCATION**

Ph.D.	1991	University of California, Los Angeles -Department of Kinesiology Major area: Biomechanics Minor area: Muscle Physiology
M.S.	1988	University of California, Los Angeles -Department of Kinesiology Major area: Biomechanics
B.S.	1983	University of California, Davis - Department of Psychology Major area: Biological Psychology

### **POST-DOCTORAL TRAINING**

1991-1993 Post-Doctoral Scholar, Department of Physiological Science, UCLA

### **ACADEMIC APPOINTMENTS**

2004-present	Associate Professor, Division of Biokinesiology and Physical Therapy, University of Southern California (USC)
1996-present	Director Anatomical Sciences, Division of Biokinesiology and Physical Therapy, USC
1996-present	Co-director Musculoskeletal Biomechanics Research Laboratory, Division of Biokinesiology and Physical Therapy, USC
1997-2004	Assistant Professor, Division of Biokinesiology and Physical Therapy, USC

1999-2001	Visiting Assistant Professor, School of Engineering and Applied Science, University of California, Los Angeles (UCLA)
1996-1997	Assistant Professor of Research, Department of Biokinesiology and Physical Therapy, USC
1995-1996	Associate Professor, Department of Kinesiology and Physical Education, California State University, Long Beach (CSULB)
1991-1995	Adjunct Assistant Professor, Department of Physiological Science, UCLA
1987-1990	Assistant Strength Coach, Department of Intercollegiate Athletics, UCLA

### **LABORATORY DIRECTORSHIPS**

1. Co-Director, Musculoskeletal Biomechanics Research Laboratory (MBRL), Division of Biokinesiology and Physical Therapy, USC, 1996-present:  
Coordinate and direct motion analysis research laboratory. Procure and maintain kinematic-, kinetic-, and electromyographic-analysis equipment, computer hardware and software, and supplies. Manage laboratory personnel, including students, technicians, and engineers. Procure extramural and intramural funding.
2. Director, Human Anatomy Laboratory, Division of Biokinesiology and Physical Therapy, USC, 1996-present:  
Develop and coordinate teaching laboratory for instruction in gross and analytical anatomy, and kinesiology. Collect, prosect, and maintain anatomical specimens. Purchase models, equipment, and instructional aides. Procure extramural and intramural funding.
3. Co-Director, Biomechanics Laboratory, Department of Kinesiology and Physical Education, CSULB, 1995-1996:  
Coordinate and direct research/teaching laboratory in biomechanics. Procure and maintain kinematic-, kinetic-, and electromyographic-analysis equipment, computer hardware and software, supplies, anatomical specimens, models, and instructional aides. Procure extramural and intramural funding.
4. Director, Human Anatomy Laboratory, Department of Physiological Science, UCLA, 1991-1995:  
Develop and coordinate teaching laboratory for instruction in musculoskeletal anatomy, biomechanics, and visceral anatomy. Collect, prosect, and maintain anatomical specimens. Purchase models, and instructional aides. Procure extramural and intramural funding.

## **HONORS, AWARDS, AND FELLOWSHPS:**

1995, 1991 Distinguished Teaching Award Nomination; UCLA  
1991 Elected Fellow, American College of Sports Medicine  
1990 NASA Research Achievement Award; NASA  
1987-1990 University Graduate Research Fellow; UCLA  
1986-1990 Edith Hyde Memorial Scholarship; UCLA

## **PROFESSIONAL ORGANIZATIONS:**

International Society of Biomechanics  
American Society of Biomechanics  
(Meeting Co-chair, 2011 ASB National Conference, Long Beach, CA)  
American College of Sports Medicine  
National Parkinson's Foundation  
National Strength and Conditioning Association  
SIGMA XI Scientific Research Society

## **II. SCHOLARLY ACTIVITY**

### **RESEARCH SUPPORT**

#### **Federal Funding**

1. Principal Investigator (Southern California CTSI Pilot Funding Program) 7/01/2013-6/31/2014 *Quantifying Muscle and Bone Changes in the Foot and Leg using Magnetic Resonance Imaging (MRI)* \$20,500.
2. Principal Investigator (National Center for Complementary and Alternative Medicine ; NIH) 7/01/2009-6/31/2013 *Safe and Effective Yoga for Seniors: Biomechanical Considerations* \$1,791,763.
3. Principal Investigator (UCLA Older American Independence Center; National Institute on Aging; NIH) 12/01/06 – 05/31/09 *Upper-extremity Function following Yoga Intervention for Hyperkyphosis*, \$83,083
4. Co-investigator (National Institute on Child Health and Human Development; NIH) 2005-2010 *Intra-abdominal Adipose Tissue and Disease Risk in Adolescents*, \$321,887
5. Co-investigator (National Cancer Institute; NIH) 2005-2010 *USC Center for Transdisciplinary Research on Energetics and Cancer*, \$1,500,443
6. Co-investigator (National Institute of Arthritis and Musculoskeletal and Skin Diseases; NIH) 2005-2008 *Mechanics of Non-contact ACL Injuries in Female Athletes*, \$1,124,369.

7. Principal Investigator (National Institute on Aging; NIH) 2001-2003 *Preserving Physical Function: Biomechanical Considerations*, \$203,125.
8. Co-Principal Investigator (National Institute on Aging; NIH) 1996-2001 *A Weighted Vest for the Prevention of Muscular Weakness and Osteoporosis*, \$609,974.

### **International Funding**

Principal Investigator/ Graduate Student Advisor (NATO Scientific Fellowship Program) 2003 *Biomechanical Analysis of Rehabilitative Exercise Following Anterior Cruciate Ligament Repair*, \$8,696.

### **Foundations and Associations**

1. Principal Investigator (R&A; World Golf Foundation) 2018-2020 *Golf Empowers Seniors Study*, \$82,600.
2. Principal Investigator (Children's Hospital Los Angeles) 2012-2013 *Yoga to Improve Posture and Muscular Performance in Persons with Cystic Fibrosis*, \$20,484.
3. Co-Investigator, Chiu; (Life Fitness Academy) 2005-2006 *Does kinematic specificity ensure kinetic specificity?* \$5,000.
4. Principal Investigator/Faculty Advisor (National Strength and Conditioning Association, Doctoral Fellowship; Loren Chiu) 2004-2005 *Determination of Subject Specific Anthropometrics Using DEXA: The Effect on Joint Kinetics During Weightlifting*, \$2,500.
5. Co-Investigator (Kinetics Foundation) 2003-2005 *Effects of Body-Weight-Supported Treadmill Training in Individuals with Parkinson's Disease*, \$388,413.
6. Co-Investigator (Foundation for Physical Therapy) 2003-2005 *A Clinical Research Network to Evaluate the Efficacy of Physical Therapist Practice*, \$1,500,000.
7. Principal Investigator (Arthroscopic Association of North America) 2003-2004 *Rehabilitative Exercise Following Arthroscopic ACL Reconstruction: A Biomechanical Examination*, \$5,000.
8. Co-Investigator (Thrasher Research Fund) 2002-2004 *Effects of Resistance Training on Risk Factors for Type 2 Diabetes in Overweight Hispanic Boys*, \$364,465.
9. Co-Investigator (National Athletic Training Association) 2002-2003 *Biomechanical and Neuromuscular Aspects of Non-contact ACL Injuries: The Influence of Gender, Experience, and Training*, \$52,501.

10. Co-Investigator (California Physical Therapy Fund) 1999-2001 *Biomechanical Analysis of the Back Squat Exercise: A Comparison Between the Healthy and Anterior Cruciate Ligament Reconstructed Knee*, \$1,825.
11. Co-Investigator (California Physical Therapy Fund) 1999-2001 *Peak Ground Reaction Forces During Weighted and Un-weighted Bench Stepping*, \$1,182.
12. Principal Investigator (National Collegiate Athletic Association M950428) 1995-1998 *Repetitive Trauma Injuries of the Knee Extensor Mechanism in Women Intercollegiate Athletes: Resistance Training and Biomechanical Considerations*, \$16,380.
13. Principal Investigator (Straus Sports Medicine Research Foundation) 1994-1995 *Quantification of Tissue Loading During Resistance Exercise in Older Adults*, \$5,650
14. Principal Investigator (Fitness Quest, Canton OH) 1994-1995 *Biomechanical Analysis of a Flexible Bench Step*, \$7,800
15. Principal Investigator (Alfta Rehabilitation Center Forlag, AB Sweden) 1993-1994 *Flexibility Exercise and Carpal Tunnel Syndrome*, \$3,207
16. Co-investigator (Weider Foundation, Woodland Hills, CA) 1990-1994 *Protein Supplementation and Bone Biomechanics*, \$69,704
17. Assistant Researcher (American Diabetes Association J890725), 1990-1991 *Diabetic Effects on Bone and Ligament*, \$27,316

### **Intramural Funding**

1. Principal Investigator (James H, Zumberg Research Grant) 2014, *Mindfulness Training for Improving Physical Rehabilitation in Older Adults*, \$10,000
2. Principal Investigator (James H, Zumberg Research Grant) 2012, *Yoga as an Intervention for Postural and Neuromuscular Dysfunction in Persons with Cystic Fibrosis*, \$10,000
3. Principal Investigator (Division of Biokinesiology and Physical Therapy, Pilot Grant) 2011, *Yoga as an Intervention for Postural and Neuromuscular Dysfunction in Persons with Cystic Fibrosis*, \$7,500.
4. Principal Investigator (USC Department Intercollegiate Athletics) 2007-2008 *Assessing the Health & Wellness USC Intercollegiate Athletes Throughout a Lifetime*, \$38,963

5. Principal Investigator (USC Department of Neurology, Intervention Development Grant) 2007-2008 *Group Exercise in Persons with Parkinson's Disease*, \$12,000
6. Principal Investigator (James H, Zumberg Research Grant) 2006-2008 *The Influence of Fixed and Changing Environmental Stimuli on Walking and Freezing Behavior in Persons with Parkinson's Disease*, \$50,000
7. Principal Investigator (James H, Zumberg Research Grant) 2004-2005 *Biomechanical Analysis of Rehabilitative Exercise Following Anterior Cruciate Ligament Repair: Influence of Different Surgical Interventions*, \$44,785.
8. Principal Investigator (James H, Zumberg Research Grant) 2001-2002 *Preserving Physical Function: Electromyographic Considerations*, \$46,787.
9. Principal Investigator (James H, Zumberg Research Grant) 1999-2001 *Measuring Strength in Older Adults: The Trial-Dependent Relations Among Force Production, Functional Performance, and Muscle Mass*, \$19,018.
10. Principal Investigator (California State University, Long Beach Summer Stipend) 1996 *Relationship Between Bench-step Structural Properties and the Kinetics of Bench Stepping Exercises*, \$3,813.
11. Principal Investigator (UCLA School of Medicine) 1994-1995 *Quantification of Musculoskeletal Loading While Wearing a Weighted Vest*, \$4,500

## SUMMARY OF PUBLICATIONS

### Published Papers in Peer-Reviewed Journals

h-index=21 (Google Scholar; <http://scholar.google.com/citations?user=qLBYnUwAAAAJ&hl=en> )

\*Student/Post-doc under supervision at the time data was collected; Underline indicates senior author

1. Hashish, R\*., Du Bois, A.\*, Samarawickrame, S.D.\*, Nandi, T.\*, and **Salem, G.** Spatiotemporal characteristics of habitually shod runners change when performing barefoot running. *Sport Sci Health* <https://doi.org/10.1007/s11332-017-0380-7> 2017.
2. Nandi, T., Fisher, B. E., Hortobágyi, T., & **Salem, G. J.** Increasing mediolateral standing sway is associated with increasing corticospinal excitability, and decreasing M1 inhibition and decreasing M1 inhibition and facilitation. *Gait & Posture* 60: 135-140, doi: 10.1016/j.gaitpost.2017.11.021, 2017.
3. Kiwata, JL, Dorff, TB, Schroeder, ET **Salem, GJ** Lane, CJ, Rice, JC, Gross, M.E., Dieli-Conwright, C.M. A pilot randomised controlled trial of a periodised resistance training and protein supplementation intervention in prostate cancer survivors on androgen deprivation therapy. *BMJ open* 7 (7), e016910, 2017.
4. R Hashish, SD Samarawickrame, S Sigward, SP Azen, **GJ Salem.** Lower-limb dynamics and clinical outcomes for habitually shod runners who transition to barefoot running. *Physical Therapy in Sport*, 1-8, pii: S1466-853X(16)30209-7. doi: 10.1016/j.ptsp. 2016.
5. Hashish, R.\*, Samarawickrame, S.\*, Baker, L., and **Salem, G.,** The influence of a bout of exertion on novice barefoot running dynamics. *J Sports Sci Med* 15(2): 327-334, (PMCID:PMc4879448) 2016.
6. MY Wang\*, GA Greendale, SSY Yu\*, and **GJ Salem.** Physical-Performance Outcomes and Biomechanical Correlates from the 32-Week Yoga Empowers Seniors Study. *Evidence-Based Complementary and Alternative Medicine* <http://dx.doi.org/10.1155/2016/6921689>, 2016.
7. Hashish, R.\*, Samarawickrame, S.\*, Powers, C., and **Salem, G.** Lower limb dynamics vary in shod runners who acutely transition to barefoot running. *J. Biomechanics* (doi: <http://dx.doi.org/10.1016/j.jbiomech>, 2016.
8. Flanagan, S.\*, Kulik, J, and **Salem, G.** The limiting joint during a failed squat: A biomechanical case series. *J Strength Conditioning Res*; 29(11): 3134–3142, doi: 10.1519/JSC.0000000000000979, 2015.
9. Sorenson SC\*, Romano R, Scholefield RM, Schroeder ET, Azen SP, **Salem GJ.** The Trojan Lifetime Champions Health Survey: Development, Validity, and Reliability. *J Athletic Training*; 50(4):407-18. doi: 10.4085/1062-6050-50.2.10, 2015.

10. Sorenson SC\*, Romano R, Azen SP, Schroeder ET, **Salem GJ**. Lifespan exercise among elite intercollegiate student athletes. *Sports Health*. Jan;7(1):80-6. doi: 10.1177/1941738114534813, 2015.
11. Hashish R\*, Samarawickrame SD\*, **Salem GJ**. A Comparison of Dorsal and Heel Plate Foot Tracking Methods on Lower Extremity Dynamics. *J. Biomechanics* 47(5), 1211-1214, doi: 10.1016/j.jbiomech.2014.01.028, 2014.
12. Sorenson SC\*, Romano R, Scholefield RM, Martin BE, Gordon JE, Azen SP, Schroeder ET, **Salem GJ**. Holistic life-span health outcomes among elite intercollegiate student-athletes. *J Athl Train*;49(5):684-95. doi: 10.4085/1062-6050-49.3.18, 2014.
13. Hashish R\*, Samarawickrame SD\*, Wang MY\*, Yu SS\*, **Salem GJ**. The Association Between Heel-Rise Performance with Static and Dynamic Balance in Community Dwelling Older Adults. *Geriatric Nursing* 9(3) doi:10.1016/j.gerinurse.2014.09.003, 2014.
14. **Salem, G.**, Yu, S-Y.\*, Wang, M-Y.\*, Samarawickrame, S.\*, Hashish, R.\*, and Greendale, G., Physical Demand Profiles of Hatha Yoga Postures Performed by Older Adults. *Evidenced-based Complementary and Alternative Medicine* Article ID 165763, 13: 1-29, 2013.
15. Fisher, B., Nacca, Q., **Salem, G.**, Song, J\*. Yip, J., Conte, P., Jakowec, M., and Petzinger, G. Treadmill exercise elevates dopamine D2 receptor binding potential in patients with early Parkinson's disease. *Neuro Report*, 2013.
16. Wang, M-Y.\*, Yu, S-Y.\*, Hashish, R.\*, Samarawickrame, S.\*, Kazadi, L., Greendale, G., and **Salem, G.** Physical demands of standing yoga poses in seniors: yoga empowers seniors study (YESS), *BMC Complementary & Alternative Medicine* Article ID: 2099618558770127, 13:8 2013.
17. Yu, S-Y.\*, Wang, M-Y.\*, Samarawickrame, S.\*, Hashish, R.\*, Kazadi, L., Greendale, G., and **Salem, G.** The physical demands of the tree (vriksasana) and one leg balance (utthita hasta padangusthasana) poses performed by seniors: a biomechanical examination, *Evidenced-based Complementary and Alternative Medicine* Article ID 971896, 2012:1-11, 2012.
18. Chiu, L.Z.F.\*, and **GJ. Salem**. Potentiation of vertical jumping performance during a weightlifting training session. *Journal Applied Biomechanics*: 28: 627-635, 2012.
19. Wang, M-Y.\*, Greendale, G., and **Salem, G.** Yoga improves upper extremity function and scapular posturing in persons with hyperkyphosis. *Journal of Yoga Physical Therapy* 2(3):1-6, 2012.
20. Greendale, G Kazadi, L., Mazdyasni, S., Ramirez, E., Wang, M-Y.\*, Yu, S-Y.\*, and **Salem, G.** The yoga empowers seniors study (YESS): design and asana series. *Journal of Yoga Physical Therapy* 2 (1):1-8, 2012.



21. Song, J\*, Sigward, S, Fisher, B, and **Salem, G.** Altered dynamic postural control during step turning in persons with early stage Parkinson's disease. *Parkinson's Disease*, Article ID 386962, 2012:1-8, 2012.
22. Chiu, L.Z.F.\*, and **G.J. Salem.** Pelvic kinematic method for determining vertical jump height. *Journal Applied Biomechanics* 26: 508-511, 2010.
23. Sorenson, S.\*, Arya, S., Souza, R., Pollard, C., **Salem, G.**, and Kulig, K., Altered knee extensor dynamics in the volleyball approach jump: the influence of patellar tendinopathy. *Journal Orthopaedic and Sports Physical Therapy* 40: 568-576, 2010.
24. Souza, R, Arya, S., Pollard, C., **Salem, G.**, and Kulig, K., Patellar tendinopathy alters the distribution of lower extremity joint effort during hopping. *Journal Applied Biomechanics* 26: 249-256, 2010.
25. Chiu, L.\* , and **Salem, G.**. Time series analysis: evaluating trends in exercise and athletic performance. *Journal of Strength and Conditioning Research*, 24:230-234, 2010.
26. Chodzko-Zajko , W.J., Minson, C.T., Nigg, C.R., Fiatarone, M.A., Proctor, D. **Salem, GJ.**, Skinner, J.S. ACSM Position stand on exercise and physical activity for older adults. *Medicine and Science in Sport and Exercise*, 41:1510-1530, 2009.
27. Song, J-E.\* , Fisher, B., Wu, A., Pettsinger, G., Gordon, J., and **Salem, G.**, The relationships between the unified Parkinson's disease rating scale and lower-extremity functional performance in persons with early-stage Parkinson's disease. *Journal Neurorehabilitation & Neural Repair* 23: 657-661, 2009
28. Fisher, B., Wu, A., **Salem, G.**, Song, J-E.\* , Lin, J., Jakowic, M., Yip, J., Gordon, J., and Pettsinger, G. The effect of exercise training in improving motor performance and cortico-motor excitability in individuals with early Parkinson's disease. *Archives of Physical Medicine and Rehabilitation* 89: 1221-1229, 2008.
29. Chiu, L.Z.F.\* , B.K. Schilling, A.C. Fry, and **GJ. Salem.** The influence of deformation on barbell mechanics during the clean pull. *Sport Biomechanics* 7:260-273, 2008
30. Flanagan, S.\*and **Salem, G.** Lower extremity joint kinetic responses to external resistance variations. *Journal of Applied Biomechanics* 24: 58-68, 2008
31. Flanagan, S.\*and **Salem, G.** Bilateral differences in the net joint torques during the squat exercise. *Journal of Strength and Conditioning Research* 21: 1220-1226, 2007.
32. Flanagan, S.\* , Kessans, K., and **Salem, G.** Quantifying bilateral joint contributions during a variety of stepping exercises. *Journal of Sport Rehabilitation* 15: 255-265, 2006.
33. Shaibi, G.Q.\* , Cruz, M.L., Ball, G.D., Weigensberg, **Salem GJ.**, Crespo, N.C., and Goran, M.I. Effects of resistance training on insulin sensitivity in overweight Latino adolescent males *Medicine and Science in Sport and Exercise* 38: 1208-1215, 2006.

34. Chui, L\*. and **Salem, G.** Comparison of joint kinetics during free weight and flywheel resistance exercise. *Journal of Strength and Conditioning Research* 20: 555-562, 2006.
35. Wang, M-Y.\*, Flanagan, S.\*, Song, J-E\*, Greendale, G.A, Azen, S., and **Salem, GJ.** Relations among body weight, joint moments generated during functional activities, and hip bone mass in older adults. *Clinical Biomechanics* 21: 717-725, 2006.
36. Shaibi, G.Q.\*, Cruz, M.L., Ball, G.D., **Salem GJ.**, Weigensberg, M.J., and Goran, M.I. Cardiovascular fitness and physical activity in children with and without impaired glucose tolerance. *International Journal of Obesity* 30: 45-49, 2006.
37. Shaibi, G.Q.\*, Cruz, M.L., Ball, G.D., Weigensberg, M.J., Kobaissi, H.A., **Salem GJ.**, and Goran, M.I. Cardiovascular fitness and the metabolic syndrome in overweight Hispanic youth. *Medicine and Science in Sport and Exercise* 37: 922-928, 2005.
38. Flanagan, S.P.\* and **Salem, GJ.** The validity of summing lower extremity individual joint kinetic measures. *Journal of Applied Biomechanics* 21: 181-188, 2005.
39. Flanagan, S.\*, Song, J-E\*, Wang, M-Y\*, Azen, S., Greendale, G.A., and **Salem, GJ.** Biomechanics of the heel raise exercise in older adults: effects of technique and resistance modification *Journal of Aging and Physical Activity* 13: 2005.
40. **Salem, GJ.**, Flanagan, S.\*, Wang, M-Y\*, Song, J-E\*, Azen, S. and Greendale, G.A. Lower-extremity kinetic response to weighted-vest resistance during stepping exercise in older adults. *Journal of Applied Biomechanics* 20: 260-274, 2004.
41. Flanagan, S.\*, Wang, M-Y.\*, Greendale, G.A., Azen, S. and **Salem, GJ.**, Biomechanical attributes of lunging activities in older adults. *Journal of Strength and Conditioning Research* 18: 599-605, 2004.
42. Wang, M-Y.\* and **Salem, GJ.**, The relations among upper-extremity loading characteristics and bone mineral density changes in young women. *Bone* 34:1053-1063, 2004.
43. **Salem, GJ.**, Salinas, R.\*, and Harding, V\*. Bilateral kinematic and kinetic analysis of the squat exercise following ACL reconstruction. *Archives of Physical Medicine and Rehabilitation* 84:1211-1216, 2003.
44. Wang, M-Y.\*, Flanagan, S.\*, Song, J-E\*, Greendale, G.A, and **Salem, GJ.** Lower-extremity biomechanics during forward and lateral stepping activities in older adults. *Clinical Biomechanics* 18: 214-221, 2003.
45. Flanagan, S., Wang, M-Y.\*, Sanker, S., Greendale, G.A., and **Salem, GJ.**, Squatting exercises in older adults: kinematic and kinetic comparisons. *Medicine and Science in Sport and Exercise* 35: 635-643, 2003.

46. **Salem, G.J.**, Wang, M-Y\*, and Sigward, S. Recommendations for measuring lower-extremity strength in older adults: the stability of isokinetic vs 1RM measures *Journal of Aging and Physical Activity* 10: 489-503, 2002.
47. Wallace, D.A., **Salem, G.J.**, Salinas, R.\* , and Powers, C.M. Patellofemoral joint kinetics during squatting with and without external load. *Journal of Orthopaedic & Sports Physical Therapy* 32: 141-148, 2002.
48. **Salem, G.J.** and Powers, C. Patellofemoral joint stress during deep squatting in elite women athletes. *Clinical Biomechanics* 16: 424-430, 2001.
49. **Salem, G.J.**, Wang, M-Y\*, Azen, S., Young, J.T.\* , Marion, M., and Greendale, G.A. Lower-extremity response to activity program dosing in older adults. *Journal of Applied Biomechanics* 17: 103-112, 2001.
50. **Salem, G.J.**, Wang, M-Y,\* Young, J.T.\* , Marion, M., and Greendale, G.A. Knee strength and lower- and higher-intensity functional performance in older adults. *Medicine and Science in Sport and Exercise* 32: 1679-1684, 2000.
51. Greendale, G.A., **Salem, G.J.**, Young, J.T.\* , Damesyn, M, Marion, M., Wang, M-Y, and Reuben, D.B. A randomized trial of weighted vest use in ambulatory seniors: strength, performance, and quality of life outcomes. *Journal American Geriatrics Society* 48: 305-311, 2000.
52. **Salem, G.J.**, Ward, S.R.\* , and Lee, T. Regulation of plantar-foot kinetics during exercises on step-benches with markedly different structural properties. *Journal of Strength and Conditioning Research* 14: 26-31, 2000.
53. Zernicke, R.F., **Salem, G.J.**, Barnard, R.J., Woodward, J.S., Meduski, J.W., and Meduski, J.D. Adaptations of immature trabecular bone to exercise and augmented dietary protein. *Medicine and Science in Sports and Exercise* 27: 1486-1493, 1995.
54. Zernicke, R.F., **Salem, G.J.**, Barnard, R.J., and Schramm, E. Long-term, high-fat-sucrose diet alters rat femoral neck and vertebral morphology, bone mineral content, and mechanical properties. *Bone* 16: 25-31, 1995.
55. **Salem, G.J.**, Zernicke, R.F., Martinez, D.A., and Vailas, A.C. Adaptations of immature trabecular bone to moderate exercise: geometrical, biochemical, and biomechanical correlates. *Bone* 14: 647-654, 1993.
56. Tidball, J.G., **Salem, G.J.**, and Zernicke, R.F. Site and mechanical conditions for failure during skeletal muscle experimental strain injuries. *Journal of Applied Physiology* 74: 1280-1286, 1993.
57. **Salem, G.J.**, Zernicke, R.F. and Barnard, R.J. Diet-related changes in mechanical properties of vertebrae in rapidly growing rats. *American Journal of Physiology* 262: R318-R321, 1992.
58. Zernicke, R.F., Vailas, A.C., Grindeland, R. E., Kaplansky, A., **Salem, G.J.**, and Martinez, D.A. Spaceflight effects on biomechanical and biochemical properties of vertebrae in rapidly-growing rats. *American Journal of Physiology* 258: R1327-1332, 1990.

59. Zernicke, R.F., Vailas, A.C., Grindeland, R.E., Li, K-C., and **Salem, G.J.** Interactive effects of nutrition, environment, and rat-strain on cortical and vertebral bone geometry and biomechanics. *Aviation, Space, and Environmental Medicine* 61: 640-647, 1990.
60. Hou, J, C-H, **Salem, G.J.**, Zernicke, R.F., and Barnard, R.J. Structural and mechanical adaptations of immature trabecular bone to strenuous exercise. *Journal of Applied Physiology* 69: 1309-1314, 1990.
61. **Salem, G.J.**, Zernicke, R.F., Vailas, A.C., and Martinez, D.A. Biomechanical and biochemical changes in lumbar vertebrae of rapidly growing rats. *American Journal of Physiology* 256: R259-R263, 1989.
62. DeLustro, F., Smith, S.T., Sundsmo, J., **Salem, G.J.**, Kincaid, S., and Ellingsworth, L. Reaction to injectable collagen: results on animal models and clinical use. *Plastic and Reconstructive Surgery*. 79: 581-592, 1987.

### **Book Chapters**

1. **Salem, G.J.** and Turman, J. Exercise and the Neuromuscular System In: Roberts, S. (Ed.) *Clinical Exercise Testing and Prescription* CRC Press Inc: Boca Raton, FL. (1997).
2. Zernicke, R.F., and **Salem, G.J.**, and Alejo, R.K. Endurance Training In: Reider, B. (Ed.) *Sports Medicine: The School Age Athlete Vols. I & II*. W.B. Saunders: Orlando, FL, (1991 & 1996).
3. Zernicke, R.F., and **Salem, G.J.** Flexibility Training In: Reider, B. (Ed.) *Sports Medicine: The School-Age Athlete Vols. I & II*. W.B. Saunders: Orlando, FL, (1991 & 1996).
4. Zernicke, R.F., Vailas, A.C., and **Salem, G.J.** Biomechanical response of bone to weightlessness. In: Pandolf, K.B. (Ed.) *Exercise and Sport Science Reviews* 18: 167-192, Williams and Wilkins: Baltimore, MD, 1990.

### **NIH Magazine**

*Make Like a Tree and Breath* Yoga for Seniors: Safe and Effective? NIH Record, Vol. LXV, No. 6, March 2013.

### **Contributing Editor**

The Ultimate Workout Log: An Exercise Diary and Fitness Guide, Schlosberg, S., (Senior Ed.), Houghton Mifflin Company New York, NY, 1993.

## Abstracts and Proceedings

1. Marcione N.A., Du Bois A.M. & **Salem G.J.** Effects of Golf Training on Gait Parameters in Older Military Veterans. *American Society of Biomechanics. Boulder, CO. August 2017.*
2. Marcione N.A., Du Bois A.M. & **Salem G.J.** Golf Intervention for Veterans Exercise (GIVE): a pilot study examining golf's influence on gait speed and cognition in older adults. *American College of Sports Medicine. Denver, CO. June 2017.*
3. Du Bois AM, Marcione N, & **Salem GJ.** Dynamic postural control and hip abductor muscle performance following a 12-week introductory golf program. *American College of Sports Medicine. Denver, CO. June 2017.*
4. Nandi Tulika, Fisher Beth, Hortobágyi Tibor, **Salem G.** M1 inhibition and facilitation decrease when mediolateral standing balance is manipulated. *Society for the Neural Control of Movement, Dublin, Ireland, May 2017*
5. Silke, O, Lam, C., McNeil, B., Matsumoto, T., Shull, I., Doyle, C., Itamura, J., **Salem, G.,** Black, D.S. Telephonic mindfulness meditation training for pain following orthopedic surgery: A pilot study. Poster at USC Institute for Integrative Health Conference on Integrative Health and Medicine, Los Angeles, CA, April 16, 2016.
6. Du Bois AM & **Salem GJ.** Hip energetics of a golf swing when swinging with different clubs. *Southwest American College of Sports Medicine Regional Meeting, Costa Mesa, CA, October 2016.*
7. Nandi T\*, Fisher BE, **Salem GJ.** Association between motor cortical excitability and postural stability in standing. *Annual Conference of the American Society of Biomechanics, Raleigh, NC, USA, August 2016.*
8. Marcione N., Du Bois A.M. & **Salem G.J.** Is golf a one-sided sport? Bilateral demands of the hip joint during the golf swing. *World Scientific Congress of Golf VII St. Andrews, SCT July 2016*
9. Du Bois AM & **Salem GJ.** Can the golf swing be therapeutic hip exercise? *World Scientific Congress of Golf VII, St. Andrews, Scotland, July 2016.*
10. Nandi T\*, Fisher BE, **Salem GJ.** Modulation of cortical excitability with changes in base of support during standing. *Society for the Neural Control of Movement, Montego Bay, Jamaica, April 2016.*
11. Marcione N., Du Bois A.M. & **Salem G.J.** Lower Extremity Joint Kinematics While Picking Up a Golf Ball. *Research Day – Ostrow School of Dentistry, Los Angeles, CA, March 2016.*

12. Nandi T\*, Hiramatsu S, Fisher BE, **Salem GJ**. Change in motor cortical excitability with changes in postural threat. *Research Day – Ostrow School of Dentistry, Los Angeles, CA, March 2016*.
13. Nandi T.\*, Du Bois A.\*, Runkle N., Havens K., **Salem GJ**. Biomechanics of the functional reach test. *Annual Conference of the American Society of Biomechanics, Columbus, OH, August 2015*.
14. Du Bois AM\*, Nandi T\*, **Salem GJ**. Validation of center of pressure measurements with artificial turf *Annual Conference of the American Society of Biomechanics, Columbus, OH August, 2015*.
15. Du Bois AM\*, Hashish R\*, Samarawickrame SD\*, **Salem GJ**. Changes in joint contributions to the support impulse during an acute transition to barefoot running by *American College of Sports Medicine, San Diego, CA, May, 2015*.
16. Nandi T.\*, **Salem GJ**. Biomechanical Role of the hip in maintaining balance during standing forward reach. *American College of Sports Medicine, San Diego, May, 2015*.
17. Du Bois AM, Hashish R, Samarawickrame SD, **Salem GJ**. Support impulse joint contributions following a transition to barefoot running. *Research Day – Ostrow School of Dentistry, Los Angeles, CA, March 2015*.
18. Nandi T.\*, Du Bois A\*, Runkle N., **Salem GJ**. Hip and ankle moments during forward reach: a comparison across strategies. *Research Day – Ostrow School of Dentistry, Los Angeles, CA, March 2015*.
19. Russell, S., **Salem, GJ.**, Rao, A., Yu, S., and Kazadi, L. Yoga Improves Posture and Physical Performance In Adult Persons with Cystic Fibrosis, *North American Cystic Fibrosis Conference, Atlanta, October, 2014*.
20. Samarawickrame, S.\*, Hashish, R.\*, Ward, S., Colletti, P., and **Salem, GJ**. Calf and Foot Muscle Adaptations in Western Shod Runners after a Transition to Barefoot Running. *7th World Congress of Biomechanics. Boston, MA. 2014*.
21. Hashish R, Samarawickrame SD, Gaur K, **Salem GJ**. Do Western Shoe Runners Inherently Adopt the Barefoot Pattern? *7th World Congress of Biomechanics. Boston, MA. 2014*.
22. Hashish R, Samarawickrame SD, **Salem GJ**. The Association Between Heel-Rise Performance and Static Balance in Community Dwelling Older Adults. *International Society of Biomechanics Conference, Brazil, August 2013*.
23. Hashish R, Samarawickrame SD, Gaur K, **Salem GJ**. Tibialis Posterior Muscle Activation Strategies in Novice Barefoot Runners Before and After Exertion. *International Society of Biomechanics – Footwear Biomechanics Group Conference, Brazil, July 2013*.
24. Samarawickrame SD, Hashish R, White E, Ward S, Colletti P, **Salem GJ**. Validity and Reliability of Foot Muscle Volume Determination by Magnetic Resonance Imaging. *International Society of Biomechanics Conference, Brazil, August 2013*.

25. Samarawickrame SD, Hashish R, Gaur K, **Salem GJ**. Adaptations in Plantar-flexor Performance and Length-Tension Relationship following a transition from Shod to Barefoot running. *International Society of Biomechanics – Footwear Biomechanics Group Conference, Brazil, July 2013.*
26. **Salem, G.S.** The Yoga Empowers Seniors Study YESS, *National Center for Complementary and Alternative Medicine, National Institutes of Health, Bethesda, MA, January, 2013.*
27. Hashish, R.\*, Samarawickrame S, Gaur, K., and **Salem G**. Adaptation of contact dynamics following an eight-week transition from shod to barefoot running. *Presented at the American Society of Biomechanics, Gainesville, FL , August, 2012.*
28. Holistic Lifespan Health Outcomes Among Intercollegiate Student-Athletes. Shawn C. S. Sorenson, S., Romano, R., Scholefield, R., Schroeder, T., and **Salem, G**. Data from the Trojan lifetime champions study. *Presented at the National Meeting of American College of Sports Medicine, San Francisco, CA, June 2012*
29. Samarawickrame S, Hashish R, Gaur, K., and **Salem G**. Evidence of adaptation to barefoot running can be demonstrated in the ankle plantar-flexors. *Presented at the National Meeting of American College of Sports Medicine, San Francisco, CA, June 2012*
30. Hashish, R.\*, Samarawickrame, S.\*, Gaur, K, and **Salem, G** . Mechanical demand distribution during shod and novice barefoot running. *Presented at the National Meeting of American College of Sports Medicine, San Francisco, CA, June 2012*
31. Yu S-Y, Wang M-Y, Kazadi, L, Greendale G, and **Salem G**. Muscle activation and co-contraction patterns in healthy older adults performing hatha yoga. *Presented at the National Meeting of American College of Sports Medicine, San Francisco, CA, June 2012*
32. Wang MY, Yu SY, Haines M., Hashish R, Samarawickrame S, Greendale G, and **Salem G**. Does Yoga Improve Balance Performance in Older adults? *Presented at the National Meeting of American College of Sports Medicine, San Francisco, CA, June 2012.*
33. Yu S-Y, Wang M-Y, Kazadi, L, Greendale G, and **Salem G**. Biomechanical demands and effectiveness of yoga in older adults: Examining the modified tree pose. *Presented at the USC Dental School Research Day, 2012*
34. Hashish, R.\*, Samarawickrame, S.\*, Gaur, K, and **Salem, G.**, Adaptation of contact dynamics following an eight-week transition from shod to barefoot running. *Presented at the USC Dental School Research Day, 2012*
35. Sorenson, S., Romano, R., Scholefield R., Schroeder, T., and **Salem, G**. Holistic lifespan health outcomes among intercollegiate student-athletes: The TLC Study. *Presented at the USC Dental School Research Day, 2012*
36. Tsai, L-C, Pollard, C., **Salem, G.**, and Powers, C. Post-training increased hip flexion during landing decreases tibiofemoral landing compressive forces in females who have undergone

anterior cruciate ligament reconstruction. *Presented at the National Meeting of the American Physical Therapy Association, CSM, Chicago, IL, February, 2012.*

37. Hashish, R.\*, Samarawickrame, S.\*, Powers, C., and **Salem, G.**, Foot contact patterns and joint demands in novice barefoot runners before and after exertion *Presented at the National Meeting of the American Physical Therapy Association, CSM, Chicago, IL, February, 2012.*
38. Flanagan, S.P. and **Salem, GJ.** Understanding the causes of failed squat attempts. *Presented at the National Strength and Conditioning Association, Las Vegas, NV, July, 2011.*
39. Flanagan, S.P., Kulik, J., and **Salem, GJ.** The search for a limiting joint during a failed squat: a case study. *Presented at the American Society of Biomechanics, Long Beach, CA, August, 2011.*
40. Wang MY, Yu SY, Hashish R, Samarawickrame S, Haines M, Mulwitz L, Kazadi L, Greendale G, and **Salem G.** Biomechanical demands of therapeutic hatha yoga poses in older adults: modified chair and downward facing dog. *Presented at the American Society of Biomechanics, Long Beach, CA, August, 2011.*
41. Yu SY, Wang MY, Haines M, Mulwitz L, Hashish R, Samarawickrame S, Greendale G, and **Salem G.** Conventional wisdom regarding yoga pose modification may not benefit healthy older adults: examining the modified tree pose. *Presented at the American Society of Biomechanics, Long Beach, CA, August, 2011.*
42. Samarawickrame S, Hashish R, and **Salem G.** Kinematic and kinetic differences between shod and barefoot running. *Presented at the American Society of Biomechanics, Long Beach, CA, August, 2011.*
43. Hashish R, Samarawickrame S, **Salem G.** Ground reaction forces in barefoot running before and after exertion. *Presented at the American Society of Biomechanics, Long Beach, CA, August, 2011.*
44. Hashish R, Samarawickrame S, Wang MY, Yu SY, Tsai LC, **Salem G.** The influence of different marker sets on lower extremity dynamics during walking. *Presented at the National Meeting of American College of Sports Medicine, Boulder, CO, June, 2011.*
45. Samarawickrame S, Wang MY, Hashish R, Yu SY, **Salem G.** The association between hip abductor strength and excursion of the center of pressure. *Presented at the National Meeting of American College of Sports Medicine, Boulder, CO, June, 2011.*
46. Yu SY, Wang MY, Haines M, Mulwitz L, Hashish R, Samarawickrame S, Kazadi L, Greendale G, **Salem G.** Lower-extremity joint kinematics in older adults performing the Warrior I pose of Hatha Yoga. *Presented at the National Meeting of American College of Sports Medicine, Boulder, CO, June, 2011.*



47. Sorenson, S., Romano, R., and **Salem, G.** Health Concerns Precede Participation in Intercollegiate Athletics: Epidemiological Data on Five Conditions *Presented at the National Meeting of American College of Sports Medicine, Boulder, CO, June, 2011.*
48. Hashish R, Samarawickrame S, Wang MY, Yu SY, **Salem G.** Normalized knee extensor strength and TUG performance in community dwelling older adults. *Presented at the National Meeting of the American Physical Therapy Association, Washington DC, June, 2011.*
49. **Salem G,** Wang M-Y, Yu, S-Y, Kazadi L, and Greendale, G. Yoga Empowers Seniors Study. *Presented at Stephen Straus Distinguished Lecture in the Science of Complementary and Alternative Medicine. National Center for Complementary and Alternative Medicine, National Institutes of Health, Bethesda, MA, December, 2010.*
50. Wang M-Y, Greendale G, **Salem G.** Effects of 6-month Yoga intervention on upper-extremity function in older adults with hyperkyphosis. *Presented at International Association of Yoga Therapists Research Conference, Honesdale, PA, October, 2010.*
51. Sorenson, S.C., Chiu, L.Z.F., Flanagan, S.P., **Salem, GJ.** . External Load Variation Modifies Lower Extremity Kinetics in the Barbell Squat. *American College of Sports Medicine National Conference, Baltimore, MD, 2010.*
52. Yu, S-Y, Wang M-Y, Greendale G, **Salem G.** Self-reported Shoulder Function Psychometrics following a 6-month Yoga Intervention in Older Adults with Hyperkyphosis. *Presented at International Association of Yoga Therapists Research Conference, Honesdale, PA, October, 2010.*
53. Lee A.J.Y, Song, J-E, Fisher, B., Petzinger, G., and **Salem, G.** Impaired braking forces during stopping in persons with early-stage Parkinson's disease. *Presented at the Asian Pacific Congress on Exercise and Sport Sciences, Malaysia, July, 2009.*
54. Ferris, A., Welsh, M., and **Salem, G.** Exploratory study of yoga as a therapeutic modality for Parkinson's disease. *Presented at the Movement Disorder Society International Conference, Paris France, June, 2009.*
55. Song, J-E, Fisher, B, Sigward, S, Petzinger, G, and **Salem, GJ.** The effect of early stage Parkinson's disease on dynamic postural stability during turning activities. *Presented at Neuroscience 2008, Washington DC, November, 2008.*
56. Chiu, L. and **Salem, G.** Time series analysis an application for athletic performance. *Presented at the International Conference on Strength Training, Colorado Springs, CO, October, 2008.*
57. Song, J-E, Sigward, S., Fisher, B., Petzinger, G., and **Salem, G.** Dynamic postural stability in persons with early stage Parkinson's disease during turning activities. *Presented at the California Physical Therapists Association, Oakland, CA, September, 2008.*

58. M-Y Wang, A. Ferris, L. Kazadi, C. Coda, G. Greendale, and **G. Salem**, Effects of a 6-month yoga program on scapular posturing in older adults with hyperkyphosis. *Presented at the North American Conference on Biomechanics, Anne Arbor, MI, August, 2008.*
59. Souza, R, Arya, S., Pollard, C., **Salem, G.**, and Kulig, K. Patellar tendinopathy alters the distribution of lower extremity joint effort during hopping. *Presented at the North American Conference on Biomechanics, Anne Arbor, MI, August, 2008.*
60. Chiu, L., Powers, C., and **Salem, G.** Potentiation and fatigue responses during high-power resistance exercise is gender specific. *Presented at the NSCA National Conference, Las Vegas, NV, July 2008.*
61. Sorenson, S.C., Arya, S., Harper, K.L., Paulseth, S.G., **Salem, G.J.**, and Kulig, K. Altered knee extensor dynamics in the volleyball approach jump: the influence of patellar tendinopathy. *Presented at the National Meeting of American College of Sports Medicine, Indianapolis, IN, May, 2008.*
62. Arya, S., Souza, R.B., Pollard, C.D., Sorenson, S.C., **Salem, G.J.**, and Kulig, K. Energetics of single-legged hopping in the presence of patellar tendinopathy. *Presented at the National Meeting of American College of Sports Medicine, Indianapolis, IN, May, 2008.*
63. Ferris, AE, Wang, M-Y, Magpantay, L., Whiting, W., Greendale, GA and **Salem, G.** Upper extremity functional performance in older adults with hyperkyphosis: the effects of a 6-month yoga intervention. *National Meeting of American College of Sports Medicine, Indianapolis, IN, May, 2008.*
64. Song, J-E, Fisher, B., Wu, Gordon, J., and **Salem, G.** Modulating walking speed in persons with early stage Parkinson's disease. *Southern California Conference on Biomechanics, April, 2008.*
65. A. Ferris, M-Y Wang, L. Kazadi, C. Coda, G. Greendale, and **G. Salem.** A methodological approach to quantifying the joint and muscular demands of Yoga asanas. *Presented at the Second Annual International Association of Yoga Therapists Symposium on Yoga Therapy and Research, Los Angeles, March, 2008.*
66. M-Y Wang, A. Ferris, L. Kazadi, C. Coda, G. Greendale, and **G. Salem** Selecting yoga asanas for older adults: biomechanical considerations. *Presented at the Second Annual International Association of Yoga Therapists Symposium on Yoga Therapy and Research, Los Angeles, March, 2008.*
67. Ferris, AE, Wang, M-Y, Chiu, S-L, and **Salem, G.** Relations Among Clinical Measures of Spine Curvature. *Presented at the APTA Combined Sections Meeting, Nashville, TN, February, 2008.*

68. Chiu, L. and **Salem, G.** Joint kinetic contributions to acute performance enhancement. *Presented at the American Society of Biomechanics, National Conference, Palo Alto, CA, August 2007.*
69. Chiu, L. Wagner, P, and **Salem, G.** Relative contribution of lower extremity joint kinetics to vertical jumping performance. *Presented at the NSCA National Conference, Atlanta, GA, July 2007.*
70. Wang, M-Y, Ferris, AE, Chiu, S-L, McQuade, K., and **Salem, G.** Relations between thoracic curvature and functional performance in older adults. *Presented at the ISB World Congress, Taipei, Taiwan, July, 2007.*
71. Ferris, AE, Chiu, S-L, and **Salem, G.** Lower extremity kinematics and kinetics during gait in persons with hyperkyphosis. *Presented at the ISB World Congress, Taipei, Taiwan, July, 2007.*
72. J-E. Song, G. Petzinger, B. Fisher, J. Gordon, and **G. Salem.** The influence of walking speed on lower extremity joint torque asymmetry in persons with early Parkinson's disease. *Presented at 11<sup>th</sup> International Conference of Parkinson's Disease and Movement Disorders, Istanbul, Turkey, June, 2007*
73. Kessans, K., Sigward, S., and **Salem, G.** Mechanics of a unilateral squat exercise to different depths: implications for rehabilitation. *Medicine and Science in Sports and Exercise, 39:5, 2007. Presented at National Meeting of American College of Sports Medicine, New Orleans, LA, June, 2007.*
74. Chiu, L., Wagner, P., **Salem, G.** Weightlifting exercise potentiates joint mechanical work during vertical jumping. *Medicine and Science in Sports and Exercise, 39:5, 2007. Presented at National Meeting of American College of Sports Medicine, New Orleans, LA, June, 2007.*
75. Wang, M-Y, Ferris, AE, Chiu, S-L, McQuade, KJ, Aguilera, LF, Greendale, GA and **Salem, G.** Correlations between thoracic kyphosis and scapulohumeral motion *Medicine and Science in Sports and Exercise, 39:5, 2007. Presented at National Meeting of American College of Sports Medicine, New Orleans, LA, June, 2007.*
76. Ferris, AE, Wang, M-Y, Chiu, S-L, McQuade, KJ, Nadalin, M, Greendale, GA and **Salem, G.** Tri-planar Lumbopelvic Motion of Older Adults with Hyperkyphosis. *Medicine and Science in Sports and Exercise, 39:5, 2007. Presented at National Meeting of American College of Sports Medicine, New Orleans, LA, June, 2007.*
77. Souza RB, Fowler EG, DeMuth S, Seibert K, **Salem G.** The Influence of Knee Extensor and Flexor Strength on Knee Kinematics and Kinetics of Children with Cerebral Palsy. CSM, 2006. *Presented at APTA Combined Sections Meeting, Boston, MA, February, 2007.*

78. Chiu, L. and **Salem, G.** Accuracy of inverse dynamics calculations during weightlifting using normative versus subject-specific anthropometrics. *Proceedings of the National Strength and Conditioning Association, 2006. Presented at the NSCA National Conference, Las Vegas, NV, July 2006.*
79. Flanagan, S.P. and **Salem, G.S.** Bilateral differences in the net joint torques during the squat exercise. *Proceedings of the National Strength and Conditioning Association, 2006. Presented at the NSCA National Conference, Las Vegas, NV, July 2006.*
80. Chiu, L. and **Salem, G.** Vertical Jump Performance Increases during a Weightlifting Training Session. *Medicine and Science in Sports and Exercise, 38:5, 2006. Presented at National Meeting of American College of Sports Medicine, Denver, CO, May, 2006.*
81. Scaglioni, P. and **Salem, G.** Multi-planar lower extremity biomechanics during different squatting exercises. *Medicine and Science in Sports and Exercise, 38:5, 2006. Presented at National Meeting of American College of Sports Medicine, Denver, CO, May, 2006.*
82. Song, J., Fisher, B., Wu, A., Gordon, J. and **Salem, G.** Influence of movement speed on gait mechanics in patients with early Parkinson's disease. *Medicine and Science in Sports and Exercise, 38:5, 2006. Presented at National Meeting of American College of Sports Medicine, Denver, CO, May, 2006.*
83. Flanagan, S.P. and **Salem, G.S.** Is the squat represented by a generalized motor program? *Proceedings of the National Strength and Conditioning Association, 2005. Presented at the NSCA National Conference, Las Vegas, NV, July 2005.*
84. Chiu, L. and **Salem, G.S.** Comparison of joint kinetics during free weight and flywheel exercise. *Proceedings of the National Strength and Conditioning Association, 2005. Presented at the NSCA National Conference, Las Vegas, NV, July 2005.*
85. Flanagan, S.P. and **Salem, G.S.** The effect of movement speed and external resistance on joint contributions during lower-extremity extensions. *Proceedings of the XXth International Society of Biomechanics Conference, August, 2005. Presented at the ISB World Congress, Cleveland OH, August, 2005.*
86. Fisher, B., Song, J., **Salem, G.** and Gordon. Treadmill training associated with improved gait in a patient with Parkinson's disease. *III STEP: Summer Institute on Translating Evidence into Practice: Linking Movement Science and Intervention, Salt Lake City, Utah, July, 2005.*
87. Shaibi GQ, Ball GDC, **Salem G,** Weigensberg MJ, Crespo , NC, Cruz ML, Goran MI. Strength and body composition changes in response to resistance training in overweight Latino adolescent males. *Medicine and Science in Sports and Exercise, 37:5, 2005. Presented at National Meeting of American College of Sports Medicine, Nashville, TN, June, 2005.*

88. Scaglioni, P., Song, J-E, and **Salem, G.** Lower-extremity biomechanics of different squatting depths. *Medicine and Science in Sports and Exercise*, 37:5, 2005. *Presented at National Meeting of American College of Sports Medicine, Nashville, TN, June, 2005.*
89. Chiu, L. and **Salem, G.** Sources of error and noise reduction with a six-degree of freedom marker set. *Medicine and Science in Sports and Exercise*, 37:5, 2005. *Presented at National Meeting of American College of Sports Medicine, Nashville, TN, June, 2005.*
90. Song, J-E, Wu, A., Fisher, B., Gordon, J., and **Salem, G.** The relations between the Unified Parkinson's Rating Scale score and self-selected and fast walking speeds in patients with early-stage Parkinson's disease. *International Society of Postural and Gait Research, Marseille, France, May, 2005.*
91. Chui, L. and **Salem, G.** Net Joint Moment Calculation Errors during Weightlifting: Dempster versus DEXA *Proceedings of the Southern California Conference on Biomechanics*, April, 2005.
92. Dunn, E., Kessans, K, and **Salem, G.** Lower-extremity joint angles associated with exercise. *Proceedings of the Southern California Conference on Biomechanics*, April, 2005.
93. Scaglioni, P., Song, J-E, and **Salem, G.** Small changes in single-leg squat depth produce significant increases in knee joint loading. *Proceedings of the Southern California Conference on Biomechanics*, April, 2005.
94. Wang, M.-Y. and **Salem, G.** The relations among hip bone mineral density and joint moments generated during functional activities in older adults. *Osteoporosis International*. 15:S50, 2004. *Presented at the National Osteoporosis Conference, Harrogate, England, November, 2004.*
95. Vilimek, M, Song, J-E, and **Salem, G.** The prediction of knee actuator forces using emg-driven models and static optimization techniques. *Presented at the Biomechanics of Man International Research Conference, Prague, CZ, November, 2004.*
96. **Salem G.** Preserving physical function: biomechanics-based intervention. *Presented at the Biomechanics of Man International Research Conference, Prague, CZ, November, 2004.*
97. J-E. Song and **Salem G.** Joint mechanical contributions vary with squatting depth. *Presented at the National Meeting of the American Society of Biomechanics, Portland, OR, September, 2004.*
98. Shaibi GQ, Ball GDC, Cruz ML, Weigensberg MJ, **Salem G**, Goran MI. Resistance training significantly improves insulin sensitivity in overweight Hispanic adolescent males. *Obesity Research*, 244-P, 2004. *Presented at the 2004 Annual Scientific Meeting of the North American Association for the Study of Obesity, October, 2004.*
99. J-E. Song, B. Sather, S.P. Flanagan, **Salem G.** The effect of contralateral limb position on joint kinetics during unilateral squatting exercises. *Medicine and Science in Sports and*

*Exercise, 36: S169, 2004. Presented at National Meeting of American College of Sports Medicine, Indianapolis, IN, June, 2004.*

100. S. P. Flanagan and **Salem G.** Correlations Between Systemic Work and Summed Measures of Lower Extremity Mechanical Demand. *Medicine and Science in Sports and Exercise, 36: S101, 2004. Presented at National Meeting of American College of Sports Medicine, Indianapolis, IN, June, 2004.*
101. Shaibi GQ, Cruz ML, Ball GDC, **Salem G.**, Weigensberg MJ, and Goran MI. Cardiovascular fitness and physical activity are not reduced in overweight youth with impaired glucose tolerance. *Medicine and Science in Sports and Exercise, 36: S134, 2004 Presented at National Meeting of American College of Sports Medicine, Indianapolis, IN, June, 2004.*
102. Vilimek, M and **Salem, G.** Muscle force calculations based on static optimization and emg-driven models. *Presented at the 6th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering, Madrid Spain, February, 2004.*
103. Burlette, JL. Zakhary, R. Cabellon, L. and **Salem, G.** Anatomical review of the elbow: entrapment sites and clinical implications. *Presented at Annual Meeting of California Physical Therapy Association, Sacramento, CA, November, 2003.*
104. Kern RW, Zachary R, Cabellon L, and **Salem G.** The effects of thoracic joint mobilization on the sympathetic nervous system in a cadaveric spine. *Presented at Annual Meeting of California Physical Therapy Association, Sacramento, CA, November, 2003.*
105. Doubleday, K, Zachary, R, Cabellon, L, and **Salem, G.** Cadaveric dissection of the lumbar plexus and three-dimensional relationship with the psoas. *Presented at Annual Meeting of California Physical Therapy Association, Sacramento, CA, November, 2003.*
106. Shaibi, GQ, **G. Salem,** and M. Goran. Aerobic capacity is not reduced in children with impaired glucose tolerance. *Presented at Annual Meeting of Southwest Chapter of the American College of Sports Medicine, Las Vegas, NV, November, 2003.*
107. Vilimek, M and **G. Salem.** Calculation of flexor muscle forces about the elbow: sensitivity associated with different optimization criteria. *Presented at Annual Meeting of Southwest Chapter of the American College of Sports Medicine, Las Vegas, NV, November, 2003.*
108. J-E. Song, B. Sather, S. Flanagan, and **G. Salem.** Biomechanics of forward step-up and step-down exercises. *Presented at Annual Meeting of Southwest Chapter of the American College of Sports Medicine, Las Vegas, NV, November, 2003.*
109. B. Sather, J. Song, S. Flanagan, and **G. Salem.** Lower extremity kinetics during unilateral and bilateral squatting activities. *Presented at Annual Meeting of Southwest Chapter of the American College of Sports Medicine, Las Vegas, NV, November, 2003.*

110. S.P. Flanagan, J-E. Song, C. Admon, M-Y. Wang, and **G. J. Salem**. Effect of external resistance on joint moment and impulse in older adults during step-up exercises. *Medicine and Science in Sports and Exercise*, 35: S323, 2003. *Presented at National Meeting of American College of Sports Medicine, San Francisco, CA, May, 2003.*
111. J-E. Song, S.P. Flanagan, C. Admon, M-Y. Wang, and **G. J. Salem**. Lower-extremity joint kinetics in older adults are symmetric while performing the squat exercise. *Medicine and Science in Sports and Exercise*, 35: S347, 2003. *Presented at National Meeting of American College of Sports Medicine, San Francisco, CA, May, 2003.*
112. Wang, M-Y and **G. Salem**. The role of peak load magnitude and loading history on bone adaptation in human forearm. *Medicine and Science in Sports and Exercise*, 35: S82, 2003. *Presented at National Meeting of American College of Sports Medicine, San Francisco, CA, May, 2003.*
113. J-E. Song, S. P. Flanagan, C. Admon, M-Y. Wang, and **G. J. Salem**. Bilateral symmetry during the squat exercise in older adults. *Presented at the Southern California Conference on Biomechanics, Malibu, CA, April, 2003.*
114. Flanagan, Song, J., Admon, C. and **Salem, G**. A Comparison of two different methods to calculate work and power during the forward step-up exercise. *Presented at the Southern California Conference on Biomechanics, Malibu, CA, April, 2003.*
115. Sather, B., Song, J., Flanagan, S., Whiting, W., and **Salem, G**. Lower-extremity kinetics during the squat in an ACL injured participant: Pre- & Post-surgical measures. *Presented at the Southern California Conference on Biomechanics, Malibu, CA, April, 2003.*
116. S.P. Flanagan, **GJ Salem**, and M.-Y. Wang. Extensor impulse as a measure of quantifying muscular demand during exercise. *Presented at the Southern California Conference on Biomechanics, Malibu, CA, April, 2003.*
117. Wang, M-Y, and **Salem, G**. Relations between bone adaptation and loading forces associated with a novel osteoporosis intervention program. *Presented at the IV World Congress on Biomechanics, Calgary BC, Canada, August, 2002.*
118. Flanagan, S.P., **Salem, GJ.**, Wang, M-Y, Sanker, S., and Reiss, C. The contribution of the hip extensors, knee extensors, and ankle plantar flexors during different squatting techniques in older adults. *Presented at the IV World Congress on Biomechanics, Calgary BC, Canada, August, 2002.*
119. Harding, FV, and **Salem, GJ**. Case Study: ACL Rehabilitation—Track and Field. *Medicine and Science in Sports and Exercise*, 34: S43, 2002. *Presented at National Meeting of American College of Sports Medicine, St Louis, MO, May 2002.*
120. Sigward, SM, **Salem, GJ.**, and Powers, CM, Lower limb alignment is correlated with frontal and transverse plane moments at the knee during side-step cutting. *Medicine and Science in Sports and*

- Exercise*, 34: S173, 2002. Presented at National Meeting of American College of Sports Medicine, St Louis, MO, May 2002.
121. Harding, FV, Salinas, R. and **Salem, GJ**. Significant side-to-side differences in joint moments during squatting. *Medicine and Science in Sports and Exercise*, S215, 2002. Presented at National Meeting of American College of Sports Medicine, St Louis, Mo, May 2002.
122. Flanagan, S.P., **Salem, GJ.**, Wang, M-Y, Sanker, S., and Reiss, C. Effect of two different squatting techniques on lower extremity kinetics in older adults. *Medicine and Science in Sports and Exercise*, 34: S215, 2002. Presented at National Meeting of American College of Sports Medicine, St Louis, MO, May 2002.
123. Wang, M-Y, **Salem, GJ.**, Flanagan, S., and Sanker, S. Lower-extremity joint kinetics during forward stepping and lateral stepping in older adults. *Medicine and Science in Sports and Exercise*, 34: S253, 2002. Presented at National Meeting of American College of Sports Medicine, St Louis, MO, May 2002.
124. Wang, M-Y and **Salem, GJ**. A novel osteoporosis intervention program: dynamic impact loading exercise (DILE). Presented at the 44th Annual Conference on Physical Therapy in Taipei, Taiwan, March 2002.
125. Wang, M-Y, **Salem, GJ.**, Flanagan, S., and Sanker, S. A biomechanical investigation of forward and lateral stepping in older adults. Presented at the 44th Annual Conference on Physical Therapy, Taipei, Taiwan, March 2002.
126. Wallace DA, Powers CM, Salinas R, and **Salem GJ** Patellofemoral joint mechanics during weighted and unweighted squatting. *Medicine and Science in Sports and Exercise*, 33: S54, 2001. Presented at National Meeting of American College of Sports Medicine, Baltimore, MD, May 2001.
127. Wang, M-Y, Sigward S and **Salem GJ**. Knee isokinetic and isotonic muscle strength in older adults: a correlation and reliability study. Presented at the 21st Convention of the National Taiwan University Medical College Alumni Association of North America, May, 2001.
128. Wheeler J, **Salem G**. Nail-gun discharge distance, nail penetration, and patella fracture severity. Presented at the Annual Meeting of the International Society of Biomechanics, Taipei, Taiwan, November, 2001.
129. Sigward SM, **Salem GJ**, Powers CM. Kinematic and kinetic analysis of sidestep cutting: A comparison of males and females. Presented at ACL Injuries: The Gender Question Research Retreat, Chattanooga TN, 2001.
130. Wang, M-Y, **Salem GJ**, Azen S, Young J and Greendale G. The effects of weighted-vest dosing on ground reaction forces in older adults. Presented at the 42nd Annual Conference on Physical Therapy, Taipei, Taiwan, 2000.



131. Wang, M-Y, Sigward S and **Salem GJ**. Multiple-test repeatability and correlation of knee isokinetic and isotonic muscle strength in older adults. *Presented at the 42nd Annual Conference on Physical Therapy, Taipei, Taiwan, 2000.*
132. Wang, M-Y, Shuler CJ, **Salem GJ** and Jaque SV. The effects of weighted and unweighted bench step aerobics on ground reaction forces. *Presented at the 42nd Annual Conference on Physical Therapy, Taipei, Taiwan, 2000.*
133. Wang, M-Y, Greendale, G., Azen, S., and **Salem, G.** Ground reaction forces following weighted-vest dosing in older adults. *Medicine and Science in Sports and Exercise*, 32: S275, 2000. *Presented at National Meeting of American College of Sports Medicine, Indianapolis, IN, May 2000.*
134. Sigward, S., Wang, M-Y.\*, and **Salem, G.** Relative repeatability of isokinetic and isotonic measures of knee strength in older adults. *Medicine and Science in Sports and Exercise*, 32: S99, 2000. *Presented at National Meeting of American College of Sports Medicine, Indianapolis, IN, May 2000.*
135. Powers, C. and **Salem, G.** Patellofemoral joint stress during deep squatting in collegiate women athletes. *Physical Therapy* 80:S59, 2000. *Presented at the Annual Conference & Exposition of the American Physical Therapy Association, Indianapolis, IN, May 2000.*
136. Sigward, S., Wang, M-Y.\*, and **Salem, G.** Relative repeatability and correlation of isokinetic and isotonic measures of knee strength in older adults. *Presented at the Southern California Conference on Biomechanics, Los Angeles, CA, April, 2000.*
137. Shuler, C., Jaque, V., Wang, M-Y.\*, and **Salem, G.** Peak ground reaction forces during weighted and unweighted bench step aerobics. *Presented at the Southern California Conference on Biomechanics, Los Angeles, CA, April, 2000.*
138. Wallace, D.\*, Salinas, R.\*, and **Salem, G.** Reliability of lower extremity kinetics and kinematics during squatting. *Presented at the Southern California Conference on Biomechanics, Los Angeles, CA, April, 2000.*
139. Greendale, G., **Salem, G.**, Young, J., Damesyn, M., Marion, M., Wang, M-Y.\*, and Reuben, D. A randomized trial of weighted vest use in ambulatory seniors: strength, performance, and quality of life outcomes. *Presented at the Southern California Conference on Biomechanics, Los Angeles, CA, April, 2000.*
140. **Salem, GJ.**, Young, J\*. Gregor, G., Ryan, M., Abrahamse, A., and Greendale, G. Alterations in hip joint biomechanics while walking with a weighted vest. *Presented at the National Meeting of the American Society of Biomechanics, Pittsburgh, PA, October, 1999.*
141. **Salem, G.**, Wang, M-Y\*, Young, J.\*, and Greendale, G. Lower-extremity kinetics while walking with a weighted vest. *Presented at the National Meeting of the American Society of Biomechanics, Pittsburgh, PA, October, 1999.*

142. Nelson, E., **Salem, G.**, Harding, V.\*, Lupinski, J., and Fortanasce, M. Ground-reaction forces during functional tests of power for patients with ACL reconstruction. *Medicine and Science in Sports and Exercise*, 31: S219, 1999. *Presented at National Meeting of American College of Sports Medicine, Seattle, WA, May 1999.*
143. **Salem, GJ.**, Young, J., Wang, M-Y, Marion, M., and Greendale, G. Relationship between isokinetic knee strength and functional performance measures in older subjects. *Medicine and Science in Sports and Exercise*, 31: S1719, 1999. *Presented at National Meeting of American College of Sports Medicine, Seattle, WA, May 1999.*
144. Pho C.N., **Salem GJ.**, Lupinski J.M., Nelson E.E. Kinematics & kinetics of progressive-Range-of-motion closed-kinetic-chain exercise. *Presented at Annual Meeting of Southwest Chapter of the American College of Sports Medicine, Las Vegas, NV, November, 1998.*
145. **Salem, G.** Young, J, Elliot, M, Mizell, L, Greendale, G. Relationship between knee isokinetic endurance and functional-performance measures in older subjects. *Medicine and Science in Sports and Exercise*, 30: S334, 1998. *Presented at National Meeting of American College of Sports Medicine, Orlando, FL, May 1998.*
146. Young, J, **Salem, G.** Elliot, M, Mizell, L, Greendale, G. Knee extensor isokinetic endurance in older subjects. *Medicine and Science in Sports and Exercise*, 30: S72, 1998. *Presented at the Annual Conference & Exposition of the American Physical Therapy Association, Orlando, FL, May 1998.*
147. Harding, FV, Fairley, JL, Salinas, R., **Salem, GJ.** and Fortanasce, MG. An investigation of the relationship between an open kinetic chain test of quadriceps power and a functional test of leg power. *Physical Therapy*, 78: 232, 1998. *Presented at the Annual Conference & Exposition of the American Physical Therapy Association, Orlando, FL, May 1998.*
148. Harding, FV, Fairley, JL, Salinas, R., **Salem, GJ.** and Fortanasce, MG. An evaluation of the return to activity criteria of a single leg hop test for rehabilitation following anterior cruciate ligament reconstruction. *Physical Therapy*, 78: 234, 1998. *Presented at the Annual Conference & Exposition of the American Physical Therapy Association, Orlando, FL, May 1998.*
149. Lupinski J, Harding V, Nelson E, Fortanasce M, and **Salem G.** Landing kinematics during functional tests of power for patients with ACL reconstruction. *Physical Therapy*, 78: 125, 1998. *Presented at the Annual Conference & Exposition of the American Physical Therapy Association, Orlando, FL, May 1998.*
150. **Salem, GJ.** Harding, F.V., and Fortanasce, M.G. Functional tests of power for patients with ACL reconstruction. *Presented at the Southern California Conference on Biomechanics, Pomona, CA, April, 1997.*

151. Ward, S.R., **Salem, GJ.**, and Lee, T. Plantar-foot forces and impulses on step benches with varying structural properties. *J. Strength and Conditioning Research*, 10: 292, 1996. *Presented at the National Conference of the National Strength and Conditioning Association, Atlanta, GA, 1996.*
152. **Salem, GJ.**, Young, J. Gregor, G., Ryan, M., Abrahamse, A., and Greendale, G. Knee extensor moments and knee-extensor strength in older persons wearing a weighted vest. *Medicine and Science in Sports and Exercise*, 28:S110, 1996. *Presented at National Meeting of American College of Sports Medicine, Cincinnati, OH, May 1996.*
153. **Salem, GJ.**, Fowler, E.G., Bieschke, M.N., Holderbaum, B., and Cobos, S. Ground reaction forces and plantar foot pressures during exercise on a compliant and a rigid step bench. *Medicine and Science in Sports and Exercise*, 27:91, 1995. *Presented at National Meeting of American College of Sports Medicine, Minneapolis, MN, May 1995.*
154. Zernicke, R.F., McNitt-Gray, J., Otis, C., Loitz, B., **Salem, G.**, and Finerman, G. Stress fracture risk assessment among elite collegiate women runners. *Journal of Biomechanics* 27: 854, 1994. *Presented at the National Meeting of the American Society of Biomechanics, Palo Alto, CA October, 1994.*
155. Tidball, J.G., **Salem, GJ.**, and Zernicke, R.F. Skeletal muscle failure site and biomechanics during experimental strain injuries. *Medicine and Science in Sports and Exercise* 25: S153, 1993. *Presented at National Meeting of American College of Sports Medicine, Seattle, WA, May 1993.*
156. **Salem, GJ.**, Zernicke, R.F., Barnard, R.J., and Schramm, E. Long-term high fat-sucrose diet changes in femoral neck and vertebral mineral content and mechanics. *Medicine and Science in Sports and Exercise*, 25: S33, 1993. *Presented at National Meeting of American College of Sports Medicine, Seattle, WA, May 1993.*
157. Zernicke, R.F., Barnard, R.J., **Salem, GJ.**, Woodward, Jr., J.S., Meduski, J., and Meduski, G. Dietary protein and exercise effects on immature femoral neck and lumbar vertebra. *Transactions of the Orthopaedic Research Society*, 18: 152, 1993. *Presented at the Annual Conference of the Orthopaedic Research Society, Anaheim, CA, 1993.*
158. Zernicke, R.F., Barnard, R.J., **Salem, GJ.**, and Schramm, E. Effects of a long-term, high fat-sucrose diet on morphology and biomechanics of femoral neck and lumbar vertebra. *Presented at the Second Annual Meeting of the North American Congress of Biomechanics, Chicago, IL, 1992.*
159. **Salem, GJ.** and Zernicke, R.F. Response of immature rat femoral neck and lumbar vertebra to moderate exercise. *Presented at the Combined Meeting of Orthopaedic Research Societies of USA, Japan, and Canada, Banff, Alberta, Canada, 1991.*
160. **Salem, GJ.**, Li, K-C., Zernicke, R.F., and Barnard, R.J. Exercise-related adaptation in geometry and mechanical properties of immature rat tibia and vertebra. *Journal of Biomechanics* 22: 1077, 1990. *Presented at the World Congress on Biomechanics, Los Angeles, CA, 1990.*

161. Zernicke, R.F., Barnard, R.J., Li, K-C., **Salem, GJ.**, Hou, J., and Li, A. Biomechanical and morphological response of immature cortical and trabecular bone to strenuous exercise. *Presented at the First IOC World Congress on Sport Sciences, Colorado Springs, CO, 1989.*
162. **Salem, GJ.**, Zernicke, R.F., Vailas, A.C., and Martinez, D.A. Biomechanical and biochemical changes in lumbar vertebrae of rapidly growing rats. *Medicine and Science in Sports and Exercise* 20: 344, 1988. *Presented at National Meeting of American College of Sports Medicine, Dallas, TX, May 1988.*

### **Technical Reports**

1. **Salem, G.S.** Biomechanical assessment of a rigid and a compliant (prototype I) step bench. Technical Report submitted to Fitness Quest Inc., Canton, OH, September, 1994.
2. **Salem, G.S.** Work-related carpal tunnel syndrome and flexibility exercise: in-plant intervention program for keyboard operators. Technical Report submitted to the Alfta Rehabilitation Center Forlag, AB Sweden, January, 1993.

## STUDENT MENTORING

### Doctoral Students (Primary or Co-Primary Advisor)

**1. Man-Ying Wang**

Dissertation title: *Quantifying musculoskeletal load and adaptation: biomechanical considerations*. MBRL, USC Department of Biokinesiology & Physical Therapy, (2002).

**2. Sean Flanagan**

Dissertation title: *Mechanical demand distribution during multi-joint tasks/* MBRL, USC Department of Biokinesiology & Physical Therapy, (2004).

**3. Gabriel Shaibi**

Dissertation Title: *Effects of resistance training on risk factors for type 2 diabetes in overweight hispanic boys*. MBRL, USC Department of Biokinesiology & Physical Therapy, (2005).

**4. Albert Vallejo**

Dissertation title: *Metabolic Cost of Eccentric vs. Concentric Resistance Exercise in Young and Older Men*. CERC , USC Department of Biokinesiology and Physical Therapy, (2005).

**5. Loren Chui**

Dissertation Title: *Acute physiologic and neuromuscular responses to high-power resistance exercise*. MBRL, USC Department of Biokinesiology & Physical Therapy, (2008).

**6. Joo-Eun Song**

Dissertation Title: *Dynamic Postural Control During Simple and Complex Locomotor Tasks in Persons with Early Stage Parkinson's Disease*, MBRL, USC Department of Biokinesiology and Physical Therapy (2009).

**7. David Erceg**

Dissertation title: *The effects of whole body vibration on indices of metabolic syndrome in children*. MBRL, USC Department of Biokinesiology and Physical Therapy, (2011).

**8. Matt Villanueva**

Dissertation Title: *The influence of rest interval on acute and adaptational responses in seniors*. MBRL, USC Department of Biokinesiology and Physical Therapy (2012).

**9. Shawn Sorenson**

MS Degree, MBRL USC Department of Biokinesiology and Physical Therapy, 5/2009  
Dissertation Title: *Trojan Lifetime Champions: A cross-sectional epidemiological study of lifetime health, wellness, and exercise in elite intercollegiate athletes*. MBRL, USC Department of Biokinesiology and Physical Therapy (2012).

**10. Kate Havens**

Dissertation Title: *Quantifying agility in young and experienced athletes*. MBRL, USC Department of Biokinesiology and Physical Therapy (2014).

**11. Rami Hashish**

Dissertation Title: Biomechanical adaptations associated with the transition from shod to barefoot running. MBRL, USC Department of Biokinesiology and Physical Therapy, (2014).

**12. Yu-Jen Chang**

Dissertation Title: *Neuromechanical Adaptations to Achilles Tendinosis* MBRL, USC Department of Biokinesiology and Physical Therapy (2015).

**13. Sachithra Samarawickrame**

Dissertation Title: *Physiological adaptations associated with the transition from shod to barefoot running.* MBRL, USC Department of Biokinesiology and Physical Therapy, (2015).

**14. Tulika Nandi**

Dissertation Title: *Changes in corticospinal excitability and cortical inhibition in response to changes in postural stability.* MBRL, USC Department of Biokinesiology and Physical Therapy, (proposed; Spring 2015).

**15. Andrea Du Bois**

Accepted into the Ph.D. program, Fall, 2013.

**16. Nicole Marcione**

Accepted into the Ph.D. program, Fall, 2015.

**Doctoral Students (Dissertation Committee)**

**17. Steve Hawkins**

Dissertation Title: *The mechanism of muscle influence on bone adaptation.* Exercise Physiology Laboratory, USC Department of Kinesiology, (1999).

**18. Todd Schroeder**

Dissertation title: *Eccentric training and bone mass in young women.* Exercise Physiology Laboratory, USC Department of Biokinesiology and Physical Therapy, (2000).

**19. Susan Sigward**

Dissertation title: *Biomechanical and neuromuscular aspects of non-contact ACL injuries: The influence of gender, experience and training* MBRL, USC Department of Biokinesiology and Physical Therapy, (2002).

**20. Kathleen Ganley**

Dissertation title: *At what age are gait characteristics mature? Evaluation of gait kinematics, kinetics and intersegmental dynamics in 7-year old children.* MBRL, USC Department of Biokinesiology and Physical Therapy, (2003).

**21. Judith Burnfield**

Dissertation title: *Human and environmental factors contributing to slip events during walking*. MBRL, USC Department of Biokinesiology and Physical Therapy, (2003).

**22. Samuel Ward**

Dissertation title: *The influence of patella alta on knee extensor mechanics and patellofemoral joint stress*. MBRL, USC Department of Biokinesiology and Physical Therapy, (2006).

**23. Yi-Ju Tsai**

Dissertation title: *The influence of footwear sole hardness on slip initiation and falls in young adults*. MBRL, USC Department of Biokinesiology and Physical Therapy, (2008).

**24. Yu-Jen (Sam) Chen**

Dissertation title: *Biomechanical determinants of patellofemoral joint forces*. MBRL, USC Department of Biokinesiology and Physical Therapy, (2006).

**25. Richard Souza**

Dissertation title: *The influence of hip and femur kinematics on patellofemoral joint dysfunction*. MBRL, USC Department of Biokinesiology and Physical Therapy, (2008).

**26. Shawn Farrokhi**

Dissertation title: *Patellofemoral Joint Stress and its Relation to Patellofemoral Pain, Cartilage Morphology, and Cartilage Composition*. MBRL, USC Department of Biokinesiology and Physical Therapy, (2009).

**27. Ching Tsai**

Dissertation Title: *Biomechanical analysis of knee joint loading for individuals with anterior cruciate ligament reconstruction*. MBRL, USC Department of Biokinesiology and Physical Therapy (2010)

**28. Szu-Ping Lee**

Dissertation Title: *The influence of hip muscle performance on Postural Stability and Ankle Joint Biomechanics*. MBRL, USC Department of Biokinesiology and Physical Therapy (2011)

**29. Mark Blanchette**

Dissertation Title: *The influence of shoe sole design on slipping*. MBRL, USC Department of Biokinesiology and Physical Therapy (2011)

**30. Kai-Yu Ho**

Dissertation Title: *The influence of patellofemoral joint loading on patellar failure risk, water content, and bone marrow lesions in individuals with patellofemoral pain*. MBRL, USC Department of Biokinesiology and Physical Therapy (2011)

**31. Hsiang-Ling Teng**

Dissertation Title: *The influence of trunk posture on lower extremity biomechanics*. MBRL, USC Department of Biokinesiology and Physical Therapy (2014)

**32. Kristamarie Pratt**

Dissertation Title: *The influence of trunk posture on lower extremity biomechanics*. MBRL, USC Department of Biokinesiology and Physical Therapy (2014)

**33. Jackie Kiwata**

Dissertation Title: *Exercise and protein supplementation for prostate cancer survivors*. CERL, USC Department of Biokinesiology and Physical Therapy (2014)

**34. Tzu-Chieh (Jennifer) Liao**

Dissertation Title: *Patellofemoral cartilage stress during functional activities*. MBRL, USC Department of Biokinesiology and Physical Therapy (2014)

**35. Yo-Shih**

Dissertation Title: *Cortical influence on lower-extremity muscle recruitment patterns*. MBRL, USC Department of Biokinesiology and Physical Therapy (2014)

**36. Ming-Sheng (Matt) Chan**

Dissertation Title: *Asymmetric loading following ACL reconstruction*. MBRL, USC Department of Biokinesiology and Physical Therapy (2014)

**37. Kyung-Mi (Jasmine) Park**

Dissertation Title: *Patellar tendon biomechanics*. MBRL, USC Department of Biokinesiology and Physical Therapy (2014)

**Masters of Science Students (Primary Advisor)**

**Man-Ying Wang**

Research Project: *Adaptations in isokinetic muscle strength and functional performance after 27 weeks of weighted vest use in elders*. MBRL, USC Department of Biokinesiology and Physical Therapy, (2000).

**David Wallace**

Research Project: *Patellofemoral joint kinetics while squatting with and without an external load*. MBRL, USC Department of Biokinesiology and Physical Therapy, (2002).

**Salinas, Ruben**

Research Project: *Biomechanical analysis of the back squat exercise: a comparison between the healthy and anterior cruciate ligament reconstructed knee*. MBRL, USC Department of Biokinesiology and Physical Therapy, (2002).



**Briana Sather (05/2003)**

*Lower extremity kinetics during unilateral and bilateral squatting activities.* MBRL, USC Department of Biokinesiology and Physical Therapy, (2003).

**Joo-Eun Song**

*Bilateral symmetry during squatting in older adults.* MBRL, USC Department of Biokinesiology and Physical Therapy, (2003).

**Erin Dunn**

*Lower extremity joint angles associated with exercise.* MBRL, USC Department of Biokinesiology and Physical Therapy, (2005).

**Pietro Scaglioni**

Research Project: *Squatting mechanics following ACL repair.* MBRL, USC Department of Biokinesiology and Physical Therapy, (2006).

**Abbie Ferris**

Research Project: *Group exercise in persons with early-stage Parkinson's disease.* MBRL, USC Department of Biokinesiology and Physical Therapy, (2009).

### **Professional Societies**

American Society of Biomechanics

Meeting Co-chair, 2011 ASB National Conference, Long Beach, CA

American College of Sports Medicine, Fellow

International Society of Biomechanics

National Parkinson's Foundation

National Strength and Conditioning Association

### **Editorial Board**

Journal of Applied Biomechanics

Bulletin of Applied Mechanics

American Council on Exercise

### **Journal Reviews**

Journal of Applied Biomechanics

Journal of Experimental Biology

Journal of Strength and Conditioning Research

Clinical Science

Medicine and Science in Sport and Exercise

Sport Biomechanics

Clinical Biomechanics

### **Textbook Reviews**

Benjamin/Cummings Publishing Company, Inc., Redwood City, CA

West Academic Publishing Company, Minneapolis, MN

### **University Service**

1. Standing Committee Member—USC Anatomical Gift Program (1997-present). Policy development for anatomical sciences programs in USC Schools/Departments of Medicine, Dentistry, Pharmacology, and Physical Therapy.
2. Steering Committee Member, Institute for Integrative Health (IIH) 2012-present) Chair, Research Committee (2012-present)
3. Committee Member—USC University Research Committee (2007-2009)
4. Senator—USC Academic Senate (1999-2000)
5. Council President—USC Independent Health Professions Faculty Council (1999-2000)
6. Council Member—USC Independent Health Professions Faculty Council (1997-1999)
7. Director—UCLA Undergraduate Student Research Program in Biomechanics (1991-1995)
8. Chair, Research Committee—UCLA Consultants Helping Athletes Maximize Performance (C.H.A.M.P.S.) (1991-1995)

### **Division Service**

1. Director—Anatomical Sciences, (1996-present).
2. Co-director—Musculoskeletal Research Laboratory (1996-present).
3. Founding member—Research Committee (2011-present)
4. Co-director—Service Learning Program (2009-present)
5. Member of the BKN Committee (1997-present)
6. Member of the Curriculum Committee (1996-2000; 2010-present)
7. Member of the Executive Committee (2009-2011)
8. Member of the DPT Admissions Committee (1996-2006)
9. Coordinator of the Second Semester Committee (2002-2003)
10. Coordinator of the First Semester Committee (1999-2001)

### **National Service**

Member—National Center for Complementary and Alternative Medicine (NCCAM), Study Section: Clinical Trials of CAM Therapy, Fall, 2011.

### **International Service**

Member—Scientific Committee of the 2015 European Society of Biomechanics Congress. (2011-present)