

CURRICULUM VITAE

KORNELIA KULIG, PhD, PT, FAPTA

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1. BIOGRAPHICAL INFORMATION

PERSONAL INFORMATION:

Office Address: Musculoskeletal Biomechanics Research Laboratory, Co-Director
Division of Biokinesiology and Physical Therapy
University of Southern California
1540 East Alcazar Street
Los Angeles, CA 90033
Telephone (1) 323-442-2911 Fax: (1) 323-442-1515
Email: kulig@usc.edu
Lab website: <http://pt2.usc.edu/labs/mbrl/>

UNIVERSITY EDUCATION:

1972-1976 M.S., Physical Therapy and Physical Education, Academy of Physical Education
Wroclaw, Poland

1977-1982 Ph.D., Biomechanics, Academy of Physical Education Wroclaw, Poland

1982-1983 Postdoctoral Fellow, Biomechanics, Biomechanics Laboratory, The University of Iowa
Iowa City, Iowa

1985-1986 B.S., Physical Therapy, Oakland University, Rochester, Michigan

ACADEMIC APPOINTMENTS:

2012-present Professor, Clinical Scholar, University of Southern California (USC)

2013-2014 Adjunct Appointment, National Cheng Kung University, Tainan, Taiwan, RoC
2011-2012

2006-2019 Joint appointment, Department of Orthopaedic Surgery, Keck School of Medicine, USC

2005-pres. Co-Director of the Musculoskeletal Biomechanics Research Laboratory, Division of
Biokinesiology and Physical Therapy, USC

2004-2005 Director of the Musculoskeletal Rehabilitation Research Laboratory, Department of
Biokinesiology and Physical Therapy, USC

1997-2012 Associate Professor of Clinical Physical Therapy, Department of Biokinesiology and Physical
Therapy, USC

1998-2003 Co-Director, Orthopedic Physical Therapy Residency Program, Department of Biokinesiology
and Physical Therapy, USC

1996-1997 Associate Director of Post-Professional Studies, Program in Physical Therapy, Oakland University
Rochester, Michigan

1995 Associate Professor (Jan to Aug.) (On sabbatical leave from Oakland U.), Department of

Biokinesiology and Physical Therapy, USC

- 1993-1997 Associate Professor (with tenure), Program in Physical Therapy, Oakland University, Rochester, Michigan
- 1991-1996 Coordinator of the Orthopedic Manual Physical Therapy Program, Program in Physical Therapy Oakland University, Rochester, Michigan
- 1986-1993 Assistant Professor, Program in Physical Therapy, Oakland University, Rochester, Michigan
- 1991- 1997 Adjunct Assistant Professor, Physical Therapy Program, College of Pharmacy and Allied Health Professions, Wayne State University, Detroit, Michigan

OTHER PREVIOUS EMPLOYMENT:

- 1986-1989 Staff Physical Therapist (part-time), Oakland Physical Therapy, P.C., Novi, Michigan
- 1984-1985 Coordinator of Work Hardening Program, Rehabilitation Medicine, P.C., Gainesville, Florida
- 1982-1983 Assistant Professor (On leave), Biomechanics Laboratory, Academy of Physical Education, Wroclaw, Poland
- 1978-1982 Teaching and Research Assistant II , Biomechanics Laboratory, Academy of Physical Education Wroclaw, Poland
- 1976-1978 Teaching and Research Assistant I, Biomechanics Laboratory, Academy of Physical Education Wroclaw, Poland

HONORS, AWARDS, AND FELLOWSHIPS:

- 2019 Division of Biokinesiology and Physical Therapy Teaching Award, referred to as the “Tommy Teaching Award”
- 2019 USC Mentoring Award, “Faculty Mentoring Faculty, Postdoctoral Scholars, Medical Residents, and Fellows”
- 2015 Royce P Noland Award of Merit, 16th Noland Award Address (2016), California Chapter of the APTA
- 2015 Helen J. Hislop Award for Outstanding Contribution to Professional Literature of the American Physical Therapy Association
- 2014 3rd Annual Distinguished Lectureship Award of American Academy of Orthopaedic Manual Physical Therapists
- 2014 Residency Mentorship Award, Orthopedic Physical Therapy Residency, Division of Biokinesiology and Physical Therapy, USC
- 2013 18th HP John Maley Lectureship of the American Physical Therapy Association
- 2010 Catherine Worthingham Fellow of the American Physical Therapy Association (FAPTA)
- 2009 Honorary Fellow of the American Academy of Orthopedic Manual Physical Therapists (FAAOMPT Hon)

- 2009 Physical Therapist Research Award – Faculty, California Chapter of the APTA 2009, for a publication: Kulig K, Reischl SF, Pomrantz AB, Burnfield JM, Mais-Requejo S, Thordarson DB, Smith RW: Non-operative management of tibialis posterior tendon dysfunction using orthoses and resistive exercise: a randomized clinical trial. *Physical Therapy*, 89:26-36.
- 2008 Physical Therapist Research Award – Faculty, California Chapter of the APTA 2008, for a publication: Landel RF, Kulig K, Fredricson M, Li B, Powers CM: Intertester reliability and validity of manual lumbar spine segmental motion testing. *Physical Therapy*, 88:43-49.
- 2005 Physical Therapist Research Award – Clinical Faculty, California Chapter of the APTA 2007, for a publication: Davenport TE, Kulig K; Matharu Y, Blanco CE: The EdUReP model for non-surgical management of tendinopathy. *Physical Therapy*: 85:1093-1103.
- 2005 Physical Therapist Research Award – Clinician, California Chapter of the APTA 2007, for a publication: Davenport TE, Watts H, Kulig K, Resnik C: Current status and correlates of physicians' referral diagnoses for physical therapy. *Journal of Orthopedic and Sports Physical Therapy*, 35:572-579.
- 2004 Dorothy E. Baethke – Eleanor J. Carlin Award for Excellence in Academic Teaching. American Physical Therapy Association.
- 2002 Outstanding Teacher of the Year, Department of Biokinesiology and Physical Therapy, University of Southern California.
- 2002 James A. Gould Excellence in Teaching, Orthopaedic Physical Therapy Award, Orthopaedic Section of the APTA.
- 2001 Physical Therapist Research Award – Faculty, California Chapter of the APTA 2001, for a publication: Kulig K, Powers CM, Shellock F, Terk M: Muscle activation mediated by the velocity of the eccentric component of isotonic exercise: evaluation by MRI. *MSSE*, 33:196-200.
- 1997 Teaching Excellence Award, Nominated, Oakland University.
- 1996 Outstanding Teacher Award, Honorable Mention, Golden Key National Honor Society, Oakland University.
- 1992 E. Darnell Research Award presented by Michigan Physical Therapy Association Institute for Education and Research, Inc.
- 1994 Merit Award, Oakland University, School of Health Sciences, 1989, 1990, 1991
- 1989 Research Productivity Award (IBM PC computer) IBM and Oakland University, School of Health Sciences.
- 1982 Research Award, The Ministry of Physical Education in Sports, Level II, Poland.
- 1979 Research and Teaching Award, The Ministry of Physical Education and Sports, Level III, Poland.

PROFESSIONAL ORGANIZATIONS:

International Society of Biomechanics
 American Society of Biomechanics
 American College of Sports Medicine
 American Alliance for Health, Physical Education, Dance and Recreation
 American Physical Therapy Association
 Michigan Physical Therapy Association

II. ADMINISTRATIVE AND SERVICE ACTIVITIES

UNIVERSITY SERVICE:

University (University of Southern California)

2020	USC Mentoring Award Selection Committee
2013-2015	Conflict of Interest Review Committee
2004	USC University Senate

School (Ostrow School of Dentistry)

2015-present	Faculty Development Committee
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School (Keck School of Medicine)

2001-2004	Orthopedic Curriculum of the Keck School of Medicine
2001-2002	Co-editor, Health Sciences Women Faculty Association Newsletter
1999-2000	Distance Learning Task Force for the Independent Health Professions
1998-2000	Committee on Medical Faculty Women's Issues
1997-2000	Committee for Handicapped Persons Accessibility

Division of Biokinesiology and Physical Therapy

2013; 2018	Chair, Faculty Search Committee
2010	Faculty Search Committee
2008-present	Chair, Research, Teaching, Practice and Clinical Track Appointments and Promotions Committee, Division of Biokinesiology and Physical Therapy
2006-present	Awards Committee, Division of Biokinesiology and Physical Therapy
2005	Faculty Search Committee
2004	Faculty Search Committee
2003-2006	Executive Committee
2003	Faculty Search Committee
2002	Faculty Search Committee
2001-2006	Merit Committee
1998	Merit Committee

SERVICE PROFESSIONAL ORGANIZATIONS (elected by membership)

2014-2017	Michels Forum Committee of the Section on Research of the American Physical Therapy Association
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2015-2018	APTA's Lectureship Selection Committee
2014	Reviewer, InnovationSummit2013 American Physical Therapy Association, Grant Proposals
2009-2012	Director, Board of Directors, Orthopaedic Section of the American Physical Therapy Association
1991-1993	Member-at-Large, American Academy of Orthopaedic Physical Therapists

III. SCHOLARLY ACTIVITIES

PUBLICATIONS:

PUBLICATIONS (peer reviewed)

(* indicates USC students under Dr. Kulig's mentorship, Senior Author is underlined)

1. Shih H-JS*, Van Dillen L, Kutch J and **Kulig K**: Individuals with recurrent low back pain exhibit further altered frontal plane trunk control in remission than when in pain. *Clin Biomech*, 2021 May 28;87:105391. doi: 10.1016/j.clinbiomech.2021.105391. Epub ahead of print. PMID: 34118490.
2. Shih H_JS*, Winstein CJ and **Kulig K**: Young adults with recurrent low back pain demonstrate altered trunk coordination during gait independent of pain status and attentional demands. *Exp Brain Res*. 2021 Apr 19. doi: 10.1007/s00221-021-06106-8. Epub ahead of print. PMID: 33871659.
3. Rowley KM, Shih HJ, Traina K, Winder B, Mikkelsen P and **Kulig K**: Effects of a "toes-off" modified heel raise on lower leg muscle coordination in non-dancers, dancers, and dancers with flexor hallucis longus tendinopathy. *Clin Biomech (Bristol, Avon)*. 2021 Mar;83:105287. doi: 10.1016/j.clinbiomech.2021.105287. Epub 2021 Feb 3. PMID: 33601167.
4. Lantz J, Abedi A, Tran F, Cahill R, **Kulig K**, Michener LA, Hah RJ, Wang JC, Buser Z: The Impact of Physical Therapy Following Cervical Spine Surgery for Degenerative Spine Disorders: A Systematic Review. *Clinical Spine Journal* 36(1): 18-26, 2021.
5. Shih HJS*, Rowley KM and **Kulig K**: Lower limb posture at initial contact differentiates between dancers with and without flexor hallucis longus tendinopathy and predicts injury-related kinetic factors. *Medical Problems of Performing Artists*, 36(1):18-26, 2021. doi: 10.21091/mppa.2021.1003
6. Shih HJS*, Gordon J and **Kulig K**: Trunk Control during Gait: Walking with Wide and Narrow Step Widths Present Distinct Challenges. *J Biomech*, 114:110135, 2021. <https://doi.org/10.1016/j.jbiomech.2020.110135>.
7. Jarvis DN*, Sigward SM, Lerch K and **Kulig K**: The effects of jump strategy modification on energetics during dance jumps: landing. *Journal of Sports Sciences*, 39(4) 446-452, 2021.
8. Shih HJS*, Gordon J, **Kulig K**. Trunk control during gait: walking with wide and narrow step widths present distinct challenges. *BioRxiv*, 2020.08.30.274423. <https://doi.org/10.1101/2020.08.30.274423>
9. Kurihara T, Rowley KM, Reischl SF, Baker LL and **Kulig K**: Interaction between foot type and a task's postural demand on medial longitudinal arch deformation and activation of foot intrinsics and extrinsic musculature. *Acta of Bioengineering and Biomechanics*, 22(4) 23-29, 2020.
10. **Kulig K**, Chang Y-J, Ortiz-Weissberg D*: A perspective on reversibility of tendinosis-induced multilevel adaptations. *Front. Physiol.* 11:651 doi: 10.3389/phys.2020.00651 2020.
11. Jarvis DN* and **Kulig K**: What goes up must come down: Consequences of jump strategy modification on dance leap takeoff biomechanics. *Journal Sports Sci*. doi: 10.1080/02640414.2020.1756710. Online ahead of print. PMID: 32362240

12. Jarvis, DN* and **Kulig K**. Achieving the split position in a saut de chat leap. *Medical Problems of Performing Artists*. 35 (2): 68-72, 2020.
13. Derian JM, Armour Smith J, Wang Y, Lam W and **Kulig K**: Biomechanical Characteristics of Lumbar Spine Manipulation in Expert, Resident, and Student Therapists. *Musculoskeletal Science and Practice*, 2020 Mar 11;48:102150. doi: 10.1016/j.msksp.2020.102150. [Epub ahead of print]
14. Rowley KM*, Winstein CJ and **Kulig K**: Persons in remission from recurrent low back pain alter trunk coupling during a dynamic balance task under dual-task interference while modulating task performance with prioritization instructions. *Exp Brain Res*. 238: 957–968, 2020.
15. Muller J, Martinez-Valdes E, Mueller S, **Kulig K**, **Meyer F**: Sudden gait perturbations elicit sex-specific neuromuscular trunk responses in persons with low back pain *J Biomech*. 10962020 Jan 16:109646. doi: 10.1016/j.jbiomech.2020.109646. [Epub ahead of print] 2020.
16. Rowley KM, Engel T and **Kulig K**: Trunk and hip muscle activity during the Balance-Dexterity Task in persons with and without recurrent low back pain *J Electromyogr Kinesiol*. Nov 20;50:102378. doi: 10.1016/j.jelekin.2019.102378. [Epub ahead of print] xxx; 2020.
17. Fietzer AL* Koyama Y and **Kulig K**: Movement variability responses to change in hopping rate. *Acta of Bioengineering and Biomechanics*, 21(4):37-45, 2019.
18. Ho KY, Baquet A, Chang YJ, Chien LC, Evers M, Bashford GB, **Kulig K**: Factors related to intra-tendinous morphology of Achilles tendon in runners. *PLoS ONE* 14(8): e0221183. <https://doi.org/10.1371/journal.pone.0221183>
19. Rowley KM*, Smith JA and **Kulig K**: Reduced trunk coupling in persons with recurrent low back pain is associated with greater deep-to-superficial trunk muscle activation ratios during the Balance-Dexterity Task. *Journal of Orthopedic and Sports Physical Therapy* 49(12),887-898, 2019.
20. **Cassel M**, Risch L, Mayer F, Kaplick H, Engel A, **Kulig K** and Bashford GR: Achilles tendon morphology assessed using image based spatial frequency analysis is altered among healthy elite adolescent athletes compared to recreationally active controls. *Journal of Science and Medicine in Sport* 22 (8) 882-86, 2019.
21. Mikkelsen P, Jarvis DN and **Kulig K**: Heeled Shoes Increase Knee Demand during a Rate-Controlled Bipedal Dance Jump. *Medical Problems in Performing Artists*, 33(4):243-251, 2018.
22. Fietzer AL* Winstein CJ and **Kulig K**: An external focus of attention preferentially increases performance-stabilizing variability over performance-destabilizing variability. *Human Movement Science* 62:14-24, 2018.
23. Rowley KM* Gordon J and **Kulig K**: Characterizing the Balance-Dexterity Task to investigate trunk control during dynamic balance. *Journal of Biomechanics*, 77:211-217, 2018.
24. Shih HJ*, Jarvis DN, Mikkelsen P and **Kulig K**: Interlimb force coordination in rate-controlled dance specific bipedal jumps: comparison between experts and novices. *Journal of Applied Biomechanics*, 34:462-468, 2018.
25. Yani MS, Wondolowski JH, Eckel SP, **Kulig K**, Fisher BE, Gordon JE, Kutch JJ. Distributed representation of pelvic floor muscles in human motor cortex. *Scientific Reports*. 8:8(1):7213, 2018.
26. Armour Smith J*, Gordon J, **Kulig K**: The influence of divided attention on walking turns: effects on gait control in young adults with and without a history of low back pain. *Gait and Posture*, 58:498-503, 2017.
27. Heredia-Jimenez J, Orantes-Gonzalez E, Rowley KM, **Kulig K**: Pulling, pushing and lateral use of a trolley vs. carrying a backpack: a pilot study. *Gait and Posture* 49:43-44, 2016.

28. O'Donnell M, Armour-Smith J, Abzug A, **Kulig K**: How should we teach lumbar manipulation? A consensus study. *Manual Therapy* 25(9):1-10, 2016.
29. Jarvis DN* and **Kulig K**: Lower extremity biomechanical demands during saut de chat leaps. *Medical Problems of Performing Artists* 31(4):211-217, 2016.
30. Davenport TE, Cleland JA, Yamada KA, **Kulig K**: Measurement properties of the Low Back Activity Confidence (LoBACKS). *Evaluation and the Health Professions* 39(2) 204-214, 2016.
31. Fisher BE, Piraino A, Armour Smith J, Lee YY, Johnson S, Davenport TE, **Kulig K**: The effect of velocity of joint mobilization on corticospinal excitability in individuals with history of ankle sprain. *Journal of Orthopedic and Sports Physical Therapy* 46(7), 562-570, 2016.
32. Armour-Smith J* and **Kulig K**: Trunk-pelvis coordination during turning: a cross sectional study of young adults with and without a history of low back pain. *Clinical Biomechanics* 36:58-64, 2016.
33. Armour-Smith J* and **Kulig K**: Altered multifidus recruitment during walking in young asymptomatic individuals with a history of low back pain. *Journal of Orthopedic and Sports Physical Therapy* 46(5): 365-374, 2016.
34. **Kulig K**, Chang Y-J, Winiarski S, Bashford GR: Ultrasound based tendon micromorphology predicts mechanical characteristics of degenerated tendons. *Ultrasound in Medicine and Biology*, 42(3), 664-673, 2016.
35. Jarvis DN and **Kulig K**: Kinematic and Kinetic Analyses of the Toes in Dance Movements. *Journal of Sport Sciences*. 34(17):1612-18, 2016.
36. Ho KY and **Kulig K**: Changes in patellar tendon water content in response to an acute bout of eccentric loading: a case report. *Physiother Theory Pract*. 32(7):566-570, 2016.
37. Michener LA and **Kulig K**: Not all tendons are created equal – implications for differing treatment approaches. *Journal of Orthopedic and Sports Physical Therapy*, 45(11): 829-831, 2015.
38. **Kulig K**, Noceti-DeWit L, Reischl SF, Landel RF: Physical Therapists' Role in Prevention and Management of Patellar Tendinopathy Injuries in Youth, Collegiate and Middle-aged Indoor Volleyball Athletes: *Braz. J. Phys. Ther.* 19(5): 410-420, 2015.
39. Rowley KM*, Jarvis DN*, Kurihara T, Fietzer AL*, Chang YJ*, **Kulig K**: Toe flexor strength, flexibility and function and flexor hallucis longus tendon morphology in dancers and non-dancers. *Med Probl Perform Art*. 30(3):152-156, 2015.
40. Chang Y-J* and **Kulig K**: The Neuromechanical Adaptations to Achilles Tendinosis. *J Physiol*. 593(15) 3373-3387, 2015.
41. Sutton-Traina K*, Armour Smith J*, Jarvis DN*, Lee SP, **Kulig K**: Exploring active and passive contributors to turn out in dancers and non-dancers. *Med Probl Perform Art*. 30(2):78-83, 2015.
42. Jarvis DN* and **Kulig K**. Pointing the foot without sickling: an examination of ankle movement during jumping. *Med Probl Perform Art*. 30(1):61-5, 2015.
43. Armour-Smith J* and **Kulig K**: Does insertion of intramuscular electrodes alter motor behavior during locomotion? *J Electromyogr Kinesiol*. 25(3):431-7, 2015.
44. **Kulig K**, Lee SP, Reischl SF, Noceti-DeWit L: Effect of Tibialis Posterior Tendon Dysfunction on Unipedal Standing Balance Test. *Foot and Ankle International*, 36(1):83-9, 2015.

45. **Kulig K**, Joiner DG*, Chang YJ*: Elite Male Volleyball Athletes with Patellar Tendinopathy Land at a More Acute Angle than those with Asymptomatic Patellar Tendons. *International Journal of Sports Medicine*, 36(5):400-406, 2015.
46. **Kulig K**, Oki K,* Chang Y-J*, Bashford GR: Achilles and patellar tendon morphology in dancers with and without tendinopathy. *Medical Probl Perform Art.*, 29(4):221-228, 2014.
47. Jarvis DN*, Armour Smith J*, **Kulig K**: Trunk Coordination in Dancers and Non-Dancers. *Journal of Applied Biomechanics*, 30(4):547-554, 2014.
48. Armour Smith J*, Popovich JM Jr., **Kulig K**: The effect of hip strength on the lower limbs and trunk during walking and hopping, *Journal of Orthopedic and Sports Physical Therapy*, 44:525-531, 2014.
49. Beneck GJ*, Popovich JM Jr.*, Selkowitz DM, Azen S, **Kulig K**, and Physical Therapy Clinical Research Network (PTClinResNet), Intensive, Progressive Exercise Improves Quality of Life Following Lumbar Microdiscectomy: A Randomized Controlled Trial. *Clinical Rehabilitation*, 28(9):892-901, 2014.
50. **Kulig K**: Residencies Education in Every Town: Is it Just so Simple? *Physical Therapy*, 94:151-161, 2014.
51. Poppert EM, **Kulig K**: High volume exercise training following microdiscectomy (LEAP). *Physical Therapy*, 93:591-596, 2013.
52. Popovich JM*, Jr., Welcher JW, Hedman TP, Tawackoli W, Anand N, Chen TC, **Kulig K**: Lumbar facet joint and intervertebral disc loading during simulated frontal plane pelvic obliquity. *The Spine Journal*, 13:1581-1589, 2013.
53. **Kulig K**, Landel RF, Chang EY*, Hannanvash N*, Reischl SF, Song PF, Bashford GR: Patellar Tendon Morphology in Volleyball Athletes with and without Patellar Tendinopathy. *Scandinavian Journal of Medicine and Science in Sports*, 23:81-88, 2013.
54. Beneck GJ*, Baker LL, **Kulig K**: Fatigability assessment of the lumbar extensors in persons with chronic low back pain: an EMG spectral analysis using intramuscular electrodes. *Journal of Electromyography and Kinesiology*, 23:70-77, 2013.
55. Fietzer AL, Chang YJ*, **Kulig K**: Dancers with patellar tendinopathy exhibit higher vertical and braking ground reaction forces during landing. *Journal of Sports Sciences*, 30:1157-1163, 2012.
56. Hassett EK*, **Kulig K**, Colletti PM: Xanthomatous Tendinosis, *Journal of Orthopaedic and Sports Physical Therapy*, 42:379, 2012.
57. Beneck GJ*, **Kulig K**: Localized and bilateral multifidus atrophy in active persons with chronic unilateral low back pain. *Archives of Physical Medicine and Rehabilitation*, 93:300-306, 2012.
58. Armour Smith J*, Siemienski A, Popovich JM Jr*, **Kulig K**: Intra-task variability of trunk coordination during a rate-controlled bipedal dance jump. *Journal of Sports Sciences*, 30:139-147, 2012.
59. Popovich JM Jr.*, **Kulig K**: Lumbopelvic landing kinematics and EMG in women with contrasting hip strength. *Medicine and Science in Sports and Exercise*, 41:146-153, 2012.
60. Mulroy SJ, Winstein CJ, **Kulig K**, Beneck GJ*, Fowler E, DeMuth S, Sullivan KJ, Brown DA, Lane C: The Effect of Physical Therapy on the Disablement-Enablement Process: Insights from the PTClinResNet Database. *Physical Therapy*, 91:1766-1779, 2011.
61. Yamada KA, Lewthwaite R, Popovich JM Jr*, Beneck GJ*, **Kulig K**: The Low Back Activity Confidence Scale (LoBACS): Preliminary Validity and Reliability. *Physical Therapy*, 91:1592-1603, 2011.

62. **Kulig K**, Popovich JM Jr.*, Nocetti-DeWit L, Reischl SF, Kim D*: Persons with Posterior Tibial Tendon Dysfunction have Diminished Hip Muscle Performance. *Journal of Orthopedic and Sports Physical Therapy*, 41:687-694, 2011.
63. **Kulig K**, Loudon JK, Popovich JM Jr.*, Pollard CD, Winder BR*: Dancers with Achilles tendinopathy demonstrate altered lower extremity take-off kinematics. *Journal of Orthopedic and Sports Physical Therapy*, 41:606-613, 2011.
64. Poppert E and **Kulig K** Hip Osteoarthritis in a Patient Presenting with Medial Knee Pain. *Journal of Orthopedic and Sports Physical Therapy*, 41:33, 2011.
65. **Kulig K**, Fietzer AL, Popovich JM Jr.* Takeoff and Landing Ground Reaction Forces and Knee Mechanics during a Saut de Chat. *Journal of Sports Sciences*, 29:125-131, 2011.
66. **Kulig K**, Harper-Hanigan K*, Souza RB*, Powers CM. Femoral torsion measured by ultrasound and magnetic resonance imaging: concurrent validity. *Physical Therapy*, 90:1641-1648, 2010.
67. Davenport TE, **Kulig K**, Fisher BE: Ankle manual therapy for individuals with post-acute ankle sprains: description of a randomized, placebo-controlled clinical trial. *BMC Complementary and Alternative Medicine*, 2010, 10:59.
68. Sorenson SC*, Arya S*, Souza RB*, Pollard CD, Salem GJ, **Kulig K**: Altered Knee Extensor Dynamics in the Volleyball Approach Jump: The Influence of Patellar Tendinopathy. *Journal of Orthopedic and Sports Physical Therapy*, 40:568-576, 2010.
69. Souza R*, Arya S*, Pollard CD, Salem GJ, **Kulig K**: Patellar Tendinopathy Alters the Distribution of Lower Extremity Joint Effort during Hopping. *Journal of Applied Biomechanics*, 26, 249-255, 2010.
70. Flanagan SP, **Kulig K**: Time Courses of Adaptation in Lumbar Extensor Performance of Patients with a Single Level Microdiscectomy during a Physical Therapy Exercise Program. *Journal of Orthopedic and Sports Physical Therapy*, 40:336-344, 2010.
71. Arya S* and **Kulig K**: Tendinopathy Alters Mechanical and Material Properties of the Achilles Tendon. *Journal of Applied Physiology*, 108: 670-675, 2010.
72. Cleland JA, Fritz JM, **Kulig K**, Davenport TE, Eberhart S, Magel J, Childs J: Comparison of the Effectiveness of Three Manual Physical Therapy Techniques in a Subgroup of Patients with Low Back Pain Who Satisfy a Clinical Prediction Rule: A Randomized Clinical Trial. *Spine*, 34:2720-2729, 2009.
73. **Kulig K**, Beneck GJ*, Selkowitz DM, Popovich JM Jr.*, Ge TT, Flanagan SP*, Poppert EM, Yamada K, Powers CM, Azen S, Winstein CJ, Gordon J, Samudrala S, Chen TC, Shamie N, Khoo L, Spoonamore MJ, Wang JC and Physical Therapy Clinical Research Network (PTClinResNet), The effect of an intensive, progressive exercise program on functional performance in patients post single-level lumbar microdiscectomy. *Physical Therapy*, 89:1145-1157, 2009.
74. Johnson SD*, **Kulig K**: Patellar tendon rupture following an acute knee injury. *Journal of Orthopedic and Sports Physical Therapy*, 90:825, 2009.
75. **Kulig K**, Lederhaus E*, Reischl SF, Arya S*, Bashford GB: Does a 10-week tendon specific eccentric exercise program alter the degenerated tibialis posterior tendon? *Foot and Ankle International*.30:877-885, 2009.
76. Fisher BE, Davenport TE, **Kulig K**, Wu AD: Identification of potential neuromotor mechanisms of manual therapy in patients with musculoskeletal disablement: rationale and description of a clinical trial. *BMC Neurology*, 9:20, 2009.

77. **Kulig K**, Reischl SF, Pomrantz AB, Burnfield JM, Mais-Requejo S, Thordarson DB, Smith RW: Non-operative management of tibialis posterior tendon dysfunction using orthoses and resistive exercise: a randomized clinical trial. *Physical Therapy*, 89:26-36, 2009.
78. **Kulig K**, Scheid AR*, Beauregard R*, Popovich JM*, Beneck GJ*, Colletti PM: Multifidus morphology in persons scheduled for single level microdiscectomy: qualitative and quantitative assessment with anatomical correlates. *American Journal of Physical Medicine & Rehabilitation*, 88:355-361, 2009.
79. **Winstein CJ**, Pate P, Ge T, Ervin C, Baurley J, Sullivan, K, Underwood SJ, Fowler, E, Mulroy S, Brown D, **Kulig K**, Gordon J, Azen S, The Physical Therapy Clinical Research Network (PTClinResNet): Methods, Efficacy and Benefits of a Rehabilitation Research Network. *American Journal of Physical Medicine & Rehabilitation*, 87:937-950, 2008.
80. **Kulig K**, Burnfield JM: The Role of Biomechanics in Orthopedic and Neurological Rehabilitation *Acta of Bioengineering and Biomechanics*, 10:3-14, 2008.
81. **Bober T**, Dziuba A, Kobel-Buys K, **Kulig K**: Gait characteristics following Achilles tendon elongation: the foot rocker perspective. *Acta of Bioengineering and Biomechanics*, 10:37-42, 2008.
82. **Bashford GR**, Tomsen N, Arya S*, Burnfield JM, **Kulig K**: Tendinopathy determination by use of spatial frequency parameters in ultrasound B-mode images. *IEEE Trans. Med Imaging*, 27:608-615, 2008.
83. **Powers CM**, Beneck GJ*, **Kulig K**, Landel R, Fredricson M: The effects of a single session of posterior to anterior spinal mobilization on pain response and lumbar segmental extension in persons with nonspecific low back pain. *Physical Therapy*, 88:485-493, 2008.
84. Landel RF, **Kulig K**, Fredricson M, Li B, **Powers CM**: Intertester reliability and validity of manual lumbar spine segmental motion testing. *Physical Therapy*, 88:43-49, 2008.
85. Flanagan SP, **Kulig K**: Assessing musculoskeletal performance of the back extensors following a single-level microdiscectomy. *Journal of Orthopedic and Sports Physical Therapy*, 37:356-363, 2007.
86. **Kulig K**, Powers CM, Landel R, Chen K, Fredricson M, Guillet M, Butts K: Segmental lumbar mobility in individuals with central low back pain: In vivo assessment during passive and active motion using dynamic MRI. *BMC Musculoskeletal Disorders*. 8:8, 2007.
87. Selkowitz DM, **Kulig K**, Poppert EM, Flanagan SP, Matthews ND, Beneck GJ*, Popovich Jr. JM*, Lona JR, Yamada KA, Burke WS, Ervin C, Powers CM, and PTClinResNet. The immediate and long-term effects of exercise and patient education on physical, functional, and quality of life outcome measures after single-level lumbar microdiscectomy: a randomized controlled trial protocol (NCT00306423). *BMC Musculoskeletal Disorders*. 7:70, 2006.
88. **Kulig K**, Pomrantz AB, Burnfield, JM, Reischl SF, Mais-Requejo, S, Thordarson DB, Smith RW: Non-operative management of posterior tibialis tendon dysfunction: design of a randomized clinical trial (NCT00279630), *BMC Musculoskeletal Disorders*. 7:49, 2006.
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2. Tang JX, Shih HJS, Ai Y, Rowley MK, **Kulig K.** (2021) Balance-Dexterity Task performance in and out of an episode of low back pain. XXVIII Congress of the International Society of Biomechanics. Online. Poster
3. Derian JM, Wang Y, Pham JMS, **Kulig K.** Can a Speed-Specific Instruction Alter Kinetic Characteristics of a Side-Lying Lumbar Manipulation? APTA Combined Sections Meeting, virtual conference. POSTER 2021.
4. Wang Y, Derian JM, **Kulig K.** Immediate Effects of Speed-Specific Instruction on Practitioner's Pelvic Kinematics During Side-Lying Lumbar Manipulation. APTA Combined Sections Meeting, virtual conference. POSTER 2021.
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15. Ortiz DW*, Laine CM, Shih HJS*, Yamaguchi AC*, **Kulig K.** (2020) Influences of Continuous Physical Activity on Muscle Recruitment: Findings from Rate-Controlled Sauté Jumps in Dancers. American Physical Therapy Association Combined Sections Meeting. Denver, CO, USA. Poster.
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27. Shih HJS*, Trejo L, Rowley KM, and **Kulig K.** (2018) Mechanism of metatarsophalangeal joint overload in dancers with flexor hallucis longus tendinopathy. International Association for Dance Medicine and Science, Helsinki, Finland. Podium.
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86. Oki KC*, Chang YJ*, Lim A*, Heredia-Jimenez JM*, Mills J, Bashford G, **Kulig K**. Achilles and patellar tendon morphology in young dancers with and without tenalgia. APTA Combined Sections Meeting, New Orleans, LA, 2011.
87. Hannanvash N*, Chang YJ*, Song P, Bashford GB, **Kulig K**. Patellar Tendon Morphology in Elite Male Volleyball Athletes with and without Patellar Tendinopathy. APTA Combined Sections Meeting, New Orleans, LA, 2011.
88. Leung K*, Lee SP*, Popovich JM Jr.*, Reischl SF, **Kulig K**. A Comprehensive Foot, Ankle, and Hip Intervention for Patients with Posterior Tibial Tendon Dysfunction: A Case Series. APTA Combined Sections Meeting, New Orleans, LA, 2011.
89. Armour Smith J*, Sieminski A, Popovich JM Jr,*, **Kulig K**: Trunk segment coordination during a jumping task in Elite dancers: an exploration using vector coding. ASB, Providence, RI, 2010.
90. Armour Smith J*, Popovich JM Jr,*, **Kulig K**: Sagittal plane spinal kinematics during sautes. IADMS, Birmingham, UK, 2010.
91. Chang YJ*, Siemiński A, Gregor RJ, **Kulig K**: Ankle actuator deficits in the presence of Achilles tendinopathy. ASB, Providence, RI, 2010.
92. Chang YJ*, Arya S*, Gregor RJ, **Kulig K**: Lower extremity movement strategies in individuals with Achilles tendinopathy. i-FAB, Seattle, WA, 2010.
93. Popovich, J.M., Jr. *, and **Kulig, K**. Lumbopelvic kinematics in the presence of diminished hip muscle performance. APTA Combined Sections Meeting, San Diego, CA, 2010.
94. Urisaka MC*, Popovich JM Jr. *, Arya S*, Asami DK*, Chang YJ*, Souza RB*, **Kulig K**. Is support moment during slow single-legged hopping influenced by patellar tendinopathy. CSM, San Diego, CA, 2010.
95. Loudon J, Popovich JMP Jr. *, Winder BR, * Pollard CD, **Kulig K**. Lower extremity kinematics in the presence of Achilles tendinopathy during a *saut de chat* performed by elite dancers. CSM, San Diego, CA, 2010.

96. Burnfield JM, Rawat M*, Song P, Arya S*, Bashford GR, **Kulig K**. Morphological adaptations in lower extremity tendons following spinal cord injury, CSM, San Diego, CA, 2010.
97. Beneck GJ*, Colletti PM, **Kulig K**. Multifidus muscle volume in persons with and without chronic unilateral low back pain, CSM, San Diego, CA, 2010.
98. Rawat M*, Arya S*, Song P, Burnfield JM, Bashford GR, **Kulig K**. Macro- and micro-morphology of Achilles tendon in runners with and without history of tendinopathy, CSM, San Diego, CA, 2010.
99. Reischl SF, Lee YY*, Davenport TE, **Kulig K**, Wu A, Ruckert E, Fisher BE. Peripheral and central responses to ankle joint manipulation or stretching. CSM, San Diego, CA, 2010.
100. Chang YJ*, Popovich JM*, **Kulig K**: Joint contributions to support moment during running and hopping in runner with Achilles tendinopathy: an interlimb comparison. ASB, University Park, PA, 2009.
101. Song P, Linstrom K, Boye J, **Kulig K**, Burnfield JM, Bashford GR: Tendinopathy discrimination using spatial frequency parameters and artificial neural networks. IEEE International Ultrasonic Symposium, Rome, Italy, (IUS), pp.1902-1905, 20-23 Sept. 2009.
102. Nelson CA, Provorse AR, Bashford GB, Burnfield JM, **Kulig K**: An Under-Actuated 5-DOF Robotic Manipulator for Ultrasound Transducer Guidance using a Passive Four-Bar Linkage IDETC/CIE, San Diego, 2009.
103. Davenport TE, **Kulig K**, Resnik K: Roles and barriers for direct access to physical therapy in the development of a culture of patient-centered efficiency in the United States health care system, AAOMPT, Washington, DC, 2009
104. Fietzer AL, Popovich JM Jr.*, Cabot A, Ickes D, Shrier G, Tyler K, Hemphill S, **Kulig K**. Ground reaction forces during the landing phase of a saut de chat: a comparison of healthy dancers and dancers with patellar tendinopathy. IADMS Annual Meeting, The Hague, Netherlands, 2009.
105. Harper KL*, Souza RB*, Powers CM, **Kulig K**: Femoral torsion measured by ultrasound: test –retest reliability and concurrent validity. CSM, Las Vegas, 2009.
106. Lederhaus E*, Reischl SF, Arya S*, **Kulig K**: Does a 10-week tendon specific eccentric exercise program alter the degenerated tibialis posterior tendon? CSM, Las Vegas, 2009.
107. Fietzer AL, Asami D*, Pollard CD, Arya S*, Souza RB*, Popovich JM Jr.*, **Kulig K**. Ground reaction forces and knee net joint moments during the takeoff and landing phases of grand jeté, CSM, Las Vegas, 2009.
108. Winder BR*, Asami DK*, Pollard CD, Souza RB*, Arya S*, Popovich JM Jr.*, **Kulig K**. Lower extremity joint kinetics during the takeoff phase of a grand jeté performed by elite dancers, CSM, Las Vegas, 2009.
109. Davenport TE, Cleland J, **Kulig K**: Patient classification based on psychosocial variables predict treatment outcome in patients with lower back pain who meet a clinical prediction rule. CSM, Las Vegas, 2009.
110. Davenport T E, Cleland J, Lewthwaite R, Yamada, K*, **Kulig K**: Validity of the low back activity confidence scale in a subgroup of patients with lower back pain who will meet a clinical prediction rule. CSM 2009 CSM, Las Vegas, 2009.
111. Cleland J, Fritz J, Childs J, **Kulig K**, Eberhart S, Davenport T, Magel J. Landel RF. Generalizability of clinical prediction rule for identifying patients with low back pain who are likely to respond rapidly and dramatically to thrust manipulation. AAOMPT 2008.
112. **Kulig K**, Burnfield JM: The role of biomechanics in orthopedic and neurological rehabilitation, International Congress of the Polish Society of Biomechanics, Wroclaw 2008.

113. Arya S*, **Kulig K**: Tendinopathy alters mechanical properties of the Achilles tendon. ASB 2008.
114. Souza RB*, Arya S*, Pollard CD, Salem GJ, **Kulig K**: Patellar tendinopathy alters the distribution of lower extremity joint effort during hopping. ASB, 2008.
115. Sorenson SC*, Arya S*, Souza SB*, Pollard CD, Harper KL*, Paulseth SG, Salem GJ, **Kulig K**: Altered Knee Extensor Dynamics in the Volleyball Approach Jump: The Influence of Patellar Tendinopathy. ACSM 2008.
116. Arya S*, Souza RB*, Pollard CD, Sorenson SC*, Salem GJ, **Kulig K**: Energetics of Single-Legged Hopping in the Presence of Patellar Tendinopathy. ACSM 2008.
117. Davenport TE, Cleland JA, Lewthwaite R, Yamada KA, Childs J, Fritz J, **Kulig K**: Responsiveness of the Lower Back Self-Efficacy Scale: Preliminary Analysis, CSM 2008.
118. Husain A, Burke W, **Kulig K**: Relationship of Core Stability Measures in Baseball Players with Shoulder or Elbow Injuries During a Season, AOSSM, Calgary, Canada 2007.
119. Popovich JM*, Welcher JW, **Kulig K**, Pelled G, Gazit D, Tawackoli W: The effects of loading rate on porcine lumbar spinal segments: an in-vivo biomechanical study. ASB, Stanford, CA, 2007.
120. Arya, S*, **Kulig K**: Mechanical properties of the Achilles tendon in the presence of tendinosis. ISB XXI, Taipei, Taiwan 2007.
121. Beneck GJ*, Kurihara D, Garvin R, Samudrala S, Chen TC, **Kulig K**: The effect of an intensive training program on lumbar multifidus following microdiscectomy. ISB XXI, Taipei, Taiwan 2007
122. Beauregard R, Popovich JM*, Beneck GJ*, **Kulig K** and PTcliResNet: A better method to identify lumbar multifidus atrophy accompanying L4/L5 disc herniation visualized on magnetic resonance images NASS 2007.
123. Yamada KA, Lewthwaite R, Popovich JM*, Beneck GJ*, Selkowitz DM, **Kulig K**. The Low Back Activity Confidence Scale (LoBACS): development, test-retest reliability, and preliminary validation. CSM 2007.
124. Arya S*, Solnik S, **Kulig K**: Influence of Achilles Tendinopathy on Lower Extremity Joint Stiffness Strategies during Single-Legged Hopping, World Congress of Biomechanics, Munich, 2006.
125. **Kulig K**, for the MUSSEL team of the PTcliResNet: Patient Perspectives and Quality of Life: Early PTcliResNet Outcomes, CSM, San Diego, 2006.
126. Beauregard R*, Kurihara D, Popovich JM*, **Kulig K**: Asymmetry of the Psoas Major and Multifidus Muscles in Patients Undergoing Single Level Lumbar Microdiscectomy. CSM, San Diego, 2006.
127. Flanagan S, Villareal J, Lona RJ, **Kulig K**: Modifying the Sorensen Back Extensor Test. CSM, San Diego, 2006.
128. Flanagan S, Yamada K, Sutton T, **Kulig K**: Predicting the Number of Sessions Necessary to Improve Back Extensor Endurance Following Single Level Microdiscectomy. CSM, San Diego, 2006.
129. Pomrantz A, Reischl S, Requejo S, Burnfield J, **Kulig K**: Long-term effectiveness of progressive resistive exercise on posterior tibialis tendon dysfunction: a randomized clinical trial. CSM, San Diego, 2006.
130. **Kulig K**, for the MUSSEL of the PTcliResNet: Microtopography of an intervention in a randomized clinical trial: preliminary data. CCAPTA October 2005.
131. Beneck GJ*, **Kulig K**, Burke W, Beauregard R, Chen TC, Samudrala S: Does disc quality influence function and disability status in persons who received comprehensive spine care? Edinburgh, UK, September, 2005.

132. Popovich JM*, Nunnery J*, Kurihara D, **Kulig K**: Lumbar spine morphology and clinical characteristics in microdiscectomy patients: A pre-surgical perspective. World Congress of the International Society for Physical Medicine and Rehabilitation, San Paolo, Brazil, April 2005.
133. **Kulig K**: Development of a person specific post-surgical rehabilitation program: A micro-topography of interventions in a randomized clinical trial. CSM, New Orleans, February 2005.
134. Andersen M, Lee D, Garvin R, Park K, Beneck GJ*, Colletti PM, **Kulig K**. Morphology of the lumbar multifidus in persons with back pain: A quantitative analysis and qualitative assessment. CSM, New Orleans, February 2005
135. Weimer K,* Reischl SF, Requejo SM, Burnfield JM, **Kulig K**. Non-operative treatment of posterior tibialis tendon dysfunction: a randomized clinical trial. CSM, New Orleans, February 2005
136. Sum J*, Popovich JM*, Poppert E, Colletti PM, **Kulig K**. The role of axial loading in early diagnosis of lumbar disc injury: a biomechanical interpretation using magnetic resonance imaging: a pilot study. CSM, New Orleans, February 2005
137. Davenport T, Watts H, **Kulig K**, Resnik C. Current status and correlates of physicians' referrals to physical therapy. CSM, New Orleans, February 2005.
138. **Kulig K**, Poppert E: Microtopography of an intervention in a randomized clinical trial; low back pain. CCAPTA October 2004.
139. **Kulig K**: Clinical Trials in PT: Lessons from the past, possibilities for the future. CSM, Nashville, February 2004.
140. Beneck GJ*, **Kulig K**, Landel RF, Powers CM. The relationship between lumbar segmental motion and pain response in persons with low back pain. CSM, Nashville, February 2004.
141. Requejo MS, Limcay M, **Kulig K**: Effectiveness of an eccentric program on function and disability in a patient with posterior tibial tendon dysfunction (PTTD) CSM, Nashville, February 2004.
142. Liao G, **Kulig K**, Burnfield JM, Mais-Requejo S, Reischl S: Can An Orthosis Alter Tibialis Posterior Activation in Persons with Pes Planus? CSM, Nashville, February 2004.
143. **Kulig K**, Landel R, Powers CM: A proposed mechanism of sagittal motion induced by manual posterior to anterior mobilization: assessment of lumbar spine kinematics using dynamic MRI. ASB, Toledo, September 2003.
144. Sperry M, Burnfield JM, Mais SR, Reischl SF, Thordarson D, Terk M, **Kulig K**: MRI evaluation of muscle activation associated with three posterior tibialis exercises. MSSE, 35(5) 1532, Suppl. 2003.
145. Landel RF, **Kulig K**, Fredricson M, Guillet M, Powers CM: Manual spinal segmental motion testing: Inter-rater reliability using a dichotomous within-subject scale, and testing accuracy determined by dynamic MRI. CSM, Orlando, FL, February, 2003.
146. **Kulig K**, Powers CM, Landel RF, Fredricson M, Guillet M: Are persons with centralized low back pain more likely to present with altered segmental lumbar mobility? In vivo assessment using dynamic MRI. CSM, Orlando, FL, February, 2003.
147. Powers CM, **Kulig K**, Landel RF, Fredricson M, Guillet M, Butts K: The effects of a single intervention session on pain response and lumbar segmental mobility in persons with low back pain. CSM, Orlando, FL, February, 2003.

148. Farrokhi S*, **Kulig K**, Burnfield, JM, Powers, CM: In vivo assessment of the lumbar spine's instantaneous axes of rotation in symptomatic and asymptomatic subjects, WCB, Calgary, August, 2002.
149. **Kulig K**, Powers CM, Landel R, Chen HW, Fredricson M, Guillet M, Butts K: Segmental mobility of the lumbar spine during a prone press-up maneuver in symptomatic and asymptomatic subjects: Assessment using dynamic MRI, WCB, Calgary, August, 2002.
150. Doubleday K*, **Kulig K**, Landel R: Conservative management of unilateral testicular pain in thoracolumbar dysfunction. CSM, Boston, February, 2002.
151. Landel RF, **Kulig K**, Powers CM, Fredricson M, Guillet M: Spinal segmental motion testing using a dichotomous segmental within subject scale. CSM, Boston, February, 2002.
152. Powers CM, Requejo P, Lim P, Flynn J, Brault JR, **Kulig K**: Comparison of coefficient of friction requirements during gait to standard tribometry measurements. AAFC, Reno, Nevada, February, 2000.
153. **Kulig K**, Powers CM, Terk M, Shellock F: Does velocity of the eccentric component of isotonic exercise influence magnetic resonance signal intensity in muscle?. ACSM, Seattle, WA, June, 1999.
154. Yip-Menck J*, Mais S, **Kulig K**: Consideration of thoracic spine dysfunction in upper extremity Complex Regional Pain Syndrome Type I: A case report. CSM, Seattle, WA, February, 1999.
155. Cady D*, Zawislak J*, Rau C*, Lee M*, **Kulig K**, Drouin J: The effects of dexamethasone iontophoresis on acute inflammation using a sports model of treatment. 69th APTA Congress, Minneapolis, MN, June, 1996.
156. Narula M*, Jackson O, **Kulig K**: The effects of a six week Feldenkreis method on selected functional parameters in subjects with rheumatoid arthritis. Second joint APTA/CPA Congress, Toronto, Canada, June, 1994.
157. Narula M*, **Kulig K**, Jackson O: Effects of a three month intense aerobic walking program on the hip abductor strength in the elderly. Second joint APTA/CPA Congress, Toronto, Canada, June, 1994.
158. VanSwol A, **Kulig K**, Jones P, Taylor A: Comparison of the analgesic effects of three transcutaneous electrical nerve stimulation protocols. Second joint APTA/CPA Congress, Toronto, Canada, June, 1994.
159. Szajbach M*, Koornneef J*, Hippler K*, Weber J*, **Kulig K**: Vertical jump and knee flexion and extension strength characteristics in figure skaters and non-skaters. Second joint APTA/CPA Congress, Toronto, Canada, June, 1994.
160. Jarski RW, Dibble T, **Kulig K**: Clinical aspects of stress management: Patients reported stress versus their actual stress measured across organ systems. 21st Annual Physician Conference, Miami, FL, 1992.
161. Carter L, Julien C, Walter J, **Kulig K**: A comparison of hemiplegic cerebral palsy walking patterns to normal gait patterns in children age 5: A pilot study. 67th APTA Conference, Denver, Colorado, June, 1992.
162. Kingsbury N*, Majewski C*, **Kulig K**, Andrews D: An assessment of the effects of hand preference on standing posture. 67th APTA Conference, Denver, Colorado, June, 1992.
163. Weiss M*, Clark T*, Wolcott C*, Dudek D*, **Kulig K**: A comparison of subjective and objective measures of delayed onset muscle soreness. 67th APTA Conference, Denver, Colorado, June, 1992.
164. Whipple-Ellsworth A*, Klebba M*, Walden J*, **Kulig K**: A comparison of the analgesic effects of ice massage and brief intense transcutaneous electrical stimulation. 67th APTA Conference, Denver, Colorado, June, 1992.
165. Priestap R*, **Kulig K**, Eveningred M*: Local analgesia using brief intense transcutaneous electrical stimulation (BIT) and two electrode types. 67th APTA Conference, Denver, Colorado, June, 1992.

166. Narula M*, Jackson O, **Kulig K**: The effects of a six week Feldenkreis method on selected functional parameters in a subject with rheumatoid arthritis. 67th APTA Conference, Denver, Colorado, June, 1992.
167. Kevelin A*, **Kulig K**, Szemer W: Instantaneous center of rotation of the knee during isokinetic exercises. XIII International Congress of Biomechanics, Perth, Australia, 1991.
168. Dibble T, Jarski R, **Kulig K**: Evaluating stress management interventions through physiological reactions and psychological effects. National Wellness Conference, University of Wisconsin, Stevens Point, WI, July, 1991.
169. Eveningred M*, **Kulig K**, Priestap R: A comparison of treatment protocols and electrodes in producing analgesia. Annual MPTA Conference, Grand Rapids, October, 1991.
170. Jarski RW, Dibble T, **Kulig K**: Customizing stress management interventions through physiological reactions and psychological effects. National Wellness Conference, University of Wisconsin, Stevens Point, July, 1990.
171. **Kulig K**, Jarski RW, Drewek E, Bianco D: The effects of microcurrent stimulation on CPK and delayed onset muscle soreness. 66th APTA Conference, Boston, Massachusetts June, 1991.
172. Rapaski D*, Isles S*, **Kulig K**: Microcurrent electrical stimulation: Comparison of two protocols in reducing delayed onset muscle soreness. 66th APTA Conference, Boston, Massachusetts, June, 1991.
173. **Kulig K**, Placzek J, DeYoung L*, Maurer C*, Stone S*: Increasing acutely reduced hamstring length through self- and therapist-performed stretching programs. 66th APTA Conference, Boston, Massachusetts, June, 1991.
174. **Kulig K**, DeYoung L*, Maurer C*, Stone S*: Comparison of the effects of high-velocity exercises and microcurrent stimulation on delayed onset muscle soreness. 66th APTA Conference, Boston, Massachusetts, June, 1991.
175. Narula M*, **Kulig K**, Jackson O: Effects of a three month intense aerobic walking program on hip abductor strength in the elderly. 66th APTA Conference, Boston, Massachusetts, June, 1991.
176. Wolcott C*, Dudek D*, **Kulig K**, Weiss M*, Clark T*: A comparison of the effects of high volt and microcurrent stimulation on delayed onset muscle soreness. 66th APTA Conference, Boston, Massachusetts, June, 1991.
177. Kulwicki M, Hughes J, **Kulig K**, Kevelin A: Reliability of Biodex isokinetic measurement using a fixed versus anti-compression knee attachment. 66th APTA Conference, Boston, Massachusetts, June, 1991.
178. **Kulig K**, DeYoung L, Maurer C, Stone S: Effects of high velocity concentric exercises on muscle enzyme levels, range of motion and delayed onset muscle soreness. 1991 American College of Sports Medicine Annual Meeting, Orlando, Florida, May 29-June, 1991.
179. Weatherell V, **Kulig K**, Boyce D*, Kander A*: Reciprocal isokinetic test reliability of the Ariel arm-leg exerciser. 65th APTA Annual Conference, Anaheim, California, June, 1990.
180. **Kulig K**, Jarski RW, Olson RE: Clinical teaching in physical therapy student and teacher perceptions. 65th APTA Annual Conference, Anaheim, California, June, 1990.
181. Kevelin A*, Hollender P*, **Kulig K**: The instantaneous center of rotation of the knee joint during active movement. 65th APTA Annual Conference, Anaheim, California, June, 1990.
182. **Kulig K**, Isles S*, Rapaski D*, Smith J*: Comparison of three microcurrent stimulation protocols in reducing delayed onset muscle soreness. 65th APTA Annual Conference, Anaheim, California, June, 1990.
183. Chasse L*, DeHenau G*, Segall J*, Leo S*, **Kulig K**: T.E.N.S. and dysmenorrhea: The effects of electrode

placement. 65th APTA Annual Conference, Anaheim, California, June, 1990.

184. **Kulig K**, Redmond P: Effects of hamstrings eccentric exercise program on the concentric hamstring/quadriceps torque ratio. AAHPERD Convention, New Orleans, LA, March, 1990.
185. Olson RE, **Jarski RW**, **Kulig K**: Narrowing the gap between education and professional services: Improving clinical instruction. Conference of American Society of Allied Health Professions, MCV, Richmond, VA, November, 1989.
186. Davison R*, Erickson C*, **Kulig K**: The effects of seat position and lower extremity kinematics on automobile brake pedal force capability. XII International Congress of Biomechanics. UCLA, Los Angeles, California, June, 1989.
187. **Kornecki S**, **Kulig K**, Mularczyk W, Trzcinski M: The relationship between force produced against objects of different mobility during static and dynamic conditions. XII International Congress of Biomechanics. UCLA, Los Angeles, California, June, 1989.
188. Popchock M*, King M*, **Kulig K**: Trunk flexor and extensor muscle activity during abdominal exercises with variable resistance. Annual Conference of the American Physical Therapy Association. Nashville, Tennessee, June, 1989.
189. **Kulig K**, **Jarski RW**, Olson RE: Student and instructor perceptions of effective clinical teaching. Annual Conference of the Association of Physician Assistant Programs, Los Angeles, California, May, 1988.
190. **Kornecki S**, **Kulig K**, Zawadzki J: Biomechanical implications of the artificial and natural strengthening of wrist joint structures. IXth International Congress of Biomechanics, Waterloo, Canada, August, 1983.
191. **Kulig K**, Bober T, Zawadzki J: Synchronization of partial impulses as a biomechanical principle. VIIth International Congress of Biomechanics, Nagoya, Japan, July, 1981.
192. **Bober T**, Rutkowska-Kucharska A, **Kulig K**: Investigation of the consistency of movements of elite judo athletes. International Symposium on Sport Biology, Vierumaki, Finland, October, 1979.
193. **Kulig K**, Suska M, Zawadzki J: Experiments on the coordination of fast movements in the forearm. Conference on Methods of Investigating Students' Motor Skills, Wroclaw, Poland, 1977.

GRANTS and CONTRACTS

Principal Investigator

- | | |
|-----------|---|
| 2016-2018 | Orthopedic Section of the APTA (\$15,000)
Kulig (PI)
Rowley (Co-PI)
Investigating a Novel Intervention for Flexor Hallucis Longus Tendinopathy in Dancers
<i>This study will elucidate coordination strategies used by dancers to conduct a heel raise – a task used to examine lower limb function, completed dozens of times in dance class or performance, and frequently reported to place high demands on the FHL and toe flexors – and how these strategies change when the task is modified to remove force transmission by the toes.</i> |
| 2006-2008 | Osiris Therapeutics, Inc. (\$68,232)
Kulig (PI) |

A Phase I/II, Randomized, Controlled, Double-blind, Study of Chondrogen – Adult Universal Cell (AUC) Delivered by Intra-articular Injection Following Meniscectomy in Patients 18-60 Years. Core lab for Magnetic Resonance Imaging (MRI) Analyses.

- 2006-2008 **Osiris Therapeutics, Inc. (\$10,925)**
Kulig (PI)
Verification of MR image acquisition and processing reliability. Development of the protocol of image acquisition and image segmentation and analyses.
- 2005-2006 **Health Research Association (\$9,775)**
Kulig (PI)
Lumbar paraspinal atrophy and fatigability in persons with recurrent episodes of low back pain: relationship, mechanism and an association with clinical outcomes. The goal of this study is to develop the methodology for morphometric and electrophysiological analyses of human lumbar paraspinal musculature.
- 2002-2003 **Orthopedic Section of APTA (\$7,500)**
Kulig (PI)
Effectiveness of exercise on function, quality of life and disability in patients with posterior tibial tendon dysfunction (PTTD). The goal of this study is to establish a clinical network and conduct a community based clinical trial.

Participated as Co-Investigator, Investigator or Lead Investigator

- 2008-2010 **Orthopedic Section of the APTA (\$25,000)**
Kulig (Co-PI)
Davenport (PI)
Ankle manual therapy for individuals with post-acute ankle sprains: a randomized, placebo-controlled study
The goal of this study is to investigate central (brain) mechanisms underlying the beneficial effects of joint manipulation.
- 2007-2008 **Interdisciplinary Research Fund, University of Nebraska (\$22,680)**
Kulig (Co-PI)
Nelson (PI)
Robot System for Automated Image Acquisition and Diagnosis of Tendon Injury
The goal of this study is to develop a robot to acquire ultrasonographic images of human tendons. The robot will be interfaces with automated analyses of the images rendering a quantitative analysis of the tendon's microstructure aiding in diagnosis.
- 2005-2006 **Layman Fund of the University of Nebraska (\$10,000)**
Kulig (Co-PI)
Bashford (PI)
Development of a reliable and valid sonographic method to quantify tendon and ligament structure in select symptomatic and asymptomatic human tissues exposed to varying activity levels. The goal of this study is to develop the methodology for quantitative image analyses of human tendons.
- 2003-2005 **Foundation for Physical Therapy (\$164,107)**
Kulig (Lead Investigator)
Winstein (PI)
Muscle Specific Strengthening Effectiveness Post Lumbar Microdiscectomy (MUSSEL) As part of: A clinical research network to evaluate the efficacy of physical therapy practice. The goal of this study is to establish a clinical network and conduct a community based clinical trial.

2001-2002 **Foundation for Physical Therapy (\$40,000)**
 Kulig (Co-PI)
 Powers (PI)
 The effects of single intervention session on pain response and lumbar segmental mobility in persons with low back pain: A comparison of spine mobilization and active extension using dynamic MRI. The goal of this study was to explore the mechanism of manual therapy applied to the lumbar spine.

PI or Co-PI prior to joining the University of Southern California

1996 Educational Technology Advancement Proposal. Co-authored with A. Griggs, R. Olson and B. Marcoux, Oakland University (**\$65,000**).

1992 Enhancing physical therapy teaching and learning through innovative evaluation. Educational development grant. Oakland University, Rochester, Michigan, (**\$900**).

1991 Manual Mobilization of the Spine. Translation of a textbook authored by Freddy Kaltenborn, (**\$7,500**).

1991 Comparisons of two types of electrodes in producing analgesia. Henley International (**\$1,800**).

1992 A kinematical comparison of the effects of handedness on dominant posture and spinal position. FARRO Medical (**\$1,000**).

1991 Ketoprofen dose-response. Marion Merrell Dow, Inc. (**\$17,000**).

1990 The effectiveness of the Electro-link system for reducing edema: A comparison of treatment protocols. FERNO-ILLE, Division of Ferno-Washington, Inc., (**\$4,000**).

1990 The effectiveness of ice and electrical stimulation on edema. Howmedica, Division of Pfizer Hospital Product Group, Inc., (**\$5,056**).

1990-1991 The position of preference while sitting in a midsize car. General Motors Corporation (**\$4,000**).

1989 Physiotechnology, Inc. grant in the form of an electrotherapeutic instrument used in research and teaching OMNISTYM IV (**\$1,600**).

1989 Institute of Biomolecular Education and Research (Myopulse) (**\$1,500**).

1989 William Beaumont Research Grant, Effectiveness of selected manual therapy procedures (**\$7,500**).

1989 Hawthorn Grant, Michigan State Health Department, Effectiveness of subject specific relaxation techniques. Co-investigator. PI: Robert Jarski, PhD (**\$23,000**).

1989 Financial support for OU Physical Therapy research, Electromedical Instruments (**\$500**).

1989 Research support for OU Physical Therapy research, FARO Medical (**\$5,500**).

1989-1990 Entry/egress into a midsize car. General Motors Corporation (**\$3,000**).

1987-1988 A Study of Student and Teacher Perceptions of Effective Clinical Teaching, Educational Development Fund, Oakland University (**\$1,200**).

1987-1988 The Effects of Seat Position and Lower Extremity Kinematics on Brake Pedal Force Capability, General Motors Corporation (**\$2,000**).

MAJOR PUBLIC PRESENTATIONS

Presentations as Invited Speaker:

2021

3rd International Conference on Rehabilitation Sciences (ICRS) - 2021 in Lahore, Pakistan, Organized by Riphah College of Rehabilitation Sciences, Riphah International University, Pakistan (May 27-31) – virtual. Keynote Lecture and a Workshop.

2020

Professor Wit's Biomechanics Seminars, Warszawa, Poland, From the Clinic to the Lab abd Back, December 3, 2020 (Zoom based)

REACH Half Day Symposium. "The role of muscles in chronic low back pain" UCSF, August 26, 2020 (VIRTUAL)

3rd International Conference on Rehabilitation Sciences (ICRS) - 2020 in Lahore, Pakistan, Organized by Riphah College of Rehabilitation Sciences, Riphah International University, Pakistan (March 13-15) – Cancelled due to COVID-19

2019

Keynote: *Neuromechanical Adaptation to Tendon Injury and the Proposed Framework for Intervention*. Symposium Sportu i Rehabilitacji, Warsaw, Poland, EU (December 4-8)

Keynote: Building scientific and educational bridges in movement sciences and physical therapy, Charles University, Prague, Czech Republic, EU (October 31)

International Winter School, University of Potsdam, Potsdam, Germany, EU (October 21-25)

Integrating multi-scale approaches to tendon biomechanics, (presentation with T Fini, H Screen, H Mass, B Raiteri, Franz J) International Society of Biomechanics, (July 31 to August 3)

Second Tendon Summit, University of Southern California, 12 attendees from 6 academic institutions, (May 24-25)

Keynote Lecture for PT Graduates, Physical Therapy Program, Wayne State University, Detroit, Michigan (May 8 and 9)

Clinical examination and treatment of the injured runner: Hypothesis driven by experience, research and technology Northern California Fellowship Program, Hayward, California (March 16)

2018

International Winter School, University of Potsdam, Potsdam, Germany, EU (October 22-26)

Application of quantifiable assessment of movement strategies in the clinic, Oakland University (September 15)

Lower Extremity Tendinopathies: Tissue, Joint and Whole Body Adaptions Persist during Pain Remission - Yet, Movement Variability Seems to be Altered, German Olympic Congress for Sports Medicine Specialists, Hamburg, Germany, (May 24-26)

Tendinopathies: Whole body, Joint and Tissue: Implication for Practice. Bern University of Applied Sciences, Bern, Switzerland, (March 7)

2017

Asia-American Rehabilitation Summit, Sun Yat-Sen University Guangzhou, China, (November 17)

Seminar Celebrating the 50th Anniversary of National Taiwan University's Physical Therapy Program, Taipei, Taiwan (November 11-12)

2nd International Conference on Rehabilitation Sciences (ICRS) - 2017 in Islamabad Pakistan, Organized by Riphah College of Rehabilitation Sciences, Riphah International University, Pakistan (May 19-21)

Achilles Tendinopathy, Annual Orthopedic Meeting, San Diego, California, (April 21-22)

Masters Class, Achilles Tendon Ruptures, Agile Physical Therapy, Paolo Alto, California (March 11-12)

Common Lower Extremity Foot and Ankle Problems, Northern California Fellowship Program, Hayward, California (March 18)

2016

International Winter School, University of Potsdam, Potsdam, Germany, EU, in collaboration with Tel Aviv University, Tel Aviv, Israel (November 7-11)

2015

Biomechanical and Motor Control Locomotive Characteristics in Pain-Free Persons with History of Low Back Pain. Ritsumeikan University, Kyoto, Japan (July 31)
Cervical Radiculopathy: Diagnosis and Management. Kanazawa Orthopaedic & Sports Medicine Clinic in Shiga, Kyoto, Japan (August 1)
Concepts, Theory, Motivation, Hypotheses and Dissemination of Research, Ritsumeikan University, Kyoto, Japan (July 27-31)
Annual Update on Research in the Kulig Lab. Kaiser Hayward Residency Program (March 21)
Patellar Tendinopathy in Jumping Athletes, Presentation to USA Beach Volleyball Medical Team Summit USOC Olympic Training Center, Chula Vista, (February 28)

2014

Biomechanics of Jumping Sports and Common Sport Specific Injuries, University of Nebraska, Lincoln, NE (June 26)
The Story of Three Jumpers; Combined Sections of the APTA, Las Vegas, Nevada (February 3-6)

2013

Graduate Seminar, University of Potsdam, Potsdam, Germany, European Union (November 25-27)
WCPT-AWP and ACPT, Taichung, Taiwan, (September 5-9)
18th J.H.P. Maley lecture: Residencies in Physical Therapy, APTA Annual Conference (June 29)
Visiting Scholar Program, Keynote. Physical Therapy Program at Oakland University, Rochester, Michigan (May 17)
Annual Update on Research in the Kulig Lab. Kaiser Hayward Residency Program (March 16)

2012

Evidence-Based Practice Day: Tendinopathies, Keynote. Physical Therapy Program at the California State University at Northridge, California, (December 7)
Invited Lectureship on The Role of Biomechanics in the Study of persons with Tendinopathies and Low Back Pain University of Potsdam, Potsdam, Germany, European Union (November 19-21)
7th Annual Distinguished Lecture on the Science of Manual Therapy. Reflections on the Role of Biomechanics: Application to Manual Therapy in Clinical Practice. University of Illinois at Chicago (November 9)
Lower extremity tendinopathies: tissue, joint and whole body adaptations. National Yang Ming University, Taipei, Taiwan (May 17)
Annual Update on Lower Extremity Tendinopathies. Kaiser Hayward Residency Program (April 28)
Non-surgical management of posterior tibial tendon dysfunction with exercise and orthoses, Temple University, School of Podiatric Medicine, Philadelphia, Pennsylvania (March 9)

2011

Biomechanical and Motor Control approaches to clinical problems of low back disorders and lower extremity tendinopathies, University of Potsdam, Germany (December 12 and 13)
Lumbar Spine Mechanics, Application to Treatment Paradigms, Czech Technical University, (December 8)
Lower extremity tendinopathies: tissue, joint and whole body adaptations. Motol Hospital at the Charles University in Prague, Czech Republic (October 26)
Tissue specific rehabilitation of the lower extremity pathologies: Tendon. Annual Conference of the California Physical Therapy Association, Long Beach, California (September 23)
In the search of mechanisms underlying low back disorders: the role of biomechanics and motor control. Wroclaw's division of PAN (Polish Academy of Science) (March 30)
Sports Biomechanics: Running and Jumping. First Biomechanics and Human Performance Congress, University of Fernando Pessoa, Porto, Portugal (March 25-26)
Spine Biomechanics: Current Developments. First Biomechanics and Human Performance Congress, University of Fernando Pessoa, Porto, Portugal (March 25-26)

2010

Lower Extremity Tendinopathies. UCLA Athletic Trainers, (December 1)
Post-surgical rehabilitation of the lumbar spine. Glendale Adventist Hospital, Glendale, California (October 14)
Lower Extremity Tendinopathies. National Basketball Athletic Trainers Association. Chicago, Illinois (May 17)

2009

Disorders of the Lumbar Spine: Research, Practice and Education. The Hong Kong Polytechnic University, Department of Rehabilitation Sciences. (September 21)
Decision Making: Certainty, Uncertainty and Risk – Keynote Address. Annual Fall Conference of PTAROC (Taiwan) to be held in Tainan, Taiwan. (September 26)
Lower Extremity Tendinopathies: From Mechanism to Treatment, Agile Physical Therapy, Palo Alto, CA (August 13)
Non-surgical Management of Posterior Tibial Tendon Dysfunction With Orthoses and Resistive Exercise:, 12th Annual International Conference on Foot Biomechanics and Orthotic Therapy, Atlanta, GA (October 2-4)
Disorders of the Lumbar Spine: Research, Practice and Education. The Hong Kong Polytechnic University, Department of Rehabilitation Sciences. (September 21)
Decision Making: Certainty, Uncertainty and Risk – Keynote Address. Annual Fall Conference of PTAROC (Taiwan) to be held in Tainan, Taiwan. (September 26)
Lower Extremity Tendinopathies: From Mechanism to Treatment, Agile Physical Therapy, Palo Alto, CA (August 13)
Insights into Spine Biomechanics from Imaging Studies: Application to Clinical Practice, 10th Nordic OMT Conference, Sweden, Gothenburg (May 29-31)
PTClinResNet: Translating the Results of the Clinical Research Network Into Practice. CSM, Las Vegas (February 9-12)
Insights into Spine Biomechanics from Imaging Studies: Application to Clinical Practice, CSM, Las Vegas (February 9-12)
Joint, Muscle, but what about the Tendon? Mechanisms Underlying Tendinopathies and the Basis for Effective Interventions. CSM, Las Vegas (February 9-12)
The Role of Biomechanics in Orthopedic and Neurological Rehabilitation. Invited Lecturer, International Congress of the Polish Society of Biomechanics, Wroclaw

2008

Current Concepts in Tendinosis. AAPT, Montgomery, Alabama (3.5 hours) (April 19)
Foot and Ankle Tendinopathies: From Mechanisms to Interventions. (3 hours) CSM, Nashville, Tennessee (February 9)
Biomechanical and motor control considerations in the development of exercise interventions for the management of low back disorders: experimental and clinical trial evidence. (3 hours) APTA, San Antonio, TX (June 13)
Biomechanical and motor control considerations in the development of exercise interventions for the management of low back disorders: experimental and clinical trial evidence. (12 hours) Madonna Rehabilitation Center (January 11-12)

2007

Biomechanical Characteristics of Degenerated Tendons. Long Beach Memorial Hospital, Long Beach, CA (November 30)
Biomechanical Characteristics of Degenerated Tendons. UNMC, Omaha, NE (November 1)
Evidence Based Interventions for Lower Extremity Tendinopathies. UNMC, Omaha, NE (November 1)
In Search of Tissues Specific Rehabilitation. Kaiser Hayward (August 25)
Biomechanical Consequences of Lower Extremity Tendinopathies. Keck School of Medicine, Orthopedic Grand Rounds (September 14)

GRANT REVIEWING, DATA and SAFETY MONITORING BOARD member:

2012-2015 Swiss National Science Foundation, Primary Reviewer for Health and Use Initiated Grants (biannual)

2014-2018 Chair of the DSMB (Data and Safety Monitoring Board) for an R18 study titled “Management Strategies for Patients with Low Back Pain and Sciatica” funded by AHRQ (Agency for Health Care Research and Quality). Principal Investigator: Julie Fritz, PhD, PT, FAPTA

JOURNAL EDITORIAL BOARD:

2016-Present International Editorial Board, member, of Brazilian Journal of Physical Therapy
2013-Present Editorial Board Member, Biomechanics and Motor Control, *Human Movement*, ISSN 1732-3991
2008-2015 Member of the International Editorial Review Board, *Journal of Orthopaedic and Sports Physical Therapy*
2006-Present Research Advisory Board, *Fizjoterapia* (Physiotherapy), ISSN 1230-8323

EDUCATIONAL MATERIALS DEVELOPED:

1998 Developed a 15-credit proposal for a Graduate Certificate in Orthopedic Physical Therapy. Approved by the Graduate and Professional Studies Committee, University of Southern California
1997 Developed, presented and defended a 17 credit proposal for a Graduate Certificate in Pediatric Rehabilitation. Approved by the Graduate Council of Oakland University.
1995 Developed, presented and defended a 36 credit proposal for a post-professional Master of Science in Physical Therapy degree - Musculoskeletal Track. Oakland University.
1994 Developed, presented and defended a 17 credit proposal for a Graduate Certificate in Orthopedic Manual Physical Therapy. Approved by the School of Health Science Assembly of the Oakland University.
1991 Kaltenborn FM, Evjenth O: Spinal evaluation and treatment, translation from German into English, Oakland University, Rochester, Michigan
1983 Bober T, Golema M, Kornecki S, Kulig K, Zawadzki J: Biomechanics: Selected topics (guidebook for students), Wroclaw

TEACHING ACTIVITIES:

Coursework directed and taught at Division of Biokinesiology and Physical Therapy

BKN 551 Musculoskeletal and Biomechanical Basis of Movement (4 units), 2003 until now
BKN 580 Analytical Kinesiology (3 units), 1997 - 2002
BKN 581 Arthrology (2 units), 1998-2002
PT 554L Analytical Anatomy (3 units), 1998 – present
PT595a-c Residency in Advanced Clinical Physical Therapy (1-4 units), 1997-2002
PT 622 Advanced Management of Spinal Disorders (3 units), 1997-2002
PT 623 Advanced Management of Extremity Disorders (3 units), 1997-2002
BKN 672 Advanced Independent Study in Pathokinesiology (1-3 units), as needed per students’ interest
PT 681 Management of Spinal Disorders (2 units), 1997-2002

Student Mentoring

Post-doctoral Fellows

2016 **Yumiko Koyama, MS**, Pre-doctoral Fellow, Kyoto University, Japan
Current Position: Assistant Professor, Teikyo University of Science, Tokyo, Japan
2016 **Jose Maria Heredia Jimenez, PhD**, Fulbright Fellow
Current Position: Assistant Professor, University of Granada, Spain
2016 **Eva Orantes**, Pre-doctoral Fellow, University of Grenada, Spain, European Union
2015 **Slawomir Winiarski, PhD**, Visiting Scholar, Academy of Physical Education, Wroclaw, Poland, European Union

- 2014 **Stanislav Machac**, Pre-doctoral Fellow, Charles University, Prague, Czech Republic, European Union
- 2012, 2014, 2015 **Toshiyuki Kurihara, PhD**, Visiting Scholar, Ritsumeikan University, Kusatsu, Shiga, Japan
Current Position: Research Associate, Faculty of Sport and Health Science, Ritsumeikan University, Kusatsu, Shiga, Japan
- 2012-2013 **Weimin Pan, surgeon**, Xi'an City, Shaanxi Province, China
Current Position: Associate Professor and Attending physician at Department of Human Health & Movement Studies, Xi'an Physical Education University
- 2010 **Jing-Lan Yang, MS, PT**, Visiting Scholar
Current Position: Assistant Professor, National Taiwan University, Taipei, Taiwan
- 2009-2010 **Jose Maria Heredia Jimenez, PhD**
Current Position: Assistant Professor, University of Granada, Spain
- 2009 **Matthias Friedrich**, Visiting Pre-Doctoral Scholar from Swiss Federal Institute of Technology Zurich, Switzerland
Current Position: Unknown
- 2005-2006 **Stan Solnik, PhD** (Academy of Physical Education, Wroclaw, Poland), Visiting Pre-doctoral Fellow:
Current Position: Post-Doctoral Fellow, Department of Kinesiology, The Pennsylvania State University, State College, Pennsylvania

Ph.D. Students' Advisor

- 8/2018 - Present **David Ortiz-Weissberg, MS** (PhD Advisor) Division of Biokinesiology and Physical Therapy, University of Southern California
- 2020 **Hai-Jung (Steffi) Shih, PhD, PT** (PhD Advisor) The Footprint of Pain: Investigating Persistence of Altered Trunk Control in Recurrent Low Back Pain. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Post-Doctoral Fellow, Columbia University, New York, New York
- 2018 **K. Michael Rowley, PhD** (PhD Advisor) Trunk control during dynamic balance: Effects of cognitive dual-task interference and a history of recurrent low back pain. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Post-Doctoral Fellow, Brown University, Providence, Rhode Island
- 2018 **Abigail L. Fietzer, PhD, DPT** (PhD Advisor) The structure of kinematic variability during hopping: a window into motor control factors in overuse injury. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Assistant Professor, Mt Saint Mary's University, Los Angeles, California
- 2015 **Danielle N. Jarvis, PhD, ATC** (PhD Advisor) The effects of Jump Strategy Modification on Energetics During Dance Jumps. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Assistant Professor, California State University Northridge, Northridge, California
- 2015 **Eugene (Yu-Jen) Chang, PhD, PT** (PhD Advisor) Neuromechanical Adaptations for Achilles Tendinosis. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Assistant Professor, West Virginia University, Morgantown, West Virginia
- 2014 **Joanne Armour Smith, PhD, PT, OCS** (PhD Advisor) Trunk Neuromechanics during Turning: a Window into Recurrent Low Back Pain. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Post-doctoral fellow, Neuroplasticity and Imaging Laboratory, USC followed by Assistant Professor, tenure track, Program in Physical Therapy, Chapman University
- 2010 **John M. Popovich, PhD, DPT, ATC, CSCS** (PhD Advisor) Lumbopelvic Kinematics. Muscle Activation and Lumbar Spine Load Sharing in the Presence of Diminished Hip Muscle Performance. Division of Biokinesiology and Physical Therapy, University of

- Southern California
Current Position: Post-Doctoral Fellow with Jacek Cholewicki, PhD, Michigan State University, Lansing, Michigan
- 2010 **George J. Beneck, PhD, PT, OCS** (PhD Advisor) Dissertation Title: Morphology Fatigability and Activation of the Lumbar Multifidus in Persons with Chronic Low Back Pain. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Professor, tenured, Program in Physical Therapy, California State University Long Beach, Long Beach, California
- 2008 **Shruti Arya, PhD, PT** (PhD Advisor) Dissertation Title: Mechanical Properties of Degenerated Tendons and Their Influence on Lower Extremity Biomechanics. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Post-Doctoral Fellow with Richard L. Segal, PhD, PT, FAPTA, University of North Carolina
- PhD Students' Committee Member
- 5/2018-Present **Jordan Cannon, MS** (PhD Committee Member) Dissertation Title: xxxxx Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position:
- 3/2017-Present **Kyungmi Jasmine Park, MS, PT** (PhD Committee Member) Dissertation Title: Effect of lower extremity kinematics and patellar position on the patellar tendon stress and strain.
Current Position:
- 2021 **Sara Almnasouri, MS** (PhD Committee Member) Dissertation Title: Gait Flexibility Following Anterior Cruciate Ligament Reconstruction: Implications for Early Gait Training. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position:
- 2021 **Joanthan Lee, MS** (PhD Committee Member) Dissertation Title: The Role of Upper Extremities in the Recovery of Balance During a Slip Perturbation. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Founder and Principal @ Verum Biomechanics
- 2018 **Ian Russell, PhD** (PhD Committee Member) Dissertation Title: Upper Extremity Control and Dynamics during Manual Wheelchair Propulsion at Different Speeds and Wheelchair Configurations.
Current Position: Research Engineer @ FlintRehab
- 2018 **Paige Lin, PhD** (PhD Committee Member) Dissertation Title: An investigation of altered gait mechanics in individuals following ACL reconstruction. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Nike Sports Research Lab, Portland, Oregon
- 2017 **Travis Peterson, PhD** (PhD Committee Member) Dissertation Title: Regulation of the Lower Extremity Control and Dynamics during the Golf Swing with Different Clubs and Varying Address Positions. Department of Biomedical Engineering, University of Southern California
Current Position: California Lutheran University
Current Position: Assistant Professor, California Lutheran University, California
- 2017 **Moheb Yani, PhD** (PhD Committee Member) Dissertation Title: Motor cortical control of pelvic floor muscles. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Post-Doctoral Fellow, USC
- 2017 **Jennifer Liao, PhD** (PhD Committee Member) Dissertation Title: The influence of tibiofemoral kinematics and kinetics on patella cartilage stress: a comparison of recreational runners with and without patellofemoral pain. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Post-Doctoral Fellow, UCSF
- 2015 **Kristamarie Pratt, PhD, M Eng** (PhD Committee Member) Dissertation Title: Dynamic knee loading asymmetries following anterior cruciate ligament reconstruction: methods

- for clinical detection. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Assistant Professor, Physical Therapy Program, University of Hartford, CT
- 2015 **Antonia Zaferiou, PhD** (PhD Committee Member) Dissertation Title: Control and dynamics during two turning tasks with different rotation and translation requirements. Department of Biomedical Engineering, University of Southern California
Current Position: Department of Kinesiology, University of Michigan, Ann Arbor
- 2015 **Jan Elizabeth Gildea, MPhySt** (International Reviewer) Dissertation title: Physiology and Pathophysiology of Low Back Pain in Ballet Dancers. The University of Queensland, Australia
- 2015 **Tohid Masood, PhD** (International Reviewer) Dissertation title: Calf muscle activation strategies in healthy and injured Achilles tendon conditions. Faculty of Sport and Health Sciences of the University of Jyväskylä, Finland, European Union
- 2015 **Jennifer Bagwell, PhD, DPT** (PhD Committee Member) Dissertation Title: Hip and pelvis kinematics and kinetics in persons with femoroacetabular impingement. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Assistant Professor, Department of Physical Therapy, Creighton University, Omaha, Nebraska
- 2015 **Sachithra Samarawickrame, PhD, MD** (PhD Committee Member) Dissertation Title: Musculotendinous Adaptations Associated with a Functional Training Program: The Transition to Barefoot Running. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position:
- 2014 **Guilherme Cesar, PhD, PT** (PhD Committee Member) Dissertation Title: Development of Postural Strategies for the Control of Forward Momentum. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Post-Doctoral Research Associate, NAPL, University of Nebraska, Lincoln, Nebraska
- 2013 **Mark Blanchette, PhD** (PhD Committee Member) The influences of footwear tread design on available friction and slip risk, Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Biomechanics Consultant, Semper Scientific, Mission Viejo, California
- 2012 **Szu-Ping Lee, PhD, PT** (PhD Committee Member) The influence of hip muscle performance on postural stability and ankle biomechanics: implications of ankle injury. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Assistant Professor, tenure track, Department of Physical Therapy University of Nevada Las Vegas, Las Vegas, Nevada
- 2012 **Kate Ho, PhD, PT** (PhD Guidance Committee Member) Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Assistant Professor, tenure track, Department of Physical Therapy University of Nevada Las Vegas, Las Vegas, Nevada
- 2010 **Shawn Farrokhi, PhD, DPT**, (PhD Committee Member) Patellofemoral Joint Stress and its Relation to Patellofemoral Pain, Cartilage Morphology, and Cartilage Composition, Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Assistant Professor, tenure track, Department of Physical Therapy, University of Pittsburgh, Pittsburgh, Pennsylvania
- 2008 **Rich Souza, PhD, MPT, ATC** (PhD Committee Member) The Influence of Hip and Femur Kinematics on Patellofemoral Joint Dysfunction. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Assistant Professor, tenure track, Department of Physical Therapy, University of California, San Francisco
- 2008 **Sam Chen, PhD, PT** (PhD Committee Member) Biomechanical Determinants of Patellofemoral Joint Forces. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Assistant Professor, tenure track, Department of Physical Therapy,

- 2006 National Taiwan University, Taipei, Taiwan
Yi-Ju (Joyce) Tsai, PhD, PT (PhD Committee Member) The influence of footwear sole hardness on slip initiation and recovery in young adults. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Assistant Professor, tenure track, Department of Physical Therapy, National Cheng Kung University, Tainan, Taiwan
- 2004 **Kathleen E. Costa, PhD, BME** (PhD Committee Member) Control Strategies during Landing. Department of Kinesiology, University of Southern California
Current Position: Unknown
- 2004 **Sean Flanagan, PhD, ATC** (PhD Committee Member) Mechanical Demand Distribution during Multi-joint tasks. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Associate Professor with tenure, Department of Athletic Training, California State University Northridge, Northridge, California
- 2003 **Dan Mathiyakom, PhD, PT** (PhD Committee Member), Control and Dynamics During Angular Impulse Generation. Department of Kinesiology, University of Southern California
Current Position: Associate Professor with tenure, Department of Physical Therapy, California State University Northridge, Northridge, California
- 2003 **Samuel Ward, PhD, PT** (PhD Committee Member) The Influence of Patella Alta on Knee Extensor Mechanics and Patellofemoral Stress. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Associate Professor with tenure, Department of Radiology, University of California San Diego, San Diego, California
- 2002 **Philip Requejo, PhD, BSE** (PhD Committee Member) Modeling Control and Dynamics of Human Landing Using an Experimentally Based Approach. Department of Kinesiology, University of Southern California
Current Position: Director of Research, Rancho Los Amigos National Rehabilitation Center, Downey, California

External Reviewers of Dissertations, International

- 2020 **Monique Wochatz**, Faculty of Human Sciences of the University of Potsdam, Germany
 Title: Influence of different loading conditions on scapular movement and scapular muscle activation patterns.
Principal Advisor: Prof. Dr. Frank Mayer (M.D.)
Current Position: University of Potsdam, Potsdam, Germany, EU
- 2017 **Tilman Engel**, Faculty of Human Sciences of the University of Potsdam, Germany
 Title: Motor Control Strategies in Response to Unexpected Disturbances of Dynamic Postural Control in People with and without Low Back Pain
Principal Advisor: Prof. Dr. Frank Mayer (M.D.); Prof. Heiner Baur, Dr. Steffen Muller.
Current Position: Assistant Professor, University of Potsdam, Potsdam, Germany, EU
- 2016 **Antje Reschke**, Faculty of Human Sciences of the University of Potsdam, Germany
 Title: Effectiveness of a foot orthosis on muscular activity in functional ankle instability – a randomized controlled trial.
Principal Advisor: Prof. Dr. Frank Mayer (M.D.); Prof. Heiner Baur, Dr. Steffen Muller.
Current Position:
- 2016 **Kim Allison**, Department of Physiotherapy, Melbourne School of Health Sciences, Faculty of Medicine, Dentistry and Health Sciences, The University of Melbourne, Australia
 Title: Biomechanical and Neuromuscular Impairments in Individuals with Gluteal Tendinopathy.
Principal Advisor: Prof. Kim Bennell; Prof Paul Hodges; Prof. Bill Vicenzino

Current Position:

- 2016 **Stephan Kopinski**, Faculty of Human Sciences of the University of Potsdam, Germany
Title: The Neuromuscular Efficiency of Lower Back Muscles in Low Back Pain.
Principal Advisor: Prof. Dr. Frank Mayer (M.D.)
Current Position: Department of Early Child Education, University of Potsdam, Germany
- 2015 **Jan Gildea**, School of Health and Rehabilitation Sciences, University of Queensland, Australia.
Title: The activation pattern of trunk and pelvic muscles during loading through the foot in dancers and non-dancers with and without low back pain.
Principal Advisors: Prof Paul Hodges; Dr Julie Hides
Current Position:
- 2015 **Tohid Masood**, Department of Biology of Physical Activity, University of Jyväskylä, Finland.
Title: Calf muscle activation strategies in healthy and injured Achilles tendon conditions.
Principal Advisors: Profs Taija Finni, Bojsen-Møller J., Kalliokoski K.K., Kirjavainen A., Äärimaa V., Magnusson S.P.,
Current Position: Isra Institute of Rehabilitation Science, Isra University, Islamabad Campus, Pakistan

Masters Students

- 2020 **Jiayi Tang, BS** (Advisor) Topic: Balance-Dexterity Task Performance in and out of an episode of Low Back Pain. Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position:
- 2018 **Yue (Wesley) Wang, BS** (Advisor) Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: DPT Student at USC
- 2018 **Lindsey Trejo, BS** (Advisor) Division of Biokinesiology and Physical Therapy, University of Southern California
- 2014 **Chun-Hao (Phillip) Huang, BS**, (Advisor) Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: PhD student at UIC
- 2012 **Tatri Mukherjee, BPT** (Advisor) Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: practicing physical therapist
- 2009 **Mohini Rawat, MS, PT** (Advisor) Division of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Residency in Electrodiagnostics, Ithaca College, Ithaca, New York
- 2005 **Allison Powers, BSE**, (Committee Member)
Current Position: Unknown
- 2003 **Kerri Cheng, MS**, (Advisor) Comprehensive Exam, Topic: Lumbar inter-segmental kinematics during a manual therapy procedures. Department of Biokinesiology and Physical Therapy, University of Southern California
Current Position: Unknown

Keck School of Medicine

Department of Family Medicine

Introduction to Clinical Medicine (1st and 2nd year medical students), 1997-2006

Department of Radiology

Anatomy and Biomechanics (Residents and Fellows in Radiology), 2001-2008

Oakland University, Rochester, Michigan

School of Health Sciences, Department of Physical Therapy

Courses developed, directed and taught during the period from 1986 to 1997

PT 300	Kinesiology (3 units)
PT 311	Biomechanics (3 units)
PT 332	Physical Agents (3 units)
PT 512	Arthrology (2 units)
PT 513	Musculoskeletal System (4 units)
PT 533	Electrotherapy (4 units)
PT 570	Musculoskeletal Biomechanics (3 units)
PT 592	Independent Study
PT 650	Comprehensive Examination
PT 690	Master's Thesis
EXS 650	Comprehensive Exam
EXS 690	Master's Thesis

Master's degree students (thesis or comprehensive exams)

1999	Tom Meszaros, MS, PT
1996	Angie Vitale, MS, PT
1996	Anne Ewing Tafelski, MS, PT
1996	John Krauss, MS, PT
	<i>Current Position:</i> Associate Professor with tenure, Program in Physical Therapy, Oakland University, Rochester, Michigan
1996	Fredrick Pociask, MS, PT
	<i>Current Position:</i> Associate Professor with tenure, Program in Physical Therapy, Wayne State University, Detroit, Michigan
1995	Jessica Schnabel, MS, PT
1994	Allison Schmidt, MS, PT
1994	Tonyia Thomas, MS, PT
1993	Meena Narula, MS, PT
1992	Julie Upp, MS, PT
1990	Mary Beaulac, MS, PT

Physical Therapy Professional Continuing Education

Since 1986, I have taken and taught many clinical continuing education courses.

Oakland University, Rochester, Michigan, Faculty Governance and Committee Activities

1995-1996	Faculty Search Committee, Chair
1991-1994	Committee for Handicapped Persons Accessibility and Awareness
1990-1993	Committee on Appointment and Promotions
1994	Committee on Instruction, 1989 - 1997, Chair
1989-1994	Graduate Council
1989-1990	Academic Clinical Coordinator Search Committee, Chair
1989-1990	Program Director Search Committee, Chair
1989	Exercise Science Faculty Search Committee
1989-1990	University Senate
1986-1989	Michigan Orthopedic Network, Steering Committee
1988	Merit Committee
1986-1997	School of Health Sciences Academic Assembly
1987	Admissions Committee, Program in Physical Therapy
1987-1996	Faculty Promotion Assessment Committee, School of Health Sciences

Consultation with National Organizations

2006-Present	Research Advisory Board, Fizjoterapia (Physiotherapy), ISSN 1230-8323, 2006 – present
2006-2010	External Research Advisory Board, Lied Center for Performing Arts, University of Nebraska
1989	Metropolitan Center for High Technology, Detroit Michigan, and Biomechanics of the upper extremity in designing a robotics system based on expert system approach

Consulting for National Athletic Groups

1979 Polish National Cross-country Ski Team. Biomechanical analysis of cross-country skiing techniques for the national cross country ski team

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