

Yih-Kuen Jan, PhD

University of Illinois at Urbana-Champaign
906 S. Goodwin Ave, MC 052
Urbana, IL 61801

Office: 288 Freer Hall
Lab: 172D DRES & 61 Freer Hall
E-mail: yjan@illinois.edu

Biography

Dr. Yih-Kuen Jan, PhD is an Associate Professor in the Department of Kinesiology and Community Health at the University of Illinois at Urbana-Champaign (UIUC). Dr. Jan obtained his PhD in Rehabilitation Science and Technology at the University of Pittsburgh where he also completed a postdoctoral fellow training. Dr. Jan's research focuses on *assistive technology* for people with physical disabilities and *soft tissue biomechanics* for musculoskeletal rehabilitation and wound healing and prevention. His research on using blood flow dynamics to assess soft tissue viability has been funded by NIH, NIDILRR, and PVA for more than \$2 million. His research findings have been contributing to the development of clinical guidelines on using wheelchair seating systems and support surfaces to prevent pressure injury. Dr. Jan serves as an Associate Editor for several prestigious journals, including Assistive Technology, Journal of NeuroEngineering and Rehabilitation, Frontiers in Bioengineering and Biotechnology, and Frontiers in Physiology as well as on the editorial board for the Journal of Tissue Viability, Scientific Reports, PLOS ONE, and BMC Sports Science, Medicine and Rehabilitation. Dr. Jan served as the Chair of Scientific Papers of the Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) in 2015-2021. He was a councilor of the World Association of Chinese Biomedical Engineers (WACBE). Dr. Jan has published more than 120 peer-reviewed journal papers. He is a naturalized citizen of the United States.

Education

- 2004-2006 **Postdoc in Rehabilitation Science & Technology**, University of Pittsburgh
Postdoc Project: A Study of Biophysical and Microvascular Function of Individuals with Spinal Cord Injuries
Mentors: David M. Brienza, PhD and Michael L. Boninger, MD
- 2000-2004 **Ph.D. in Rehabilitation Science & Technology**, University of Pittsburgh
Dissertation: A Study on Skin Blood Flow Mechanisms Using Wavelet Analysis: Implications for Pressure Ulcer Prevention
Committee: David M. Brienza, PhD (chair), Michael L. Boninger, MD, George E. Carvell, PT, PhD, Mary Jo Geyer, PT, PhD, and David A. Vorp, PhD
- 1995-1997 **M.S. in Biomedical Engineering**, National Yang Ming Chiao Tung University, Taiwan
Thesis: A Study on Selecting a Right Prosthetic Foot and Socket Alignment in People with Below-Knee Amputation
- 1991-1995 **B.S. in Physical Therapy**, National Yang Ming Chiao Tung University, Taiwan

Professional Appointments

- 2012-present **University of Illinois at Urbana-Champaign (UIUC)**
Associate Professor (with tenure), Department of Kinesiology and Community Health, College of Applied Health Sciences (2012-present)
Director, Rehabilitation Engineering Research Lab, Disability Resources and Educational Services (2012-present)
Affiliate, Discovery Partners Institute (2021-present)
Affiliate, Computational Science and Engineering Program, Grainger College of Engineering (2012-present)
Coordinator, International Graduate Mentoring Program (IGMP) on Kinesiology, Global Education and Training, Illinois International (2019-present)
Affiliate, Center for East Asian & Pacific Studies (2017-present)

Affiliate, Center for Health, Aging and Disability (2012-present)
Affiliate, Center for Health Informatics (2017-present)
Affiliate, Chicago Center for Diabetes Translation Research (NIDDK P30), Department of Medicine, University of Chicago (2016-present)

2008-2012 **University of Oklahoma, Health Sciences Center (OUHSC)**
Assistant Professor (tenure track), Doctor of Physical Therapy program, Department of Rehabilitation Sciences (2008-2012)
Director, Rehabilitation Biomechanics Lab (2008-2012)
Adjunct Assistant Professor, Department of Physiology (2009-2012)
Adjunct Assistant Professor, Department of Aerospace & Mechanical Engineering (Bioengineering) (2010-2012)
Adjunct Assistant Professor, Oklahoma Center for Neuroscience (2010-2012)
Primary Researcher (WOC), OKC Veterans Affairs Medical Center (2008-2012)

2000-2008 **University of Pittsburgh (Pitt)**
Assistant Professor (research track), Department of Rehabilitation Science and Technology (2006-2008)
Task Leader, Rehabilitation Engineering Research Center (RERC) on Spinal Cord Injury, National Institute on Disability, Independent Living and Rehabilitation Research (PI: David Brienza, 2006-2008)
Researcher, Quality of Life Technology Engineering Research Center (NSF ERC), Carnegie Mellon University and Pitt (PI: Takeo Kanade, 2006-2008)
Researcher (WOC), Pittsburgh Veterans Affairs Healthcare System (PI: Rory Cooper, 2006-2008)
Postdoctoral Fellow (2004-2006)
Graduate Research Assistant (2000-2004)

1997-1999 **Clinic of the Combined Service Forces Headquarters, Taipei, Taiwan**
Director of Physical Therapy and Second Lieutenant Medical Officer, Department of Physical Therapy

1995-1997 **National Yang Ming Chiao Tung University, Taipei, Taiwan**
Research Assistant, Rehabilitation Engineering Lab, Department of Biomedical Engineering
Research Assistant, Motion Analysis Lab, Department of Physical Therapy and Assistive Technology

1995 **Chang Gung Memorial Hospital, Taoyuan, Taiwan**
Student Physical Therapist, Division of Rehabilitation

1994 **Shin Kong Memorial Hospital, Taipei, Taiwan**
Student Physical Therapist, Division of Rehabilitation

Licensures

2002-present Physical Therapy License, New York (#024747)
1996-present Physical Therapy License, Taiwan (#186)

Honors and Awards

- 2024 List of Teachers Ranked as Excellent by Their Students (Fall 2023, REHB/CHLH 330 ON2), UIUC
- 2023 List of Teachers Ranked as Excellent by Their Students (Spring 2023, REHB/CHLH 330 ON2), UIUC
- 2023 Long Service Award, PLOS ONE
- 2022 List of Teachers Ranked as Excellent by Their Students (Spring 2022, REHB/CHLH 330 ON2), UIUC
- 2022 Top Cited Article 2020-2021, Using laser Doppler flowmetry with wavelet analysis to study skin blood flow regulations after cupping therapy, *Skin Research and Technology*, Wiley
- 2021 **Distinguished Service Award, Rehabilitation Engineering and Assistive Technology Society of North America (RESNA)**
- 2021 Outstanding Editor Award, *Frontiers in Physiology*
- 2020 List of Teachers Ranked as Excellent by Their Students (Fall 2020, REHB/CHLH 330 ON2), UIUC
- 2017 **Invited Attendee, Summit on Global Research, Innovation, and Education in Assistive Technology, World Health Organization, Geneva, Switzerland, August 3-4**
-Five position papers were published based on the consensus of this WHO Summit on Assistive Technology. One of the position papers that I involved is: Smith EM, Gowran RJ*, Mannan H, Donnelly B, Alvarez L, Bell D, Contepomi S, Ennion L, Hoogerwerf EJ, Howe T, **Jan YK**, Kagwiza J, Layton N, Legerd R, MacLachlan M, Oggero G, Pettersson C, Pousada T, Scheffler E, Tebbut E, and Wu S (2018). Enabling appropriate skills-mix towards progressive realisation of equitable access to assistive technology. *Disability and Rehabilitation: Assistive Technology*, 13(5), 445-453.)
- 2016 **Highly Cited Researcher, Elsevier** (Skin blood flow dynamics and its role in pressure ulcers, *Journal of Tissue Viability*)
- 2016 The 1st Remarkable Alumni Award, Department of Physical Therapy and Assistive Technology, National Yang Ming Chiao Tung University, Taiwan
- 2015 Best Paper Award, Student Scientific Paper Competition, RESNA International Conference, Denver, CO (Student: Tim Yang, Role: Advisor)
- 2015 Honorable Mention Award, Student Scientific Paper Competition, RESNA International Conference, Denver, CO (Student: Tim Yang, Role: Advisor)
- 2014 2nd Place, Best Poster Award, Computational Science and Engineering Annual Meeting, University of Illinois, Urbana, IL (Student: Tim Yang, Role: Advisor)
- 2014 Honorable Mention Award, Student Scientific Paper Competition, RESNA International Conference, Indianapolis, IN (Student: Tim Yang, Role: Advisor)
- 2012 Outstanding Faculty in Research Award, Senior Category, College of Allied Health, University of Oklahoma Health Sciences Center
- 2009 Outstanding Faculty in Research Award, Junior Category, College of Allied Health, University of Oklahoma Health Sciences Center
- 2008 Faculty Fellow, Faculty Leadership Program, University of Oklahoma Health Sciences Center (Mentors: Marti Ferretti and Robert Foreman)
- 2007 Member (Nominated), Pepper Scholars Working Group, University of Pittsburgh Claude D. Pepper Older Americans Independence Center (NIH P20)
- 2007 Finalist, Best Poster Award, Science 2007, University of Pittsburgh, Pittsburgh, PA
- 2006 **Mary E. Switzer Research Fellow, National Institute on Disability, Independent Living and Rehabilitation Research (NIDILRR)**

- 2004 Best Post-Doctoral Research Paper Award, Rehabilitation Institute Research Day, University of Pittsburgh Medical Center
- 2003 Honorable Mention Award, Student Scientific Paper Competition, Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) International Conference, Atlanta, GA
- 2003 Finalist, Best Poster Award, Science 2003, University of Pittsburgh, Pittsburgh, PA
- 2002 Pre-Doctoral Research Fellowship Award, Advanced Rehabilitation Research Training (ARRT) program at the University of Pittsburgh, NIDILRR
- 1997 First Place, Student Thesis Competition: Biomedical Engineering Category, National Yang Ming Chiao Tung University, Taipei, Taiwan
- 1996 Academic Achievement Award (Highest GPA), Department of Biomedical Engineering, National Yang Ming Chiao Tung University, Taipei, Taiwan (09/1996)
- 1994 Academic Achievement Awards (Highest GPA), Department of Physical Therapy, National Yang Ming Chiao Tung University, Taipei, Taiwan (02/1994 and 09/1994)
- 1993-1995 Outstanding College Students Scholarships, The Jans Kindred Association, Taiwan (08/1993, 02/1994, 08/1994, & 02/1995)

RESEARCH AND SCHOLARSHIP

Peer-Reviewed Journal Articles (* indicates the corresponding author)

1. Pauly S, Mo PC, Elliott J, Bleakney A, Pappu S, and **Jan YK*** (in press). Effects of alternating pressure patterns on sacral skin blood flow responses in people with spinal cord injury. *International Wound Journal*, in press.
2. Chen P, Yu H, Lin CF, Guo J, Elliott J, Bleakney A, and **Jan YK*** (in press). Effect of adaptive sports on quality of life in individuals with disabilities who use wheelchairs: a mixed-methods systematic review. *Disability and Rehabilitation: Assistive Technology*, in press.
3. Mohamed AA*, Abdalla AA, and **Jan YK** (in press). Role of enhancing aerobic capacity in countering COVID-19-induced liver injury in elderlies. *Endocrine, Metabolic & Immune Disorders – Drug Targets*, in press.
4. Li Y, Mo PC, Peng F, Guo J, Sheng Z, Lyu S and **Jan YK*** (in press). Using multi-channel near-infrared spectroscopy to assess the effect of cupping therapy on spatial hemodynamic responses. *Journal of Back and Musculoskeletal Rehabilitation*, in press.
5. Jankaew A, **Jan YK**, Hwang IS, Kuo LC, and Lin CF* (in press). Hamstring activation deficits in different jumping directions in athletes with a history of hamstring strain injuries: a cross-sectional laboratory study. *Sports Biomechanics*, in press.
6. Jankaew A, **Jan YK**, Hwang IS, Kuo LC, and Lin CF* (in press). Hamstring muscle stiffness affects lower extremity muscle recruitment and landing forces during double-legs vertical jump. *Sports Biomechanics*, in press.
7. **Jan YK***, Lin CF, Liao F, and Singh NB (2023). Editorial: Nonlinear dynamics and complex patterns in the human musculoskeletal system and movement. *Frontiers in Bioengineering and Biotechnology*, 11, 1339376.
8. Haris F, **Jan YK**, Liau BY, Hsieh CW, Shen WC, Tai CC, Shih YH, and Lung CW* (2023). The effects of different inner pressures of air insoles and walking durations on peak plantar pressure. *Medicine*, 102(43), e35704.(7 pages)
9. Wei W, Zhu JX, Ren S, **Jan YK**, Zhang W, Su R, and He L* (2023). Effects of progressive body-weight versus barbell squat training on strength, hypertrophy and body fat among sedentary young women. *Scientific Reports*, 13(1), 13505.

10. Prisilla AA, Guo YL, **Jan YK**, Lin CY, Lin FY, Liao BY, Tsai JY, Ardianto P, Pusparani Y, and Lung CW* (2023). An approach to the diagnosis of Lumbar Disc Herniation Using Deep Learning Models. *Frontiers in Bioengineering and Biotechnology*, 11, 1247112.
11. Liao BY, Lung CW, Hernandez ME, Mo PC, Li Y, Guo J, and **Jan YK*** (2023). Using cross-correlation analysis of multi-channel near infrared spectroscopy to assess the hemodynamic response to cupping therapy. *Biomedical Optics Express*, 14(9), 4455-4467.
12. Pusparani Y, Lin CY, **Jan YK**, Lin FY, Liao BY, Ardianto P, Farady I, Alex JSR Aparajeeta J, Chao WH, and Lung CW (2023). Diagnosis of Alzheimer's Disease using Convolutional Neural Network with Select Slices by Landmark on Hippocampus in MRI Images. *IEEE Access*, 11, 61688-61697.
13. Hou X, Ren H, Wang RH, and **Jan YK*** (2023). Clinical applications and evidence of ultrasound imaging in musculoskeletal rehabilitation. *Chinese Journal of Rehabilitation Medicine*, 38(6), 863-867. (in Chinese)
14. Liao F, Zhao H, Lin CF, Chen P, Chen P, Onyemere K, and **Jan YK*** (2023). Application of multiscale sample entropy in assessing the effect of exercise on skin blood flow oscillations in people with spinal cord injury. *Entropy*, 25, 690.
15. Li Y, Mo PC, Lin CF, Pauly S, Kundal N, Hernandez ME and **Jan YK*** (2023). Using near-infrared spectroscopy to investigate the effect of durations and pressures of cupping therapy on muscle blood volume and oxygenation of the biceps. *Journal of Biophotonics*, 16(7), e202200342.
16. Liao F and **Jan YK*** (2023). Assessing skin blood flow function in people with spinal cord injury using the time domain, time-frequency domain and deep learning approaches. *Biomedical Signal Processing and Control*, 84, 104790.
17. Santulli G*, Pabelick CM, **Jan YK**, Denise P, and de Lucia C (2023). Methods and applications in clinical and translational physiology. *Frontiers in Physiology*, 14, 1169544.
18. Li H, Zhu Y, Lyu S*, Shan X*, **Jan YK**, and Ma F (2023). Stair-climbing wheelchair proven to maintain user's body stability based on AnyBody musculoskeletal model and finite element analysis. *PLOS One*, 18(1), E0279478.
19. Mohamed AA*, Zhang X, and **Jan YK** (2023). Evidence-based and adverse-effects of cupping therapy in musculoskeletal and sports rehabilitation: a systematic and evidence-based review. *Journal of Back and Musculoskeletal Rehabilitation*, 36(1), 3-19
20. Shen WC, **Jan YK**, Liao BY, Lin Q, Wang S, Tai CC, and Lung CW* (2022). Effectiveness of self-management of dry and wet cupping therapy for low back pain: a systematic review and meta-analysis. *Medicine*, 101(51), e32325. (13 pages)
21. Wu FL, Lung CW, Wang WTJ, Elliott J, Jain S, and **Jan YK*** (2022). Effects of walking speeds and durations on peak plantar pressures. *Journal of the American Podiatric Medical Association*, 112(6), 20-043.
22. Li Y, Mo PC, Jain S, Elliott J, Bleakney A, Lyu S*, and **Jan YK*** (2022). Effect of pressures and durations of cupping therapy on muscle stiffness of triceps. *Frontiers in Bioengineering and Biotechnology*, 10, 996589.
23. Ardianto P, Liao BY, **Jan YK**, Tsai JY, Akhyar F, Lin CY, Subiakto RBR, and Lung CW* (2022). Deep learning in left and right footprint image detection based on plantar pressure. *Applied Sciences*, 12, 8885.
24. Lung CW, Mo PC, Cao C, Zhang K, Wu FL, Liao BY, and **Jan YK*** (2022). Effects of walking speeds and durations on the plantar pressure gradient and pressure gradient angle. *BMC Musculoskeletal Disorders*, 23, 823.
25. Ren W, Duan Y, **Jan YK**, Li J, Liu W, Pu F*, and Fan Y* (2022). Effect of intermittent pneumatic compression with different inflation pressures on the distal microvascular responses of the foot in people with type 2 diabetes mellitus. *International Wound Journal*, 19(5), 968-977.

26. Mohamed AA*, **Jan YK**, Kattabei O, Abed Al Raof N, Moustafa I, and Hosony H (2022). Effect of biofeedback corrective exercise on reaction time and central somatosensory conduction time in patients with forward head posture and radiculopathy: a randomized controlled study. *Journal of Chiropractic Medicine*, 21(1), 39-50.
27. Yeh SJ, Lung CW, **Jan YK**, and Liao BY* (2022). Advanced cross-correlation function application to identify arterial baroreflex sensitivity variations from healthy to diabetes mellitus. *Frontiers in Neuroscience*, 16, 812302.
28. Ardhiyanto P, Subiakto RBR, Lin CY, **Jan YK**, Liao BY, Tsai JY, Akbari VBH, and Lung CW* (2022). A deep learning system for foot progression angle detection in plantar pressure images. *Sensors*, 22, 2786.
29. **Jan YK***, Major MJ, Pu F, and Sonenblum SE (2022). Soft tissue biomechanics in wound healing and prevention. *Frontiers in Bioengineering and Biotechnology*, 10, 897860.
30. Duan Y, Ren W, Liu W, Li J, Pu F*, and **Jan YK*** (2022). Relationship between plantar tissue hardness and plantar pressure distributions in people with diabetic peripheral neuropathy. *Frontiers in Bioengineering and Biotechnology*, 10, 836018.
31. Zhang K, **Jan YK**, Liu Y, Zhang L, Liu R, Liu J, and Cao C* (2022). Exercise intensity and brain plasticity: What's the difference of brain morphometry and activation patterns plasticity characteristics between elite aerobic and anaerobic athletes? *Frontiers in Human Neuroscience*, 16, 757522.
32. Pusparani Y, Liao B, **Jan Y**, Cheng H, Ardhiyanto P, Akhyar F, Lung C, and Lin C* (2022). Plantar soft tissue stiffness automatic estimation in ultrasound imaging using deep learning. *Physical Ergonomics and Human Factors*. 63, 187-195.
33. **Jan YK*** (2022). Advances in diagnosis and pathophysiology of microvascular dysfunction. *Diagnostics*, 12, 620.
34. Haris F, Liao BY, **Jan YK**, Akbari VBH, Primanda Y, Lin KH, and Lung CW* (2021). A review of plantar pressure distribution effects from insole materials and at different walking speeds. *Applied Sciences*, 11(24), 11851.
35. Yeh SJ, Lung CW, **Jan YK**, Kuo FC, and Liao BY* (2021). Hypertension and stroke cardiovascular control evaluation by analyzing blood pressure, cerebral blood flow, blood vessel resistance and baroreflex. *Frontiers in Bioengineering and Biotechnology*, 9, 731882.
36. Ren W, Duan Y, **Jan YK**, Ye W, Li J, Liu W, Liu H, Guo J, Pu F*, and Fan Y* (2021). Effect of exercise volume on plantar microcirculation and tissue hardness in People with type 2 Diabetes. *Frontiers in Bioengineering and Biotechnology*, 9, 732628.
37. Wu FL, Wang W, Liao F, Liu Y, Li J, and **Jan YK*** (2021). Microvascular control mechanism of the plantar foot in response to different walking speeds and durations: implication for the prevention of foot ulcers. *International Journal of Lower Extremity Wounds*, 20(4), 327-336.
38. Ren W, Zhang M, Liu H, **Jan YK**, Pu F* and Fan Y (2021). Effect of vibration on alleviating foot pressure-induced ischemia under occlusive compression, *Journal of Healthcare Engineering*, 2021, 6208499.
39. Chen HC, Sunardi S, Liao BY, Lin CY, Akbari VBH, Lung CW*, and **Jan YK*** (2021). Estimation of various walking intensities based on wearable plantar pressure sensors using artificial neural networks. *Sensors*, 21, 6513.
40. Lung CW, Liao BY, Peters JA, He L, Townsend R, and **Jan YK*** (2021). Effects of various walking intensities on leg muscle fatigue and plantar pressure distributions. *BMC Musculoskeletal Disorders*, 22, 831.
41. Liao BY, Wu F, Li Y, Lung CW, Mohamed AA, and **Jan YK*** (2021). Effect of walking speeds on complexity of plantar pressure patterns. *Complexity*, 2021, 6571336.
42. Liao F, Zhang X, Cao C, Hung IYJ, Chen Y, and **Jan YK*** (2021). Effects of muscle fatigue and recovery on complexity of surface electromyography of Biceps Brachii. *Entropy*, 23(8), 1036.

43. Zhu X, Zhang K, He L, Liao F, Ren Y, and **Jan YK*** (2021). Spectral analysis of blood flow oscillations to assess the plantar skin blood flow regulation in response to preconditioning local vibrations. *Biorheology*, 58, 39-49.
44. Hou X, Liu J, Weng K, Griffin L, Rice LA, and **Jan YK*** (2021). Effect of various physical interventions on neuromuscular fatigue assessed by electromyography: a systematic review and meta-analysis. *Frontiers in Bioengineering and Biotechnology*, 9, 659138.
45. Tsai JY, Hung IYJ, Guo YL, **Jan YK**, Lin CY, Shih TTF, Chen BB, and Lung CW* (2021). Lumbar disc herniation automatic detection in magnetic resonance imaging based on deep learning, *Frontiers in Bioengineering and Biotechnology*, 9, 708137.
46. Duan Y, Ren W, Xu L, Ye W, **Jan YK***, and Pu F* (2021). The effects of different accumulated pressure-time integral stimuli on plantar blood flow in people with diabetes mellitus. *BMC Musculoskeletal Disorders*, 22, 554
47. Hou X, Wang X, Griffin L, Liao F, Peters J, and **Jan YK*** (2021). Immediate and delayed effects of cupping therapy on reducing neuromuscular fatigue. *Frontiers in Bioengineering and Biotechnology*, 9, 678153.
48. **Jan YK***, Hou X, He X, Guo C, Jain S, and Bleakney A (2021). Using elastographic ultrasound to assess the effect of cupping size of cupping therapy on stiffness of triceps muscle. *American Journal of Physical Medicine and Rehabilitation*, 100(7), 694-699.
49. Zhu X, Wu FL, Zhu T, Liao F, Ren Y, and **Jan YK*** (2021). Effects of preconditioning local vibrations on subsequent plantar skin blood flow response to walking. *International Journal of Lower Extremity Wounds*, 20(2), 143-149.
50. Hou X#, He X#, Zhang X, Liao F, Hung YJ, and **Jan YK*** (2021). Using laser Doppler flowmetry with wavelet analysis to study microvascular regulations after cupping therapy. *Skin Research and Technology*, 27(3), 393-399.
51. Ardhiyanto P, Tsai JY, Lin CY, Liao BY, **Jan YK**, Akbari VBH, and Lung CW* (2021). A review of challenges in deep learning for skeletal and smooth muscle ultrasound Images. *Applied Sciences*, 11(9), 4021.
52. He X, Zhang X, Liao F, He L, Xu X, and **Jan YK*** (2021). Using reactive hyperemia to investigate the effect of cupping sizes of cupping therapy on skin blood flow responses. *Journal of Back and Musculoskeletal Rehabilitation*, 34(2), 327-333.
53. Liao BY, Wu FL, Zhang K, Lung CW, Cao C, and **Jan YK*** (2021). Using bidimensional multiscale entropy analysis of ultrasound images to assess the effect of various walking intensities on plantar soft tissues. *Entropy*, 23(3), 264.
54. Choi HMC, Cheung KK, Ng MCH, Zheng Y, **Jan YK**, and Cheing GLY* (2021). Indentation stiffness measurement by an optical coherence tomography-based air-jet indentation system can reflect type I collagen abundance and organisation in diabetic wounds. *Frontiers in Bioengineering and Biotechnology*, 9, 648453.
55. Chen HC, Sunardi, **Jan YK**, Liao BY, Lin CY, Tsai JY, Li CT, and Lung CW (2021). Using deep learning methods to predict walking intensity from plantar pressure images. *Lecture Notes in Networks and Systems*, 273, 270-277.
56. Shen WC, **Jan YK**, Lung CW, Chen HC, Li CT, Bau JG, and Liao BY (2021). Using ultrasound to assess microchambers and macrochambers tissue properties after walking at different speeds and durations. *Lecture Notes in Networks and Systems*, 273, 355-363.
57. Wu FL#, Zheng Z#, Ma Y, Weng K, Liao F, and **Jan YK*** (2020). Effects of cycle periods and pressure amplitudes of alternating pressure on sacral skin blood flow responses. *Journal of Tissue Viability*, 29(4), 264-268.

58. Wang X, Zhang X, Elliott J, Liao F, Tao J and **Jan YK*** (2020). Effect of pressures and durations of cupping therapy on skin blood flow responses. *Frontiers in Bioengineering and Biotechnology*, 8, 608509. (7 pages)
59. Liao F, Zhang K, Zhou L, Chen Y, Elliott J, and **Jan YK*** (2020). Effect of different frequencies of local vibration on multiscale regularity of plantar skin blood flow, *Entropy*, 22(11), 1288. (12 pages)
60. Lung CW, Wu FL, Zhang K, Liau BY, Townsend R, and **Jan YK*** (2020). Using elastographic ultrasound to assess plantar tissue stiffness after walking at different speeds and durations. *Applied Sciences*, 10(21), 7498. (10 pages)
61. Lung CW, Yang TD, Liau BY, Cheung WC, Jain S, and **Jan YK*** (2020). Dynamic changes in seating pressure gradients in people with spinal cord injury. *Assistive Technology*, 32(5), 277-286.
62. Zhu T, Wang Y, Wang X, Liao F, Liu Y, and **Jan YK*** (2020). Effect of local vibrations on plantar skin blood flow responses during weight-bearing standing in healthy volunteers. *Wound Management and Prevention*, 66(8), 7-14. (# contributed equally)
63. Mohamed AA*, **Jan YK**, El Sayed WH, El Wanis MEA, and Yamany AA (2020). Dynamic scapular recognition exercise improves scapular upward rotation and shoulder pain and disability in patients with adhesive capsulitis: a randomized controlled trial. *Journal of Manual and Manipulative Therapy*, 28(3), 146-158.
64. Shen WC, **Jan YK**, Lung CW, Anastian A, Hsieh CW, Cheng HT, Liao YY, and Liau BY* (2020). Analysis of moisture and sebum of the skin for monitoring wound healing in older nursing home residents. *Advances in Intelligent Systems and Computing*, 1215, 177-182.
65. Tsai JY, **Jan YK**, Liau BY, Subiakto RBR, Lin CY, Hendradi R, Hsu YC, Lin Q, Chang HT, and Lung CW* (2020). A convolutional neural network model to clarify the effects of vibrations on biceps muscles. *Advances in Intelligent Systems and Computing*, 1215, 56-62.
66. Cheng YC, Lung CW, **Jan YK**, Kuo FC, Lin YS, Lo YC, and Liau BY* (2020). Evaluating the far-infrared radiation bioeffects on microvascular dysfunction, nervous System and plantar pressure in diabetes mellitus. *International Journal of Lower Extremity Wounds*, 19(2), 125-131.
67. Lung CW, Wu FL, Liao F, Pu F, Fan Y, and **Jan YK*** (2020). Emerging technologies for the prevention and management of diabetic foot ulcers. *Journal of Tissue Viability*, 29(2), 61-68.
68. Mohamed AA* and **Jan YK** (2020). Effect of proprioceptive exercise to balance training in older adults with diabetes: a systematic review. *Current Diabetes Reviews*, 16(4), 327-339.
69. **Jan YK*** (2020). The effects of local cooling rates on perfusion of the sacral skin under externally applied pressure in people with spinal cord injury: An exploratory study. *Spinal Cord*, 58, 476-483.
70. Zhu T, Wang Y, Yang J, Liao F, Wang S, and **Jan YK*** (2020). Wavelet-based analysis of plantar skin blood flow response to different frequencies of local vibrations. *Physiological Measurement*, 41(2), 025004. (10 pages)
71. Yang TD and **Jan YK*** (2020). Nonnegative matrix factorization for the identification of pressure ulcer risks from seating interface pressures in people with spinal cord injury. *Medical & Biological Engineering & Computing*, 58, 227-237.
72. Wu FL, Wang WT, Liao F, Elliott J, Jain S, and **Jan YK*** (2020). Effects of walking speeds and durations on plantar skin blood flow responses. *Microvascular Research*, 128, 103936. (5 pages)
73. Lung CW, **Jan YK**, Lu JH, Chen CL, Kuo FC, and Liau BY* (2020). The evaluation of mechanical properties of soft tissue on pressure ulcers among bedridden elderly patients. *Advances in Intelligent Systems and Computing*, 967, 360-368.
74. Tsai JY, **Jan YK**, Liau BY, Chen CL, Chen PJ, Lin CY, Liu YC, and Lung CW* (2020). Deep learning model to recognize the different progression condition patterns of manual wheelchair users for prevention of shoulder pain. *Advances in Intelligent Systems and Computing*, 967, 3-13.
75. Liau BY, Wu FL, Lung CW, Zhang X, Wang X, and **Jan YK*** (2019). Complexity-based measures of postural sway during walking at different speeds and durations using multiscale entropy. *Entropy*, 21(11), 1128. (11 pages)

76. Ren W, Pu F, Luan H, Duan Y, Su H, Fan Y*, and **Jan YK*** (2019). Effects of local vibration with different intermittent durations on skin blood flow responses in diabetic people. *Frontiers in Bioengineering and Biotechnology*, 7, 310. (8 pages)
77. **Jan YK***, Liao F, Cheing GLY, Pu F, Ren W, and Choi HMC (2019). Differences in skin blood flow oscillations between the plantar and dorsal foot in people with diabetes mellitus and peripheral neuropathy. *Microvascular Research*, 122, 45-51.
78. Liao F, An R, Pu F, Burns S, Shen S, and **Jan YK*** (2019). Effect of exercise on risk factors of diabetic foot ulcers: a systematic review and meta-analysis. *American Journal of Physical Medicine and Rehabilitation*, 98(2), 103-116.
79. Liao F, Yang TD, Wu FL, Cao CM, Mohamed A, and **Jan YK*** (2019). Using multiscale entropy to assess the efficacy of local cooling on reactive hyperemia in people with a spinal cord injury. *Entropy*, 21(1), 90. (12 pages)
80. Rice IM*, Peters J, Rice L, and **Jan YK** (2019). Influence of wheelchair user interface and personal characteristics on static and dynamic pretibial skin pressures in elite wheelchair racers, a pilot study. *Journal of Spinal Cord Medicine*, 42(5), 613-621.
81. Liao BY, Chen CL, **Jan YK**, Chiu HY, Huang YW, and Lung CW* (2019). Three-dimensional elastography gradient of the plantar soft tissue: methodology and preliminary study. *Advances in Intelligent Systems and Computing*, 792, 318-327.
82. Lung CW, Lin YS, **Jan YK**, Lo YC, Chen CL, and Liao BY* (2019). Effect of far infrared radiation therapy on improving microcirculation of the diabetic foot. *Advances in Intelligent Systems and Computing*, 781, 156-163.
83. Liao F, Cheing GL, Ren W, Jain S, and **Jan YK*** (2018). Application of multiscale entropy in assessing plantar skin blood flow dynamics in diabetics with peripheral neuropathy. *Entropy*, 20(2), 127. (14 pages)
84. Pu F, Ren W, Fu H, Zhang X, Yang M, **Jan YK***, and Fan Y* (2018). Plantar blood flow response to accumulated pressure stimulus in diabetic people with different peak plantar pressure: a non-randomized clinical trial. *Medical & Biological Engineering & Computing*, 56(7), 1127-1134.
85. Smith EM, Gowran RJ*, Mannan H, Donnelly B, Alvarez L, Bell D, Contepomi S, Ennion L, Hoogerwerf EJ, Howe T, **Jan YK**, Kagwiza J, Layton N, Legerd R, MacLachlan M, Oggero G, Pettersson C, Pousada T, Scheffler E, Tebbut E, and Wu S (2018). Enabling appropriate skills-mix towards progressive realisation of equitable access to assistive technology. *Disability and Rehabilitation: Assistive Technology*, 13(5), 445-453.
- **A paper from the Summit on Global Research, Innovation, and Education in Assistive Technology, Global Cooperation on Assistive Technology, World Health Organization (WHO) in Geneva, Switzerland in August 2017.**
86. Lung CW, Chen CL, **Jan YK**, Chao LF, Chen WF, and Liao BY* (2018). Activation sequence patterns of forearm muscles for driving a power wheelchair. *Advances in Intelligent Systems and Computing*, 603, 141-147.
87. Liao BY, Chen CL, **Jan YK**, Chiu HY, He PS, and Lung CW* (2018). A comparative study of the effects of electrical stimulation and intermittent compressive forces on soft tissue mechanical properties. *Advances in Intelligent Systems and Computing*, 602, 89-97.
88. Chen CL, Lung CW, **Jan YK**, Liao BY, and Tang JS* (2018). The effects of cupping therapy on muscle fatigue of upper extremity muscles - a pilot study. *Advances in Intelligent Systems and Computing*, 603, 73-83.
89. Liao F and **Jan YK*** (2017). Nonlinear dynamics of skin blood flow response to mechanical and thermal stresses in the plantar foot of diabetics with peripheral neuropathy, *Clinical Hemorheology and Microcirculation*, 66(3), 197-210.
90. Lung CW, Cheng TY, Li YJ, Liao BY, and **Jan YK*** (2017). Development of an intermittent pneumatic compression system to manage soft tissue mechanical properties. *Advances in Intelligent Systems and Computing*, 482, 317-325.

91. Liao F and **Jan YK*** (2016). Using modified sample entropy to characterize skin blood flow dynamics in older adults. *Frontiers in Physiology*, 7, 126. (11 pages)
92. Fu J*, Jones M, Liu T, Hao W, Yan Y, Qian G, and **Jan YK** (2016). A novel mobile-cloud system for capturing and analyzing wheelchair maneuvering data: a pilot study. *Assistive Technology*, 28(2), 105-114.
93. Lung CW, Hsiao-Weckler ET, Burns S, Lin F, and **Jan YK*** (2016). Quantifying dynamic changes in plantar pressure gradient in diabetics with peripheral neuropathy. *Frontiers in Bioengineering and Biotechnology*, 4, 54. (9 pages)
94. Lung CW, Cheng TY, **Jan YK**, Chen HC and Liao BY* (2016). Electromyographic assessments of muscle activation patterns during driving a power wheelchair. *Advances in Intelligent Systems and Computing*, 489, 705-711.
95. Dicianno BE*, Lieberman J, Schmeler MR, Souza AE, Cooper R, Lange M, Liu H, and **Jan YK** (2015). Rehabilitation Engineering and Assistive Technology Society of North America's position on the application of tilt, recline, and elevating legrests for wheelchairs literature update. *Assistive Technology*, 27(3), 193-198.
 - **A position paper from the Rehabilitation Engineering and Assistive Technology Society of North America (RESNA).**
96. Koontz AM*, Ding D, **Jan YK**, de Groot S, and Hansen A (2015). Editorial – wheeled mobility. *Biomed Research International*, 2015, 138176.
97. Liao F, Liao BY, Rice IM, Elliott J, Brooks I, and **Jan YK*** (2015). Using local scale exponent to characterize heart rate variability in response to postural changes in people with spinal cord injury. *Frontiers in Physiology*, 6, 142. (8 pages)
98. Chen Y, Wang J, Lung CW, Yang TD, Crane BA, and **Jan YK*** (2014). Effect of tilt and recline on ischial and coccygeal interface pressures in people with spinal cord injury. *American Journal of Physical Medicine and Rehabilitation*, 93(12), 1019-1030.
99. Lung CW, Yang TD, Crane BA, Elliott J, Dicianno B, and **Jan YK*** (2014). Investigation of peak pressure index parameters for people with spinal cord injury using wheelchair tilt-in-space and recline: Methodology and preliminary report. *Biomed Research International*, 2014, 508583. (9 pages)
100. Fu J*, Jones MA, and **Jan YK** (2014). Providing personalized guidance on wheelchair tilt and recline usage for people with spinal cord injury: methodology and preliminary report. *Journal of Rehabilitation Research and Development*, 51(5), 775-788.
101. Lee B, Benyajati S, Woods JA, and **Jan YK*** (2014). Effect of local cooling on pro-inflammatory cytokines and blood flow to the skin under surface pressure in rats: feasibility study. *Journal of Tissue Viability*, 23(2), 69-77.
102. Liao F, O'Brien WD, Jr, and **Jan YK*** (2013). Assessing complexity of skin blood flow oscillations in response to locally applied heating and pressure in rats: implications for pressure ulcer risk. *Physica A: Statistical Mechanics and Its Applications*, 392(20), 4905-4915.
103. Yang TD, Hutchinson S, Rice LA, Watkin KL, and **Jan YK*** (2013). Development of a scalable monitoring system for wheelchair tilt-in-space usage. *International Journal of Physical Medicine and Rehabilitation*, 1(4), 129. (6 pages)
104. Liao BY*, Lung CW, and **Jan YK** (2013). Development of human balance assessment system with continuous center of gravity tracking. *Lecture Notes in Computer Science*, 8025(1), 332-337.
105. Lung CW*, Liao BY, and **Jan YK** (2013). Plantar pressure gradient angles to evaluate risk of diabetic foot ulcers. *Lecture Notes in Computer Science*, 8025(1), 240-247.
106. Liao F, Burns S, and **Jan YK*** (2013). Skin blood flow dynamics and its role in pressure ulcers. *Journal of Tissue Viability*, 22(2), 25-36.
 - **Highly Cited Researcher, Elsevier**

107. **Jan YK***, Crane BA, Liao F, Woods JA, and Ennis WJ (2013). Comparison of muscle and skin perfusion at the ischial tuberosities in response to wheelchair tilt-in-space and recline angles in people with spinal cord injury. *Archives of Physical Medicine and Rehabilitation*, 94(10), 1990-1996.
108. **Jan YK***, Liao F, Rice LA, and Woods JA (2013). Using reactive hyperemia to assess the efficacy of local cooling on reducing skin ischemia under surface pressure in people with spinal cord injury: a preliminary report. *Archives of Physical Medicine and Rehabilitation*, 94(10), 1982-1989.
109. **Jan YK***, Shen S, Foreman RD, and Ennis WJ (2013). Skin blood flow response to locally applied mechanical and thermal stresses in the diabetic foot. *Microvascular Research*, 89, 40-46.
110. **Jan YK*** and Crane BA (2013). Wheelchair tilt-in-space and recline does not reduce sacral skin perfusion as changing from the upright to the reclined and tilted position in people with spinal cord injury. *Archives of Physical Medicine and Rehabilitation*, 94(6), 1207-1210.
111. **Jan YK***, Anderson M, Soltani J, Burns S, and Foreman RD (2013). Comparison of changes in heart rate variability and sacral skin perfusion in response to postural changes in people with spinal cord injury. *Journal of Rehabilitation Research and Development*, 50(2), 203-214.
112. **Jan YK***, Liao F, Jones MA, Rice LA, and Tisdell T (2013). Effect of durations of wheelchair tilt-in-space and recline on skin perfusion over the ischial tuberosity in people with spinal cord injury. *Archives of Physical Medicine and Rehabilitation*, 94(4), 667-672.
113. **Jan YK***, Lung CW, Cuaderes E, Rong D, and Boyce K (2013). Effect of viscoelastic properties of plantar soft tissues on plantar pressures at the first metatarsal head in diabetics with peripheral neuropathy. *Physiological Measurement*, 34(1), 53-66.
114. Liao F and **Jan YK*** (2012). Enhanced phase synchronization of blood flow oscillations between heated and adjacent non-heated sacral skin. *Medical & Biological Engineering & Computing*, 50(10), 1059-1070.
115. Liao F and **Jan YK*** (2012). A recurrence network approach for the analysis of skin blood flow dynamics in response to loading pressure. *Journal of Biomedical Graphics and Computing*, 2(1), 47-56.
116. **Jan YK***, Lee B, Liao F, and Foreman RD (2012). Local cooling reduces skin ischemia under surface pressure in rats: an assessment by wavelet analysis of laser Doppler blood flow oscillations. *Physiological Measurement*, 33(10), 1733-1745.
117. Liao F, Struck BD, MacRobert M, and **Jan YK*** (2011). Multifractal analysis of nonlinear complexity of sacral skin blood flow oscillations in older adults. *Medical & Biological Engineering & Computing*, 49(8), 925-934.
118. Liao F and **Jan YK*** (2011). Using multifractal detrended fluctuation analysis to assess sacral skin blood flow oscillations in people with spinal cord injury. *Journal of Rehabilitation Research and Development*, 48(7), 787-799.
119. **Jan YK***, Liao F, and Burns S (2011). Effect of spinal cord injury on nonlinear complexity of skin blood flow oscillations. *Lecture Notes in Computer Science*, 6768(4), 345-355.
120. **Jan YK***, Brienza DM, Boninger ML, and Brenes G (2011). Comparison of skin perfusion response with alternating and constant pressures in people with spinal cord injury. *Spinal Cord*, 49(1), 136-141.
121. Liao F, Garrison DW, and **Jan YK*** (2010). Relationship between nonlinear properties of sacral skin blood flow oscillations and vasodilatory function in people at risk for pressure ulcers. *Microvascular Research*, 80(1), 44-53.
122. **Jan YK***, Jones MA, Rabadi MH, Foreman RD, and Thiessen A (2010). Effect of wheelchair tilt-in-space and recline angles on skin perfusion over the ischial tuberosity in people with spinal cord injury. *Archives of Physical Medicine and Rehabilitation*, 91(11), 1758-1764.

123. **Jan YK***, Struck BD, Foreman RD, and Robinson C (2009). Wavelet analysis of skin blood flow oscillations to assess soft tissue viability in older adults. *Microvascular Research*, 78(2), 162-168.
124. **Jan YK***, Brienza DM, Geyer MJ, and Karg P (2008). Wavelet-based spectrum analysis of sacral skin blood flow response to alternating pressure. *Archives of Physical Medicine and Rehabilitation*, 89(1), 137-145.
125. **Jan YK** and Brienza DM* (2006). Technology for pressure ulcer prevention. *Topics in Spinal Cord Injury Rehabilitation*, 11(4), 30-41.
126. **Jan YK***, Brienza DM, and Geyer MJ (2005). Analysis of week-to-week variability in skin blood flow measurements using wavelet transforms. *Clinical Physiology and Functional Imaging*, 25(5), 253-262.
127. Brienza DM*, Geyer MJ, and **Jan YK** (2005). A comparison of changes in rhythms of sacral skin blood flow in response to heating and indentation. *Archives of Physical Medicine and Rehabilitation*, 86(6), 1245-1251.
128. Geyer MJ, **Jan YK***, Brienza DM, and Boninger ML (2004). Using wavelet analysis to characterize the thermoregulatory mechanisms of sacral skin blood flow. *Journal of Rehabilitation Research and Development*, 41(6), 797-805.
129. **Jan YK**, Lee SJ*, Yang SW, Chao LY, Lin CC, and Cheung W (1997). Foot pressure analysis in normal young Chinese adults. *Journal of the Physical Therapy Association of the Republic of China*, 22, 81-90. (In Chinese)
130. Chang MK, Yang SW*, and **Jan YK** (1995). Gait analysis of below-knee amputees. *Chinese Journal of Medical and Biological Engineering*; 15, 315-328. (In Chinese)

Position Papers and Reports

1. World Health Organization GREAT Summit (2017). *Global Research, Innovation and Research in Assistive Technology Summit Report*, WHO GATE, Geneva, Switzerland. (I was an invited expert for the panel of the Summit.)
2. Dicianno BE*, Lieberman J, Schmeler MR, Schuler AE, Cooper R, Lange M, Liu H, and **Jan YK** (2015). RESNA position on the application of tilt, recline, and elevating legrests for wheelchairs: 2015 current state of the literature. RESNA Press, Arlington, VA.
3. Brienza DM*, Geyer MJ, Karg P, and **Jan YK** (2001). State of the science white paper on tissue integrity management. In: Brubaker C and Brienza DM, eds. *Wheelchair Seating*. University of Pittsburgh Rehabilitation Engineering Research Center on Wheeled Mobility, Pittsburgh, PA, pp 3-9.

Books

1. **Jan YK**, Lin CF, Liao F, and Singh NB, eds (2024). *Nonlinear Dynamics and Complex Patterns in the Human Musculoskeletal System and Movement*. Frontiers Publisher, Lausanne, Switzerland. (ISBN: 978-2-8325-4222-4)
2. Santulli G, Pabelick CM, **Jan YK**, Denise P, and de Lucia C, eds (2023). *Methods and Applications in Clinical and Translational Physiology*. Frontiers Publisher, Lausanne, Switzerland. (ISBN: 978-2-8325-2043-7)
3. **Jan YK**, Major MJ, Pu F, and Sonenblum SE, eds (2022). *Soft Tissue Biomechanics in Wound Healing and Prevention*. Frontiers Publisher, Lausanne, Switzerland. (ISBN: 978-2-88976-028-2)
4. **Jan YK** (2004). *A study on skin blood flow mechanisms using wavelet analysis: implications for pressure ulcer prevention*. PhD Dissertation, University of Pittsburgh, Pittsburgh, PA.
5. **Jan YK** (1997). *A study of selecting a right prosthetic foot and socket alignment in people with below-knee amputation*. Master's Thesis, National Yang Ming University, Taipei, Taiwan.

Book Chapters

1. Mohamed AA, **Jan YK**, Rice IM, Pu F, and Cheng CK (2020). Chapter 14: Biomechanics of Orthopedic Rehabilitation. In: Cheng CK and Woo SLY, eds. *Frontiers in Orthopedic Biomechanics*. Springer Nature, 357-396. (ISBN: 978-981-15-3158-3)
2. Ren W, Pu F, Fan Y, and **Jan YK** (2018). Chapter 7: Diabetic Foot Biomechanics. In: Fan Y and Zhang M, eds. *Rehabilitation Engineering and Biomechanics*. Shanghai Jiaotong University Publisher, Shanghai, China, pp 119-146. (In Chinese)
3. Ennis WJ, Koh T, Urao N, **Jan YK**, Sui A, Brown K, and Borhani M (2015). Chapter 2: Ischemia/Reperfusion: A potential cause for tissue necrosis. In: Téot L, Meaume S, Akita S, Ennis WJ, and del Marmol V, eds. *Skin Necrosis*. Springer, New York, NY, pp 9-17. (ISBN: 978-37-091-1240-3)
4. Liao F and **Jan YK** (2015). Chapter 1: Heart rate variability and cardiovascular disease in people with spinal cord injury. In: Walters S, ed. *Heart Rate Variability (HRV): Prognostic Significance, Risk Factors and Clinical Applications*. Nova Science Publishers, Hauppauge, NY, pp 1-15. (ISBN: 978-1-63463-772-5)
5. Lung CW and **Jan YK** (2012). Chapter 1: Soft tissue biomechanics of diabetic foot ulcers. In: Ruiz AJC and Mendoza JMA, eds. *Soft Tissue: Composition, Mechanisms of Injury and Repair*. Nova Science Publishers, Hauppauge, NY, pp 1-32. (ISBN: 978-16-225-7363-9)
6. Burns S and **Jan YK** (2012). Chapter 1: Diabetic foot ulceration and amputation. In: Kim CT, ed. *Rehabilitation Medicine*. InTech Publisher, Croatia, pp 1-20. (ISBN: 979-95-330-7517-3)
7. **Jan YK**, Liao F, and Foreman RD (2011). Subject: EEG/EKG. In: Greenwald SJ and Thomley JE, eds. *Encyclopedia of Mathematics and Society*. Salem Press, Pasadena, CA, pp 329-330. (ISBN: 978-15-876-5844-0)
8. **Jan YK** and Brienza DM (2009). Chapter 9: Tissue mechanics and blood flow factors in pressure ulcers of individuals with spinal cord injury. In: Gefen A, ed. *The Pathomechanics of Tissue Injury and Disease, and the Mechanophysiology of Healing*. Research Signpost, India, pp 241-259. (ISBN: 978-81-308-0314-2)
9. Brienza DM, **Jan YK**, and Zanca JM (2007). Chapter 7: Tissue Integrity Management. In: Cooper RA, Ohnabe H, and Hobson DA, eds. *An Introduction to Rehabilitation Engineering*. CRC Press, Taylor and Francis Group, Boca Raton, FL, pp 182-198. (ISBN: 978-08-493-7222-3)

Peer-Reviewed Conference Proceedings & Presentations

1. Prisilla AA, Pusparani Y, Chang WT, Liao BY, **Jan YK**, Ardianto P, Lin CY, Lien CM, and Lung CW (2023). Automatic detection of lumbar disc herniation using YOLOv7. 2023 International Conference on Consumer Electronics (IEEE ICCE-Taiwan). Pingtung, Taiwan, July 17-19, 2023.
2. Lin CF, Mo PC, and **Jan YK** (2023). Differences of blood flow responses in two hand exercise types between healthy adults and individuals with diabetes mellitus. ACRM Progress in Rehabilitation Research, Atlanta, GA, October 28-November 2.
3. Jankaew A, **Jan YK**, and Lin CF* (2023). Hamstring activation deficits during challenging balance control in athletes with hamstring strain injuries. American Physical Therapy Association Combined Sections Meeting (CSM), San Diego, CA, February 23-25, 2023.
4. Zhang K, Cao C, **Jan YK**, and Ding Y (2022). Characteristics of executive-related brain networks in male college students undergoing long-term aerobic exercise. American College of Sports Medicine annual conference, San Diego, CA, May 31-June 4, 2022. (*Medicine & Science in Sports & Exercise* 54(9S), 593-594)
5. Pusparani Y, Liao BY, **Jan YK**, Cheng HT, Ardianto P, Akhyar F, Lung CW, and Lin CY (2022). Plantar soft tissue stiffness automatic estimation in ultrasound imaging on deep learning. International Conference on Applied Human Factors and Ergonomics and the Affiliated Conferences, New York, NY, July 24-28, 2022.

6. Boston J, **Jan YK**, and Mo O (2022). Comparison of different intensities of handgrip exercise on cardiovascular responses in people with cerebral palsy. Molecular and Cellular Biology Undergraduate Research Symposium, UIUC, November 4.
7. Ardianto P, Subiakto RBR, Tsai JY, Lin CY, **Jan YK**, Liao BY, Akbari VBH, Lien CM, and Lung CW (2021). Optimizing object detection of foot profiles position based on plantar pressure images labeling. The 3rd International Symposium on Engineering and Technology (ISET 2021), Taichung, Taiwan, November 19-20, 2021
8. Lung CW, **Jan YK**, Wang S, and Liao BY (2021). Evaluation of EMG complexity in response to different walking regulations by using multiscale entropy analysis. Taiwanese Society of Biomedical Engineering annual conference, Taichung, Taiwan, November 19-20, 2021.
9. Shen, W.-C., Liao, B.-Y., Cheng, H.-T., Wang, S., **Jan, Y.K.**, & Lung, C.-W. (2021). Repeatability Analysis of Plantar Soft Tissue Stiffness Test. Paper presented at the 2021 Annual Meeting of Taiwanese Society of Biomechanics and Annual Report of Ministry of Science and Technology, Taipei, Taiwan, October 16, 2021.
10. Chen HC, Sunardi, **Jan YK**, Liao BY, Lin CY, Li CT, and Lung CW (2021). Using deep learning methods to predict walking intensity from foot plantar pressure. International Conference on Applied Human Factors and Ergonomics and the Affiliated Conferences, Manhattan, New York, July 25-29, 2021.
11. Shen WC, **Jan YK**, Lung CW, Chen HC, Li CT, Bau JG, and Liao BY (2021). Using ultrasound to assess microchambers and macrochambers tissue properties after walking at different speeds and durations. International Conference on Applied Human Factors and Ergonomics and the Affiliated Conferences, Manhattan, New York, July 25-29, 2021.
12. Zhang K, Cao C, and **Jan YK** (2020). Characteristics of resting state networks of elite skating athletes: An ICA analysis. American College of Sports Medicine annual conference, San Francisco, CA, May 26-30, 2020. (Medicine & Science in Sports & Exercise 52(7S), 363)
13. Cheng YC, Lung CW, **Jan YK**, and Liao BY (2020). Evaluate the effect of far infrared rays with carbon fiber on sleep quality. The 4th Global Conference on Biomedical Engineering & Annual Meeting of TSBME, Taipei, Taiwan, November 12-14, 2020.
14. Lin CY, Huang HY, Lin WY, Chang CY, Chang WT and **Jan YK** (2020). Limited-anchor deep neural network for moving object detection. IEEE International Conference on Consumer Electronics – TW (ICCE-TW), Taoyuan, Taiwan, September 28-30.
15. Shen WC, **Jan YK**, Lung CW, Anastian A, Hsieh CW, Cheng HT, Liao YY, and Liao BY (2020). Analysis of moisture and sebum of the skin for monitoring wound healing in older nursing home residents. International Conference on Applied Human Factors and Ergonomics and the Affiliated Conferences, San Diego, CA, July 16-20.
16. Tsai JY, **Jan YK**, Liao BY, Subiakto RBR, Hendradi R, Hsu YC, Chang HT, and Lung CW (2020). A convolutional neural network model to clarify the effects of vibrations on biceps muscles. International Conference on Applied Human Factors and Ergonomics and the Affiliated Conferences, San Diego, CA, July 16-20.
17. Lung CW, **Jan YK**, and Liao BY (2019). EMG analysis of cupping therapy effect on muscle fatigue by applying Lyapunov Exponent. WACBE World Congress on Bioengineering, Taipei, Taiwan, August 16-19.
18. Lung CW, **Jan YK**, Lu JH, Chen CL, Kuo FC, and Liao BY (2019). The evaluation of mechanical properties of soft tissue on pressure ulcers among bedridden elderly patients. International Conference on Applied Human Factors and Ergonomics and the Affiliated Conferences, Washington, DC, July 24-28.
19. Tsai JY, Liao BY, **Jan YK**, Chen CL, Chen PJ, Lung CW (2019). Deep learning model to recognize the different progression condition patterns of manual wheelchair users for prevention of shoulder pain. International Conference on Applied Human Factors and Ergonomics and the Affiliated Conferences, Washington, DC, July 24-28.

20. Yang TD, Rice LA, and **Jan YK** (2018). Typifying power wheelchair joystick control using EMG feature and channel selection. RESNA Annual Conference, Arlington, VA, July 13-15.
21. Liao BY, Chen CL, **Jan YK**, Chiu HY, Huang YW, and Lung CW (2018). Three-dimensional elastography gradient of the plantar soft tissue: methodology and preliminary study. International Conference on Applied Human Factors and Ergonomics and the Affiliated Conferences, Orlando, FL, July 22-26.
22. Lung CW, Lin YS, **Jan YK**, Lo YC, Chen CL, and Liao BY (2018). Effect of far infrared radiation therapy on improving microcirculation of the diabetic foot. International Conference on Applied Human Factors and Ergonomics and the Affiliated Conferences, Orlando, FL, July 22-26.
23. Mohamed AA, **Jan YK**, El Sayed WH, El Wanis ME, and Mohammed AA (2017). Effect of dynamic scapular recognition on the shoulder range of motion in patients with adhesive capsulitis. American Congress on Rehabilitation Medicine, Atlanta, GA, October 26-28. (Archives of Physical Medicine and Rehabilitation, 2017, 98(10), e58-e59.)
24. Chen CL, Lung CW, **Jan YK**, Liao BY, and Tang JS (2017). The recovery effects of dry cupping treatment between repeated arm cranking tests - a pilot study. International Conference on Applied Human Factors and Ergonomics and the Affiliated Conferences, Los Angeles, CA, July 17-21.
25. Liao BY, Chen CL, **Jan YK**, Chiu HY, He PS, and Lung CW (2017). A comparative study of the effects of electrical stimulation and intermittent compressive forces on soft tissue mechanical properties. International Conference on Applied Human Factors and Ergonomics and the Affiliated Conferences, Los Angeles, CA, July 17-21.
26. Lung CW, Chao LF, Chen WF, Chen CL, **Jan YK**, and Liao BY (2017). Activation sequences patterns of forearm muscles for driving power wheelchair. International Conference on Applied Human Factors and Ergonomics and the Affiliated Conferences, Los Angeles, CA, July 17-21.
27. Mohamed AA and **Jan YK** (2017). Effect of dynamic scapular recognition on the shoulder range of motion in patients with adhesive capsulitis. The Chittenden Symposium on Assistive Technology, UIUC, Champaign, IL, March 31.
28. Mohamed AA and **Jan YK** (2017). Effect of dynamic scapular recognition on the shoulder range of motion in patients with adhesive capsulitis. KCH Honors and Awards Program, UIUC, Champaign, IL, March 31.
29. **Jan YK**, Lung CW, Yang TD, Cheung W, and Jain S (2016). Seating pressure gradient vectors in response to the changes of wheelchair tilt and recline in people with spinal cord injury. American Congress on Rehabilitation Medicine, Chicago, IL, October 30-November 4. (Archives of Physical Medicine and Rehabilitation 2016, 97(10), e93.)
30. Lung CW, Cheng TY, Li YJ, Liao BY, and **Jan YK** (2016). Development of an intermittent pneumatic compression system to manage soft tissue mechanical properties. International Conference on Applied Human Factors and Ergonomics and the Affiliated Conferences, Orlando, FL, July 27-31.
31. Lung CW, Cheng TY, **Jan YK**, Chen HC, and Liao BY (2016). Assessment of muscle activation pattern by electromyography while wheelchair driving with joystick. International Conference on Applied Human Factors and Ergonomics and the Affiliated Conferences, Orlando, FL, July 27-31.
32. Yang TD, Rice LA, David A, Hutchinson S, and **Jan YK** (2015). Myoelectric modeling of joystick control for an adaptive smart wheelchair. RESNA Annual Conference, Denver, CO, June 11-14.
33. Yang TD, Kibler K, Lung CW, and **Jan YK** (2015). Development and evaluation of a programmable alternating pressure seat cushion. RESNA Annual Conference, Denver, CO, June 11-14.
34. Zhuge C, Lung CW, Chen D, and **Jan YK** (2015). Development of the feedback controlled indentation system for assessing risk of pressure ulcers. RESNA Annual Conference, Denver, CO, June 11-14.
35. Liao F, Brooks I, Hsieh CW, Rice IM, Jankowska MM, and **Jan YK** (2014). Assessing complexity of heart rate variability in people with spinal cord injury using local scale exponents.

- IEEE International Conference on Engineering in Medicine and Biology Society, Chicago, IL, August 26-30. (Liao F, Brooks I, Hsieh CW, Rice IM, Jankowska MM, and **Jan YK** (2014). Assessing complexity of heart rate variability in people with spinal cord injury using local scale exponents. Proceedings of the Annual International Conference of IEEE Engineering in Medicine and Biology Society, 2014, 6381-6384.)
36. Fu J, Liu T, Jones M, Qin G, and **Jan YK** (2014). Characterization of wheelchair maneuvers based on noisy inertial sensor data: A preliminary study. IEEE International Conference on Engineering in Medicine and Biology Society, Chicago, IL, August 26-30. (Fu J, Liu T, Jones M, Qin G, and **Jan YK** (2014). Characterization of wheelchair maneuvers based on noisy inertial sensor data: A preliminary study. Proceedings of the Annual International Conference of IEEE Engineering in Medicine and Biology Society, 2014, 1731-1734.)
 37. Liao F and **Jan YK** (2014). Assessing skin blood flow dynamics in older adults using a modified sample entropy approach. IEEE International Conference on Engineering in Medicine and Biology Society, Chicago, IL, August 26-30. (Liao F and **Jan YK** (2014). Assessing skin blood flow dynamics in older adults using a modified sample entropy approach. Proceedings of the Annual International Conference of IEEE Engineering in Medicine and Biology Society, 2014, 722-725.)
 38. Yang TD, Patel A, and **Jan YK** (2014). Individualized performance quantification of wheelchair driving. RESNA Annual Conference, Indianapolis, IN, June 11-15.
 39. Xie LQ, Zhan ZH, Yang TD (Advisors: Lung CW and **Jan YK**) (2014). Development of a rapid prototyping wheelchair cushion for preventing pressure ulcers. (Student Design Competition) RESNA Annual Conference, Indianapolis, IN, June 11-15.
 40. Yang TD, Hutchinson S, and **Jan YK** (2014). Markov modeling of power wheelchair driving. Computational Science and Engineering Annual Meeting, UIUC, April 10-11.
 41. Fu J, Hao W, White T, Yan Y, Jones M, and **Jan YK** (2013). Capturing and analyzing wheelchair maneuvering patterns with mobile cloud computing. IEEE International Conference on Engineering in Medicine and Biology Society, Osaka, Japan, July 3-7. (Fu J, Hao W, White T, Yan Y, Jones M, and **Jan YK** (2013). Capturing and analyzing wheelchair maneuvering patterns with mobile cloud computing. Proceedings of the Annual International Conference of IEEE Engineering in Medicine and Biology Society, 2013, 2419-2422.)
 42. **Jan YK**, Crane BA, Rice LA, and Ennis WJ (2013). Muscle and skin perfusion over the ischial tuberosities in response to wheelchair tilt and recline in people with spinal cord injury. RESNA Annual Conference, Bellevue, WA, June 20-24.
 43. **Jan YK**, Liao F, Rice LA, and Woods JA (2013). Using reactive hyperemia to assess the efficacy of local cooling on reducing skin ischemia under surface pressure in people with spinal cord injury. American Spinal Injury Association annual conference, Chicago, IL, May 6-8. (Topics in Spinal Cord Injury Rehabilitation 2013; 19(S1): 23)
 44. Yang TD, Hutchinson SA, Rice LA, Watkin KL, and **Jan YK** (2013). Pressure ulcer prevention with the Raspberry Pi and Python. Center for Health, Aging, and Disability symposium, UIUC, March 29.
 45. Rong D, Liao F, and **Jan YK** (2013). Wavelet ridge analysis of interactions of skin blood control mechanisms in response to pressure. Center for Health, Aging, and Disability symposium, UIUC, March 29.
 46. Fu J, Wiechmann P, **Jan YK**, and Jones M (2012). Towards an intelligent system for clinical guidance on wheelchair tilt and recline usage. IEEE International Conference on Engineering in Medicine and Biology Society, San Diego, CA, August 28-September 1. (Fu J, Wiechmann P, **Jan YK**, and Jones M (2012). Towards an intelligent system for clinical guidance on wheelchair tilt and recline usage. Proceedings of the Annual International Conference of IEEE Engineering in Medicine and Biology Society, 2011: 4648-4651.)
 47. Liao F and **Jan YK** (2012). Using recurrence network approach to quantify nonlinear dynamics of skin blood flow in response to pressure loading. IEEE International Conference on Engineering in Medicine and Biology Society, San Diego, CA, August 28-September 1. (Liao F and **Jan YK**

- (2012). Using recurrence network approach to quantify nonlinear dynamics of skin blood flow in response to pressure loading. Proceedings of the Annual International Conference of IEEE Engineering in Medicine and Biology Society, 2012, 4196-4199.)
48. **Jan YK**, Anderson M, and Foreman RD (2012). Changes in heart rate variability and sacral skin perfusion in response to postural changes in people with spinal cord injury. South Central American Society of Biomechanics Annual Conference, Dallas, TX, April 13-14.
 49. Rong D, Lung C, Burns S, and **Jan YK** (2012). Biomechanical analysis of the risks of diabetic foot ulcers. Southern Biomedical Engineering Conference, Houston, TX, May 4-6.
 50. Liao F and **Jan YK** (2012). Effects of local cooling on nonlinear dynamics of skin blood flow response to pressure loading. Southern Biomedical Engineering Conference, Houston, TX, May 4-6.
 51. Yang T, Liao F, Jones M and **Jan YK** (2012). Effects of wheelchair tilt and recline angles on peak seating interface pressure in wheelchair users with spinal cord injury. Southern Biomedical Engineering Conference, Houston, TX, May 4-6.
 52. Yang T, Liao F, Jones M and **Jan YK** (2012). Sitting-induced pressure ulcer risks may be reduced at specific tilt and recline angles. Oklahoma INBRE research program, July 20.
 53. Rong D, Lung C, Burns S, and **Jan YK** (2012). Biomechanical analysis of the risks of diabetic foot ulcers. College of Allied Health Research Day, OUHSC, OK, April 6.
 54. Liao F and **Jan YK** (2012). Effects of local cooling on nonlinear dynamics of skin blood flow response to pressure loading. College of Allied Health Research Day, OUHSC, OK, April 6.
 55. Yang T, Liao F, Jones M and **Jan YK** (2012). Effects of wheelchair tilt and recline angles on peak seating interface pressure in wheelchair users with spinal cord injury. College of Allied Health Research Day, OUHSC, OK, April 6.
 56. Starbuck G, Liao F, Rong D, and **Jan YK** (2012). Effects of local cooling on the risk of pressure ulcers. College of Allied Health Research Day, OUHSC, OK, April 6.
 57. Rong D, Lung C, Burns S, and **Jan YK** (2012). Biomechanical analysis of the risks of diabetic foot ulcers. GREAT, OUHSC, OK, April 2-5.
 58. Liao F and **Jan YK** (2012). Effects of local cooling on nonlinear dynamics of skin blood flow response to pressure loading. GREAT, OUHSC, OK, April 2-5.
 59. Yang T, Liao F, Jones M, and **Jan YK** (2012). Effects of wheelchair tilt and recline angles on peak seating interface pressure in wheelchair users with spinal cord injury. GREAT, OUHSC, OK, April 2-5.
 60. Fu J, Genson J, **Jan YK**, and Jones M (2011). Using artificial neural network to determine favorable wheelchair tilt and recline usage in people with spinal cord injury. IEEE International Conference on Tools with Artificial Intelligence, Boca Raton, FL, November 7-9. (Fu J, Genson J, **Jan YK**, and Jones M (2011). Using artificial neural network to determine favorable wheelchair tilt and recline usage in people with spinal cord injury. Proceedings of the IEEE International Conference on Tool with Artificial Intelligence, 2011: 25-32.)
 61. Fu J, **Jan YK** and Jones M (2011). Development of intelligent model to determine favorable wheelchair tilt and recline angles for people with spinal cord injury. IEEE International Conference on Engineering in Medicine and Biology Society, Boston, MA, August 30-September 3. (Fu J, **Jan YK** and Jones M (2011). Development of intelligent model to determine favorable wheelchair tilt and recline angles for people with spinal cord injury. Proceedings of the Annual International Conference of IEEE Engineering in Medicine and Biology Society, 2011: 2045-2048.)
 62. **Jan YK** and Liao F (2011). Synchronization of sacral skin blood flow oscillations in response to local heating. IEEE International Conference on Engineering in Medicine and Biology Society, Boston, MA, August 30-September 3. (**Jan YK** and Liao F (2011). Synchronization of sacral skin blood flow oscillations in response to local heating. Proceedings of the Annual International Conference of IEEE Engineering in Medicine and Biology Society, 2011, 1753-1756.)

63. **Jan YK**, Anderson M, James S, Soltani J, and Foreman R (2011). Relationship between heart rate variability and sacral skin perfusion in people with spinal cord injury. International Conference on Spinal Cord Medicine and Rehabilitation, Washington, DC, June 6-8. (Topics in Spinal Cord Injury Rehabilitation 2011; 16(S1): 45)
64. Lee B, Foreman R, and **Jan YK** (2011). Local cooling on enhancing tissue viability in people with spinal cord injury. Southern Biomedical Engineering annual conference, Arlington, TX, April 29-May 1. (International Journal of Medical Implants and Devices, supplement)
65. Rong D, Liao F, Jones M, and **Jan YK** (2011). Performance of wavelet transform and Fourier transform in heart rate variability analysis. Southern Biomedical Engineering annual conference, Arlington, TX, April 29-May 1. (International Journal of Medical Implants and Devices, supplement)
66. **Jan YK**, Brienza DM, Brenes G, and Boninger ML (2011). Comparison of skin perfusion response with alternating and constant pressures in people with spinal cord injury. The Symposium on Advanced Wound Care, Dallas, TX, April 14-17.
67. Rabadi MH, **Jan YK**, Jones MA, Foreman RD, and Thiessen A (2011). Effect of wheelchair tilt-in-space and recline angles on skin perfusion over the ischial tuberosity in people with spinal cord injury. American Academy of Neurology annual conference, Honolulu, Hawaii, April 9-16. (Neurology 2011; 76: A160)
68. **Jan YK**, Liao F, Struck BD, and MacRobert M (2011). Effect of aging on complexity of sacral skin blood flow oscillations. 2011 South Central American Society of Biomechanics conference, Dallas, TX, February 25-26. (International Journal of Exercise Science, supplement)
69. Rong D, Lung C, Burns S, and **Jan YK** (2011). Biomechanical analysis of risk for diabetic foot ulcers. Oklahoma Diabetes Research Symposium, Oklahoma City, OK, November 12.
70. Yang T, Fu J, Jones M, and **Jan YK** (2011). Using accelerometry to quantify power wheelchair usage in children with cerebral palsy. Oklahoma Research Day, Lawton, OK, November 4.
71. **Jan YK** (2011). Biomechanical analysis of risk for diabetic foot ulcers. Oklahoma Health Research Conference, Oklahoma Center for the Advancement of Science and Technology (OCAST), Oklahoma City, OK, April 6.
72. Lee B, Foreman R, and **Jan YK** (2011). The effects of local cooling on pressure ulcer development. GREAT, OUHSC, March 28-31.
73. Rong D, Liao F, Jones M, and **Jan YK** (2011). Performance of wavelet transform and Fourier transform in heart rate variability analysis. GREAT, OUHSC, March 28-31.
74. Akbaran M, Burns S, and **Jan YK** (2011). Biomechanical analysis of diabetic foot. GREAT, OUHSC, March 28-31.
75. Clagg L, Garrison DW, and **Jan YK** (2010). Effect of sympathovagal balance on posturally-induced vasoconstrictive responses in people with spinal cord injury. Annual Biomedical Research Conference for Minority Students, Charlotte, NC, November 10-13.
76. **Jan YK**, Liao F, Garrison DW, and Anderson MA (2010). Relationship between sacral skin blood flow oscillations and vasodilatory functions in people at risk for pressure ulcers. American Society of Biomechanics scientific conference, Providence, RI, August 18-21.
77. Thiessen A, Jones MA, Rabadi MH, Foreman RD, and **Jan YK** (2010). Effect of wheelchair tilt-in-space and recline angles on skin perfusion over the ischial tuberosity in people with spinal cord injury. College of Allied Health Research Day, OUHSC, November 12.
78. Lee B, Foreman RD, Ma JX, Garrison DW, Rabadi MH, and **Jan YK** (2010). The effects of cooling on pressure ulcer development. College of Allied Health Research Day, OUHSC, November 12.
79. Liao F, Garrison DW, Anderson MA, and **Jan YK** (2010). Nonlinear complexity of sacral skin blood flow oscillations in people with spinal cord injury. College of Allied Health Research Day, OUHSC, November 12.
80. **Jan YK**, Akbaran M, Burns S, James S, and Soltani J (2010). Effect of sympathovagal balance on posturally-induced vasoconstrictive responses in people with spinal cord injury. College of Allied Health Research Day, OUHSC, November 12.

81. **Jan YK**, Struck BD, Foreman RD, Robinson C, and MacRobert M (2010). Wavelet analysis of skin blood flow oscillations to assess soft tissue viability in older adults. College of Allied Health Research Day, OUHSC, November 12.
82. Clagg L, Garrison DW, and **Jan YK** (2010). Effect of sympathovagal balance on posturally-induced vasoconstrictive responses in people with spinal cord injury. Oklahoma INBRE research program, July 23.
83. **Jan YK**, Curtis DD, Foreman RD, and Lyons TJ (2010). Biomechanical analysis of risk for diabetic foot ulcers. 2010 Oklahoma Health Research Conference, Oklahoma Center for the Advancement of Science and Technology (OCAST), Midwest City, OK, April 22.
84. Lee B, Rabadi M, Foreman RD, and **Jan YK** (2010). Exploring the affect of cooling on the development of pressure ulcers. Graduate Research and Education Technology Symposium, OUHSC, March 30-April 1.
85. **Jan YK**, Struck BD, Foreman RD, and Robinson C (2009). Wavelet analysis of blood flow oscillations to assess pressure ulcer risk in older adults. RESNA Annual Conference, New Orleans, LA, June 23-27.
86. **Jan YK**, Brienza DM, Brenes G, and Boninger ML (2009). Effects of alternating and constant pressures on soft tissue viability and pressure ulcer risk in people with spinal cord injury. Congress on Spinal Cord Medicine and Rehabilitation, Dallas, TX, September 23-26. (Journal of Spinal Cord Medicine 2009; 32(4): 457.)
87. Tzen Y, **Jan YK**, Porach EA, Karg PE, and Brienza DM (2009). Effects of local cooling on sacral skin perfusion response to pressure: implications for pressure ulcer prevention. National Pressure Ulcer Advisory Panel (NPUAP) Biannual Conference, Washington, DC, February.
88. Tzen Y, **Jan YK**, and Brienza DM (2008). Development of a system to study the effect of local cooling on skin blood flow response to interface pressure. RESNA Annual Conference, Arlington, VA, June 26-30.
89. **Jan YK**, Brienza DM, and Brenes G (2008). Assessment of endothelial function using wavelet analysis of skin blood flow oscillations in older people. International Conference on Mechanics in Medicine and Biology, Pittsburgh, PA, July 23-25.
90. **Jan YK**, Day JD, Foreman RD, and Bryer-Ash M (2008). The roles of biomechanical property and microvascular function on diabetic foot ulcer development. Fifth Oklahoma Diabetes Research Retreat, Oklahoma City, OK, November 22.
91. **Jan YK**, Brienza DM, and Porach EA (2007). Noninvasive assessment of endothelial nitric oxide function using wavelet-based spectrum analysis of laser Doppler blood flow oscillations in elderly people. Science 2007: Collaborate, Innovate, Transform, University of Pittsburgh, PA, October 11-12.
92. **Jan YK**, Brienza DM, and Boninger ML (2005). Analysis of skin blood flow responses to mechanical stresses with implications to alternating pressure support surfaces. RESNA Annual Conference, Atlanta, GA.
93. **Jan YK**, Brienza DM, and Boninger ML (2005). A time-frequency approach using wavelets to study week-to-week variability in blood flow oscillations. XXth Congress of the International Society of Biomechanics and 29th Annual Meeting of the American Society of Biomechanics, Cleveland, OH.
94. **Jan YK** and Brienza DM (2005). Using wavelet-based spectrum analysis of skin blood flow oscillations to investigate the physiologic mechanisms associated with alternating pressure. Clinical Symposium on Advances in Skin and Wound Care, Las Vegas, Nevada, October.
95. **Jan YK**, Brienza DM, and Boninger ML (2005). A time-frequency approach using wavelets to study week-to-week variability in blood flow oscillations. Department of Physical Medicine and Rehabilitation's Annual Resident Research Day, University of Pittsburgh, Pittsburgh, PA.
96. **Jan YK**, Brienza DM, and Geyer MJ (2004). Using wavelet analysis to investigate skin blood flow control mechanisms: Implications for skin thermoregulatory mechanisms. RESNA Annual Conference, Orlando, FL.

97. **Jan YK**, Brienza DM, and Geyer MJ (2004). A comparison of skin blood flow responses to alternating pressure and constant loading. 2nd World Union of Wound Healing Societies' Meeting, Paris, France.
98. **Jan YK**, Brienza DM, and Geyer MJ (2004). A comparison of changes in rhythms of sacral skin blood flow in response to heating and indentation. American Physical Therapy Association Annual Conference, Chicago, IL.
99. **Jan YK**, Brienza DM, and Geyer MJ (2004). A comparison of changes in rhythms of sacral skin blood flow in response to heating and indentation. McGowan Institute for Regenerative Medicine 2004 Scientific Retreat, Farmington, PA.
100. **Jan YK**, Brienza DM, and Geyer MJ (2004). A time-frequency approach using wavelets to study week-to-week variability in blood flow oscillations. Science 2004: No Boundaries, University of Pittsburgh, Pittsburgh, PA, October 6-8.
101. **Jan YK**, Brienza DM, and Geyer MJ (2004). A comparison of skin blood flow responses to alternating pressure and constant loading. Department of Physical Medicine and Rehabilitation's Annual Resident Research Day, University of Pittsburgh, Pittsburgh, PA.
102. **Jan YK**, Geyer MJ, Brienza DM, and Boninger ML (2003). Using wavelet analysis to characterize thermoregulatory mechanisms of sacral skin blood flow. Science 2003: Improving the Human Condition, University of Pittsburgh, Pittsburgh, PA, September 24-26.
103. Lung CW, Yang SW, and **Jan YK** (2003). Functional evaluation of below-knee prosthetic feet. World Congress on Medical Physics and Biomedical Engineering Conference, Australia.
104. **Jan YK**, Geyer MJ, and Brienza DM (2003). Development of a system to study the effect of alternating pressure loading on skin perfusion. RESNA Annual Conference, Atlanta, GA.
105. Wang J, Brienza DM, and **Jan YK** (2001). Review of etiology of pressure ulcers and development of pressure-relieving products. The 3rd National Conference in Rehabilitation Medicine, Beijing, China.
106. **Jan YK**, Lee SJ, and Yang SW (1997). The effects of walking speed on plantar pressure. Annual Symposium of the Chinese Biomedical Engineering Society, Taoyuan, Taiwan.
107. **Jan YK**, Huang YC, and Yang SW (1997). Foot pressure analysis of below-knee amputees. Annual Symposium of the Chinese Biomedical Engineering Society, Taoyuan, Taiwan.
108. **Jan YK**, Lee SJ, and Yang SW (1997). Comparison of overground and treadmill foot pressure. Annual Symposium of the Chinese Biomedical Engineering Society, Taoyuan, Taiwan.
109. **Jan YK**, Yang SW, and Cheung W (1996). Gait analysis of different prosthetic feet. Annual Meeting of Chinese Prosthetics and Orthotics Society, Taipei, Taiwan.
110. Chang MK, **Jan YK**, and Yang SW (1995). Gait analysis of alignment and foot prosthesis of below-knee prosthesis. Joint Conference of the International Society of Biomechanics and the Formosan Society of Biomechanics, Tainan, Taiwan.

Invited Presentations

1. **Jan YK** (2023). Rehabilitation Biomechanics Education. School of Biological Science and Medical Engineering, Beihang University, June 13.
2. **Jan YK** (2023). Kinesiology Research at UIUC and Soft Tissue Biomechanics in Kinesiology Research. College of Physical Education and Sports, Beijing Normal University, June 7.
3. **Jan YK** (2023). Advances in Rehabilitation Research. School of Biological Science and Medical Engineering, Beihang University, June 6.
4. **Jan YK** (2022). Disability in the American Society. School of Biological Science and Medical Engineering, Beihang University, August 5.
5. **Jan YK** (2022). Soft Tissue Biomechanics in Wound Development and Prevention. School of Biological Science and Medical Engineering, Beihang University, July 29.

6. **Jan YK** (2022). Soft Tissue Biomechanics in Rehabilitation. School of Biological Science and Medical Engineering, Beihang University, July 15.
7. **Jan YK** (2022). Soft Tissue Biomechanics in the Dose-Response Relationships of Rehabilitation. School of Biological Science and Medical Engineering, Beihang University, July 8.
8. **Jan YK** (2022). Global Report on Assistive Technology. School of Biological Science and Medical Engineering, Beihang University, July 1.
9. **Jan YK** (2022). Soft Tissue Biomechanics in Rehabilitation: from Bulk Tissues and Blood Vessels to Optimal Dose-Response Relationships of Interventions. International Webinar Series on Smart Healthcare Science and Technology, June 16.
10. **Jan YK** (2019). Microvascular biomechanics and its applications in assistive device development. International Conference on Medicine in Novel Technology and Devices, Beijing, China, August 11-12.
11. **Jan YK** (2019). Topic 1: Review of rehabilitation professions in the United States. Topic 2: Assistive technology development and practice: perspectives from RESNA. Department of Physical Therapy, National Cheng Kung University, Tainan, Taiwan, June 6.
12. **Jan YK** (2019). Review of Doctor of Physical Therapy Application Process and Physical Therapist Career in the United States. Student Physical Therapist Association, National Cheng Kung University, Tainan, Taiwan, May 30.
13. **Jan YK** (2019). Topic 1: Review of the University of Illinois at Urbana-Champaign (UIUC). Topic 2: Microvascular dynamics and its applications in physical therapy. Department of Physical Therapy, National Cheng Kung University, Tainan, Taiwan, May 30.
14. **Jan YK** (2018). Evaluations of the National Institutes of Health research plan on rehabilitation. 2018 International Symposium on Rehabilitation Engineering, Qinhuangdao, China, September 9.
15. **Jan YK** (2017). Applying a problem-based learning (PBL) approach to research the needs of assistive device designs. College of Creative Design, Asia University, Taichung, Taiwan, December 12.
16. **Jan YK** (2017). Applying a problem-based learning (PBL) approach to design assistive devices. College of Creative Design, Asia University, Taichung, Taiwan, December 11.
17. **Jan YK** (2017). Microvascular biomechanics and its applications on injury prevention and rehabilitation. Rehabilitation Engineering Conference and Expo, Beijing, China, November 1.
18. **Jan YK** (2017). Using American experience on developing assistive technology industry to guide the development of rehabilitation engineering in China. Beihang University, School of Biological Science and Biomedical Engineering, Beijing, China, June 5.
19. **Jan YK** (2017). Rehabilitation Engineering and Assistive Technology for improving the quality of life in people with disability. A special lecture for the Technology and Industry seminar, Beihang University, Beijing, China, June 2.
20. **Jan YK** (2017). Evaluations of research plan on rehabilitation of the National Institutes of Health to develop strategies to advance rehabilitation research in China. Beihang University, School of Biological Science and Biomedical Engineering, Beijing, China, May 31.
21. **Jan YK** (2017). Biomechanical analyses of risks for diabetic foot ulcers. Beihang University, School of Biological Science and Biomedical Engineering, Beijing, China, May 22.
22. **Jan YK** (2017). Biomechanical analyses of risks for diabetic foot ulcers. University of Chicago, Chicago Center for Diabetes Translation Research, Chicago, IL, March 24.
23. **Jan YK** (2016). Global Disability and Rehabilitation Engineering Initiatives. Xi'an Jiaotong University, Institute of Biomedical Engineering, Xi'an, China, May 23.
24. **Jan YK** (2016). Rehabilitation Engineering and Assistive Technology for improving the quality of life in people with disability. A special lecture for the Technology and Industry seminar, Beihang University, Beijing, China, May 18.

25. **Jan YK** (2016). Soft tissue biomechanics and its applications on injury prevention and rehabilitation. Beihang University, School of Biological Science and Biomedical Engineering, Beijing, China, May 17.
26. **Jan YK** (2016). Global Disability and Rehabilitation Engineering Initiatives. National Research Center for Rehabilitation Technical Aids (NRCRTA), National Department of Civil Affairs, Beijing, China, May 16.
27. **Jan YK** (2016). Microvascular biomechanics and its applications on injury prevention and rehabilitation. Beihang University, School of Biological Science and Biomedical Engineering, Beijing, China, May 11.
28. **Jan YK** (2016). Wheelchair and seating research for people with disabilities. Beihang University, School of Biological Science and Biomedical Engineering, Beijing, China, May 9.
29. **Jan YK** (2016). Microvascular physiology and soft tissue biomechanics of pressure ulcers/injury. Carle Foundation Hospital Wound Healing Clinic, April 29.
30. **Jan YK** (2015). Development of wheelchair driving and seating systems for people with disabilities. University of Illinois at Urbana-Champaign, Department of Industrial and Enterprise Systems Engineering, IL, November 19.
31. **Jan YK** (2015). Development of methods for assessing wheelchair driving and seating performance. Technology Center for Innovative Medicine & Division of Biomedical Engineering, Chinese University of Hong Kong, Hong Kong, July 3.
32. **Jan YK** (2015). Development of methods for assessing wheelchair driving and seating performance. National Changhua University of Education, Department of Electrical Engineering, Changhua, Taiwan, June 24.
33. **Jan YK** (2015). Adaptive sports and cardiovascular function in wheelchair users. Kaohsiung Medical University, Department of Sports Medicine, Kaohsiung, Taiwan, June 18.
34. **Jan YK** (2015). Soft tissue biomechanics and injury prevention. Department of Sports Medicine, Kaohsiung Medical University, Department of Sports Medicine, Kaohsiung, Taiwan, June 18.
35. **Jan YK** (2015). Microvascular remodeling to physical activity and inactivity. Kaohsiung Medical University, Department of Sports Medicine, Kaohsiung, Taiwan, June 17.
36. **Jan YK** (2015). Assistive technology and rehabilitation engineering research at the University of Illinois at Urbana-Champaign. Kaohsiung Medical University, Department of Sports Medicine, Kaohsiung, Taiwan, June 16.
37. **Jan YK** (2015). Kinesiology and community health research at the University of Illinois at Urbana-Champaign. Kaohsiung Medical University, Department of Sports Medicine, Kaohsiung, Taiwan, June 16.
38. **Jan YK** (2015). Wheeled mobility and seating research in Rehabilitation Engineering Lab at UIUC. International Medical Device Summit and Beihang University Biomedical Engineering Research Symposium, Beijing, China, May 14.
39. **Jan YK** and lab students (2015). Wheeled mobility and seating research in Dr. Jan's lab. Division of Disability Resources and Educational Services, UIUC. March 6.
40. **Jan YK** (2015). Wheeled mobility and seating research at Rehabilitation Engineering Lab, UIUC. The Chittenden Symposium on Mobility, Technology and the Future of Health. University of Illinois at Urbana-Champaign, Champaign, IL January 29.
41. **Jan YK** (2013). Soft tissue biomechanics of diabetic foot ulcers. Bio-Interest Group Seminars, University of Illinois at Urbana-Champaign Department of Mechanical Science and Engineering, October 28.
42. **Jan YK** (2013). The role of microvascular and tissue mechanic factors on the development of pressure ulcers. University of Illinois at Chicago, Center for Wound Healing and Tissue Regeneration, Chicago, IL, January 17.

43. **Jan YK** (2012). Research program in Dr. Jan's research lab. Surgery Research Roundtable, Department of Surgery, School of Community Medicine, University of Oklahoma, Tulsa, OK, March 7.
44. **Jan YK** (2011). Effect of spinal cord injury on autonomic and microvascular dysfunction. Neuroscience Seminars, Oklahoma Center for Neuroscience, College of Medicine, University of Oklahoma Health Sciences Center, Oklahoma City, OK, November 4.
45. **Jan YK** (2011). Effect of spinal cord injury on nonlinear complexity of skin blood flow oscillations. 2011 Human Computer Interaction International Conference, Orlando, FL, July 9-14.
46. **Jan YK** (2011). Development of the Oklahoma Assistive Technology Research Center: Journey through Biomedical Engineering to Rehabilitation Research. Rehabilitation Sciences Research Roundtable, Department of Rehabilitation Sciences, College of Allied Health, OUHSC, April.
47. **Jan YK** (2010). Soft tissue biomechanics and pressure ulcer prevention. Neuroscience Postdoc/Junior Faculty meetings, Oklahoma Center for Neuroscience, College of Medicine, OUHSC, September.
48. **Jan YK** (2009). The role of biomechanics in diabetic foot ulcers. Endocrinology Grand Rounds, Department of Medicine-Endocrinology and Diabetes, College of Medicine, OUHSC, September 22.
49. **Jan YK** (2009). Blood flow and tissue mechanics factors in pressure ulcers of people with disabilities. Physiology Research Seminars, Department of Physiology, OUHSC, April.
50. **Jan YK** (2009). The promise of translational physiology in rehabilitation research. Rehabilitation Sciences Research Seminars, D.Sc. program, Department of Rehabilitation Sciences, College of Allied Health, OUHSC, March.
51. **Jan YK** (2008). Effectiveness of local cooling on enhancing tissue tolerance to loading pressure in SCI: a preliminary report. Spinal Cord Symposium, Christopher and Dana Reeve Foundation, Atlanta, GA, May 9-11.
52. **Jan YK** (2007). Skin blood flow oscillation and pressure ulcer risk in older adults with disabilities. Mary E. Switzer Research Fellow Seminar, National Institute on Disability and Rehabilitation Research (NIDRR), Washington, DC, May 3-4.

Patents and Invention Disclosure

1. Wearable electrical stimulation to improve distal limb use during and after active device use. Invention disclosure submitted by Lisa Griffin, Yih-Kuen Jan and Ayman Mohamed through University of Texas at Austin (8242 GRI, August 31, 2023).

Research Grant Awards

1. **VinUniversity – University of Illinois Smart Health Center** (VISHC), 2024-2032, Total Cost: 5 5-year PhD positions and 1 2-year Postdoc position. Project title: The future of rehabilitation robotics: A framework for human-robot interaction for complete training and assessment, Role: PI (VinUni PI Linh Nguyen)
2. **National Taiwan University – University of Illinois Seed Grants**. 2024, Total Cost \$5,000, Project title: Promoting bilateral collaborations on using vibration to reduce osteoarthritis pain and improve functioning from lab to community, Role: PI (NTU PI Wei-Li Hsu)
3. **Paralyzed Veterans of America Education Foundation** (PVA817), 2017-2019, Total Cost \$47,709, Project title: Pressure management in adaptive sports (PI: Ian Rice), Role: Co-I
4. **Egyptian Cultural & Educational Bureau**, 2016-2018, Total Cost: \$5,000, Project title: Rehabilitation research development, Role: PI
5. **Department of Veterans Affairs**, 2015-2017, Total Cost \$40,000, Project title: Sustainable sports science instructional program for VA athletes and coaches (PI: Ian Rice), Role: Co-I

6. **University of Illinois at Urbana-Champaign**, Office of Vice Chancellor for Research, Campus Research Board (#13288), 2013-2014, Total Cost \$25,000, Project title: Wheelchair tilt and recline for preventing pressure ulcers in people with spinal cord injury: a pilot study, Role: Principal Investigator
7. **Paralyzed Veterans of America Research Foundation** (PVA2827), 2012-2014, Total Cost \$100,000, Project title: Effects of obesity on soft tissue mechanical properties in people with SCI (postdoctoral fellowship for Fuyuan Liao), Role: Mentor and Co-PI
8. **National Institutes of Health**, INBRE Junior Scholar Award (P20GM103447), 2011-2013, Total Cost \$293,000 (Oklahoma INBRE PI: Darrin Akins), Project title: Autonomic and microvascular functions and pressure ulcers in spinal cord injury, Role: Principal Investigator
9. **National Institutes of Health**, INBRE Program Grant (P20GM103447) (PI: Jicheng Fu, PhD, University of Central Oklahoma), 2011-2014, Total Cost \$308,791 (Oklahoma INBRE PI: Darrin Akins), Project title: An intelligent system for clinical guidance on power seat function usage to reduce pressure ulcers risk, Role: Co-PI
10. **National Institutes of Health** (R21HD065073), 2010-2012, Total Cost \$205,152, Project title: Blood flow oscillations and early detection of pressure ulcers in older adults, Role: Principal Investigator
11. **National Institutes of Health**, Oklahoma Institutional Development Award (IDeA) Network of Biomedical Research Excellence (INBRE), Summer Research Program, Total Cost \$6,600.00; Role: Mentor (2010-2012)
12. **National Institutes of Health** (R03HD060751), 2009-2012, Total Cost \$146,500, Project title: Effects of power seat function usage on tissue viability in wheelchair users with spinal cord injury, Role: Principal Investigator
13. **National Institutes of Health** (R03HD060751-01S1), 2009-2010, Total Cost \$20,000, Project title: Administrative supplement for a near infrared spectroscopy, Role: Principal Investigator
14. **Oklahoma Center for the Advancement of Science and Technology** (HR09-048), 2009-2012, Total Cost \$135,000, Project title: Biomechanical analysis of risk for diabetic foot ulcers: a pilot study, Role: Principal Investigator
15. **University of Oklahoma Health Sciences Center**, College of Allied Health Seed Grants Program, 2009, Total Cost \$2,000, Project title: Physical activity, ANS function, and pressure ulcer risk in the elderly: a pilot study, Role: Principal Investigator
16. **Christopher and Dana Reeve Foundation** (JA2-0701-2), 2008-2011, Total Cost \$150,000, Project title: Effectiveness of local cooling on enhancing tissue tolerance to pressure loading, Role: Principal Investigator
17. **Presbyterian Health Foundation** (PHF1545), 2008-2010, Total Cost \$25,868, Project title: Effects of power seat function usage on tissue viability in wheelchair users with SCI: a pilot study, Role: Principal Investigator
18. **National Institute on Disability, Independent Living and Rehabilitation Research**, Center for International Rehabilitation Research Information and Exchange (CIRRIE), International Exchange Program Grant, 2008-2009, Direct Cost \$2,500.00; Project title: Research collaboration between a NIDRR-funded grant and Xi'an Children Hospital, Xi'an, China. Role: Principal Investigator

19. **Paralyzed Veterans of America Research Foundation** (PVA2480), 2007-2009, Total Cost \$150,000, Project title: Remodeling ANS and endothelium with exercise for preventing pressure ulcers: a pilot study, Role: Principal Investigator
20. **National Institute on Disability, Independent Living and Rehabilitation Research**, Mary E. Switzer Research Fellowship (H133F060025), 2006-2008, Total Cost \$65,000, Project title: Skin blood flow oscillations and pressure ulcer risk in older adults with disabilities, Role: Principal Investigator
21. **National Institute on Disability, Independent Living and Rehabilitation Research**, Rehabilitation Engineering Research Center on Spinal Cord Injury (H133E070024) (Center Director: David Brienza), 2007-2012, Total Cost \$4.7 million, Project title: R1- Skin cooling and tissue viability (10/1/2007-4/30/2008), Role: Project Principal Investigator
22. **National Institute on Disability, Independent Living and Rehabilitation Research**, Rehabilitation Engineering Research Center on Spinal Cord Injury (H133E070024) (Center Director: David Brienza), 2007-2012, Total Cost \$4.7 million, Project title: R2- Effects of weight shifting on pressure ulcer risk status (10/1/2007-4/30/2008), Role: Co-investigator
23. **National Science Foundation**, Quality of Life Technology Engineering Research Center (EEC-0540865) (Center Directors: Takeo Kanade and Rory Cooper), 2006-2011, Total Cost \$18 million, Project title: SmartSeat, Role: Co-Investigator & Center Researcher
24. **National Institute on Disability, Independent Living and Rehabilitation Research**, Field Initiated Program (H133G040222), 2004-2007, Total Cost \$450,000 (PI: David Brienza), Project title: A study of biophysical and microvascular function of individuals with spinal cord injuries: implications for alternating pressure support surfaces, Role: Co-PI
25. **National Institute on Disability, Independent Living and Rehabilitation Research**, Advanced Rehabilitation Research Training Program (ARRT, H133P970013), Total Cost \$727,308 (PIs: Cliff Brubaker and David Brienza), Project title: Research Training in Rehabilitation Science with Special Emphasis on Disability Studies, Role: Graduate Student Researcher (2002-2004)
26. **Department of Veterans Affairs**, Center of Excellence on Wheelchairs and Related Technology (F2181C) (Center directors: Rory Cooper and Michael Boninger), 2000-2005, Total Cost \$3.5 million, Project title: A comparison of the effects of static and dynamic low-level sacral loading on blood flow in spinal cord injured subjects, Role: Graduate Student Researcher (2000-2002)

TEACHING EXPERIENCE

University of Illinois at Urbana-Champaign (2012-present)

- KIN 449 Rehabilitation Biomechanics
- REHB/CHLH 330 ON2 Disability in the American Society
- CHLH 545 Grant Writing for Health Professionals
- KIN/CHLH 494 Rehabilitation Professions
- KIN/CHLH 199 Introduction to Rehabilitation
- KIN 385 Exper in Kinesiology Research
- CHLH 393 Special Projects
- KIN 599 Thesis Research
- CHLH 599 Thesis Research
- REHB 501 Rehabilitation Research (2013-2015)
- REHB 594 Advances in Rehabilitation Technology (2013-2015)

- KIN 565 Teaching in the Professoriate, Mentor (Fall 2016, Fall 2019)
- CHLH/REHB 407 Disability, Culture, and Society, Co-Professor (with Laura Rice, Spring 2016)
- KIN 457 Motor Learning and Control, Co-Professor (with Jake Sosnoff, Spring 2014)

University of Oklahoma Health Sciences Center (2008-2012)

- RS 5153 **Biomechanics**, Professor
- PHTH 8132 **Cardiopulmonary Rehabilitation**, Co-Professor (with Jane Soltani)
- PHTH 8133/OCTH 7143 **Principles of Human Movement**, Lab Faculty
- PHTH/OCTH 9391 Interprofessional Case Management, Faculty Facilitator
- PHTH 8271 Clinical Reasoning in Physical Therapy I, Faculty Facilitator
- PHTH 9152 Clinical Reasoning in Physical Therapy II, Faculty Facilitator
- PHTH 8362 Clinical Education I, Faculty Interviewer
- PHTH 8383 Clinical Education II, Faculty Interviewer
- PHYO 5980 Research Master's Thesis, Professor
- PHYO 5990 Special Studies, Professor
- ECE 5973 Biomedical Signals and Systems (Instructor: Lei Ding), Guest Lecturer on microcirculation and its signal analysis (2011)

University of Pittsburgh (2002-2008)

- HRS 2706 **Rehabilitation Biomechanics**, from TA (for Gina Bertocci in 2002-2003) to Co-Professor (with David Brienza in 2004-2008)

International Student Exchange and Research Collaboration Programs

- International Graduate Mentors Program (IGMP) on Kinesiology and Community Health, Global Education and Training, Illinois International, University of Illinois at Urbana-Champaign; Role: Director (2019-present) & mentor (2018-present)
- Research collaboration and student exchange agreement between University of Pittsburgh Department of Rehabilitation Science and Technology and Korean Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea (approved by the University Center for International Studies and Senior Vice President of Health Sciences); Role: Coordinator and Initiator (2007 - 2008)
- Research collaboration and student exchange agreement between University of Pittsburgh Department of Rehabilitation Science and Technology and Xi'an Jiaotong University Institute of Biomedical Engineering, Xi'an, China (approved by the University Center for International Studies and Senior Vice President of Health Sciences); Role: Coordinator and Initiator (2006 - 2008)

Postdoctoral Fellows & Visiting Scholars Supervised

- Jen-Chieh Liao, Department of Biomedical Engineering, National Cheng Kung University, Taiwan (2023)
- Cheng-Feng Lin, Department of Physical Therapy, National Cheng Kung University, Taiwan (Summer 2022, 2023-present)
- Panpan Chen, Division of Sports Science and Physical Education, Tsinghua University, China (2022-2023)
- Chih-Yang Lin, Department of Electrical Engineering, Yuan Ze University, Taiwan (Summer 2022, 2023)
- Yameng Li, College of Kinesiology and Physical Education, Beijing Normal University, China (2022-2023)
- Pu-Chun Mo, Department of Biomedical Engineering, National Cheng Kung University, Taiwan (2021-2023)

- Keying Zhang, Department of Sports Science and Physical Education, Tsinghua University, China (2020-2021)
- Xiao Hou, Department of Sports Science and Physical Education, Tsinghua University, China (2020-2021)
- Wen-Wen Yang, Department of Athletic Performance, National Taiwan Normal University, Taiwan (2019)
- Xiaoling Wang, College of Rehabilitation Medicine, Fujian University of Traditional Chinese Medicine, Fujian, China (2019-2020)
- Fu-Lien Wu, Department of Physical Therapy and Assistive Technology, National Yang-Ming University, Taiwan (2018-2019)
- Xueyan Zhang, Beijing Changping Hospital of Integrated Chinese and Western Medicine, Beijing, China (2017-2018)
- Ayman A. Mohamed, Faculty of Physical Therapy, Cairo University and Beni Suef University, Egypt (2016-2018)
- Jicheng Fu, Department of Computer Science, University of Central Oklahoma, Edmond, OK (Summer 2013)
- Chi-Wen Lung, Department of Creative Product Design, Asia University, Taiwan (Summer of 2011, 2013, 2014, 2016, 2017, and 2018)
- Stephanie Burns, Department of Physical Therapy, Oklahoma City VA Medical Center, Oklahoma City, OK (2011-2012)
- Fuyuan Liao, Institute of Biomedical Engineering, Xi'an Jiaotong University, Xi'an, China (2009-2013)
- Yanni Chen, Department of Pediatric Rehabilitation, Xi'an Children's Hospital, Xi'an Jiaotong University, Xi'an, China (2008-2009)

Doctoral Students Supervised

- Mansoureh Samadi, PhD student in Kinesiology, UIUC, Role: Advisor (Fall 2023-present)
- Liwan Huang, PhD student in Kinesiology, University of Illinois at Urbana-Champaign, Role: Advisor and Committee Chair (2023-present)
- Jiaqi (Jack) Guo, PhD student in Kinesiology, University of Illinois at Urbana-Champaign, Role: Advisor and Committee Chair (2023-present)
- Amornthep (Tong) Jankaew, PhD student "Hamstring contractile function and activation during postural control and jumping performance in athletes with and without hamstring injuries, Department of Physical Therapy, National Cheng Kung University, Taiwan, Role: Committee Member (2022-2023, Advisor: Cheng-Feng Lin)
- Serah Pauly, PhD in Kinesiology, University of Illinois at Urbana-Champaign, Role: Advisor and Committee Chair (2022-present)
- Saad Alqahtani, PhD in Community Health, University of Illinois at Urbana-Champaign, Role: Advisor (2021-present)
- Qitao Tan, PhD in Biomedical Engineering, Hong Kong Polytechnic University, Role: External Examiner (2021, Advisor: Ming Zhang)
- Libak Abou, PhD in Kinesiology, University of Illinois at Urbana-Champaign, Role: Committee Member (2020-2021, Advisor: Laura Rice)
- Runnell Townsend, PhD in Community Health, University of Illinois at Urbana-Champaign, Role: Advisor and Committee Chair (2019-2022)
- Mengmeng Ji, PhD in Community Health, University of Illinois at Urbana-Champaign, Role: Co-Advisor (2019-2021, Advisor: Ruopeng An)
- Yang Hu, PhD in Kinesiology, University of Illinois at Urbana-Champaign, Role: 2nd year review committee member (2019, Advisor: Manuel Hernandez)

- Rachel Dargatz, PhD in Community Health, University of Illinois at Urbana-Champaign, Role: Committee Member (2018-present, Advisor: Hillary Klonoff-Cohen)
- Weiyan Ren, PhD in Biomedical Engineering, Beihang University, Role: Expert Group Member (2018, Advisor: Fang Pu)
- Mingzheng Zhang, PhD in Biomedical Engineering, Beihang University, Role: Expert Group Member (2018, Advisor: Fang Pu)
- Annmarie Chizewski, PhD in Kinesiology, University of Illinois at Urbana-Champaign, Role: Committee Member (2018-2019, Advisor: Steve Petruzzello)
- Sicong Ren, PhD in Kinesiology, University of Illinois at Urbana-Champaign, Role: Advisor (2017-2018)
- Andrew Hua, MD and PhD in Kinesiology, University of Illinois at Urbana-Champaign, Role: Committee Member (2017-2019, Advisors: David Buchner and Manuel Hernandez)
- Kate Rougeau, PhD in Kinesiology, University of Illinois at Urbana-Champaign, Role: Committee Member (2016-2017, Advisor: Steve Petruzzello)
- Harry Ming Chun Choi, PhD in Rehabilitation Science, Hong Kong Polytechnic University, Hong Kong, Role: External Examiner (2016-2017, Advisor: Gladys Cheing)
- Jennifer Dysterheft, PhD in Kinesiology, University of Illinois at Urbana-Champaign, Role: Committee Member (2015-2016, Advisor: Ian Rice)
- Jian Jiao, PhD in Kinesiology, University of Illinois at Urbana-Champaign, Role: Advisor (2014)
- Tim D. Yang, PhD in Kinesiology, University of Illinois at Urbana-Champaign, Role: Advisor (2012-2022)
- Xiangming Zhang, PhD in Bioengineering, University of Oklahoma, Role: Committee Member (2011-2012, Advisor: Rong Gan)

Masters' & Honors Students Supervised

- Nikeeta Kundal, MS in Kinesiology, UIUC, Role: Advisor (2021-2023)
- David Pochinka, MS in Kinesiology, UIUC, Role: Advisor (2021-2023)
- Daqian Rong, MS in Kinesiology, UIUC, Role: Advisor (2012-2015)
- Bernard Lee, MS in Physiology, University of Oklahoma Health Sciences Center, Role: Advisor (2009-2012)
- Jonathan S. Akins, MS in Bioengineering, University of Pittsburgh, Pittsburgh, Role: Committee Member (2006-2008, Chair: David Brienza)
- Yi-Ting Tzen, MS in Rehabilitation Science and Technology, University of Pittsburgh, Role: Committee Member (2005-2008, Chair: David Brienza)
- Gregory Meloy, Bachelor of Philosophy (B.Phil.) Student, University Honors College, University of Pittsburgh, Role: Committee Member (2005-2007, Chair: David Brienza)

Research Interns Supervised (from more than 15 different universities)

- Josh Gordy, Department of Kinesiology and Community Health (Fall 2023-present)
- Rahil Sadruddin, Department of Kinesiology and Community Health (Fall 2023-present)
- 16 Students, Department of Creative Product Design, Asia University (Summer 2023)
- 4 Students, Department of Electrical Engineering, Yuan Ze University (Summer 2023)
- 3 Students, Department of Electrical Engineering, Asia University (Summer 2023)
- Justine Asperga, Kinesiology, UIUC (Fall 2022-Spring 2023)
- Elisabeth Paskali, Molecular and Cellular Biology, UIUC (Fall 2022-present)
- George Tawfic, Kinesiology, UIUC (Fall 2022-Spring 2023)
- Joe Boston, Biochemistry, UIUC (Fall 2022-present)

- Jack Guo, Department of Kinesiology and Community Health, UIUC (Summer 2022-Summer 2023)
- Yu-Wei Chen, Department of Electrical Engineering, Yuan Ze University, Taiwan (Summer 2022)
- Chih-Yun Chiang, Department of Electrical Engineering, Yuan Ze University, Taiwan (Summer 2022)
- Chia-Chun Hsiao, Department of Electrical Engineering, Yuan Ze University, Taiwan (Summer 2022)
- Ying-Chun Lee, Department of Electrical Engineering, Yuan Ze University, Taiwan (Summer 2022)
- Amar Suljic, Department of Kinesiology and Community Health, UIUC (Spring 2022)
- Kevin Baek, Department of Bioengineering, UIUC (Fall 2021)
- Lingling Zhou, Shenyang Sports University (UIUC IGMP, Spring 2020)
- Chunming Guo, Shenyang Sports University (UIUC IGMP, Spring 2020)
- Ting Zhu, Shanghai University of Sport, China (UIUC IGMP, Fall 2019)
- Xiangfeng He, Shanghai University of Sport, China (UIUC IGMP, Fall 2019)
- Xiaotong Zhu, Beijing Normal University, China (UIUC IGMP, Fall 2019)
- Peichi Hung, Department of Creative Product Design, Asia University, Taiwan (Summer 2019)
- Yi-Xuan Lee, Department of Creative Product Design, Asia University, Taiwan (Summer 2019)
- Chen-Hao Liao, Department of Creative Product Design, Asia University, Taiwan (Summer 2019)
- Quanxin Lin, Department of Creative Product Design, Asia University, Taiwan (Summer 2019)
- Mona Jawad, Centennial High School, Champaign, IL (Spring 2019-Fall 2019)
- Yinyin Ma, BS, Beijing Normal University, Beijing, China (UIUC IGMP, Spring 2019)
- Yang Liu, BS, Shenyang Sport University, China (UIUC IGMP, Spring 2019)
- Jieying Yang, BS, Shenyang Sport University, China (UIUC IGMP, Spring 2019)
- Jiacong Li, BS, Shanghai University of Sport, Shanghai, China (UIUC IGMP, Fall 2018)
- Yana Wang, BS, Shanghai University of Sport, Shanghai, China (UIUC IGMP, Fall 2018)
- Zhi Zheng, BS, Shanghai University of Sport, Shanghai, China (UIUC IGMP, Fall 2018)
- Jamiu Odunsi, Department of Kinesiology and Community Health, UIUC (Fall 2018-present)
- Wei-Cheng Shen, MS, Asia University, Taiwan (MOST's Overseas Research Internship, Taiwan, Summer 2018)
- Edward TH Lee, Chinese University of Hong Kong, Hong Kong SAR, China (Summer 2018)
- Zaki Naqvi, Department of Kinesiology and Community Health, UIUC (Spring 2018)
- Hema Patel, Department of Kinesiology and Community Health, UIUC (Spring 2018)
- Claudia Kolach, i-Health Program, UIUC (Fall 2017, Spring 2018, Fall 2018)
- Hsin-Ying Chiu, Asia University, Taiwan (MOST's Overseas Research Internship, Taiwan, Summer 2017)
- Pei-Syuan He, Asia University, Taiwan (MOST's Overseas Research Internship, Taiwan, Summer 2017)
- Ariel Huang, Asia University, Taiwan (MOST's Overseas Research Internship, Taiwan, Summer 2017)
- Brandon Leung, Department of Mechanical Engineering, UIUC (Spring 2017)
- Karan Trikhya, Department of Mechanical Engineering, UIUC (Fall 2016 - Spring 2017)
- Shashwat Gupta, Department of Mechanical Engineering, UIUC (Fall 2016 - Spring 2017)
- Weiyan Ren, School of Biological Science and Medical Engineering, Beihang University, Beijing, China (Fall 2016)
- Hoi-Ching Ko, Hungkuang University, Taiwan (MOST's Overseas Research Internship, Taiwan, Summer 2016)

- Li-Wen Zhang, Hungkuang University, Taiwan (MOST's Overseas Research Internship, Taiwan, Summer 2016)
- Yu-Ting Jiang, Hungkuang University, Taiwan (MOST's Overseas Research Internship, Summer 2016)
- Ryan Juguan, Department of Recreation, Sport and Tourism, UIUC (Fall 2014 - Spring 2015)
- Chuanhao Zhuge, Department of Electrical and Computer Engineering, UIUC (with Deming Chen, Summer 2014 - Summer 2015)
- Kevin Kibler, Department of Mechanical Science and Engineering, UIUC (with Liz Hsiao-Wecksler, Summer 2014 - Spring 2015)
- Ann David, BS, Department of Bioengineering, Christian Medical College, India (Khorana program administered by the University of Wisconsin-Madison, the Government of India, and Indo-US Science and Technology Forum) (Summer 2014)
- Yu-Chen Fa, Hungkuang University, Taiwan (Summer 2014)
- Yu-Xuan Huang, Hungkuang University, Taiwan (Summer 2014)
- Ling-Yi Wang, Hungkuang University, Taiwan (Summer 2014)
- Ameya D. Patil, Department of Electrical Engineering, Indian Institute of Technology, Hyderabad, India (Khorana program administered by the University of Wisconsin-Madison, the Government of India, and Indo-US Science and Technology Forum), Summer 2013)
- Tiffany Varughese, Department of Bioengineering, Rice University, Houston, TX (Summer 2012)
- Sam Howard, Oral Roberts University, Tulsa, OK (Summer 2012)
- Grayson Starbuck, BS, Doctor of Physical Therapy program, OUHSC (01/2012 – 08/2012)
 - Grayson was the first physical therapy student to give an oral presentation in the College of Allied Health Research Day in April 2012.
- Tim D. Yang, Department of Computer Science, University of Central Oklahoma, Edmond, Oklahoma (NIH INBRE, 05/2011 – 08/2012)
 - Selected into the 2012 Oklahoma IDeA Network of Biomedical Research Excellence (INBRE) summer research program and continued his research training in my lab
- Alexandra Tran, Cell and Molecular Biology program, Oklahoma City University, Oklahoma City, Oklahoma (Summer 2011)
- Zachary A. Yokell, Department of Chemical Engineering program, University of Oklahoma (Summer 2011)
- Hem R. Gurung, Department of Biological Sciences, Cameron University, Lawton, OK (NIH INBRE, Summer 2011)
 - First job placement: OUHSC GPiBS PhD program in 2012
- Tiwei Zhu, BS, Department of Mathematics and Statistics, University of Central Oklahoma, Edmond, OK (with Maria Jones, Spring 2011)
- Daqian Rong, BS, Department of Mathematics and Statistics, University of Central Oklahoma, Edmond, OK (with Maria Jones, Spring 2011)
 - First job placement: PhD program in Bioengineering, OU in 2011
- Lena J. Clagg, Program in Agriculture Equine Science, Redlands Community College, El Reno, OK (NIH INBRE, Summer 2010)
 - First job placement: Oklahoma State University College of Veterinary Medicine in 2012
- Elizabeth A. Copenhaver, Department of Biomedical Engineering, Vanderbilt University, Nashville, TN (with David Brienza, NSF REU, Summer 2006)
- Justin L. Kassie, Department of Mechanical Engineering, Carnegie Mellon University (CMU), Pittsburgh, PA (Graduate Student Mentor for David Brienza, Summer 2002)

Research Staff Supervised

- Denisse Lopez, Research Coordinator, Rehabilitation Biomechanics Lab, Department of Rehabilitation Sciences, OUHSC (2011-2012)
- Eym-Soon Chong, BS, Research Coordinator, Rehabilitation Biomechanics Lab, Department of Rehabilitation Sciences, OUHSC (2011-2012)
- Mandip Aryal, MS, Research Technician, Rehabilitation Biomechanics Lab, Department of Rehabilitation Sciences, OUHSC (2009-2010)
- Miziana Abyad, BBA, Research Technician, Rehabilitation Biomechanics Lab, Department of Rehabilitation Sciences, OUHSC (2009)

PROFESSIONAL SERVICE

Editor and Associate Editor of Journals (independently handle the review and decision of the manuscripts)

- **Associate Editor, Assistive Technology** (the official journal of the Rehabilitation Engineering and Assistive Technology Society of North America (**RESNA**); 2014-2020: editorial board; 2021-present: associate editor; impact factor 2.431)
- **Associate Editor, Journal of NeuroEngineering and Rehabilitation** (2018-present, impact factor 4.262)
- **Associate Editor, Frontiers in Bioengineering and Biotechnology** (2015-present; impact factor 5.890)
- **Associate Editor, Frontiers in Physiology** (2015-present; impact factor 4.566)
- **Editor, Scientific Reports** (2022-present; impact factor 4.380)
- **Academic Editor, PLOS ONE** (2016-present; impact factor 3.240)

Editorial Board of Journals – selected list

- **Editorial Board, Journal of Tissue Viability** (the official journal of the **Tissue Viability Society** (2014-present)
- **Editorial Board, BMC Sports Science, Medicine and Rehabilitation** (2022-present)
- **Editorial Board, Medicine in Novel Technology and Devices** (2019-present)
- **Editorial Board, Advances in Rehabilitation** (2018-present)
- **Editorial Board, Journal of Rehabilitation Research and Development** (the official journal of the **US Department of Veterans Affairs**, JRRD was transferred to PLOS Veterans Disability & Rehabilitation Research Channel, 2015-2016.)

Guest Editor of Journals

- **Guest Editor**, Frontiers in Bioengineering and Biotechnology, Special Issue on **Computational and Experimental Approaches on Soft Tissues Biomechanics and Mechanobiology** (led by Lei Fan, Ge He, Lei Wang, and Yih-Kuen Jan, 2023-present)
- **Guest Editor**, Scientific Reports, special issue on **Bionic Humans** Collection (2023-present)
- **Guest Editor**, Frontiers in Bioengineering and Biotechnology, Special Issue on **Nonlinear Dynamics and Complex Patterns in the Human Musculoskeletal System and Movement** (edited by Yih-Kuen Jan, Navrag Singh, Cheng-Feng Lin, and Fuyuan Liao, 2022-2023)
- **Guest Editor**, Sensors, Special Issue on **Sensors and Wearable Technologies in Sport Biomechanics** (edited by Yih-Kuen Jan, Chi-Wen Lung, Ben-Yi Liao, and Manuel Hernandez, 2022-2023)

- **Guest Editor**, Frontiers in Bioengineering and Biotechnology, Special Issue on **Individual's Mechanics, Movement and Kinematics Post-Stroke** (edited by Yih-Kuen Jan and Veronica Cimolin, 2022-2023)
- **Guest Editor**, Frontiers in Physiology, Special Issue on **Methods and Applications in Clinical and Translational Physiology** (edited by Claudio de Lucia, Christina Pabelick, Yih-Kuen Jan, Gaetano Santulli, and Pierre Denise, 2021-2023)
- **Guest Editor**, Diagnostics, Special Issue on **Advances in Diagnosis and Pathophysiology of Microvascular Dysfunction** (edited by Yih-Kuen Jan, 2021-2022)
- **Guest Editor**, Frontiers in Bioengineering and Biotechnology, Special Issue on **Soft Tissue Biomechanics in Wound Healing and Prevention** (edited by Yih-Kuen Jan, Matthew Major, Fang Pu, and Sharon Sonenblum, 2020-2021)
- **Channel Editor**, PLOS Veterans Disability & Rehabilitation Research Channel (edited by Noam Harel, Alicia Koontz, Mary Elizabeth Bowen, and Yih-Kuen Jan, formerly Journal of Rehabilitation Research and Development (VA RR&D official journal), 2017-2020)
- **Guest Editor**, Frontiers in Bioengineering and Biotechnology, Special Issue on **Injury Prevention and Rehabilitation** (edited by In-Ju Kim, Ravindra Goonetilleke, and Yih-Kuen Jan, 2015-2016)
- **Guest Editor**, Biomed Research International, Special Issue on **Wheeled Mobility** (edited by Alicia Koontz, Dan Ding, Yih-Kuen Jan, Sonja de Groot and Andrew Hansen, 2014-2015)

Reviewer of Journals – selected list

- American Journal of Physical Medicine and Rehabilitation
- Archives of Physical Medicine and Rehabilitation
- Assistive Technology
- Australian Occupational Therapy Journal
- Biomedical Signal Processing and Control
- Cardiopulmonary Physical Therapy Journal
- Clinical Biomechanics
- Computers in Biology and Medicine
- Diabetes Technology and Therapeutics
- Disability and Rehabilitation: Assistive Technology
- European Journal of Physical and Rehabilitation Medicine
- Frontiers in Physiology
- IEEE Transactions on Biomedical Engineering
- IEEE Transactions on Neural Systems and Rehabilitation Engineering
- Journal of American Geriatric Society
- Journal of Applied Physiology
- Journal of Bioinformatics and Diabetes
- Journal of Medical Devices
- Journal of Spinal Cord Medicine
- Journal of Sports Medicine and Physical Fitness
- Journal of Tissue Viability
- Medical & Biological Engineering & Computing
- Medical Engineering and Physics
- Medicine & Science in Sports & Exercise
- Microvascular Research
- Neuromodulation
- Physiological Measurement

Reviewer for Funding Agencies

- | | |
|------|--|
| 2024 | Grant Reviewer, SBIR Phase 1, NIDILRR |
| 2024 | Grant Reviewer, Research Grants Council, Hong Kong SAR |

2023 Grant Reviewer, Paralyzed Veterans of America Research Foundation

2023 Grant Reviewer, National Health Research Institute, Taiwan

2023 Grant Reviewer, Research Grants Council, Hong Kong SAR

2022 Grant Reviewer, Medical Research Council, UK Research and Innovation, UK

2022 Grant Reviewer, Canada First Research Excellence Fund, Canada

2022 Grant Reviewer, National Health Research Institute, Taiwan

2022 Grant Reviewer, SBIR Phase 1, NIDILRR

2022 Grant Reviewer, Research Grants Council, Hong Kong SAR

2002 Grant Reviewer, Campus Review Board, UIUC

2021 Grant Reviewer, National Natural Science Foundation of China / Research Grants Council, Joint Research Scheme, Hong Kong SAR

2021 Grant Reviewer, National Health Research Institute, Taiwan

2021 Grant Reviewer, SBIR Phase 1, NIDILRR

2021 Grant Reviewer, Research Grants Council, Hong Kong SAR

2020 Grant Reviewer, DRRP, NIDILRR

2020 Grant Reviewer, SBIR Phase 1, NIDILRR

2019 Grant Reviewer (phone), Musculoskeletal Rehabilitation Sciences, CSR, NIH

2019 Grant Reviewer, SBIR Phase 1, NIDILRR

2018 Grant Reviewer, Merit Awards, Rehabilitation Research and Development, US Department of Veterans Affairs (VA)

2018 Participant/Grant Reviewer, Center for Scientific Review Anonymization Study, National Institutes of Health (NIH)

2018 Grant Reviewer, SBIR Phase 1, NIDILRR

2018 Hong Kong Food and Health Bureau, Health and Medicine Research Fund, Hong Kong SAR

2017 Grant Reviewer, Paralyzed Veterans of America Research Foundation (PVA)

2017 Grant Reviewer, SBIR Phase 1, NIDILRR

2017 Hong Kong Food and Health Bureau, Health and Medicine Research Fund, Hong Kong SAR

2016 Grant Reviewer, SBIR Phase 2, NIDILRR

2016 Grant Reviewer, Merit Awards (2nd cycle), Rehabilitation Research and Development, US Department of Veterans Affairs (VA)

2016 Grant Reviewer, SBIR Phase 1, NIDILRR

2016 Grant Reviewer, Musculoskeletal Rehabilitation Study Section (MRS), National Institutes of Health

2016 Grant Reviewer, Merit Awards (1st cycle), Rehabilitation Research and Development, US Department of Veterans Affairs (VA)

2016 Judge, Conquer Paralysis Now Grand Challenge (formerly Sam Schmidt Paralysis Foundation)

2016 Hong Kong Food and Health Bureau, Health and Medicine Research Fund, Hong Kong SAR

2015 Hong Kong Food and Health Bureau, Health and Medicine Research Fund, Hong Kong SAR

- 2015 Early Career Reviewer program, Center for Scientific Review, National Institutes of Health (NIH)
- 2015 Grant Reviewer, Spinal Cord Injury Research Program (SCIRP), CDMRP, Department of Defense
- 2015 Grant Reviewer, Merit Awards, Rehabilitation Research and Development, US Department of Veterans Affairs (VA)
- 2015 Grant Reviewer, SPiRE awards, Rehabilitation Research and Development, US Department of Veterans Affairs (VA)
- 2015 Alternate Grant Reviewer, Disability and Rehabilitation Research Projects (DRRP), National Institute of Disability, Independent Living and Rehabilitation Research (NIDILRR)
- 2015 Grant Reviewer, Peer Reviewed Medical Research Program (PRMRP), Congressionally Directed Medical Research Programs (CDMRP), US Department of Defense (DOD)
- 2015 Judge, Conquer Paralysis Now Grand Challenge (formerly Sam Schmidt Paralysis Foundation)
- 2014 Hong Kong Food and Health Bureau, Health and Medicine Research Fund, Hong Kong SAR
- 2014 Grant Reviewer, SPiRE awards, Rehabilitation Research and Development, US Department of Veterans Affairs (VA)
- 2014 Alternate Grant Reviewer, Disability and Rehabilitation Research Projects (DRRP), National Institute of Disability, Independent Living and Rehabilitation Research (NIDILRR)
- 2014 Grant Reviewer, Peer Reviewed Orthopaedic Research Program (PRORP), Congressionally Directed Medical Research Programs (CDMRP), Department of Defense (DOD)
- 2013 Grant Reviewer, Spinal Cord Injury Research Program (SCIRP), Congressionally Directed Medical Research Programs (CDMRP), Department of Defense (DOD)
- 2011 Grant Reviewer, Field Initiated Program, National Institute on Disability, Independent Living and Rehabilitation Research
- 2011 Grant Reviewer (mail), Study Section (Dermatology, Rheumatology, and Inflammation), National Institutes of Health (NIH)
- 2010 Grant Reviewer, Field Initiated Program, National Institute on Disability, Independent Living and Rehabilitation Research
- 2009 Grant Reviewer, Field Initiated Program, National Institute on Disability, Independent Living and Rehabilitation Research

International Committees and Services

- 2015-present World Health Organization (WHO), Global Cooperation on Assistive Technology (GATE), Geneva, Switzerland (Director: Chapal Khasnabis)
 - Co-author, position paper on the personnel (2017-2018)
 - Invited participant, Global Research, Innovation, and Education in Assistive Technology (GREAT) Summit (2017)
 - Member (2015-present)
- 2018-present School of Biological Science and Medical Engineering, Beihang University, Beijing, China (Yubo Fan and Fang Pu)
 - Summer visiting professor
- 2015-present Taiwan Ministry of Science and Technology, New Partnership Program for the Connection to the Top Labs in the World, Taiwan

- Host lab director
- 2013-present India Khorana Program & Bose Program, India
 - Host lab director
- 2012-present International Compression Club (ICC)
 - Member, compression therapy guideline development
- 2015-2020 National Research Center for Rehabilitation Technical Aids, Ministry of Civil Affairs, Beijing, China (Director: Yubo Fan)
 - Academic committee member
- 2016-2017 International Convention on Rehabilitation Engineering and Assistive Technology (i-CREATe), Coalition on Rehabilitation Engineering and Assistive Technology of Asia
 - Advisory committee member

Professional Organizations

Active

- 2001-present **Rehabilitation Engineering and Assistive Technology Society of North America (RESNA)** (2001-2004: student member, 2004-present: member)
 - **Chair, Scientific Papers of annual conferences (2014-2021 (conference chairs Alisa Brownlee, John Anschutz, Doug Gayton)) (2021 RESNA Distinguished Service Award)**
 - **Member, Research Committee (2013-present; chairs Rich Simpson, Heidi Koester, Sajay Arthanat)**
 - **Member, Conference Committee (2013-2021)**
 - **Vice Chair, International Special Interest Group (2017-2020)**
 - **Member, Assistive Technology Standards Board (2014-present)**
 - **Member, Assistive Technology Journal Board (2014-present)**
 - **Co-author, RESNA Position Paper on Power Seat Function Usage in 2015**
 - **Member, Student Development Committee (2012-2013; chair Sharon Sonenblum)**
 - **Reviewer, Scientific Papers (2009-2014, 2021-present)**
 - **Reviewer, Instructional Courses and Workshops (2009-2017)**
 - **Reviewer, Student Scientific Paper Competition (2009-2017)**
- 2013-present **World Association for Chinese Biomedical Engineers (WACBE)**
 - **Councilor (board of directors) (2017-2022)**
 - **Editor, Newsletters (2017-present)**
 - Member, Scientific Program Committee

Inactive

- 2005-2009 American Diabetes Association (ADA)
- 2012-2016 American Spinal Injury Association (ASIA)
 - Member, Rehabilitation Standards Committee (2014-2016)
 - Special Guest, Board of Directors Strategic Planning Retreat (2015)
- 2004-2012 American Physical Therapy Association (APTA)
 - Clinical Electrophysiology and Wound Management Section
 - Cardiovascular and Pulmonary Rehabilitation Section
 - Cardiopulmonary Physical Therapy Journal Reviewer (2010-2012)
- 2008-2014 American Society of Biomechanics (ASB)
 - Reviewer, ASB annual scientific conference (2009, 2013)
- 2010-2017 IEEE Engineering in Medicine and Biology Society (EMBS)
 - Reviewer, Student Scientific Paper Competition (2010)
- 1996-1999 Physical Therapist Association of Republic of China (PTAROC) (#927)

Consulting Work

2023-present Consultant, Stryker

Reviewer for Peer Universities

2023 Reviewer, Peer Review Expert Committee on Sports Science, Tsinghua University, China
2021 Reviewer, promotion and tenure, University of Oklahoma Health Sciences Center
2021 Reviewer, promotion and tenure, Tianjin University, China
2021 Reviewer, promotion and tenure, University of Oklahoma
2020 Reviewer, promotion and tenure, Tianjin University, China
2020 Reviewer, promotion and tenure, University of Oklahoma Health Sciences Center
2019 Reviewer, promotion and tenure, Tianjin University, China
2019 Reviewer, promotion and tenure, Georgia State University
2018 Reviewer, promotion and tenure, Tianjin University, China

University Committees and Services (at UIUC, OUHSC, and Pitt)

2016-2022 **Member, Senate Committee on Diversity, Equity and Inclusion** (formerly Equal Opportunity and Inclusion, Chair: JJ Pionke)
2019 Grant Reviewer, Campus Research Board, UIUC
2017 Co-Facilitator, Social Equity and Access session, Illinois-National Taiwan University Global Forum (with Andi Schwingel)
2017 Reviewer, Fulbright applications, UIUC
2017 Judge, Poster Competitions, Undergraduate Research Symposium, UIUC
2017-2020 Member, IRB Committee on Bio-Medical Research, UIUC (Chair: Ken Wilund)
2016-2018 Faculty Senate, The Senate of the Urbana-Champaign Campus, University of Illinois
2016 Member, Program Committee, Design Center Inaugural Symposium, UIUC (Chair: Madhu Viswanathan)
2015-2016 Member, Design Center Program Working Group Committee, Provost's ad-hoc committee, UIUC (Chair: Andy Singer)
2013-2015 Grant Reviewer, Campus Research Board, UIUC
2012 Member, Admission Committee, Graduate Program in Biomedical Science (GPiBS), OUHSC (Chair: Eric Howard)
2010-2012 Member, Program Evaluation Committee, Graduate College, OUHSC
2010-2012 Member, Outstanding Thesis/Dissertation Committee, Graduate College, OUHSC
2009 Grant Reviewer, College of Medicine Alumni Association research grant program, University of Oklahoma Health Sciences Center (OUHSC)
2009-2012 Judge, Poster Competitions, Graduate Research, Education, and Technology (GREAT) Annual Scientific Symposium, Graduate College, OUHSC
2009-2012 Mentor, Graduate Program in Biomedical Science, Graduate College, OUHSC

Department & College Committees and Services (at UIUC, OUHSC, and Pitt)

2021-2022 Member, Website and Communications Committee, KCH
2020-present Member, Diversity, Equity, and Inclusion Committee, KCH
2019-present Director, International Graduate Mentors Program (IGMP), Global Education & Training, Illinois International
2018-present Mentor, International Graduate Mentors Program on Kinesiology and Community Health, Global Education & Training, Illinois International

2018-2020 Member, Educational Policy Committee, KCH (Chair: Kim Graber)

2018-2019 Member, Search Committee for a tenure track faculty on Rehabilitation Counseling, KCH (Chair: Chung-Yi Chiu)

2018-2019 Member, KCH Framework Development Committee (Chair: Sean Mullen)

2017-2018 Member, Search Committee for an open rank faculty on Health, Aging and Technology, AHS (Chair: Jake Sosnoff)

2017-2018 Member, Search Committee for an assistant/associate professor on Exercise Psychology, KCH (Chair: Steve Petruzzello)

2017 Member, Committee on Community Health Graduate Specializations and Concentrations (Chair: Steve Notaro)

2016-2020 Representative, KCH Representative to the IRB Committee, UIUC

2016-2018 Representative, KCH Representative to the UIUC Faculty Senate, UIUC

2016-present Peer Evaluator, Peer Evaluation of Teaching, Department of Kinesiology and Community Health, UIUC

2016-2017 Member, Search Committee for an Associate/Full Professor on Rehabilitation Counseling, Department of Kinesiology and Community Health, UIUC (Chair: David Strauser)

2014 Member, Rehabilitation Engineering White Paper Committee, AHS (Chair: Jake Sosnoff)

2013-2014 Member, Search Committee, 2 open rank faculty positions in Disability and Rehabilitation Sciences, College of Applied Health Sciences (AHS), UIUC (Chair: Ken Watkin)

2012-present Graduate Faculty, Department of Kinesiology and Community Health, UIUC

2011-2012 Member, Program Evaluation Committee, Department of Rehabilitation Sciences, OUHSC (Chair: Denise Bender)

2010-2012 Member, Task Group for Departmental Strategy Plan on Research in 2010-2015, Department of Rehabilitation Sciences, OUHSC (Chair: Thubi Kolobe)

2010-2012 Member, Task Group for Departmental Strategy Plan on Post-Professional Program in 2010-2015, Department of Rehabilitation Sciences, OUHSC (Chair: Irene McEwen)

2010 Member, Faculty Search Committee, Occupational Therapy Program, Department of Rehabilitation Sciences, OUHSC

2010-2012 Chair, Elections Committee, College of Allied Health, OUHSC (Chair-Elect in 2010-2011)

2010-2012 Member, Graduate Council, Graduate College, OUHSC

2009-2011 Grant Reviewer, Seed Grant Program, College of Allied Health, OUHSC

2009-2012 Member, Academic Advisory Committee, PhD in Allied Health Sciences program, College of Allied Health, OUHSC (Chair: Irene McEwen)

2009-2011 Member, Research Committee, College of Allied Health, OUHSC (Chair: Thubi Kolobe)

2008-2012 Graduate Faculty (level 4), Allied Health Sciences, Neuroscience, Physiology, Rehabilitation Sciences, and Aerospace and Mechanical Engineering, OUHSC

2007-2008 Graduate Faculty, Department of Rehabilitation Science & Technology, Pitt

2007-2008 Member, Nominating Committee, School of Health and Rehabilitation Sciences (SHRS), Pitt

2007-2008 Member, Safety Committee, SHRS, Pitt

2004-2008 Member, PhD Preliminary Exam Committee on Biomechanics, PhD Program in Rehabilitation Science, SHRS, Pitt (Chair: Gina Bertocci)