

Yih-Kuen Jan, PhD

Associate Professor, Kinesiology and Community Health
Director, Rehabilitation Engineering Lab
University of Illinois at Urbana-Champaign
1206 South Fourth Street
211N Huff Hall, MC 588
Champaign, IL 61820
Tel: (217) 300-7253, e-mail: yjan@illinois.edu, yjan@uiuc.edu

Education

- 2004-2006 **Postdoc in Rehabilitation Science & Technology**, University of Pittsburgh
- 2000-2004 **Ph.D. in Rehabilitation Science & Technology**, University of Pittsburgh
- 1995-1997 **M.S. in Biomedical Engineering**, National Yang-Ming University, Taiwan
- 1991-1995 **B.S. in Physical Therapy**, National Yang-Ming University, Taiwan

Professional Appointments

- 2012-present **University of Illinois at Urbana-Champaign (UIUC)**
 - Associate Professor, Department of Kinesiology and Community Health, College of Applied Health Sciences (2012-present)
 - Director, Rehabilitation Engineering Lab, Division of Disability Resources and Educational Services (2012-present)
 - Affiliate, Computational Science and Engineering Program, College of Engineering (2012 - present)
 - Affiliate, Center for Health, Aging and Disability (2012- present)
 - Affiliate, Center for Public Health Analytics (2017- present)
 - Affiliate, Center for East Asian & Pacific Studies (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, Doctor of Physical Therapy (DPT) 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 Program (2010-2012)
 - Primary Researcher (WOC), Oklahoma City Veterans Affairs Medical Center (2008-2012)
- 2000-2008 **University of Pittsburgh (Pitt)**
 - Assistant Professor, 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 (NIDILRR), 2006-2008)

Researcher, Quality of Life Technology Engineering Research Center (National Science Foundation (NSF), 2006-2008)

Researcher (WOC), Pittsburgh Veterans Affairs Healthcare System (2006-2008)

Postdoctoral Fellow (2004-2006)

Graduate Research Assistant (2000-2004)

1997-1999 **Clinic of the Combined Service Forces Headquarters, Taipei, Taiwan**

Physical Therapist and Second Lieutenant Medical Officer, Department of Rehabilitation

1995-1997 **National Yang-Ming University, Taipei, Taiwan**

Research Assistant, Department of Biomedical Engineering and 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 Therapist License, New York, United States (#024747)

1996-present Physical Therapist License, Taiwan (#186)

Honors and Awards

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 Certificate for Highly Cited Research in *Journal of Tissue Viability*, Elsevier (Skin blood flow dynamics and its role in pressure ulcers, corresponding author)

2016 The 1st Remarkable Alumni Award, Department of Physical Therapy and Assistive Technology, National Yang-Ming University, Taiwan

2015 Best Paper Award, Student Scientific Paper Competition, RESNA International Conference, Denver, CO (Role: Advisor)

2015 Honorable Mention Award, Student Scientific Paper Competition, RESNA International Conference, Denver, CO (Role: Advisor)

2014 2nd Place, Best Poster Award, Computational Science and Engineering Annual Meeting, University of Illinois, Urbana, IL (Role: Advisor)

2014 Honorable Mention Award, Student Scientific Paper Competition, RESNA International Conference, Indianapolis, IN (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 Research Category, National Yang-Ming University, Taipei, Taiwan
- 1996 Academic Achievement Award (Highest GPA), Department of Biomedical Engineering, National Yang-Ming University, Taipei, Taiwan (09/1996)
- 1994 Academic Achievement Awards (Highest GPA), Department of Physical Therapy, National Yang-Ming 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

Research & Training Grant Awards – Extramural

1. **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
2. **Egyptian Cultural & Educational Bureau**, 2016-2018, Total Cost: \$5,000, Project title: Rehabilitation research development, Role: PI
3. **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
4. **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

5. **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
6. **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
7. **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
8. **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)
9. **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
10. **National Institutes of Health** (R03HD060751-01S1), 2009-2010, Total Cost \$20,000, Project title: Administrative supplement for a near infrared spectroscopy, Role: Principal Investigator
11. **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
12. **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
13. **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
14. **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
15. **Paralyzed Veterans of America Research Foundation** (PVA2480), 2007-2009, Total Cost \$75,000, Project title: Remodeling ANS and endothelium with exercise for preventing pressure ulcers: a pilot study, Role: Principal Investigator
16. **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

17. **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
18. **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
19. **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
20. **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
21. **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)
22. **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)

Research Grant Awards – Intramural

1. **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
2. **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

Journal Publications (*: Corresponding Author)

1. Liao F, An R, Pu F, Burns S, Shen S, and **Jan YK*** (in press). Effect of exercise on risk factors of diabetic foot ulcers: a systematic review and meta-analysis. *American Journal of Physical Medicine and Rehabilitation*, in press.

2. Liao BY, Chen CL, **Jan YK**, Chiu HY, Huang YW, and Lung CW* (in press). Three-dimensional elastography gradient of the plantar soft tissue: methodology and preliminary study. *Advances in Intelligent Systems and Computing*, in press.
3. Lung CW, Lin YS, **Jan YK**, Lo YC, Chen CL, and Liao BY* (in press). Effect of far infrared radiation therapy on improving microcirculation of the diabetic foot. *Advances in Intelligent Systems and Computing*, in press.
4. 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.
5. 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 position paper from the Summit on Global Research, Innovation, and Education in Assistive Technology, Global Cooperation on Assistive Technology, World Health Organization in 2017.**
6. 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)
7. 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.
8. 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.
9. 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.
10. 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.
11. 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.
12. 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)
13. 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.
14. Lung CW, Hsiao-Wecksler 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)
15. 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.

16. 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 RESNA.
17. 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)
18. Koontz AM*, Ding D, **Jan YK**, de Groot S, and Hansen A (2015). Editorial – wheeled mobility. *Biomed Research International*, 2015, 138176. (2 pages)
19. 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.
20. 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)
21. 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.
22. 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.
23. 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.
24. 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)
25. **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.
26. **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.
27. **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.
28. 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.

29. 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.
30. **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.
31. **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.
32. 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.
33. **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.
34. **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.
35. **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.
36. 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.
37. 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.
38. 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.
39. 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.
40. **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.
41. **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.
42. **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.

43. 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.
44. **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.
45. **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.
46. **Jan YK** and Brienza DM* (2006). Technology for pressure ulcer prevention. *Topics in Spinal Cord Injury Rehabilitation*, 11(4), 30-41.
47. **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.
48. 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.
49. 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.
50. **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)
51. 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)

Book Chapters and Monographs

1. Mohamed AA, **Jan YK***, Rice IM, Pu F, and Cheng CK (accepted). Chapter 15: Biomechanics of Orthopedic Rehabilitation. In: Cheng CK and Woo S, eds. *Frontiers in Orthopedic Biomechanics*. Springer, accepted.
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. 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.

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. 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)
8. **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)
9. **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)
10. 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)
11. **Jan YK*** (2004). A study on skin blood flow mechanisms using wavelet analysis: implications for pressure ulcer prevention. PhD Dissertation, University of Pittsburgh, Department of Rehabilitation Science and Technology, Pittsburgh, PA.
12. 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.
13. **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, Department of Biomedical Engineering, Taipei, Taiwan.

Proceeding Publications (International & National Conferences)

1. 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.
2. 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.
3. 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.
4. 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.)
5. 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.
6. 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.
 7. 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.
 8. **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.)
 9. 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.
 10. 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.
 11. 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.
 12. 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.
 13. 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.
 14. 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.)
 15. 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.)
 16. 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.)
17. Yang TD, Patel A, and **Jan YK** (2014). Individualized performance quantification of wheelchair driving. RESNA Annual Conference, Indianapolis, IN, June 11-15.
 18. 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.
 19. 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.)
 20. **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.
 21. **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)
 22. 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.)
 23. 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.)
 24. **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.
 25. 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.
 26. 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.

27. 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.
28. 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.)
29. 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.)
30. **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.)
31. **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)
32. 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)
33. 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)
34. **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.
35. 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)
36. **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)

37. 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.
38. **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.
39. **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.
40. **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.)
41. 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.
42. 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.
43. **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.
44. **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.
45. **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.
46. **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.
47. **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.
48. **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.
49. **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.
50. 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.

51. **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.
52. 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.
53. **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.
54. **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.
55. **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.
56. **Jan YK**, Yang SW, and Cheung W (1996). Gait analysis of different prosthetic feet. Annual Meeting of Chinese Prosthetics and Orthotics Society, Taipei, Taiwan.
57. 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.

Conference Presentations (Regional Conferences & Symposiums)

1. 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.
2. 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.
3. Yang TD, Hutchinson S, and **Jan YK** (2014). Markov modeling of power wheelchair driving. Computational Science and Engineering Annual Meeting, UIUC, April 10-11.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.

10. 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.
11. 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.
12. 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.
13. 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.
14. 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.
15. 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.
16. **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.
17. Lee B, Foreman R, and **Jan YK** (2011). The effects of local cooling on pressure ulcer development. GREAT, OUHSC, March 28-31.
18. 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.
19. Akbaran M, Burns S, and **Jan YK** (2011). Biomechanical analysis of diabetic foot. GREAT, OUHSC, March 28-31.
20. 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.
21. 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.
22. 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.
23. **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.
24. **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.
25. 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.
26. **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.

27. 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.
28. **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.
29. **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.
30. **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.
31. **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.
32. **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.
33. **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.
34. **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.

Invited Presentations

1. **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.
2. **Jan YK** (2017). Applying a problem-based learning (PBL) approach to design assistive devices. College of Creative Design, Asia University, Taichung, Taiwan, December 11.
3. **Jan YK** (2017). Microvascular biomechanics and its applications on injury prevention and rehabilitation. Rehabilitation Engineering Conference and Expo, Beijing, China, November 1.
4. **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.
5. **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.
6. **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.

7. **Jan YK** (2017). Biomechanical analyses of risks for diabetic foot ulcers. Beihang University, School of Biological Science and Biomedical Engineering, Beijing, China, May 22.
8. **Jan YK** (2017). Biomechanical analyses of risks for diabetic foot ulcers. University of Chicago, Chicago Center for Diabetes Translation Research, Chicago, IL, March 24.
9. **Jan YK** (2016). Global Disability and Rehabilitation Engineering Initiatives. Xi'an Jiaotong University, Institute of Biomedical Engineering, Xi'an, China, May 23.
10. **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.
11. **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.
12. **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.
13. **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.
14. **Jan YK** (2016). Wheelchair and seating research for people with disabilities. Beihang University, School of Biological Science and Biomedical Engineering, Beijing, China, May 9.
15. **Jan YK** (2016). Microvascular physiology and soft tissue biomechanics of pressure ulcers/injury. Carle Foundation Hospital Wound Healing Clinic, April 29.
16. **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.
17. **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.
18. **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.
19. **Jan YK** (2015). Adaptive sports and cardiovascular function in wheelchair users. Kaohsiung Medical University, Department of Sports Medicine, Kaohsiung, Taiwan, June 18.
20. **Jan YK** (2015). Soft tissue biomechanics and injury prevention. Department of Sports Medicine, Kaohsiung Medical University, Department of Sports Medicine, Kaohsiung, Taiwan, June 18.
21. **Jan YK** (2015). Microvascular remodeling to physical activity and inactivity. Kaohsiung Medical University, Department of Sports Medicine, Kaohsiung, Taiwan, June 17.
22. **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.

23. **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.
24. **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.
25. **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.
26. **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.
27. **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.
28. **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.
29. **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.
30. **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.
31. **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.
32. **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.
33. **Jan YK** (2010). Soft tissue biomechanics and pressure ulcer prevention. Neuroscience Postdoc/Junior Faculty meetings, Oklahoma Center for Neuroscience, College of Medicine, OUHSC, September.
34. **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.
35. **Jan YK** (2009). Blood flow and tissue mechanics factors in pressure ulcers of people with disabilities. Physiology Research Seminars, Department of Physiology, OUHSC, April.
36. **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.
37. **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.

38. **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.
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TEACHING EXPERIENCE

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

- KIN/CHLH/REHB 199 **Introduction to Rehabilitation Sciences**, Professor (2017-present)
- KIN 494 **Rehabilitation Biomechanics**, Professor (2013-present)
- CHLH 494 **Grant Writing**, Professor (2017-present)
- REHB 501 Rehabilitation Research, Professor (2013-present, as needed)
- REHB 594 Advances in Rehabilitation Technology, Professor (2013-present, as needed)
- KIN 565 Teaching in the Professoriate, Mentor (Fall 2016)
- CHLH/KIN/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

- 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

- Fu-Lien Wu, PT, Department of Physical Therapy and Assistive Technology, National Yang-Ming University, Taiwan (Supported by Taiwan Ministry of Science and Technology, Research Abroad Program, 2018-present)
- Xueyan Zhang, MD, Beijing Changping Hospital of Integrated Chinese and Western Medicine, Beijing, China (2017-present)
- Ayman Mohamed, PT, Faculty of Physical Therapy, Cairo University and Beni Suef University, Egypt (Supported by Egypt Government Research Abroad Program, 2016-present)
- Weiyan Ren, School of Biological Science and Medical Engineering, Beihang University, Beijing, China (Fall 2016)
- Jicheng Fu, PhD, Department of Computer Science, University of Central Oklahoma, Edmond, OK (Supported by Oklahoma NIH INBRE, Summer 2013)
- Stephanie Burns, PT, PhD, Department of Physical Therapy, Oklahoma City VA Medical Center, Oklahoma City, OK (2011-2012)
- Chi-Wen Lung, PhD, Department of Creative Product Design, Asia University, Taiwan (Summer 2011, 2013, 2014, 2016, 2017, 2018)
- Fuyuan Liao, PhD, Institute of Biomedical Engineering, Xi'an Jiaotong University, Xi'an, China (2009-2015)
- Yanni Chen, MD, PhD, Department of Pediatric Rehabilitation, Xi'an Children's Hospital, Xi'an, China (2008-2009)

Doctoral Students Supervised

- Weiyan Ren, School of Biological Science and Medical Engineering, Beihang University, Role: Expert Group Member (2018, Advisor: Fang Pu)
- Mingzheng Zhang, School of Biological Science and Medical Engineering, Beihang University, Role: Expert Group Member (2018, Advisor: Fang Pu)
- Annmarie Chizewski, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign, Role: Committee Member (2018-present, Chair: Steve Petruzzello)
- Sicong Ren, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign, Role: Advisor and Committee Chair (2017-present)
- Andrew Hua, Department of Kinesiology and Community Health & College of Medicine, University of Illinois at Urbana-Champaign, Role: Committee Member (2017-present, Chair: David Buchner)
- Kate Rougeau, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign, Role: Committee Member (2016-2017, Chair: Steve Petruzzello)
- Harry Ming Chun Choi, Department of Rehabilitation Science, Hong Kong Polytechnic University, Hong Kong, Role: External Examiner (2016-2017, Chair: Gladys Cheing)
- Jennifer Dysterheft, Department of Kinesiology and Community health, University of Illinois at Urbana-Champaign, Role: Committee Member (2015-2016, Chair: Ian Rice)
- Jian Jiao, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign, Role: Advisor and Committee Chair (2014)

- Tim D. Yang, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign, Role: Advisor and Committee Chair (2012-present)
- Xiangming Zhang, PhD Student, Program in Bioengineering, University of Oklahoma, Role: Committee Member (2011-2012, Chair: Rong Gan)

Masters' & Honors Students Supervised (Thesis Based)

- Daqian Rong, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign, Role: Advisor (2012-2015)
- Bernard Lee, Department of Physiology, University of Oklahoma Health Sciences Center, Role: Advisor and Committee Chair (2009-2012)
- Jonathan S. Akins, Master's Student, Department of Bioengineering, University of Pittsburgh, Pittsburgh, Role: Committee Member (2006-2008, Chair: David Brienza)
- Yi-Ting Tzen, Master's/PhD Student, Department of 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 & Visiting Students Supervised

- Jamiu Odunsi, Department of Kinesiology and Community Health, UIUC (Fall 2018)
- Edward Lee, Department of Biomedical Engineering, Chinese University of Hong Kong, Hong Kong (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)
- Hsin-Ying Chiu, Department of Creative Product Design, Asia University, Taiwan (MOST's Overseas Research Internship, Taiwan, Summer 2017)
- Pei-Syuan He, Department of Creative Product Design, Asia University, Taiwan (MOST's Overseas Research Internship, Taiwan, Summer 2017)
- Ariel Huang, Department of Creative Product Design, Asia University, Taiwan (MOST's Overseas Research Internship, Taiwan, Summer 2017)
- Brandon Leung, Department of Mechanical Engineering, UIUC (Spring 2017)
- Karan Trikha, Department of Mechanical Engineering, UIUC (Fall 2016 - Spring 2017)
- Shashwat Gupta, Department of Mechanical Engineering, UIUC (Fall 2016 - Spring 2017)
- Hoi-Ching Ko, Department of Biomedical Engineering, Hungkuang University, Taiwan (MOST's Overseas Research Internship, Taiwan, Summer 2016)
- Li-Wen Zhang, Department of Biomedical Engineering, Hungkuang University, Taiwan (MOST's Overseas Research Internship, Taiwan, Summer 2016)
- Yu-Ting Jiang, Department of Biomedical Engineering, 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, Department of Bioengineering, Christian Medical College, India (**Khorana** (administered by the University of Wisconsin-Madison, the Government of India, and Indo-US Science and Technology Forum)) (Summer 2014)
- Yu-Chen Fa, Department of Biomedical Engineering, Hungkuang University, Taiwan (Summer 2014)
- Yu-Xuan Huang, Department of Biomedical Engineering, Hungkuang University, Taiwan (Summer 2014)
- Ling-Yi Wang, Department of Biomedical Engineering, Hungkuang University, Taiwan (Summer 2014)
- Ameya D. Patil, Department of Electrical Engineering, Indian Institute of Technology, Hyderabad, India (**Khorana** (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, Department of Biology, Oral Roberts University, Tulsa, OK (Summer 2012)
- Grayson Starbuck, 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, Department of Mathematics and Statistics, University of Central Oklahoma, Edmond, OK (with Maria Jones, Spring 2011)
- Daqian Rong, 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 – selected list (JCR: Journal Citation Reports)

- **Frontiers in Bioengineering and Biotechnology, Associate Editor** on Biomechanics (2015-present)
- **Frontiers in Physiology, Associate Editor** on Clinical and Translational Physiology (JCR, Physiology, Q1; 2015-present)
- **Journal of NeuroEngineering and Rehabilitation, Associate Editor** (JCR, Rehabilitation, Q1; 2018-present)
- **PLOS ONE, Academic Editor** (JCR, Multidisciplinary Science, Q1; 2016-present)
- **PLOS Veterans Disability & Rehabilitation Research Channel, Editor** (2017-present)

Editorial Board of Journals – selected list

- **Assistive Technology, Editorial Board** (the official journal of the Rehabilitation Engineering and Assistive Technology Society of North America (**RESNA**); JCR, Rehabilitation, Q3; 2014-present)
- **Journal of Rehabilitation Research and Development, Editorial Board** (official journal of the **US Department of Veterans Affairs**, SSCI, Rehabilitation; 2015-2016, JRRD was ended by VA and was transferred to PLOS.)
- **Journal of Tissue Viability, Editorial Board** (the official journal of the **Tissue Viability Society (TVS)**; JCR, Nursing, Q1; 2014-present)

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 Engineering Online, Cardiopulmonary Physical Therapy Journal, Clinical Biomechanics, Diabetes Technology and Therapeutics, European Journal of Physical and Rehabilitation Medicine, Frontiers in Physiology, IEEE Transactions on Biomedical Engineering, Journal of Allied Health, Journal of American Geriatric Society, Journal of Applied Physiology, Journal of Bioinformatics and Diabetes, Journal of Medical Devices, Journal of Sports Medicine and Physical Fitness, Journal of Tissue Viability, Medical Engineering and Physics, Microvascular Research, Neuromodulation, Physiological Measurement

Reviewer of Funding Agencies

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, National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR)
- 2017 Grant Reviewer, Paralyzed Veterans of America Research Foundation (PVA)
- 2017 Grant Reviewer, SBIR Phase 1, National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR)
- 2016 Grant Reviewer, SBIR Phase 2, National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR)
- 2016 Grant Reviewer, Merit Awards (2nd cycle), Rehabilitation Research and Development, US Department of Veterans Affairs (VA)
- 2016 Grant Reviewer, SBIR Phase 1, National Institute on Disability, Independent Living, and Rehabilitation Research (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)
- 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 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

- 2015-present **Beihang University**, School of Biological Science and Medical Engineering,
Beijing, China
 - Advisory committee member (Chaired by Savio Woo, Fellow of US
National Academy of Engineering and National Academy of Medicine)
(2015-present)
- 2015-present **China National Research Center for Rehabilitation Technical Aids**
(NRCRTA), Ministry of Civil Affairs, China
 - Academic committee member
- 2014-present **Hong Kong Food and Health Bureau**, Health and Medicine Research
Fund, Hong Kong SAR, China
 - Grant reviewer
- 2013-present **India Khorana Program & Bose Program**, India
 - Mentor and host lab director
- 2012-present **International Compression Club (ICC)**
 - Member, compression therapy guideline development
- 2016-2017 **International Convention on Rehabilitation Engineering and Assistive
Technology (i-CREATE)**, Coalition on Rehabilitation Engineering and
Assistive Technology of Asia
 - Advisory committee member
 - Reviewer, annual conference
- 2015-present **QS Global Academic Survey**, England
 - Participant
- 2015-present **Taiwan Ministry of Science and Technology**, New Partnership Program
for the Connection to the Top Labs in the World, Taiwan
 - Mentor and host lab director
- 2015-present **World Health Organization (WHO), Global Cooperation on Assistive
Technology (GATE), Geneva, Switzerland**
 - 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)

Professional Organizations

Active

- 2001-present **Rehabilitation Engineering and Assistive Technology Society of North America (RESNA)** (2001-2004: student member, 2004-present: member)
- Vice Chair, International Special Interest Group (2017-present)
 - Chair, Scientific Papers of annual conferences (2014-present)
 - 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, Conference Committee (2013-present)
 - Member, Research Committee (2013-present)
 - Member, Student Development Committee (2012-2013)
 - Reviewer, Scientific Papers (2009-present)
 - Reviewer, Instructional Courses and Workshops (2009-2017)
 - Reviewer, Student Scientific Paper Competition (2009-present)
- 2013-present **World Association for Chinese Biomedical Engineer (WACBE)**
- Councilor (2017-present)
 - Editor, Newsletters (2017-present)
 - Member, Scientific Program Committee (2016-present)

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)

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

- 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-present **Member, IRB Committee on Bio-Medical Research, UIUC** (Chair: Patricia Jones)
- 2016-present **Member, Senate Committee on Equal Opportunity and Inclusion** (Chair: Kathy Oberdeck)

- 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

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

- 2014 Member, Rehabilitation Engineering White Paper Committee, College of Applied Health Sciences, UIUC (Chair: Jake Sosnoff)
- 2013-2014 Member, Search Committee, 2 open rank faculty positions in Disability and Rehabilitation Sciences, College of Applied Health Sciences, UIUC (Chair: Ken Watkin)
- 2010-2012 Chair, Elections Committee, College of Allied Health, OUHSC (Chair-elect in 2010-2011)
- 2010-2012 Member, Graduate Council, College of Allied Health, 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)
- 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, Ph.D. Program in Rehabilitation Science, SHRS, Pitt (Chair: Gina Bertocci)

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

- 2018-present Member, KCH Framework Development committee (Chair: Sean Mullen)
- 2017-2018 Member, Search Committee for an open rank faculty on Health, Aging and Technology (Chair: Jake Sosnoff)

2017-2018	Member, Search Committee for an assistant/associate professor on Exercise Psychology (Chair: Steve Petruzzello)
2017	Member, Committee on CHLH Graduate Specializations and Concentrations (Chair: Steve Notaro)
2016-present	Representative, KCH Representative to the IRB Committee, UIUC
2016-present	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)
2012-present	Graduate Faculty (tenured status), 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
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

Biography

Yih-Kuen Jan, PhD is a tenured Associate Professor and Director of Rehabilitation Engineering Lab at the University of Illinois at Urbana-Champaign (UIUC). Dr. Jan obtained his PhD in Rehabilitation Science and Technology from the University of Pittsburgh in 2004. His research focuses on assistive technology, cardiovascular dynamics and soft tissue biomechanics in people with disabilities. His research has been supported by the NIH, NIDILRR, and PVA. Dr. Jan is a member of the Assistive Technology Standards Board, Conference Committee and Research Committee of the Rehabilitation Engineering and Assistive Technology Society of North America (RESNA). He is a member of World Health Organization's Global Cooperation on Assistive Technology (GATE). Dr. Jan serves as a councilor of the World Association of Chinese Biomedical Engineers (WACBE). Dr. Jan is an editor of Veterans Disability and Rehabilitation Research Channel (formerly JRRD). He serves as an associate editor and editorial board member on many prestigious journals, including Journal of NeuroEngineering and Rehabilitation, PLOS ONE, Frontiers in Physiology, Assistive Technology, and Journal of Tissue Viability. Dr. Jan has published more than 50 journal papers, 10 book chapters, and 60 proceeding papers. He is an active grant reviewer for several funding agencies, including NIDILRR and NIH. He is a naturalized citizen of the United States.