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Rehabilitation Engineering Lab, DRES
Department of Kinesiology and Community Health
University of Illinois at Urbana-Champaign
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Educational Experience

- 2004-2006 **Postdoc in Rehabilitation Technology**, University of Pittsburgh
Mentors: David Brienza, PhD and Michael Boninger, MD
Postdoc project: A study of biophysical and microvascular function of individuals with spinal cord injuries
- 2000-2004 **Ph.D. in Rehabilitation Science**, University of Pittsburgh
Committee: David Brienza, PhD (chair), Michael Boninger, MD, George Carvell, PT, PhD, Mary Jo Geyer, PT, PhD, and David Vorp, PhD
Dissertation: A study on skin blood flow mechanisms using wavelet analysis: implications for pressure ulcer prevention
- 1995-1997 **M.S. in Biomedical Engineering**, National Yang-Ming University, Taiwan
Thesis: A study of selecting a right prosthetic foot and socket alignment in people with below-knee amputation
- 1991-1995 **B.S. in Physical Therapy**, National Yang-Ming University, Taiwan
Senior project: Balance and falls in the elderly

Professional Experience

- 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 (2012-present)
Affiliate, Center for Health, Aging and Disability (2012-present)
Affiliate, Chicago Center for Diabetes Translation Research, University of Chicago (2015-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, Oklahoma Center for Neuroscience Program (2010-2012)
Adjunct Assistant Professor, Department of Aerospace & Mechanical Engineering (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, RERC on Spinal Cord Injury, Pitt (National Institute on Disability, Independent Living and Rehabilitation Research, 2006-2008)

Researcher, Quality of Life Technology Engineering Research Center, Carnegie Mellon University & Pitt (National Science Foundation, 2006-2008)

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

Postdoctoral Fellow (2004-2006)

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

- 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

- 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 for the academic year 1995-1996)
- 1994 Academic Achievement Awards (Highest GPA.), Department of Physical Therapy, National Yang-Ming University, Taipei, Taiwan (02/1994 for the junior year, Fall semester, and 09/1994 for the junior year, Spring semester)
- 1993-1995 Outstanding College Students Scholarships, The Jans Kindred Association, Taiwan. (08/1993, 02/1994, 08/1994, & 02/1995)

RESEARCH AND SCHOLARSHIP

Research Grant Awards – Extramural

1. **Department of Veterans Affairs**, 2015-2017, Direct Cost \$40,000, Project title: Sustainable sports science instructional program for VA athletes and coaches (PI: Ian Rice), Role: Co-I
2. **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
3. **National Institutes of Health**, INBRE Junior Scholar Award (P20GM103447), 2011-2014, 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
4. **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

5. **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
6. **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
7. **National Institutes of Health** (R03HD060751-01S1), 2009-2010, Total Cost \$20,000, Project title: Administrative supplement for a near infrared spectroscopy, Role: Principal Investigator
8. **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
9. **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
10. **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
11. **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
12. **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
13. **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
14. **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
15. **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
16. **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

17. **National Institute on Disability, Independent Living and Rehabilitation Research**, Advanced Rehabilitation Research Training Program (ARRT, H133P970013), Total Cost \$727,308 (PI: Cliff Brubaker and David Brienza), Project title: Research Training in Rehabilitation Science with Special Emphasis on Disability Studies, Role: Graduate Student Researcher (2002-2004)
18. **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; SCI: Science Citation Index; SSCI: Social Science Citation Index; EI: Engineering Index)

1. 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*, accepted. (SCI)
2. Chen CL, Lung CW, **Jan YK**, Liau BY, and Tang JS* (2017). The effects of cupping therapy on muscle fatigue of upper extremity muscles - a pilot study. *Advances in Intelligent Systems and Computing*, accepted. (EI)
3. Liau 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. *Advances in Intelligent Systems and Computing*, accepted. (EI)
4. Lung CW, Chen CL, **Jan YK**, Chao LF, Chen WF, and Liau BY* (2017). Activation sequence patterns of forearm muscles for driving a power wheelchair. *Advances in Intelligent Systems and Computing*, accepted. (EI)
5. 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. (PubMed)
6. Liao F and **Jan YK*** (2016). Using modified sample entropy to characterize skin blood flow dynamics in older adults. *Frontiers in Physiology*, 7, 126. (SCI)
7. 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. (SSCI)
8. Lung CW, Cheng TY, Li YJ, Liau BY, and **Jan YK*** (2016). Development of an intermittent pneumatic compression system to manage soft tissue mechanical properties. *Advances in Intelligent Systems and Computing*, 482, 317-325. (EI)

9. 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. (EI)
10. 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. (SSCI)
11. 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. (SCI)
12. Koontz AM*, Ding D, **Jan YK**, de Groot S, and Hansen A (2015). Editorial – wheeled mobility. *Biomed Research International*, 2015, 138176. (SCI)
13. 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. (SCI)
14. 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. (SCI)
15. 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. (SCI)
16. 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. (SCI)
17. 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. (SCI)
18. **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. (SCI)
19. 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) (PubMed)
20. **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. (SCI)
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: a preliminary report. *Archives of Physical Medicine and Rehabilitation*, 94(10), 1982-1989. (SCI)
22. **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. (SCI)
23. 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, 240-247. (EI)
 24. 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, 332-337. (EI)
 25. **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. (SCI)
 26. 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. (SCI)
 27. **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. (SCI)
 28. **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. (SCI)
 29. **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. (SCI)
 30. 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. (SCI)
 31. 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. (PubMed)
 32. 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), 787-800. (SCI)
 33. 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. (SCI)
 34. **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. (SCI)
 35. **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, 345-355. (EI)
 36. **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. (SCI)

37. 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. (SCI)
38. **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. (SCI)
39. **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. (SCI)
40. **Jan YK** and Brienza DM* (2006). Technology for pressure ulcer prevention. *Topics in Spinal Cord Injury Rehabilitation*, 11(4), 30-41.
41. **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. (SCI)
42. 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. (SCI)
43. 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), 797-806. (SCI)
44. **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.
45. Chang MK, Yang SW*, and **Jan YK** (1995). Gait analysis of below-knee amputees. *Chinese Journal of Medical and Biological Engineering*; 15, 315-328.

Book Chapters and Monographs

1. 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: Prognostic Significance, Risk Factors and Clinical Applications*. Nova Science Publishers, Hauppauge, NY, pp 1-15. (ISBN: 978-1-63463-772-5)
2. 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: T  ot L, Meaume S, Akita S, Ennis WJ, and del Marmol V, eds. *Skin Necrosis*. Springer, New York, NY, pp 9-18. (ISBN: 978-37-091-1240-3)
3. 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.
4. 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)
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. **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)
7. **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)
8. 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)
9. **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.
10. 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.
11. **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. 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. (in review)
2. Chen CL, Lung CW, **Jan YK**, Liau BY, 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. (EI)
3. Liau 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. (EI)
4. Lung CW, Chao LF, Chen WF, Chen CL, **Jan YK**, Liau 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. (EI)
5. **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.
6. Lung CW, Cheng TY, Li YJ, Liau 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. (EI)

7. Lung CW, Cheng TY, **Jan YK**, Chen HC, and Liau 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. (EI)
8. 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.
9. 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.
10. 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.
11. 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. (EI)
12. 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. (EI)
13. 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. (EI)
14. Yang TD, Patel A, and **Jan YK** (2014). Individualized performance quantification of wheelchair driving. RESNA Annual Conference, Indianapolis, IN, June 11-15.
15. 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.
16. 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. (EI)
17. **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.
18. **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)
19. 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. (EI)
20. 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.
(EI)

21. **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.
22. 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.
23. 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.
24. 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.
25. 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. (EI)
26. 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. (EI)
27. **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. (EI)
28. **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)
29. 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)
30. 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)
31. **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.
32. 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) (SCI)
33. **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)
34. 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.
 35. **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.
 36. **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.
 37. **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.) (SCI)
 38. 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.
 39. 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.
 40. **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.
 41. **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.
 42. **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.
 43. **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.
 44. **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.
 45. **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.
 46. **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.

47. 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.
48. **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.
49. 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.
50. **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.
51. **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.
52. **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.
53. **Jan YK**, Yang SW, and Cheung W (1996). Gait analysis of different prosthetic feet. Annual Meeting of Chinese Prosthetics and Orthotics Society, Taipei, Taiwan.
54. 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 (from universities in USA, China, Hong Kong, and Taiwan)

1. **Jan YK** (2017). Biomechanical analyses of the risks for diabetic foot ulcers. University of Chicago, Chicago Center for Diabetes Translation Research, Chicago, IL, March 24.
2. **Jan YK** (2016). Global Disability and Rehabilitation Engineering Initiatives. Xi'an Jiaotong University, Institute of Biomedical Engineering, Xi'an, China, May 23.
3. **Jan YK** (2016). Rehabilitation Engineering and Assistive Technology for improving the quality of life in people with disability. A special lecture for Technology and Industry course, Beihang University, Beijing, China, May 18
4. **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.
5. **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.

6. **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.
7. **Jan YK** (2016). Wheelchair and seating research for people with disabilities. Beihang University, School of Biological Science and Biomedical Engineering, Beijing, China, May 9.
8. **Jan YK** (2016). Microvascular physiology and soft tissue biomechanics of pressure ulcers/injury. Carle Foundation Hospital Wound Healing Clinic, April 29.
9. **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.
10. **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.
11. **Jan YK** (2015). Development of methods for assessing wheelchair driving and seating performance. National Changhua University of Education, Department of Electrical Engineering, Taiwan, June 24.
12. **Jan YK** (2015). Adaptive sports and cardiovascular function in wheelchair users. Kaohsiung Medical University, Department of Sports Medicine, Kaohsiung, Taiwan, June 18.
13. **Jan YK** (2015). Soft tissue biomechanics and injury prevention. Department of Sports Medicine, Kaohsiung Medical University, Department of Sports Medicine, Kaohsiung, Taiwan, June 18.
14. **Jan YK** (2015). Microvascular remodeling to physical activity and inactivity. Kaohsiung Medical University, Department of Sports Medicine, Kaohsiung, Taiwan, June 17.
15. **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.
16. **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.
17. **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.
18. **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.
19. **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.
20. **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.
21. **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, January 17.

22. **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, March 7.
23. **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.
24. **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.
25. **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.
26. **Jan YK** (2010). Soft tissue biomechanics and pressure ulcer prevention. Neuroscience Postdoc/Junior Faculty meetings, Oklahoma Center for Neuroscience, College of Medicine, OUHSC, September.
27. **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.
28. **Jan YK** (2009). Blood flow and tissue mechanics factors in pressure ulcers of people with disabilities. Physiology Research Seminars, Department of Physiology, OUHSC, April.
29. **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.
30. **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.
31. **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.

TEACHING EXPERIENCE

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

- KIN 494 **Rehabilitation Biomechanics**, Instructor (2013-present)
- KIN 199 Introduction to **Rehabilitation Sciences**, Instructor (2017-present)
- CHLH 494 **Grant Writing**, Instructor (2017-present)
- REHB 501 **Rehabilitation Research**, Instructor (2013-2015)
- REHB/CHLH 594 Advances in **Rehabilitation Technology**, Instructor (2013-2017)
- KIN 565 Teaching in the Professoriate, Mentor (Fall 2016)
- CHLH 407/KIN 407/REHB 407/ANTH 404 **Disability, Culture, and Society**, Co-Instructor (with Laura Rice, Spring 2016)
- KIN 457 Motor Learning and Control, Co-Instructor (with Jake Sosnoff, Spring 2014)

University of Oklahoma Health Sciences Center (2008-2012)

- RS 5153 **Biomechanics**, Instructor
- PHTH 8132 **Cardiopulmonary Rehabilitation**, Co-Instructor (with Jane Soltani)
- 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
- PHTH 8133/OCTH 7143 Principles of Human Movement, Lab Faculty
- PHYO 5980 Research Master's Thesis, Instructor
- PHYO 5990 Special Studies, Instructor
- 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), 2002-2003 to Co-Instructor (with David Brienza), 2004-2008

Training Grant Awards

- **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)
- **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 (round trip international airfare between China and USA for a visiting scholar); Project title: Research collaboration of a NIDRR-funded grant with Xi'an Children Hospital, Xi'an, China. Role: Principal Investigator (2008 - 2009)

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, P. R. of 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

- Ayman Mohamed, PT, Director of Physiotherapy and Assistant Lecturer, Faculty of Physical Therapy, Beni Suef University, Egypt. Role: Mentor (2016-present)
- Jicheng Fu, PhD, Assistant Professor of Computer Science at the University of Central Oklahoma. Project title: Applications of artificial neural network on individualized guidance of wheelchair tilt and recline usage, Role: Mentor (summer 2013)

- Chi-Wen Lung, PhD, Associate Professor of Creative Product Design at the Asia University, Taiwan. Project title: Diabetic foot biomechanics, Role: Mentor (summer 2011, 2013, 2014, 2016)
- Stephanie Burns, PT, PhD, Physical Therapist at the Oklahoma City VA Medical Center. Project title: Diabetic foot ulcer research, Role: Mentor (2011-2012)
- Fuyuan Liao, PhD received his Ph.D. degree in Biomedical Engineering from the Xi'an Jiaotong University, China. Project title: Nonlinear dynamics of skin blood flow oscillations, Role: Mentor (2009-2015)
- Yanni Chen, MD, PhD, Director of Department of Pediatric Rehabilitation and Vice President at the Xi'an Children's Hospital, China. Project title: Comparative effects of sitting and standing postures on pressure ulcer risk in child wheelchair users with cerebral palsy, Role: Mentor (2008-2009)

Doctoral Students Supervised

- Sicong Ren, PhD Student, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign, Role: Advisor and Committee Chair (Fall 2017-present)
- Andrew Hua, MD/PhD Student, 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, PhD Student, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign, Role: Committee Member (2017-present, Chair: Steve Petruzzello)
- Ming Chun Choi, PhD Student, Department of Rehabilitation Science, Hong Kong Polytechnic University, Hong Kong, Role: External Examiner (2016-2017, Chair: Gladys Cheing)
- Jennifer Dysterheft, PhD Student, Department of Kinesiology and Community health, University of Illinois at Urbana-Champaign, Role: Committee Member (2015-2016, Chair: Ian Rice)
- Tim D. Yang, PhD Student, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign (BS in Computer Science from the University of Central Oklahoma, Edmond, OK, 2012), Role: Advisor and Committee Chair (2012-present)
- Jian Jiao, PhD Student, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign (BE degree in Electronic Information Engineering, Southwest University of Science and Technology, China, 2009; MS in Biomedical Engineering, University of Dundee, UK, 2010), Role: Advisor and Committee Chair (2014)
- Daqian Rong, PhD Student, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign (MS degree in Mathematics from the University of Central Oklahoma, Edmond, OK 2011), Role: Advisor and Committee Chair (2012-2015)
- Xiangming Zhang, PhD Student, Program in Bioengineering, University of Oklahoma, Norman. Dissertation title: Transition of Chinchilla ear tissue dynamic properties into FE model of human ear, Role: Committee Member (2011-2012, Chair: Rong Gan)

Masters' & Honors Students Supervised (Thesis Based)

- Bernard Lee, Master's Student, Department of Physiology, College of Medicine, University of Oklahoma Health Sciences Center (BS degree in Biochemistry from the University of Texas at Austin, TX, 2008), Thesis title: The effects of cooling on pressure ulcer development in rats, Role: Advisor and Committee Chair (2009-2012)

- First job placement: Research assistant, University of Washington, Seattle, WA
- Jonathan S. Akins, Master's Student, Department of Bioengineering, University of Pittsburgh, Pittsburgh, PA (BS degree in Mechanical Engineering from Oklahoma State University), Thesis title: Investigation of interface shear stresses on wheelchair seat cushions and the effects on subcutaneous buttock soft tissues, Role: Committee Member (2006-2008, Chair: David Brienza)
 - First job placement: PhD student in Bioengineering, University of Pittsburgh, PA
- Yi-Ting Tzen, Master's/PhD Student, Department of Rehabilitation Science and Technology, University of Pittsburgh, Pittsburgh, PA (BS degree in Physical Therapy from National Taiwan University, Taiwan), Thesis title: Effects of local cooling on skin perfusion response to pressure: implications to pressure ulcer prevention, Role: Committee Member (2005-2008, Chair: David Brienza)
 - First job placement: Postdoc in University of Pittsburgh, Pittsburgh, PA.
- Gregory Meloy, Bachelor of Philosophy (B.Phil.) Student, University Honors College, University of Pittsburgh, Pittsburgh, PA , Thesis title: Analysis of the relationship between sacral skin blood flow and transcutaneous oxygenation in response to causative factors of pressure ulcers in healthy subjects, Role: Committee Member (2005-2007, Chair: David Brienza)
 - First job placement: Drexel University School of Medicine, PA

Visiting Students & Research Interns Supervised

- Yu Shu, Master's Student, Department of Biomedical Engineering, National Cheng Kung University, Taiwan. Role: Mentor (2017-2018)
- Brandon Leung, Undergraduate Student, Department of Mechanical Engineering, UIUC. Role: Mentor (Spring 2017-present)
- Weiyan Ren, PhD Student, School of Biological Science and Medical Engineering, Beihang University, Beijing, China. Role: Mentor (Fall 2016)
- Karan Trikha, Undergraduate Student, Department of Mechanical Engineering, UIUC. Role: Mentor (Fall 2016-present)
- Shashwat Gupta, Undergraduate Student, Department of Mechanical Engineering, UIUC. Role: Mentor (Fall 2016-present)
- Hoi-Ching Ko, Undergraduate Student, Department of Biomedical Engineering, Hungkuang University, Taiwan. Role: Mentor in the Hungkuang Overseas Research Internship (Summer 2016)
- Li-Wen Zhang, Undergraduate Student, Department of Biomedical Engineering, Hungkuang University, Taiwan. Role: Mentor in the Hungkuang Overseas Research Internship (Summer 2016)
- Yu-Ting Jiang, Undergraduate Student, Department of Biomedical Engineering, Hungkuang University, Taiwan. Role: Mentor in the Hungkuang Overseas Research Internship (Summer 2016)
- Ryan Juguan, Undergraduate Student, Department of Recreation, Sport and Tourism, UIUC. Role: Mentor (fall 2014- spring 2015)
- Chuanhao Zhuge, Undergraduate Student, Department of Electrical and Computer Engineering, UIUC. Role: Co-Mentor with Deming Chen (summer 2014-summer 2015)
- Kevin Kibler, Undergraduate Student, Department of Mechanical Science and Engineering, University of Illinois at Urbana-Champaign. Role: Co-Mentor with Liz Hsiao-Wecksler (Summer 2014-spring 2015)

- Ann David, MS student in Bioengineering, Christian Medical College, India. Role: Mentor in the **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, Undergraduate Student, Department of Biomedical Engineering, Hungkuang University, Taiwan. Role: Mentor in the Hungkuang Overseas Research Internship (Summer 2014)
- Yu-Xuan Huang, Undergraduate Student, Department of Biomedical Engineering, Hungkuang University, Taiwan. Role: Mentor in the Hungkuang Overseas Research Internship (Summer 2014)
- Ling-Yi Wang, Undergraduate Student, Department of Biomedical Engineering, Hungkuang University, Taiwan. Role: Mentor in the Hungkuang Overseas Research Internship (Summer 2014)
- Ameya D. Patil, Undergraduate Student, Electrical Engineering, Indian Institute of Technology, Hyderabad, India. Role: Mentor in the **Khorana program** (administered by the University of Wisconsin-Madison, the Government of India, and Indo-US Science and Technology Forum) (Summer 2013)
- Tiffany Varughese, Undergraduate Student, Bioengineering, Rice University, Houston, TX. Role: Mentor (Summer 2012)
- Sam Howard, Undergraduate Student, Biology, Oral Roberts University, Tulsa, Oklahoma. Role: Mentor (Summer 2012)
- Grayson Starbuck, Doctor of Physical Therapy student, University of Oklahoma Health Sciences Center, Oklahoma. Role: Mentor (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, Undergraduate Student, Computer Science, University of Central Oklahoma, Edmond, Oklahoma. Role: Mentor in the **NIH INBRE program** (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
 - First job placement: accepted by the UIUC PhD program in kinesiology
- Alexandra Tran, Undergraduate Student, Cell and Molecular Biology program, Oklahoma City University, Oklahoma City, Oklahoma. Role: Mentor (Summer 2011)
- Zachary A. Yokell, Undergraduate Student, Chemical Engineering program, University of Oklahoma, Norman, Oklahoma. Role: Mentor (Summer 2011)
- Hem R. Gurung, Undergraduate Student, Department of Biological Sciences, Cameron University, Lawton, Oklahoma. Role: Mentor in the **NIH INBRE program** (Summer 2011)
 - First job placement: OUHSC GPiBS PhD program in 2012
- Tiwei Zhu, BS, Master's student, Department of Mathematics and Statistics, University of Central Oklahoma, Edmond, Oklahoma. Role: Co-Mentor with Maria Jones (Spring 2011)
- Daqian Rong, BS, Master's Student, Department of Mathematics and Statistics, University of Central Oklahoma, Edmond, Oklahoma. Role: Co-Mentor with Maria Jones (Spring 2011)
 - First job placement: PhD program in Bioengineering, OU in 2011
- Lena J. Clagg, Undergraduate Student, Program in Agriculture Equine Science, Redlands Community College, El Reno, Oklahoma. Role: Mentor in the **NIH INBRE program** (Summer 2010)
 - First job placement: Oklahoma State University College of Veterinary Medicine in 2012

- Elizabeth A. Copenhaver, Undergraduate Student, Department of Biomedical Engineering, Vanderbilt University, Nashville, TN. Role: Co-Mentor with David Brienza in the **NSF REU program** (Summer 2006)
- Justin L. Kassie, Undergraduate Student, Department of Mechanical Engineering, Carnegie Mellon University (CMU), Pittsburgh, PA. Role: Graduate Student Mentor for David Brienza in the CMU summer research program (Summer 2002)

Research Staff Supervised

- Denisse Lopez, Research Coordinator, Department of Rehabilitation Sciences, OUHSC (Ms. Lopez was also a community college student.). Role: Supervisor (2011-2012)
- Eym-Soon Chong, BS, Research Coordinator, Department of Rehabilitation Sciences, OUHSC (Mr. Chong holds B.S. in Computer Science from the University of Central Oklahoma, PT Aide certificate). Role: Supervisor (2011-2012)
- Mandip Aryal, MS, Research Technician, Department of Rehabilitation Sciences, OUHSC (Mr. Mandip holds M.S. in Engineering Physics from the University of Central Oklahoma, Edmond, OK, 2009). Role: Supervisor (2009-2010)
- Miziana Abyad, BBA, Research Technician, Department of Rehabilitation Sciences, OUHSC (Ms. Abyad holds BBA in Business Administration from the University of Oklahoma, OK, 2008). Role: Supervisor (2009)

PROFESSIONAL SERVICE

Editor and Editorial Board of Journals

- **Editorial Board, Assistive Technology (official journal of RESNA, SSCI, Q1; 2014-present)**
- Guest Editor, Wheeled Mobility special issue, Biomed Research International (SCI, Q3; 2014-2015)
- **Associate Editor, Biomechanics section, Frontiers in Bioengineering and Biotechnology (2015-present)**
- Topic Editor, Injury Prevention and Rehabilitation research topic, Frontiers in Bioengineering and Biotechnology (2015-2016)
- **Associate Editor, Clinical and Translational Physiology section, Frontiers in Physiology (SCI, Q1; 2015-present)**
- Editorial Board, Journal of Bioinformatics and Diabetes (2014-present)
- **Editorial Board, Journal of Rehabilitation Research and Development (official journal of US Department of VA, SSCI, Q2, SCI, Q3; 2015-2016, JRRD was transferred to PLOS ONE)**
- **Editorial Board, Journal of Tissue Viability (official journal of Tissue Viability Society, SCI, Q1; 2014-present)**
- Editorial Board, JSM Burns and Trauma (2016-present)
- **Academic Editor, PLOS ONE (SCI, Q1, 2016-present)**
- **Editor, Veterans Disability & Rehabilitation Research Channel (formerly JRRD), PLOS ONE (SCI, Q1, 2017-present)**
- Editor, Rehabilitation section, WebMed Central (2012-present)

Reviewer of Journals

- American Journal of Physical Medicine and Rehabilitation (SCI)
- Archives of Physical Medicine and Rehabilitation (SCI)
- Assistive Technology (SSCI)
- Australian Occupational Therapy Journal (SCI)
- Cardiopulmonary Physical Therapy Journal
- Diabetes Technology and Therapeutics (SCI)
- European Journal of Physical and Rehabilitation Medicine (SCI)
- Frontiers in Physiology (SCI)
- IEEE Transactions on Biomedical Engineering (SCI)
- Journal of Allied Health
- Journal of Applied Physiology (SCI)
- Journal of Bioinformatics and Diabetes
- Journal of Rehabilitation and Research Development (SCI)
- Journal of Sports Medicine and Physical Fitness
- Journal of Tissue Viability (SCI)
- Medical Engineering and Physics (SCI)
- Microvascular Research (SCI)
- Neuromodulation (SCI)
- Physiological Measurement (SCI)

Reviewer of Extramural Grants

2017	Grant Reviewer, SBIR Phase 1, National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR)
2016	Grant Reviewer, Sparks Charity
2016	Grant Reviewer, SBIR Phase 2, National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR)
2016	Grant Reviewer, Merit Awards (2 nd 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 (1 st 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 ZRG1 Moss-D12 (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 & Services

- 2017 Invited Expert, School of Biological Science and Medical Engineering, Beihang University, Beijing, **China**
- 2016 Reviewer, Canada First Research Excellence Fund (CFREF), Tri-Granting Council Program, Government of **Canada**
- 2016-present **International Advisory Committee Member, International Convention on Rehabilitation Engineering and Assistive Technology (i-CREATe), Coalition on Rehabilitation Engineering and Assistive Technology of Asia**
- 2016 Reviewer, Canada Research Chairs Program, Tri-Granting Council Program (the Social Sciences and Humanities Research Council (SSHRC), the Natural Sciences and Engineering Research Council (NSERC), and the Canadian Institutes of Health Research (CIHR)), Government of **Canada**

- 2016 Invited Expert, Institute of Biomedical Engineering, Xi'an Jiaotong University, Xi'an, **China**
- 2016 Invited Expert, School of Biological Science and Medical Engineering, Beihang University, Beijing, **China**
- 2015-present **Top Lab Director, New Partnership Program for the Connection to the Top Labs in the World (aka Dragon Gate), Ministry of Science and Technology, Taiwan**
- 2015-present **Academic Committee Member, National Research Center for Rehabilitation Technical Aids (NRCRTA), Ministry of Civil Affairs, China**
- 2015-present **Advisory Committee Member, (Chaired by Savio Woo, Fellow of US National Academy of Engineering and US National Academy of Medicine), School of Biological Science and Medical Engineering, Beihang University, Beijing, China**
- 2015-present Participant, QS Global Academic Survey, **England**
- 2014-present Grant Reviewer (mail), Health and Medicine Research Fund, Food and Health Bureau, Hong Kong Special Administrative Region, **China**
- 2013-present Mentor, Khorana Program (administered by the University of Wisconsin-Madison), Government of **India**

Professional Societies and Committees

Active

- 2010-present IEEE Engineering in Medicine and Biology Society (EMBS)
- Reviewer, Student Scientific Paper Competition (2010)
- 2012-present International Compression Club (compression therapy guideline development)
- 2001-present **Rehabilitation Engineering and Assistive Technology Society of North America (RESNA)** (2001-2004 student member, 2004-present member)
- **Chair, Scientific Papers (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-present)**
- **Reviewer, Student Scientific Paper Competition (2009-present)**
- 2013-present **World Association for Chinese Biomedical Engineer (WACBE)** (2013-2017 member, 2017-present life member)
- Member, Scientific Program Committee (2016-present)
- 2015-present **World Health Organization (WHO)**
- **Member, Global Cooperation on Assistive Technology (GATE)**
- **Participant, Global Research, Innovation, and Education in Assistive Technology (GREAT) Summit (2017)**

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)
- 1996-2000 Physical Therapist Association of Republic of China (#927)

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

- 2017 Judge, Poster Competitions, Undergraduate Research Symposium, UIUC
- 2017-present Member, IRB Committee on Bio-Medical Research, UIUC**
- 2016-present Member, Senate Committee on Equal Opportunity and Inclusion**
- 2016-present Faculty Senator, The Senate of the Urbana-Champaign Campus, University of Illinois**
- 2016 Member, Program Committee, Design Center Inaugural Symposium, UIUC
- 2015-2016 Member, Design Center Program Working Group Committee, Provost's ad-hoc committee, UIUC
- 2013-2015 Grant Reviewer, Campus Research Board, UIUC
- 2012 Member, Admission Committee, Graduate Program in Biomedical Science (GPiBS, an umbrella program for all first-year PhD students), OUHSC
- 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
- 2013-2014 Member, Search Committee, 2 open rank faculty positions in Disability and Rehabilitation Sciences, College of Applied Health Sciences, UIUC
- 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

2009-2011	Member, Research Committee, College of Allied Health, OUHSC
2007-2008	Member, Nominating Committee, School of Health and Rehabilitation Sciences (SHRS), Pitt
2007-2008	Member, Safety Committee, SHRS, Pitt
2004-2008	Member, Committee of Biomechanics Preliminary Exam, Ph.D. Program in Rehabilitation Science, SHRS, Pitt

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

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
2012-present	Graduate Faculty, Department of Kinesiology and Community Health, UIUC
2011-2012	Member, Program Evaluation Committee, Department of Rehabilitation Sciences, OUHSC
2010-2012	Member, Task Group for Departmental Strategy Plan on Research in 2010-2015, Department of Rehabilitation Sciences, OUHSC
2010-2012	Member, Task Group for Departmental Strategy Plan on Post-Professional Program in 2010-2015, Department of Rehabilitation Sciences, OUHSC
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 and Technology, Pitt

Biography

Yih-Kuen Jan, PT, 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 completed his Postdoc in Rehabilitation Technology from the University of Pittsburgh. His research focuses on the development of assistive devices and technologies for people with disabilities and the promotion of social inclusion of people with disabilities. His research has been supported by the NIH, NIDILRR, and PVA. Dr. Jan is the Chair of Scientific Papers and is a member of the Assistive Technology Standards Board and the Research Committee of the Rehabilitation Engineering and Assistive Technology Society of North America (RESNA). He is a member of WHO's Global Cooperation on Assistive Technology and is a Faculty Senator of the Equal Opportunity and Inclusion Committee at UIUC. He serves on the advisory board for China's National Research Center for Rehabilitation Technical Aids and Asia's International Convention on Rehabilitation Engineering and Assistive Technology. Dr. Jan is recognized by Taiwan's Ministry of Science and Technology as a Top Lab Director in the world. Dr. Jan is an editor of PLOS Veterans Disability and Rehabilitation Research Channel (formerly JRRD) and is an academic editor of PLOS ONE. He is also an associate editor of Frontiers in Physiology and Frontiers in Bioengineering and Biotechnology. He serves on the editorial board of many prestigious

journals, including Assistive Technology and Journal of Tissue Viability. Dr. Jan is passionate about advancing knowledge to help people with disabilities and has published more than 50 peer-reviewed papers and 80 proceeding papers. He is a grant reviewer for NIH, NIDILRR, DOD and VA. He is a naturalized citizen of the United States.

Biography in Chinese

詹益坤博士是美國伊利諾大學香檳分校的副教授(終身職)及康復工程實驗室主任。詹教授在美國匹茲堡大學獲得康復科學博士(2004)和康復工程博士後研究(2006)。他在台灣國立陽明大學獲得物理治療學士(1995)和生物醫學工程碩士(1997)。詹博士是康復工程及科學領域的著名專家，他的研究主要集中在康復輔具及科技的發展，為殘疾人士改善生活品質。他現為北美康復工程學會擔任科學論文主席和康復輔具及科技標準委員會的成員。他是世界衛生組織的全球康復輔具合作的成員、亞洲康復工程及輔具學會諮詢委員、中國國家康復輔具研究中心的學術委員、台灣科技部認定世界頂尖實驗室主任。詹博士在軟組織微循環建模與分析、壓瘡預防和治療等方面做出了開創性的工作，率先提出採用皮膚血流波動的特徵頻率評估軟組織活性的方法。他主持美國國立衛生研究院項目共超過2百萬美元，發表論文50多篇和會議論文80多篇。由於詹博士在康復科學及工程領域的突出貢獻，他受邀擔任多個著名期刊(SCI, Q1)的副主編及編委 (Assistive Technology, Frontiers in Physiology, J. of Tissue Viability, PLOS ONE)。他是美國衛生研究院，國防部和退伍軍人事務部的研究基金評審委員。