Curriculum Vitae
David Michael Brienza

Biographical

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Education

Undergraduate

1982-1986	University of Notre Dame Notre Dame, Indiana	BS	1986	Electrical Engineering

Graduate

1986-1991	University of Virginia Charlottesville, Virginia	MS Ph.D.	1988 1991	Electrical Engineering Electrical Engineering

Appointments and Positions

Academic

1986-1987	University of Virginia Department of Electrical Engineering Charlottesville, Virginia	Graduate Teaching Assistant
1987-1991	University of Virginia Rehabilitation Engineering Center Charlottesville, Virginia	Research Assistant
1991-1998	University of Pittsburgh School of Health and Rehab Sciences Pittsburgh, Pennsylvania	Assistant Professor (Tenure stream)
1998-2006	University of Pittsburgh School of Health and Rehab Sciences Pittsburgh, Pennsylvania	Associate Professor (Tenure)
1999-2006	University of Pittsburgh Department of Bioengineering Pittsburgh, Pennsylvania	Associate Professor (Secondary appointment)
2001-2005	University of Pittsburgh Rehabilitation Engineering Research Center on Wheeled Mobility	Director
2002-present	Xi'an Jiaotong University School of Life Sciences Xi'an, China	Adjunct Professor
2004-2015	University of Pittsburgh Rehabilitation Engineering Research Center on Telerehabilitation	Director
2006-present	University of Pittsburgh School of Health and Rehab Sciences Pittsburgh, Pennsylvania	Professor (Tenure)
2006-present	University of Pittsburgh Department of Bioengineering Pittsburgh, Pennsylvania	Professor (Secondary appointment)
2007-2014	University of Pittsburgh Rehabilitation Engineering Research Center on Spinal Cord Injury	Director
2002-present	University of Pittsburgh McGowan Institute for Regenerative Medicine Pittsburgh, Pennsylvania	Professor (Secondary appointment)
2012-2015	Department of Rehabilitation Science and Technology, Orthotics and Prosthetics Program	Interim Director

2012-2015	University of Pittsburgh School of Health and Rehabilitation Sciences	Associate Dean for Strategic Initiatives and Planning
2014-present	Duquesne University School of Nursing	Adjunct Faculty
2015-2018	University of Pittsburgh School of Health and Rehabilitation Sciences	Associate Dean for Research
2017-present	University of Pittsburgh Rehabilitation Engineering Research Center on Wheelchair and Seating Standards	Director
2019-present	University of Pittsburgh School of Health and Rehabilitation Sciences	Associate Dean for Technology and Innovation

Non-Academic Positions

1984, 1985	Harris Corporation Syosset, New York	Test Engineer
1986	National Security Agency Fort Meade, Maryland	Electronic Engineer
1989-1997	Pin Dot Products Niles, Illinois	Consultant on the development of seating products
1995-2000	Sentron Medical Cincinnati, Ohio	Consultant on the evaluation of seating products
1996-2000	ARTSCO Inc. Pittsburgh, Pennsylvania	Consultant on the development of cushion manufacturing systems
1996-1997	DEKA Manchester, New Hampshire	Consultant on seating products
1995-present	Various	Legal consulting IP/Patent litigation Personal Injury
1998,1999, 2003, 2013,2017-2019	Hill-Rom, Inc.	Consultant on seating and support surface products

2000-2003	Dynamic Contours, LLC	Research Scientist, Owner
2002-2006	SADMERC	Consultant on Medicare coding policy
2003	Smith & Nephew	Consultant on Pressure Ulcer Prevention
2005-2007	AireRx, LLC	Scientific Advisory Board
2013-2017	ROHO, Inc / Permobil	Scientific Advisory Board
2017-present	Molnlycke Health Care	Speaker
2017	Turncare Inc.	Scientific Advisor

Memberships in Professional and Scientific Societies

1986-2000	IEEE	Member
1988-present	Rehabilitation Engineering and Assistive Technology Association of North America (RESNA)	Member Fellow (2007)
1992-1997	Pittsburgh Assistive Technology Association	Member
1993-2000	IEEE Engineering in Medicine and Biology Society	Member
1995-2007, 2009-2016 2019-present	National Pressure Ulcer Advisory Panel	Board of Directors
1995-2003	Sigma Xi Scientific Research Society	Full Member
2001-2002	Association for the Advancement of Wound Care (AAWC)	Member
2004-present	American Institute for Medical and Biological Engineering	Fellow (elected)
2007-2015	American Telemedicine Association	Member
2009-2010	Biomedical Engineering Society	Member
2011-2018	American Congress of Rehabilitation Medicine	Member
2014-present	Wound Ostomy Continence Nursing Society	Associate Member

Leadership Positions in Professional Organizations

National Pressure Ulcer Advisory Panel

- Co-Chair of Support Surface Standards Committee (2001-2015, 2019-present)
- Collaborating Organization Representative (RESNA);
- Research Committee Co-chair (1996-98, 2001-2002);
- Board of Directors Member (2001-2003) (2004-2006) (2010-2012) (2013-2015)(2019-2021); elected for 5 terms; Research Committee Chair (2003-2005)

Rehabilitation Engineering and Assistive Technology Association of North America (RESNA)

- Special Interest Group-09 (Wheeled Mobility and Seating) Vice Chair (1995-96);
- Special Interest Group-09 (Wheeled Mobility and Seating) Chair (1997-99);
- Board of Directors (2001-04)
- Vice Chair Wheelchair Standards subcommittee on seat cushions (1999-2000)
- Assistive Technology Standards Board (2003-2016, 2019-present)

American Institute for Medical and Biological Engineering

- Nominations, Sub-committee on Rehab Engineering – Chair (2007-2009)
- Nominations Executive Committee – Member (2009-2013)

Biomedical Engineering Society

- 2009 Conference Track Chair (Orthopedics and Rehab Engineering)

Pittsburgh Assistive Technology Association

- President (1994)

Sigma Xi Scientific Research Society

- Pittsburgh Chapter Secretary (1994-96);
- Vice-President (1997-98);
- President (1999-2001)

School of Health and Rehabilitation Sciences

- SHRS Space Utilization Committee – Chair (1998-2015)
- Executive Committee – Secretary, 1995
- Associate Dean for Strategic Initiatives and Planning (2012-2015)
- Associate Dean for Research (2015-2018)
- Associate Dean for Technology and Innovation (2019-present)

Honors

2017 NPUAP Kosiak Award for significant contributions to the prevention and/or management of pressure ulcers through their leadership in the areas of research, education and/or patient care.

2007 Selected Fellow of the Rehabilitation Engineering and Assistive Technology Association of North America (RESNA)

2006 Advances in Skin and Wound Care Peer Reviewer of the Year Award

2004 Rehabilitation Engineering and Assistive Technology Association of North America (RESNA) Certificate of Appreciation

2004 Elected Fellow of the American Institute for Medical and Biological Engineering (AIMBE)

2003 RESNA Distinguished Service Award

2001 Elected to the Board of Directors of the Rehabilitation Engineering and Assistive Technology Association of North America (RESNA)

2001 Elected to National Pressure Ulcer Advisory Board of Directors. Reelected for second term in 2004.

1997 Chair of 1997 Annual RESNA Conference, Pittsburgh, PA June 20-24, 1997

1996 RESNA Sore Butts Cushion Design Competition, First Place

1996 Guest editor of *IEEE Transactions on Rehabilitation Engineering*, Special Issue on Soft Tissue Biomechanics

1995 The PinDot Award for outstanding paper published in *Assistive Technology*

1992 NIDRR, Mary E. Switzer, Rehabilitation Research Fellowship (Declined fellowship to assume position at the University of Pittsburgh.)

Publications

Refereed Articles (Student-Authors are *italicized*)

James, A. M., Pramana, G., Mhatre, A., **Brienza, D.**, Pearlman, J., Karg, P., & Schmeler, M. R. (2021). Development of a Wheelchair Repair Registry. Archives of Physical Medicine and Rehabilitation.

Padula, W.V., Cuddigan, J., Ruotsi, L., Black, J.M., **Brienza, D.,** Capasso, V., Cox, J., Delmore, B., Holden-Mount, S., Munoz, N., Nie, A.M., Pittman, J., Sonenblum, S., Tescher, A. and (2021), Best-Practices for Preventing Skin Injury Beneath Personal Protective Equipment During the COVID-19 Pandemic: A Position Paper from the National Pressure Injury Advisory Panel (NPIAP). Journal of Clinical Nursing. Accepted Author Manuscript. https://doi.org/10.1111/jocn.15682

Guzman, S., Allegretti, A. L., Kormos, R. L., & **Brienza, D. M.** (2021). A comparison of air-cell and gel surgical table pads and an evaluation of the influence of pressure distribution and other factors on pressure injury prevention. Journal of Tissue Viability, 30(1), 9-15. doi:10.1016/j.jtv.2020.12.006

Tzen, Y. T., **Brienza, D. M.,** & Karg, P. E. (2019). Implementing local cooling to increase skin tolerance to ischemia during normal seating in people with spinal cord injury. *Journal of Tissue Viability*.

Joy Nix, Richard M. Schein, Don Clayback, **David M. Brienza** & Mark R. Schmeler (2019): An exploratory study analyzing demographics and opinions of assistive technology professionals within the complex rehab technology industry, *Assistive Technology*, DOI:10.1080/10400435.2019.1619634

Harper, A. E., L. Terhorst, D. Brienza and N. E. Leland (2020). "Exploring the first pressure injury and characteristics of subsequent pressure injury accrual following spinal cord injury." The Journal of Spinal Cord Medicine: 1-6.

Huang W, Kabbani N, Brannan T, Lin MK, Theiss M, Hamilton J, Ecklund J, Conley YP, Vodovotz Y, **Brienza D**, Wagner AK. Association of a functional polymorphism in the CHRFAM7A gene with inflammatory response mediators and neuropathic pain after spinal cord injury. Journal of neurotrauma. 2019 Mar 29(ja).

Karg, P., Ranganathan, V., Churilla, M., & **Brienza, D.** (2019). Sacral skin blood flow response to alternating pressure operating room overlay, *Journal of Tissue Viability*.

Duvall, J., Karg, P., **Brienza, D.**, & Pearlman, J. (2019). Detection and classification methodology for movements in the bed that supports continuous pressure injury risk assessment and repositioning compliance. *Journal of tissue viability*, *28*(1), 7-13.

AE Harper, L Terhorst, N Leland, **D Brienza**. (2019) Pressure Injury Incidence Across Care Settings Following Spinal Cord Injury. Archives of Physical Medicine and Rehabilitation 99 (10), e108

Brienza D, Karg P, Bertolet M, Schmeler M, Poojary-Mazzotta P, Vlachos H, Wilkinson D. (2018) A randomized clinical trial of wheeled mobility for pressure injury prevention and better function. J Am Geriatr Soc. 2018; 66(9):1752-9; doi: 10.1111/jgs.15495

Brienza D, Krishnan S, Karg P, Sowa G, Allegretti AL. (2018) Predictors of pressure ulcer incidence following traumatic spinal cord injury: a secondary analysis of a prospective longitudinal study. Spinal Cord volume 56, pages 28–34 (2018) doi:10.1038/sc.2017.96

Brienza, D., Vallely, J., Karg, P., Akins, J., & Gefen, A. (2018). An MRI investigation of the effects of user anatomy and wheelchair cushion type on tissue deformation. *Journal of Tissue Viability*. Volume 27, Issue 1, February 2018, Pages 42-53
https://doi.org/10.1016/j.jtv.2017.04.001

Reinkensmeyer, D. J., Blackstone, S., Bodine, C., Brabyn, J., **Brienza, D.,** Caves, K., … Corfman, T. (2017). How a diverse research ecosystem has generated new rehabilitation technologies: Review of NIDILRR's Rehabilitation Engineering Research Centers. Journal of NeuroEngineering and Rehabilitation, 14(1), 109. https://doi.org/10.1186/s12984-017-0321-3

Ceren Yarar-Fisher, PhD, PT, Patricia Heyn, PhD, Jeanne M. Zanca, PhD, MPT, Susie Charlifue, PhD, Jean Hsieh, PhD, OT, **David M. Brienza, PhD**. (2017) Early Identification of Cardiovascular Diseases in People with Spinal Cord Injury: Key Information for Primary Care Providers. Archives of Physical Medicine & Rehabilitation, February 2017. Available online 6 February 2017. http://dx.doi.org/10.1016/j.apmr.2016.10.001

Krishnan, S., Vodovotz, Y., Karg, P. E., Constantine, G., Sowa, G. A., Constantine, F. J., & **Brienza, D. M.** (2017). Inflammatory mediators associated with pressure ulcer development in individuals with pneumonia following traumatic spinal cord injury: A pilot study. Archives of Physical Medicine and Rehabilitation. DOI: 10.1016/j.apmr.2016.12.018

Tzen, Y.-T., **Brienza, D. M.,** & Karg, P. E. (2016). Positive Effects of Local Cooling on Ischial Skin Ischemia During Normal Seating in People with SCI. Archives of Physical Medicine and Rehabilitation, 97(10), e73. DOI: 10.1016/j.apmr.2016.08.222

Krishnan, S., Vodovotz, Y., Karg, P. E., Constantine, G., Sowa, G. A., & **Brienza, D. M.** (2016). Biomarkers Associated with Pressure Ulcer Formation in Traumatic Spinal Cord Individuals with Pneumonia. Archives of Physical Medicine and Rehabilitation, 97(10), e128-e129. DOI: 10.1016/j.apmr.2016.08.401

Akins, J. S., Vallely, J. J., Karg, P. E., Kopplin, K., Gefen, A., Poojary-Mazzotta, P., & **Brienza, D. M.** (2016). Feasibility of freehand ultrasound to measure anatomical features associated with deep tissue injury risk. Medical Engineering & Physics, 38(9), 839-844. DOI: 10.1016/j.medengphy.2016.04.026

Krishnan S, Brick RS, Karg PE, Tzen YT, Garber SL, Sowa GA, **Brienza DM**. Predictive validity of the Spinal Cord Injury Pressure Ulcer Scale (SCIPUS) in acute care and inpatient rehabilitation in individuals with traumatic spinal cord injury. NeuroRehabilitation. 2016 Apr 6;38(4):401-9. doi: 10.3233/NRE-161331.

Krishnan S, Karg P, Boninger M, **Brienza D.** Association between presence of pneumonia and pressure ulcer formation following traumatic spinal cord injury. J Spinal Cord Med. 2016; doi: 10.1080/10790268.2016.1180099.

Jonathan S Akins, Ph.D.; Jaxon J Vallely; Patricia E Karg, MS; Kara Kopplin; Amit Gefen, PhD; Prerna Poojary-Mazzotta; **David M Brienza, PhD.** Feasibility of freehand ultrasound to measure anatomical features associated with deep tissue injury risk. Med Eng Phys. 2016 Sep;38(9):839-44. doi: 10.1016/j.medengphy.2016.04.026. Epub 2016 Jul 4.

Krishnan, S., Karg, P. E., Boninger, M. L., Vodovotz, Y., Constantine, G., Sowa, G. A., & Brienza, D. M. (2016). Early detection of pressure ulcer development following traumatic spinal cord injury using inflammatory mediators. *Archives of physical medicine and rehabilitation*, 97(10), 1656-1662.

Zanca JM, Heyn P, Horn S, Charlifue S, Hsieh CH, **Brienza DM**, Chen Y, Dyson-Hudson T, Backus D; (2015) Secondary Complications and Aging Task Force of the ACRM Spinal Cord Injury Interdisciplinary Special Interest Group. Arch Phys Med Rehabil. 2015 Nov;96(11):2089-90. Doi: 10.1016/j.apmr.2015.03.001. Epub 2015 Jul 21.

Dicianno, B. E., Fairman, A. D., McCue, M., Parmanto, B., Yih, E., McCoy, A., ... & **Brienza, D. M.** (2015). Feasibility of Using Mobile Health to Promote Self-Management in Spina Bifida. Am J Phys Med Rehabil. 2016 Jun;95(6):425-37. doi: 10.1097/PHM.0000000000000400.

Stone, A., **Brienza, D.,** Call, E., Fontaine, R., Goldberg, M., Hong, K. Z., ... & Sylvia, C. (2015). Standardizing Support Surface Testing and Reporting: A National Pressure Ulcer Advisory Panel Executive Summary. *J Wound Ostomy Continence Nurs. 2015 Sep-Oct;42(5):445-9. doi: 10.1097/WON.0000000000000172.*

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Lachenbruch, Charlie; Tzen, Yi Ting; **Brienza, David**; Karg, Patricia E.; Lachenbruch, Peter A. (2015) Relative contributions of interface pressure, shear stress, and temperature on ischemic-induced, skin-reactive hyperemia in healthy volunteers: A repeated measures laboratory study Ostomy Wound Management vol. 61(2) p. 16-25

Brienza D, Antokal S, Herbe L, et al. Friction-induced skin injuries - Are they pressure ulcers? (2014) An updated NPUAP white paper. *Journal of Wound, Ostomy and Continence Nursing.* 2014;42(1):62-64.

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Huang W, Vodovotz Y, Kusturiss MB, Barclay D, Greenwald K, Boninger ML, Coen PM, **Brienza D**, Sowa G. (2013) Identification of Distinct Monocyte Phenotypes and Correlation with Circulating Cytokine Profiles in Acute Response to Spinal Cord Injury: A Pilot Study. PM R. 2013 Oct 17. pii: S1934-1482(13)01138-6. doi: 10.1016/j.pmrj.2013.10.006.

C. Ziraldo, A. Solovyev, A. Allegretti, S. Krishnan, M.K. Henzel, G.A. Sowa, **D. Brienza,** G. An, Q. Mi, Y. Vodovotz (2013) A computational, tissue-realistic model of pressure ulcer formation in individuals with spinal cord injury. Journal of Critical Care. 02/2013; 28(1):e23.

Turkovich, M., Hu, J., Van Roosmalen, L., & **Brienza, D.** (2013). Computer simulations of obesity effects on occupant injury in frontal impacts. International Journal of Crashworthiness, 18(5), 502-515.

Yi-Ting Tzen; **David M. Brienza**; Patricia E. Karg; Patrick J. Loughlin. (2013) Effectiveness of local cooling for enhancing tissue ischemia tolerance in people with spinal cord injury. Journal of Spinal Cord Medicine, 36(4) pp. 357-364. DOI: http://dx.doi.org/10.1179/2045772312Y.0000000085

Solovyev A, Mi Q, Tzen Y-T, **Brienza D,** Vodovotz Y (2013) Hybrid Equation/Agent-Based Model of Ischemia-Induced Hyperemia and Pressure Ulcer Formation Predicts Greater Propensity to Ulcerate in Subjects with Spinal Cord Injury. PLoS Comput Biol 9(5): e1003070. doi:10.1371/journal.pcbi.1003070

Charlie Lachenbruch, PhD; Yi-Ting Tzen, PhD; **Dave M. Brienza, PhD**; Patricia E. Karg, MS; and Peter Anthony Lachenbruch, PhD. (2013) The Relative Effects of Interface Pressure, Shear Stress, and Temperature of Tissue Ischemia: a Cross-sectional Pilot Study. Ostomy Wound Manage. 2013;59(3):25–34.

Becky L. Faett, Mary Jo Geyer, Leslie A. Hoffman, and **David M. Brienza**, "Design and Development of a Telerehabilitation Self-Management Program for Persons with Chronic Lower Limb Swelling and Mobility Limitations: Preliminary Evidence," Nursing Research and Practice, vol. 2012, Article ID 608059, 10 pages, 2012. doi:10.1155/2012/608059

Boninger, ML, **D Brienza,** S Charlifue, Y-Y Chen, K C Curley, D E Graves, S Groah, A W Heinemann, L M Hudson, A B Jackson, K L Johnson, C Z Kalpakjian, A Kusiak, K E Larson, T S Agustin, A M Sherwood, N Shinowara, T Stripling and D Tate. State of the Science Conference in Spinal Cord Injury Rehabilitation 2011: introduction. Spinal Cord advance online publication, March 27, 2012; doi:10.1038/sc.2012.13

Allegretti, Ana Luiza; Malkiewicz, Andrew; **Brienza, David M**. Measuring Interface Pressure and Temperature in the Operating Room *Advances in Skin & Wound Care*. 25(5):226-230, May 2012. doi: 10.1097/01.ASW.0000414706.33267.db

Mi, Q., Constantine, G., Megas, C., Krishnan, S., Allegretti, A., Sowa, G., **Brienza, D** and Vodovotz, Y. (2011, March). URINARY TRACT INFECTIONS PRECEDE PRESSURE ULCERS IN SPINAL CORD INJURY PATIENTS. In WOUND REPAIR AND REGENERATION (Vol. 19, No. 2, pp. A39-A39).

Jennifer L Collinger; Brad E Dicianno; Douglas J Weber; Xinyan Tracy Cui; Wei Wang; **David M Brienza**; Michael L Boninger. Integrating rehabilitation engineering technology with biologics. PM R 3, 1480 (2011)

Schein Richard M; Schmeler Mark R; Holm Margo B; Pramuka Michael; Saptono Andi; **Brienza David M.** Telerehabilitation assessment using the Functioning Everyday with a Wheelchair-Capacity instrument. Journal of rehabilitation research and development 2011;48(2):115-24

Akins JS, Karg PE, **Brienza DM**. Interface shear and pressure characteristics of wheelchair seat cushions. J Rehabil Res Dev. 2011;48(3):203–12. DOI:10.1682/JRRD.2009.09.0145

Jan Y-K; **Brienza D M**; Boninger M L; Brenes G. Comparison of skin perfusion response with alternating and constant pressures in people with spinal cord injury. Spinal cord: the official journal of the International Medical Society of Paraplegia 2011;49(1):136-41

Parmanto B, Saptono A, Pramana G, Pulantara W, Schein RM, Schmeler MR, McCue MP, & **Brienza DM**. (2010). VISYTR: Versatile and Integrated System for Telerehabilitation. *Telemedicine and E-health, 16*(9), 939-944.

Schein RM, Schmeler MR, Saptono A, and **Brienza D**. Patient Satisfaction with Telerehabilitation Assessments for Wheeled Mobility and Seating. 2010 *Assistive Technology, 22*(4), 215-222

Lim S., Kim J., Ikpeama U., Porach E., Lynch R.D., **Brienza D.M.** Quantitative approach of Remote Accessibility Assessment System (RAAS) in telerehabilitation. *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*. 2010 vol. 6159 LNCS

Brienza D, Kelsey S, Karg P, Allegretti A, Olson M, Schmeler M, Zanca J, Geyer MJ, Kusturiss M, Holm M. A randomized clinical trial on preventing pressure ulcers with wheelchair seat cushions. J Am Geriatr Soc. 2010 Dec;58(12):2308-14. Epub 2010 Nov 10.

Schein Richard M; Schmeler Mark R; Holm Margo B; Saptono Andi; **Brienza David M.** Telerehabilitation wheeled mobility and seating assessments compared with in person. *Archives of physical medicine and rehabilitation* 2010;91(6):874-8

Tzen YT, **Brienza DM**, Karg P, Loughlin P. Effects of local cooling on sacral skin perfusion response to pressure: Implications for pressure ulcer prevention. *Journal of Tissue Viability,Volume 19, Issue 3, August 2010, Pages 86-97*

Schein RM. Schmeler MR. **Brienza D**. Saptono A. Parmanto B. Development of a service delivery protocol used for remote wheelchair consultation via telerehabilitation. *Telemedicine Journal & E-Health. 14(9):932-8, 2008 Nov.*

Kim J. **Brienza DM**. Lynch RD. Cooper RA. Boninger ML. Effectiveness evaluation of a remote accessibility assessment system for wheelchair users using virtualized reality. *Archives of Physical Medicine & Rehabilitation. 89(3):470-9, 2008 Mar.*

Jan YK, **Brienza DM**, Geyer MJ and Karg T. Wavelet analysis of sacral skin blood flow response to alternating pressure. Arch Phys Med Rehabil Vol 89, January 2008

W. Call, **David M. Brienza**, Mary Ellen Posthauer Development of Uniform Terminology for Support Surfaces Evan Journal of WOCN 01/2007 34(Supplement):S75-S76.

Kim, JB and **Brienza, DM**; Development of a remote accessibility assessment system through three-dimensional reconstruction technology. *Journal of Rehabilitation Research and Development* 2006; 43(2): 257–272.

Berlowitz DR. **Brienza** DM. Are all pressure ulcers the result of deep tissue injury? A review of the literature. [Review] [27 refs**]** [Journal Article. Review] *Ostomy Wound Management. 53(10):34-8, 2007 Oct.*

Jan, YK and **Brienza DM**. Technology for Pressure Ulcer Prevention. Topics in Spinal Cord Injury. Spring 2006; 11(4): 30-41.

Elicia M. Kohlenberg, Jeanne Zanca, **David M. Brienza,** Michelle A. Levasseur, Michael G. Sowa Spectroscopic detection of the blanch response at the heel of the foot: a possible diagnostic for stage I pressure ulcers. Proc SPIE 09/2005

Jan YK, **Brienza DM**, and Geyer MJ. Analysis of week-to-week variability in skin blood flow measurements using wavelet transforms. *Clinical Physiology and Functional Imaging* 2005; 25(5): 253-262.

Brienza DM, Geyer MJ, and Jan YK**.** A comparison of changes in rhythms of sacral skin blood flow in response to heating and indentation. *Archives of Physical Medicine and Rehabilitation*. 2005 June; (86)6: 1245-1251.

Brienza, David M. PhD; Geyer, Mary Jo PhD, PT, CWS, CLT-LANA. Using Support Surfaces to Manage Tissue Integrity. *Advances in Skin & Wound Care.* 18(3):151-157, April 2005

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LoPresti, EF; **Brienza, DM**; Angelo, J; Gilbertson L. Neck Range of Motion and Use of Computer Head Controls**.** *Journal of Rehabilitation Research and Development*. Vol. 40, No. 3, May/June 2003; pp. 199-212.

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4. Research and development to improve seating design. Chung K-C, Brubaker CE, McLaurin CA, Brienza DM and Sprigle SH. **Rehabilitation R&D Progress Reports**, pp. 143-144, Veterans Administration Rehabilitation Research and Development Service, Baltimore, MD, 1989.
5. Seating and body support. Chung K-C, McLaurin CA, Brubaker CE, Reger SI, Sprigle SH and Brienza DM. **Wheelchair Mobility: A Summary of Activities at the University of Virginia Rehabilitation Engineering Center,** 1983-1988, pp. 39-118, 1988.
6. Improved seating design. Chung K-C, Brubaker CE, McLaurin CA, Brienza DM, Sprigle SH, Schunkewitz J, Todd BA and Hughes CJ. **University of Virginia Rehabilitation Engineering Center Annual Report,** pp. 68-118, 1988.
7. Seat contour optimization using force feedback. Brienza DM. **Ph.D. Dissertation**, University of Virginia, August 1991.
8. Design of a CAM system for custom contoured wheelchair cushions. Brienza DM. **Master's Thesis**, University of Virginia, May 1988.
9. **Brienza, D.,** Deppisch, M., Gillespie, C., Goldberg, M., Gruccio, P., Jordan, R., . . . Sylvia, C. (2015). Do Lift Slings Significantly Change the Efficacy of Therapeutic Support Surfaces? A National Pressure Ulcer Advisory Panel White Paper.
10. **Brienza, D,** *Research Sheds New Light on Pressure Injuries,* Directions Issue 5 of 2018, pp. 34-41

Professional Activities

Teaching

HRS 2905	Ethical Issues in Healthcare (Primary Professor)
HRS 2727	Capstone Projects for orthotics and Prosthetics (co-instructor)
HRS 2706	Introduction to Rehabilitation Engineering Design (Primary Professor)
HRS 2706	Rehabilitation Biomechanics (Primary Professor)
HRS 3704	Environmental Control Systems (Primary Professor)

HRS 2703 Rehabilitation Engineering Design (Primary Professor)

BIOE1010 Bioinstrumentation (Primary Professor)

BIOE1011 Bioinstrumentation Lab (Primary Professor)

HRS 3707: Power Wheelchairs II (Primary Professor)

HRS 3702: Seating Biomechanics (Primary Professor)

HRS 2701: Rehabilitation Engineering and Technology (Pressure Relief Seating section and laboratory)

HRS 2702: Instrumentation and Computer Interfacing (Primary Professor)

HRS 2704: Fundamentals of Rehabilitation Engineering (Pressure Relief Seating and Pressure Ulcers section)

HRS 2705: Principles and Practice of Rehabilitation Engineering (Support Surface Evaluation section and laboratory)

HRS 2706: Analysis of Adaptations for Physical Impairment (Pressure Measurement and Devices)

EE 1695: Senior Design Project, Controls (Primary Professor)

EE 2646: Linear Control Systems Theory (Primary Professor)

BIOE 2023: Bioengineering Seminar Series (Soft Tissue Biomechanics)

OTH 732: Assistive Technology Applications in Occupational Therapy, Chatham College (Pressure Measurement laboratory)

OCCTH 550: Environmental Adaptation & Rehabilitation Technology, Duquesne University (Pressure Ulcer Etiology, Pressure Measurement laboratory)

Student Advising and Thesis Committee Participation

David McLeary: Member of MS Thesis Committee, 1992-1993, Dept. of Physical Therapy, University of Pittsburgh. Thesis: *The effect of four ankle braces on calcaneal inversion/eversion angles and calcaneal torque when landing from a height of eighteen inches*.

Lori Baker: Member of MS Thesis Committee, 1992-1996, Dept. of Physical Therapy, University of Pittsburgh. Thesis: *The effect of semi-rigid orthotics on the center of pressure*.

Andrew Gordon: MS Academic and Research Advisor and Committee Chairman, 1993-1994, Bioengineering program, University of Pittsburgh (withdrew from program to attend medical school).

Paula Mehta: Independent Study Supervisor, 1993-1994, Dept. of Electrical Engineering, University of Pittsburgh.

Narayan Gehlot: Ph.D. Research Advisor, 1993-1995, Dept. of Electrical Engineering, University of Pittsburgh. Dissertation: *Novel burst and packet mode receiver architecture with automatic compensation for optical networks and communication systems*.

Wonchul Nho: MS Research Advisor, 1993-1995, Dept. of Electrical Engineering, University of Pittsburgh. Thesis: *Pulse-width modulation voltage source inverter for induction motor in power wheelchair*. Ph.D. Research Advisor, 1995-1997, 2003-2005, Dept. of Electrical Engineering.

Seun Onodipe: MS Research Advisor, 1993-1994, Dept. of Electrical Engineering, University of Pittsburgh.

Chen-Tse Lin: Member of Ph.D. Dissertation Committee, 1994, Dept. of Mechanical Engineering, University of Pittsburgh. Dissertation: *Unsteady, inhomogeneous motions of a generalized neo-hookean material*. Postdoctoral Research Mentor, 1993-1995, School of Health and Rehabilitation Sciences.

Heather Rushmore: MS Academic Advisor, 1995-1996, Dept. of Rehabilitation Science and Technology, University of Pittsburgh.

Mostafa Khondakar: Member of MS Thesis Committee, 1995-1997, MS Thesis: *Monte carlo stochastic simulation of power system generation cost under time and system dependent constraints*, Dept. of Electrical Engineering, University of Pittsburgh.

Neal Row: MS Academic Advisor, 1995-1997, Dept. of Rehabilitation Science and Technology, University of Pittsburgh.

Rayanne DiCola: MS Academic Advisor, 1995-1997, Scholarly paper: *Secondary injuries associated with alternative computer access*, Dept. of Rehabilitation Science and Technology, University of Pittsburgh.

James Protho: MS Academic and Research Advisor, 1995-1998, Dept. of Rehabilitation Science and Technology, University of Pittsburgh. Thesis: *An evaluation of an obstacle avoidance force feedback joystick*

Jue Wang: Research Mentor/Advisor, 1994-2000; Ph.D. Academic and Research Advisor, Dept. of Rehabilitation Science and Technology, University of Pittsburgh. Dissertation: *Development of a compound ultrasonic device and in vivo biomechanical assessment of buttock soft tissue* Postdoctoral advisor

Thomas Ault: Member of Ph.D. Advisory Committee, 1996-2005, Dept. of Computer Science, Robotics Institute, Carnegie Mellon University.

Edmond Lopresti, Ph.D. Academic and Research Advisor, 1997-2002, Dept of Bioengineering, University of Pittsburgh. Dissertation: *Neck movement limitations and the use of head-operated computer controls for people with disabilities*.

Mary-Jo Geyer, Ph.D. Advisor, 1997-2001, SHRS Ph.D. Program, University of Pittsburgh, Dissertation: *The relationships between computed tomography and ultrasound indentation testing in characterizing fibrotic tissue associated with Chronic venous disease*

Robert Joseph, MS Academic Advisor, 1998-2000, Rehabilitation Science and Technology, University of Pittsburgh.

Thomas Bursic, MS Academic Advisor, 1998-2000, Rehabilitation Science and Technology, University of Pittsburgh.

Yih-Kuen Jan, Ph.D., PT, Research Mentor/Advisor, 2000-2004, University of Pittsburgh. Dissertation: *A study on skin blood flow control mechanisms using wavelet analysis: Implications for alternating pressure support surfaces* Postdoctoral advisor

Jeanne Zanca, Ph.D. Advisor, 2001-2006, SHRS Ph.D. Program, University of Pittsburgh. Dissertation: *Spectroscopic Assessment of the Blanch Response*

Vikram Chib, Undergraduate research and academic advisor, 1998-2001, Bioengineering, University of Pittsburgh

Jong Bae Kim, Ph.D. Research Mentor/Academic and research advisor, 2001-2005, SHRS Ph.D. Program, University of Pittsburgh, *A Virtualized Reality Telerehabilitation System for the accessibility analysis of the physical environment.* Postdoctoral advisor

Sandra Hubbard, Ph.D. Academic Advisor, 2001-2002, SHRS Ph.D. Program, University of Pittsburgh

Yue Wang, Ph.D. Academic and Research advisor, 2003-2005, University of Pittsburgh, School of Health and Rehabilitation Sciences

Rohit Bafana, MS Academic and Research Advisor, 2003-2005, University of Pittsburgh, Dept of Bioengineering. MS Thesis: *Development, evaluation and implementation of standardized wheelchair seat cushion test protocols*

Yi-Ting Tzen, MS Academic advisor, 2005-2008, University of Pittsburgh, Department of Rehabilitation Science, and Technology.

BC Deemer, Ph.D. Academic and Research Advisor. Dept of Bioengineering, University of Pittsburgh

Jonathan Akins, MS Academic and Research Advisor, 2006-2008, University of Pittsburgh, Department of Bioengineering. MS Thesis: *Investigation of interface shear stresses on wheelchair seat cushions and the effects on subcutaneous buttock soft tissues.* Postdoctoral mentor, 2012-14

Susan Fuhrman, Ph.D. Research Mentor/Academic and Research Advisor, 2005-2008, University of Pittsburgh, Department of Rehabilitation Science and Technology. *Pediatric Wheelchair and Headrest Design Guidelines and the Effect of Headrests on Relative Injury Risk Under Rear Impact Conditions.*

Richard Schein, Ph.D. Academic and Research Advisor, 2005-2009, University of Pittsburgh, Department of Rehabilitation Science and Technology. *Evaluation of Using a Telerehabilitation Consultation Model for Remote Wheelchair Prescription.*

Michael Turkovich, Ph.D. Academic and Research Advisor, 2008-2010, University of Pittsburgh, Department of Bioengineering, *The effects of obesity on occupant response in frontal impact*.

Yi-Ting Tzen, Ph.D. Academic and Research Advisor, 2008-2010, University of Pittsburgh, Department of Rehabilitation Science, and Technology. *Effectiveness of Local Cooling on Enhancing Tissue Ischemia Tolerance in People with Spinal Cord Injury.* Post Doctoral Advisor

Becky Faett, Ph.D. Academic and Research Advisor, 2009-2013, University of Pittsburgh, School of Health and Rehabilitation Sciences. *Remote delivery of a standardized educational protocol for self-management of chronic swelling of the lower limbs and individuals with limited mobility*

Andrew J. Malkiewicz, MS Academic and research Advisor, 2010-2011, University of Pittsburgh, Department of Bioengineering, *Development of a wheelchair seat cushion with site-specific temperature control for pressure ulcer prevention*.

Shilpa Krishnan, Ph.D. Academic and Research Advisor, 2010-2014, University of Pittsburgh, School of Health and Rehabilitation Sciences. *Factors associated with occurrence and early detection of pressure ulcers following spinal cord injury*

Charles Vukotich, Ph.D. (candidate) Academic and Research Advisor, 2010-2017, University of Pittsburgh, Department of Bioengineering.

Hassan Sarsak, Ph.D. Academic and Research Advisor, 2010-2012, University of Pittsburgh, School of Health and Rehabilitation Sciences.

Prerna Poojary, Ph.D. Academic and Research Advisor, 2012-2017, University of Pittsburgh, School of Health and Rehabilitation Sciences. *Wheelchair related fall risk and function in nursing home residents: Factors related to wheelchair fit*

Sara Peterson, Ph.D. (candidate) Academic and Research Advisor, 2012-2013, University of Pittsburgh, School of Health Rehabilitation Sciences.

David Smeresky, Ph.D. (candidate) Academic and Research Advisor, 2012-present, University of PIttsburgh, School of Health Rehabilitation Sciences.

Esteban Ruiz, Ph.D. Academic and Research Advisor, 2012-2017, University of Pittsburgh, School of Health Rehabilitation Sciences. *Skin-inspired hydrogel-elastomer composite with application in a moisture permeable prosthetic limb liner*

Chonnikan Ariyakul Academic and Research Advisor, 2019-present, University of Pittsburgh, School of Health and Rehabilitation Sciences.

Sandra Arias Guzman, Ph.D. Post-doctoral mentor, 2017-present, University of Pittsburgh, School of Health and Rehabilitation Sciences

Junghan Sim, MS Rehabilitation Technology, Advisor and Committee Chair, 2018-2019, Dept of Rehabilitation Science and Technology, University of Pittsburgh. MS thesis: Development of a wheelchair cushion cover with microclimate management to prevent pressure injuries

Sample Presentations and Instructional Courses

1. How to use wheelchair cushion performance standards to inform product selection, Patricia Karg, Alex Delazio and David Brienza, RESNA Annual conference, Sept 23, 2020. (peer reviewed workshop)

2. Translating aetiological knowledge to support surface science; David Brienza, European Pressure Ulcer Advisory Panel Virtual Meeting 2020, Sept. 24 2020 (invited plenary lecture)
3. International Guidelines for Pressure Injury Prevention & Treatment: 2019 Update David Brienza, PhD, 7th Annual Comprehensive Wound Care Symposium, Sept. 12 2020 (invited plenary lecture)
4. Using standard performance measures for support surface selection; UPMC Health Plan Technology Assessment Committee, Pittsburgh, PA
5. RESNA WS10 - Using Wheelchair Cushion Performance Standards to Enhance Product Selection (2019, June) Patricia Karg, Alex Delazio and David Brienza. RESNA Annual Conference Toronto Canada.
6. Use of Performance Standards in Wheelchair Selection. (2019, March) Jonathan Pearlman, PhD, David Brienza, PhD, Anand Mhatre, PhD, MIMSE, Joseph Ott, MS, International Seating Symposium
7. David Brienza (October, 2018) "Use of standard performance measures in clinical trials evaluating effectiveness of medical devices" at the *British Healthcare Trades Association Symposium on Support Surfaces*, Performance, effectiveness … the future.
8. Harper, A., Terhorst, L., Leland, N. E., & Brienza, D. (2018, June). A comparison of pressure injury accrual following traumatic spinal cord injury. Poster presented at the 14th Annual Rehabilitation Institute Research Day, Pittsburgh, PA.
9. The More We Know, The Better We Are: MARSI, MASD and Friction, Laurie McNichol, Mikel Gray, David Brienza, PhD. 50th Wound Ostomy Continence Nursing Society Annual Conference, Philadelphia, PA. June 6, 2018 (plenary session presentation)
10. Ischemia and deformation: Two damage mechanisms leading to deep tissue pressure injuries, Annual Conference of the National Pressure Ulcer Advisory Panel, New Orleans, Louisiana, March 3, 2018 (invited industry sponsored satellite symposium presentation)
11. New Technologies and Strategies for Pressure Injury Prevention, (with Jon Pearlman and Darren Hammond), 34th International Seating Symposium, Vancouver BC, Canada, March 9th 2018
12. Wheeled Mobility for Pressure Injury Prevention: Results from and RCT, 19th annual meeting of the European Pressure Ulcer Advisory Panel. Belfast, Northern Ireland, September 21, 2017. (podium presentation)
13. Damage mechanisms leading to deep tissue pressure injuries. Wound Ostomy Continence Nursing Society Annual Conference, Salt Lake City, Utah. May 20, 2017
14. Ischemia and deformation: Two damage mechanisms leading to deep tissue pressure injuries, Biennial Conference of the National Pressure Ulcer Advisory Panel, New Orleans, Louisiana, March 11, 2017 (invited industry sponsored satellite symposium presentation)
15. An MRI investigation comparing tissue responses for multiple wheelchair seat cushions. International Seating Symposium, Nashville, Tennessee, March 3, 2017.
16. Understanding Pressure Injuries for Effective Prevention. International Seating Symposium, Nashville, Tennessee, March 2, 2017.

17. Wheeled Mobility for Pressure Injury Prevention. International Seating Symposium, Nashville, Tennessee, March 3, 2017.
18. Improving Patient Outcomes: Bridging the Gap Between Science and Efficacy, European Seating Symposium, Dublin Ireland, June 2016 (invited plenary session)
19. The Problem with Friction: The Science. NPUAP Research Symposium. Las Vegas, Nevada. November 9, 2016 (invited plenary session)
20. Understanding the Clinical Effects of External Loading on Tissue Deformation in Humans. NPUAP Research Symposium. Las Vegas, Nevada. November 9, 2016

< presentations were not tracked between 2011 and 2016>

21. Brienza DM, Kelsey S, Karg PE, Allegretti, A. Risk factors for developing pressure ulcers in nursing homes: A secondary analysis of data from an RCT on preventing pressure ulcers with seat cushions European Seating Symposium, November 8-10, 2011, Dublin Ireland.
22. Sprigle, S; Brienza, DM; Sonenblum, S. Strategies for Designing Wheeled Mobility and Seating Intervention Studies. 2011 ACRM-ASRM Annual Conference. October 11-15, 2011. Atlanta, GA.
23. Brienza, DM and Allegretti, A. The use of support surfaces in pressure ulcer prevention. Best Pracice journey on the Trail to Skin Health Maintenance and Restoration. October 1, 2011, Pittsburgh, PA.
24. Brienza, DM. Assistive technology research and development: Identifying needs and development trends in the US, Keynote Address. September 1, 2011, Goyang, Korea.
25. Brienza, DM. Caracteristicas de Almohadones. 1° Simposio Internacional de Adecuacion Postural al Sentado, August 18-20, 2011, Buenos Aires, Argentina
26. Brienza, DM. Practica Basada en la Evidencia en Asientos. 1° Simposio Internacional de Adecuacion Postural al Sentado, August 18-20, 2011, Buenos Aires, Argentina
27. Brienza, DM, Symposium for Advanced Wound Care West, September 24-26, 2010. Los Angeles, California
8. Rehabilitation Engineering and Assistive Technology Association of North America, June 26-29, 2010, Las Vegas, Nevada.
9. Posture Mobility Group Meeting, June 6-9, 2010, Glasgow, Scotland.
10. American Telemedicine Association, May 15-18, 2010, San Antonio, Texas.
11. Symposium on Advanced Wound Care, April 17-20, 2010, Orlando, Florida.
12. International Seating Symposium, March 13, 2010, Vancouver, Canada,
13. Walter Reed Medical Center, January 22, 2010.
14. Horton, JA; Henzel, MK; Wood, SL; and Brienza, DM. Pressure Ulcers: Clinical Update, Advances in Care, and Technological Horizons. American Academy of Physical Medicine and Rehabilitation, 70th Annual Assembly, Austin, Tx, Oct. 22-25, 2009.
15. Jan, Y-K; Brienza, DM; Boninger, ML; Brenes, G. “Comparison of Alternating and Constant Pressures on Soft Tissue Viability and Pressure Ulcer Risk in People with SCI”

2009 Congress on Spinal Cord Medicine and Rehabilitation, Dallas, Texas, Sept 23-26, 2009.

16. Brienza, DM; Mi, Q. "Tissue Integrity Management Research and Development at the Rehabilitation Engineering Research Center (RERC) on SCI" 2009 Congress on Spinal Cord Medicine and Rehabilitation, Dallas, Texas, Sept 23-26, 2009.
17. Brienza, "International standardization of medical devices" International Symposium on Medical Industry and Medical Devices Clinical Trial, Yeungam Uniniversity, Deagu City, South Korea, April 29, 2009.
18. Brienza, DM, "An RCT on Preventing Pressure Ulcers with Seat Cushions." Feinberg School of Medicine, Northwestern University, April 23, 2009.
19. Brienza, DM, "An RCT on Preventing Pressure Ulcers with Seat Cushions." International Seating Symposium, Orlando Florida, March 12, 2009.
20. Brienza, DM "Soft Tissue Interfaces: Seat Cushions of Maintain Tissue Integrity." Guest Lecture CMU/RI 16-899D Principles of Human Robot Interaction. September 12, 2006.
21. Brienza, DM. Critical question Debate: All pressure ulcers are he result of deep tissue damage. Evidence-based Practice in Wound Care. September 15-16, 2006. Case Western Reserve University, Cleveland Ohio
22. Siekman, Allen and Brienza, DM. The effect of skin temperature on skin ulcer development. Nordic Seating Symposium, (Abstract) Copenhagen, Denmark. October 4-6, 2006.
23. Brienza, DM. Pressure Ulcer Prevention with Cushions and Support Surfaces. Nordic Seating Symposium, (Abstract) Copenhagen, Denmark. October 4-6, 2006.
24. Seelman, K; Brienza, D; Peifer, J; Winters, J; Schiller, W. Telerehabilitation Across RERC Research and Development, RESNA 2006: Thriving in Challenging Times: The Future of Rehabilitation Engineering and Assistive Technology. June 22-26, 2006, Atlanta, Ga.
25. Siekman, A; Brienza, D; Call, E. The Effects of Skin Temperature and Moisture on Pressure Ulcer Development, RESNA 2006: Thriving in Challenging Times: The Future of Rehabilitation Engineering and Assistive Technology. June 22-26, 2006, Atlanta, Ga.
26. Brienza, DM and Kim, JB. Remote Accessibility Assessment of Built Environment for Individuals Who Use Wheeled Mobility Device, Workplace RERC State of the Science Conference, Atlanta, GA September 15-16, 2005
27. Brienza, DM. Telerehabilitation: An overview of the Rehabilitation Engineering Research Center at the University of Pittsburgh, McGowan Institute Seminar Series, March 31, 2005.
28. Brienza, DM "Pressure Ulcer Prevention and Early Detection." University of Pittsburgh, School of Medicine, Dept. of Physical Medicine and Rehabilitation, Rehabilitation Grand Rounds, Nov. 2005.
29. Brienza, DM. Telerehabilitation: Concepts and Distance Wheelchair Functional Assessment. 2nd International Conference on Telemedicine and Multimedia Communication, Kajetany, Poland, October 8 – 9, 2004.

30. Jan YK, Brienza DM, and Geyer MJ. 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, 2004.
31. Jan YK, Brienza DM, and Geyer MJ. 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, 2004.
32. Jan YK, Brienza DM, and Geyer MJ. A comparison of changes in rhythms of sacral skin blood flow in response to heating and indentation. McGowan Institute for Regenerative Medicine Scientific Retreat, Farmington, PA, 2004.
33. Brienza, DM. "The RERC on Wheeled Mobility at the University of Pittsburgh," Hong Kong Polytechnic University, Hong Kong, China, December 17, 2002.
34. Geyer, MJ, Chib, V, Brienza, DM and Wang, J. "Quantifying Fibrosis in Chronic Venous Disease via Computed Tomography and Ultrasound Load-Indentation Testing," McGowan Institute for Regenerative Medicine Scientific Retreat, Feb 4-5, 2002.
35. Brienza, DM. "The Development of Rehabilitation Engineering in America," Xi'an Jiaotong University, P.R. China, August 22, 2002.
36. Geyer, MJ, Chib, V, Brienza, DM and Wang, J. "Quantifying Fibrosis in Chronic Venous Disease via Computed Tomography and Ultrasound Load-Indentation Testing," Science 2001: A Research Odyssey, University of Pittsburgh, Sept 12-14, 2001.
37. Brubaker, CE, Chung, K-C and Brienza, DM. "CAD/CAM Custom Seating System," RESNA Training Course, 13th Annual RESNA Conference, Washington, D.C., June 1990.
38. Brubaker, CE, Ferguson-Pell, M, Chung, K-C and Brienza, DM. "Pressure Measurement and Advanced Custom Contoured Seating Technology," RESNA Training Course, 14th Annual RESNA Conference, Kansas City, Missouri, June 1991.
39. Brienza, DM. "Seat Cushion Design Using Force Feedback," 1991 Annual Fall Meeting of the Biomedical Engineering Society, Charlottesville, Virginia, October 1991.
40. Brienza, DM. "Seat Contour Optimization," Physical Therapy Faculty Research Seminar, University of Pittsburgh, September 1992.
41. Brienza, DM. "Seat Contour Optimization," SHRS Faculty Research Seminar, University of Pittsburgh, October 1992.
42. Brienza, DM. "Seat Contour Optimization," SHRS Faculty Research Seminar, University of Pittsburgh, February 1993.
43. Brienza, DM. "Round Table Discussion Leader," 10th International Seating Symposium, Memphis Tennessee, February 1993.
44. Brienza, DM and Trefler, E. "Developments in Contoured Seating Technology," Workshop, 10th International Seating Symposium, Vancouver, BC, Canada, February 1994.
45. Brienza, DM. "Assisted Control and Navigation of a Powered Wheelchair," 12th Triennial Congress of the International Ergonomics Association, Symposium of Rehabilitation Ergonomics, Toronto, Canada, August 15-19, 1994.

46. Brienza, DM. "Custom Contoured Seating," SHRS Dept. of Occupational Therapy, University of Pittsburgh, November 1994.
47. Brienza, DM. "Soft Tissue Biomechanics for Seating," Bioengineering Seminar, University of Pittsburgh, January 1995.
48. Brienza, DM. "Session Chair for Seating and Positioning Technology," RESNA Annual Conference, June 1995.
49. Brienza, DM, Schuch, J and Sprigle, S. "Wheelchair Seating and Positioning: Improving your services from assessment through follow up," Continuing Education Workshop, University of Virginia, September 22-23, 1995.
50. Brienza, DM. "Past, Present and Future of Wheelchair Seating," University of Virginia, September 1995.
51. Brienza, DM. "Wheelchair Seating for Pressure Ulcer Prevention," SHRS Dept. of Rehabilitation Science and Technology, University of Pittsburgh, September 1995.
52. Brienza, DM. "The Internet: What the Future Holds for People with Disability," Pittsburgh Assistive Technology Association, Annual Fall Meeting, Pittsburgh, PA, October 1995.
53. Brienza, DM. "Custom Contoured Seating," SHRS Dept. of Occupational Therapy, University of Pittsburgh, November 1995.
54. Brienza, DM. "Soft Tissue Biomechanics," Dept. of Mechanical Engineering, Carnegie Mellon University, March 1996.
55. Brienza, DM. Session Chair for Wheeled Mobility and Seating, RESNA Annual Conference, June 1996.
56. Brienza, DM and Karg, PE. "Past, Present and Future of Seating and Mobility Research and Development," University of Virginia, Charlottesville, Virginia, Oct. 11-12, 1996.
57. Brienza, DM, Shapcott, N and Schmeler, M. "Wheelchair Seating: Cushion Selection," The 1996 Mid-Atlantic Regional RESNA Conference: Connections for Life, Philadelphia, PA, November 8-9, 1996.
58. Brienza, DM. "Pressure Ulcer Risk Factors," Assistive Technology Training Program for Rehabilitation Technology Suppliers, Pittsburgh, PA, March 13-14, 1997.
59. Brienza, DM. "Electrical Fundamentals," Assistive Technology Training Program for Rehabilitation Technology Suppliers, Pittsburgh, PA, March 13-14, 1997.
60. Brienza, DM. "Ultrasound Measurements of Tissue Distortion," Dundee '97 an International Conference on Wheelchairs and Seating, Dundee, Scotland, September 8-12, 1997.
61. Brienza, DM. "CAD/CAM Custom Contoured Cushions," Dundee '97 an International Conference on Wheelchairs and Seating, Dundee, Scotland, September 8-12, 1997.
62. Brienza, DM. "Pressure Measurement and Practice: Session Chair," Dundee '97 an International Conference on Wheelchairs and Seating, Dundee, Scotland, September 8-12, 1997.

Patents

C.E. Brubaker, C.A. McLaurin and D.M. Brienza, Custom Contoured Wheelchair Seat and Other Body Supports, Serial No. 320,959. Application filed March 9, 1989. Licensed to PinDot Products.

C. E. Brubaker, D.M. Brienza and M.J. Brienza, Reusable Die Shape for the Manufacture of Molded Cushions, Patent No. 5,470,590. Filed January 31, 1994.

D.M. Brienza and C.E. Brubaker, Steering linkage for short wheelbase four-wheeled vehicles, Patent No. 5,862,874 Filed June 19, 1997.

M. J. Brienza and D. M. Brienza, A Contour Replicating and Measuring Device, Patent No. 6,125,338. Filed April 22, 1998.

C.E. Brubaker and D. M. Brienza, Self-adjusting contouring cushioning system, Patent No. 6,519,797. Filed August 10, 2000

Sanna Gaspard, Mel Siegel Todd M. Presbycien James F. Antaki David M. Brienza Mark B. Friedman, Medical device for diagnosing pressure ulcers, Patent No. US8116838 B2.

D.M. Brienza, Patricia E. Karg, Andrew Malkiewicz. Actively and selectively cooled cushioning surface US Patent No. 10376412

D. Smeresky, D M Brienza, P E Karg, Y T Tzen, Temperature Regulating Diabetic Footwear, PCT/US16/55776

E Ruiz, D M Brienza, Moisture Permeable Hydrogel Composite Materials, PCT/US16/55853

Peer Review and Editing Activities

1992-2018	RESNA SIG-09 (Wheeled Mobility and Seating), Reviewer of conference proceedings articles and instructional courses,
1995-1997	RESNA SIG-09 Review coordinator for papers, special sessions and instructional courses
1993, 2002	NSF Biomechanical Systems and Rehabilitation, Grant Reviewer
1993-1995	NIH SBIR/STTR Special Study Section Rehabilitation, Grant Reviewer
1994	NIH SBIR/STTR Special Study Section Safety, Grant Reviewer
1995-1999	IEEE Transactions on Rehabilitation Engineering, Assistant Editor
1996-2012	American Paraplegia Society, Grant Reviewer
1997-present	Spinal Cord Research Foundation of Paralyzed Veterans of America, Grant Reviewer
1997-2018	Department of Veterans Affairs, Journal of Rehabilitation Research and Development, Reviewer
1998-present	Advances in Skin and Wound Care, Reviewer, Editorial Board (2000-present)

1999-present	Archives of Physical Medicine, Reviewer.
2007-present	Journal of Clinical Biomechanics
2007-present	Journal of Biomechanics
2018 – present	NIH LRP study section reviewer
2019	NIH Nursing and Related Clinical Sciences, ad hoc grant reviewer
2019	DoD SCIRP grant reviewer
2020 – present	NIH ICSC Study Section (appointed to 4-year term)

List of Current Research Interests:

Pressure Injury prevention
Assistive Technology – Wheeled Mobility, Seat Cushions, Support Surfaces
Spinal Cord Injury
Exercise Technology

Service

Service to the University of Pittsburgh and Health Center

- Provost's Ad-hoc IP and Copyright Policy Committee (2015-2017)
- CTSI Advisory Board (2012-2018)
- Coulter Oversight Committee (2012-2014)
- University Senate Athletics Committee (2007-2010, 2010-13) (elected)
- University Research Council (2000-2004)
- Technology Management Advisory Committee (2002-present) (Rotating Chair)
- Health Science Information Technology Faculty Advisory Committee (2002-2004)
- Central Research Development Fund Small Grants Program, Science and Engineering sub- committee – Chair (2000, 2002)
- Academic Computing Council - Internet2 Pitt Faculty representative (2000)
- Steering Committee for Health Promotion and Wellness (1999)
- Health Sciences Space Committee SHRS rep. (2004-2016)
- University Public and Facilities Subcommittee of University Safety Committee (1995-1998)
- University of Pittsburgh Medical Center (UPMC) Health Plan, Medical Policy Subject Matter Expert, Support Surface Medical Policies (2018-present)

Service to the School of Health and Rehabilitation Sciences

- SHRS Ph.D. Steering Committee
- SHRS Space Utilization Committee - Chair (2000-2015)
- SHRS Faculty Retreat 2000 Co-Chair
- SHRS Appointment, Promotion, and Tenure (2004-2006, Elected Member) (1996, appointed) (2017-2020)(appointed for additional 2 year term)

- SHRS Graduate Faculty Committee
- SHRS Planning and Budgeting Committee (elected)
- SHRS Ph.D. Admissions Committee
- SHRS World Wide Web Planning Committee (Chair)
- SHRS Space and Facilities Planning Committee
- SHRS Marketing Task Force Committee
- SHRS Aids Education Task Force Committee
- SHRS IRB Scientific Review Committee (through 2017, 2018-present)

Service to the Department of Rehabilitation Science and Technology

- RST Curriculum Committee – Chair (1999-2006)
- RST Executive Committee
- RST Recruitment Committee
- RST-RT Curriculum Committee
- RST New Building Committee
- RST computing and network resources administration