

## Curriculum Vitae

### **William Harold Cooke, Ph.D., FACSM**

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### Education

- 1990 – B.S., Health and Human Performance, University of Houston, Clear Lake, TX.
- 1991 – M.A., Health and Human Performance, University of Houston, Clear Lake, TX.
- 1995 – Ph.D., Kinesiology/Exercise Physiology, Texas A&M University, College Station, TX.

### Professional Experience

- 1996 – 1998: **Research Associate**, Department of Internal Medicine, Division of Cardiology; School of Medicine, Medical College of Virginia at Virginia Commonwealth University, Richmond, VA.
- 1998 – 2003: **Assistant Professor**, Department of Biomedical Engineering; Michigan Technological University, Houghton, MI.
- 2003 – 2003: **Associate Professor (Tenure)**, Department of Biomedical Engineering; Michigan Technological University, Houghton, MI.
- 2003 – 2005: **Research Physiologist**, U.S. Army Institute of Surgical Research, Ft. Sam Houston, TX
  - 2003 – 2006: **Adjunct Associate Professor**, Departments of Biomedical Engineering and Biological Sciences, Michigan Technological University, Houghton, MI.
- 2005 – 2010: **Associate Professor (Tenure)**, Department of Health and Kinesiology; The University of Texas at San Antonio, San Antonio, TX.
  - 2006 – 2010: **Adjunct Associate Professor**, School of Medicine, Department of Physiology, The University of Texas Health Science Center at San Antonio, San Antonio, TX.
- 2010 – 2017: **Professor**, Department of Kinesiology, Health, and Nutrition; The University of Texas at San Antonio, San Antonio, TX
  - 2010 – 2017: **Adjunct Professor**, School of Medicine, Department of Physiology, The University of Texas Health Science Center at San Antonio, San Antonio, TX.
- 2014 – 2017: **Professor and Chair**, Department of Kinesiology, Health, and Nutrition; The University of Texas at San Antonio, San Antonio, TX

- 2017 – Present: **Professor**, College of Sciences and Arts, Department of Kinesiology and Integrative Physiology, Michigan Technological University, Houghton, MI.
- 2017 – Present: **Portage Health Foundation Endowed Professor of Preventative and Community Health**, Michigan Technological University, Houghton, MI.

### Courses Taught

- Aerospace and Environmental Physiology (Graduate and Undergraduate)
- Exercise Physiology (Undergraduate)
- Advanced Topics in Exercise Physiology (Undergraduate)
- Special Topics in Physiology Research (Graduate and Undergraduate)
- Senior Design in Biomedical Engineering (Undergraduate)
- Anatomic Kinesiology/Anatomy and Physiology (Undergraduate)
- Current Trends in Kinesiology and Health Education (Graduate)
- Independent Study (Graduate and Undergraduate)
- Research Methods in Health and Kinesiology (Graduate)
- Human Systems Physiology (Undergraduate and Graduate)
- Graduate Seminar (Graduate)

### Research Interests

- Autonomic Cardiovascular and Cerebrovascular Regulation
- Cardiovascular Adaptations to Microgravity
- Cardiovascular Adaptations to Exercise
- Traumatic Injury and Medical Monitoring
- Vaporized Nicotine and Cardiovascular Control
- Pre-Hypertension, Pre-Diabetes, and the Influence of Exercise

### Funding History

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- 1993: **Cooke, Principal Investigator:** Effect of Oral Creatine Supplementation on Power Output and Fatigue During Bicycle Ergometry. Cal. Pharm. Inc., Lakewood, Colorado; \$300 (total).
  - 1993: **Cooke, Principal Investigator:** Extracellular Calcium and Cooling-Induced Contractures in Isolated Skeletal Muscle. Graduate Student Mini-Grant Award, Department of Health and Kinesiology, Texas A&M University. \$500 (total).

- 1994: **Cooke, Principal Investigator:** Effects of High Concentrations of Extracellular Creatine Monohydrate on Force Production and Fatigue in Isolated Skeletal Muscle. Graduate Student Mini-Grant Award, Department of Health and Kinesiology, Texas A&M University. \$500 (total).
- 1995: **Cooke, Principal Investigator:** The Influence of Recovery Duration on High-Intensity Exercise Performance after Oral Creatine Supplementation. Office of Graduate Research, Texas A&M University. \$500 (total).
- 1996 - 1998: **Cooke, Co-Investigator:** Neuroplasticity in Weightlessness. [Principal Investigator, Dwain L. Eckberg, M.D.]. National Aeronautics and Space Administration (NAS9-19539). \$915,438 (total).
- 1996 - 1998: **Cooke, Co-Investigator:** Autonomic Mechanisms During Prolonged Weightlessness. [Principal Investigator, Dwain L. Eckberg, M.D.]. National Aeronautics and Space Administration (NAS9-19514). \$749,668 (total).
- 1998 - 1999: **Cooke, Principal Investigator** – Sub-Contract Award [from NAS9-19514]: Autonomic Mechanisms During Prolonged Weightlessness. National Aeronautics and Space Administration. \$28,603 (direct); \$35,784 (total).
- 1999 - 2000: **Cooke, Principal Investigator:** Microneurography to Study Autonomic Cardiovascular Adaptations to Space Flight. National Aeronautics and Space Administration/Michigan Space Grant Consortium, Faculty Development Award. \$8,000 (direct); \$11,220 (total).
- 2000 - 2004: **Cooke, Principal Investigator:** Exercise and Autonomic Cardiovascular Regulation. American Heart Association, National Affiliate (0030203N) \$252,493 (direct) \$337,422 (total).
- 2001 - 2004: **Cooke, Principal Investigator:** Gender and Orthostatic Tolerance. National Institutes of Health; Heart, Lung, and Blood Institute (R15 HL67787-01) \$100,000 (direct); \$139,576 (total).
- 2001 - 2002: **Cooke, Principal Investigator:** Hemorrhagic Shock and Microneurography: Collaborations in Physiology Research. Michigan Technological University, Faculty Scholarship Grant. \$3,000 (total).
- 2002 – 2003: **Cooke, Co-Investigator:** Future work onboard the International Space Station: Finnish Biomedical Know-How. [Principal Investigator, Kari Tahvanainen]. Centennial Foundation of Helsingin Sanomat, Finland. \$20,000 (total).
- 2004 – 2006: **Cooke, Principal Investigator:** Fundamental Autonomic Neural Oscillations and Blood Pressure Control Mechanisms in Humans. Department of the Army, Medical Research and Materiel Command, Laboratory Independent Research Program. \$29,000 (total).

- 2005 – 2006: **Cooke, Principal Investigator:** Novel Analyses to Assist in the Prediction for Need of Life Saving Interventions for Soldiers and Trauma Patients. Department of Defense, U.S. Army Medical Research and Materiel Command (W81XWH-05-P-1070). \$28,845 (direct costs) \$40,815 (total costs).
- 2005 – 2006: **Cooke, Principal Investigator:** Arm Nerve Recordings Provide Insight into Hemorrhage Control: Implications for Mass Casualty Triage. The University of Texas at San Antonio, Faculty Research Award, \$4,300 (total costs).
- 2006 – 2007: **Cooke, Principal Investigator (Renewal):** Novel Analyses to Assist in the Prediction for Need of Life Saving Interventions for Soldiers and Trauma Patients. Department of Defense, U.S. Army Medical Research and Materiel Command (W81XWH-06-P-1008). \$31,825 (direct costs) \$45,033 (total costs).
- 2007 – 2010: **Cooke, Principal Investigator:** Circuit Weight Training and Blood Pressure Regulation in Prehypertension. National Institutes of Health; Heart, Lung, and Blood Institute (R15 HL087222-01) \$150,000 (direct costs) \$212,250 (total costs).
- 2007 – 2008: **Cooke, Principal Investigator (Renewal):** Novel Analyses to Assist in the Prediction for Need of Life Saving Interventions for Soldiers and Trauma Patients. Department of Defense, U.S. Army Medical Research and Materiel Command (W81XWH-06-P-1008). \$31,802 (direct costs) \$45,000 (total costs).
- 2007 – 2008: **Cooke, Principal Investigator:** Dynamic Injury Severity Estimation (DISE) System. Department of Defense, Medical Research and Materiel Command (Industry Partner, Paul Cox, Perl Research Technologies, Huntsville Alabama); A07-T040). \$23,280 (direct costs) \$32,941 (total costs to Cooke).
- 2008 – 2009: **Cooke, Principal Investigator (Renewal):** Novel Analyses to Assist in the Prediction for Need of Life Saving Interventions for Soldiers and Trauma Patients. Department of Defense, U.S. Army Medical Research and Materiel Command (W81XWH-06-P-1008). \$17,667 (direct costs) \$24,999 (total costs).
- 2008 – 2011: **Cooke, Principal Investigator:** Autonomic Rhythms During Simulated Hemorrhage and Real-World Trauma. Department of Defense, Broad Agency Announcement, Medical Research and Materiel Command (W81XWH-08-1-0274). \$265,900 (direct costs) \$335,037 (total costs).
- 2008 – 2012: **Cooke, Co-Investigator (Principal Investigator, Donald Royall, M.D.):** Insular and Autonomic Function in Depression. National Institutes of Health (RO1-HL093776-01A2). \$1,000,000 (direct costs) \$1,862,110 (total costs); \$71,549 (direct costs to Cooke) \$101,242 (total costs to Cooke).

- 2008 – 2011: **Cooke, Principal Investigator:** Standoff Remote Triage Sensor Array for Robotic Casualty Extraction Systems, STTR Phase II (Industry Partner, Paul Cox, Perl Research Technologies, Huntsville Alabama. Department of Defense, Telemedicine and Advanced Technology Research Center (A07-T040). \$181,123 (direct costs) \$241,764 (total costs).
- 2011 – 2013: Rickards, Principal Investigator; **Cooke, Co-Principal Investigator:** Cerebral Blood Flow Regulation During Simulated Hemorrhage. Department of Defense, Medical Research and Materiel Command, Broad Agency Announcement. \$254,704 (direct costs) \$344,178 (total costs).
- 2013 – 2014: **Cooke, Principal Investigator,** Fogt and Rickards Co-Principal Investigators. Acute Effects of Vaporized Nicotine on Metabolic, Cardiovascular, and Cerebrovascular Responses in Humans. Collaborative Research Seed Grant Program, Office of the Vice President for Research, University of Texas at San Antonio. \$30,000 (\$20,000 to Cooke and Fogt; \$10,000 to Rickards).
- 2015 – 2016: **Cooke, Co-Investigator,** Fogt Principal Investigator. Effects of pre-frailty on cardiovascular performance and risk factors. San Antonio Area Foundation. \$30,000 (total costs).
- 2020 – 2023: **Cooke, Principal Investigator.** Switching from Tobacco Cigarettes to Vaporized Nicotine: Influences on Cardiovascular and Cerebrovascular Control. National Institutes of Health, Heart Lung and Blood Institute. \$299,007 (direct costs) \$438,484 (total costs).
- 2021 – 2021: **Cooke, Co-Principal Investigator,** Carolyn Duncan, Principal Investigator, Kelly Kamm, Co-Principal Investigator. Understanding the relationship between Type II Diabetes, fall risk and physical activity in the Upper Peninsula of Michigan. Portage Health Foundation, Research Enhancement Fund. \$36,580 (total costs).

### **Student-Mentored Funding**

- 2000 - 2001: Faculty Mentor for Graduate Student Grant [Student PI, Jeffery Leismer]: Countermeasure for Bone Disuse Atrophy. National Aeronautics and Space Administration/Michigan Space Grant Consortium. \$5,000 (total).
- 2001 – 2002: Faculty Mentor for Graduate Student Grant [Student PI, Jason Carter]: Human Neural Organization During Acute Simulated Microgravity. National Aeronautics and Space Administration/Michigan Space Grant Consortium. \$5,000 (total).
- 2001 – 2002: Faculty Mentor for Undergraduate Student Grant [Student PI, Michael Yandl]: The Influence of Estrogen on Orthostatic Tolerance in Women. National Aeronautics and Space Administration/Michigan Space Grant Consortium. \$2,500 (total).

- 2002 – 2003: Faculty Mentor for Graduate Student Grant [Student PI, Jason Carter]: Effects of Mental Stress on the Vestibulosympathetic Reflex. National Aeronautics and Space Administration/Michigan Space Grant Consortium. \$5,000 (total).
- 2002 – 2003: Faculty Mentor for Graduate Student Grant [Student PI, Guy Pellegrini]: Arterial Baroreflex Responsiveness During Acute Simulated Microgravity. National Aeronautics and Space Administration/Michigan Space Grant Consortium. \$5,000 (total).
- 2008: Faculty Mentor for Graduate Student Grant [Student PI, Steven Romero]: Dehydration and the Influence of Inspiratory Resistance on Orthostatic Stability. Student Research Development Award, Texas Chapter of the American College of Sports Medicine \$500 (total).
- 2009: Faculty Mentor for Graduate Student Grant [Student PI, Gilbert Morales]: The influence of dehydration and hyperventilation on post-exercise autoregulation of cerebral blood velocity. Student Research Development Award, Texas Chapter of the American College of Sports Medicine \$500 (total).
- 2011: Faculty Mentor for Graduate Student Grant [Student PI, Chelsea Barrera]: Influence of controlled breathing on cerebrovascular control. Student Research Development Award, Texas Chapter of the American College of Sports Medicine \$400 (total).
- 2016: Faculty Mentor for Graduate Student Grant [Student PI, Christopher Blount]: The compensatory reserve index as a new vital sign during exercise. Student Research Development Award, Texas Chapter of the American College of Sports Medicine \$750 (total).
- 2018: Faculty Mentor for Summer Undergraduate Research Fellowship [Student PI, Stephanie Jewell]: Controlled Breathing and Autonomic Cardiovascular Control, Michigan Technological University \$4,000 (total).
- 2018: Faculty Mentor for Graduate Student Grant [Student PI, Joshua Gonzalez]: Vaporized nicotine and autonomic control. Blue Cross and Blue Shield \$3,000 (total).
- 2019 - 2020: Faculty Mentor for Graduate Student Grant [Student PI, Joshua Gonzalez]: The effects of a negative energy balance on orthostatic tolerance. National Aeronautics and Space Administration/Michigan Space Grant Consortium \$5,000 (total).
- 2020 – 2021: Faculty Mentor for Graduate Student Grant [Student PI, Steven Stelly]: The impact of food deprivation on cardiovascular physiology: Implications for astronauts. National Aeronautics and Space Administration/Michigan Space Grant Consortium \$5,000 (total).

### **Peer-Reviewed Publications**

### **Book Chapters**

1. Cox JF, Tahvanainen KUO, Kuusela TA, **Cooke WH**, Ames JE, and Eckberg DL. Influence of microgravity on arterial baroreflex responses triggered by Valsalva's maneuver. In: *Neurolab Spacelab Mission: Neuroscience Research in Space*, edited by Buckley JC and Homick JL. Houston: National Aeronautics and Space Administration, 2003, p. 187-195.
2. Fogt D, Contreras M, **Cooke W**, Falcon B, Gutierrez G, Jones T, and Kalns J. Assessment of physiological biomarkers involved with acute fatigue/physical exhaustion. In: *Adaptation Biology and Medicine, Volume 6: Cell Adaptations and Challenges*, edited by Wang P, Kuo C-H, Takeda N, and Signal PK. Signal, Narosa Publishing House Lts, 2010.

### **Journal Publications**

1. **Cooke WH**, Grandjean PW, and Barnes WS. Effect of oral creatine supplementation on power output and fatigue during bicycle ergometry. *Journal of Applied Physiology* 78(2):670-673, 1995.
2. **Cooke WH** and Barnes WS. The influence of recovery duration on high-intensity exercise performance after oral creatine supplementation. *Canadian Journal of Applied Physiology* 22(5):454-467, 1997.
3. **Cooke WH**, Whitacre CA, and Barnes WS. Measuring fatigue relative to peak power output during high-intensity cycle sprinting. *Research Quarterly for Exercise and Sport* 68(4):303-308, 1997.
4. **Cooke WH**. Heart rate variability and baroreceptor responsiveness to evaluate autonomic cardiovascular adaptations to exercise. *Journal of Exercise Physiology* [online] 1(3):1-4, October, 1998. <http://www.css.edu/users/tboone2/asep/jan13a.htm>
5. **Cooke WH**, Cox JF, Diedrich A, Taylor JA, Beightol LA, Ames JE IV, Hoag JB, Siedel H, and Eckberg DL. Controlled breathing protocols probe human autonomic cardiovascular rhythms. *American Journal of Physiology* 274(2) (*Heart and Circulatory Physiology*, 43):H709-H718, 1998.
6. **Cooke WH**, Hoag JB, Crossman AA, Kuusela TA, Tahvanainen KUO, and Eckberg DL. Human responses to upright tilt: A window on central autonomic integration. *Journal of Physiology (London)* 517(2):617-628, 1999.
7. **Cooke WH**, Ames JE IV, Crossman AA, Cox JF, Kuusela TA, Tahvanainen KUO, Moon LB, Drescher J, Baisch FJ, Mano T, Levine BD, Blomqvist CG, and Eckberg DL. Nine months in space: effects on human autonomic cardiovascular regulation. *Journal of Applied Physiology* 89(3):1039-1045, 2000.

8. **Cooke WH** and Dowlyn MM. Power spectral analysis imperfectly informs changes in sympathetic traffic during acute simulated microgravity. *Aviation, Space, and Environmental Medicine* 71(12):1232-1238, 2000.
9. **Cooke WH**. Topical anesthetic before microneurography decreases pain without affecting sympathetic traffic. *Autonomic Neuroscience* 86(1-2):120-126, 2000.
10. Badra LJ, **Cooke WH**, Hoag JB, Crossman AA, Kuusela TA, Tahvanainen KUO, and Eckberg DL. Respiratory modulation of human autonomic rhythms. *American Journal of Physiology (Heart and Circulatory Physiology)* 280(6):H2674-H2688, 2001.
11. Cox JF, Tahvanainen KUO, Kuusela TA, Levine BD, **Cooke WH**, Mano T, Iwase S, Sugiyama Y, Ertl AC, Biaggioni I, Diedrich A, Robertson RM, Zuckerman JH, Lane LD, Ray CA, White RJ, Pawelczyk JA, Buckey JC, Baisch FJ, Blomqvist CG, Robertson D, and Eckberg DL. Influence of microgravity on astronauts' sympathetic and vagal responses to Valsalva's manoeuvre. *Journal of Physiology (London)* 538(1):309-320, 2002.
12. Levine BD, Pawelczyk JA, Ertl AC, Cox JF, Zuckerman JH, Diedrich AM, Biaggioni I, Ray CA, Smith ML, Iwase A, Saito M, Sugiyama Y, Mano T, Zhang R, Iwasaki K, Lane LD, Buckey JC, **Cooke WH**, Baisch FJ, Robertson D, Eckberg DL, and Blomqvist CG. Human muscle sympathetic neural and haemodynamic responses to upright tilt following spaceflight. *Journal of Physiology (London)* 538(1):331-340, 2002.
13. **Cooke WH**, Reynolds BV, Yandl MG, Carter JR, Tahvanainen KUO, and Kuusela TA. Effects of exercise training on cardiovagal and sympathetic responses to Valsalva's maneuver. *Medicine and Science in Sports and Exercise* 34(6):928-935, 2002.
14. **Cooke WH**, Ludwig DA, Hogg PS, Eckberg DL, and Convertino VA. Does the menstrual cycle influence the sensitivity of vagally-mediated baroreflexes? *Clinical Science (London)* 102(6):639-644, 2002.
15. Carter JR, Ray CA, and **Cooke WH**. Vestibul sympathetic reflex during mental stress. *Journal of Applied Physiology* 93(4):1260-1264, 2002.
16. **Cooke WH**, Zhang R, Zuckerman JH, Cui J, Wilson TE, Crandall CG, and Levine BD. Does nitric oxide buffer arterial blood pressure variability in humans? *Journal of Applied Physiology* 93(4):1466-1470, 2002.
17. Fu Q, Levine BD, Pawelczyk JA, Ertl AC, Diedrich A, Cox JF, Zuckerman JH, Ray CA, Smith ML, Iwase S, Saito M, Sugiyama Y, Mano T, Zhang R, Iwasaki K, Lane LD, Buckey JC, **Cooke WH**, Robertson RM, Baisch FJ, Blomqvist CG, Eckberg DL, Robertson D, and Biaggioni I. Cardiovascular



and sympathetic neural responses to handgrip and cold pressor stimuli before, during and after spaceflight. *Journal of Physiology (London)* 544(2):653-664, 2002.

18. Convertino VA and **Cooke WH**. Relationship between stroke volume and sympathetic nerve activity: new insights about autonomic mechanisms of syncope. *Journal of Gravitational Physiology* 9(1):P63-P66, 2002.
19. **Cooke WH** and Convertino VA. Association between vasovagal hypotension and low sympathetic neural activity during presyncope. *Clinical Autonomic Research* 12(6):483-486, 2002.
20. Carter JR, Ray CA, Downs EM, and **Cooke WH**. Strength training reduces arterial blood pressure but not sympathetic neural activity in young normotensive subjects. *Journal of Applied Physiology* 94(6):2212-2216, 2003.
21. **Cooke WH**, Carter JR, and Kuusela TA. Muscle sympathetic nerve activation during the Valsalva maneuver: interpretive and analytical caveats. *Aviation, Space, and Environmental Medicine*. 74(7):731-737, 2003.
22. **Cooke WH**, Pellegrini GL, and Kovalenko OA. Dynamic cerebral autoregulation is preserved during acute head-down tilt. *Journal of Applied Physiology* 95(4): 1439-1445, 2003.
23. Rothlisberger BW, Badra JL, Hoag JB, **Cooke WH**, Kuusela TA, Tahvanainen KUO, and Eckberg DL. Spontaneous baroreflex sequences occur as deterministic functions of the breathing phase. *Clinical Physiology and Functional Imaging* 23(6): 307-313, 2003.
24. **Cooke WH**, Ryan KL, and Convertino VA. Invited Review: Lower body negative pressure as a model to study progression to acute hemorrhagic shock in humans. *Journal of Applied Physiology* 96(4): 1249-1261, 2004.
25. **Cooke WH**, Carter JR, and Kuusela TA. Human cerebrovascular and autonomic rhythms during vestibular activation. *American Journal of Physiology (Regulatory, Integrative and Comparative Physiology)* 286(5): R838-R843, 2004.
26. West BJ, Scafetta N, **Cooke WH**, and Balocchi R. Influence of progressive central hypovolemia on fractal and multifractal dimension of cardiac interbeat intervals. *Annals of Biomedical Engineering*. 32(8):1077-1087, 2004.
27. Convertino VA, Ludwig DA, and **Cooke WH**. Stroke volume and sympathetic responses to lower body negative pressure reveal new insight into circulatory shock in humans. *Autonomic Neuroscience*. 111(2): 127-134, 2004.

28. Convertino VA, Ratliff DA, Ryan KL, **Cooke WH**, Doerr DF, Ludwig DA, Muniz GW, Britton DL, Clah SD, Fernald KB, Ruiz AF, Idris A, and Lurie KG. Effects of inspiratory impedance on the carotid-cardiac baroreflex response in humans. *Clinical Autonomic Research*. 14(4): 240-248, 2004.
29. **Cooke WH** and Convertino VA. Heart rate variability and spontaneous baroreflex sequences: implications for autonomic monitoring during hemorrhage. *Journal of Trauma*. 58(4):798-805, 2005.
30. **Cooke WH** and Carter JR. Strength training does not affect vagal-cardiac control or cardiovagal baroreflex sensitivity in young healthy subjects. *European Journal of Applied Physiology*. 93:719-725, 2005.
31. Carter JR, **Cooke WH**, and Ray CA. Forearm neurovascular responses during mental stress and vestibular activation. *American Journal of Physiology (Heart and Circulatory Physiology)*. 288:H904-H907, 2005.
32. **Cooke WH** and Convertino VA. Invited Review: Cardiovascular consequences of weightlessness promote advances in clinical and trauma care. *Current Pharmaceutical Biotechnology*. 6(4):285-297, 2005.
33. Convertino VA, **Cooke WH**, and Lurie KG. Inspiratory resistance as a potential treatment for orthostatic intolerance and hemorrhagic shock. *Aviation, Space, and Environmental Medicine*. 76(4):319-325, 2005.
34. Convertino VA and **Cooke WH**. Invited Paper: Evaluation of cardiovascular risks of space flight does not support the NASA bioastronautics critical path roadmap. *Aviation, Space, and Environmental Medicine*. 76:869-876, 2005.
35. Holcomb JB, Salinas J, McManus J, Miller CC, **Cooke WH**, and Convertino VA. Manual vital signs reliably predict need for life saving interventions in trauma patients. *Journal of Trauma*. 59(4):821-829, 2005.
36. Convertino VA, **Cooke WH**, and Lurie, KG. Restoration of central blood volume: application of a simple concept and a simple device to counteract cardiovascular instability in syncope and hemorrhage. *Journal of Gravitational Physiology*. 12(1):P55-P60, 2005.
37. **Cooke WH**, Salinas J, Convertino VA, Duke JA, Hinds D, Moore FA, and Holcomb JB. Heart rate variability and its association with mortality in pre-hospital trauma patients. *Journal of Trauma*. 60(2):363-370, 2006.
38. **Cooke WH**, Lurie KG, Rohrer MJ, and Convertino VA. Human autonomic and cerebrovascular responses to inspiratory impedance. *Journal of Trauma*. 60(6):1275-1283, 2006.

39. Convertino VA, **Cooke WH**, and Holcomb JB. Arterial pulse pressure and its association with reduced stroke volume during progressive central hypovolemia. *Journal of Trauma*. 61(3):629-634, 2006.
40. McManus JG, Convertino VA, **Cooke WH**, and Holcomb JB. R-wave amplitude in lead II of an electrocardiograph correlates with central hypovolemia in humans. *Academic Emergency Medicine*. 13(10):1003-1010, 2006.
41. **Cooke WH**, Salinas J, McManus JG, Ryan KL, Rickards CA, Holcomb JB, and Convertino VA. Heart period variability in trauma patients may predict mortality and allow remote triage. *Aviation, Space, and Environmental Medicine*. 77(11):1107-1112, 2006.
42. Batchinsky AI, **Cooke WH**, Kuusela TA, and Cancio LC. Loss of complexity characterizes the heart rate response to experimental hemorrhagic shock in swine. *Critical Care Medicine*. 35(2):519-525, 2007.
43. **Cooke WH** and Convertino VA. Invited Review: Sympathetic nervous system and spaceflight. *Acta Astronautica*. 60:223-233, 2007.
44. Convertino VA and **Cooke WH**. Invited Review: Vascular functions in humans following cardiovascular adaptations to space flight. *Acta Astronautica*. 60:259-266, 2007.
45. Convertino VA, Ryan KL, Rickards CA, **Cooke WH**, Idris A, Metzger A, Holcomb JB, Adams BD, and Lurie KG. Inspiratory resistance maintains arterial pressure during central hypovolemia: Implications for treatment of patients with severe hemorrhage. *Critical Care Medicine*. 35(4):1145-1152, 2007.
46. Iwasaki, KI, Levine BD, Zhang R, Zuckerman JH, Pawelczyk JA, Diedrich A, Ertl AC, Cox JF, **Cooke WH**, Giller CA, Ray CA, Lane LD, Buckey JC, Baisch F, Eckberg DL, Robertson D, Biaggioni I, and Blomqvist, CG. Human cerebral autoregulation before, during, and after spaceflight. *Journal of Physiology (London)*. 579(Pt 3):799-819, 2007.
47. **Cooke WH**. Head rotation during upright tilt increases cardiovagal baroreflex sensitivity. *Aviation, Space, and Environmental Medicine*. 78:463-469, 2007.
48. Batchinsky AI, **Cooke WH**, Kuusela TA, Jordan BS, Wang JJ, and Cancio LC. Sympathetic nerve activity and heart rate variability during severe hemorrhagic shock in sheep. *Autonomic Neuroscience*. 136:43-51, 2007.
49. Romero SA and **Cooke WH**. Hyperventilation before resistance exercise: cerebral hemodynamics and orthostasis. *Medicine and Science in Sports and Exercise*. 39:1302-1307, 2007.
50. Rickards CA, Cohen K, Lindsey B, Buddi B, Prateek K, Christopher L, Ryan KL, **Cooke WH**, Doerr D, and Convertino VA. Cerebral blood flow responses are associated with symptoms during orthostatic hypotension. *Aviation Space and Environmental Medicine*. 78:653-658, 2007.

51. Rickards CA, Ryan KL, **Cooke WH**, Lurie KG, and Convertino VA. Inspiratory resistance delays the reporting of symptoms with central hypovolemia: association with cerebral blood flow. *American Journal of Physiology Regulatory, Integrative and Comparative Physiology*. 293:R243-R250, 2007.
52. Batchinsky AI, Cancio LC, Salinas J, Kuusela TA, **Cooke WH**, Wang JJ, Boehme M, Convertino VA, and Holcomb JB. Prehospital loss of R-to-R interval complexity is associated with mortality in trauma patients. *Journal of Trauma*. 63:512-518, 2007.
53. **Cooke WH**. Autonomic neural control and implications for remote medical monitoring in space. *Journal of Gravitational Physiology*. 14(1):P43-P46, 2007.
54. Eastridge BJ, Salinas J, McManus JG, Blackburn L, Bugler EM, **Cooke WH**, Convertino VA, Wade CE, and Holcomb JB. Hypotension begins at 110 mm Hg: redefining “hypotension” with data. *Journal of Trauma*. 63:291-297, 2007.
55. Soller BR, Soyemi OO, Yan Y, Ryan KL, Rickards CA, Watz JM, Heard SO, **Cooke WH**, Crookes BA, and Convertino VA. Oxygen saturation determined from deep muscle, not thenar tissue, is an early indicator of central hypovolemia in humans. *Critical Care Medicine*. 36:176-182, 2008.
56. McManus JG, Ryan KL, Morton MJ, Rickards CA, **Cooke WH**, and Convertino, VA. Limitations of end-tidal CO<sub>2</sub> as an early indicator of central hypovolemia in humans. *Prehospital Emergency Care*. 12(2):199-205, 2008.
57. Rickards CA, Cohen KD, Bergeron LL, Burton L, Khatri PJ, Lee CT, Doerr DF, Ryan KL, **Cooke WH**, Lurie KG, and Convertino VA. Inspiratory resistance, cerebral blood flow velocity, and symptoms of acute hypotension. *Aviation, Space, and Environmental Medicine*. 79(6):557-564, 2008.
58. Convertino VA, Ryan KL, Rickards CA, Salinas J, McManus JG, **Cooke WH**, and Holcomb JB. Physiological and medical monitoring for en-route care of combat casualties. *Journal of Trauma*. 64:S342-S353, 2008.
59. **Cooke WH**, Rickards, CA, Ryan KL, and Convertino, VA. Autonomic compensation to simulated hemorrhage monitored with heart period variability. *Critical Care Medicine*. 36(6):1892-1899, 2008.
60. Ryan KL, **Cooke WH**, Rickards CA, Lurie KG, and Convertino VA. Breathing through an inspiratory threshold device improves stroke volume during central hypovolemia in humans. *Journal of Applied Physiology*. 104(5):1402-1409, 2008.
61. Rickards CA, Ryan KL, Romero SA, **Cooke WH**, and Convertino VA. Combat stress or hemorrhage? Evidence for a decision-assist algorithm for remote triage. *Aviation, Space, and Environmental Medicine*. 79(7):670-676, 2008.

62. Fogt DL, Cooper PJ, Freeman CN, Kalns JE, and **Cooke WH**. Heart rate variability to assess combat readiness. *Military Medicine*. 174(5):491-495, 2009.
63. **Cooke WH**, Rickards, CA, Ryan KL, Kuusela TA, and Convertino VA. Muscle sympathetic nerve activity during intense lower body negative pressure to presyncope in humans. *Journal of Physiology (London)*. 587(20):4987-4999, 2009.
64. Romero SA, Morales G, Rickards CA, Ryan KL, Fogt DL, Convertino VA, and **Cooke WH**. Control of cerebral blood velocity with furosemide-induced hypovolemia and upright tilt. *Journal of Applied Physiology*. 110(2):492-498, 2011.
65. **Cooke WH**. Invited Perspectives Article: You say resistance, I say compliance; let's call the whole thing cerebral Windkessel control. *Journal of Physiology (London)*. 589(13):3051-3052, 2011.
66. Rickards CA, Ryan KL, **Cooke WH**, and Convertino VA. Tolerance to central hypovolemia: the influence of oscillations in arterial pressure and cerebral blood velocity. *Journal of Applied Physiology*. 111:1048-1058, 2011.
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### **Letters to the Editor**

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**Abstracts and Proceedings Papers**

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98. Gonzalez JE, Jewell SR, and **Cooke WH**. Acute effects of vaporized nicotine inhalation on young non smokers. *FASEB Journal*. 2019.
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### **Invited Presentations and Seminars**

“Autonomic Mechanisms During Prolonged Weightlessness: An Experimental Overview”

- Mir ‘23’ Russian Space Station Crew Briefing, Moscow Russia, March, 1997.
- NASA ‘7’ Space Shuttle Crew Briefing, Johnson Space Center, Houston Texas, May, 1997.



- Mir '25' Russian Space Station Crew Briefing, Johnson Space Center, Houston Texas, September, 1997.

“Simple Tests of Autonomic Function Inform Mechanisms of Cardiovascular Regulation”

- Seminar, Michigan Technological University, June, 1998.

“Cardiovascular Research On-Board the Russian Mir Space Station”

- NASA/Mir Phase 1 Research Program Results Symposium, Marshall Space Flight Center, Huntsville, Alabama, November, 1998.

“Effects of Microgravity on the Autonomic Regulation of Cardiovascular Function”

- Hungarian Cardiology Congress, Szeged, Hungary, May, 1999.

“Dynamic Cardiovascular Control in Space”

- American College of Sports Medicine Conference, Symposium: Effects of microgravity on circulatory control, Seattle, Washington, June, 1999.

“Humans in Space: Physiological Adaptation to Microgravity”

- Educator's Science and Mathematics Institute Series, Michigan Technological University, July, 1999.

“Orthostatic Intolerance and Autonomic Cardiovascular Regulation”

- Seminar: Department of Health and Physical Education, Northern Michigan University, Marquette, MI, October, 2000.

"Frequency Domain Analysis to Explore Human Cardiovascular Adaptations to Microgravity"

- Department of Physics Colloquium, Michigan Technological University, March, 2000.

“The Effects of Space Flight on Human Cardiovascular Control”

- Department of Biological Sciences Seminar Series, Michigan Technological University, May, 2000.

“Autonomic Cardiovascular Adaptations to Spaceflight: Techniques to Investigate Hypovolemia on Earth”

- Seminar: US Army Institute of Surgical Research, Fort Sam Houston, Texas, March, 2002.

“Microneurography Reveals Mechanisms of Chronic Fatigue Syndrome”

- Seminar: Department of Neurology, New Jersey Medical and Dental School, East Orange, NJ, May, 2002.

“Theory and Methods of Microneurography”

- Symposium: Department of Clinical Physiology, Kuopio University Hospital, Kuopio, Finland, June, 2002.

“Spaceflight and Autonomic Function”

- Seminar: Department of Clinical Physiology, Kuopio University Hospital, Kuopio, Finland, June, 2002.

“Cardiovascular Regulatory Mechanisms Allow Humans to Stand: Malfunctions and Adaptations to Microgravity and Exercise”

- Department of Mechanical Engineering and Engineering Mechanics Graduate Seminar Series, Michigan Technological University, February, 2003.

“Autonomic Neural Control Predicts Injury Severity and Injury Outcome”

- Advanced Technology Applications for Combat Casualty Care, St. Pete Beach, Florida, August, 2004.

“Studies of Human Autonomic Cardiovascular Regulation: Astronauts, Athletes, and Victims of Trauma”

- Graduate Seminar Series, Texas A&M University, College Station, Texas, February, 2005.

“Sympathetic Nervous System and Spaceflight”

- Humans in Space Symposium, Graz, Austria, May, 2005.

“Studies of Human Autonomic Cardiovascular Regulation: Astronauts, Athletes, and Victims of Trauma”

- Invited Seminar, The University of Texas Health Science Center at San Antonio, Department of Physiology, April, 2006.

“Autonomic Neural Control and Implications for Remote Medical Monitoring in Space”

- Invited Plenary Speaker, The International Society for Gravitational Physiology. San Antonio, Texas, April 2007.

“Linear Frequency-Dependent Oscillations During Hypovolemia in Humans”

- Invited Speaker, Advanced Technology Applications for Combat Casualty Care, St. Pete Beach, Florida, August, 2007.

“Sympathetic Traffic Prior to Cardiovascular Decompensation: New Perspectives and Interpretations”

- Invited Speaker, The Japan Microneurography Society. Tokyo, Japan, June 2008.

“Autonomic Regulation in Humans: Experimental Techniques and Real-World Applications”

- Invited Speaker, The University of Texas Health Science Center at San Antonio, Department of Pharmacology, October, 2008.

“Humans Under Pressure: Studies of Autonomic Cardiovascular Control”

- Invited Speaker, The University of North Texas Health Science Center at Ft. Worth, Department of Integrative Physiology, February, 2010.

“Back From Space and Under Pressure: Sympathetic Control and Hemodynamic Stability”

- Invited Speaker, Texas A&M University, Graduate Seminar Series, Department of Health and Kinesiology, September 2010.

“Humans Under Pressure: Studies of Autonomic Cardiovascular Control”

- Invited Speaker (McCraw Lecture), The University of Texas at Austin, Department of Kinesiology and Health Education, October 2010.

“The Science of Saving Lives”

- Invited Speaker, UTSA Development Board, January, 2012.

“Kinesiology Research and Practical Applications: The Science of Saving Lives”

- Invited Speaker, University of Texas Chancellor's Council Executive Committee Winter Meeting, January, 2012.

"Humans Under Pressure: Studies of Autonomic Cardiovascular Control with Applications to Traumatic Injury"

- Invited Lecture Tour Speaker, Texas Chapter of the American College of Sports Medicine
  - West Texas A&M University, Canyon, Texas (April 1, 2013)
  - Texas A&M International University, Laredo, Texas (April 2, 2013)

"Cerebrovascular Control During Exercise, Orthostasis and Dehydration: The TACSM Connection

- Invited Lecture Tour Speaker, Texas Chapter of the American College of Sports Medicine
  - Texas A&M-Corpus Christi, Corpus Christi, Texas (April 3, 2013)
  - Lamar University, Beaumont, Texas (April 4, 2013)
  - Tarleton State University, Stephenville, Texas (April 5, 2013)

"Autonomic Function and Trauma"

- Invited talk, University of Texas at San Antonio Heart Health Student Organization, November 19, 2014, San Antonio, Texas.
- Invited talk, Mexico Medical English Project for Mexican Physicians, November 25, 2014, San Antonio, Texas.

"Translational Science of Cardiovascular Regulation"

- Invited talk, Institute for the Integration of Medicine and Science, April 28, 2015, University of Texas Health Science Center at San Antonio, San Antonio, Texas.

"The Autonomic Nervous System: Target Organ in Critical Illness and Recovery”

- Invited talk, Institute of Surgical Research, December 2, 2015, San Antonio Military Medical Center, San Antonio, Texas.

"The Autonomic Nervous System: Application to Human Trauma"

- Invited talk, UTSA Neurosciences Institute Lecture Series, September 15, 2016, Department of Biology, University of Texas at San Antonio.

"Research in the Department of Kinesiology, Health, and Nutrition at UTSA."

- International Symposium in Exercise and Health Science Research. Baylor University, Waco TX, October 12, 2016.

"Emergency Medicine Meets Preventative Health – Some Practical Suggestions."

- Invited talk, Department of Kinesiology and Integrative Physiology Seminar Series, Michigan Technological University Houghton Michigan, February 28, 2017.

"Is Microgravity Sympathetic to Humans? Results from Space and upon Return to Earth."

- Invited Seminar, Department of Kinesiology and Integrative Physiology, Michigan Technological University, Houghton MI, November 10, 2017.

"Spectral Analysis and Device Development for Assessment of Traumatic Injury."

- Invited Seminar, Department of Mechanical Engineering-Engineering Mechanics Graduate Seminar Series, Michigan Technological University, Houghton MI, January 18, 2018.

"Humans Under Pressure: Studies of Autonomic Cardiovascular Control"

- Invited Speaker, Northern Michigan University, Health and Human Performance. October 22, 2020.

## **Graduate Student Advisory Committees**

**Michigan Technological University (1999-2004)**

### **Committee Chairman: Doctoral**

- Jason R. Carter: Graduated 08/03
  - Dissertation title: Interactive effects of mental stress and vestibular activation on neural and vascular control in humans
- Olga A. Kovalenko: Graduated 08/04
  - Dissertation title: Cardiovascular function in young eumenorrheic women in the low-estrogen and the high-estrogen phases of the menstrual cycle during progressive lower body negative pressure

**Committee Chairman: Masters**

- Jeffery Leisner: Graduated 05/02
  - Thesis title: Bone response gravity simulator: a vibrational bone-loading device
- Guy L. Pellegrini: Graduated 08/03
  - Thesis title: Circuit weight training decreases muscle sympathetic nerve activity and arterial blood pressure in young adults

**Committee Member: Masters**

- Michael Nelson: Graduated 05/99
  - Thesis title: Modeling thermal effects of millimeter wave exposure in the primate head.

**The University of Texas at San Antonio (2005-2017)**

**Committee Chairman: Masters**

- Steven Romero: Graduated 05/09
  - Thesis title: Effects of hypovolemia on cerebral blood velocity and autoregulation during upright tilt
- Edgar Gonzolez: Graduated 05/09
  - Thesis title: Resistance training for the 3-point basketball shot for youth athletes
- Ida Hardy: Graduated 08/09
  - Thesis title: The effects of integral Yoga Nidra on autonomic cardiac control
- Gilbert Moralez: Graduated 05/10
  - Thesis title: Effects of dehydration on cerebral blood velocity and autoregulation during standing after heavy resistance exercise
- Chelsea Barrera: Graduated 12/11
  - Thesis title: The influence of controlled breathing on cerebrovascular control
- Andre Miller: Graduated 08/12
  - Thesis title: Cardiovascular and cerebrovascular responses to lower body negative pressure in smokers
- Yi-Chiann Wu: Graduated 08/12
  - Thesis title: Cardiovascular and cerebrovascular responses to head-up tilt throughout the normal menstrual cycle

- Anusheela Pokhrel: Graduated 12/14
  - Thesis title: Acute effects of vaporized nicotine inhalation on human autonomic cardiovascular control

### **Committee Member: Masters**

- Weston Zunker: Graduated 05/08
  - Thesis title: The influence of chain resistance on power output during the squat exercise.
- Bryan Wilson: Graduated 12/08
  - Thesis title: Using exercise as therapeutic angiogenesis: post myocardial infarction
- Sung Wook Park: Graduated 08/12
  - Thesis title: Use of heart rate and heart rate variability to indicate anaerobic threshold
- Michael Garza: Graduated 12/13
  - Thesis title: The effects of strength vs. endurance training on cardiac function and remodeling in post-myocardial infarction rats
- Steven Stelly: Graduated 05/15
  - Thesis title: Effect of acute cold exposure on resting metabolic rate in humans
- Emily Wason: Graduated 05/16
  - Thesis title: The effects of strength vs. endurance exercise on cardiac function, myocardial remodeling and hormone response in post-myocardial Infarction rats

### **Michigan Technological University (2017- )**

#### **Committee Chairman: Doctoral**

- Joshua Gonzalez: In Progress
- Steven Stelly: In Progress

### **Professional Service**

#### **Consulting and Research Service Activities**

- NASA Grant Review Panel: National Space Biomedical Research Institute, Washington, DC., August, 2000.

- 2001 – 2003: Summer Faculty Research Fellow: U.S. Army Institute of Surgical Research, Ft. Sam Houston, TX.
- Consultant: Development of a novel technique to record renal sympathetic nerve activity in sheep, Department of the U.S. Army, Institute of Surgical Research, Ft. Sam Houston, TX., March, 2002.
- Consultant: Application of the microneurography technique, University of Medicine and Dentistry of New Jersey, Newark, NJ, May, 2002. [Application to Chronic Fatigue Syndrome, Benjamin Natelson, M.D. Principal Investigator].
- Consultant: Application of the microneurography technique, Kuopio University Hospital, Kuopio, Finland, June, 2002. [Application to Autonomic Clinical Physiology, Esko Lansimies, M.D. Principal Investigator].
- NASA Grant Review Panel: Small Business Innovation Research Program, Phase I, 2003.
- NASA Grant Review Panel: National Space Biomedical Research Institute, Washington, DC., October, 2003.
- Medical Research and Materiel Command Grant Review: Small Business Innovation Research Program, Phase I, July 2005.
- Medical Research and Materiel Command Grant Review: Small Business Innovation Research Program, Phase I, July 2006.
- Netherlands Organization for Scientific Research Invited Grant Review: January, 2007.
- Oak Ridge Associated Universities, Ralph E. Powe Junior Faculty Enhancement Award, Invited Review: March 2009.
- National Institutes of Health, Center for Scientific Review and the Italian Ministry of Health, Directorate for Health and Technologies Research, International Grant Review Panel, January, 2010.
- Invited Grant Review Panel: San Antonio Life Sciences Institute, 2010.
- Invited Grant Review: Institute for Integration of Medicine and Science Clinical and Translational Science (NIH sponsored), University of Texas Health Science Center San Antonio, August, 2013.
- External Reviewer, 5-year Performance Review of Department Chair, University of Illinois, Chicago, December 2014.
- Elected Member: Board of Directors, Texas Chapter of the American College of Sports Medicine, 2015 - 2018.
- Invited Grant Review: Institute for Integration for Medicine and Science, Clinical and Translational Science (NIH sponsored), University of Texas Health Science Center San Antonio, June, 2015.
- Invited Program Review Consultant: Academic Research Enhancement Award (AREA) Program, Challenges and Successes, National Institutes of Health, June, 2015.
- Invited Proposal Reviewer: San Antonio Military Health System and Universities Research Forum, June 2015.
- Invited Member 2016 - 2017: University of Texas Health Science Center at San Antonio Translational Science Committee on graduate Studies (UTSA representative).
- NIH Study Section Member ZHL1 CSR-N (S1) Basic Physiology of Electronic Cigarettes, June 2018.

## **Manuscript Review**

- **Official Journals of the Physiological Society:**  
*Journal of Physiology (London)* (13 papers)  
*Experimental Physiology* (2 paper)  
*Physiological Reviews* (1 paper)
- **Official Journals of the American Physiological Society:**  
*Physiological Reviews* (1 paper)  
*Journal of Applied Physiology* (34 papers)  
*American Journal of Physiology: Regulatory, Integrative, and Comparative Physiology* (19 papers)  
*American Journal of Physiology: Heart and Circulatory Physiology* (19 papers)
- **Official Journal of The American College of Sports Medicine:**  
*Medicine and Science in Sports and Exercise* (16 papers)
- **Official Journal of the Aerospace Medical Association:**  
*Aviation, Space, and Environmental Medicine/Aerospace Medicine and Human Performance* (36 papers)
- **Official Journal of the Scandinavian Physiological Society:**  
*Acta Physiologica Scandinavica* (2 papers)
- **Official Journal of The Institute of Electrical and Electronics Engineers:**  
*IEEE Transactions on Biomedical Engineering* (2 papers)
- **Official Journal of The American Autonomic Society:**  
*Clinical Autonomic Research* (6 papers)
- **Official Journal of the Scandinavian Society of Clinical Physiology and Nuclear Medicine**  
*Clinical Physiology and Functional Imaging* (1 paper)
- **Official Journals of the American Heart Association**  
*Hypertension* (1 paper)
- **Other**  
*European Journal of Applied Physiology* (1 paper)  
*International Journal of Sports Medicine* (3 papers)  
*Autonomic Neuroscience* (6 papers)  
*Journal of Neuroscience* (2 papers)  
*Applied Physiology, Nutrition and Metabolism* (1 paper)

## **Professional Affiliations/Offices/Certifications**

- 1990 – 1992: Certified Strength and Conditioning Specialist, National Strength and Conditioning Association
- 1993 – present: Member, American College of Sports Medicine
- 1994 – present: Member, American Physiological Society
- 1999 – 2002: Member, Aerospace Medical Association
- 2000 – present: Board Certified Exercise Physiologist (certificate #24); American Society of Exercise Physiologists



- 2004 – 2006: Peer Review Editorial Consultant, Journal of Special Operations Command
- 2008 – present: Member, American Autonomic Society
- 2015 – 2017: Board of Directors (elected), Texas Regional Chapter of the American College of Sports Medicine

### **University (Departmental) Service**

- Member: Search Committee, Department of Biomedical Engineering, Michigan Technological University, 2000
- Member: Search Committee, Department of Biomedical Engineering, Michigan Technological University, 2001
- Member: Merit Review Evaluation, Department of Health and Kinesiology, University of Texas at San Antonio, 2005 -
- Member: Graduate Degree Program Development, Department of Health and Kinesiology, University of Texas at San Antonio, 2005 -
- Member, Curriculum Task Force, Department of Health and Kinesiology, University of Texas at San Antonio, 2005
- Member: Departmental Faculty Advisory Committee, Department of Health and Kinesiology, University of Texas at San Antonio, 2005 -
- Chair: Departmental Faculty Advisory Committee, Department of Health and Kinesiology, University of Texas at San Antonio, 2007 -
- Member: Departmental Faculty Review Advisory Committee, Department of Health and Kinesiology, University of Texas at San Antonio, 2005 –
- Chair: Search Committee, Department of Health and Kinesiology, University of Texas at San Antonio, 2006 – 2007.
- Member: Graduate Studies Working Committee, Department of Health and Kinesiology, University of Texas at San Antonio, 2007 –
- Chair: Search Committee, Department of Health and Kinesiology, University of Texas at San Antonio, 2007 – 2008.
- Chair: Departmental Faculty Review Advisory Committee, Department of Health and Kinesiology, University of Texas at San Antonio, 2008 – 2010.
- Chair: Search Committee, Department of Health and Kinesiology, University of Texas at San Antonio, 2009-2010.
- Chair: Strategic Planning Committee, Department of Health and Kinesiology, University of Texas at San Antonio, 2011 - 2013
- Chair: PhD Task Force, 2011 – 2012, University of Texas at San Antonio
- Chair: Periodic Performance Review, Departmental Full Professor Review, 2011
- Chair: Departmental Faculty Review Advisory Committee, Department of Health and Kinesiology, University of Texas at San Antonio, 2012 – 2014
- Department Chair: Department of Kinesiology, Health, and Nutrition, University of Texas at San Antonio 2014 – 2017

- Chair, Promotion and Tenure Committee, Department of Kinesiology and Integrative Physiology, Michigan Technological University 2017.
- Chair, Department Chair Search Committee, Department of Kinesiology and Integrative Physiology, Michigan Technological University 2018-19.
- Chair, Department Search Committee, Sleep Scientist/Researcher, Department of Kinesiology and Integrative Physiology, Michigan Technological University 2020-21.
- Member, Search Committee for Department Chair, Cognitive and Learning Sciences 2021.

### **University and College Service**

- Member: Research and Development Committee, College of Education and Human Development, University of Texas at San Antonio, 2006
- Member: Institutional Review Board for the Protection of human Subjects in Research, University of Texas at San Antonio, 2007 – 2010
- Member: University Libraries Committee, University of Texas at San Antonio, 2007 – 2009
- Member: Academic Research Committee, College of Education and Human Development, University of Texas at San Antonio, 2007
- Invited Participant: Risk Assessment Development for the Institutional Review Board for the Protection of Human Subjects in Research, The University of Texas at San Antonio, 2007
- Invited Member: Ashbel Smith Professor Nomination Committee, 2008
- Chair: College of Education and Human Development Scholarship Committee, 2007 – 2009
- Chair: Research and Development Committee, College of Education and Human Development, University of Texas at San Antonio, 2008 – 2010
- Participant: College of Education and Human Development promotion and tenure panel, “Beyond the Box,” 2008
- Member: University Graduate Council, 2008 – 2011
- Member: University Faculty Senate, 2008 – 2011
- Member: University Faculty Senate Executive Committee, 2008 – 2010
- Chair: University Faculty Senate Evaluation, Merit, Rewards, and Workload Committee, 2008 – 2009
- Member: University Grievance Committee, 2008 – 2012
- Member: University Review Committee, 2009 – 2011
- Invited Reviewer, William T. Grant Scholars Program, 2009
- Member: University Faculty Senate Curriculum Committee, 2009 – 2010
- Invited Member: Inquiry Panel for Scientific Misconduct, Office of the Vice President for Research, 2010
- Member: Periodic Performance Review for the Dean of Graduate Studies, 2010
- Member: Periodic Performance Review for the Dean of the College of Education and Human Development, 2010
- Member, Graduate Council Membership Committee, 2010 – 2012
- Member, Committee on the Conflict of Interest in Research and Intellectual Property, 2011–

- Member, Faculty Developmental Leave Committee, College of Education and Human Development, 2013 -
- Invited Member: Inquiry Panel for Scientific Misconduct, Office of the Vice President for Research, 2013
- Task Force Member: UTSA Institutional Review Board, 2013
- Task Force Member: Office of the Vice President for Research, Equalizing Social and Educational Transformations, 2014
- Invited Member: UTSA "Innovative Research and Discovery" task for the UTSA 2020 Blueprint (university strategic plan) 2015
- Member, Search Committee, Dean of the College of Engineering, Michigan Technological University, 2017.
- Departmental Representative, University Senate, Michigan Technological University, 2017 –
  - Member, University Senate Academic and Policy Committee, Michigan Technological University, 2019 –
  - Member, University Senate Research Policy Committee, Michigan Technological University, 2019 –
- College of Sciences and Arts Promotion and Tenure Committee, Michigan Technological University, 2019 –
- Member, Michigan Tech Sabbatical Leave Committee, 2020 –

### **Honors and Awards**

- 1991: Inducted into Psi Chi, The National Honor Society in Psychology
- 1992: Worthington A. Frank Superior Graduate Student Scholarship Award
- 1994: Research Presentation Award, College of Education, Texas A&M University
- 1994: Research Presentation Award, American College of Sports Medicine, Texas
- 1995: Research Presentation Award, American College of Sports Medicine, Texas
- 1998: Certificate of Achievement, National Aeronautics and Space Administration
- 1999: Group Achievement Award, National Aeronautics and Space Administration
- 2000-2004: Scientist Development Grantee of the American Heart Association
- 2001: Certificate of Appreciation, U.S. Army Institute of Surgical Research
- 2002: Finalist for the Michigan Tech Distinguished Teaching Award
- 2002: Inducted into the Michigan Tech Academy of Teaching Excellence
- 2008: Distinguished Research Achievement Award, College of Education and Human Development, University of Texas at San Antonio
- 2009: Distinguished Research Achievement Award, College of Education and Human Development, University of Texas at San Antonio
- 2009: Faculty of the Year Award, Department of Health and Kinesiology, University of Texas at San Antonio
- 2010: McCraw Lecturer, Department of Kinesiology and Health Education, University of Texas at Austin

- 2013: Spring Lecture Tour Speaker, Texas Chapter of the American College of Sports Medicine
- 2013: Fellow, American College of Sports Medicine (FACSM)
- 2013: President's Distinguished Achievement Award for Research, University of Texas at San Antonio
- 2015: Inducted into the Academy of Distinguished Researchers (Charter Member), University of Texas at San Antonio