**Home Address:** 6 Whippoorwill Lane,

Walpole, MA 02081

 Phone: (508) 212-5509

**Current**

**Office Address:** Biophysics and Biomedical Modeling Division (MCMR-EMB)

 U.S. Army Research Institute of Environmental Medicine

 Natick, MA 01760-5007

 Phone: (508) 206-2357

 Fax: (508) 206-2137

 E-mail: adam.w.potter.civ@mail.mil

**Citizenship:** US Citizen

**Special Hiring Authority:** Veteran Preference (5 point)

**Federal Experience:** **Military** (5+ years active duty) and **Civilian** (10+ years)

**Clearance:** Secret

**Education:** AA, BA, MBA, MS, PhD

**(1) Academic**

2015-2019 Rutgers University

Doctor of Philosophy (PhD), Biomedical and Health Sciences, Concentration: Bioinformatics, Nanomedicine, and Clinical Informatics, August 2019 (GPA 3.9/4.0)

* Dissertation Topic: “*Modeling individualized thermoregulatory responses to clothing and activity, in hot and cold environments*”
* BINF5005 – Health Care Information Systems
* BINF5075 – Biomedical Informatics in Clinical Trials Management
* BINF5100 – Introduction to Biomedical Informatics
* BINF5125 – Machine Learning Techniques
* BINF5210 – SAS Applications in Biomedical and Clinical Research
* BINF7560 – Health Information Systems Integration
* BINF7510 – Clinical Decision Making and Decision Analysis
* BINF7550 – Medical Image Processing and Visualization
* BINF7910 – Research and Developments in Medical Informatics
* BINF8001 – Dissertation – Literature Review Phase
* BINF8002 – Dissertation – Proposal Phase
* BINF8003 – Dissertation – Results Phase
* BINF8004 – Dissertation – Defense Phase

2013-2014 American Military University

 Master of Science (MS), with Honors

Sports and Health Sciences, May 2014 (GPA 4.0/4.0)

*36 credit hours completed:*

* SPHS500 – Statistics for Sports and Health Sciences
* SPHS501 – Advanced Exercise and Sport Physiology
* SPHS502 – Motor Learning
* SPHS503 – Nutrition for Sports Performance
* SPHS504 – Advanced Methods of Strength and Conditioning
* SPHS505 – Sport Psychology
* SPMT600 – Research Methods in Sports and Health Sciences
* SPHS506 – Essentials of Human Performance and Exercise Science
* SPHS507 – Advanced Biomechanics
* SPHS508 – Current Topics in Exercise Science and Human Performance
* SPHS509 – Optimal Sports Performance

2011 Harvard University Extension School, Cambridge, MA

Java Programming (Graduate level)

2011-2013 American Military University

 Master of Business Administration (MBA), with Honors

Concentration: Accounting, February 2013 (GPA 3.9/4.0)

*39 credit hours completed:*

* BUSN601 – Global Management Perspective
* BUSN602 – Managerial Analysis
* BUSN603 – Quantitative Analysis
* BUSN620 – Strategic Management
* BUSN623 – Legal & Ethical Issues in Management
* BUSN625 – Applied Decision Making
* MKTG600 – Marketing Management
* ECON600 – Managerial Economics
* FINC600 – Corporate Finance
* FINC605 – Financial Accounting
* ACCT600 – Intermediate Accounting I
* ACCT615 – Individual Tax Research and Planning

2007-2010 Cambridge College, Cambridge, Massachusetts

 Bachelor of Arts (BA), Summa Cum Laude

Major: Psychology, August 2010 (GPA 3.8/4.0)

*120 credit hours completed:*

*Mathematics and Computer Science Courses:*

* CMP230 – Information Literacy
* MAT113 – Pre-calculus
* CSI101 – Intro to Computers
* CSI229 – Visual Basic Programming
* MAT207 – Statistics
* MAT205 – Linear Algebra

 2004-2007 Quincy College, Quincy, Massachusetts

Associates of Arts (AA), Magna Cum Laude

Major: Psychology, June 2006 (GPA 3.6/4.0)

**(2) In-Service Training**

* Credentialed by USARIEM: as a Principal Investigator (PI) for human research:
	+ Human Physiology / Biomechanics
	+ Epidemiologic / Database / Modeling
	+ Human Factors / Engineering
* Credentialed by USARIEM: Dual Energy X-ray Absorptiometry (DEXA/DXA)
* Credentialed by USARIEM: Telemetric Temperature Sensor and Rectal Thermistor
* Credentialed by USARIEM: Cardiorespiratory Exercise Testing (VO2 Max)
* Certified in Basic Life Saving (BLS): Automated External Defibrillator (AED) and Cardiac Pulmonary Resuscitation (CPR), by the American Heart Association
* Jackson Laboratory Courses:
	+ “Basics of Mouse Genetics”
	+ “Basics of CRISPR/Cas9”
* Udemy Courses:
	+ “Master MATLAB through Guided Problem Solving”
	+ “Introduction to the Discrete Fourier Transform with Python”
	+ “Maching Learning for Data Science using MATLAB”
	+ “Learn Neural Networks using MATLAB Programming”
	+ “Particle Swarm Optimization in MATLAB”
	+ “DNA Damage and Repair”
	+ “Conducting Introductory Computational Biology Research”
* edX Courses:
	+ “PH207x: Health in Numbers: Quantitative Methods in Clinical Public Health Research”
	+ “Stat2.1x: Introduction to Statistics: Descriptive Statistics”
* Army e-Learning Courses:
	+ An Introduction to Program Management
	+ Introduction to Portfolio Management
	+ IT Project Management Essentials: Managing Risks in an IT Project
	+ IT Project Management Essentials: Monitoring and Controlling IT Projects
	+ IT Project Management Essentials: Executing IT Projects
	+ IT Project Management Essentials: Initiating and Planning IT Projects
	+ IT Project Management Essentials: Introduction to IT Project Management
	+ Project Management Process Groups
	+ Basic Accounting Principles and Framework
	+ Project Management Overview
	+ Managing Projects within Organizations
	+ Managing Technical Professionals
* Marine Corps Institute Courses:
* 028B – ***Introduction to Combat Intelligence***
* 033N – ***Fundamentals of Marine Corps Leadership***
* 0112B **– *Counseling for Marines***
* 0201 **– *Intelligence Brief: Southwest Asia***
* 0210B **- *Terrorism Awareness for Marines***
* 0332G **- *Reconnaissance Marine***
* 0410B **- *Marine Corps Integrated Maintenance Management Automated Information System***
* 0416A **- *The Marine Corps Publications and Directives System***
* 0582 **- *Corrections Supervisor***
* 1143 **- *Interior Wiring***
* 3414 **- *Financial Management***
* 3420E **- *Personal Financial Management***
* 3503 **- *Motor Transport Noncommissioned Officer: Combat Operations***
* 3525B **- *Automotive Fuel and Exhaust Systems***
* 5714A **- *Nuclear Biological and Chemical Reconnaissance and Contamination Avoidance***
* 7103 **- *Tactical Communications***
* 7104F **- *Personal Administration***
* 7105F **- *Military Justice***
* 7106B **- *Leadership***
* 7110 **- *Operations***
* 8000 **- *Sergeants Distance Education Program***
* 8001A **- *Basic Grammar***
* 8002A **- *Leadership***
* 8003 **- *Military Studies***
* 8004 **- *Training***
* 8005 **- *Battle Skills***
* 8006A **– *Weapons***
* Advanced training in ***Interviewing and Interrogations***, by John E. Reid and Associates
* ***Certified Clinical Research Coordinator (CCRC)***, 2009-2013, Association of Clinical Research Professionals (ACRP), Alexandria, Virginia
* Certified in ***Management of Aggressive Behavior (M.O.A.B.)*** 2013, MOAB® Training International Inc.
* Civilian Education System (CES), ***Civilian Foundation Course***
* Certified Acquisition Level 1 – ***Engineering I (ENG I)***
* Certified Acquisition Level 1 – ***Program Management I (PM I)***
* Certified Acquisition Level 1 – ***Science and Technology Manager I (STM I)***
* Certified Acquisition Level 2 – ***Science and Technology Manager II (STM II)***
* Acquisition Level 3 **(STM III)** – **Coursework completed; pending resident course**
* Defense Acquisition University (DAU) Courses:
* ACQ 101 ***Fundamentals of Systems Acquisition Management***
* ACQ 201a ***Intermediate Systems Acquisition***
* ACQ 201b (Equivalent) ***Intermediate Medical Acquisition Course (IMAC) (Resident)***
* ACQ 202 – ***Intermediate Systems Acquisition Part A***
* BCF 103 ***Fundamentals of Business Financial Management***
* CLB 008 ***Program Execution***
* CLC 004 ***Market Research***
* CLC 007 ***Contract Source Selection***
* CLC 012 ***Contracting Officers Representative Overview (HCAA)***
* CLC 013 ***Performance-Based Services Acquisition***
* CLC 106 ***Contracting Officer Representative with a Mission Focus***
* CLC 222 ***Online Training for Contracting Officers Representative (COR)***
* CLE 003 ***Technical Reviews***
* CLE 021 ***Technology Readiness Assessments***
* CLE 068 ***Intellectual Property and Data Rights***
* CLE 069 ***Technology Transfer***
* CLE 082 ***Prototyping & Experimentation***
* CLM 013 ***Work Breakdown Structure***
* CLM 014 ***IPT Management and Leadership***
* CLM 024 ***Contracting Overview***
* CLM 034 ***Science & Technology - Lesson from PMT 352A***
* CON 100 ***Shaping Smart Business Arrangements***
* CON 110 ***Mission Support Planning***
* HBS 401 ***Budgeting***
* HBS 417 ***Finance Essentials***
* HBS 428 ***Negotiating***
* HBS 435 ***Project Management***
* HBS 438 ***Strategy Execution***
* IRM 101 ***Basic Information Systems Acquisition***
* LOG 101 ***Acquisition Logistics Fundamentals***
* PQM 101 ***Production, Quality and Manufacturing Fundamentals***
* SAM 101 ***Basic Software Acquisition Management***
* SPS 106 ***Database Maintenance (WBT)***
* STM 101 ***Introduction to Science and Technology Management***
* STM 203 ***Intermediate Science and Technology Management (Resident)***
* SYS 101 ***Fundamentals of Systems Planning, Research, Development and Engineering***
* SYS 202 ***Intermediate Systems Planning, Research, Development and Engineering***

**Experience:**

**Research Physiologist, DB-0413-3**

**[Deputy Division Chief / Supervisor]**

Biophysics and Biomedical Modeling Division,

U.S. Army Research Institute of Environmental Medicine, Natick, MA

Jan 2015 – Present

40 hours/week

* Task Area Manager for the Division’s Research Program (2011-present). Manage a diverse program including all of the Division’s major research projects and associated subprojects. Manage Division budget up to ~$8 million annually. Establish spend plans and actively coordinate distribution of Division resources, ensuring programmed funding is available for salaries (for civilians, contractors, and interns).
* Principal Investigator: Prepare, submit, and conduct research protocols (human and non-human use). Prepare, submit, and conduct physiological, biophysics, and predictive modeling research protocols.
* Actively support the Department of Defense (DoD), Army, Institute, and Division mission by developing and reviewing high quality scientific contributions in the field of human performance. Additionally, serve as an invited reviewer on the Institute’s Scientific Review Committee (SRC) and a voting member on the Military Operational Medicine Research Program, Joint Program Committee 5 (MOMRP/JPC-5) Working Group: Human Performance Optimization in Extreme Environments.
* Contribute to scientific approaches towards improved methods of biophysical testing of clothing and individual equipment, mathematical modeling methods, and wireless and wearable sensor system solutions. Continuously work towards investigating approaches to improve health readiness, performance and survivability in environmental extremes.
* Actively publish and present research findings in open literature and government technical reports. Manage, edit, review, and clear all Division publications.
* Supervise and mentor junior staff, interns, and fellows of varying levels of education and experience. Formally supervise / rate all Division DB2 staff. Formally mentor and rate two doctoral level research fellows (one early career and one established scientist). Lead a monthly meeting of all Division academic research fellows. Support Division Chief in leading a team of diversely trained staff towards scientific improvements in the study of thermal and mathematical modeling, biophysics, physiology, real-time analyses, and data-driven solution developments.
* Represent the Institute and Division during high-level visits and program reviews. Regularly present and brief visitors and VIPs, to include members of the press, congressional appointees, politicians, senior military and General Officer Level Staff.

**Research Program Coordinator, DJ-0301-2**

**[Deputy Division Chief]**

Biophysics and Biomedical Modeling Division,

U.S. Army Research Institute of Environmental Medicine, Natick, MA

Jan 2011 – Jan 2015

40 hours/week

* Provide project management oversight for 10 major research projects and all associated subprojects
* Maintain financial awareness and tracking of Division funds
* Serve as Software Liaison for Division protected source codes and data
* Manage and expedite Division publications through institution clearance process
* Assist Principal Investigators in coordination of project efforts
* Lead in project tasking from Command-level assignments
* Assist Division Chief in personnel management
* Led Command Initiative (Tiger Team) to establish the Institute’s first Business Management Office.

**Clinical Research Project Manager**,

Office of Research,

Newton-Wellesley Hospital, Newton, MA

2008 – 2010

40 hours/week

* Successfully managed 19 major clinical trials
* Identified and evaluated resources required for protocol start up
* Initiated a system for recruitment, screening, and enrollment of volunteers
* Worked with Institutional Review Board (IRB) preparing documents for review as well as provision of guidance for issues with submitted protocols
* Developed and maintained research information systems and databases
* Managed study progress through milestones and completions
* Evaluated patients according to protocols (and in accordance with GCP)

**Clinical Research Project Manager / Sub-Investigator**,

Behavioral Medicine

New England Baptist Hospital, Boston, MA

2007 – 2008

20 hours/week

* Successfully conducted a 100 subject, inpatient clinical trial
* Administered and evaluated all human research volunteer neurological tests
* Collected and entered patient observations into database software
* Preformed interim analysis and initial data analysis of study data
* Provided training and supervision to all Research Assistants and students

**Clinical Research Coordinator / Junior Investigator**,

Behavioral Medicine

New England Baptist Hospital, Boston, MA

2006 – 2008

20 hours/week

* Successfully conducted 495 subject, inpatient clinical trial
* Administered and reviewed all mental status evaluations of subjects
* Created database software (via Visual Basic) for study tracking
* Collected and entered patient observations into database software
* Preformed interim analysis and initial data analysis of study data
* Provided training and supervision to all Research Assistants and students

**Supervisor**

Security Department,

New England Baptist Hospital, Boston, MA

2004-2007

**Sergeant** (E-5)

2nd Marine Division (2MARDIV), 1st Battalion, 8th Marine Regiment (1/8)

United States Marine Corps

1998-2004

**Academic Appointments:**

**Adjunct Professor, Health Sciences**

University of the People

2020-Present

**Adjunct Professor, Biomedical and Health Sciences**

Rutgers University

Appointment to begin 2021

**Summary of Achievements**

As a US Marine Corps combat veteran, serving our country and the Warfighter has always been a passion of mine. Working as a Research Physiologist and the Deputy Chief at the US Army Research Institute of Environmental Medicine (USARIEM) within the Biophysics and Biomedical Modeling Division (BBMD) offers me a unique opportunity to conduct meaningful science that supports the general public and specifically the men and women within our Armed Forces.

As a credentialed Principle Investigator within the Division my duties include leading non-human and human research protocols in the areas of thermal manikins, thermoregulatory modeling, metabolic cost studies, and real-time monitoring of physiological responses to various military operational activities. My research portfolio spans across the applied sciences, e.g., manikin testing, to the cutting-edge of product development, e.g., computer-based decision aids, wireless communications, and wearable sensors. Current scientific work areas I lead include: 1) individualized mathematical modeling of thermoregulatory responses to clothing, environment, activities, with the inclusion of components for rest and recovery, 2) studies of metabolic costs over complex terrain, 3) real-time assessments of ground reaction forces and energy demands during locomotion and load carriage, and 4) innovative approaches to data management and the application of mathematics in integrative physiology.

Scientific findings have resulted in more than 60 open literature publications and government reports, 27 as first author, 9 as second, and 18 as senior author. This work has led to multiple tradespace assessments used by material developers for clothing selections and operators for safety and mission thermal management guidance. Notably, this work has provided quantitative guidance to healthcare workers responding to the Ebola outbreak in West Africa, developed simplified modeling methods for explosive ordnance disposal (EOD) operators, and novel methods for estimating thermal manikin derived values of evaporative potential that otherwise consisted of multiple costly tests within climate-controlled chambers, significantly reducing required cost and labor hours. My work increasingly makes me a point of contact for subject matter expertise guidance in these work areas, providing guidance to both internal, Department of Defense (DoD) customers as well as external collaborators.

During the course of my career I have been fortunate enough to have successfully managed, mentored, and supervised a number of individuals. As a squad leader, I effectively led enlisted Marines during real-world operations during deployments around the world (1998-2003). As a security supervisor for a Boston hospital, I supervised a diverse workforce in a progressive yet complex organization (2004-2007). While working in clinical research management, I had the pleasure of engaging with and mentoring clinical staff, physicians, and researchers during unique clinical trials (Phase 1 – 3) (2006-2010). Working for the Army as a civilian, I have and continue to provide scientific leadership, mentorship, and supervision to junior- and mid-level staff and convey high-level objectives and Army visions to senior staff members. In my current role as a Research Physiologist and Deputy Chief of BBMD, I continue to provide a high-level of continuity and stability as a leader within the Organization. I play a critical role in business management, specifically internal and external collaborations, budgetary oversight, spearheading of transition agreements, personnel management, and strategic planning of long- and short-term objectives. I continue to provide passionate and accurate high-level briefings, consultations, and presentations to a wide array of individuals and groups.

**Publications**

1. **Government Publications**
2. Gonzalez JA, Laprise B, Looney DP, and **Potter AW**. Thermal Manikin Evaluation and Simulated Thermal Responses: Tactical Advanced Threat Protective Ensemble (TATPE) Chemical Biological Protective Suit. US Army Research Institute of Environmental Medicine, Natick, MA, 01760, USA, Technical Report, T20-12, 2020. AD1098469 (Contribution: 50% assisted with analytical design, mentorship, and contributed to writing report).
3. Doughty EM, Looney DP, Santee WR, Figueiredo PS, Vangala SV, Sanford SP, McClung HL, Karis AJ, Marrero AS, and **Potter AW**. Assessment of the relationship between rucksack load and standing metabolic rate. US Army Research Institute of Environmental Medicine, Natick, MA, 01760, USA, Technical Report, T20-10, 2020. AD1098483 (Contribution: 10% assisted with analytical design, data collection, mentorship, and contributed to writing).
4. Gonzalez JA, and **Potter AW**. Quantitative Comparison of two Chemical Biological Protective Suits: The Joint Service Lightweight Integrated Suit Technology (JSLIST) and the Tactical Advanced Threat Protective Ensemble (TATPE). US Army Research Institute of Environmental Medicine, Natick, MA, 01760, USA, Technical Report, T20-09, 2020. AD1097108 (Contribution: 50% assisted with analytical design, mentorship, and contributed to writing).
5. Welles AP, **Potter AW**, Rioux TP, Berglund LG, Biby GA, Gonzalez JA, Looney DP, and Xu X. Assessment of evaporative heat flux through wicking fabrics using a sweating guarded hot plate. U.S. Army Research Institute of Environmental Medicine, Natick, MA 01760 USA, Technical Report, T20-05, 2020. AD1096019 (Contribution: 20% assisted with analytical design, data collection, mentorship, and contributed to writing).
6. **Potter AW**, Looney DP, Castellani MP, Chin Suey DR, and Gonzalez JA. Effects of layering on thermal insulation and vapor permeability. U.S. Army Research Institute of Environmental Medicine, Natick, MA 01760 USA, Technical Report, T20-01, 2019. AD1092367
7. **Potter AW**, Gonzalez JA, and Looney DP. Biophysical assessment of the US Army Improved Hot Weather Combat Uniform (IHWCU) and a comparison to the currently fielded Fire Resistant Army Combat Uniform (FRACU). U.S. Army Research Institute of Environmental Medicine, Natick, MA 01760 USA, Technical Report, T20-02, 2019. AD1092374
8. **Potter AW**, Gonzalez JA, Chin Suey DR, Looney DP, Castellani MP, Blanchard LA, and Santee WR. Quantitative assessment of the meaningful differences in evaporative potential. U.S. Army Research Institute of Environmental Medicine, Natick, MA 01760 USA, Technical Report, T20-03, 2019. AD1092375
9. Castellani MP, Rioux TP, **Potter AW**, and Xu X. Modeling male temperature profiles with the finite element method and anatomically correct human torsos. US Army Research Institute of Environmental Medicine, Natick, MA, 01760, USA, Technical Report, T19-11, 2019. AD1095715 (Contribution: 20% assisted with analytical design, mentorship, and contributed to writing report).
10. Xu X, Rioux TP, Gonzalez JA, Hansen EO, Castellani JW, Santee WR, Karis AJ and **Potter AW**. Development of a cold injury prevention tool: The Cold Weather Ensemble Decision Aid (CoWEDA). US Army Research Institute of Environmental Medicine, Natick, MA, 01760, USA, Technical Report, T19-06, 2019. (Contribution: 20% assisted with analytical design, mentorship, and contributed to writing report).
11. Castellani MP, Rioux TP, Gonzalez JA, **Potter AW**, and Xu X. Effects of different body armor configurations on body heat loss during exposure to extreme cold environments using the finite element method. US Army Research Institute of Environmental Medicine, Natick, MA, 01760, USA, Technical Report, T19-04, 2019. AD1072848 (Contribution: 20% assisted with analytical design, mentorship, and contributed to writing report).
12. **Potter AW**, Gonzalez JA, Xu X, Looney DP, Montain SJ. Thermal Manikin and Mathematical Modeling Evaluation of Military Head worn Covers. US Army Research Institute of Environmental Medicine, Natick, MA, 01760, USA, Technical Report, T19-02, 2018. AD1061686
13. **Potter AW**, Hunt AP, Rioux TP, Looney DP, and Fogarty AL. Interlaboratory Manikin Testing, Mathematical Modeling, and Human Research Data. US Army Research Institute of Environmental Medicine, Natick, MA, 01760, USA, Technical Report, T18-03, 2018. AD1052856
14. **Potter AW**, Gonzalez JA, Carter AJ, Looney DP, Rioux TP, Srinivasan S, Sullivan-Kwantes W, and Xu X. Comparison of Cold Weather Clothing Biophysical Properties: US Army, Canadian Department of National Defence, and Norwegian Military. US Army Research Institute of Environmental Medicine, Natick, MA, 01760, USA, Technical Report, T18-02, 2018. ADA#1051229
15. **Potter AW**, Coca A, Quinn T, Wu T, Isherwood K, and Perkins A. Tradespace assessment: Thermal strain modeling comparison of multiple clothing configurations based on different environmental conditions. US Army Research Institute of Environmental Medicine, Natick, MA, 01760, USA, Technical Report, T17-06, 2017, ADA#1031717
16. Welles AP, Tharion WJ, **Potter AW**, and Buller MJ. *Novel method of estimating metabolic rates of soldiers engaged in chemical biological defense training.* US Army Research Institute of Environmental Medicine, Natick, MA, 01760, USA, Technical Report, T17-02, 2017, ADA#1022691. (Contribution: 20% assisted with analytical design and contributed to writing report).
17. **Potter AW**, Blanchard LA, Gonzalez JA, Berglund LG, Karis AJ, and Santee WR. *Black versus gray t-shirts: Comparison of spectrophotometric and other biophysical properties of physical fitness uniforms and modeled heat strain and thermal comfort.* US Army Research Institute of Environmental Medicine, Natick, MA, 01760, USA, Technical Report, T16-15, 2016, ADA#1016232.
18. **Potter AW**. *Method for estimating evaporative potential (im/clo) from ASTM standard single wind velocity measures.* US Army Research Institute of Environmental Medicine, Natick, MA, 01760, USA, Technical Report, T16-14, 2016, ADA#637325.
19. Xu X, Karis AJ, Rioux TP, Sinha P, Heath CA, Batty J, Perry J, and **Potter AW**. *Heat strain evaluation of US Navy steam suit ensembles.* US Army Research Institute of Environmental Medicine, Natick, MA, 01760, USA, Technical Report, T16-14, 2016, ADA#634304, accessible at: [www.dtic.mil/dtic/tr/fulltext/u2/a634304.pdf](http://www.dtic.mil/dtic/tr/fulltext/u2/a634304.pdf) (Contribution: 30% managed design, analysis, and contributed to writing report).
20. Friedl KE, Buller MJ, Tharion WJ, **Potter AW**, Manglapus GL, & Hoyt RW. *Real time Physiological status monitoring (RT-PSM): Accomplishments, requirements, and research roadmap*. US Army Research Institute of Environmental Medicine, Natick, MA, 01760, USA, Technical Note, TN16-02, 2016, ADA#630142, accessible at: [www.dtic.mil/dtic/tr/fulltext/u2/a630142.pdf](http://www.dtic.mil/dtic/tr/fulltext/u2/a630142.pdf) (Contribution: 20% contributed to writing report).
21. Santee WR, Xu X, Yokota M, Buller MJ, Karis AJ, Mullen SP, Gonzalez JA, Blanchard LA, Welles AP, Cadarette BS, **Potter AW**, and Hoyt RW. *Core temperature and surface heat flux during exercise in heat while wearing body armor.*  US Army Research Institute of Environmental Medicine, Natick, MA, 01760, USA, Technical Report, T16-1, 2015, ADA#622653, accessible at: [www.dtic.mil/dtic/tr/fulltext/u2/a622653.pdf](http://www.dtic.mil/dtic/tr/fulltext/u2/a622653.pdf) (Contribution: 15% managed progress, conducted analysis, and contributed to writing report).
22. **Potter AW**, Gonzalez JA, Karis AJ, Santee WR, Rioux TP, and Blanchard LA. *Biophysical characteristics and measured wind effects of chemical protective ensembles with and without body armor.* US Army Research Institute of Environmental Medicine, Natick, MA, 01760, USA, Technical Report, T15-8, 2015. ADA#621169, accessible at: [www.dtic.mil/dtic/tr/fulltext/u2/a621169.pdf](http://www.dtic.mil/dtic/tr/fulltext/u2/a621169.pdf)
23. **Potter AW**, Karis AJ, and Gonzalez JA. *Comparison of biophysical characteristics and predicted thermophysiological responses of three prototype body armor systems versus baseline U.S. Army body armor systems.* US Army Research Institute of Environmental Medicine, Natick, MA, 01760, USA, Technical Report, T15-6, 2015, ADA#619765, accessible at: [www.dtic.mil/dtic/tr/fulltext/u2/a619765.pdf](http://www.dtic.mil/dtic/tr/fulltext/u2/a619765.pdf)
24. **Potter AW**, Walsh M, and Gonzalez JA. *Explosive ordnance disposal (EOD) ensembles: Biophysical characteristics and predicted work times with and without chemical protection and active cooling systems.* US Army Research Institute of Environmental Medicine, Natick, MA, 01760, USA, Technical Report, T15-5, 2015, ADA#618081, accessible at: [www.dtic.mil/dtic/tr/fulltext/u2/a618081.pdf](http://www.dtic.mil/dtic/tr/fulltext/u2/a618081.pdf)
25. **Potter AW**, Gonzalez JA, Karis AJ, Rioux TP, Blanchard LA, and Xu X. *Impact of estimating thermal manikin derived wind velocity coefficients on physiological modeling.* US Army Research Institute of Environmental Medicine, Natick, MA, 01760, USA, Technical Report, 2014, ADA#607972, accessible at: [www.dtic.mil/dtic/tr/fulltext/u2/a607972.pdf](http://www.dtic.mil/dtic/tr/fulltext/u2/a607972.pdf)
26. Tharion WJ, Buller MJ, Clements CM, Dominguez D, Sampsonis C, Karis AJ, and **Potter AW.** *Human factors evaluation of the Hidalgo EquivitalTM­­­ EQ-02 physiological status monitoring system.* U.S. Army Research Institute of Environmental Medicine, Natick, MA 01760 USA, Technical Report, T14-2, 2013, ADA#592523, accessible at: [www.dtic.mil/dtic/tr/fulltext/u2/a592523.pdf](http://www.dtic.mil/dtic/tr/fulltext/u2/a592523.pdf) (Contribution: 30% managed design, collected data, conducted analysis, and contributed to writing report).
27. **Potter AW**, Karis AJ, and Gonzalez JA. *Biophysical characterization and predicted human thermal responses to U.S. Army body armor protection levels (BAPL).* U.S. Army Research Institute of Environmental Medicine, Natick, MA 01760 USA, Technical Report, T13-5, 2013, ADA#585406, accessible at: [www.dtic.mil/dtic/tr/fulltext/u2/a585406.pdf](http://www.dtic.mil/dtic/tr/fulltext/u2/a585406.pdf)
28. Berglund LG, Yokota M. and **Potter AW.** *Thermo-physiological responses of sailors in a disabled submarine with interior cabin temperature and humidity slowly rising as predicted by computer simulation techniques.* U.S. Army Research Institute of Environmental Medicine, Natick, MA 01760 USA, Technical Report, T13-6, 2013, ADA#587308, accessible at : [www.dtic.mil/dtic/tr/fulltext/u2/a587308.pdf](http://www.dtic.mil/dtic/tr/fulltext/u2/a587308.pdf) (Contribution: 35% managed design, conducted analysis, and contributed to writing report).
29. Berglund LG, Yokota M, Santee WR, Endrusick TL, **Potter AW**,Goldman SJ, and Hoyt RW. *Predicted Thermal Responses of Military Working Dog (MWD) to Chemical, Biological, Radiological, Nuclear (CBRN) Protective Kennel Enclosure.* U.S. Army Research Institute of Environmental Medicine, Natick, MA 01760 USA, Technical Report, T11-03, 2011, ADA#547192, accessible at: [www.dtic.mil/dtic/tr/fulltext/u2/a547192.pdf](http://www.dtic.mil/dtic/tr/fulltext/u2/a547192.pdf) (Contribution: 15% conducted analysis and contributed to writing report).
30. **Open Literature Publications**

\*Corresponding author

1. Santee WR, Berglund LG, Cardello AV, Winterhalter, CA, Looney DP, Gonzalez JA, and **Potter AW\***. Physiological assessment of Soldiers wearing military uniforms of different fabrics during intermittent exercise. Journal of Sport and Human Performance, 8(1), 1-14, 2020. (Contribution: 35% conducted analysis, and contributed to writing manuscript).
2. **Potter AW\***, Berglund LG, and O’Brien C. A canine thermal model for simulating temperature responses of military working dogs. *Journal of Thermal Biology*, (91), 102651; 2020.
3. Looney DP, Sanford DP, Li P, Santee WR, Doughty EM, and **Potter AW\***. Formulae for Calculating Body Surface Area in Modern U.S. Army Soldiers. *Journal of Thermal Biology*, (92), 102650; 2020. (Contribution: 35% conducted analysis, and contributed to writing manuscript).
4. **Potter AW\***, Looney DP, Santee WR, Gonzalez JA, Welles AP, Srinivasan S, Castellani MP, Rioux TP, Hansen EO, Xu X. Validation of new method for predicting human skin temperatures during cold exposure: The Cold Weather Ensemble Decision Aid (CoWEDA). *Informatics in Medicine Unlocked*, 2020:100301.
5. Looney DP, Santee WR, Hansen EO, Bonventre PJ, Chalmers CR, and **Potter AW**. Estimating energy expenditure during level, uphill, and downhill walking. *Medicine & Science in Sports & Exercise*. 2019. (Contribution: 35% conducted analysis, and contributed to writing manuscript).
6. Looney DP, Long ET, **Potter AW\***, Xu X, Friedl KE, Hoyt RW, Chalmers CR, Buller MJ, and Florian JP. Divers risk accelerated fatigue and core temperature rise during fully-immersed exercise in warmer water temperature extremes. *Temperature*, 2019.

DOI: 10.1080/23328940.2019.1599182. (Contribution: 35% conducted analysis, and contributed to writing manuscript).

1. **Potter AW\***, Hunt AP, Cadarette BS, Fogarty A, Srinivasan S, Santee WR, Blanchard LA, and Looney DP. Heat Strain Decision Aid (HSDA) accurately predicts individual-based core body temperature rise while wearing chemical protective clothing. *Computers in Biology and Medicine*, 107: 131-139, 2019.
2. Richmond PW, **Potter AW\***, Looney DP, and Santee WR. Terrain coefficients for predicting energy costs of walking over snow. *Applied Ergonomics,* 74: *48-54, 2019*. (Contribution: 30% conducted analysis, and contributed to writing manuscript).
3. Looney DP, **Potter AW**, Pryor JL, Bremner PE, Chalmers CR, McClung HM, Welles AP, Santee WR. Metabolic Costs of Standing and Walking in Healthy Military-Age Adults: A Meta-regression. *Medicine & Science in Sports & Exercise (MSSE)*, 2018. (Contribution: 35% conducted analysis, and contributed to writing manuscript).
4. **Potter AW\***, Looney DP, Xu X, Santee WR, and Srinivasan S. Modeling thermoregulatory responses to cold environments. In: Sadaka F, editor. *Hypothermia*. IntechOpen, 2018
5. Looney DP, Santee WR, Blanchard LA, Karis AJ, Carter AJ, and **Potter AW**. Cardiorespiratory responses to heavy military load carriage over complex terrain. *Applied Ergonomics*. 73: 194-198, 2018 (Contribution: 40% principle investigator, managed design, conducted analysis, and contributed to writing manuscript).
6. Looney DP, Buller MJ, Gribok A, Welles AP, Leger JL, **Potter AW\***, Rumpler WV, Tharion WJ, and Hoyt RW. Estimation of resting human core temperature fluctuations from sequential heart rate observations. *Journal for the Measurement of Physical Behaviour.*1 (2), 79-86, 2018 (Contribution: 10% contributed to writing manuscript).
7. Welles AP, Xu X, Santee WR, Looney DP, Buller MJ, **Potter AW**, Hoyt RW. Estimation of core body temperature from skin temperature, heat flux, and heart rate using a Kalman filter. *Computers in Biology and Medicine,* 99, 1-6. 2018. (Contribution: 10% contributed to writing manuscript).
8. **Potter AW\***, Santee WR, Mullen SP, Karis AJ, Blanchard LA, Rome MN, Pitts KP, and Looney DP. Complex Terrain Load Carriage Energy Expenditure Estimation Using GPS devices. *Medicine & Science in Sports & Exercise (MSSE),* 2018.
9. Looney DP, Santee WR, Karis AJ, Blanchard LA, Rome MN, Carter AJ, and **Potter AW**. Metabolic Costs of Military Load Carriage over Complex Terrain. *Military Medicine,* 2018. (Contribution: 40% principle investigator, managed design, conducted analysis, and contributed to writing manuscript).
10. Welles AP, Buller MJ, **Potter AW**, Balcius JA, and Richter MW. Simulation of thermal-work strain of dismounted Marines wearing different body armor protection levels in a jungle environment. *Journal of Sport and Human Performance*. 6(1), 2018. (Contribution: 15% contributed to writing manuscript).
11. **Potter AW\***, Looney DP, Blanchard LA, Welles AP, and Santee WR. Accuracy of predictive equations for metabolic cost of locomotion while carrying external load. *Journal of Sport and Human Performance*. 5(1), 2017.
12. **Potter AW\***, Blanchard LA, Friedl KE, Cadarette BS, and Hoyt RW. Mathematical prediction of core body temperature from environment, activity, and clothing: The heat strain decision aid (HSDA). *Journal of Thermal Biology*, 64: 78-85, 2017.
13. Santee WR, **Potter AW**, and Friedl KE. Talk to the hand: US Army biophysical testing. *Military Medicine*, 182(7), 2017. (Contribution: 35% managed design, conducted analysis, and contributed to writing manuscript).
14. Xu X, Rioux TP, MacLeod T, Patel T, Rome MN, and **Potter AW**. Measured body composition and geometrical data of four “virtual family” members for thermoregulatory modeling. *International Journal of Biometeorology*, 1-10, 2016. (Contribution: 30% managed design, conducted analysis, and contributed to writing manuscript).
15. Welles AP, Buller MJ, **Potter AW**, Balcius JA, and Richter MW. Simulation of thermal-work strain of dismounted Marines wearing different body armor protection levels in a jungle environment. Personal Armour Systems Symposium, Amsterdam, the Netherlands, 2016. (Contribution: 15% contributed to writing manuscript).
16. **Potter AW\***, Hunt AP, Xu X, Blanchard LA, and Friedl KE. Simplified model of heat stress wearing explosive ordnance disposal suits. Personal Armour Systems Symposium, Amsterdam, the Netherlands, 2016.
17. **Potter AW\***, Karis AJ, Rioux TP, Buller MJ, Welles AP, and Gonzalez JA. Thermal burden comparison of concealable armor shirt and outer-armor vest. Personal Armour Systems Symposium, Amsterdam, the Netherlands, 2016.
18. Xu X, Gonzalez JA, Karis AJ, Rioux TP, and **Potter AW**. *Use of Thermal Mannequins for Evaluation of Heat Stress Imposed by Personal Protective Equipment*, in: Performance of Protective Clothing and Equipment: 10th Volume, Risk Reduction Through Research and Testing, ASTM STP1593, B. Shiels and K. Lehtonen, Eds., ASTM International, West Conshohocken, PA, 2016, pp. 286–296. (Contribution: 35% managed design, conducted analysis, and contributed to writing manuscript).
19. **Potter AW\***, Gonzalez JA, and Xu X. Ebola response: Modeling the risk of heat stress from personal protective clothing. *PLoS ONE 10*(11), e0143461, 2015.
20. Richmond PW, **Potter AW\***, and Santee WR. Terrain factors for predicting walking and load carriage energy costs: Review and refinement. *Journal of Sport and Human Performance*, *3*(3), 1-26, 2015. (Contribution: 35% managed design, conducted analysis, and contributed to writing manuscript).
21. **Potter AW\***, Gonzalez JA, Karis AJ, and Xu X. Biophysical assessment and predicted thermophysiologic effects of body armor. *PLoS ONE 10*(7): e0132698, 2015.
22. Tharion WJ, Karis AJ, **Potter AW\***, and Hoyt RW. Seasonal differences in performance of the Ranger School qualifying road march. *Journal of Sport and Human Performance*, 2(2): 1-14, 2014. (Contribution: 25% assisted in design, conducted analysis, and contributed to writing manuscript).
23. Xu X, Rioux TP, and **Potter AW.** Fabric thermal resistance and ensemble thermal resistances are two different concepts. *Journal of Occupational and Environmental Hygiene*, *11*(11), D187-188, 2014. (Contribution: 35% contributed to writing manuscript).
24. Carter JG, **Potter AW\***, and Brooks KA. Overtraining syndrome: Causes, consequences, and methods for prevention. *Journal of Sport and Human Performance*, *2*(1): 1-14, 2014. (Contribution: 40% conducted analysis and contributed to writing manuscript).
25. Brooks KA, **Potter AW**, Carter JG, and Leal E. Risk of chronic disease and disability in former competitive collegiate athletes. *International Journal of Physical Medicine and Rehabilitation,* 2(1):178, 2014. (Contribution: 40% conducted analysis, and contributed to writing manuscript).
26. Tharion WJ, **Potter AW\***, Duhamel CM, Karis AJ, Buller MJ, and Hoyt RW. Real-time physiological monitoring while encapsulated in personal protective equipment*. Journal of Sport and Human Performance*, 1(4): 14-21, 2013. (Contribution: 30% managed design, collected data, conducted analysis, and contributed to writing manuscript).
27. Tharion WJ, Buller MJ, **Potter AW**, Karis AJ, Goetz V, and Hoyt RW. Acceptability and usability of an ambulatory health monitoring system for use by military personnel. *IIE Transactions on Occupational Ergonomics and Human* 1(4), 203-214, 2013. (Contribution: 20% conducted analysis and contributed to writing manuscript).
28. Tharion WJ, Karis AJ, and **Potter AW\***. Mood states of U.S. Army Ranger students associated with a competitive road march. *Journal of Sport and Human Performance*, 1(3): 1-9, 2013. (Contribution: 35% managed design, conducted analysis, and contributed to writing manuscript).
29. **Potter AW\***, Santee WR, Clements CM, Brooks KA, and Hoyt RW. Comparative analysis of metabolic cost equations: A review. *Journal of Sport and Human Performance*, 1(3): 34-42, 2013.
30. **Potter AW\***, Tharion WJ, and Elrod JM. Technology-assisted feedback for motor learning: A brief review. *Journal of Sport and Human Performance*, 1(3): 43-49, 2013.
31. Tharion WJ, **Potter AW**, Clements CM, Karis AJ, Buller MJ, and Hoyt RW. Real-time physiological monitoring of soldiers encapsulated in chemical-biological clothing. IEEE, Body Sensor Networking, Cambridge, MA, 2013. (Contribution: 30% managed design, collected data, conducted analysis, and contributed to writing manuscript).
32. Clements CM, Moody D, **Potter AW**, Seay JF, Fellin RE, and Buller MJ. Loaded and unloaded foot movement differentiation using chest mounted accelerometer signatures. IEEE, Body Sensor Networking, Cambridge, MA, 2013. (Contribution: 30% managed design, conducted analysis, and contributed to writing manuscript)
33. Nicolson SE, Chabon B, Larsen KA, Kelly SE, **Potter AW**, and Stern TA. Primitive reflexes associated with delirium: A prospective trial. *Psychosomatics* 52: 507-512, 2011. (Contribution: 30% managed design, collected data, conducted analysis, and contributed to writing manuscript)
34. Larsen KA, Kelly SE, Stern TA, Bode RH, Jr, Price L, Hunter DJ, Gulczynski D, Bierbaum BE, Sweeney GA, Hoikala KA, Cotter JJ, and **Potter AW**. Administration of Olanzapine to prevent postoperative delirium in elderly joint-replacement patients: A randomized, controlled trial. *Psychosomatics* 51: 409-418, 2010. (Contribution: 75% managed design, collected data, conducted analysis, and contributed to writing manuscript)

**(3) Other Publications**

1. Xu, X, Rioux TP, Gonzalez JA, and **Potter AW**. Evaluation of Cold Protective Clothing Using a Human Thermoregulatory Model. *European Conference on Protective Clothing, ECPC 2020*, Stuttgart Germany (Accepted abstract).
2. Looney DP, Doughty EM, Marrero AS, Figueiredo PS, Welles AP, Santee WR, McClung HL, Sanford DP, and **Potter, AW**. Cardiovascular and metabolic responses of US Army Soldiers during heavy military rucksack carriage. 2020 Annual Meeting of the American College of Sports Medicine. San Francisco, CA. May 2020. (Accepted abstract).
3. McClung HL, Walker L, Tharion WJ, Welles AP, Hansen H, **Potter AW**, Rome MN, Chalmers CR, and Hoyt RW. Validity of a new portable metabolic gas exchange system. American College of Sports Medicine (ACSM) Annual Meeting / Medicine & Science in Sports & Exercise (MSSE), Orlando, FL, May 2019.
4. Walker LA. Looney DP, Hansen HM, Rome MN, Tharion WJ, Welles AP, **Potter AW**, Chalmers CR, Hoyt RW, and McClung HL. Validation of gas analysis over incremental work intensities – A comparison of two metabolic measurement systems. American College of Sports Medicine (ACSM) Annual Meeting / Medicine & Science in Sports & Exercise (MSSE), Orlando, FL, May 2019.
5. Looney DP, Fykman PN, Blanchard LA, Chalmers CR, Hansen EO, Harman EA, McCLung HL, Montain SJ, **Potter AW**, and Santee WR. Predicting metabolic costs of heavy backpacking. American College of Sports Medicine (ACSM) Annual Meeting / Medicine & Science in Sports & Exercise (MSSE), Orlando, FL, May 2019.
6. Chalmers CR, Looney DP, Santee WR, Blanchard LA, Mullen SP, Karis AJ, Carter AJ, McClung HL, and **Potter AW**. Core temperature responses to military load carriage over complex terrain. New England American College of Sports Medicine Fall Conference, Providence, RI, November 2018.
7. Xu X, Castellani M, Rioux TP, and **Potter AW** Simulation of Temperature Profiles Using Anatomically Correct Human Model. 12th International Manikin and Modelling Meeting. St. Gallen, Switzerland, August 2018.
8. Looney DP, **Potter AW**, McClung HL, Welles AP, and Santee WR. Heavy external loads disproportionately increase walking energy expenditure. National Strength & Conditioning Association (NSCA) National Conference Presentation, Indianapolis, IN, July 2018.
9. Xu X, Rioux TP, Gonzalez JA, and **Potter AW**. Evaluation of Cold Protective Clothing Thermal Performance Using Physiological Parameters. DoD S&T Arctic Synchronization Workshop. Hanover, NH. May 2018
10. Xu X, Rioux TP, Pomerantz N, and **Potter AW**. Heat Strain in Chemical Protective Ensembles with Different Materials. Accepted abstract, 8th European Conference on Protective Clothing; Porto, Portugal 7-9 May 2018.
11. **Potter AW** and Gonzalez JA. Effects of Layering on Thermal Insulation and Vapor Permeability. Accepted abstract, 17th International Conference on Environmental Ergonomics (ICEE); Kobe, Japan 12-17 Nov 2017.
12. Looney DP, Santee WR, Karis AJ, Blanchard LA, Rome MN, Buller MJ, Welles AP, Carter AJ, and **Potter AW**. Energy Expenditure Estimation of Active Military Personnel During Load Carriage Over Complex Terrain. Accepted abstract, 17th International Conference on Environmental Ergonomics (ICEE); Kobe, Japan 12-17 Nov 2017.
13. **Potter AW**, Hunt AP, Cadarette BS, and Xu X. How much of a difference in evaporative potential is important? Accepted abstract, 17th International Conference on Environmental Ergonomics (ICEE); Kobe, Japan 12-17 Nov 2017.
14. Hunt AP, **Potter AW**, Fogarty AL, and Gonzalez JA. Estimation of the Effects of Wind-Speed on the Thermal Insulation and Evaporative Resistance of Military Protective Clothing Systems. Accepted abstract, 17th International Conference on Environmental Ergonomics (ICEE); Kobe, Japan 12-17 Nov 2017.
15. Rioux TP, Gonzalez JA, **Potter AW**, and Xu X. Nude Thermal Manikins as a Control: A Multi-chamber, Multi-manikin Analysis. 11th International Meeting on Thermal Manikins and Modeling (11i3m) – Accepted abstract, Suzhou, China, 12-14 October 2016.
16. **Potter AW**, Karis AJ, Rome MN, and Santee WR. Accuracy of ACSM equation for predicting metabolic cost of locomotion while carrying external load. New England chapter American College of Sports Medicine (NEACSM) Annual Fall Conference – Accepted abstract, Providence, RI, 15-16 October 2015.
17. **Potter AW**, Karis AJ, and Gonzalez JA. Thermal impact of US Army body armor protection levels (BAPL). 3rd International Congress on Soldiers' Physical Performance (ICSPP) – Accepted abstract, Boston, MA, 18-22 August 2014.
18. Tharion WJ, Buller MJ, Duhamel CM, Karis AJ, and **Potter AW**. Human factors assessment of a physiological status monitoring system for CBRNE operations. 3rd International Congress on Soldiers' Physical Performance (ICSPP) – Accepted abstract, Boston, MA, 18-22 August 2014.
19. Tharion WJ, O’Brien C, **Potter AW**, Clements CM, Karis AJ, Buller MJ and Hoyt RW. Real-time physiological monitoring of soldiers encapsulated in chemical-biological clothing; applications for military working dogs. Paper presented at the USARIEM Working Dog Thermal Workshop, U.S. Army Research Institute of Environmental Medicine, Natick, MA, January 2014.

**Professional Society Membership**

* American Association for the Advancement of Science (AAAS)
* American College of Sports Medicine (ACSM)
* American Institute of Biological Sciences (AIBS)
* American Medical Informatics Association (AMIA)
* American Meteorological Society (AMS)
* American Physiological Society (APS)
* American Society for Testing and Materials (ASTM)
* Human Performance Consortium (HPC) (Founding member)
* National Defense Industrial Association (NDIA)
* Delta Mu Delta, International Honor Society in Business (Life member)
* Gamma Beta Phi, Honor Society (Life member)
* Phi Theta Kappa, Honor Society (Life member)
* Alpha Epsilon Lambda, Honor Society (Life member)

**Professional Societies, Associations, and Universities**

* 2013-Present Co-Editor-in-Chief; Journal of Sport and Human Performance (JSHP)
* 2011-Present Integrated Product Team (IPT) Member: Real-Time Physiological Status

Monitoring (RT-PSM)

* 2016 (Event) Workshop Chair; Institute of Electrical and Electronics Engineers (IEEE),

Engineering in Medicine and Biology Society (EMBS) Body Sensors Networks (BSN) conference

* 2016-Present Invited Reviewer; IEEE Journal of Biomedical and Health Informatics

(JBHI)

* 2013-2016 Invited Reviewer; IEEE, BSN conferences 2013, 2015. 2016
* 2016-Present Invited Reviewer; Journal of Thermal Biology
* 2017 (Event) Session Co-Chair; “Materials and Design” Session - 17th International

Conference on Environmental Ergonomics (ICEE)

* 2017-Present Invited Reviewer; PLoS ONE
* 2017-Present Invited Reviewer; International Archives of Clinical Physiology
* 2018-Present Invited Guest Editor – PLoS ONE
* 2018-Present Invited Reviewer; Journal of Advances in Mathematics and Computer

Science

* 2018-Present Academic Editor – PLoS ONE
* 2018-Present Reviewer - Journal of DoD Research and Engineering (JDR&E).
* 2019-Present Invited Reviewer; Applied Computing & Informatics
* 2019-Present Invited Reviewer; Military Medical Research
* 2019-Present Invited Reviewer; Informatics in Medicine Unlocked

**Awards and Other Honors**

Military Awards (1998-2004):

-Awarded the Navy and Marine Corps Achievement Medal

-Awarded Combat Action Ribbon (Marine Corps)

-Awarded Marine Corps Good Conduct Medal

-Awarded the National Defense Service Medal

-Awarded the Iraq Campaign Medal (w/Bronze Star)

-Awarded the Global War on Terrorism Service Medal

-Awarded the Humanitarian Service Medal

-Awarded the Sea Service Deployment Ribbon (w/Bronze Star)

2004-2009 Formally recognized by New England Baptist Hospital executive staff for outstanding performance (12 Awards)

2008 Dlin/Fischer Clinical Research Award, from the Academy of Psychosomatic Medicine: *A Double-Blind, Randomized, Placebo-Controlled Study of Perioperative Administration of Olanzapine to Prevent Postoperative Delirium in Joint Replacement Patients*

2011 Certificate of Appreciation from USARIEM Commander

2012 Certificate of Appreciation from USARIEM Commander

2014 US Army Achievement Medal for Civilian Service

2015 Certificate of Appreciation from USARIEM Commander

2016 US Army Achievement Medal for Civilian Service

2017 Student Award (Paid Registration) for Presentations to 17th International Conference on Environmental Ergonomics (ICEE); Kobe, Japan.

2017 US Army Commander’s Award for Civilian Service

**Briefings, presentations, lectures**

Briefing provided: MRDC and USARIEM Scientific Overview. To: Senior leaders from the UK and US. UK leaders included: Lt. Gen. Christopher Tickell (3 STAR), Deputy Chief of the General Staff (DCGS), Maj. Gen. James Swift (2 STAR), and Brig. Gen. Paul Tennant (1 STAR), Military Attache (UK Embassy in Washington). US seniors included MG Maria Gervais (2 STAR), STE CFT, MG John George (2 STAR), CG CCDC, senior representatives from Army Futures Command, the 75th Innovation Command, AMD CFT, ASA(ALT), DASA-DEC, and PEO Soldier, at Aberdeen Proving Grounds, MD, 20 February 2020.

Briefing provided: Biophysics and Biomedical Modeling Division overview. To: The Honorable Jack Reed, US Senator for Rhode Island, Dr. Arun Seraphin, Professional Staff Member, Senate Armed Services Committee, Mr. John Kiernan, Regional Staffer, Office of Senator Reed, COL Lance Calvert, Chief, Programs Division, Office of the Chief Legislative Liaison, at USARIEM, Natick, MA 7 February 2020.

Briefing provided: Biophysics and Biomedical Modeling Division overview and Scientific Capabilities. To: General John M. Murray (4 STAR) Commanding General, Army Futures Command CSM Michael A. Crosby, Army Futures Command; MAJ John Oliver, Aide-de-Camp; COL Rosendo (Ross) Guieb, Executive Officer; Dr. Catherine Dale, Senior Advisor for Strategy; Mr. Brian Concannon, CASA, MA; BG Mark Merlino (1 STAR), Assistant Adjutant General of the MA National Guard; Mr. John Beatty, Executive Director, Massachusetts Military Asset and Security Task Force, at the Doriot Climatic Facility, Natick, MA 5 February 2020.

Briefing provided: Wearables and Modeling Scientific Capabilities. To: The Honorable Charlie Baker, Governor of Massachusetts, at the Doriot Climatic Facility, Natick, MA 4 February 2020.

Briefing provided: Biophysics and Biomedical Modeling Division overview and Scientific Capabilities. To: COL Christopher M. Coglianese, Director, Soldier & Maneuver Modernization Division, AFC; COL Gregory R. Bell, Soldier Requirements Division Director, Army Futures Command Fort Benning, GA; COL Cory Berg, Military Deputy, CCDC CBC, at USARIEM, Natick, MA 3 February 2020.

Briefing provided: Biophysics and Biomedical Modeling Division overview and scientific brief of clothing protection from hot and cold injuries. To: Ms. Nicole Gilmore, Civilian Aide to the Secretary of the Army - Massachusetts, and BG Vincent Malone (1 STAR), Deputy Commanding General, U.S. Army Combat Capabilities Development Command (CCDC) / Senior Commander, Natick Soldier Systems Center (NSSC), at USARIEM, Natick, MA 23 December 2019.

Invited Seminar Presentation: Modeling Physiological Responses for Dismounted Warfighter Operations. To: Nutrition and Exercise Sciences group, Center for Research and Education in Special Environments (CRESE), at University at Buffalo, SUNY, Buffalo, NY. 25 October 2019.

Presenter: Scientific approach to modeling cold-related injuries and the development of the Cold Weather Ensemble Decision Aid (CoWEDA). To: Military Operational Medicine Research Program (MOMRP) Environmental Extremes IPR; at Fort Detrick, MD, 10 October 2019.

Briefing provided: Biophysics and Biomedical Modeling Division overview and scientific brief of clothing protection from hot and cold injuries. To: Ms. Rachel Littleton, Senate Committee on Appropriations Subcommittee on Defense, Professional Staff Member, and Major Laura L. Wang, Legislative Liaison, Assistant Secretary of the Army for Financial Management and Comptroller, at USARIEM, Natick, MA 8 October 2019.

Briefing provided: Biophysics and Biomedical Modeling Division overview and Scientific Capabilities. To: MG A. Royalty (2 STAR), Deputy Chief of Staff, US Army Training and Doctrine Command (TRADOC), at USARIEM, Natick, MA 4 October 2019.

Briefing provided: Biophysics and Biomedical Modeling Division overview and Modeling and Decision Aid Capabilities. To: Immersion Technology Integrated Product Team (IPT), National Guard Bureau (NGB), Homeland Response Force (HRF) / CBRNE Enhanced Response Force Package (CERFP) and Joint Product Manager Chemical, Biological, Radiological, Nuclear, and Explosives Analytics and Response Systems (JPdM CBRNE A&RS), at Aberdeen Proving Ground, MD 11 September 2019.

Briefing provided: Biophysics and Biomedical Modeling Division overview and Scientific Capabilities. To: US Air Force Work Training Program (30 individuals); hosted by BG Vincent Malone (1 STAR), Deputy Commanding General, U.S. Army Combat Capabilities Development Command (CCDC) / Senior Commander, Natick Soldier Systems Center (NSSC), at USARIEM, Natick, MA 23 July 2019.

Interviewed and quoted by National Defense Magazine, October 2019. *Army Researchers Working to Boost Soldier Performance*, Connie Lee. <http://digital.nationaldefensemagazine.org/publication/?m=46185&l=1#{%22issue_id%22:621438,%22page%22:38}>

Briefing provided: Biophysics and Biomedical Modeling Division and Thermal and Mountain Medicine Division overview. To: MG E. John Deedrick, Jr. (2 STAR), Commanding General, and Command Sergeant Major Tomas G. Sandoval, Sergeant Major, 1st Special Forces Command, US Army Special Operations Command, at USARIEM, Natick, MA 23 May 2019.

Briefing provided: Biophysics and Biomedical Modeling Division overview To: Mr. Brian Concannon, Civilian Aide to the Secretary of the Army – MA; at USARIEM, Natick, MA 22 April 2019.

Radio interview: "Researchers try to predict when Soldiers risk overheating in gear" Mr. Tom Temin, Federal News Radio; <https://federalnewsnetwork.com/federal-drive/2019/01/researchers-try-to-predict-when-soldiers-risk-overheating-in-gear/> 2 January 2019

Briefing provided: Biophysics and Biomedical Modeling Division overview and scientific brief of clothing protection from hot and cold injuries. To: COL John Cochran, LTC Eric Schnabel and Chris Bowen, Close Combat Lethality Task Force; at USARIEM, Natick, MA 13 December 2018.

Presentation: Mathematical prediction of core body temperature in hot environments. To: School of Health Professionals Research Symposium; Rutgers University, 23 November 2018.

Briefing provided: Biophysics and Biomedical Modeling Division overview and scientific brief of clothing protection from hot and cold injuries. To: Mr. Jonathan Rue, Military Legislative Assistance to Senator Elizabeth Warren (MA); at USARIEM, Natick, MA 19 November 2018.

Briefing provided: Biophysics and Biomedical Modeling Division overview and scientific brief of cold weather clothing for protection from cold injuries and the development of the Cold Weather Ensemble Decision Aid (CoWEDA). BG David Hodne (1 STAR), Infantry School Commandant, Maneuver Center of Excellence; at USARIEM, Natick, MA 14 November 2018.

Briefing provided: Applied Biomedical Modeling and Physiological Monitoring – Task Area / Work Unit - H overview. To: Military Operational Medicine Research Program (MOMRP) Review and Analysis (R&A), USARIEM, Natick, MA, 6 November 2018.

Briefing provided: Scientific approach to modeling cold-related injuries and the development of the Cold Weather Ensemble Decision Aid (CoWEDA). To: Military Operational Medicine Research Program (MOMRP) Environmental Extremes IPR; at Fort Detrick, MD, 10 October 2018.

Briefing provided: Biophysics and Biomedical Modeling Division overview and scientific brief of cold weather clothing for protection from cold injuries and the development of the Cold Weather Ensemble Decision Aid (CoWEDA). BG Vincent F. Malone (1 STAR), Deputy Commanding General, U.S. Army Research, Development and Engineering Command (RDECOM), and Senior Commander, Natick Soldier Systems Center (NSSC); at USARIEM, Natick, MA 3 May 2018.

Briefing provided: Biophysics and Biomedical Modeling Division overview and scientific brief of cold weather clothing for protection from cold injuries and the development of the Cold Weather Ensemble Decision Aid (CWEDA). Ms. Mary Miller, Assistant Secretary of Defense for Research and Engineering (ASD R&E); at USARIEM, Natick, MA 30 April 2018.

Briefing provided: Biophysics and Biomedical Modeling Division overview To: Dr. Linda Chrisey and Dr. Bill D’Angelo, Program Managers, Office of Naval Research; at USARIEM, Natick, MA 21 December 2017.

Presenter: Scientific approach to modeling cold-related injuries and the development of the Cold Weather Ensemble Decision Aid (CWEDA). To: Military Operational Medicine Research Program (MOMRP) Environmental Extremes IPR; at Fort Detrick, MD, 26 October 2017.

Briefing provided: Biophysics and Biomedical Modeling Division overview and scientific brief of cold weather clothing for protection from cold injuries and the development of the Cold Weather Ensemble Decision Aid (CWEDA). To: Ms. Maria Bowie, Deputy Chief of Staff and Military Legislative Liaison to U.S. Representative Tom Cole (R-OK); at USARIEM, Natick, MA 18 October 2017.

Presenter: Applied Biomedical Modeling and Physiological Monitoring – Task Area H overview. Military Operational Medicine Research Program (MOMRP) Review and Analysis (R&A), USARIEM, Natick, MA, 17 October 2017.

Briefing provided: Biophysics and Biomedical Modeling Division Capabilities and Wearable Technologies. To: Mr. Gregg Stevens, Senior Executive Service, Chief, AMEDD Civilian Corps; at USARIEM, Natick, MA 23 June 2017.

Briefing provided: Biophysics and Biomedical Modeling Division Capabilities and Division’s Cognitive Science Initiative Overview. To: COL Sidney R. Hinds II, DoD Brain Health Research Program Coordinator, Blast Injury Research Program Coordinating Office, Medical Advisor to the Principal Assistant for Research and Technology U. S. Army Medical Research and Materiel Command; at USARIEM, Natick, MA 19 May 2017.

Briefing provided: Biophysics and Biomedical Modeling Division Capabilities and Wearable Sensors Overview. To: LTG Stephen Lyons (3 STAR), Deputy Commander, U.S. Transportation Command; at USARIEM, Natick, MA 18 May 2017.

Briefing provided: Biophysics and Biomedical Modeling Division Capabilities and Mission Overview. To: LTG Charles Luckey (3 STAR), Chief of Army Reserve and Commanding General, U.S. Army Reserve Command; at USARIEM, Natick, MA 11 May 2017.

Briefing provided: Biophysics and Biomedical Modeling Division Capabilities and Mission Overview. To: Ms. Sasha Baker, National Security Advisor to The Honorable Elizabeth Warren, US Senator, MA; at USARIEM, Natick, MA 14 April 2017.

Briefing provided: Biophysics and Biomedical Modeling Division Capabilities and cold weather clothing for protection from cold injuries. COL James E. Donnellan, Commanding Officer, U.S. Marine Corps Mountain Warfare Training Center (MCMWTC); at USARIEM, Natick, MA 12 April 2017.

Briefing provided: Biomedical modeling and wearable sensor capabilities at USARIEM. To: Rear Admiral Matthew Bell (2 STAR), Commander, US Coast Guard Personnel Service Center (PSC), Captain Kurt Viraitis, Director, Personnel Services Div, USCG PSC, Mr. Hayes Davis, Program Manager, Military Uniforms, USCG PSC, Master Chief Jason Vanderhaden, Command Master Chief, Deputy Commandant for Missions Support; at USARIEM, Natick, MA 29 March 2017.

Presenter: Applied Biomedical Modeling and Physiological Monitoring – Task Area H overview. Military Operational Medicine Research Program (MOMRP) Integrating Integrated Product Team (IIPT), Fort Detrick, MD, 7-8 March 2017.

Presenter: Applied Biomedical Modeling and Physiological Monitoring – Task Area N overview. Military Operational Medicine Research Program (MOMRP) Integrating Integrated Product Team (IIPT), Fort Detrick, MD, 7-8 March 2017.

Briefing provided: Biomedical modeling and wearable sensor capabilities at USARIEM. To: General Mark A. Milley (4 STAR), Chief of Staff of the Army (CSA), and his team; at Doriot Chambers, Natick, MA, 24 February 2017.

Briefing provided: Biomedical modeling and wearable sensor capabilities at USARIEM. To: MG Cedric T. Wins (2 STAR), Commanding General of the U.S. Army Research, Development and Engineering Command (RDECOM), MG Wesley Eric J. Wesley (2 STAR), Commanding General, U.S. Army Maneuver Center of Excellence (MCoE), BG David P. Komar (1 STAR), Director, Capabilities Developments Directorate (CDD), BG Andrew W. Potts (1 STAR), Deputy Commanding General, U.S. Army Research, Development and Engineering Command (RDEC), and Senior Commander, Natick Soldier Systems Center (NSSC), and BG Brian P. Cummings (1 STAR), Program Executive Officer Program Executive Office Soldier (PEO-Soldier); at Doriot Chambers, Natick, MA, 24 February 2017.

Key staff member in demonstration / presentation: new, lightweight, low-cost Personal Metabolic Monitor developed by MIT Lincoln Lab in collaboration with USARIEM. To: Dr. Melissa Flagg, SES (DASD Research), at USARIEM, Natick, MA, 12 July 2016

Briefing provided: Biophysical testing, biomedical modeling, and wearable sensor capabilities at USARIEM. To: Mr. Bruce Parker, Secretary of the Army Airborne Board, and his team; at USARIEM, Natick, MA, 22 March 2016.

Presenter: Applied Biomedical Modeling and Physiological Monitoring – Task Area H overview. Military Operational Medicine Research Program (MOMRP) Integrating Integrated Product Team (IIPT), Fort Detrick, MD, 16-17 March 2016.

Briefing provided: Biophysics, Biomedical Modeling, and Wearable Sensors. For MRMC Commander’s Conference; Senior Attendee: MG Brian Lein (2 STAR), MRMC Commander; at USARIEM Natick, MA 7 December 2015.

Briefing provided: Biophysics and Biomedical Modeling for Soldier Health and Performance. To: COL Michael Todd Kelly, Deputy Director, US Army Soldier for Life; at USARIEM, Natick, MA 16 November 2016.

Briefing provided: Biophysics and Biomedical Modeling for Soldier Health and Performance. To: Professional Staff Members from the Senate and House Armed Services Committee: Dr. Anish Goel, Dr. Arun Seraphin, Ms. Lindsay Kavanaugh, Mr. Kevin Gates, and Mr. Antonio Baines, OCLL Programs DivisionProfessional Staff Member; at USARIEM, Natick, MA 10 November 2016.

Briefing provided: Cold weather clothing for protection from cold injuries: Probability of Survival Decision Aid (PSDA) as well as the under development Cold Weather Ensemble Decision Aid (CWEDA). To: visitors from US Army Alaska (USARAK) G4, SGM Raymond Jacobs and his team along with Mr. Andrew Margules, RDECOM S&T Advisor to USARAK; at USARIEM, Natick, MA 4 November 2015.

Briefing provided: Probability of Survival Decision Aid (PSDA). To: RADM William Kelly (2 STAR), Commander, US Coast Guard Personnel Service Center (USCG PSC); at USARIEM, Natick, MA 6 October 2015.

Briefing provided: Biophysics and Biomedical Modeling Division Capabilities and Mission Overview. To: Mr. Gabe Camarillo, Principal Deputy Assistant Secretary of the Army (Acquisition, Logistics and Technology), Ms. Laura Schmidt, Special Assistant, and LTC Gregory Fortier, Executive Officer; at USARIEM, Natick, MA 15 September 2015.

Briefing provided: Biophysical testing, biomedical modeling, and wearable sensor capabilities at USARIEM. To: COL Kurt "Travis" Thompson, Soldier Division Director, Maneuver Center of Excellence (MCoE); at USARIEM, Natick, MA 2 September 2015.

Briefing provided: Biophysics and Biomedical Modeling Division Capabilities and Mission Overview. To: BG Patrick Burden (1 STAR), Deputy Program Executive Officer (PEO) Ammunition and Senior Commander, Picatinny Arsenal, USARIEM, Natick, MA, 19 August 2015

Briefing provided: Biophysics and Biomedical Modeling Division Capabilities and Mission Overview. To: Ms. Colleen Gaydos and Mr. David Gillies, Professional Staff Members, Subcommittee on Defense (SAC-D); at USARIEM, Natick, MA 11 August 2015.

Briefing provided: Biophysics and Biomedical Modeling Division Capabilities and Mission Overview. To: COL Christopher Riga, Commander 7th Special Forces Group (Airborne), and MAJ David Gunther, Executive Officer; at USARIEM, Natick, MA 1 May 2015.

Presenter: Applied Biomedical Modeling and Physiological Monitoring – Task Area H overview. Military Operational Medicine Research Program (MOMRP) Review and Analysis (R&A), USARIEM, Natick, MA, 13 January 2015.

Briefing provided: Biophysics and Biomedical Modeling Division Capabilities and Mission Overview and Cold Weather Clothing and Protection. To: MGMichael Shields (2 STAR), Commanding General, US Army Alaska, Deputy Commander, US Alaskan Command, and LTC Mark Adams, Commander Northern Warfare Training Center (NWTC), USARIEM, Natick, MA, 19 May 2014.

Presenter: Load carriage injury prevention and performance – Task Area H overview. Military Operational Medicine Research Program (MOMRP) Integrating Integrated Product Team (IIPT), USARIEM, Fort Detrick, MD, 11-12 March 2014.

Presenter: Load carriage injury prevention and performance – Task Area H overview. Military Operational Medicine Research Program (MOMRP) Review and Analysis (R&A), USARIEM, Natick, MA, 15 January 2014.

Briefing provided: Biophysics and Biomedical Modeling Division Capabilities and Mission Overview and Probability of Survival Decision Aid (PSDA). To: RADM Daniel B. Abel (2 STAR), Commander; CAPT Verne Gifford, Chief of Staff; LCDR Jamie Stall-Ryan, Chaplain CDR; MCPO David Rochefort, Command Master Chief; MCPO Andreas Apenburg, Reserve Command Master Chief; Mr. Edward Marohn, Executive Assistant, LT Collinson Burgwyn, Aide; Mrs. Paula Marcangelo, Command Staff Admin Asst; PO1 Melvin Acevedo, Special Cmd Aide; PO1 Michele Serrano, Admin Asst; SN Kathleen Dillon, First Coast Guard District, Boston, MA; at USARIEM, Natick, MA, 11 July 2013

Briefing provided: Biophysics and Biomedical Modeling Division Capabilities and Mission Overview. To: Robert Johns, SES, Associate Administrator and Director; Stephen Popkin, Ph.D., SES, Director, Safety Management Systems; Richard John, Ph.D, SL, Director Emeritus; Michael G. Dinning, Director, Transportation Logistics and Security; Maura Lohrenz, Chief, Aviation Human Factors Division; Mary Stearns, Ph.D., Chief, Surface Transportation Human Factors Division, John A. Volpe National Transportation Systems Center, at USARIEM, Natick, MA, 25 April 2013.

Presenter: Load carriage injury prevention and performance – Task Area H overview. Military Operational Medicine Research Program (MOMRP) Review and Analysis (R&A), at USARIEM, Natick, MA, 27 February 2013.

Briefing provided: Practice of a Multi-Modality Approach for Addressing Thermal Strain. To Ms. Terri Spoutz, Professional Staff Member, Senate Armed Services Committee, at USARIEM, Natick, MA, 9 October 2012.

Briefing provided: Biophysics and Biomedical Modeling Division mission and capabilities; biophysical assessments, biomedical modeling, and real-time physiological monitoring to scientifically address military needs. To: Mr. George Solhan, SES, Deputy Chief of Naval Research for Expeditionary Maneuver Warfare and Combating Terrorism; and Director Marine Corps Science and Technology, Office of Naval Research. 19 October 2012.

Presenter: Physiological Awareness for Force Health Protection – Task Area H overview. Military Operational Medicine Research Program (MOMRP) Review and Analysis (R&A), USARIEM, Natick, MA, 31 January 2012.

**International**

Presentation: Energy expenditure estimation of active military personnel during load carriage over complex terrain. Accepted abstract, 17th International Conference on Environmental Ergonomics (ICEE); Kobe, Japan 12-17 Nov 2017.

Briefing provided: Biophysics and Biomedical Modeling Division mission and capabilities; biophysical assessments, biomedical modeling, and real-time physiological monitoring. To: Dr. Leslie Saxon, University of Southern California Center for Body Computing. Natick Soldier System Center (NSSC), Natick, MA, 6 March 2017.

Presenter: USARIEM capabilities and ongoing scientific work related to Warfighter optimization and injury mitigation, and emphasized specific work related to real-time thermal-work strain monitoring of ongoing efforts in collaboration with Australian Defence Science and Technology Organization (DSTO), under a formal Project Arrangement (No US-AS-A-13-0001) focused on Thermal Safety. To: MAJGEN David Coughlan (2 STAR) and BRIG David Creagh (1 STAR) (Australian Defence Forces), 29 October 2015.

Key presentation / briefing: Potential solutions for Ebola protection for healthcare workers. To a DTRA-organized meeting with NIOSH (<http://www.cdc.gov/niosh/npptl/>) on Interagency Coordination for Ebola Protection: Assessment of Thermal Burden of PPE Healthcare Workers. USARIEM, in partnership with JPEO-CBD/JPM-P/DTRA, will identify DoD PPE ensembles used, and performed similar assessments and predictive modeling with and without the use of micro-climate cooling and will help provide relevant analysis for operational use cases guidance. Meeting took place at Natick Soldier System Center (NSSC), Natick, MA, 15 October 2014.

**Consultative Assistance to others**

25 February 2020: met with textile engineers from the Combat Capabilities Development Command Soldier Center (CCDC SC) to provide consultation and expertise regarding testing of new cold weather clothing system, the Cold Temperature Arctic Protection System (CTAPS). The CTAPS ensemble is planned to replace the Army Extreme Cold Weather Clothing System (ECWCS). From this meeting a collaborative study design was initiated to assess the CTAPS on sweating thermal manikins for in-depth evaluations of the clothing properties.

25 February 2020: consulted with Julie Greeves, OBE, Research Director, United Kingdom Department of Army Health and Performance Research (DAHPR) regarding the heat strain decision aid (HSDA) and methods for predicting and preventing heat injuries during training. Following this meeting a plan was initiated to jointly validate HSDA for use during UK Role Fitness Test (RFT) for Ground Close Combat (GCC) personnel.

January-February 2020: Provided subject matter expertise and consultation to: David Gillis, Operations Research Analyst, Combat Capabilities Development Command Soldier Center (CCDC) Data and Analysis Center, regarding implementation and use of the heat strain decision aid (HSDA).

8 July 2019: Provided subject matter expertise and consultation to LCDR Justin Meeker, Aeromedical Safety Officer, Training Wing Five, US Navy, regarding biophysical clothing properties and specifically understanding differences between clothing color properties and their associated impacts on the human.

6 May 2019: Provided subject matter expertise and consultation to Dr. Natalie Pomerantz, CB Innovative Material & Ensemble Development (CBIMED) Team U.S. Army Combat Capabilities Development Command (CCDevCom), regarding predictive modeling for heat stress, specifically while wearing personal protective equipment.

11 November 2018: Provided subject matter expertise and consultation to David McDonald, Human Systems Integration (HSI), regarding thermal properties of body armor and testing approaches for quantitative analyses of torso ballistic protection ensembles.

28 September 2018: Provided subject matter expertise and consultation to Kristine Isherwood, Soldier Clothing and Configuration Management Team Soldier Protection and Survivability Directorate Natick Soldier Research, Development & Engineering Center (NSRDEC), regarding biophysical clothing assessments and regional distribution of properties, as well as predictive modeling for heat stress in various environmental conditions.

21-23 August 2017: Provided subject matter expertise and consultation for legal case regarding biophysics and physiological responses to clothing and body armor, to: Jennifer Chorpening, Trial Attorney, Civil Division of the U.S. Department of Justice.

15 September 2016: Provided subject matter expertise and consultation to: LTC Ingrid Lim, Sleep Lead, Performance Triad and System for Health, Health and Wellness Directorate, Deputy Chief of Staff for Public Health, HQDA Office of the Surgeon General, Defense Health Headquarters. Topic included quantitative estimations of Soldiers’ ability to operate at various work intensities using a certain work/rest cycles before becoming combat ineffective.

14 January 2016: Provided subject matter expertise and consultation to: key scientific leadership from the Naval Submarine Medical Research Laboratory (NSMRL) to discuss capabilities and potential for future scientific collaborations. USARIEM and NSMRL partnership has previously focused on modeling or studying survival in a disabled submarine; while current discussions included survival of individuals immersed in aquatic conditions.

8 January 2016: Provided subject matter consultation to: 10th MTN Division Surgeon, LTC(P) Craig Taylor to discuss USARIEM capabilities related to personnel protection during cold weather operations and areas where SME support can help optimize physical training plans.

30 November 2015: Provided critical input and drafted information paper for Congressional Inquiry: “Use of new heat stress measurement technologies to counter threat of heat injury during training”, MRMC Tasker 1408052.

22 October 2015: Presented and provided subject matter expertise and consultation to: engineers from NASA's Johnson Space Center. Topics included: 1) areas for collaboration related to wearable physiological monitoring technologies and ongoing development efforts and 2) search and rescue related probability of survival modeling and analysis for possible Astronaut immersion upon exit or reentry.

7 October 2015: Consulted with subject matter expertise to: key members of the Land Division, Australian Defence Science and Technology Organization (DSTO); Drs. Mark Patterson, Daniel Billing, Alison Fogarty, and Andrew Hunt. Topics included modeling methods of estimation of human thermal limits, mixed manikin and modeling methods, and wearable sensor techniques for field studies.

2014 to Present: Provided subject matter expertise and consultation to: Ms. Kristine Isherwood and Anita Perkins, for the Natick Soldier Research, Development & Engineering Center (NSRDEC)-led Regionally Aligned Combat Ensemble (RACE) program. Expertise and guidance was used to shape scientific design as well as modeling and analysis of program data (Government technical reports in preparation).

13 May 2015: Presented and provided subject matter expertise and consultation to WO Michael Walsh and WO Marco Lacroix of Combat Support Equipment Management National Defence Headquarters Ottawa, Ontario, Canada. After establishing a formal Reciprocal Use of Test Facilities Project Arrangement (RUTF PA), Test and Evaluation Program (TEP) Cooperation Memorandum of Understanding (MoU), biophysical properties of explosive ordnance disposal (EOD) ensembles were measured and modeling was conducted for maximal safe working times. Results and data provided guidance for improved awareness during EOD training and operations.

18 December 2014: Provided subject matter expertise and consultation to US Air Force Program Manager Headwear, Handwear, and Footwear, USAF Aircrew Performance Branch for Clothing & Individual Equipment Ms. Debra McLean, Air Force Materiel Command Arnold Engineering Development Complex / Air Force Analysis Branch (AEDC/TSTA), Aeropropulsion Analyst Josh Osborne, and Air Force Research Laboratory (AFRL) Rapid Development Group Contractor (Rally Point Management) Mr. Mickey Wright visited USARIEM. Specific consultation topics included USARIEM capabilities to support modeling and biophysical assessments of USAF cold weather clothing and potential support to the Air Force Special Operations Command (AFSOC) under AFRL Rapid Development efforts.

2013 to 2016: Provided subject matter expertise and consultation to: Rick Villeneuve, Project Lead and Ms. Anita Perkins, for the Natick Soldier Research, Development & Engineering Center (NSRDEC)-led Dismounted Route Planning & Performance Analysis Tool(s) (DRPPAT) program. Expertise and guidance used to shape scientific design, assist with modeling and analysis, and provide scientific insights into physiological and energy costs of locomotion.