

CURRICULUM VITAE

Salah S. Al-Zaiti, PhD, RN, CRNP, FAHA

Home Address: xxx Citizenship: US Citizen
 xxx
Home Telephone: (xxx) xxx-xxxx
Business Address: 3500 Victoria Street, 336 VB Email Address: ssa33@pitt.edu
 Pittsburgh, PA 15261
Business Phone: (412) 624-4369 Business Fax: (412) 383-7227

EDUCATION

UNDERGRADUATE

2002–2006 **BSN, Nursing**
The Hashemite University, Amman, Jordan

GRADUATE

2008–2010 **MSN, Adult Nurse Practitioner**
State University of New York, Buffalo, NY

2010–2013 **Ph.D., Cardiovascular Nursing**
State University of New York, Buffalo, NY

POST-GRADUATE CERTIFICATES

09/19–12/19 **Machine Learning: From Data to Decisions**
Professional Education, Department of Electrical Engineering
Massachusetts Institute of Technology (MIT), Boston, MA

10/20–05/21 **Applied Machine Learning using Python**
Executive Education, School of Engineering, Data Science Center
Columbia University, New York, NY

APPOINTMENTS AND POSITIONS

ACADEMIC

2013–2019 **Assistant Professor**
Department of Acute & Tertiary Care Nursing (Primary)
Department of Emergency Medicine (Secondary)
University of Pittsburgh, Pittsburgh, PA

2019– **Associate Professor with Tenure**
Department of Acute & Tertiary Care, School of Nursing (Primary)
Division of Cardiology, School of Medicine (Secondary)
Department of Emergency Medicine (Secondary)
University of Pittsburgh, Pittsburgh, PA

- 2019–2020** **Director of Interprofessional Education**
School of Nursing, University of Pittsburgh, Pittsburgh PA
- 2019–2021** **Director of Nursing Honors Program**
School of Nursing, University of Pittsburgh, Pittsburgh PA
- 2020–** **Affiliated Translational Researcher**
Center for Physiologic Research, UCSF, San Francisco CA
- 2021–** **Vice Chair for Research**
School of Nursing, University of Pittsburgh, Pittsburgh PA

CLINICAL

- 2006–2008** **Registered Nurse, Bone Marrow Transplantation**
King Hussein Cancer Center, Amman, Jordan
- 2010–2011** **Nurse Practitioner, Diabetes Outpatient Clinic**
Diabetes and Endocrinology Center of WNY, Kaleida Health, Buffalo, NY
- 2018–2019** **Nurse Practitioner (per diem)**
Braddock Free Health Clinic, Swissvale, PA

PROFESSIONAL LICENSURE

- 2009– Registered Nurse, RN #612022 (NY State)
- 2010– Nurse Practitioner, NP #F305328 (NY State)
- 2010– Board Certified Adult Nurse Practitioner, ANCC, ANP-BC #2010002855
- 2013– Registered Nurse, RN #648240 (PA State)
- 2013– Nurse Practitioner, CRNP #013039 (PA State)

HONORS & AWARDS

- 2006 **Chancellor’s Award for Student Excellence** (highest GPA, class of 2006)
Hashemite University, Jordan
- 2009 **Sigma Theta Tau**, Gamma Kappa Chapter
The Honor Society of Nursing
- 2009 **Woodburn Presidential Fellowship**
State University of New York, Buffalo NY
- 2010 **Anne Sengbusch Award for Excellence in Leadership**
State University of New York, Buffalo NY
- 2011 **Jos Willems Young Investigator Finalist**
International Society of Computerized ECG (ISCE), San Jose, CA
- 2012 **Graduate Student Excellence in Teaching Award**
State University of New York, Buffalo NY
- 2012 **Best Poster Award**
International Society of Computerized ECG (ISCE), Birmingham, AL
- 2013 **Ruth G. Elder Award for Excellence in Research**
State University of New York, Buffalo NY

- 2013 **Jos Willems Young Investigator Finalist**
International Society of Computerized ECG (ISCE), San Jose, CA
- 2014 **Martha N. Hill New Investigator Award**
Council on Cardiovascular and Stroke Nursing (CVSN), American Heart Association
- 2015 **Marie Cowan Promising Young Investigator Award**
Council on Cardiovascular and Stroke Nursing (CVSN), American Heart Association
- 2017 **Fellow of the American Heart Association (FAHA)**
Council on Cardiovascular and Stroke Nursing (CVSN), American Heart Association
- 2018 **Dean's Distinguished Teaching Award** (school-wide highest teaching honor)
University of Pittsburgh
- 2020 **Nurse Researcher of the Year**
Pittsburgh Magazine
(<https://www.pittsburghmagazine.com/excellence-in-nursing-researcher-salah-al-zaiti/>)
- 2020 **Chancellor's Distinguished Teaching Award** (University-wide highest teaching honor)
University of Pittsburgh
(<https://www.at.pitt.edu/news/outstanding-faculty-0>)
- 2020 **Excellence in Nursing Research** (state-wide highest nursing research award)
Nightingale Awards of Pennsylvania
(<https://www.nightingaleawards.org/2020-award-finalists--winners.html>)
- 2020 **U.S. Patent # 10,820,822** (ECG identification of Non-STE ischemia)
US Patenting and Trademark Office
(<https://pubchem.ncbi.nlm.nih.gov/patent/US-10820822-B2>)
- 2020 **Featured on Pittwire for Innovation and Research News:**
University of Pittsburgh
“[New AI Research Looks to Better Diagnose Heart Attacks Before Hospital Arrival](#)”
- 2021 **Senior Vice Chancellor Research Seminar Series** (university-wide keynote presentation)
University of Pittsburgh
Topic: “Intelligent ECG Methods for Myocardial Ischemia Detection”
(<http://www.svc-seminar.pitt.edu/8.html>)
- 2021 **Nominee for the Chancellor's Distinguished Research Award**
University of Pittsburgh
- 2021 **Research Article of the Year Award**
Council on Cardiovascular and Stroke Nursing (CVSN), American Heart Association

RESEARCH CONSULTATIONS

Center for Physiologic Research

1/1/20–12/31/22

University of California San Francisco (UCSF)

Algorithm Based Strategies to Reduce False and Non-Actionable ECG Alarms

I serve as an independent consultant (paid) to advise on the creation of the largest, multi-expert, ground-truth, annotated repository of ventricular tachycardia (VT) alarms in hospitalized patients in the ICU (n = 25,298). This repository will serve as a gold standard database for validating and testing commercial VT algorithms submitted to US Food & Drug Administration (FDA) for 510(k) clearances.

RESEARCH FUNDING

Principal Investigator

Pending

NIH/NHLBI	Al-Zaiti (PI)	7/1/22–6/30/27
R01 HL137761	<i>Impact score = 18 (1st percentile)</i>	\$3,850,163

ECG Detection of Non-ST Elevation Myocardial Events – Two (ECG-SMART-2)

This is a multi-site clinical trial between UPITT and UNC-Chapel Hill to design and deploy a machine-learning-based graphical user interface for real-time identification of coronary events.

Ongoing

NIH/NINR	Al-Zaiti & Clermont (Co-PI's)	2/23/22–11/30/25
R01 NR013912	<i>Impact score = 24 (7th percentile)</i>	\$3,105,315

Predicting Patients Instability Noninvasively for Nursing Care –Three (PPINNC-3)

This is a multi-site clinical trial to design and pilot test an intelligent alerting system at stepdown and telemetry units. Collaboration sites are Carnegie Mellon University (CMU), UCSF, and UCLA.

NIH/NHLBI	Al-Zaiti (PI)	4/15/18–1/31/22
R01 HL137761	<i>Impact score = 20 (3rd percentile)</i>	\$1,479,372

Electrocardiographic Detection of Non-ST Elevation Myocardial Events for Accelerated Classification of Chest Pain Encounters (ECG-SMART)

This prospective cohort study aims to develop machine-learning-based ECG analysis tools to allow real-time identification of acute coronary syndrome in the prehospital setting.

University of Pittsburgh	Al-Zaiti (PI)	9/1/20 – 4/30/22
Ruth Perkins Kuehn Award		\$30,000

Vessel-Specific ECG Leads (VSEL): A Novel Solution for Myocardial Ischemia Detection

This sub-study aims to evaluate the clinical utility of three novel ECG leads that are optimized for detecting ischemia caused by the occlusion of each of the three main coronary arteries.

Oracle for Research	Al-Zaiti (PI)	9/1/20 – 8/31/22
Cloud Credit Award		\$50,000

A Deep-Learning Based Clinical Decision Support Tool for Detecting Acute Coronary Lesions

This sub-study aims is to develop a deep-learning-based ECG interpretation system that is fully interpretable and can visually display ACS prediction in clinical practice.

Completed

University of Pittsburgh	Al-Zaiti (PI)	7/1/2016–6/30/2019
Momentum Fund		\$16,000

Non-ST Elevation Myocardial Ischemia: The Role of Cell Survival Genes

This sub-study examined the molecular genetic basis of apoptosis, autophagy, and ischemic preconditioning during the evolution of acute ischemic in STEMI versus NSTEMI patients.

NIH/NCATS	Reis (PI)	2/1/2017–9/30/2017
1 UL 1TROO1857-01	Al-Zaiti (sub-award # 0050952)	\$25,000

Modeling Repolarization Lability on ECG Signals to Detect Myocardial Injury in Chest Pain

This pilot study aimed to develop a tool to analyze beat-to-beat repolarization lability from the standard 12-lead ECG and test its clinical value in detecting myocardial ischemia in chest pain.

University of Pittsburgh Momentum Fund	Al-Zaiti (PI)	7/1/2014–6/30/2016 \$15,000
---	----------------------	--------------------------------

Redefining the Pretest Probability of Ischemia Prior to Nuclear Stress Testing

This study aimed to validate the diagnostic accuracy of spatial ECG metrics and their dynamic changes against SPECT scans as a gold standard of subclinical myocardial ischemia in chest pain.

UPMC Medical Research Fund	Al-Zaiti (PI)	7/1/2015–12/31/2016 \$24,000
-------------------------------	----------------------	---------------------------------

ECG Methods for Prehospital Detection of NSTEMI: Feasibility Study

This pilot study aimed to establish the feasibility of collecting high-quality, reliable, prehospital 12-lead ECGs from our local UPMC Prehospital Network and Pittsburgh EMS agencies.

Emergency Nurses Foundation Technology Research Award	Al-Zaiti (PI)	1/1/2015–12/31/2015 \$6,000
--	----------------------	--------------------------------

Redefining ECG Interpretation in Emergency Departments: Novel Methods for ACS Detection

This pilot study aimed to test the feasibility of performing real-time advanced analyses of 12-lead ECG signals in the field to harvest novel signatures of ischemia that can be used during patient care.

University of Pittsburgh Center for Medical Innovation	Al-Zaiti (PI)	7/1/2014–12/31/2015 \$12,000
---	----------------------	---------------------------------

Stratifying Prehospital ECGs for Treatment Decisions at Emergency Departments (SPEED)

This pilot study developed the necessary infrastructure for the acquisition, transmission, and signal processing of prehospital ECG data from Pittsburgh EMS network.

Co-Investigator

Pending

NIH/NIGMS R01 20220013	Clermont (PI) Al-Zaiti (Co-I)	4/1/2022–3/31/2027 \$3,643,203.64
---------------------------	---	--------------------------------------

Machine Learning for Accurate Diagnosis of Instability (MLADI)

This study aims to detect patterns impending cardiopulmonary instability (CPI) from real-time physiologic monitoring and EHR data before overt manifestation in critically ill ICU patients.

Completed

NIH/NINR R01 NR 013912	Hravnak & Pinsky (Co-PI's) Al-Zaiti (Co-I)	9/27/16–6/30/22 \$2,659,686
---------------------------	--	--------------------------------

Predicting Patients Instability Noninvasively for Nursing Care –Two (PPINNC-2)

This prospective cohort study aims to develop an intelligent alerting system based on multi-channel vital signs physiological data to alert nurses to ongoing (and future) hemodynamic instability.

Faculty Mentor

Pending

NIH/NINR T32 NR008857	Dabbs & Al-Zaiti (Co-Directors) <i>Impact score = 23</i>	1/1/24–12/31/28 \$1,914,290
--------------------------	--	--------------------------------

Technology Research in Chronic and Critical Illness (Years 15-20)

This grant provides rigorous research training and interdisciplinary culturalization to aid nurse scientists in adopting technology to promote health, manage illness, and reduce disability.

NIH/NCATS Dierkes (PI) 9/1/22–8/31/23
 TL1TR001858 (KL2 Scholars Program) **Al-Zaiti** (Primary Mentor)

Intelligent Methods for Optimizing Nursing Staff Allocation to Improve Patient Outcomes

This KL2 training grant aims to use 4.5 million patient admissions from Medicare data to leverage the large and omnipresent nursing workforce through dyad optimization and help address a range of workforce and clinical outcomes efficiently using existing staff resource.

Ongoing

NIH/NINR Helman (PI) 7/1/21–6/30/24
 F31 NR018589 **Al-Zaiti** (Sponsor) \$203,877

Use of Predictive Analytics to Quantify Neonatal Hypothermia Burden After Cardiac Surgery

This mentored research project aims to evaluate temporal trends of unintentional hypothermia burden (temperature depth and duration) in neonates after cardiopulmonary bypass surgery.

NIH/NINR Koleck (PI) 6/1/18–5/30/23
 K99/R00 NR017651 **Al-Zaiti** (Clinical Advisory Panel) \$912,612

Advancing Chronic Condition Symptom Cluster Science Through Use of HER and Data Science

This mentored research project aims to develop a data-driven pipeline for the characterization of symptom clusters from EHRs using a cohort of adult patients diagnosed with wide range of chronic comorbidities, including cancer, heart failure, T2DM, and COPD.

NIH/NINR Dabbs & **Al-Zaiti** (Co-Directors) 7/1/17–6/30/22
 T32 NR 008857-12 \$956,224

Technology Research in Chronic and Critical Illness (Years 10-15)

This grant provides rigorous research training and interdisciplinary culturalization to aid nurse scientists in adopting technology to promote health, manage illness, and reduce disability.

Completed

NIH/NINR Frisch (PI) 7/1/19–12/31/21
 F31 NR 018589 **Al-Zaiti** (Sponsor) \$112,831

Modernizing Emergency Department Nurse Triage via Big Data Analytics

This retrospective cohort study aimed to develop a machine-learning decision support system to triage patients presenting to the emergency department using data available at initial triage.

Trainee

Completed

NIH/NHLBI Fallavollita & Canty (Co-PI) 7/1/08 – 6/30/12
 R01-HL076252 **Al-Zaiti** (Graduate Research Assistant) \$3,325,838

Hibernating Myocardium and Sudden Cardiac Death

This prospective cohort study examined the relationship between hibernating myocardium as evident on PET scans and the genesis of arrhythmic death over 5 years follow up (n = 204).

NIH/NINR Carey (PI) 9/1/08 – 8/31/10
 R21-NR011077 **Al-Zaiti** (Study Coordinator) \$411,539

Surveying & Assessing Firefighters Fitness and Electrocardiogram (SAFFE)

This cross-sectional study aimed to examine the cardiac function during stress and recovery and the prevalence of cardiac risk among on-duty professional firefighters (n = 118).

PUBLICATIONS

Scientific Statements / Guidelines

- 2022 1. **Al-Zaiti SS**, Alghwiri A, Hu X, Clermont G, Peace A, Macfarlane P, Bond R. A Clinician's Guide to Understanding and Critically Appraising Machine Learning Studies: A Checklist for Ruling Out Bias Using Standard Tools in Machine Learning (ROBUST-ML). *European Heart Journal Digital Health*, *in press*.
- 2020 2. Franklin BA, Thompson PD, **Al-Zaiti SS**, Albert CM, Hivert M-F, Levine BD, Lobelo F, Madan K, Sharrief AZ, and Eijsvogels TMH. Exercise-related acute cardiovascular events and potential deleterious adaptations following long-term exercise training: placing the risks into perspective—an update: a scientific statement from the American Heart Association. *Circulation*. 2020;141(13): e705–e736.

Data-Based Manuscripts

- Accepted* 3. Bouzid Z, **Al-Zaiti SS**, Bond R, & Sejdić E. Remote and Wearable ECG Devices with Diagnostic Abilities in Adults: A State-of-the-Science Scoping Review. *Heart Rhythm*, *in press*
4. Bouzid Z, Faramand Z, Martin-Gill C, Sereika S, Callaway C, Saba S, Gregg R, Badilini F, Sejdić E, & **Al-Zaiti SS**. The Prehospital 12-Lead ECG: A Lost Holy Grail in the Diagnostic Workup of Suspected Non-ST Elevation Acute Coronary Syndrome. *Annals of Emergency Medicine*, *in press*
- 2022 5. Faramand Z, Alrawashdeh M., Helman S, Martin-Gill C, Callaway C, & **Al-Zaiti SS**. Your Neighborhood Matters: A Machine-Learning Approach to the Geospatial and Social Determinants of Health in 9-1-1 Activated Chest Pain. *Research in Nursing and Health*, <https://doi.org/10.1002/nur.22199>
6. Helman, S., Terry, M.A., Pellathy, T., Williams, A., Dubrawski, A., Clermont, G., Pinsky, M.R., **Al-Zaiti, SS**. & Hravnak, M. Engaging Clinicians Early During the Development of a Graphical User Display of An Intelligent Alerting System at the Bedside. *International Journal of Medical Informatics*, Vol. 159:104643.
7. Schwimer, D., **Al-Zaiti, SS.**, & Beach, M. (2022). Improving Corrected QT Interval Monitoring in Critical Care Units: A Single Center Report. *Critical Care Nurse*, 42(1), 33-43.
- 2021 8. Bouzid Z, Faramand Z, Gregg R, Helman S, Martin-Gill C, Saba S, Callaway C, Sejdić E, & **Al-Zaiti SS**. Novel ECG Features and Machine Learning to Optimize Culprit Lesion Detection in Patients with Suspected Acute Coronary Syndrome. *Journal of the Electrocardiology*, Vol. 69:31-37.
9. Helman, S., Herrup, E., Christopher, A., & **Al-Zaiti, SS**. (2021). The role of machine learning applications in diagnosing and assessing critical and non-critical CHD: A scoping review. *Cardiology in the Young*, 31(11), 1770-1780.
10. Faramand Z, Helman S, Ahmad A, Martin-Gill C, Saba S, Callaway C, Gregg R, Wang J, & **Al-Zaiti SS**. Performance and Limitations of Automated ECG Interpretation Statements in Patients with Suspected Acute Coronary Syndrome. *Journal of the Electrocardiology*, Vol. 69:45-50.

11. Finlay D, Bond R, Jennings M, McCausland C, Guldenring D, Kennedy A, Biglarbeigi P, **Al-Zaiti SS**, McLaughlin J. Overview of featurization techniques used in traditional versus emerging deep learning-based algorithms for automated interpretation of the 12-Lead ECG. *Journal of the Electrocardiology*, Vol. 69:7-11.
12. Bond R, Finlay D, **Al-Zaiti SS**, Macfarlane P. Machine learning with ECGs: A call for guidelines and best practices for 'stress testing' algorithms. *Journal of the Electrocardiology*, Vol. 69:1-6.
13. Faramand Z., Martin-Gill C; Callaway CW; & **Al-Zaiti SS**. Modified HEART score to optimize risk stratification in cocaine-associated chest pain. *Am J of Emergency Medicine*, Vol. 47:307-308.
14. Bouzid Z, Faramand Z, Frisch S, Martin-Gill C, Gregg R, Saba S, Callaway C, Sejdic E, & **Al-Zaiti SS**. In Search of Optimal Subset of ECG Features to Augment the Diagnosis of Acute Coronary Syndrome at the Emergency Department. *Journal of the American Heart Association (JAHA)*, Vol. 10(3): e017871.
15. Faramand Z., Hongjin Li; Al-Rifai N, Frisch SO; Abu-Jaradeh O, Mahmoud A, & **Al-Zaiti SS**. Association between history of cancer and major adverse cardiovascular events in patients with chest pain presenting to the emergency department: a secondary analysis of a prospective cohort study. *European Journal of Emergency Medicine*, Vol. 28(1):64-69.
16. Faramand Z., Martin-Gill C; Frisch S; Callaway CW; & **Al-Zaiti SS**. The Prognostic Value of HEART score in Patients with Cocaine Associated Chest Pain: An Age-and-Sex Matched Cohort Study. *Am J of Emerg Med*, Vol. 45:303-308.
17. Frisch SO; Faramand Z., Leverknight B.; Martin-Gill C., Sereika S., Sejdic E., Callaway C., & **Al-Zaiti SS**. The Association Between Patient Outcomes and the Initial Emergency Severity Index Triage Score in Patients with Suspected Acute Coronary Syndrome. *Journal of Cardiovascular Nursing*; Vol. 35(6):550-557.
18. Khraim F; Alhamaydeh M; Faramand Z; Saba S; **Al-Zaiti SS**. A Novel Non-invasive Assessment of Cardiac Hemodynamics in Patients with Heart Failure and Atrial Fibrillation. *Cardiology Research*, Vol. 11(6):370-375.
19. **Al-Zaiti SS**, Besomi L, Bouzid Z, Faramand Z, Frisch S, Martin-Gill C, Gregg R, Saba S, Callaway C, & Sejdic E. Machine Learning-Based Prediction of Acute Coronary Syndrome Using Only the Pre-Hospital 12-Lead Electrocardiogram. *Nature Communications*, Vol. 11: 3966 (doi.org/10.1038/s41467-020-17804-2)
20. Frisch SO; Brown J; Faramand Z., Stemler J, Sejdic E, Martin-Gill C., Callaway CW; Sereika S.; & **Al-Zaiti SS**. Exploring the Complex Interactions of Baseline Patient Factors to Improve Nursing Triage of Acute Coronary Syndrome. *Research in Nursing and Health*, Vol. 43: 356–364 (doi.org/10.1002/nur.22045)
21. Alhamaydeh M, Gregg R, Ahmad A, Faramand Z, Saba S, and **Al-Zaiti SS**. Identifying the most important ECG predictors of reduced ejection fraction in patients with suspected acute coronary syndrome. *Journal of Electrocardiology*, Vol. 61 (4): 81–85.

- 2019
22. Frisch SO; Faramand Z., Abu-Jaradeh O.; Martin-Gill C., Callaway C., & **Al-Zaiti SS**. Prevalence and Predictors of Delay in Seeking Emergency Care in Patients Who Call 9-1-1 for Chest Pain. *Journal of Emergency Medicine*, Vol. 57(5):603-610.
23. Faramand Z., Frisch SO; Al-Robaidi K., Alrawashdeh M., Alhamaydeh M., Callaway C., Martin-Gill C., & **Al-Zaiti SS**. The Diurnal, Weekly, and Seasonal Variations of Chest Pain in Patients Transported by Emergency Medical Services. *Emergency Medicine Journal*, 36(10):601-607.
24. **Al-Zaiti SS**, Pietrasik G., Carey MG, Alhamaydeh M., Canty JM & Fallavollita JA. The Role of Heart Rate Variability, Heart Rate Turbulence, and Deceleration Capacity in Predicting Cause-Specific Mortality in Chronic Heart Failure. *Journal of Electrocardiology*. Vol. 52(1):70-74.
25. Faramand Z., Frisch SO; DeSantis A., Alrawashdeh M., Martin-Gill C., Callaway C., **Al-Zaiti SS**. Lack of Significant Coronary History and ECG Misinterpretation Are the Strongest Predictors of Undertriage in Prehospital Chest Pain. *Journal of Emergency Nursing*, Vol. 45(2):161-168.
26. Rivero D., Alhamaydeh M., Faramand Z., Martin-Gill C., Callaway C., Drew B., and **Al-Zaiti SS**. Nonspecific Electrocardiographic Abnormalities Are Associated with Increased Length of Stay and Adverse Cardiac Outcomes in Prehospital Chest Pain. *Heart & Lung: Journal of Acute and Critical Care*, Vol. 48(2):121-125.
27. **Al-Zaiti SS**, Faramand Z., Alrawashdeh M., Sereika S., Martin-Gill C., Callaway C. Comparison of Clinical Risk Scores for Triaging High-Risk Chest Pain Patients at the Emergency Department. *American J of Emergency Medicine*, Vol 37(3):461-67.
- 2018
28. **Al-Zaiti SS**, Sejdic E, Nemeč J, Callaway C, Soman P, Lux R. Spatial Indices of Repolarization Correlate with Non-ST Elevation Myocardial Ischemia in Patients with Chest Pain. *Medical & Biological Engineering & Computing*, 56(1):1-12.
- 2017
29. **Al-Zaiti SS**, Alrawashdeh, M., Martin-Gill, C., Callaway, C., Mortara, D., & Nemeč, J. Evaluation of Beat-to-Beat Ventricular Repolarization Lability from Standard 12-Lead ECG during Acute Myocardial Ischemia. *Journal of Electrocardiology*, 50(6):717-724
30. **Al-Zaiti SS**, Saba, S., Pike, R., Williams, J., & Khraim, F. Arterial Stiffness is Associated with QTc Interval Prolongation in Patients with Heart Failure. *Biological Research for Nursing*, 20(3):255-263.
- 2016
31. **Al-Zaiti, S. S.**, & Magdic, K. S. Paroxysmal Supraventricular Tachycardia: Pathophysiology, Diagnosis, and Management. *Critical Care Nursing Clinics of North America*, 28(3), 309-316.
- 2015
32. **Al-Zaiti SS**, Martin-Gill C, Sejdic E, Al-Rawashdeh M, and Callaway CW. Rationale, Development, and Implementation of Electrocardiographic Methods for the Prehospital Identification of Non-ST Elevation Myocardial Infarction (EMPIRE). *Journal of Electrocardiology*, Vol. 48(6):921-6.

- 2014
33. **Al-Zaiti SS**, Callaway CW, Kozik TM, Carey MG, & Pelter MM. Clinical Utility of Ventricular Repolarization Dispersion for Real-Time Detection of Non-ST Elevation Myocardial Infarction in Emergency Departments. *Journal of the American Heart Association*, Vol. 4(7). pii: e002057.
34. **Al-Zaiti SS**, Rittenberger JC, Reis SE, & Hostler D. Electrocardiographic responses during fire suppression and recovery among experienced firefighters. *Journal of Occupational and Environmental Medicine*, Vol. 57(9):938-42.
35. **Al-Zaiti SS**, Carey MG, Canty Jr. JM, & Fallavollita JA. The Prognostic Value of Discordant T waves in Lead aVR: A Simple Risk Marker of Sudden Cardiac Arrest in Ischemic Cardiomyopathy. *Journal of Electrocardiology*, Vol. 48(5):887-92.
36. Liao L, **Al-Zaiti SS**, and Carey MG. Depression and heart rate variability in firefighters. *SAGE Open Medicine*; Vol. 2: pii: e2050312114545530.
37. **Al-Zaiti SS**, Fallavollita JA, Wu YW, Tomita MR, & Carey MG. Electrocardiogram-Based Predictors of Clinical Outcomes: A Meta-Analysis of the Prognostic Value of Ventricular Repolarization. *Heart & Lung*. Vol. 43(6):516-26.
38. **Al-Zaiti SS** & Carey MG. The Prevalence of Clinical and Electrocardiographic Risk Factors of Cardiovascular Death among On-Duty Professional Firefighters. *Journal of Cardiovascular Nursing*, Vol. 44(1):59-62.
39. **Al-Zaiti SS**, Carey MG, Fallavollita JA, & Canty JM. Electrocardiographic Predictors of Sudden and Non-Sudden Cardiac Death in Ischemic Cardiomyopathy. *Heart & Lung: The Journal of Acute and Critical Care*. Vol. 43(6):527-33.
- 2013
40. **Al-Zaiti SS**, Shusterman V, & Carey MG. Novel Technical Solutions for Wireless ECG Transmission and Analysis in the Age of the Internet Cloud. *Journal of Electrocardiology*. Vol. 46(6):540-45.
- 2012
41. Carey MG, **Al-Zaiti SS**, Canty Jr. JM, & Fallavollita JA. High-Risk Electrocardiographic Parameters are Ubiquitous in Patients with Ischemic Cardiomyopathy. *Annals of Noninvasive Electrocardiology*. Vol. 17(3):241-251.
- 2011
42. **Al-Zaiti SS**, Runco KN, & Carey MG. Increased T-Wave Complexity Can Indicate Subclinical Myocardial Ischemia in Asymptomatic Adults. *Journal of Electrocardiology*. Vol. 44(6):684-8.
43. Carey MG, **Al-Zaiti SS**, Dean GE, Sessanna L, & Finnell DS. Sleep Problems, Depression, Substance Use, Social Bonding, and Quality of Life in Professional Firefighters. *J of Occupational & Environmental Medicine*. Vol. 53(8):928-933.
44. Carey MG, **Al-Zaiti SS**, Liao LM, Martin HN & Butler RA. A Low-Glycemic Nutritional Fitness Program to Reverse Metabolic Syndrome in Professional Firefighters. *Journal of Cardiovascular Nursing*. Vol. 26(4):298-304.
- 2010
45. Carey MG, Luisi AJ, Baldwa S, **Al-Zaiti SS**, Veneziano MJ, deKemp RA, Canty JM, & Fallavollita JA. The Selvester QRS Score is More Accurate than Q Waves and Fragmented QRS Complexes Using the Mason-Likar configuration in Estimating Infarct Volume in Patients with Ischemic Cardiomyopathy. *Journal of Electrocardiology*. Vol. 43(4):318-325.

Book Chapters

- 2022 1. **Al-Zaiti, S.S.**, Faramand, Z., Rjoob, K., Finlay, D. and Bond, R. Chapter 3 - The role of automated 12-lead ECG interpretation in the diagnosis and risk stratification of cardiovascular disease. *Cardiovascular and Coronary Artery Imaging*, Volume 1 (pp. 45-87). Academic Press.

Other Scholarly Publications

- 2021 1. Pelter, MM., Kozik, T. M., **Al-Zaiti SS**, & Carey, M. G. Transient Cardiac Rhythm Changes. *Am J Critical Care*, 30(6), 483-484
2. **Al-Zaiti SS**, Ahmad A, Kozik, T., Pelter, M. M., & Carey, M. G. Refractory Angina Confounded by Preexcitation Syndrome. *Am J Critical Care*, 30(5), 407-8.
3. Carey, M. G., **Al-Zaiti SS.**, Kozik, T., & Pelter, M. M. Exercise-Induced Arrhythmias. *Am J Critical Care*, 30(4), 331-332
4. Kozik, TM., Badejoko S., **Al-Zaiti SS**, Carey, M. G., & Pelter, M. M. Electrocardiographic Features Associated with Obstructive Sleep Apnea. *Am J Critical Care*, 30(3): 243-244
5. Pelter, MM., Kozik, T. M., **Al-Zaiti SS**, & Carey, M. G. Affirming Arrhythmia Diagnosis Using All Available Electrocardiography Leads. *Am J Critical Care*, 30(2), 161-162
6. **Al-Zaiti SS**, Ahmad A, Kozik, T., Pelter, M. M., & Carey, M. G. Evaluation of Bradyarrhythmia in Symptomatic Adults. *Am J Critical Care*, 30(1), 83-84
- 2020 7. Carey, M. G., **Al-Zaiti SS.**, Kozik, T., & Pelter, M. M. Preoperative Screening 12-Lead Electrocardiogram Reveals Correctable Cardiac Conditions. *Am J Critical Care*, 29(6), 493-494
8. Kozik, T. M., Mitchell M., **Al-Zaiti SS**, Carey, M. G., & Pelter, M. M. Noteworthy Electrocardiographic Changes Following Pharmacologic Treatment of COVID-19. *Am J Critical Care*, 29(5), 407-408
9. Pelter, M. M., Kozik, T. M., **Al-Zaiti SS**, & Carey, M. G. The Complexities of Wide Complex Tachycardias. *Am J Critical Care*, 29(4), 325-326
10. **Al-Zaiti SS**, Mahmoud A, Kozik, T., Pelter, M. M., & Carey, M. G. Arrhythmia Diagnosis and the 12-Lead Electrocardiogram: Seeing the Whole Picture. *Am J Critical Care*, 29(3), 237-238
11. Carey, M. G., **Al-Zaiti SS.**, Kozik, T., & Pelter, M. M. Sinus Rhythm With Frequent Funny-Looking Beats. *Am J Critical Care*, 29(2), 155-156
12. Kozik, T. M., Shiu P., **Al-Zaiti SS**, Carey, M. G., & Pelter, M. M. Electrical Disturbance from a Systemic Disease. *Am J Critical Care*, 29(1), 77-78
- 2019 13. Pelter, M. M., Kozik, T. M., **Al-Zaiti SS**, & Carey, M. G. Heart-Brain Interaction on the Electrocardiogram. *Am J Critical Care*, 28(6), 493-494

14. **Al-Zaiti SS**, Mahmoud A, Kozik, T., Pelter, M. M., & Carey, M. G. Evaluation of Wide-Complex Tachycardia. *Am J Critical Care*, 28(5), 401-402
15. Carey, M. G., **Al-Zaiti SS.**, Kozik, T., & Pelter, M. M. Important ECG Changes in the Absence of Positive Cardiac Biomarkers. *Am J Critical Care*, 28(4), 325-26
16. Kozik, T. M., **Al-Zaiti SS**, Carey, M. G., & Pelter, M. M. An Irregular Heart Rhythm in an Athlete. *Am J Critical Care*, 28(3), 231-132
17. Pelter, M. M., Kozik, T. M., **Al-Zaiti SS**, & Carey, M. G. Importance of Evaluating Prior Electrocardiograms. *Am J Critical Care*, 28(2), 157-158
18. **Al-Zaiti SS**, Faramand Z, Kozik, T., Pelter, M. M., & Carey, M. G. ECG Changes Associated With a Life-Threatening Condition. *Am J Critical Care*, 28(1), 85-86
- 2018 19. Shields A, **Al-Zaiti SS**, Kozik, T. M., Pelter, M. M., & Carey, M. G. Cardiac Dysrhythmia During Pacing in an Infant. *Am J Critical Care*, 27(6), 519-520
20. Kozik, T. M., DeMellowJM, **Al-Zaiti SS**, Carey, M. G., & Pelter, M. M. Cardiac Cause of Frequent Falls in an Elderly Patient. *Am J Critical Care*, 27(5), 429-30
21. Pelter, M. M., Kozik, T. M., **Al-Zaiti SS**, & Carey, M. G. Validation of Displayed Electrocardiographic Rhythms at the Central Monitoring Station. *Am J Critical Care*, 27(4), 339-340
22. **Al-Zaiti SS**, Kozik, T. M., Pelter, M. M., & Carey, M. G. The Value of Lead aVR: A Frequently Neglected Lead. *Am J Critical Care*, 27(3), 249-250
23. Carey, M. G., **Al-Zaiti SS.**, Kozik, T. M., & Pelter, M. M. Managing Older Persons with Multiple ECG Features. *Am J Critical Care*, 27(2), 161-162
24. Kozik, T. M., **Al-Zaiti SS**, Carey, M. G., & Pelter, M. M. Prognostic ECG Changes in A Preoperative Assessment. *Am J Critical Care*, 27(1), 77-78
- 2017 25. Pelter, M. M., Kozik, T. M., **Al-Zaiti SS**, & Carey, M. G. Undetectable P Waves. *Am J Critical Care*, 26(6), 509-510
26. **Al-Zaiti SS**, Kozik, T. M., Pelter, M. M., & Carey, M. G. Global ST-T Wave Changes: Ischemic vs Nonischemic. *Am J Critical Care*, 26(5), 425-426
27. Carey, M. G., **Al-Zaiti SS.**, Kozik, T. M., & Pelter, M. M. Sources of QRS couplets. *Am J Critical Care*, 26(4), 349-350
28. Kozik TM, **Al-Zaiti SS**, Carey MG, & Pelter MM. Predictive Pattern for Acute Myocardial Infarction. *Am J Critical Care*. Vol. 26(3):257-8
29. Pelter MM, Kozik TM, **Al-Zaiti SS**, & Carey MG. Similar ECG Features in 2 Different Diagnoses. *Am J Critical Care*. Vol. 26(2):169-70
30. **Al-Zaiti SS**, Pelter MM, Kozik TM, & Carey MG. A Rare Disease With Cardiac Involvement. *American J of Critical Care*. Vol. 26(1):89-90
- 2016 31. Carey MG, Kozik TM, Pelter MM, **Al-Zaiti SS**. Ventricular Ectopy in Hospitalized Elderly Adults. *Am J Critical Care*. Vol. 25(6):565-6

32. Kozik TM, Carey MG, **Al-Zaiti SS** & Pelter MM. Repolarization Alterations in a Genetic Disorder. *Am J Critical Care*. Vol. 25(5):465-6
33. Pelter MM, Kozik TM, **Al-Zaiti SS**, & Carey MG. Differential Diagnoses for Suspected ACS. *Am J Critical Care*. Vol. 25(4):377-8
34. **Al-Zaiti SS**, Pelter MM, Kozik TM, & Carey MG. Syncope With Profound Bradycardia. *American J of Critical Care*. Vol. 25(3):281-282
35. Kozik TM, Charos GS, **Al-Zaiti SS**, Carey MG, & Pelter MM. Symptomatic Bradycardia in a Healthy Older Adult. *Am J Critical Care*. Vol. 25(2):185-186
36. Carey MG, **Al-Zaiti SS**, Kozik TM, Schell-Chaple H & Pelter MM. QRS Amplitude Variation During Monitoring. *Am J Critical Care*. Vol. 25(1):97-8
- 2015 37. Pelter MM, Kozik TM, **Al-Zaiti SS**, & Carey MG. Bedside ECG Alarm Management. *Am J Critical Care*. Vol. 24(6):545-6
38. **Al-Zaiti SS**, Crago EA, Hravnak M, Kozik TM, Pelter MM, & Carey MG. ECG Changes During neurologic Injury. *American J of Critical Care*. Vol. 24(5):453-4
39. Kozik TM, Carey MG, **Al-Zaiti SS**, & Pelter MM. Drug Induced ECG Abnormalities. *Am J Critical Care*. Vol. 24(4):365-6
40. Carey MG, **Al-Zaiti SS**, Kozik TM, & Pelter MM. Post-Myocardial Infarction Arrhythmias. *Am J Critical Care*. Vol. 24(3):369-270
41. **Al-Zaiti SS**, Kozik TM, Pelter MM, & Carey MG. Prehospital 12-Lead ECGs and Delivery of Care. *Am J Critical Care*. Vol. 24(2):181-182
42. Kozik TM, Pelter MM, **Al-Zaiti SS**, & Carey MG. Heart-Rate Induced Conduction Defects. *Am J Critical Care*. Vol. 24(1):93-94
43. **Al-Zaiti SS**. Inflammation-Induced Atrial Fibrillation: Pathophysiological Perspectives and Clinical Implications. *Heart & Lung*. Vol. 44(1):59-62
- 2014 44. Pelter MM, Kozik TM, **Al-Zaiti SS**, & Carey MG. Acute Coronary Syndrome ST-Segment Monitoring. *Am J Critical Care*. Vol. 23(6):503-4
45. Carey MG, **Al-Zaiti SS**, Kozik TM, & Pelter MM. Asymptomatic Irregular Cardiac Rhythm. *Am J Critical Care*. Vol. 23(5):429-430
46. **Al-Zaiti SS**, Hostler D, Kozik TM, Pelter MM & Carey MG. Repolarization Abnormalities in Young Athletes. *Am J of Critical Care*. Vol. 23(4):345-346
47. Kozik TM, Gurinder GS, Pelter MM, **Al-Zaiti SS**, & Carey MG. Chest pain After Acute Illness. *Am J Critical Care*. Vol. 23(3):267-8
48. Carey MG, **Al-Zaiti SS**, Kozik TM, & Pelter MM. Holiday Heart Syndrome. *Am J Critical Care*. Vol. 23(2): 171-2
49. Kozik TM, Pelter MM, **Al-Zaiti SS**, & Carey MG. T Wave Amplitude Changes. *Am J Critical Care*. Vol. 23(1): 85-86
- 2013 50. **Al-Zaiti SS**, Carey MG, Kozik TM, & Pelter MM. Neonatal Cardiac Monitoring. *Am J Critical Care*; 2013, Vol. 22(6): 533-534

51. Pelter MM, Kozik TM, **Al-Zaiti SS**, & Carey MG. Arrhythmias of Non-Cardiac Origin. *Am J Critical Care*; 2013, Vol. 22(5): 445-6
52. **Al-Zaiti SS**, Carey MG, Kozik TM, & Pelter MM. Syncope and Cardiac Rhythms. *Am J Critical Care*; 2013, Vol. 22(4): 361-2
53. Carey MG, Fan T, Pillow T, **Al-Zaiti SS**, Kozik TM, & Pelter MM. Emergency Evaluation of 12-Lead ECGs. *Am J Critical Care*. Vol. 22(3): 267-8
54. Pelter MM, Kozik TM, **Al-Zaiti SS**, & Carey MG. Implantable Electrical Devices. *Am J Critical Care*; 2013, Vol. 22(2): 163-164
55. Carey MG, **Al-Zaiti SS**, Kozik TM, & Pelter MM. ECG Interpretation Confounders. *Am J Critical Care*; 2013, Vol. 22(1): 537-538
- 2012
56. Kozik TM, Pelter MM, **Al-Zaiti SS**, & Carey MG. Sudden Shortness of Breath and Anxiety. *Am J Critical Care*; 2012, Vol. 21(6): 453-454
57. **Al-Zaiti SS**, Carey MG, Kozik TM, & Pelter MM. Indices of Sudden Cardiac Death. *Am J Critical Care*; 2012, Vol. 21(5): 365-366
58. Pelter MM, Kozik TM, **Al-Zaiti SS**, & Carey MG. Impaired Impulse Formation. *Am J Critical Care*; 2012, Vol. 21(4): 293-294
59. Carey MG, **Al-Zaiti SS**, Kozik TM, & Pelter MM. ECG Screening of Special Populations. *Am J Critical Care*; 2012, Vol. 21(3): 209-210
60. Pelter MM, Kozik TM, **Al-Zaiti SS**, & Carey MG. Congenital Anomaly. *Am J Critical Care*; 2012, Vol. 21(2):131-132
61. **Al-Zaiti SS**. Pelter MM, & Carey MG. A New Puzzler guide. *Am J Critical Care*; 2012, Vol. 21(1):68-70
- 2011
62. Pelter MM, **Al-Zaiti SS**, & Carey MG. Coronary Artery Dominance. *Am J Critical Care*; 2011, Vol. 20(5):401-402
63. Carey MG, **Al-Zaiti SS**. & Pelter MM. Computerized Algorithms. *Am J Critical Care*; 2011, Vol. 20(4):339-340
64. **Al-Zaiti SS**. Pelter MM, & Carey MG. Exercise Stress Treadmill Testing. *Am J Critical Care*; 2011, Vol. 20(3):259-260
65. Pelter MM, Carey MG, & **Al-Zaiti SS**. Bedside Monitoring for Transient Myocardial Ischemia. *Am J Critical Care*; 2011, Vol. 20(2):171-172
66. **Al-Zaiti SS**, Khasawneh MK, & Carey MG. Syncope: An Uncommon Presentation of Ischemic Cardiomyopathy. *Journal for Nurse Practitioners*. Vol. 7(5):385-391
- 2010
67. Carey MG, Pelter MM, & **Al-Zaiti SS**. Dynamic Conduction Defects. *Am J Critical Care*; 2010, Vol. 19(3):301-302
68. Carey MG, **Al-Zaiti SS**, & Pelter MM. Asystole. *Am J Critical Care*; 2010, Vol. 19(1):84-85

INTERNATIONAL PRESENTATIONS

**** indicates podium**

International Society of Computerized ECG (ISCE)

- 2022
1. Faramand Z, Van Dam P, Saba S, Martin-Gill C, Callaway C, & **Al-Zaiti SS**. Visualizing Activation and Recovery Pathways as a Novel Approach for Myocardial Ischemia Detection on Prehospital 12-Lead ECG. *Journal of the Electrocardiology*
 2. ****** Pelter MM, Carey MG, Zegre-Hemsey J, **Al-Zaiti SS**, Sommargren C, Isola L, Prasad P, Mortara D, Badilini F. The UCSF Ventricular Tachycardia Database: Description and Annotation Protocol. *Journal of the Electrocardiology*
 3. Gregg R, An J, Babaeizadeh S, Faramand Z, Bouzid Z, **Al-Zaiti SS**. ECG Detection of ACS by Convolutional Neural Network utilizing Transfer Learning. *Journal of the Electrocardiology*.
 4. **** Al-Zaiti SS**, Saba S, Peace A, Macleod R, and Bond R. Emerging ECG Methods for Ischemia Detection: Recommendations & Future Opportunities. *Journal of the Electrocardiology*
- 2021
5. ****** Faramand Z, Helman S, Ahmad A, Martin-Gill C, Saba S, Callaway C, Gregg R, Wang J, & **Al-Zaiti SS**. Performance and Limitations of Automated ECG Interpretation Statements in Patients with Symptomatic Coronary Artery Disease. *Journal of the Electrocardiology*, Vol 69:45.
 6. ****** Bouzid Z, Faramand Z, Gregg R, Helman S, Martin-Gill C, Saba S, Callaway C, Sejdíć E, & **Al-Zaiti SS**. Novel ECG Features and Machine Learning to Optimize Culprit Lesion Detection in Patients with Suspected Acute Coronary Syndrome. *Journal of the Electrocardiology*, Vol. 69:31.
 7. Pelter, M. M., Carey, M. G., **Al-Zaiti, S.**, Zegre-Hemsey, J., Sommargren, C., Mortara, D., & Badilin, F. (2021). Annotation protocol designed to improve ventricular tachycardia identification during in-hospital ECG. *Journal of Electrocardiology*, 69:83.
- 2019
8. **Al-Zaiti SS**, Frisch S, Besomi L, Faramand Z, et al. Electrocardiographic Methods for the Prompt Identification of Coronary Events (EMPIRE): Algorithm Testing & Validation on an Independent Training Cohort, *J of Electrocardiology*, 57:S104.
 9. Yang, Y. C., Dzikowicz, D., **Al-Zaiti, SS.**, & Carey, M. G. (2019). Heart Rate Recovery and Cardiovascular Risk Factors among Firefighters. *Journal of Electrocardiology*, 57:S127.
 10. Dzikowicz, D., Yang, Y. C., **Al-Zaiti, SS.**, & Carey, M. G. (2019). Predicting Heart Rate Recovery Based on Depression, Sleep Quality and Vagal Tone in On-Duty Firefighters. *Journal of Electrocardiology*, 57:S121-S122.
 11. Yang, Y. C., Dzikowicz, D., **Al-Zaiti, SS.**, & Carey, M. G. (2019). Heart Rate Recovery, Blood Pressure Recovery, and 24-hour Heart Rate among Firefighters. *Journal of Electrocardiology*, 57:S117.
 12. Dzikowicz, D., Yang, Y. C., **Al-Zaiti, SS.**, & Carey, M. G. (2019). Relation between QRS-T Angle and Blood Pressure during Exercise Stress Test in On-Duty Firefighters. *Journal of Electrocardiology*, 57:S122.

- 2018 **13.** Faramand Z, Martin-Gill C, Alrawashdeh M, Gregg R, Callaway C, **Al-Zaiti SS**. Understanding The Demographic and Clinical Correlates of Quantitative Repolarization Parameters in Patients with Cardiovascular Risk Factors, *J of Electrocardiology*, 57:S122–S123.
- 14.** **Al-Zaiti SS**, Faramand Z, Martin-Gill C, Alrawashdeh M, Gregg R, Callaway C. Beyond the ST-Segment: Novel Methods to Quantify Acute Myocardial Ischemia in Patients with Suspected ACS. *J of Electrocardiology*, 57:S110–S111.
- 2017 **15.** **** Al-Zaiti SS**, Sejdic, E., Nemec, J., Walden, K., Callaway, C; Soman, P.; & Lux, R. Spatial Indices of Repolarization Correlate with Non-ST Elevation Myocardial Ischemia in Patients with Chest Pain. *J of Electrocardiol*, 50(6), 864.
- 16.** **Al-Zaiti SS**, Alrawashdeh, M., et al. Evaluation of Beat-to-Beat Ventricular Repolarization Lability from Standard 12-Lead ECG during Acute Myocardial Ischemia. *Journal of Electrocardiology*, 50(6):717-724
- 2016 **17.** **Al-Zaiti SS**, Alrawashdeh, M., Rivero, D., Martin-Gill, C., & Callaway, C. Widened QRS-T Angle on the Presenting 12-lead ECG may indicate NSTEMI in Patients with Chest Pain. *J of Electrocardiol*, 49(6), 925.
- 2015 **18.** **** Al-Zaiti SS**, Callaway CW, et al. Clinical Utility of Ventricular Repolarization Dispersion for Real-Time Detection of Non-ST Elevation Myocardial Infarction in Emergency Departments. *JAHA*, Vol. 4(7). pii: e002057.
- 2014 **19.** **Al-Zaiti SS**, Sethi A, Carey MG, Canty JM, and Fallavollita JA. Temporal complexity of depolarization indicates myocardial sympathetic denervation and predicts sudden cardiac arrest in patients with ischemic cardiomyopathy and poor left ventricular ejection fraction. *Journal of Electrocardiology* 47(6): 910.
- 2013 **20.** **** Al-Zaiti SS**, Shusterman V, & Carey MG. Novel Technical Solutions for Wireless ECG Transmission and Analysis in the Age of the Internet Cloud. *Journal of Electrocardiology*. Vol. 46(6):540-45.
- 2012 **21.** **Al-Zaiti SS**, Fallavollita JA, Canty JM, and Carey MG. Predicting mortality using heterogeneity of ventricular repolarization: A meta-analysis. *Journal of Electrocardiology* 46(6): 616.
- 2011 **22.** **** Al-Zaiti SS**, Runco KN, & Carey MG. Increased T-Wave Complexity Can Indicate Subclinical Myocardial Ischemia in Asymptomatic Adults. *Journal of Electrocardiology*. Vol. 44(6):684-8.
- 2010 **23.** **Al-Zaiti SS**, Fallavollita JA, & Carey MG. Is the QRS-T angle a more sensitive marker of myocardial ischemia than ST-segment deviation? *Journal of Electrocardiology*; 2010, Vol. 43(6):640.
- 2009 **24.** Carey MG, & **Al-Zaiti SS**. Computer versus manual calculations of the spatial QRST angle. *Journal of Electrocardiology*; 2009, Vol. 42(6):608-9.

European Society of Intensive Care Medicine (ESICM)

- 2021 **25.** Helman S, Terr T, Pellathy T, Williams A, Dubrawski A, Clermont G, Pinsky M, **Al-Zaiti SS**, & Hravnak M. A User Engaged Iterative Design for the Graphical Interactive Display of Machine Learning-Based Intelligent Alerting Systems.

26. Welter G, Dubrawski A, Pellathy T, Helman S, Lagattuta T, Hravnak M, Pinsky M, Clermong G, & **Al-Zaiti SS**. High-Frequency Sampling and Signal Quality Indices Boost the Performance of Online Classification of Real Alerts versus Artifacts in Multi-Signal Vital Signs Monitoring Data.

The Canadian Congress of Cardiology (CCC)

- 2018 27. ** **Al-Zaiti, SS.**, Faramand, Z., Martin-Gill, C., & Callaway, C. Demographic and Clinical Predictors of ACS in Patients with Prehospital Chest Pain and Benign ECG Findings. *Canadian Journal of Cardiology*, 34(10):S201-S202.
- 2015 28. ** **Al-Zaiti SS**, Pike, R., Williams, J., & Khraim, F. The Clinical Significance of Fragmented QRS and Widened QRS-T Angle in Systolic Dysfunction: Novel Insights Using Impedance Cardiography. *Canadian Journal of Cardiology*, 31(10):S315

The International Nursing Research Congress

- 2019 29. Frisch, S. O., Faramand, Z., Martin-Gill, C., Callaway, C., & **Al-Zaiti, SS**. Patient Factors at Emergency Department Nurse Triage Predictive of ACS.

NATIONAL PRESENTATIONS

** indicates podium

American Heart Association (AHA) Scientific Sessions

- 2021 1. ** Kraevsky-Phillips K, Bouzid Z, Ahmad A, Faramand Z, & **Al-Zaiti SS**. An Unsupervised Machine-Learning-Based Approach Elucidates the Prognostic Value of Symptom Clusters in Heart Failure Patients Evaluated in the Emergency Department. *Circulation*, 144(Suppl_1): A12673
2. Ahmad A., Faramand Z, Mahmoud A, Gregg R, & **Al-Zaiti SS**. Fragmented QRS with Benign Early Repolarization Pattern is a Strong Predictor of Adverse Events in Patients with Suspected Acute Coronary Syndrome. *Circulation*, 144: A12595
3. Bouzid Z., Faramand Z, Frisch S, Gregg R, Sejdic E, & **Al-Zaiti SS**. ECG-Based Risk Stratification of Long-Term Mortality in Suspected Acute Coronary Syndrome. *Circulation*, 144(Suppl_1), A12636.
4. Helman S., Herrup E, Christopher A, & **Al-Zaiti SS**. The Role of Machine Learning-Based Decision Support Tools for Diagnosing and Assessing Congenital Heart Disease. *Circulation*, 144(Suppl_1), A12262.
- 2020 5. Ahmad, A., Alhamaydeh, M., Faramand, Z., Gregg, R., Saba, S., & **Al-Zaiti SS**. (2020). Identifying the Most Important ECG Predictors of Reduced Ejection Fraction in Patients With Suspected Acute Coronary Syndrome. *Circulation*, 142(Suppl_3), A13596-A13596.
- 2019 6. ** **Al-Zaiti SS**; Abu-Jaradeh O; Faramand Z; Al-Ghouleh I; Conley Y. Effect of Ischemic Preconditioning on Apoptosis and Autophagy: A Potential Key Role in ST-Elevation vs. Non-ST Elevation Acute MI. *Circulation*, 140:A16285

7. ** Frisch S; Hongjin L; Faramand Z; Callaway C; Martin-Gill C; Sejdic E; **Al-Zaiti SS**. Using Predictive Machine Learning Modeling for the Nursing Triage of Acute Chest Pain at the Emergency Department. *Circulation*, 140:A14879
8. Abu-Jaradeh O; Ahmad A; Frisch S; Faramand Z; Landis P; Mahmoud A; Callaway C; Martin-Gill C; **Al-Zaiti SS**. Supplemental Oxygen is Associated With Larger Infarct Size but Not Excess Risk of Adverse Cardiac Events in Non-ST Elevation Myocardial Infarction. *Circulation*, 140:A11501
9. Alhamaydeh M; Ahmad A; Frisch S; Faramand Z; Saba S; Gregg R, Callaway C; Martin-Gill C; **Al-Zaiti SS**. Tpeak–Tend Interval on the Prehospital 12-lead ECG is a Strong Predictor of Adverse Cardiac Events in Patients With Suspected Acute Coronary Syndrome. *Circulation*, 140:A11508
10. Mahmoud A; Hongjin L; Abu-Jaradeh O; Frisch S; Faramand Z; Callaway C; Martin-Gill C; **Al-Zaiti SS**. Is HEART Score Adequate for Triage of Acute Chest Pain in Cancer Survivors? *Circulation*, 140:A14860
- 2018 11. Alhamaydeh, M., Faramand, Z., Martin-Gill, C., Callaway, C., & **Al-Zaiti, SS**. Should Paramedics Withhold Nitroglycerin in Patients With Prehospital Chest Pain Who Are Tachycardiac? *Circulation*, 138:A12389
12. Frisch, S. O., Alrawashdeh, M., Martin-Gill, C., Callaway, C., & **Al-Zaiti, SS**. Geospatial Analysis of Chest Pain Patients That Call 9-1-1 in the City of Pittsburgh. *Circulation*, 138: A16400
- 2017 13. Frisch, S., Martin-Gill, C., Alrawashdeh, M., Callaway, C., & **Al-Zaiti SS**. Incidence and Predictors of Delaying Seeking Emergent Medical Care Among Patients With Suspected Acute Coronary Syndrome. *Circulation*;136:A18707
14. DeSantis, A., Landis, P., Alrawashdeh, M., Martin-Gill, C., Callaway, C., & **Al-Zaiti SS**. Predictors of Emergency Medical Personnel’s Decision to Transmit or Not to Transmit the Prehospital 12-Lead ECG of Patients With Suspected Acute Myocardial Infarction. *Circulation*;136:A18641
15. Faramand, Z., Alrawashdeh, M., Martin-Gill, C., Callaway, C., & **Al-Zaiti SS**. Evaluating the Diagnostic Accuracy of Clinical Risk Scores to Detect Acute Coronary Syndrome in Patients Evaluated at the Emergency Department for a Chief Complaint of Chest Pain. *Circulation*; 136:A19451
16. Rivero, D., Alhamaydeh, M., Martin-Gill, C., Callaway, C., Drew, B., & **Al-Zaiti SS**. The Prevalence of Secondary Repolarization Abnormalities Confounding the Electrocardiographic Diagnosis of Acute Myocardial Ischemia in Patients Presenting With Chest Pain. *Circulation*;136:A18750
17. Alhamaydeh, M., Alrawashdeh, M., Martin-Gill, C., Callaway, C., & **Al-Zaiti SS**. Time of Day and Day of Week Variations in Chest Pain Encounters at the Prehospital Setting. *Circulation*;136:A18689
- 2016 18. Alhamaydeh, M., Rivero D., Alrawashdeh, M., Martin-Gill, C., Callaway, C., & **Al-Zaiti SS**. ECG Characteristics of Patients Evaluated at the Emergency Department for a Chief Complaint of Chest Pain. *Circulation*; 134:A15745

- 2015 **19.** ** Al-Zaiti SS, Pike R, Williams J, & Khraim F. The Hemodynamic Determinants and Physiologic Correlates of QTc Interval Using Impedance Cardiography in Heart Failure. *Circulation* 132(Suppl 2): A15631
- 2014 **20.** Al-Zaiti SS, Carey MG, Canty MJ, and Fallavollita JA. The Role of Heart Rate Variability in Predicting Sudden and Non-Sudden Cardiac Death in Ischemic Heart Disease. *Circulation* 130(Suppl 2): A14269.
- 2013 **21.** ** Al-Zaiti SS, Carey MG, Canty MJ, and Fallavollita JA. The Prognostic Value of Positive T waves in Lead aVR: A Simple Risk Marker of Sudden and Non-Sudden Cardiac Death in Patients With Ischemic Cardiomyopathy and Poor Left Ventricular Ejection Fraction. *Circulation* 128(22): A17920.

Society of Critical Care Medicine (SCCM)

- 2022 **22.** Hravnak M, Clermont G, Helman S, Pellathy T, Lagattuta T, Saul M, George B, Pinsky M, Al-Zaiti SS. Medical Emergency Team (MET) Calls for Ward Patients After Down-Transfer From an ICU. *Critical Care Medicine*, Vol. 50(1):617
- 23.** Helman S, Terry M, Hravnak M, Pellathy T, George B, Pinsky M, Al-Zaiti SS, Clermont G. User-Engaged Design of a Graphical User Interface for Instability Decision Support in the ICU. *Critical Care Medicine*, Vol. 50(1):269

American College of Emergency Physicians (ACEP)

- 2021 **24.** Faramand, Z., Ahmad, A., Martin-Gill, C., Callaway, C., & Al-Zaiti, S. Two Thirds of Patients with ACS in High Risk Chest Pain Have a Negative First Conventional Troponin. *Annals of Emergency Medicine*, 78(4), S41.

Emergency Nursing (ENA Annual Conference)

- 2018 **25.** Faramand, Z., Frisch S., Martin-Gill, C., Callaway, C., & Al-Zaiti SS. HEART score: Valid assessment tool for cocaine associated chest pain
- 26.** Frisch S., Faramand, Z., Martin-Gill, C., Callaway, C., & Al-Zaiti SS. Resolution of Ischemic ECGs Changes in Prehospital Chest Pain Patients

Eastern Nursing Research Society (ENRS)

- 2019 **27.** ** Landis P.; Faramand Z.; Zegre-Hemsey J.; Frisch S.; Ren D.; Callaway C.; Frisch A.; & Al-Zaiti SS. The Prevalence and Outcomes of Morphine Use in the Initial Management of Patients with Acute Myocardial Infarction
- 2016 **28.** ** Alrawashdeh, M., Al-Zaiti, S., Sejdic, E., Martin-Gill, C., & Callaway, C. Repolarization Dispersion on the Prehospital 12-Lead ECG Predicts Ischemic Myocardial Injury in Chest Pain Patients. *Nursing Research*; 65(2):E94.

Council for the Advancement of Nursing Science (CANS)

- 2016 **29.** ** Al-Zaiti, SS; Rittenberger J; Reis, S; and Hostler D. The Impact of Exertional Heat Stress on Cardiovascular Responses in Fire Suppression and Recovery.
- 2010 **30.** ** Al-Zaiti SS; Liao L; Martin H; Butler R; and Carey MG. Metabolic Syndrome: Quantified and Reduced in Firefighters

American College of Cardiology (ACC) Scientific Sessions

- 2022 31. Ahmad A, Faramand Z, Wang J, Gregg R, Martin-Gill C, Callaway C, Saba S, and **Al-Zaiti SS**. Vessel-Specific ECG Leads as a Novel Strategy for Myocardial Ischemia Detection in Patients with Suspected Acute Coronary Syndrome.
- 2013 32. ** Carey MG, Fallavollita JA, Canty MJ, and **Al-Zaiti SS**. ECG Predictors of Mortality among Implantable Cardioverter-Defibrillator Candidates for the Primary Prevention of Sudden Cardiac Death. *JACC*; 61: E616.

OTHER REGIONAL PRESENTATIONS

**** indicates podium**

Invited Visiting Professor Presentations

- 2019 1. ** **Al-Zaiti SS**. Frontiers of AI-Assisted Care: ECG Methods for the Prompt Identification of Coronary Events (EMPIRE): Algorithm Development and Testing on Two Independent Cohorts. *Stanford University, San Francisco, CA*
- 2018 2. ** **Al-Zaiti SS**. Establishing a Program of Research in a Research-Intensive Institution: Lesson Learned. *University of Texas at Houston, Houston TX*
- 2018 3. ** **Al-Zaiti SS**. Big Data in Cardiology: Machine Learning and the Electrocardiogram. *State University of New York at Buffalo, NY*

AHA Fellows Research Days (Northeast Affiliate)

- 2018 4. Faramand, Z., Frisch S., Martin-Gill, C., Callaway, C., & **Al-Zaiti SS**. Evaluating the Diagnostic Accuracy of Clinical Risk Scores to Detect ACS in Patients with Chest Pain.
- 2016 5. ** Alrawashdeh, M., Sejdic, E., Martin-Gill, C., & Callaway, C, **Al-Zaiti, SS**. Repolarization Dispersion on the Prehospital 12-Lead ECG Predicts Ischemic Myocardial Injury in Chest Pain Patients.

McGowan Institute Scientific Retreat

- 2018 6. ** **Al-Zaiti SS**, Faramand, Z., Frisch S., Martin-Gill, C., Callaway, C., & Sejdic E. Novel Methodologies and Technologies to Detect and Analyze Physiological Markers of Clinical Interest.

SAFAR Symposium (University of Pittsburgh)

- 2017 7. Faramand, Z., Frisch S., Martin-Gill, C., Callaway, C., & **Al-Zaiti SS**. HEART score: Valid assessment tool for cocaine associated chest pain

Pittsburgh Health Data Alliance (PHDA) Annual Retreat

- 2017 8. ** **Al-Zaiti SS** and Sejdic E. EMPIRE: A smart detection system for rapid diagnosis of heart attacks

Senior Vice Chancellor's Research Seminar (University of Pittsburgh)

- 2021 9. ** **Al-Zaiti SS**. Intelligent ECG Methods for Myocardial Ischemia Detection

THESIS, DISSERTATION, AND MENTORING

International Visiting Scholars

<i>Scholar and Affiliation</i>	<i>Training Period</i>	<i>Project Title</i>
Abdullah Ahmad Sultan, MD University of Jordan, Jordan	7/2019–6/2020	“Fragmented QRS with Benign Early Repolarization Pattern As a Strong Predictor of Adverse Events in Patients with Suspected Acute Coronary Syndrome”
Omar Abu-Jaradeh, MD Hashemite University, Jordan	9/2018–6/2019	“Association between supplemental Oxygen and Infarct Size in Non-ST Elevation Myocardial Infarction”
Mohammad Alhamaydeh, MD University of Jordan, Jordan	1/2017–12/2017	“Time of Day and Day of Week Variations in Chest Pain Encounters at the Prehospital Setting”

Postdoctoral Research Fellows

<i>Name of Postdoc Fellow & Source of Support</i>	<i>Training Period & Role</i>	<i>Project Title</i>
Ziad Faramand, MD, MS R01HL137761	9/2018–6/2022 Mentor	“Comparison of Clinical Risk Score for Detecting Acute Coronary Syndrome at the Emergency Department”
Donald T Smith, PhD, RN, AG-ACNP-BC, FF/EMT-P T32NR008857	9/2014–8/2016 Mentor	“Analyzing Safety, Effectiveness, and Outcomes of a 5-Level Triage System in the Prehospital Care Environment”

PhD Dissertation Research

<i>Name of Student, Department, & Source of Support</i>	<i>Training Period & Committee Role</i>	<i>Project Title</i>
Karina Kraevsky-Phillips, MA, BSN, RN, CCRN School of Nursing T32NR008857	9/2021–8/2025 Chair	“Data-Driven Phenotyping of Dyspnea in Symptomatic Patients with Heart Failure”
Stephanie Helman, RN, CNS, School of Nursing T32NR008857 F31 NR 018589	9/2019–8/2023 Chair	“Use of Predictive Analytics to Quantify Neonatal Hypothermia Burden After Cardiac Surgery”

Zeineb Bouzid, BS, MSc., <i>Electrical & Computer Engineering Department</i> R01HL137761	9/2020–12/2022 Co-Chair	“Unveiling the potential of the 12-lead ECG in predicting ACS: from understanding the diagnostic value of handcrafted features to exploring hidden patterns in the ECG signal”
Stephanie Frisch, RN, CCRN, <i>School of Nursing</i> T32NR008857 F31NR018589	9/2017–8/2020 Chair	“Triage chest pain patients in the emergency department: a novel machine learning approach”
Tiffany Pellathy, RN, ACNP <i>School of Nursing</i> F31NR018102	9/2018–8/2020 Member	“Machine Learning to Determine Dynamically Evolving New-Onset Venous Thromboembolic (VTE) Event Risk in Hospitalized Patients”
Mohammad Alrawashdeh, RN, MSN, <i>School of Nursing</i> T32NR008857	9/2015–8/2017 Member	“Clinicians’ Acceptance of Interactive Health Technologies to Support Patients’ Self-Management”

DNP Capstone

<i>Name of Student, Department, & Source of Support</i>	<i>Training Period & Committee Role</i>	<i>Project Title</i>
Danielle Schwimer, RN, BSN <i>School of Nursing</i>	9/2018–8/2019 Member	“A Quality Improvement Project to Enhance QTc Interval Monitoring in a Critical Care Setting: Pre and Posttest Study”

Master’s Thesis

<i>Name of Student, Department, & Source of Support</i>	<i>Training Period & Committee Role</i>	<i>Project Title</i>
Zeineb Bouzid, BS, MSc., <i>Electrical & Computer Engineering Department</i> R01HL137761	9/2019–8/2020 Co-Chair	“Novel Approaches to ECG Feature Selection for Dimensionality Reduction to Optimize ACS Detection using the 12-Lead ECG”
Ziad Faramand, MD <i>Clinical & Translational Science Institute (CTSI)</i> R01HL137761	9/2019–8/2020 Co-Chair	“Prognostic Value of HEART score in Patients with Cocaine Associated Chest Pain: An Age-and-Sex Matched Cohort Study”
Lucas Besomi, BS <i>Electrical & Computer Engineering Department</i> R01HL137761	9/2018–8/2019 Co-Chair	“Predicting Acute Myocardial Ischemia using Machine Learning applied to Standard 10-second 12-lead ECG”
Kamal Althobaiti, BS <i>School of Public Health</i>	9/2018–8/2019 Member	“Examining HIV Prevalence and Cultural Implications of HIV Awareness in the Middle East”

BSN Honors Thesis

<i>Name of Student, Department, & Source of Support</i>	<i>Training Period & Committee Role</i>	<i>Project Title</i>
Alexandra Tolassi <i>School of Nursing</i> R01HL137761	9/2021–4/2022 Chair	“Associations between treatment-seeking delay and clinical course of patients with suspected acute coronary syndrome at initial ED encounter”
Lacey Maclay <i>School of Nursing</i> R01HL137761	9/2020–8/2021 Chair	“The Role of Inflammation, Immune Responses, and Ischemic Preconditioning in Acute Myocardial Infarction”
Jennifer Stemler <i>School of Nursing</i> R01HL137761	9/2020–8/2021 Chair	“Taking a Closer Look at Using the Emergency Severity Index Tool at Emergency Department Triage for Patients Who Present with Suspected ACS”
Parker Landis <i>School of Nursing</i>	9/2017–8/2018 Chair	“Evaluating the Safety of Morphine Use in the Management of Patients with Acute Coronary Syndrome”
Diana Rivero <i>School of Nursing</i>	9/2016–8/2017 Chair	“Electrocardiographic abnormalities and their effect on Clinical Decision Making in patients presenting to the emergency department with chest pain”

Other Research Trainees

Undergraduate Research Assistants (n=15)

Katherine McGrath (2022–2023); Maura Gallagher (2021–2023); Lacey Mclay (2019–2021); Jennifer Stemler (2019–2021); Adrian Bermudez (2018–2019); Madeline Reiche (2018–2019); Parker Landis (2017–2019); Victoria Tori (2017–2018); Amber DeSantis (2016–2018); Kelsey Walden (2015–2016); Diana L Rivero (2014–2017); Katherine G McCoy (2014–2015); Connor R McClellan (2014–2015); Lindsey R. Buchanan (2014–2015); Melinda M Douglas (2013–2015)

Graduate Students Researchers (n=10)

Engineering:	Zeinab Bouzid (2019–2021)	Nursing:	Stephanie Helman (2020–2021)
	Lucas Besomi (2018–2019)		Hongjin Li (2018–2019)
	Aya Khalaf (2017–2018)		Mohammad Alrawashdeh (2014–2017)
	Nicholas Scangas (2014–2015)		Heba Khalil (2015–2016)
			Khalil Yousef (2015–2016)
			Justin Bala-Hampton (2013–2014)

TEACHING

University of Pittsburgh (2013–2022)

Classroom Teaching (Didactic)

<i>Course Number & Title</i>	<i>Level & Class Size</i>	<i>Terms Taught</i>
NUR 3072: Introduction to Machine Learning in Healthcare (3 credits)	PhD, 7-8 students	Summer 2020, 2022
NUR 3287: Research Design and Methods (3 credits)	PhD, 6-8 students	Spring 2019, 2020, 2021, 2022
NUR 2078: Clinical Diagnostics (3 credits)	DNP, ~10 students	Summer 2015, 2016, 2017, 2021
NUR 2004: Advanced Pathophysiology Across the Life Span (4 credits)	DNP, ~100 students	Fall 2016
NUR 0005: Nursing Honors Seminar (1 credit)	BSN, ~20 students	Fall 2020, 2021
NUR 0053: Introduction to Inclusion, Equity and Diversity in Health Care (1 credit)	BSN, ~20 students	Spring 2020
NUR 0067: Nursing Research: An Introduction to Critical Appraisal and EBP (3 credits)	BSN, ~60 students	Fall 2019, Spring 2020
NUR 0088: Introduction to Basic Statistics for Evidence Based Practice (3 credits)	BSN, ~60 students	Fall 2017, Spring 2018

Clinical Teaching

<i>Course Number & Title</i>	<i>Level & Class Size</i>	<i>Terms Taught</i>
NUR 1134: Transition into Professional Nursing	BSN, 5-7 students	Fall 2015, 2016, Spring 2016, 2017
NUR 1121: Advanced Clinical Problem Solving	BSN, 7-8 students	Spring 2016, 2017

Clinical Skills Lab

<i>Course Number & Title</i>	<i>Level & Class Size</i>	<i>Terms Taught</i>
NUR 2031: Diagnostic Physical Exam	DNP, 5-7 students	Fall 2014, 2015, 2016, Spring 2015, 2016, 2017
NUR 0081: Foundations of Nursing Practice I	BSN, 7-8 students	Spring 2014

Guest Lectures

<i>Course, Lecture Topic and Time Commitment</i>	<i>Level & Class Size</i>	<i>Terms Taught</i>
NUR 0067: Nursing Research → Systematic Reviews and Meta-Analysis (1.5 hours)	BSN, 45-50 students	Spring 2021, 2022

NUR 2004: Advanced Pathophysiology Across the Life Span → Altered Cardiovascular Function (6 hours divided over two weeks)	DNP, ~50 students	Fall 2017, 2018, 2019, 2020, 2021, Spring 2018, 2019, 2020, 2021, 2022, Summer 2018, 2019, 2020, 2021
NUR 2078: Clinical Diagnostics → Basic 12-Lead ECG Interpretation (3 hours)	DNP, ~10 students	Summer, 2018, 2019, 2020
NUR 3789: Physical Diagnosis Anesthesia → Advanced 12-Lead ECG Interpretation (6 hours divided over two weeks)	Nurse Anesthesia, ~40 students	Fall 2020, 2021
NUR 3044: Cancer Survivorship → Systematic Reviews and Meta-Analysis (3 hours)	PhD, ~5-6 students	Fall 2019, 2021
BIOENG 2151: Medical Product Ideation → ECG Devices for EMS Providers (weekly mentoring + judging final project)	M.Eng., ~5-6 students	Fall 2015, 2016
BIOENG 2151: Medical Product Development → ECG for Telehealth Applications (weekly mentoring + judging final project)	M.Eng., ~5-6 students	Spring 2016, 2017
NUR 3030: Professional Development → Keys of Success for Junior Faculty (2 hours)	PhD, 5-6 students	Fall 2015, 2016
NUR 0082: Nursing Care of Adults → Cultural Sensitivity in Nursing Care (1 hour)	BSN, ~100 students	Fall 2015, 2016, 2017

Continuing Education

<i>Topic and Contact Hours</i>	<i>Level & Class Size</i>	<i>Terms Taught</i>
A Guide for Basic 12-Lead EKG Interpretation (9 contact hours divided over 3 weeks)	Registered Nurses, ~20 students	Summer 2014, 2015, 2016, 2018
Coronary Artery Diseases: An Up-to-Date Review (3 hours)	Registered Nurses, ~20 students	Spring, 2015

SERVICE

Professional Societies

<i>Name of Society</i>	<i>Role</i>	<i>Service Terms</i>
International Society of Computational Electrocardiology (ISCE)	Member	2010–current
	Abstract Reviewer	2017–current
	Poster Session Chair	2015–2018
	Conference Proceedings Chair	2018–current
	Board of Directors	2020–current
	Conference Co-Chair (elected)	2022
	Conference Chair (elected)	2023
American Heart Association (AHA)	Professional Member	2012–current
	Early Career Committee	2016–2019
	Abstract Reviewer	2016–current
	AHA Fellow	2017–current
	Research Mentoring Committee	2018–current
	Kathleen Dracup Award Committee	2018
	AHA Scientific Statements Taskforce	2018–2020
	Session Moderator	2019
New Investigator Award Committee	2021	
Sigma Theta Tau International (STTI)	Abstract Reviewer	2010–2016
Eastern Nursing Research Society (ENRS)	Abstract Reviewer	2016
Council for the Advancement of Nursing Science (CANS)	Session Moderator	2014
	Abstract Reviewer	2014–2016
Canadian Cardiovascular Congress	Session Moderator	2015

Editorial Boards

2020–current	Executive Editor, <i>Heart & Lung</i>
2018–current	Executive Editor, <i>Journal of Electrocardiology</i>
2010–current	Section Editor (ECG Puzzler), <i>American Journal of Critical Care</i>

Grant Reviewer

2019–current	University of Pittsburgh, CTSI Pilot Awards Program
2019–2020	NIH, Biomedical Computing & Health Informatics Study Section
2015–2018	Sigma Theta Tau International, Small Awards Program

Ad-hoc Journal Reviewer at Scientific Journals (k=13)

Journal of Electrocardiology; Circulation: Cardiovascular Quality and Outcomes; Journal of American College of Cardiology (JACC); American Journal of Critical Care; Journal of Cardiovascular Nursing; Heart & Lung; EUROPACE; Critical Care; Public Library of Science (PLoS One); Medical and Biological Engineering and Computing; Prehospital Emergency Care; Scientific Reports; Journal of the American Heart Association (JAHA)

Service at University of Pittsburgh

➤ University-Wide Committees

2016	Patent Reviewer, Office of Technology Management (OTM)
2017–	Grant Reviewer, Clinical and Translational Science Institute (CTSI)
2018–2021	Member, Senate Plant Utilization and Planning Committee (3-year term)
2019–2021	Faculty Representative, Pathways Committee, Provost Office
2021–2024	Member, Chancellor’s Distinguished Teaching Award Committee

➤ Office of Community Partnership:

2015	Health Fair Coordinator, Hosted at the Universal Academy of Pittsburgh in Swissvale PA, and co-sponsored by UPMC Health Plan and Walgreens
------	--

➤ School of Nursing Committees:

Award Reviewer:	Cameos of Caring Award (2015) Leslie Hoffman Research Award (2017) Reva Rubin Research Award (2019-2021) Roth Endowment Undergraduate Research Fund (2021)
Committee Member:	Academic Integrity Committee (2013–2015) Evaluation & Steering Committee (2014–2015) School-Wide Curriculum Committee (2015–2017) Planning & Budget Committee (2015–2017) PhD Progression & Graduation Committee (2016–2018)
Committee Chair:	Evaluation & Steering Committee (2015–2017) PhD Progression & Graduation Committee (2018–2020) BSN Honors Committee (2019–2021) Director of Interprofessional Education (2020–2021)