ALPER BOZKURT

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I. EDUCATIONAL BACKGROUND

Institution:	Degree:	Year:	Area of Study:
➢ Cornell University Ithaca, NY	Ph.D.	2010	Electrical and Computer Eng. (Advisor: Amit Lal)
➢ Drexel University Philadelphia, PA	M.Sc.	2004	Biomedical Engineering (Advisor: Banu Onaral)
➢ Bogazici University Istanbul, Turkey	B.Sc.	2001	Electrical and Electronics Engineering

II. PROFESSIONAL EXPERIENCES

- 2019 – Present: Professor with Tenure at North Carolina State University
- 2016 – 2019: Associate Professor with Tenure at North Carolina State University
- 2018: Visiting Professor and Scholar, Katholieke Universiteit Leuven and IMEC, Belgium.
- 2010 – 2016: Assistant Professor at North Carolina State University (founder and director of the Integrated Bionic MicroSystems Laboratory (iBionicS Lab)).
- 2011 – Present: Adjunct Professor at joint Biomedical Engineering Program, University of North Carolina at Chapel Hill and North Carolina State University
- 2004 – 2010: Research assistant in Cornell University SonicMEMS Group
- 2001 – 2004: Research assistant in Drexel University Biomedical Optical Imaging Group

III. HONORS & AWARDS

- 2021, IBM Faculty Award
- 2020, IEEE Sensors Conference Best Paper Nomination
- 2020, NC State University Faculty Scholar
- 2019, IEEE Sensors Conference Best Paper 3rd Place Award
- 2018, FLEX Conference Innovators of the Future Award (2nd place)
- 2018, Drexel University 40 Under 40 List
- 2016, Honorable Mention, U.S. Environmental Protection Agency Smart City Air Challenge
- 2016, IEEE Sensors Council Young Professional Award
- 2016, National Science Foundation CAREER Award.
- 2016, Best Paper Finalist, IEEE International Conference on Engineering in Medicine and Biology.
- 2016, Best Paper Finalist, IEEE Conference on Wireless Sensors and Sensor Networks
- 2015, Popular Science Magazine Brilliant 10 List.
- 2015, Best Paper Award, IEEE Body Sensor Networks Conference.
- 2015, NCSU Chancellor's Innovation Fund Award (second time).
- 2014, NCSU William F. Lane Outstanding Teaching Award.
- 2014, Best Poster Award, The Government Microcircuit Applications & Critical Technology Conference.
- 2014, Member of the Smart Emergency Response Team, one of the highlighted academia-industry teams performing under Smart America Challenge organized by the White House Presidential Innovation Fellows.
- 2013, NCSU Chancellor's Innovation Fund Award.
- 2013, Best Paper Finalist, IEEE Biomedical Wireless Technologies, Networks, and Sensing Systems.
- 2009, Best Paper Finalist, IEEE International Conference on Engineering in Medicine and Biology.
- 2009, Donald Kerr Award from Cornell University International Students and Scholars Office.
- 2008, Best Poster Award in Cornell Nanoscience Facility Annual Meeting.
- 2007, Official consultant for the Disney Movie "G-Force" produced by Jerry Bruckheimer.
- 2006, Founding Member of Cornell Electron Device Society.
- 2001, Calhoun Fellowship from Drexel University

IV. MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS

❑ Institute of Electrical and Electronics Engineers, Senior Member 2001 – present
❑ Tau-Beta-Pi, 2002-present
❑ Optical Society of America, 2002-2005
❑ IEEE Engineering in Medicine and Biology Society, 2004-present
❑ American Society of Mechanical Engineers, 2008-present
❑ Sigma Xi, 2015-present

V. PUBLICATIONS

A. Journal Articles

1. Bhushan P, Umasankar Y, Songkakul T, Hirt PA, Lev-Tov HA, Kirsner RS, Bozkurt A, Bhansali S (2021) "In-Vivo Electrochemical Monitoring of Chronic Wounds with a Smart Dressing" submitted to Biosensors and Bioelectronics, under review

2. Cleghern Z, Foster M, Mealin S, Williams E, Holder T, Bozkurt A, Roberts D (2021). A Cloud Data Collection Platform for Canine Behavioral Prediction using Objective Sensor Data. International Journal of Cloud Computing. In Press.

3. Ahmmed P, Reynolds J, Levine JF, Bozkurt A. (2021) An Accelerometer-Based Sensing System to Study the Valve-Gaping Behavior of Bivalves. IEEE Sensors Letters. 5(4):1-4.

4. Tabor J, Agcayazi T, Fleming A, Thompson B, Kapoor A, Liu M, Lee M, Huang H, Bozkurt A, Ghosh T. (2020) Textile-based Pressure Sensors for Monitoring Prosthetic-Socket Interfaces, IEEE Sensors Journal, 21(7), 9413-9422.

5. Valero-Sarmiento JM, Ahmmed P, Bozkurt A. (2020) In Vivo Evaluation of a Subcutaneously Injectable Implant with a Low-Power Photoplethysmography ASIC for Animal Monitoring. Sensors, 20(24), 7335.

6. Holder TRN, Gruen ME, Roberts DL, Somers T, Bozkurt A. (2020) A Systematic Literature Review on Animal Assisted Interventions in Cancer Care: Part I - Methodology and Efficacy, Integrative cancer therapies 19 (2020): 1534735420943278.

7. Holder TRN, Gruen ME, Roberts DL, Somers T, Bozkurt A (2020). A Systematic Literature Review of Animal-Assisted Interventions in Oncology (Part II): Theoretical Mechanisms and Frameworks. Integrative cancer therapies 19 (2020): 1534735420943269.

8. Agcayazi T, Tabor J, McKnight M, Martin I, Ghosh T, Bozkurt A.(2020) Fully-Textile Seamline Sensors for Facile Textile Integration and Tunable Multi-Modal Sensing of Pressure and Wetness, Advanced Materials Technologies, 5(8), 2000155.

9. Cole J, Bozkurt A, Lobaton E. (2020) Localization of Biobotic Insects Using Low-Cost Inertial Measurement Units. Sensors, 20:16, 4486.

10. McKnight M, Tabor J, Agcayazi T, Fleming A, Ghosh T, Huang H, Bozkurt A. (2020) Fully-textile Insole Seam-line for Multi-modal Sensor Mapping, IEEE Sensors Journal, 20:17, 10145 - 10153.

11. Yokus M, Songkakul T, Pozdin P, Bozkurt A, Daniele M. (2020) Wearable multiplexed biosensor system toward continuous monitoring of metabolites. Biosensors and Bioelectronics, 153, 112038.

12. Foster M, Brugarolas R, Walker K, Mealin S, Cleghern Z, Yuschak S, Condit J, Adin D, Russenberger J, Gruen M, Sherman B, Roberts D, Bozkurt A. (2020) Preliminary Evaluation of a Wearable Sensor System for Heart Rate Assessment in Guide Dog Puppies. IEEE Sensors Journal, IEEE Sensors Journal, 20:16, 9449-9459.

13. Reynolds J, Ahmmed P, Bozkurt A. (2019) An Injectable System for Subcutaneous Photoplethysmography, Accelerometry, and Thermometry in Animals. IEEE Transactions of Biomedical Circuits and Systems, 13:5, 825:34.

14. Starliper N, Mohammadzadeh F, Songkakul T, Hernandez M, Bozkurt A, Lobaton E. (2019) Activity-Aware Wearable System for Power-Efficient Prediction of Physiological Responses. Sensors 2019, 19(3), 441, pp. 1-20.

15. Kapoor A, McKnight M, Chatterjee K, Agcayazi T, Kausche H, Bozkurt A, Ghosh T. (2018) Toward Fully-manufacturable Fiber Assembly based Concurrent Multimodal and Multifunctional Sensors for E-textiles, ACS Applied Materials and Interfaces. Advanced Materials Technologies 4.1 (2019): 1800281.

16. Brugarolas R, Yuschak S, Kuhn J, Adin D, Roberts DL, Sherman BL, Bozkurt A. (2018) Simultaneous Monitoring of Heart Rate and Respiratory Patterns During Scent Detection Tasks, IEEE Sensors Journal. IEEE Sensors Journal 19.4 (2019): 1454-1462.

17. Agcayazi T, Kausche H, Foster M, Bozkurt A. Multi-axis Stress Sensor Characterization and Testing Platform, HardwareX, HardwareX, 5 (2019): e00048..

18. Latif T, McKnight M, Dickey MD, Bozkurt A. (2018) In vitro Electrochemical Assessment of Neurostimulation Electrodes for Roach-bots, PLoS ONE 13(10): e0203880.

19. Valero-Sarmiento JM, Reynolds J, Krystal A, Bozkurt A. (2018) In vitro evaluation of an injectable EEG/ECG sensor for wireless monitoring of hibernation in endangered animal species, IEEE Sensors Journal, 18:2, 798-808.

20. Agcayazi T, Chatterjee K, Bozkurt A, Ghosh T. (2018) Review: Flexible Interconnects for Electronic Textiles, Advanced Materials Technologies, 2365-709X.

21. Yao S., Myers A., Malhotra A., Lin F., Bozkurt A., Muth J. F., Zhu Y. (2017). A Wearable Hydration Sensor with Conformal Nanowire Electrodes. Advanced Healthcare Materials, 6:6, pp. 1601159. (cover article).

22. Pamula V. R., Valero-Sarmiento J.M., Yan L., Bozkurt A., Van Hoof C., Van Helleputte N., Yazicioglu R.F., Verhelst M. A 172 µW Compressively Sampled Photoplethysmographic (PPG) readout ASIC with Heart Rate Estimation Directly from Compressively Sampled Data. IEEE Transactions on Biomedical Circuits and Systems, 11:3, pp. 487-496.

23. Latif T, Bozkurt A. (2017). Roach Biobots: Toward Reliability and Optimization of Control. IEEE Pulse, 8(5), 27-30.

24. Dirafzoon A., Bozkurt A., Lobaton E. (2016) Geometric Learning and Topological Inference with Biobotic Networks. IEEE Transactions on Signal and Information Processing over Networks. 3:1, pp. 200 – 215.

25. Dirafzoon A., Bozkurt A., Lobaton E. A Framework for Mapping with Biobotic Insect Networks: From Local to Global Maps, Robotics and Autonomous Systems, 88, pp. 79-96.

26. Dieffenderfer J, Goodell H, Mills S, McKnight M, Yao S, Lin F, Beppler E, Bent B, Lee B, Misra V, Zhu Y, Oralkan O, Strohmaier J, Muth J, Peden D, and Bozkurt A. (2016) Low Power Wearable Systems for Continuous Monitoring of Environment and Health for Chronic Respiratory Disease, IEEE Journal of Biomedical and Health Informatics, 20:5. pp. 1251-1264.

27. Bozkurt A, Lobaton E, Sichitiu M. (2016) A Biobotic Distributed Sensor Network for Under Rubble Search and Rescue, IEEE Computer, Special Issue Emergency Response, 49:5, pp.38-46.

28. Latif T, Whitmire E, Novak T, Bozkurt A, Sound Localization Sensors for Search and Rescue Biobots, IEEE Sensors Journal, 16:10, pp. 3444-3453.

29. Brugarolas R, Latif T, Dieffenderfer J, Walker K, Sherman B, Roberts D, Bozkurt A, (2016) Wearable Heart Rate Sensor Systems for Wireless Canine Health Monitoring, IEEE Sensors Journal, 16:10, pp. 3454-3464.

30. Dirafzoon A, Cole J, Benavides D, Bozkurt A, Lobaton E. (2016) Dynamic Topological Mapping with Biobotic Swarms. (arXiv preprint arXiv:1507.03206).

31. Brugarolas R, Majikes J, Winters M, Yuschak S, Mealin S, Walker K, Yang P, Sherman B, Bozkurt A, Roberts D. (2016) Balancing Noise Sensitivity, Response Latency, and Posture Accuracy for a Computer-Assisted Canine Posture Training System. International Journal on Human Computer Studies, Special Issue on Animal Computer Interaction, 98, 179-195.

32. Misra V, Bozkurt A, Calhoun B, Jackson T, Jur J, Lach J, Bongmook L, Muth J, Oralkan O, Ozturk M, Trolier-McKinstry S. Vashaee D, Wentzloff D, Zhu Y. (2015). Flexible Technologies for Self-Powered Wearable Health and Environmental Sensing. Proceedings of the IEEE, 103(4), 665-681.

33. Bozkurt A, Roberts D, Sherman B, Brugarolas R, Mealin S, Majikes J, Yang P, Loftin R. (2014) Towards Cyber-Enhanced Working Dogs for Search and Rescue. IEEE Intelligence Systems, 26:9, pp. 32-39.

34. Uzsák A, Dieffenderfer J, Bozkurt A, Schal C. (2014) Social facilitation of insect reproduction with motor-driven tactile stimuli. Proceedings of the Royal Society B: Biological Sciences, 281(1783), 20140325.

35. McKnight M, Verderber A, Bozkurt A. (2014) Early Metamorphic Insertion Technology for Insect Flight Behavior Monitoring. Journal of Visualized Experiments, (89), e50901-e50901.

36. Tarsi GM, Gould RA, Chung JA, Xu AZ, Bozkurt A, Butcher JT. (2013). "Method for non-optical quantification of in situ local soft tissue biomechanics". Journal of Biomechanics, 46:11, pp. 1938–1942.

37. Bozkurt A, Lal A. (2011). Low-Cost Flexible Printed Circuit Technology based Microelectrode Array for Extracellular Stimulation of Invertebrate Locomotory System. Sensors and Actuators A: Physical, 169:1, 89-97.

38. Bozkurt A, Gilmour R, Lal A (2011) In vivo Electrochemical Characterization of Tissue-Electrode Interface During Metamorphic Growth. IEEE Transactions on Biomedical Engineering, 58:8, pp. 2401-6.

39. Bozkurt A, Gilmour R, Lal A (2009). Balloon Assisted Flight of Radio Controlled Insect Biobots. IEEE Transactions on Biomedical Engineering, 56:9, pp. 2304-7. (cover article)

40. Bozkurt A, Gilmour R, Sinha A, Stern D, Lal A (2009). Insect Machine Interface Based Neuro Cybernetics. IEEE Transactions on Biomedical Engineering, 56:6, pp. 1727-33.

41. Broadbelt NV, Stahl PJ, Chen J, Mizrahi M, Lal A, Bozkurt A, Poppas DP, Felsen D (2007) Early Upregulation of iNOS mRNA Expression and Increase in NO Metabolites in Pressurized Renal Epithelial Cells. American Journal of Physiology- Renal Physiology, 293:F1877-88.

42. Bozkurt A, Rosen A, Rosen H, Onaral B (2005). A Portable Near Infrared Spectroscopy System for Bedside Monitoring of Newborn Brain. Biomedical Engineering Online, 4:29. (among top 20 most accessed articles)

43. Bozkurt A; Onaral B (2004). Safety Assessment of Light Emitting Diodes for Continuous Wave Diffuse Optical Measurements. Biomedical Engineering Online, 3:9.

B. Conference Proceedings (refereed and 3-4 pages)

1. Abdelkhalek M, Qiu J, Hernandez M, Bozkurt A, Lobaton E. (2021) Privacy-preserving Cough Detection using Optimal Filtering and Convolutional Neural Networks. 43rd Annual International Conferences of the IEEE Engineering in Medicine and Biology Society (EMBC), Virtual.

2. Cole J, Bozkurt A, Lobaton E. (2021) Simultaneous Localization of Biobotic Insects using Inertial Data and Encounter Information. 43rd Annual International Conferences of the IEEE Engineering in Medicine and Biology Society (EMBC), Virtual.

3. Songkakul T, Peterson K, Daniele M, Bozkurt A. (2021) Preliminary Evaluation of an Energy-Harvesting Wristband for Continuous Multi-Modal Electrochemical Monitoring. 43rd Annual International Conferences of the IEEE Engineering in Medicine and Biology Society (EMBC), Virtual.

4. Ahmmed P, Reynolds R, Hamada S, Regmi P, Bozkurt A. (2021) Novel 3D-printed Electrodes for Implantable Biopotential Monitoring Applications. 43rd Annual International Conferences of the IEEE Engineering in Medicine and Biology Society (EMBC), Virtual.

5. Saha T, Fang J, Mukherjee S, Bozkurt A, Daniele M, Dickey M, Velev OD. (2021) A Wearable Patch for Prolonged Sweat Lactate Harvesting and Sensing. 43rd Annual International Conferences of the IEEE Engineering in Medicine and Biology Society (EMBC), Virtual.

6. Cleghern Z, Williams E, Mealin S, Foster M, Holder T, Bozkurt A, Roberts D. (2020) Behavioral and Environmental Analytics from Potential Guide Dogs with IoT Sensor Data Informed by Expert Insight, 7th ACM International Conference on Animal Computer Interaction. Milton Keynes, UK.

7. Mealin S, Foster M, Cleghern Z, Bozkurt A, Roberts D. (2020) Using Inertial Measurement Unit Data for Objective Evaluations of Potential Guide Dogs, 7th ACM International Conference on Animal Computer Interaction. Milton Keynes, UK.

8. Foster M, Wang J, Williams E, Roberts D, Bozkurt A. (2020) Inertial Measurement Based Heart and Respiration Rate Estimation of Dogs During Sleep for Welfare Monitoring, 7th ACM International Conference on Animal Computer Interaction. Milton Keynes, UK.

9. Yokus M, Agcayazi T, Traenkle M, Bozkurt A, Daniele M. (2020) Wearable Sweat Rate Sensors, IEEE SENSORS 2020, Rotterdam, The Netherlands.

10. Da Silva RL, Starliper N, Bhosale DK, Taggart M, Ranganath R, Sarje T, Daniele M, Bozkurt A, Rufty T, Lobaton E. (2020) Feasibility Study of Water Stress Detection in Plants using a High-Throughput Low-Cost System, IEEE SENSORS 2020, Rotterdam, The Netherlands.

11. Reynolds J, Taggart M, Lobaton E, Daniele M, Rufty T, Bozkurt A. (2020) An Environmental Station with BioimpedanceCapabilities for Agricultural Deployment, IEEE SENSORS 2020, Rotterdam, The Netherlands.

12. Latif T, Gonzalez L, Dieffenderfer J, Liao Y, Hernandez M, Misra V, Lobaton E, Bozkurt A. (2020) Preliminary Assessment of Human Biological Responses to Low Level Ozone. IEEE SENSORS 2020, Rotterdam, The Netherlands.

13. Williams E, Cleghern Z, Foster M, Holder T, Roberts D, Bozkurt A. (2020) A Smart Collar for Assessment of Activity Levels and Environmental Conditions for Guide Dogs. 42nd Annual International Conferences of the IEEE Engineering in Medicine and Biology Society (EMBC), Montreal, Canada.

14. Sotory P, Bozkurt A. (2019) Biomimetic Nanostructure Fabrication to Increase Light Transmission Efficiency in Optoelectronic Devices, IEEE SENSORS 2019, Montreal, Canada.

15. Songkakul T, Bhushan B, Umasankar Y, Yokus M, Daniele M, Bhansali S, Bozkurt A. (2019) Towards a Long-Term Multi-Site Electrochemical Wound Monitoring System, IEEE SENSORS 2019, Montreal, Canada.

16. Foster M, Mealin S, Gruen M, Roberts D Bozkurt A. (2019) Preliminary Evaluation of a Wearable Sensor System for Assessment of Heart Rate, Heart Rate Variability, and Activity Level in Working Dog Sensors, IEEE SENSORS 2019, Montreal, Canada.

17. Wilkins M., Lobaton E, Bozkurt A., Daniele M. (2019) Characterization of Screen-Printed Bioimpedance Electrodes on Nanocellulose Substrate, IEEE SENSORS 2019, Montreal, Canada.

18. Cleghern Z, Williams E, Mealin S, Foster M, Holder T, Bozkurt A, Roberts D (2019). An IoT and Analytics Platform for Characterizing Adolescent Dogs' Suitability for Guide Work, 6th ACM International Conference on Animal Computer Interaction. Haifa, Israel.

19. Foster M, Gruen M, Agcayazi T, Agcayazi T, Wu T, Roberts D, Bozkurt A. Preliminary Evaluation of Dog-DroneTechnological Interfaces: Challenges and Opportunities,

20. Mealin S, Cleghern Z, Foster M, Bozkurt A, Roberts D. (2019) Predicting Guide Dog Temperament Evaluation Outcomes Using Raw ECG Signals, 6th ACM International Conference on Animal Computer Interaction. Haifa, Israel.

21. Ahmmed P, Dieffenderfer J, Valero-Sarmiento JM, Pamula VR, Van Helleputte N, Van Hoof C, Verhelst M, Bozkurt A. A Wearable Wrist-Band with Compressive Sensing based Ultra-Low Power Photoplethysmography Readout Circuit, 16th IEEE-EMBS International Conference on Wearable and Implantable Body Sensor Networks (BSN'19), Chicago, IL.

22. McKnight M, White R, Agcayazi T, Tabor J, Ghosh T, Bozkurt A. (2018) A Wetness Detection Technique Towards Scalable, Array-Based, Fully-Textile Sensing, IEEE BioCAS 2018, Cleveland, OH.

23. Foster M, Erb P, Russenberger J, Plank B, West H, Gruen M, Daniele M, Roberts D, Bozkurt A. (2018) 3D Printed Electrocardiogram Electrodes for Heart Rate Detection in Canines, IEEE BioCAS 2018, Cleveland, OH.

24. Reynolds J, Ahmmed P, Bozkurt A. (2018) Preliminary Evaluation of an Injectable Sensor for Subcutaneous Photoplethysmography in Animals, IEEE BioCAS 2018, Cleveland, OH.

25. Cleghern Z, Foster M, Mealin S, Beppler E, Russenberger J, Gruen M, Bozkurt A, Roberts D. (2018) Toward Improving Guide Dog Training Through the Application of IoT and Data Analytics, ICA CON 2018, Tokyo Japan.

26. Foster M, Beppler E, Holder T, Dieffenderfer J, Erb P, Everette K, Gruen M, Somers T, Evans T, Daniele M, Roberts D, Bozkurt A. (2018) A System for Assessment of Canine-Human Interaction during Animal-Assisted Therapies. IEEE EMBC 2018, Honolulu, HI.

27. Beppler E, Dieffenderfer J, Hood C, Bozkurt A. (2018) Accelerometer based Active Snore Detection for Behavioral Modification. IEEE EMBC 2018, Honolulu, HI.

28. Beppler E, Dieffenderfer J, Songkakul T, Krystal A, Bozkurt A. (2018) An ultra-miniaturized near infrared spectroscopy system to assess sleep apnea in children with Down Syndrome. IEEE EMBC 2018, Honolulu, HI.

29. Reynolds J, Valero-Sarmiento JM, Dieffenderfer J, Bozkurt A. (2017) The Viability of Conductive Medical Epoxy As an Implantable Electrode Material, IEEE SENSORS 2017, Glasgow, UK.

30. Pozdin V, Dieffenderfer J, Williams E, Sotory P, Yokus M, Bozkurt A, Daniele M. (2017) Modular Design for Epidermal Temperature Sensing, IEEE SENSORS 2017, Glasgow, UK.

31. Pozdin V, Yokus M, Sotory P, Bozkurt A, Daniele M. (2017) Low-Cost Flexible Inorganic Optical Devices for Epidermal Sensing, IEEE SENSORS 2017, Glasgow, UK.

32. Yokus M, Hass C, Agcayazi T, Bozkurt A, Daniele M. (2017) Towards a Wearable Perspiration Sensor, IEEE SENSORS 2017, Glasgow, UK.

33. Agcayazi T, McKnight M, Sotory P, Huang H, Ghosh T, Bozkurt A. (2017) A Scalable Shear and Normal Force Sensor for Prosthetic Sensing, IEEE SENSORS 2017, Glasgow, UK.

34. Xiong H, Agcayazi T, Latif T, Bozkurt A, Sichitiu M. (2017) Towards Acoustic Localization for Biobotic Sensor Networks, IEEE SENSORS 2017, Glasgow, UK.

35. Agcayazi T, Yokus M, Gordon M, Ghosh T, Bozkurt A. (2017) A Stitched Textile-Based Capacitive Respiration Sensor, IEEE SENSORS 2017, Glasgow, UK.

36. Cole J, Agcayazi T, Latif T, Bozkurt A, Lobaton E. (2017) Speed Estimation Based on Gait Analysis for Biobotic Agents, IEEE SENSORS 2017, Glasgow, UK.

37. Sherman BL, Joyner J, Yuschak, S, Walker K, Kuhn J, Majikes J, Ru H, Mealin S, Brugarolas R, Roberts D, Bozkurt A. (2017) Responses of anxious dogs to a simple behavior modification protocol while waiting in a veterinary hospital. Proceedings of the 11th International Veterinary Behaviour Meeting, Samorin, Slovakia, pp. 26-27.

38. Mealin S, Foster M, Walker K, Yushak S, Sherman B, Bozkurt A, Roberts DL. (2017), Creating an Evaluation System for Future Guide Dogs: A Case Study of Designing for Both Human and Canine Needs, ACI2017: Fourth International Conference on Animal-Computer Interaction, Milton Keynes, UK.

39. Majikes JJ, Yuschak S, Walker K, Brugarolas R, Mealin S, Foster M, Bozkurt A, Sherman B, Roberts DL. (2017), Stimulus Control for Semi-autonomous Computer Canine-Training, Conference on Biomimetic and Biohybrid Systems (published by Springer, Cham.), Palo Alto, CA, pp. 279-290.

40. Dieffenderfer J, Krystal A, Bozkurt A. (2017) Shedding Light to Sleep Studies, SPIE Biosensing and Nanomedicine X (Vol. 10352, p. 103520M), Conference for International Society for Optics and Photonics, San Diego, CA.

41. Cole J., Mohammadzadeh F., Bollinger C., Agcayazi T., Xiong H., Sichitiu., Bozkurt A., Lobaton E. (2017) "A Study on Motion Mode Identification for Cyborg Roaches", Submitted to 8th ACM/IEEE International Conference on Cyber-Physical Systems (ICCPS 2017), Pittsburg, PA.

42. Cole J., Mohammadzadeh F., Bollinger C., Latif T., Bozkurt A., Lobaton E. (2017) "A Study on Motion Mode Identification for Cyborg Roaches", Accepted to IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2017), New Orleans, LA.

43. Dirafzoon A., Latif T., Gong F., Sichitiu M., Bozkurt A., Lobaton E. (2017) "Biobotic Motion and Behavior Analysis in Response to Directional Neurostimulation" Accepted to IEEE International Conference on Acoustics, Speech and Signal Processing. (ICASSP 2017), New Orleans, LA.

44. Majikes J., Mealin A., Brugarolas R., Walker K., Yuschak S., Sherman B., Bozkurt A., Roberts D. (2016) Smart Connected Canines: IoT Design Considerations for the Lab, Home, and Mission-critical Environments, Proceedings of the 37th IEEE Sarnoff Symposium, Princeton, NJ.

45. Dieffenderfer J., Wilkins M., Hood C. , Daniele M.A., Bozkurt A. (2016) "Towards a Sweat-based Wireless and Wearable Electrochemical Sensor", IEEE SENSORS 2016, Orlando, FL.

46. Agcayazi T., McKnight M., Bozkurt A., Ghosh T., Bozkurt A. (2016) "A Finger Touch Force Detection Method for Textile Based Capacitive Tactile Sensor Arrays", IEEE SENSORS 2016, Orlando, FL.

47. Kapoor A., McKnight M., Chatterjee K., Agcayazi T., Kausche H., Ghosh T., Bozkurt A. (2016), "Soft, flexible 3D printed fibers for capacitive tactile sensing", IEEE SENSORS 2016, Orlando, FL.

48. Keller K., Wilkins M., Tunc-Ozdemir M., Reynolds J., Dieffenderfer J., Hood C., Daniele M., Bozkurt A. (2016) "Nanocellulose Electrodes for Interfacing Plant Electrochemistry", IEEE SENSORS 2016, Orlando, FL.

49. Tanneeru A, Mills S, Lim M, Mahmud MM, Dieffenderfer J, Bozkurt A, Nagle T, Lee B, Misra V. (2016) Room temperature sensing of VOCs by atomic layer deposition of metal oxide. IEEE SENSORS 2016, Orlando, FL.

50. McKnight M., Agcayazi T., Kausche H., Ghosh T., Bozkurt A. (2016) "Sensing Textile Seam-Line for Wearable Multimodal Physiological Monitoring", 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society**,** Orlando**,** FL. (Best Paper Finalist)

51. Brugarolas R, Valero-Sarmiento J.M., Bozkurt A., Essick G. (2016) "Auto-Adjusting Mandibular Repositioning Device for In-Home Use", 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Orlando, FL.

52. Latif T., Yang M., Lobaton E., Bozkurt A. (2016) "Preliminary Statistical Assessment towards Characterization of Biobotic Control", 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Orlando, FL.

53. Latif T., Gong F., Dickey M., Sichitiu M., Bozkurt A. (2016) "Using Liquid Metal Alloy (EGaIn) to Electrochemically Enhance Stainless Steel Stimulation Electrodes for Biobotic Applications", 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Orlando, FL.

54. Brugarolas R., Agcayazi T., Yuschak S., Roberts D., Sherman B., Bozkurt A. (2016) "Towards a wearable system for continuous monitoring of sniffing and panting in dogs", IEEE Body Sensor Networks Conference, San Francisco, CA.

55. Pamula RV, Valero-Sarmiento JM, Yan L, Bozkurt A, Van Hoof C, Van Helleputte N, Yazicioglu RF, Verhelst M. (2016) 22.4 A 172uW compressive sampling photoplethysmographic readout with embedded direct heart-rate and variability extraction from compressively sampled data. In IEEE International Solid-State Circuits Conference (ISSCC) 2016.pp. 386-387.*Lin F, Yao S, McKnight M, Zhu Y, Bozkurt A. (2016) Silver Nanowire Based Wearable Sensors for Multimodal Sensing. IEEE Conference on Biomedical Wireless Technologies, Networks, and Sensing Systems (BioWireleSS).

56. Mealin S, Winters M, Brugarolas R, Sherman B, Bozkurt A, Roberts D. (2015) Towards the Non-Visual Monitoring of Canine Physiology in Real-Time by Blind Handlers. Second International Congress on Animal-Computer Interaction, 2015.

57. Winters M, Brugarolas R, Majikes J, Sherman B, Bozkurt A, Roberts D. (2015) Knowledge Engineering for Unsupervised Canine Posture Detection Using IMUs. Submitted to the Second International Congress on Animal-Computer Interaction, 2015.

58. Xiong H, Latif T, Lobaton E, Bozkurt A, Sichitiu M. (2016) Characterization of RSS Variability for Biobot Localization Using 802.15.4 Radios. IEEE Conference on Wireless Sensors and Sensor Networks (WiSNet). (Best paper finalist)

59. Latif T, Bozkurt A. (2015) A Wireless System for Longitudinal Assessment of Tissue-Electrode Interface in Biobots. IEEE Biomedical Circuits and Systems Conference. pp. 1-4.

60. McKnight M, Lin F, Kausche H, Ghosh T, Bozkurt A. (2015) Towards Paper Based Diaper Sensors. Submitted to IEEE Biomedical Circuits and Systems Conference.

61. Dirafzoon A, Bozkurt A, Lobaton E. (2015) Exploration and topological mapping with hexbugs. In Proceedings of the 14th International Conference on Information Processing in Sensor Networks (IPSN'15). ACM, New York, NY, USA, pp. 406–407.

62. Dieffenderfer J, Goodell H, Bent B, Beppler E, Jayakumar R, Yokus Y, Jur J, Peden D, Bozkurt A. (2015) Wearable Wireless Sensors for Chronic Respiratory Disease Monitoring, IEEE Body Sensor Networks Conference, Cambridge, MA. (Best Paper Award).

63. Brugarolas R, Dieffenderfer J, Sherman B, Roberts D, Bozkurt A. (2014) Wearable Wireless Biophotonic and Biopotential Sensors for Canine Health Monitoring. IEEE Sensors Conference 2014, Valencia, Spain.

64. Whitmire E, Latif T, Bozkurt A. (2014) Acoustic Sensor Array for Biobotic Search and Rescue. IEEE Sensors Conference 2014, Valencia, Spain.

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VI. RESEARCH SUPPORT AND ACTIVITY

- 10 active projects with 10 completed projects (Total funding of $11M with AB's share of $6.1M since 2010)
- Funding sources: NSF, NIH, DARPA, USDA, ORNL, IBM, Medline, Inc, Profusa, Inc. NIRSense, Inc.
- Currently mentoring 8 PhD students, 2 postdocs,1 research assistant professor