April 2022
Shalini Prasad
Department of Bioengineering,
University of Texas, Dallas

**Narrative:** I am currently Cecil H. and Ida A. Green Professor in Systems Biology and the Department Head of Bioengineering at UT Dallas. I am also a Fellow of the American Institute of Medical and Biological Engineers and Fellow of Society of Laboratory Automation and Screening. I am also the 2021-22 Drexel ELATES Fellow; this is an executive leadership program for women in academia.

I received my Bachelor's in Engineering (B.E.) degree from the University of Madras in India, in Electronics and Communication Engineering in 2000. I graduated, first class with distinction, and was awarded a gold medal. I obtained my Ph.D. degree in Electrical Engineering in 2004 from the University of California, Riverside. My PhD research focus was in Bio-micro electromechanical systems (Bio-MEMS) and neural microelectrode array interfaces. My multidisciplinary PhD dissertation: "Development, application and characterization of a single cell-based sensor", won me the UCR graduate student research award in 2004. I started my academic research career as a tenure-track assistant professor at Portland State University in December 2004. Subsequently, I have held faculty positions at the ranks of assistant and associate professor at Arizona State University and Wichita State University prior to joining UT Dallas in 2011 as an associate professor, where I was promoted to full professor in 2015.

My primary, scholarly agenda is to develop a research program in "on-demand" and intelligent bio sensing systems through integrating principles of basic and applied sciences an engineering. Notably, my lab has developed the first and only passive sweat wearable in conjunction with a startup I co-founded EnLiSense LLC that has demonstrated the ability to monitor flares in Inflammatory Bowel Disease Patients and for tracking wellness/illness sates through host response monitoring. This work was featured as a breakthrough technology in the American Chemical Society Spring 2021 conference. My lab has also created novel sensors including a first-of-its kind sensor for real-time measurement of carbon dioxide and relative humidity that has utility in "Internet of Things" applications such as automobile and smart-phone manufacturing and monitoring of building's energy efficiency and a sensor that uses saliva to report within one minute a subject's level of THC, the psychoactive component in marijuana. This was also featured in the American Chemical Society Spring 2020 meeting through a press release.

In my research career to date, I have been successful in obtaining 55 external grants/contracts with 40 of them as PI. My research is both collaborative as well as multi-disciplinary as evidenced by 15 grants/contracts as Co-PI. In my research career, I have been successful in obtaining over 28 million in external research grants and contracts. I have published over 220 peer reviewed publications, with graduate and undergraduate student advisees, I have 235 peer refereed conference publications/abstracts, with graduate and undergraduate student advisees. I have co-authored 17 book chapters in edited volumes, with graduate and undergraduate student advisees. I have given over 75 invited talks/presentations/colloquia and 175 refereed talks/presentations at professional meetings. I have 4 issued patents, 9 pending patents. I have graduated 13 PhD students and 38 M.S. students as primary supervising professor. My graduate and undergraduate advisees have given over 200 presentations at scientific conferences and have won 113 awards and international and national scientific conferences. I was awarded the ASM-IIM lectureship in 2012. In 2021 I received the Albert Nelson Marquis Lifetime achievement award for my contribution to higher education and health care engineering.

**Service to Bioengineering Profession:** UT Dallas Department of Bioengineering is the largest department in the state of Texas and third largest in the country. As one of the founding faculty of the department and Associate Department Head from 2013-2018 and as Department Head from 2018 onwards, I worked toward enhancing the interactions between UTD and UTSW through the joint program. I have had the opportunity to contribute to shaping the graduate and undergraduate program from its nascent state. The undergraduate program has over 600 students

and the graduate program has around 190 students of which, ~ 115 students are pursuing their PhD. I have strategized faculty groups, and we have worked at developing several initiatives to provide the students a fulfilling graduate experience from recruitment to graduation. Some of the key features are (i) fully funded PhD students (ii) PhD graduation rate at 5 years (iii) multiple national and international graduate fellowships (iv) enabling students to present their work at scientific conferences and (v) networking opportunities towards achieving 100% placement for our PhD graduates. I like to believe my role has been to help create an environment conducive for fostering new ideas and rapidly implementing them. I consider our graduate program a "living laboratory" where new ideas are quickly translated into actions, with the ability to adjust our course in "real–time." I also enabled the establishment of the Biomedical Engineering Society Student chapter which serves all undergraduates and currently supports professional development activities all the students.

**Service to BMES:** In the year 2022, I am the BMES Annual Meeting co-chair Global Health Technologies Track. From 2018, I have been an active member on the BMES council of chairs. I am serving on the BMES International Affairs Sub-committee, whose charge is to identify opportunities to expand the BMES membership and presence internationally. Finally, from 2014, I have been involved with the inception and support of BMES student chapter at UT Dallas which serves the largest bioengineering undergraduate program in the state of Texas

**Contributions to Diversity:** Under my leadership the department of Bioengineering is the most gender equal program within the School of Engineering. At the master's program level the female:male ratio is 2:1. The departments tarted the first black student association for graduate students. Over the period 2010-2019 according ASEE, UT Dallas Bioengineering ranked #1 in the % female Degrees Awarded for MS students in Bioengineering with 63.33% of the degrees being awarded to women. My contribution to this ranking has been the yearly grass roots efforts in identifying peer mentors and providing support infrastructure.

**Education History:**

Bachelors in Engineering, 2000, University of Madras, Electronics and Communication Engineering
Ph.D., 2004, University of California, Riverside, Electrical Engineering
PhD Dissertation Title: *Development, Application and Characterization of a Single Cell Based Sensor*
Dissertation Adviser: Dr. Mihrimah Ozkan

**Employment History- principal positions since the Bachelor's degree:**

Professor (with tenure), 2016 - present
Department of Bioengineering, Erik Jonsson School of Engineering and Computer Science
Cecil and Ida Green Professor of Systems Biology
The University of Texas, Dallas, Richardson, TX

Associate Professor (with tenure), 2011- 2016
Department of Bioengineering, Erik Jonsson School of Engineering and Computer Science
Cecil and Ida Green Professor of Systems Biology
The University of Texas, Dallas, Richardson, TX

Associate Professor (tenure-track), 2010-2011
Department of Electrical Engineering and Computer Science (EECS)
Bomhoff Distinguished Professor in Bioengineering
Wichita State University, Wichita, KS

Assistant Professor (research track), 2008-2010
Center for Solid State Electronics Research
Department of Electrical Engineering

Arizona State University, Tempe, AZ

Assistant Professor (tenure-track), 2005-2008
Department of Electrical and Computer Engineering
Portland State University, Portland, OR

Graduate Research Assistant, 2001-2004
Department of Electrical Engineering
University of California, Riverside, CA

Graduate Teaching Assistant, 2001-2003
Department of Electrical Engineering
University of California, Riverside, CA

**Employment History – concurrent temporary or visiting appointments, consultantships:**

Affiliate Professor, 2017- Present
Department of Electrical and Computer Engineering
The University of Texas, Dallas, Richardson, TX

Affiliate Professor, 2016- Present
Department of Physics
The University of Texas, Dallas, Richardson, TX

Adjunct Associate Professor, 2015- Present
Department of Surgery
The University of Texas, Southwestern Medical Center, Dallas, TX

Affiliate Associate Professor, 2012- Present
Department of Materials Science and Engineering
The University of Texas, Dallas, Richardson, TX

Adjunct Faculty, 2010-2011
Department of Electrical Engineering
Arizona State University, Tempe, AZ

Adjunct Associate Professor, 2009-2011
Department of Physics
Portland State University, Portland, OR

Adjunct Assistant Professor, 2008-2010
Department of Electrical and Computer Engineering
Portland State University, Portland, OR

Adjunct Assistant Professor, 2005-2008
Department of Biomedical Engineering
Oregon Health and Sciences University, Portland, OR

***Professional recognitions and honors (study, teaching, research, service)***
1.2021-2022 President's Teaching Excellence Award in Graduate/Professional Instruction
2. 2022 Fellow, American Institute of Medical and Biological Engineers
3. 2021-2022 Drexel ELATES (Executive Leadership in Academic Technology Engineering and Science) Fellow

4. 2021- Albert Nelson Lifetime Achievement Award, Marquis Who's Who
5. 2020-2021: Jonsson School of Engineering and Computer Science Research Award at the rank of Full Professor
6. 2020 vice chair- European Research Commission, Starting Grants, Products and processes engineering panel
7. Excellence in Research, 2019, Department of Bioengineering, The University of Texas, Dallas
8. Excellence in graduate student mentoring, 2019, Department of Bioengineering, The University of Texas, Dallas
9. 2019- Nominee Provost Award for Excellence in Graduate Research Mentoring
10. 2019- President's Teaching Excellence Award Nominee - Graduate/Professional
11. 2019- Member of the European Research Council, Evaluation Panel (PE-08)
12. Excellence in Research, 2018, Department of Bioengineering, The University of Texas, Dallas
13. Excellence in Teaching, 2018, Department of Bioengineering, The University of Texas, Dallas
14. Nature Scientific Reports, Top 100 article featured in the chemistry collection of 2017 (number 9) https://www.nature.com/collections/mkpfrssyks/content/1-25
15. 2018- Member of the European Research Council, Evaluation Panel (PE-08)
16. 2018- Member of Editorial Board, Nature Scientific Reports
17. 2018- Nominee Provost Award for Excellence in Graduate Research Mentoring
18. 2018- President's Teaching Excellence Award Nominee - Graduate/Professional
19. 2017- Fellow Member, Society for Lab Automation and Screening
20. Department Service Award, 2015, Department of Bioengineering, The University of Texas, Dallas
21. Excellence in Research, 2014, Department of Bioengineering, The University of Texas, Dallas
22. Excellence in Teaching, 2014, Department of Bioengineering, The University of Texas, Dallas
23. American Society of Metals-Indian Institute of Metals, 2012, Visiting Lectureship
24. "Celebrate Aging Research at Wichita State University" poster competition, 2010, Faculty Division, 1st, place, WSU Regional Institute on Aging
25. Marquis Who's Who in American Women, 2008-2009, 2013-2015
26. Marquis Who's Who in the World, 2007-2009, 2014-2015
27. Marquis Who's Who in Science and Engineering, 2006-2007
28. Gordon Research Conference- Chemical Sensors and Interfacial Design, 2007, poster award, The Impact of Interfacial Design on Novel Sensor Systems Newport, RI
29. Society for Laboratory Automation, 2007, Lab Automation Innovation Award Finalist.
30. Graduate Research Award, CA, 2004, University of California Riverside
31. Whitaker Award for Poster Presentation, 2003, BioMEMS and Nanotechnology World Conference, Washington D.C.
32. Dean's Fellowship, 2001, University of California, Riverside

***Professional society memberships:***

Fellow Member, American Institute of Medical and Biological Engineers 2022- Present
Member, Sigma Xi, The Scientific Research Honor Society, 2021-Present
Fellow Member, Society of Laboratory Automation and Screening, 2017-present
Member, Biomedical Engineering Society (BMES), 2011- present
Member, Institute of Electrical and Electronics Engineers (IEEE), 2001-2011, 2016-present
Member, Materials Research Society (MRS), 2003-present
Member, The American Association for the Advancement of Science (AAAS), 2007- 2011, 2016-present
Member, American Chemical Society (ACS), 2004-2010, 2016-present
Member, Society of Laboratory Automation and Screening (SLAS), 2011- 2016
Member, American Physical Society, 2015-present
Member, American Society of Materials International- Materials Information Society (ASM), 2011-present
Member, AES Electrophoresis Society (AES), 2014- present

***Achievements in original investigations:***

*Selected articles in refereed journals (selected)*

1. Badrinath Jagannath, Madhavi Pali, Kai-Chun Lin, Devangsingh Sankhala, Pejman Naraghi, Sriram Muthukumar, Shalini Prasad, Novel Approach to Track the Lifecycle of Inflammation from Chemokine Expression to Inflammatory Proteins in Sweat Using Electrochemical Biosensor, Advanced Materials Technologies, 2101356 (2022) [I.F. 7.848]
2. Ivneet Banga, Anirban Paul, Kade France, Ben Micklich, Bret Cardwell, Craig Micklich, and S Prasad, E. Co. Tech-electrochemical handheld breathalyzer COVID sensing technology, *Scientific reports* 12 (1), 1-11 (2022) [I. F. 4.379]
3. Ashlesha Bhide, Madhavi Pali, Sriram Muthukumar, and Shalini Prasad, EBC-SURE (exhaled breath condensate- scanning using rapid electro analytics): A non-faradaic and non-invasive electrochemical assay to screen for pro-inflammatory biomarkers in human breath condensate, *Biosensors and Bioelectronics*, (2022) [I.F. 10.61] https://doi.org/10.1016/j.bios.2022.114117
4. Devangsingh Sankhala, Abha Umesh Sardesai, Madhavi Pali, Kai-Chun Lin, Badrinath Jagannath, Sriram Muthukumar, and Shalini Prasad, Machine learning-based on-demand sweat glucose reporting platform, *Nature Scientific Reports*, 12 (1), 1-11 (2022) [I.F. 4.379]
5. Aashay Kothari, Badrinath Jagannath, Sriram Muthukumar, and Shalini Prasad, An observational study for detection and quantification of interferon-γ in sweat toward inflammation monitoring, *Biosensors and Bioelectronics: X*, 100122, (2022) [I.F.10.61]
6. Sayali Upasham, Paul Rice, Madhavi Pali, and Shalini Prasad, FLOCK-flare clock: Passive sweat-based eczematous flare detection system, *Biosensors and Bioelectronics: X*, 100120 (2022).
7.Badrinath Jagannath, Madhavi Pali, Kai-Chun Lin, Devang Sankhala, Abha Sardesai, Sriram Muthukumar and Shalini Prasad, Real-time continuous reporting of IBD Biomarkers in Sweat, *Gastroenterology* 162(3): S21, DOI: 10.1053/j.gastro.2021.12.047 (2022) [I.F. 22.68]
8. Durgasha Poudyal, Vikram Narayanan Dhamu, Manish Samson, Sriram Muthukumar and Shalini Prasad, Portable Pesticide Electrochem-sensor: A Label Free Detection of Glyphosate in Human Urine, *ACS Langmuir*, DOI: 10.1021/acs.langmuir.1c02877, (2022) [IF. 3.882]
9. Vikram Narayanan Dhamu, Durgasha C. Poudyal, Chaitra Milan Telang, Anirban Paul, Sriram Muthukumar, and Shalini Prasad Electrochemically mediated multi-modal detection strategy-driven sensor platform to detect and quantify pesticides, *Electrochemical Science Advances*, https://doi.org/10.1002/elsa.202100128 (2021) [I.F. N/A]
0. Antra Ganguly, Tahmineh Ebrahimzadeh, Philippe E Zimmern, Nicole J De Nisco, and Shalini Prasad, Label-Free, Novel Electrofluidic Capacitor Biosensor for Prostaglandin E2 Detection toward Early and Rapid Urinary Tract Infection Diagnosis, *ACS Sensors*, DOI: 10.1021/acssensors.1c01951 (2021) [I.F. 7.771]
11. Vikram Dhamu, Suhashine Sukumar, Crisvin Sajee Kadambathil, Sriram Muthukumar and Shalini Prasad, Targeted On-Demand Screening of Pesticide Panel in Soil Runoff *Frontiers in Chemistry*, 9, DOI: 10.3389/fchem.2021.782252 (2021) [I.F. 5.221]
12. Ivneet Banga, Anirban Paul, Abha U Sardesai, Sriram Muthukumar, and Shalini Prasad, ZeNose/GO Hybrid Composite for Detection of Clinically Relevant VOCs in Lower Respiratory Tract (Case Study Using Carene), *Materials Letters*, 130975 [I.F. 3.019]
13. Antra Ganguly, Tamineh Ebrahimzadeh, Philippe E Zimmern, Nicole J De Nisco, and Shalini Prasad, Label Free, Lateral Flow Prostaglandin E2 Electrochemical Immunosensor for Urinary Tract Infection Diagnosis, *Chemosensors* 9 (9), 271 [I.F. 3.398]
14. Abha Umesh Sardesai, Ambalika Sanjeev Tanak, Subramaniam Krishnan, Deborah A. Striegel, Kevin L. Schully, Danielle V. Clark, Sriram Muthukumar & Shalini Prasad, 15. An approach to rapidly assess sepsis through multi-biomarker host response using machine learning algorithm, *Scientific Reports* 11, Article number: 16905 (2021) [I.F: 4.379]
15. Sayali Upasham, Shalini Prasad, Tuning SLOCK toward Chronic Disease Diagnostics and Management: Label-free Sweat Interleukin-31 Detection, *ACS Omega* https://doi.org/10.1021/acsomega.1c02414 (2021) [I.F.3.512] Supplementary Cover Image

16. Madhavi Pali, Badrinath Jagannath, Kai-Chun Lin, S Upasham, Devang Sankhala, Sriram Muthukumar, and Shalini Prasad, CATCH (Cortisol Apta WATCH):'Bio-mimic alarm to track Anxiety, Stress, Immunity in human eccrine sweat, *Electrochimica Acta,*(invited) 390, 138834 (2021)[ I.F: 6.216]
17. Madhavi Pali, Badrinath Jagannath, Kai-Chun Lin, Devangsingh Sankhala, Sayali Upasham, Sriram Muthukumar, and Shalini Prasad, Tracking metabolic responses based on macronutrient consumption: A comprehensive study to continuously monitor and quantify dual markers (cortisol and glucose) in human sweat using WATCH sensor, *Bioengineering and Translational Medicine*, 18 July 2021 https://doi.org/10.1002/btm2.10241(2021) [ I.F.6.091]
18. Ivneet Banga, Anirban Paul, Abha Umesh Sardesai, Sriram Muthukumar and Shalini Prasad, Z.E.U.S (ZIF-based Electrochemical Ultrasensitive Screening) device for Isopentane Analytics with Focus on Lung Cancer Diagnosis, *RSC Advances*, 11, 20519 – 20528 (2021) [I.F.3.070]

19. Antra Ganguly, Kai-Chun Lin, Sriram Muthukumar, Vinay Nagaraj, and Shalini Prasad, Label-free protein glycosylation analysis using NanoMonitor – an ultrasensitive electrochemical biosensor, *Current Protocols*, (Invited) 1, e150, doi/10.1002/cpz1.150 (2021) [I.F.3.36]
20. Vikram Dhamu, Durgasha Poudyal, Sriram Muthukumar and Shalini Prasad, A Highly Sensitive Electrochemical Sensor System to Detect and Distinguish Between Glyphosate and Glufosinate, J*ournal of The Electrochemical Society*, DOI: 10.1149/1945-7111/ac00f7 (2021) [IF:3.721]
21. Ashlesha Bhide, Kai-Chun Lin, Sriram Muthukumar and Shalini Prasad, On-demand lactate monitoring towards assessing physiological responses in sedentary populations
*The Analyst* DOI: 10.1039/D1AN00455G (2021) [IF: 3.978] (Supplementary Cover)
22. Nathan Churcher, Sayali Upasham, Paul Rice, Cornelia Greyling, and Shalini Prasad, Sweat Based-Multiplexed Detection of NPY-Cortisol for Disease Diagnostics and Stress Management, *Electroanalysis* (Invited) DOI: 10.1002/elan.202100083 92021) [IF: 5.75]
23. Devangsingh Sankhala, Madhavi Pali, Kai-Chun Lin, Badrinath Jagannath, Sriram Muthukumar and Shalini Prasad, Analysis of bio-electro-chemical signals from passive sweat-based wearable electro-impedance spectroscopy (EIS) towards assessing blood glucose modulations, ArXiv (2021) [IF: N/A]
24. Ivneet Banga, Anirban Paul, Sriram Muthukumar, and Shalini Prasad, ZENose (ZIF-Based Electrochemical Nose) Platform for Noninvasive Ammonia Detection, *ACS Applied Materials & Interfaces* 13(14), DOI: 10.1021/acsami.1c02283 (2021) [IF:8.758]
25. Badrinath Jagannath, Kai-Chun Lin, Madhavi Pali, Devangsingh Sankhala, Sriram Muthukumar, and Shalini Prasad, Temporal profiling of cytokines in passively expressed sweat for detection of infection using wearable device, *Bioengineering and translational medicine*https://doi.org/10.1002/btm2.10220 (2021) [IF: 6.091]
26. Sayali Upasham, Nathan Churcher, Paul Rice, and Shalini Prasad, Sweating Out the Circadian Rhythm: A Technical Review, *ACS Sensors* 6(3) DOI: 10.1021/acssensors.0c02622 (2021) [IF: 7.37]
27. Badrinath Jagannath, Sriram Muthukumar and Shalini Prasad, Wearable sweat sensing device for detection of IBD biomarkers *Gastroenterology* 160(3):S16 DOI: 10.1053/j.gastro.2021.01.067 (2021) [IF: 20.877]
28. Vikramnarayanan Dhamu, Exploring the Role of Room Temperature Ionic Liquid as a Transducer in Electrochemical Soil Probing, *Journal of The Electrochemical Society*, DOI: 10.1149/1945-7111/abe8e9 (2021) [IF: 3.7]
29. Sayali Upasham, Olivia Osborne and Shalini Prasad, Demonstration of sweat-based circadian diagnostic capability of SLOCK using electrochemical detection modalities, *RSC Advances* 11(13):7750-7765, DOI: 10.1039/D0RA10561A (2021) [IF: 3.070]

***International/U.S. Patents provisional applications:***
1. United States Patent Application (16/124164) Wearable Biosensors with Room Temperature Ionic Liquid Buffer, S Muthukumar, S Prasad
2. United States Patent Application (16/343,747), Multi-configurable sensing array and methods of using same, S Muthukumar, S Prasad

3. United States Patent Application (PCT/US2015/019899), Metal-ion electrochemical biosensor and use thereof Mathew Mathew, Shalini Prasad, Markus A. Wimmer; Nadim J. Hallab; Joshua, Jacobs.
4. United States Patent Application (14/946,899) Biosensing system and methods using electron ionic mechanisms at fluid-sensor interfaces Shalini Prasad, Sriram Muthukumar, Anjan Panneer Selvam
5. United States Patent Application (14/640,408), 2015, Tri-Electrode Apparatus and Methods for Molecular Analysis, Shalini Prasad and Anjan Panneer Selvam
6. United States Patent Application (14/448,730), 2015, Planar conformal circuits for diagnostics, Shalini Prasad and Anjan Panneer Selvam
7. United States Patent Application (PCT/US11/57925), 2014, Morphology and Protein Specific Reagents as Diagnostics for Neurodegenerative diseases, Michael Sierks, Srinath Kasthurirangan, Shariareh Emadi and Shalini Prasad
8. United States Patent Application (11/827469), 2009, IrOx nanowire protein sensor,
Fengyan Zhang, Ravikiran Reddy, Bruce Ulrich, Shalini Prasad, Sheng Teng Hsu.
9. United States Patent Application (11/891650), 2008, Cylindrical waveguide biosensors, Shalini Prasad and Ravikiran Reddy
10. United States Patent Application (11/331161), 2006, Biosensors having single reactant components immobilized over single electrodes and methods of making and using thereof, Mihrimah Ozkan, Cengiz S. Ozkan, Mo Yang, Xuan Zhang, and Shalini Prasad.

***Research Funding:***
In my research career to date, I have been successful in obtaining 55 external grants/contracts with 40 of them as PI. My research is both collaborative as well as multi-disciplinary as evidenced by 15 grants/contracts as Co-PI. In my research career, I have been successful in obtaining over ***28 million*** in external research grants and contracts. I have received funding from ONR, NSF, NMRC, ARL, NIH, Crohn's and Colitis Foundation, Henry Jackson Foundation of Military Medicine, and several private companies.

***Coursework:***
4 Bioengineering core undergraduate lab courses (Biomedical Circuits Lab, Engineering Physiology Lab, Biomedical Components and Devices Lab, Senior Design) with a Likert score of >4.5/5 for instructor since 2011
2 Bioengineering core graduate courses (Biomedical Micro devices, Nanotechnology and Sensors) Likert Score of >4.69 for instructor since 2011.
I have received 2 best teacher awards in the department in 2014 and 2018.

***Invited Presentations (selected):***
1. Recent Trends in Breath Analysis Techniques, for Healthcare Applications,
Organized by VIT Vellore, Tamil Nadu India, in collaboration with University of Texas at Dallas
Sponsored by Scheme for Promotion of Academic and Research Collaboration, (SPARC) Jan 21 and Jan 22, 2022
2. Shalini Prasad, Wearable Electrochemical Device for Continuous Monitoring of Inflammatory Biomarkers in Passive Eccrine Sweat, Crohn's and Colitis Foundation, January 10, 2022
3. Shalini Prasad and Badrinath Jagannath, Translational Research Initiatives Oversight Meeting, Crohns and Colitis Foundation, December 10, 2021
4. Shalini Prasad SWEATSENSER DX an enabling technology for on demand profiling of cytokines on passively expressed eccrine sweat, Department of Biomedical Engineering Symposium, University of Oklahoma, October 22 ,2021
5. Shalini Prasad, Sriram Muthukumar, Kai-Chun Lin, Badrinath Jagannath, Madhavi Pali, Devangsingh Sankhala A sweat wearable to decouple the relationship between physiological stress and inflammation (3594338), Division of Analytical Chemistry, Advances in Electrochemistry, Aug 22-26 (2021)

6.Shalini Prasad and Badrinath Jagannath, Sweatsenser DX, an enabling technology for monitoring inflammatory biomarkers from passively expressed human sweat, Research Progress Update, MD Anderson Oncology and Precision Medicine Group August 20th, (2021)
7. Shalini Prasad, Sriram Muthukumar, Kai-Chun Lin, Badrinath Jagannath, Madhavi Pali, Devangsingh Sankhala, SWEATSENSER DX an enabling technology for on demand profiling of biomolecules in passively expressed human sweat, Mt Sinai, June 11, 2021
8. Shalini Prasad, Kai-Chun Lin, Badrinath Jagannath, Madhavi Pali, Sayali Upasham, Ashlesha Bhide, Devangsingh Sankhala, Sriram Muthukumar. Temporal Profiling of Biomarkers to Elucidate the Relationship between Stress and Inflammation in Passively Expressed Eccrine Sweat, IMCS/239th ECS meeting on May 30-June 3, 2021.
9. Shalini Prasad, Sriram Muthukumar, (Invited) Passive Eccrine Sweat Analysis Technologies; A New Paradigm in Sweat, 237th ECS Meeting with the 18th International Meeting on Chemical Sensors (IMCS 2020)(May 10-14, 2020)
10. Badrinath Jagannath, Sriram Muthukumar, and Shalini Prasad, P109 Passive Eccrine Sweat Sensing for Duplex temporal detection of cytokines, Gastroenterology 158 (3), S30 (2020)

***Select Honors and Awards for Mentees: (Out of 113 awards)***

1. 239th Electrochemical Society Meeting/ 18th International Meeting on Chemical Sensors – 2nd place student presentation award, Investigation of Room Temperature Ionic Liquid Modified Electrode for Decoupling Soil Electrochemistry- Mr. Vikramnarayanan Dhamu
2. 2020 Baxter Young Investigator Award https://www.baxter.com/baxter-young-investigator-awards-2020-winners Multiplexed Detection of Interleukins in Blood Plasma for Rapid Detection of Sepsis as a near-patient Point-of-Care Biosensor- Ms. Ambalika Tanak
3. 2020 – Top 10 Basic Science Best Paper Award for Original Contributions to Inflammatory Bowel Disease Journal;-for the original research article-A Sweat-based Wearable Enabling Technology for Real-time Monitoring of IL-1β and CRP as Potential Markers for Inflammatory Bowel Disease- Mr. Badrinath Jagannath
4. 2020 AICHE Annual Meeting, Student Poster Competition, Finalist, Unique Electrochemical Detection of Sepsis Using Triplex Biomarker Detection Panel with IL-6, IL-8 and IL-10 in Blood Plasma, Student Competition in Bio-Sensors,2020 AICHE Annual meeting, November 16 (2020)- Ms. Ambalika Tanak.
5. 2019 AICHE Annual Meeting, Student Poster Competition, Honorable mention, Early Screening of Infection Using Electrochemical Point-of-Care Biosensor- Ms. Ambalika Tanak.
6. 1st place student poster award, SLAS 2019, Sensor-Epidermis Optimization for Non-Invasive Monitoring of Chloride Ion Levels in Sweat [https://slas.org/eln/ready-to-serve-the-world-slas2019-student-poster-winners-showcase-innovative-life-sciences-research/]
7. Society of Laboratory Automation and Screening, Travel Grant 2019- Ms. Antra Ganguly, Ms. Ambalika Tanka, Mr. Badrinath Jagannath and Mr. Paul Rice.
8. Excellence in Engineering Fellowship, Erik Jonsson School of Engineering and Computer Science, University of Texas, Dallas, 2018 Mr. Hunter Stevenson
9. Ashlesha Bhide, Research Award- Poster- TXACE /SRC Annual Review, UT Dallas, Richardson, TX, October 22-25, 2018.
10. 2018- Ms. Ambalika Tanak, Travel Award, 70th AACC Annual Scientific Meeting & Clinical Lab Expo (https://www.utdallas.edu/news/2018/9/13-33107_Accolades-ScienceMath-Educator-Doctoral-Student-Ea_story-wide.html?WT.mc_id=NewsRSS)
11. 2018- International Travel and Research Scholarship, (Univ. of Wellington), NZ – Ms. Amanda Bacon
12. 2018- NSF funded travel award for 28th Anniversary World Congress on Biosensors, June 12th - 15th Miami, FL – Mr. Hunter Stevenson and Ms. Ambalika Tanak

***Service: (Selected Service Activity)***
**Service to Professional Societies:**

2022- BMES Annual Meeting co-chair Global Health Technologies Track
2018-current, BMES council of chairs member
2020-2023- BMES International Affairs Sub-committee, [Charge: To identify opportunities to expand the BMES membership and presence internationally]
2014-present- Inception and support of BMES student chapter at UT Dallas
2014- Session chair, Session: Nanomaterials (I), 9th IEEE International Conference on Nano/Micro engineering and Molecular systems, Waikiki Beach, Hawaii, HI2008 Review Committee Member (RCM) for the IEEE-ISCAS 2008 Special Sessions,
2018-2021 IEEE NMDC International Advisory Committee
2011 Lab Automation Annual Conference Poster Program Chair
2011 Lab Automation Annual Academic Travel Award Committee, Chair
2009-2010 Association of Lab automation Education Committee Member

***Grant review service:***
2022- PE8, Panel Reviewer and Deputy Chair European Research Commission, Starting Grants
2021- Reviewer European Research Commission, Advance, Consolidator and Starting Grants
2020-Reviewer NIH ad-hoc committee member, ZRG1 IDM-V (12) Panel
2020- PE8 Deputy chair, European Research commission (ERC-STG)
2019- Adhoc member for NIH IMST B(12): IMST-B(12): Small Business: Instrumentation, Environmental, and Occupational Safety.
2018- NIH 2018-05 NIH-NIBIB POCTRN study section, review panel member
2018- NIH R15/AREA grant proposal study section review panel member (BST-80)
2017- Ad hoc reviewer NASA crew health proposal, HERO solicitation
2017- Ad hoc reviewer, Science foundation of Ireland
2017- Ad hoc NSERC Collaborative Research and Development or Industrial Research Chair proposal, Canada
2017- Ad hoc reviewer Ontario Research Fund (Ontario, Canada)
2017- SBIR/STTR review panel study section IMST B(12)
2017- 15/AREA grant review panel-NIBIB BST-80)
2016- R15/AREA grant review panel- NIBIB (BST-80)
2016-current, university assessment committee
2015- NIH, Academic Industry Partnership (R-01) Review Panel
2015- Reviewer for Wisconsin Sea Grant Institute
2015 - Reviewer NIH Surgical Sciences, Biomedical Imaging and Bioengineering IRG
2015- Ad hoc reviewer for University of Central Oklahoma, Faculty Developmental Grants
2014- NIH Reviewer for Special Emphasis Panel (SEP) focused on “Fellowship: Oncological Sciences” (ZRG1 FO9B-P (20))
2014- Reviewer for Development and Translation of Medical Technologies that Reduce Health Disparities SBIR [R43/R44].
2012 Scientific Peer Advisory and Review Services division of the American Institute of Biological Sciences (AIBS) Reviewer for PRMRP Investigator Initiated Research Award (IIRA) and Technology/Therapeutic Development Award (TTDA)

***Manuscript review / editorial roles:***
2006-2009 Journal of Lab Automation Editorial Member
2017- present Scientific Reports, Editorial Board Member
2021- Biosensors and Bioelectronics X Editorial Board Member
2003 - present: Ad hoc Journal Peer Reviewer; Nature Scientific Reports, Nanomedicine, Biosensors and Bioelectronics, Analytical Chemistry, Talanta, Journal of Applied Physics, Nature Methods, Sensors and Actuators B, Journal of Association of Lab Automation, Analyst, Nature Biomedical Engineering, IEEE Sensors Letters, Analytical Methods, Biomedical Microdevices, Nature Electronics, Lab on a chip, Solid State Ionics, Future Science Open Access, Analytical Chemistry, Journal of Nanoscience and Nanotechnology, Materials Science and Engineering B,

Sensors, Methods in Molecular Medicine and Chemical Society Reviews, Nature Biomedical Engineering, Nature Materials Asia, Advanced Electronic Materials, Biomicrofluidics, Sensors and Actuators A, Future Science OA, ACS Omega, ACS Materials and Interfaces, Nature Electronics, Bioanalysis.

***STEM outreach and diversity related service:***
2021- NSF ADVANCE Adaptation grant (ASPIRE$^2$) Recruitment Committee, to recruit women and URM in STEM
2020- International programs and globalization of education task force member (University level committee)
2020- Living our values subgroup 2 committee member (University level committee),Goal: Increase diversity in STEM
2017- University strategic planning committee member (graduate education and research) with a focus on DEI
2012-2013, UT Dallas Diversity Council Member from ECS
2007 and 2008 Short Course Instructor: "Micro and Nanoscale Technologies for Life Sciences," The 10th and 11th Annual European Conference on Micro and Nanoscale Technologies for Biosciences, Montreux, Switzerland and their impact on health disparities.
2009-2010 Societal and Ethical Issues in Nanotechnology, ASU-NSF-NNIN Node Coordinator

***Trainees Mentored:***
Doctoral advisement/direction: 21 PhD graduates, 28 M.S. Thesis Graduates, 12 PhD Advisees, 54 M.S. non-thesis advisees
Undergraduate advisement/direction: 142 undergraduate students (2012- present)

***University service (selected):***
2018-Department Head, Bioengineering, UT Dallas
*Responsibilities:* Faculty recruitment and retention, faculty governance framework, faculty success initiatives, staff recruitment and retention. Initiating diversity, equity and inclusion initiatives in the Department governance policy development. Development of department strategic plan. Department marketing and development of digital foot print for enhancing perception indictors. Student success initiatives, student recruitment and retention (graduate and undergraduate) with emphasis on diversity and underrepresented minorities. Department outreach and alumni engagement and development framework for fundraising.
*Achievements:*
*USNWR Rankings 2022:* Under my leadership, the department of Bioengineering achieved its highest ranking to date being ranked #3 in Texas (public), #33 amongst public universities in the US and #61 amongst US universities.
2018- University IRB committee
2018-Ad hoc committee member for tenure review; Robert Gregg
2018- UTD BMEN Graduate Program Review Coordinator
2018- UTD Goldwater Nominee Selection Committee Member
2017, 2018- ECS Staff Awards Committee Member, UT Dallas
2017- Mid probationary review panel member for Zachary Campbell (N Sand M) and Shashank Sirsi (ECS)
2017- ECS Dean Search Committee member
2013-2018, Associate Department Head; Department of Bioengineering University of Texas, Dallas
2014- Present, Faculty project adviser Department of Bioengineering Senior Design
2011- Present, Department of Bioengineering, Graduate Admissions Committee