Curriculum Vitae

Dvijesh J. Shastri

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EDUCATION

- **Ph.D.** in Computer Science**,** University of Houston, Houston, Texas **01/2002 – 08/2007**
  Dissertation: Stress quantification on the face and its application to lie detection
  Advisor: Prof. Ioannis Pavlidis
- **M.S.** in Computer Science**,** Wright State University, Dayton, Ohio **01/1999 – 03/2001**
- **B.E.** in Electrical Engineering**,** Sardar Patel University, Gujarat, India **09/1993 – 09/1997**

RESEARCH INTERESTS

Human Centered Computing, Affective Computing, and Data Analytics

EMPLOYMENT

- **University of Houston – Downtown**, Houston, TX **09/2017 – Present**
  Associate Professor, Department of Computer Sciences and Engineering Technology
  I am involved in *teaching* computer science and data analytics courses, *researching* in the areas of human centered computing, *mentoring* graduate and undergraduate students, and providing *services* to the department, the college and the university as well as to the research communities. I am also involved in outreach activities.
- **University of Houston – Downtown**, Houston, TX **09/2011 – 08/2017**
  Assistant Professor, Department of Computer Sciences and Engineering Technology
  My duties involved teaching computer science courses, researching in the areas of human centered computing, mentoring undergraduate students, and services to the department, the college and the university.
- **University of Houston – Main**, Houston, TX **01/2012 – 01/2016**
  Adjunct Research Assistant Professor, Department of Computer Science
  This adjunct position allowed me to pursue research collaborations. I co-mentored masters and doctoral students.
- **University of Houston – Main**, Houston, TX **09/2007 – 09/2011**
  Research Assistant Professor, Computational Physiology Lab
  I carried out research in physiological stress analysis. Apart from research, my duties included interacting with the funding agencies such as the DOD, teaching interdisciplinary courses, and mentoring undergraduate and graduate students.
- **GE-Global Research Center**, Albany, NY **05/2006 – 08/2006**
  Intern, Visualization and Imaging Lab

I conducted feasibility studies of human intent detection under outdoor settings where the environmental factors are difficult to control.

- **University of Houston – Main**, Houston, TX **08/2004 – 08/2007**
  Research Assistant, Computational Physiology Lab
  My doctoral dissertation focused on human stress analysis and its application in lie detection. My research was supported by the DOD grants/contracts.
- **University of Houston – Main**, Houston **08/2003 – 12/2006**
  Research Assistant, Optometry Department
  I was involved in software development of clinical applications for vision scientists.

GRANTS AND AWARDS

External Proposals (Total amount $1.61M)

1. PI: Benjamin Soibam, Co-PI: **Dvijesh Shastri**. **The Army Research Office's** t**he Undergraduate Research Apprenticeship Program (URAP)**. Summer Research Opportunity in Computational Biology at University of Houston-Downtown, **$6,000**, 2017.
2. PI: Ann Gates, Co-PI from UHD: **Dvijesh Shastri**. **NSF**. *Building a Resilient, Sustainable, and Adaptable CAHSI Ecosystem*, **$158,300**, 2016-2020.
3. PI: Ann Gates, Co-PI from UHD (2015-1016): **Dvijesh Shastri**. **NSF**. *Computing Alliance of Hispanic Serving Institutes (CAHSI)*, **$287,749**, 2010-2016.
4. PI: Shengli Yuan, Senior Personal: **Dvijesh Shastri,** Hong Lin. **NSF**. *REU Site: Research Experiences in Algorithm Design and Analysis for Students in Undergraduate Institutions*, **$322,794**, Summer 2013 – Fall 2016 (NSF CNS 1262928).
5. PI: Hong Lin, Co-PI: **Dvijesh Shastri**, Chang Yun, Shengli Yuan. **NSF**. *Undergraduate/Graduate Student Immersion in Computer Science, Technology and Mathematics*, **$598,088**, Fall 2010 – Summer 2016.
6. PI: Ioannis Pavlidis, CO-PI: **Dvijesh Shastri**, **DOD**, *Spectral Imaging Sensor for Improved Biometric and Human Intent Analysis*, **$240,000**, Aug. 2010 - Dec. 2012.

Internal Proposals (Total amount $42.86K)

7. PI: **Dvijesh Shastri**, **Faculty Development Fund UHD**, *Curriculum Enhancement of the Data Mining Course and Research Presentation*, **$6,199**, Spring 2018 – Spring 2019.
8. PI: **Dvijesh Shastri**, **Organized Research and Creative Activity UHD**, *Meditation: A Performance Booster for BCI Applications*, **$ 8,909**, Spring 2018 – Spring 2019.
9. PI: **Dvijesh Shastri**, **Faculty Development Fund UHD**, *Curriculum Enhancement of the Data Mining Course and Research Presentation*, **$6,900**, Spring 2017 – Spring 2018.
10. PI: **Dvijesh Shastri**, **Faculty Development Fund UHD**, *Revising the Mobile Computing Course*, **$5,800**, Fall 2015 – Spring 2016.
11. PI: **Dvijesh Shastri**, **Organized Research and Creative Activity UHD**, *Understanding the Role of Medication in Human Performance*, **$8,350**, Spring 2015 – Spring 2016.
12. PI: **Dvijesh Shastri**, **Faculty Development Fund UHD**, *Development of Information Visualization Course*, **$6,700**, Fall 2014 – Spring 2015.

External Awards (Total amount $64.17M)

13. **WeTeach_CS** program of The **University of Texas at Austin's** Center for STEM Education, a research, teaching, and service unit sub awarded **$62,635** to Fort Bend ISD to increase the number of certified Computer Science teachers. My role was to assist teachers in their efforts for completing CS certifications, and motivate parents to consider CS careers for their kids.
14. **Google** gifted $**9,540** through Google IgniteCS program-March 2017. The fund will be used to teach programming concepts to a group of Lake Olympia middle school students and a group of high school students at Young Women's College Preparatory Academy in summer 2017.
15. **Schlumberger** donated **$20,000** to support my proposal of offering an interdisciplinary course on *Computational Geoscience* to high-school students in summer 2015 and summer 2016. The course was designed and developed in collaboration with Dr. Yuriy Pinelis and Ms. Sangeeta Gad.
16. **Schlumberger** donated its Petrel, Ocean and other software packages valued at **$64,058,807.46** in summer 2016 to support the teaching and research efforts.
17. NSF Travel Award for CAREER workshop-March 2012, $1,000.
18. NSF Travel Award for CRA - Career Mentoring workshop-2012, $1,500.

RESEARCH ACTIVTIES (Total citations: 439, h-index: 9 by Google Scholar)

Refereed Publications

1. Ling, L., & **Shastri, D.** (2018, April). Meditation: Performance Booster for BCI Applications. In Proceedings of the 2016 CHI Conference Case Study on Human Factors in Computing Systems (pp.). ACM. **[Acceptance rate: 45%]**
2. Duong, D., **Shastri, D.,** & Pavlidis, I**.** (2017, November). Dynamic 3D Print of the Breathing Function. In 17th International Conference on Bioinformatics and Bioengineering (pp. 402-408). IEEE.
3. Patel, K., Shah, H**,** Dcosta, M., & **Shastri, D.** (2017). Evaluating NeuroSky's Single-Channel EEG Sensor for Drowsiness Detection. In Human-Computer Interaction. New Trends (pp. 243-250). Springer Berlin Heidelberg. A book chapter.
4. Dcosta, M., **Shastri, D.**, Tsiamyrtzis, P., & Pavlidis, I. (2016, May). Turning Security Monitoring into an Engaging High Performance Task. In Technologies for Homeland Security, the 2016 IEEE International Symposium on. IEEE.
5. Tsiamyrtzis, P., Dcosta, M., **Shastri, D.**, Prasad, E., & Pavlidis, I. (2016, May). Delineating the Operational Envelope of Mobile and Conventional EDA Sensing on Key Body Locations. In Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems (pp. 5665-5674). ACM. **[Acceptance rate: 23.4%]**
6. Khatri, A., **Shastri, D.**, Tsiamyrtzis, P., Uyanik, I., Akleman, E., & Pavlidis, I. (2016, May). Effects of Simple Personalized Goals on the Usage of a Physical Activity App. In Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems (pp. 2249-2256). ACM. **[Acceptance rate: 43.4%, Citation:1**]
7. Ugur, M., **Shastri, D.**, Tsiamyrtzis, P., Dcosta, M., Kalpakci, A., Sharp, C., & Pavlidis, I. (2015, September). Evaluating smartphone-based user interface designs for a 2D psychological questionnaire. In Proceedings of the 2015 ACM International Joint Conference on Pervasive and Ubiquitous Computing (pp. 275-282). ACM. **[Acceptance rate: 23.6%, Citation:2]**

8. Uyanik, I., Khatri, A., Majeti, D., Ugur, M., **Shastri, D.**, & Pavlidis, I. (2015, April). Using Accelerometer Data to Estimate Surface Incline and Its Walking App Potential. In Proceedings of the 33rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems (pp. 1397-1402). ACM. **[Acceptance rate: 45.3%, Citation:1]**
9. Dcosta, M., **Shastri, D.**, & Pavlidis, I. (2015, May). Perinasal indicators of malevolence. In Automatic Face and Gesture Recognition (FG), 2015 11th IEEE International Conference and Workshops on (Vol. 1, pp. 1-4). IEEE.
10. Dcosta, M., **Shastri, D.**, Vilalta, R., Burgoon, J. K., & Pavlidis, I. (2015, May). Perinasal indicators of deceptive behavior. In Automatic Face and Gesture Recognition (FG), 2015 11th IEEE International Conference and Workshops on (Vol. 1, pp. 1-8). IEEE.
11. Kwon, K. A., **Shastri, D.**, & Pavlidis, I. (2014, November). Information Visualization in Affective User Studies. Stress, In IEEE VIS. (Conference Video Link: https://vimeo.com/103346662)
12. Kwon, K. A., **Shastri, D.**, & Pavlidis, I. (2014, September). Interfacing information in affective user studies. In Proceedings of the 2014 ACM International Joint Conference on Pervasive and Ubiquitous Computing: Adjunct Publication (pp. 87-90). ACM. [**Acceptance rate: 75%, Citation:1]**
13. **Shastri, D.,** Papadakis, M., Tsiamyrtzis, P., Bass, B., & Pavlidis, I. (2012). Perinasal imaging of physiological stress and its affective potential. Affective Computing, IEEE Transactions on, 3(3), 366-378. **[Impact Factor: 2.675**, **Citation: 29]**
14. Duong, D., **Shastri, D.**, Tsiamyrtzis, P., & Pavlidis, I. (2012). Spatiotemporal reconstruction of the breathing function. Medical Image Computing and Computer-Assisted Intervention–MICCAI 2012, 149-156. [**Acceptance rate: 31.8%, Citation:2]**
15. Pavlidis, I., Tsiamyrtzis, P., **Shastri, D.**, Wesley, A., Zhou, Y., Lindner, P., Buddharaju, P., Joseph, R., Mandapati, A., Dunkin, B., & Bass, B. (2012). Fast by nature-how stress patterns define human experience and performance in dexterous tasks. Scientific Reports, 2. **[Impact Factor: 5.578, Citation: 27]**
16. Buddharaju, P., **Shastri, D.**, Mandapathi, A., Vaidya, S., & Pavlidis, I. (2011, May). Who said monitoring is boring. In CHI'11 Extended Abstracts on Human Factors in Computing Systems (pp. 2041-2046). ACM. [**Acceptance rate: 42%, Citation: 1]**
17. Wesley, A., **Shastri, D.**, & Pavlidis, I. (2010, April). A novel method to monitor driver's distractions. In CHI'10 Extended Abstracts on Human Factors in Computing Systems (pp. 4273-4278). ACM. [**Acceptance rate: 26%, Citation: 11**]
18. **Shastri, D.**, Fujiki, Y., Buffington, R., Tsiamyrtzis, P., & Pavlidis, I. (2010, April). O job can you return my mojo: improving human engagement and enjoyment in routine activities. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (pp. 2491-2498). ACM. [**Acceptance rate: 22%, Citation: 7**]
19. **Shastri, D.**, & Pavlidis, I. (2009, September). Automatic initiation of the periorbital signal extraction in thermal imagery. In Advanced Video and Signal Based Surveillance, 2009. AVSS'09. Sixth IEEE International Conference on (pp. 182-187). IEEE. **[Citation: 4]**
20. **Shastri, D.**, Pavlidis, I., & Wesley, A. (2009). A Method to Monitor Operator Overloading. In Human-Computer Interaction. New Trends (pp. 169-175). Springer Berlin Heidelberg. A book chapter. [**Citation: 2**]

21. **Shastri, D.**, Merla, A., Tsiamyrtzis, P., & Pavlidis, I. (2009). Imaging facial signs of neurophysiological responses. Biomedical Engineering, IEEE Transactions on, 56(2), 477-484. [**Impact Factor: 2.33, Citation: 64**]
22. Yun, C., **Shastri, D.**, Pavlidis, I., & Deng, Z. (2009, April). O'game, can you feel my frustration?: improving user's gaming experience via stresscam. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (pp. 2195-2204). ACM. [**Acceptance rate: 24.5%, Citation: 34**]
23. **Shastri, D.**, Wesley, A., & Pavlidis, I. (2008). Contact-free Stress Monitoring for User's Divided Attention. INTECH Open Access Publisher. ISBN 978-953-7619-19-0. A book chapter. **[Citation: 3]**
24. **Shastri, D.**, Tsiamyrtzis, P., & Pavlidis, I. (2008, August). Periorbital thermal signal extraction and applications. In Engineering in Medicine and Biology Society, 2008. EMBS 2008. 30th Annual International Conference of the IEEE (pp. 102-105). IEEE. **[Citation: 4]**
25. **Shastri, D.**, Merla, A., Tsiamyrtzis, P., & Pavlidis, I. (2007, November). Imaging facial signs of neuro-physiology responses, In Workshop proceedings of Medical Image Computing and Computer-Assisted Intervention–MICCAI, 152-160.
26. Tsiamyrtzis, P., Dowdall, J., **Shastri, D.**, Pavlidis, I. T., Frank, M. G., & Ekman, P. (2007). Imaging facial physiology for the detection of deceit. International Journal of Computer Vision, 71(2), 197-214. [**Impact Factor: 3.623, Citation: 105**]
27. Buddharaju, P., Dowdall, J., Tsiamyrtzis, P., **Shastri, D.**, Pavlidis, I., & Frank, M. G. (2005, June). Automatic thermal monitoring system (ATHEMOS) for deception detection. In Computer Vision and Pattern Recognition, 2005. CVPR 2005. IEEE Computer Society Conference on (Vol. 2, pp. 1179-vol). IEEE. [**Citation: 13**]
28. Tsiamyrtzis, P., Dowdall, J., **Shastri, D.**, Pavlidis, I., Frank, M. G., & Ekman, P. (2005, March). Lie detection-recovery of the periorbital signal through tandem tracking and noise suppression in thermal facial video. In Proceedings of SPIE Sensors, and Command, Control, Communications, and Intelligence (C3I) Technologies for Homeland Security and Homeland Defense IV (Vol. 5778, pp. 29-31). **[Invited paper, Citation: 15]**

Publication in Preparation

29. **Shastri, D.**, Tolar T., Currie, D., Dcosta, M., Taamneh, S., Wesley, A., & Pavlidis, I. Affect, Stress, and Reading Skills at Developmental Ages. In Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems. ACM. [Submitted]

Abstract-based Conferences

1. Neema, S., Dhaliwal, N., & **Shastri, D.** Eye Movement Patterns while Driving Under Cognitive, Emotional, and Texting Distractions. In 29th Hispanic Engineer National Achievement Awards Conference (HENAAC), Pasadena, CA, October 18-21, 2017. **[Best poster award]**
2. Trejo, V., & **Shastri, D.** A Machine Learning Approach to Understanding Student Academic Performance. In 29th Hispanic Engineer National Achievement Awards Conference (HENAAC), Pasadena, CA, October 18-21, 2017. **[Second best poster award]**

3. Suryanarayanan, D., Khan, S., & **Shastri, D.** Descriptive and Predictive Analytics on Electricity Trends. In 29th Hispanic Engineer National Achievement Awards Conference (HENAAC), Pasadena, CA, October 18-21, 2017.
4. Singh, T., Karakus, E., **Shastri, D.,** & Soibam B**.** Identifying Genetic Markers To Improve Prognosis And Therapy Of Melanoma Tumors. In 29th Hispanic Engineer National Achievement Awards Conference (HENAAC), Pasadena, CA, October 18-21, 2017.
5. Dongarwar, D., Abigail, P., & **Shastri, D.** Stock Market Prediction using Fundamental and Technical analysis. In 29th Hispanic Engineer National Achievement Awards Conference (HENAAC), Pasadena, CA, October 18-21, 2017.
6. Nguyen, D., Simpson, N., & **Shastri, D.** The Effects of Brief Meditation on BCI Performance. In 29th Hispanic Engineer National Achievement Awards Conference (HENAAC), Pasadena, CA, October 18-21, 2017.
7. Stevenson, A., Ruiz, E., & **Shastri, D.** Prompting Computer Science to Young Minority Students. In 29th Hispanic Engineer National Achievement Awards Conference (HENAAC), Pasadena, CA, October 18-21, 2017.
8. Santana, M., Soibam, B., & **Shastri, D.** Cancer cell detection. In 28th Hispanic Engineer National Achievement Awards Conference (HENAAC), Anaheim, CA, October 5-9, 2016. **[Best poster award]**
9. Ganady, A. & **Shastri, D**. Military Budgets and Social Inequality. In 28th Hispanic Engineer National Achievement Awards Conference (HENAAC), Anaheim, CA, October 5-9, 2016.
10. Cox, O. & **Shastri, D.** Using Eye Tracking Analysis to Anticipate Poor Driving Behavior in Distracted Drivers. In 28th Hispanic Engineer National Achievement Awards Conference (HENAAC), Anaheim, CA, October 5-9, 2016.
11. Jackson, R., Perez, E. & **Shastri, D.** Automatically Adjusting Game Difficulty via Electrodermal Readings. In 28th Hispanic Engineer National Achievement Awards Conference (HENAAC), Anaheim, CA, October 5-9, 2016.
12. Zegarra, W, Hong, Zheng, & **Shastri, D.** Data Mining of Crime in Houston. In 28th Hispanic Engineer National Achievement Awards Conference (HENAAC), Anaheim, CA, October 5-9, 2016.
13. Perkins, J., & **Shastri, D.** American Sign Language Translator Using Gesture Recognition. In 2nd Computer Science Undergraduate Research Expo at the University of Texas – Dallas, February 27, 2016.
14. Turner, A., Pareja D., & **Shastri**, **D.** Detecting Drowsy Driving. In CAHSI summit, San Juan, Purto Rico, September 10-11, 2015.
15. Patel, K., Shah, H & **Shastri**, **D.** Drowsy Detection via EEG - Sensor. In CAHSI summit, San Juan, Purto Rico, September 10-11, 2015.
16. Perkins, J., Brown, K., Ihenacho, P., Chisholm, J., **Shastri, D**. and Pinelis, Y., An Interface Design for Automating Shale Strata Identification, In CAHSI summit, San Juan, Purto Rico, September 10-11, 2015.
17. Patel, K., Shah, H. & **Shastri**, **D**. A Physiology-based Monotonous Driving Detection, 1st Computer Science Undergraduate Research Expo at the University of Texas – Dallas, April 11, 2015. **[Honorable mention]**

18. Taamneh**, S**., **Shastri**, **D.**, Currie, D., Dcosta, M., Wesley, A., and Pavlidis, I. What Sympathetic Responses Can Tell about Children's Performance in Reading, In *Society of Affective Science Conference, San Francisco, CA, April 9 – 11, 2015*.
19. D. Duong, **D. Shastri**, M. Dcosta, and I. Pavlidis, "Stereoscopic Reconstruction of the Breathing Function," in Abstracts of the 2013 *Pharmaceutical Health Services Research Symposium*, Houston, Texas, March 29, 2013.
20. Wesley, A., Tsiamyrtzis, P., **Shastri**, **D.**, Bass B., & Pavlidis, I. Fast by Nature - How Stress Patterns Define Human Experience and Performance. In *Abstracts of the 2010 National Center for Human Performance Annual Meeting,* Houston, Texas, November 11-12, 2010. **[Best poster award]**
21. Joseph, R., Bourlai, T., **Shastri**, **D.**, Pavlidis. I. Dunkin, B.J., & Bass, B. Use of a novel thermal and visual facial mapping system to measure stress in surgeons may provide a valuable metric in surgical skills acquisition. In *Abstracts of the national American College of Surgeons (ACS) Educational Consortium* Chicago, Illinois, March 21-22, 2009.
22. **Shastri, D.**, Tsiamyrtzis, P., & Pavlidis, I. Recovery of the periorbital signal and its application in the detection of deceit. In Abstracts of the IEEE International Conference on Technologies for Homeland Security, Boston, MA, May 12, 2008.
23. Tsiamyrtzis, T., Dowdall, J., **Shastri**, **D.**, Pavlidis, I., Frank, M., & Ekman, P. Lie detection: recovery of the periorbital signal through tandem tracking and noise suppression in thermal facial video. In *Abstracts of the 22nd Annual Houston Conference on Biomedical Engineering Research*, Houston, TX, February 10, 2005.

Invited Talks

1. *Careers in Computer Science*, **Lake Olympia Middle School**, Missouri City TX, June 15, 2017.
2. *Careers in Computer Science*, **Robotics Competition, Digital Learning, Fort Bend ISD,** Sugar Land, TX, May 22, 2017.
3. *Perinasal Imaging of Physiological Stress and its Affective Potential*, **School of Computing, Clemson University,** Clemson, SC, May 22, 2012.
4. *O' Job, Can you return my mojo?,* **Computer Science Department, University of Houston-Downtown campus**, Houston, TX, January 13, 2011.
5. *Panel participant,* **Graduate forum for the Research Experiences for Undergraduates (REU) program**, July 23, 2010.
6. *Improving human engagement and enjoyment in the routine activities*, **Texas Institute for Measurement, Evaluation and Statistics,** Houston, June 09, 2010.
7. *Improving human engagement and enjoyment in the routine activities*, **Psychology Department, University of Houston**, Houston, TX, May 12, 2010.
8. Pavlidis, I., **Shastri**, D. & Bourlai, T. Imaging stress. **Rapid Screening Workshop at International Conference on System Sciences-42**, Big Island, HI, January 5-6, 2009.
9. *Panel participant,* **Graduate forum for the Research Experiences for Undergraduates (REU) program**, July 25, 2008.
10. Pavlidis, I., Buddharaju, P. & **Shastri**, **D.** Short course on *Novel Biometrics*, **Conference on Computer Vision and Pattern Recognition (CVPR)***,* Minneapolis, MN, *June* 18, 2007.
11. **Shastri**, **D.,** & Pavlidis, I. Imaging Facial Physiology for the Deception of deceit. **BBN Technologies**, Arlington, VA, November 03, 2006.

Press Coverage

1. Fort Bend ISD acknowledged Dr. Shastri and his team's contributions in the 2017 elementary and middle school students' robotics competition. Press coverage can be viewed here.
2. Press Coverage (**Science360, Becker's Hospital Review, USA Today, The Cypress Times, MediLexicon, Medical News Today, NSE news from field, University of Houston**) for the publication in **Nature - Scientific** Reports: "Fast by Nature - How Stress Patterns Define Human Experience and Performance in Dexterous Tasks". Press coverage can be viewed: http://www.cpl.uh.edu/press/stress-rese/
3. On May 08, 2009, the Department of Defense's research division (National Center For Credibility Assessment, NCCA) demonstrated on primetim**e CNN news, Wolf Blitzer's Situation Room**, the StressCam system as one of the high-tech devices designed to aid intelligence officials in interrogation.
4. On May 09, 2009, the **Discovery science channel** broadcasted next generation polygraph machine, in episode#18(Chewing Pencils) of Weird Connections series.

Outreach Activities

1. Organized 1st Robotics Competition at UHD, November 17, 2017.
2. Mentored a group of students organize programming workshops at a HISD high school and FBISD middle school June, 2017. The workshops were sponsored by Google IgniteCS project.
3. Offered a course on Computational Geoscience to a group of high school students, summer 2015, and 2016.
4. Offered a course on Mobile Game Development to a group of high school students, summer 2014.

Technology Expositions

1. Quantitative stress measurement using thermal imaging as a marker of competence in laparoscopic skills, ***4th Annual American College of Surgeons (ACS) Accredited Education Institutes (AEI) Postgraduate Course: Measuring Procedural Competence***, MITIE Institute for Technology, Innovation and Education, Houston, TX, September 17, 2011.
2. Monitoring Physiological Functions at a Distance, ***SPIE Defense, Security and Sensing Conference***, Orlando World Center Marriott Resort & Convention Center, Orlando, Florida, April 25-29, 2011.
3. Do Nintendo Surgeons Defy Stress?, ***Showcase in 3rd Annual International conference in Computational Surgery***, The Methodist Hospital, Houston, TX, January 26-28, 2011.
4. Stress analysis and its application in deception detection, ***UH-DOD Research Conference***, University of Houston, Houston, TX, November 1-2, 2007.

TEACHING EXPERIENCE

Graduate Data Analytics Courses Taught at UHD

1. Information Visualization **[New course established]**: *Fall 2015, 2016, 2017*
2. Data Mining **[New course established]**: *Spring 2016, 2017*

Graduate Course Taught to the University of Gdansk Students

3. Information Visualization **[Online course]**: *Fall 2015*

Undergraduate Computer Science Courses Taught at UHD

4. Computational Geoscience **[New course co-designed]**: *Summer 2015, 2016*
5. Information Visualization **[New course developed]**: *Fall 2014*
6. Introduction to Data Mining: *Spring 2014*
7. Mobile Computing (iOS) [**New course established]**: *Spring 2013, 2014, Summer 2014, Fall 2015, 2016, 2017*
8. Mobile Games for High-school Students [**New course module]**: *Summer 2013*
9. Principles of Computer Graphics **[Revised the course]**: *Spring 2012, Fall 2013 (**OpenGL**), Spring 2015, Spring 2016 (**WebGL**)*
10. Senior Seminar/Ethics for the Information Age **[Revised the course]**: *Spring 2013, Fall 2013-2014, Spring 2016 - Fall 2017*
11. Data Structures and Algorithms: *Fall 2015 - 2017, Spring 2017*
12. Digital Logic: *Spring 2015*
13. Introduction to Computer Science with C++: *2011 – 2016*
14. Introduction to Computer Science with Visual Basic: *2011 - 2017*
15. Introduction to Computer Technology: *Summer 2012-2013, Fall 2012*

Graduate Courses Taught at UH

16. Psychophysiology in HCI **[New course]**: *Spring 2011*
17. Computational Psychophysiology **[New course]**: *Spring 2010*

RESEARCH MENTOR (64 students)

Master's Thesis Committee Member at UH (5 students)

Fall 2013

1. Eswar Prasad (**Co-advised**)
   Topic: Wearable EDA Sensing – A Validation Study

Spring 2012

2. Joseph Burling (**Department of Psychology**, Committee Member)
   Topic: Order and Learning: Temporal Effects on Cued Attention

Spring 2011

3. Malcolm Dcosta (**Co-advised**)
   Topic: Perinasal Signal Extraction and its Applications in Deception Detection

Fall 2010

4. Avinash Wesley (**Co-advised**)
   Topic: Contact-free Stress Monitoring for Users' Divided Attention
5. Swati Vaidya (**Co-advised**)
   Topic: Analysis of Perspiration Responses from Various Body Parts

Master's Capstone Project Advisor at UHD (4 students)

Spring 2018

6. Victor Trejo
   Topic: E-coli bacteria analysis in Houston Bayous after Hurricane Harvey.

Fall 2017

7. Durga Suryanarayanan
   Topic: Deep learning for classifying cuisines.

Summer 2017

8. Shantanu Neema
   Topic: Visual Analytics for eye tracking in conjunction with driving response.
9. Neha Dhaliwal
   Topic: Statistical analysis of eye tracking data and driving behavior

Undergraduate Senior Project Mentor at UHD (29 students)

Spring 2018

10. Kevin Abrego
    Topic: Study the impact of Supplementary instruction on students' performance.
11. Amee' Stevenson
    Topic: Detecting Fake news on social media.

Fall 2017

12. Ralph Nichols
    Topic: CAKE software for kids to creating art in a mixed virtual and real environment.

Spring 2017

13. Ismael Almaguer
    Topic: Personality Patterns among United States Politicians
14. Carrie Dumit
    Topic: Smart Meal App and the Social Comparison Theory

Fall 2016

15. Carla Gonzales
    Topic: Study Exercise Coupling Effect for Elliptical Workout
16. Robert Jackson
    Topic: Automatically Adjusting Game Difficulty via Elector dermal Readings

Spring 2016

17. Liang Lin
    Topic: Short-Term Meditation for Task Concentration
18. Mauro Douohou
    Topic: Study of Physiological Responses During Distracted Driving

Fall 2015

19. Harit Shah
    Topic: Drowsy Driving Detection via Physiological Sensors
20. Kishan Patel
    Topic: A Single Electrode EEG Sensor Validation for Driving Applications
21. James Perkins
    Topic: Kinect-based Gesture Recognition to Aid Deaf Individuals
22. Ngan Do
    Topic: Workout Coupling

23. Deepika Dhadral
    Topic: Quantifying Short-term Meditation

Spring 2015

24. Sudarsan Pandey
    Topic: Track UHD shuttles
25. Namrata Kshtriya
    Topic: Role of Meditation in Human Performance
26. Richard Lorenzen
    Topic: Voice Activated iPhone-based App

Fall 2014

27. Edgar Ramirez (Department of Social Science, UH)
    Topic: Role of Meditation in Human Performance
28. Mervyn Cabio
    Topic: Predicting Super Bowl Outcomes Using Machine Learning
29. Phouc Nguyen
    Topic: iOS-based Student Course Organizer
30. Carlton Attaway
    Topic: Developing a Brain Game
31. Fernando Busto
    Topic: Developing an Android-based Vehicle Tracking App
32. Deary Hudson
    Topic: Mining Web-based Video Contents for Better User Experience

Spring 2013

33. Bryan Nafegar
    Topic: Developing an Android-based Hunting and Fishing App

Fall 2013

34. Usman Tamanna
    Topic: LiveCommittee – Real-time Web-based tool for C++ Programming Help
35. Latoya Smith
    Topic: iOS Based Texas STAAR App for Elementary Students
36. Yves Fernandes
    Topic: FitnessBuddy - iOS App for Monitoring Caloric Consumption and Tracking Human Mobility Patterns
37. Suhagkumar Chauhan
    Topic: Android App for Medication Reminder

Spring 2013

38. Cory Landmark
    Topic: Developing Iteratively Unique Tests for Brain Stimulation and Their Various Applications on the Android Platform

Research Projects Mentor/Co-mentor (26 students)

Summer 2017

- DOD REU: Noah Simpsons
- CAHSI REU: Daniel Nguyen

Spring 2017

- CAHSI REU: Amee Stevens, and Eva Ruiz

Summer 2016

- NSF REU: O'Brian Cox

Spring 2016

- CAHSI REU: O'Brian Cox, and Amee Stevens

Fall 2015

- CAHSI REU: O'Brian Cox, and Dorcas Mbaeri

Summer 2015

- NSF REU: Alex Turner, and Daniel Pareja

Spring 2015

- CAHSI REU: Kishan Patel, Harit Shah **[Honorable mention at the UTD poster expo]**, Ngan Do, Steve Leon, and Raul Rio

Fall 2014

- CAHSI REU: Ngan Do, and Harit Shah

Summer 2014

- NSF REU: Carlton Attway, Phouc Nguyen, Giovanni Molina, and Luc Nguyen

Summer 2013

- NSF REU: Rebecca Mesich
- NSF REU (UH): Dalene Hart[**Runner up poster award**], and Jeffery Allen

Spring 2013

- CAHSI REU: Usman Tamanna

Summer 2012

- NSF REU (UH): Aaron Joseph [**Best poster award]**

Summer 2011

- NSF REU (UH): Ethan Adkisson [**Best poster award]** and Henry Estepa [**Runner up poster award**]

Summer 2010

- NSF REU (UH): Robert Pienta [**Best poster award]**

Summer 2009

- NSF REU (UH): Ross Buffington [**Runner up**], and Adina Stoica [**Best poster award]**

Summer 2008

- NSF REU (UH):Adina Stoica [**Best poster award]** , Carlos Abanto
- Ugur Ayan (PhD candidate at Istanbul Kultur University, summer intern, 2008)

Summer 2007

- NSF REU (UH): Jonathan Hancock

SERVICE TO ACADEMIC DISCIPLINE

Institutional Services

Committee Chair/Senator

1. Computer Science Faculty Committee, 2016-2017
2. Department Senator for the Faculty Senate, 2015 - 2016
3. Secretary, Computer Science Faculty Committee, September 2011 – May 2013

Faculty Search Committees

4. Computer Science Faculty Search Committee, 2014 – 2016
5. Statistic Faculty Search Committee, 2015 – 2017

Graduate Programs

6. Math and Statistics Graduate Programs Committee, 2016-2017
7. Data Analytics Master's Degree Program Committee, 2014 - 2016
8. Computer Science Master's Degree Program Committee, 2011 – 2012
9. Data Science Bachelor's Degree Program Committee, 2016-2017

Student-Centric Committees

10. Scholar Academy Faculty Mentor, 2012 – 2017
11. Scholar Academy Advisory Council, 2013 – 2014
12. ACM Student Chapter Faculty Mentor, 2013 – 2016
13. ACM-W Student Chapter Faculty Mentor, 2016 – 2017

Other Committees

14. Rank and Tenure Committee, 2018-2020
15. Course Innovation Subcommittee, 2018-2019
16. Faculty Leave Proposals, 2014 – 2016
17. Academic Technology Committee, 2013 – 2014
18. Wellness Committee, 2012 – 2014

Conference Activities

1. **Lifetime Achievement and Education Committee Member**, Hispanic Engineer National Achievement Awards Corporation (HENAAC) Summit, 2017
2. **Program Committee Member**, 3rd Technology and Learning Conference at UHD, 2014
3. **Demo and Exhibition Chair**, IEEE 5th International Conference on Advanced Video and Signal Based Surveillance (AVSS), 2008

Reviewer

Proposals

1. Ad hoc Reviewer, NSF- IIS Smart and Connected Health [NSF 13-543] , 2013
2. Faculty Leave Proposals, UHD, Spring 2014, Spring 2015

Journals

3. Journal of the Optical Society of America (2014)
4. Annals of Biomedical Engineering, The Journal of the Biomedical Engineering Society, Springer (2012-2013, 2017)
5. International Journal of Industrial Ergonomics, Elsevier (2011, 2013)
6. Imaging and Vision Computing Journal, Elsevier (2008 – 2009, 2013)
7. Measurement Science and Technology Journal, Institute of Physics (2010 – 2013)

Conferences

8. The ACM international joint conference on pervasive and ubiquitous computing - **UbiComp** (2017)
9. ACM International Conference on Human-Computer Interaction with Mobile Devices and Services - **MobileHCI** (2014)

10. IEEE International Special Topic Conference on Healthcare Innovation & Point-of-Care Technologies – **HIC-POCT** (2014)
11. IEEE International Conferences on Biomedical and Health Informatics (2014)
12. IEEE International Conferences on Information Visualization - **Viz** (2014, 2015)
13. ACM International Conference on Human Factors in Computing Systems – **SIGCHI** (2011, 2014 – 2018)
14. ACM International Conference on Engineering Interactive Computing Systems –**EICS** (2012)
15. ACM International Conference on Designing Interactive Systems – **DIS** (2012, 2014)
16. ACM Asian Pacific Conference on Computer Human Interaction – **APCHI** (2012)
17. ACM Conference on Computer Supported Cooperative Work and Social Computing – **CSCW** (2012)
18. IEEE International Conference on Intelligent Robots and Systems (2011 – 2012)
19. International Conference of the IEEE Engineering in Medicine and Biology Society – **EMBC** (2009 – 2015, 2017)
20. CAHSI Summit (2015 – 2016)
21. ACM Tapia Conference (2017)

PROFESSIONAL MEMBERSHIP

- Associate Member of ACM Society

COMPUTER SKILLS

- **Operating Systems:** Windows, Mac
- **Programming Languages:** C, C++, C#, Objective-C, Swift, Matlab, R, Visual Basic
- **IDEs:** Visual Studio 2012, XCode 7.3
- **APIs and Libraries:** OpenCV, OpenGL, Corona Mobile Game Development SDK, MS Office Macros, iPORT for FLIR thermal camera interface