R pShekhar Bhansali, Ph.D., FNAI

Alcatel-Lucent Professor and Chair
Department of Electrical and Computer Engineering
Florida International University, Miami
Areas of Specialization: MEMS, Biosensors, Thin film devices and Nanostructures
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Education:

1997	RMIT University Melbourne, Australia	Ph.D.	Electrical Engineering
1991	Indian Institute of Technology Chennai, India	M.Tech.	Aircraft Production Engineering
1987	Malaviya National Institute of Technology, Jaipur, India	B.E.	Metallurgical Engineering (Honours)

Advisors:

Doctoral – Prof. D.K. Sood and Prof. R. Zamood (RMIT Australia)
Post-Doctoral: Prof. A. Umeda (NRLM-Japan), Prof. C.H. Ahn & Prof. H.T. Henderson (UC)

Academic Appointments:

2011 – Present:	Alcatel-Lucent Professor and Chair	Department of Electrical and Computer Engineering Florida International University, Miami, FL
Summer 2011:	Visiting Professor	Department of Materials Science Kanazawa Institute of Technology, Japan
2008 – 2011:	Professor	Department of Electrical Engineering University of South Florida, Tampa, FL
2004 – 2008:	Associate Professor	Department of Electrical Engineering University of South Florida, Tampa, FL
2000 – 2004:	Assistant Professor	Department of Electrical Engineering Nanomaterials & Nano manufacturing Research Centre University of South Florida, Tampa, FL
1999 – 2000:	Research Assistant Professor	CMSM, ECECS Department University of Cincinnati, Cincinnati, OH
1998 – 1999:	Senior Research Associate	CMSM, ECECS Department University of Cincinnati, Cincinnati, OH
1995 – 1996:	Lecturer (Part-time)	Department of Metallurgical Engineering RMIT University, Melbourne, Australia

Government and Industrial Experience:

2010: **C.S. Draper Laboratories, Bioengineering,** Tampa, FL

- On sabbatical – Bioengineering approach to study Cultured Cell Spheroids.

1996 – 1998: **National Research Laboratory of Metrology,** Tsukuba Japan

- Development of MEMS calibration standards; researched materials and processes.
- Development of Shape Memory Alloy based MEMS structures.

1990 – 1992: **Hindustan Aeronautics Limited**, Koraput, India

- As a Production Engineer, responsible for scheduling and availability of components in overhaul & assembly of R21 &R25 aircraft engines for MIG Series aircraft.
- Led repair teams to troubleshoot engine problems at Air Force bases.

1988 – 1990: **Hindustan Aeronautics Limited**; Bangalore, India

- As a Management Trainee, hands on training on all aspects of manufacturing, finance, and management of the company.
- Rotated through Foundry & Forge, Aerospace systems, and aircraft and engine divisions.

Awards and Honors:

Fellow, National Academy of Inventors, 2015

Top Scholar Award, Florida International University, 2014.

William R. Jones, Outstanding Mentor Award, Florida Education Fund, McKnight Foundation, 2011.

JSPS Foreign Research Invitation Program Award – Kanazawa Institute of Technology, Summer 2011.

Best Poster Award – HENAAC, Annual Convention, 2010.

Cortisol Paper highlighted in Chemical Physics – 10 most downloaded papers**,** 2010

William R. Jones, Outstanding Mentor Award, Florida Education Fund, McKnight Foundation, 2009.

1st Prize – Technical Paper Competition, National Society of Black Engineers, Annual Convention 2009.

Mentor of the Year, Alfred P. Sloan Foundation, 2009.

Best Poster Award – Gordon Research Conference on Detecting Illegal Substances, Explosives and Drugs, 2007.

Mentoring Recognition, Florida-Georgia Louis Strokes Alliance 2006.

William R. Jones, Outstanding Mentor Award, McKnight Foundation, 2004.

Outstanding Researcher Award, University of South Florida, 2004.

CAREER Award, National Science Foundation, 2003.

President's Award for Excellence, University of South Florida, 2003.

Outstanding Achievement Award, State of Florida, 2002.

Best Paper Award – Silver medal, Euro sensors, 1999.

Fellowship, Science and Technology Agency (Japan), 1996-1998.

Micro machine Technology Program Fellowship, RMIT University (Australia)-NEDO (Japan) 1992-1996.

Faculty of Engineering Scholarship, RMIT University (Australia) 1993-1996.

Best Trainee in Verbal Communication, Hindustan Aeronautics Limited, Bangalore, India, 1989.

Best Project Study and Presentation, Hindustan Aeronautics Limited, Bangalore, India, 1989.

Certificate of Achievement, 3rd in the order of merit in Final B.E. (Metallurgy), MNIT, Jaipur, India, 1987.

Merit Scholarship, MNIT, Jaipur, India, 1983-1987.

Service Accomplishment:

Developed and led research-training programs that recruit, fund, and mentor diverse groups of students to pursue graduate education at the intersection of disciplines. The effort has thus far supported over 155 graduate students (over a 130 from racial and ethnic minorities) who are citizens or permanent residents. The programs have positioned USF to be in the top 10 producers of African American and Hispanic PhDs for the foreseeable future.

Student Achievements (while under advisement):

Michelle Pierre	2015 NSF Fall Fellow
Kelly Mesa	2014 U.S. Naval Research Lab (NRL) Summer Graduate Fellow 2014 NSF Graduate Research Program Fellowship
Karina Rincon	2014 U.S. Naval Research Lab (NRL) Summer Graduate Fellow
Krystine Pimental	2014 U.S. Naval Research Lab (NRL) Summer Fellow 2013 NSF Travel Award, Emerging Researchers National Conference
Brett Jones	2014 NSF Travel Award, Emerging Researchers National Conference
Nicolas Narena	2013 RIE Fellow, Japan
Justin Kalap	2013 RIE Fellow, Japan
Randy Matos	2013 RIE Fellow, Japan
Andres Felipe Diaz Cruz	2012 Best presentation award
Hayde Silva	2011 1st Prize Poster Competition, Florida-Georgia LSAMP EXPO

Sheila Jean	2010 1st Prize Poster Competition, HENAAC/Great Minds in STEM Annual Conference
Register, Joseph	2010 NSF Graduate Research Fellowship Program
Celestin, Michael	2010 NSF National Lab supplement for summer at Sandia
Alexander, Frank	2014 Whitaker International Program Postdoctoral Fellowship 2014 National Research Council (NRC) Postdoctoral Associates – Alternate 2013 Carl Strom Fellowship Award - Gordon Research Conference 2010 NSF-IREE China Summer Fellowship 2010 NSF Graduate Research Program Fellowship
Boone, Justin	2010 NSF-IREE China Summer Fellowship
Huey, Eric	2011 GEM Consortium Fellowship (Sponsor: Brookhaven National Lab) 2011 McKnight Doctoral Fellowship
Rogers, Al-Aakhir	2010 2st Prize Technical Paper Competition, Great Minds in STEM/HENAAC Annual Conference 2010 Ford Foundation Dissertation Fellowship- Honorable Mention 2009 McKnight Foundation Dissertation Fellowship 2007 NSF East Asia Pacific Institute (EAPSI) Fellowship (Taiwan) 2006 NSF NATO Advanced Study Institute Travel Award (Canada)
Sekhar, Praveen Kumar	2009 Outstanding Dissertation Award 2008 NSF-CMMI Travel Award 2006 NSF PASI Fellowship (Chile) 2006 STONE Fellowship, Los Alamos National Laboratories 2007 NSF PASI Fellowship (Costa Rica) 2004 IEEE Mentoring Award
Price, Dorielle	2009 1st Prize Technical Paper Competition, National Society of Black Engineers, National Convention 2006 Ford Foundation Pre-Doctoral Fellowship 2006 NSF Graduate Research Program Fellowship 2005 McKnight Foundation Fellowship 2005 Richard F. Pride Doctoral Research Fellowship (declined)
Kevin Luongo	2009 C.S. Draper Laboratories, Draper Lab Fellowship
Aravamudhan, Shyam	2008 Outstanding Dissertation Award, USF 2007 USF Summer Doctoral Fellowship
Cover, Natasha	2008 McKnight Foundation Fellowship 2008 GEM Consortium Fellowship (Sponsor: Johnson & Johnson)
Henry, Brandon	2008 Ford Foundation Pre-Doctoral Fellowship 2006 McKnight Foundation Fellowship
Fanord, Fedena	2007 McKnight Foundation Fellowship
Ke, Sun	2007 USF-FMMD Graduate Fellowship

Shearrow, Anne 2005 U.S. Dept. of Homeland Security (DHS) Graduate Fellowship

2003-2009 USF Presidential Fellowship (Declined)

Ortiz, Ophir 2004 McKnight Foundation Fellowship

Benjamin, Helen 2003 NSF Graduate Research Program Fellowship

Societies & Organizations

IEEE

Institute of Electrical & Electronics Engineers
Founding Vice-Chair, Tampa Bay Chapter EMBS 2007- 2012

Electrochemical Society
Sensors Division Executive Committee, Member-at-large 2004-2011
Sensors Council Awards Committee, Member 2008-2010

Sigma Xi

American Society for Engineering Education

Journal Editorial/ Editorial Advisory Boards:

ISSS (international journal of Smart Structures and Sensors) Elsevier
Recent Patents in Nanotechnology
Technology and Innovation

Sponsored Programs:

Current

NSF Includes: An Integrated approach to retain underrepresented minority students in STEM disciplines 2016-2018, National Science Foundation, Sept 1 – Aug 31, $58,253.

2015-2017 FGLSAMP Bridge to Doctorate at Florida International University 2015 – 2017, National Science Foundation, Aug 1 – July 31, $225,000.

NSF Nano systems Engineering Research Center for Advanced Self-Powered Systems of Integrated Sensors and Technologies (ASSIST) Co-PI (with Thomas Jackson, John Lach and John Muth), National Science Foundation, Sept. 12 – Aug 17, $18,494,327

I-Corps Team: Transdermal alcohol sensor system for monitoring blood alcohol content 2016 – 2017, National Science Foundation, Jan 1 – June 30, $50,000.

Biosensors – Effect of design on efficacy of sensors 2015 – 2017, PicoCal Inc, Mar 15 – Mar 31, $18877.41.

NSF Florida/Georgia LSAMP-Bridge to the Doctorate 2015-2017, Co- PI (With Ralph R.Turner), FAMU/National Science Foundation, Aug 15 – July 17, $985,000.(+ $620,000 cost share).

Pending

Novel method for monitoring alcohol use in liver transplantation, PI 2017 – 2019, NIH, Apr 1 – Mar 31, $345,385.

COMPLETED

NSF Florida/Georgia LSAMP-Bridge to the Doctorate 2013-2015, Co- PI (With Ralph R.Turner), FAMU/National Science Foundation, Jun 13 – Aug 16, $985,000.(+ $620,000 cost share).

Public Engines, Fusing Environmental and Personal Sensor Data, PI, Oct 2014 – Sep 2015, $140,000.
Thin Films for Devices, PI, Mustang Vacuum, Sep 13- Aug 14, $70,000

I-Corps: Cortisense - A Point of Care Sensor for Measurement of Stress, PI, National Science Foundation, July. 14 – Dec 14, $50,000.

NSF *Integrated Microwave Micro needle-Electrode System for Fine Scale Material and Device Characterization*. Role: PI, Aug 2011 – July 2014.

Nanostructure Interaction Assessment of MCS Cells Using EIS Technique in a Microfluidic System, Naval Research Laboratories, PI, Sep 13-Sep 14, $100,000

GOALI: Integrated Microwave Micro needle-Electrode System For Fine Scale Material And Device Characterization, PI (with Thomas Weller and Eid Alsabbah), National Science Foundation, Aug 09 – Aug 13, $495,271

Insta Cortisol-A real time and continuous assessment of Cortisol in ISF, PI, sub-contract from Phase-II SBIR to Guided Therapeutics, National Institute of Health, Mar 11 – Mar 13, $403,000

Creating the Next Generation Power Grid with Massively Distributed Intelligent Sensors, Co-PI (Alexander Domijan), National Science Foundation, Aug 09 – Aug 13 $329,997.

NSF Florida/Georgia LSAMP-Bridge to the Doctorate 2011-2013, PI & Director (with Bernard Batson), FAMU/National Science Foundation, Aug 11 – Aug 13, $985,000.(+ $620,000 cost share).

Nano engineered, Manufacturable, Ion-Implantation Seeded Silica Nanowires for Sensitive Bio Screening PI (with Qiang Huang), National Science Foundation $425,450. May 07 – May 11.

Development of a High-Density Cylindrical Ion Trap Array Mass Spectrometer using Micro-Fabrication Techniques, Co-PI (with Teresa Greely, R.Timothy Short, and Jing Wang) National Science Foundation, Aug 09-Aug 13, $477,261.

Comparative Assessment and Evaluation of CTD Sensors, PI, JCG Technologies, Jul 10 – Sep 12 $258,750 (+115,000 HTC award).

Solar Rectenna-A Next Generation Solar Energy Convertor, PI (with Yogi Goswami, Lee Stefanakos, and Ken Buckle), Florida Solar Energy Consortium, State of Florida, $598,500 (direct costs). Jan 09 – Jun 12.

3D Impedance Tomography of Tumor Spheroids, PI, C.S. Draper Laboratories, Aug 09 – Dec 11, $130,000.

Sloan Foundation Minority PhD Program (MPHD) in College of Engineering, PI and Project Director, (with Nathan Crane, Maya Trotz, Norma Alcantar), Alfred P Sloan Foundation, N-3 minority Ph.D. students funded

every year (N being the total number of minority PhD students recruited into the college). Jan 05 – Aug 11, $1,806,820 (includes student scholarships + recruitment/retention funds)

An Automated Cell Health Monitoring System (CHMS) Based on Electrical Impedance, PI, Florida Center of Excellence in Bio molecular Techniques and Therapeutics, $85,000 (direct costs) Jan 09 – Jun 11.

NSF Florida/Georgia LSAMP-Bridge to the Doctorate 2009-2012, PI & Director (with Bernard Batson), FAMU/National Science Foundation, Aug 09 – Aug 12, $985,000.(+ $620,000 cost share).

Rework and Evaluation of Sensors and packages for Marine Development, PI, JCG Technologies, Mar 10 – Aug 10, $35,000 (+35000 HTC award).

NIRT: Synthesis and Applications of Nano crystalline Diamond Thin Films for MEMS/Biomedical Applications, Co-PI (with Arun Sikder, Thomas Weller, Ivan Oleynik), National Science Foundation, Sep 04 – Aug 10, $1,438,578.

InstaCortisol-A real time and continuous assessment of Cortisol in ISF, PI, sub-contract from Phase-I SBIR to Guided Therapeutics, National Institute of Health, Jun 09 – Jun 10, $55,757

Prostate Cancer Biomarker Study in African American Men Co-PI (with, Weihong Tan –PI, Catherine Phelan, and John Koomen), MCC UF Pilot Funds , Dec 08 – Dec 09, $99,931 (direct costs).

Electroporation System for Cutaneous Gene Transfer, Co-PI (with Richard Heller-PI, Mark Jaroszeski), National Institute of Health, Sep 06 – Jun 10, $1,802,074.

Bridge to the Doctorate Student Support, PI, Institute for Broadening Participation, Mar 08 – Aug 09, $71,381.

Cardiovascular Battlefield Injury Diagnostic sensor and MEMS Technology Development, Investigator (with Joel Strom, PI), Defence Threat Reduction Agency, Jul 05 – Aug 09, $3,350,000.

NSF Florida/Georgia LSAMP-Bridge to the Doctorate-III, Co-Director (with Ashanti Pyrtle), FAMU/National Science Foundation, Aug 06 – Aug 09, $985,000 (+$620,000 cost share).

Engineered Nanoparticles for Biomarker Detection and Targeted Drug Delivery of Cancers, Co-PI (with Shyam Mohapatra-PI, Shubra Mohapatra), Florida Dept. of Health-Team Science Project Award, Jun 07 – Jun 09, $939,184.

CAREER: Development of Bio-MEMS for Determining Cell Structure Using Microfluidics and Bio-impedance, PI, National Science Foundation, Jan 03 – Jan 09, $587,751.

NER: Effect of Morphology of Pd & NiFe Nanowires on Sensor Response, PI, National Science Foundation, Aug, 2004- $95,000

IGERT- Sensory Knowledge based Interface Science, PI (with Hari Haran Srikanth, Don Hilbelink, Nararajan Ranganathan and Thomas Weller),National Science Foundation, Dec 02 –Nov 08, $3,440,280 (+$1,000,000 cost share)

SGER: 3-D Heterogeneous Sensor System on a Chip (HSoC): Architecture and Stacking, National Science Foundation, Aug 07-Aug 08, $40,812

MRI: Acquisition of Deep Reactive Ion Etching Systems for the University of South Florida, PI (with Ashok Kumar, Andrew Hoff, Abdul Malik & Scott Samson), National Science Foundation, Jul 06 – Dec 07, $346,320.

Passive Wireless Wallpaper Humidity Sensor for Building Environment Monitoring, Co-PI (with Yi Jia, University of Puerto Rico Mayaguez), National Aeronautics and Space Administration Mar 06 –Feb 08, , $29,524.

NSF Florida/Georgia LSAMP-Bridge to the Doctorate-II, Co-Director (with Ashanti Pyrtle), FAMU/National Science Foundation, Aug 05 – Aug 08, $985,000 (+$620,000 cost share).

NSF Florida/Georgia LSAMP-Bridge to the Doctorate-I, Co-Director (with Ashanti Pyrtle), FAMU/National Science Foundation, Aug 04 – Aug 07, $985,000 (+$620,000 cost share)

SGER: Novel, Concentric, Hollow, Silicon Micro needle Array for Diagnostics and Therapeutics, PI, National Science Foundation, Jun 06 – Jun 07, $53,528.

NER: Correlation of Effect of Morphology on Pd & NiFe Nanowires on Sensor Response, PI, National Science Foundation, Aug 04 – Jul 06, $95,000.

USF Research on Hydrogen Production, Storage and Monitoring, Co-PI (with Elias Stefanakos, Venkat Bhethanabotla, Burt Krakow and Muhammad Rahman), National Aeronautics and Space Administration, Jun 02 – Jun 06, $ 2,200,000.

Micro monitoring Instrument, Investigator (with Larry Lange brake, David Fries, Scott Samson, Timothy Short and Thomas Weller) USASMDC, Sep 00 **–** Dec 05, $15,756,619.
Visible Light Rectenna Project, co-PI (with Lee Stefanakos, Ken Buckle, Tom Weller), University of Florida/NASA, Jun 03 **–** Jun 05, $55,000.
Development of Technology modules for Community College Teachers, PI, Florida Hi-Tech Corridor Council, Sep 03 **–** Sep 04, $35,000.
Structure and Function of Metallic Nanowires, PI, USF New Research Grant, Mar 03 – Jun 04, $10,000.

Micro fabricated MEMS Sensors for Defence Applications, PI, Breed Technologies and Florida Hi-tech Corridor Council, Jul 02 - Dec 03, $142,500.

Faculty International Travel Grant, PI, University of South Florida, Dec 02, $2500.

Film Deposition and Characterization of Liquidmetal^{TM} Alloys for MEMS Applications, co-PI (with Venkat Bhethanabotla) Liquid metal Technologies, Florida Hi-Tech Corridor Council, Sep 02-Dec 03, $75,000.

Development of Metallization, Packaging and Systems Protocols for LED applications in Lighting and communication in harsh environments, PI, Uniroyal optoelectronics, Jun 01- Dec 02, $73,000.

Faculty International Travel Grant, PI, University of South Florida, Dec 00, $1500.

Development of MEMS facilities, University of South Florida, PI, Jun 00- Sep 00, $42,000.

Heat Removal from Concentrators by Micro machined Silicon Integrated Thermal Management System, Principal Research Investigator (with H. Thurman Henderson and Frank Gerner) National Aeronautics and Space Administration, Jun 00-Nov 00, $150,000.

Graduate Recruiting in Engineering, PI (with Rudy Schlaf), USF (VP for Graduate Studies), Dec 01 – Dec 02, $5000.

Professional Activities:

Co-Chair, Provost took force on Ph.D. Diversity 2011-2013

Member, Selection Committee, 2010 Outstanding Achievement Award, ECS Sensors Division

Ad-hoc Member, Study Section, IAMT National Institute of Health, 2010

Director, Bridge to Doctorate, 2009- to date

Director, Sloan Foundation Fellowship Program, College of Engineering 2004 – to date

Co-Director, Bridge to Doctorate (I, II, III), 2004 – 2009

Director, IGERT: SKINS, University of South Florida 2002 - 2008

Organizer, 1st Micro/Nano Robotics and Technology Summer Camp for K-12 students at USF, 2006

Reviewer, International Expert-Discovery Projects, Australian Research Council, 1998-to date

Member, ERC Site Review Team, National Science Foundation, May 2003

Member, Review Panels, National Science Foundation, 1999-to date

Organizer, MEMS General Session, Electrochemical Society, 212th Meeting, Washington, October 7-12, 2007.

Organizer, Porous Materials Symposium, Electrochemical Society, 211th Meeting, Chicago, May 6-11, 2007.

Organizer, MEMS General Session, Electrochemical Society, 211th Meeting, Chicago, May 6-11, 2007.

Chair, Student Poster Session, COMS 2006, St. Petersburg August, 27-31, 2006

Organizer, MEMS General Session, Electrochemical Society, 210th Meeting, Cancun, October 29-Nov 5, 2006.

Organizer, MEMS General Session, Electrochemical Society, 209th Meeting, Denver, May 7-12, 2006

Organizer, MEMS General Session, Electrochemical Society, 207th Meeting, Quebec, May 15-19, 2005

Symposium Organizer, Multiphase Phenomena and CFD Modelling and Simulation of Engineering Processes, 133rd TMS Annual Meeting, Charlotte 2004

Session Chair, SPIE Symposium Smart Materials, Nano-, and Micro-Smart Systems, Melbourne Australia 2002

Session Chair, SPIE Symposium on Micromachining and Microfabrication, Santa Clara 1999

Reviewer:

IEEE/ASME Journal of Microelectromechanical Systems, Sensors and Actuators B , Biosensors and Bioelectronics, Sensors and Actuators A, Journal of Micro Systems Technology, Lab on a Chip, Journal of Measurement Science and Technology, Journal of Micromechanics and Micro engineering, Journal of Physics: Condensed Matter, IEEE Transactions on Knowledge and Data Engineering, Journal of American Chemical Society , IEEE Sensors, Tatanta, Journal of Physical Chemistry, Journal of Physical Chemistry B, Journal of Physical Chemistry C, California Energy Institute, Analytical Chemistry, Diamond and Related Materials, Sensors and Materials, ASME Journal of Manufacturing Science and Engineering, ASME Journal of Heat Transfer, , Expert Opinion on Drug Delivery, Journal of Micro/Nanolithography, MEMS, and MOEMS, ECS Transactions, Solid State Electronics, Journal of the Royal Society Interface, Sensors, Journal of Analytical Chemistry, Nanotechnology,

Courses (Co-) Developed/Taught:

EEL 6993 Design and Fabrication of Microsystems – (New Course at FIU)
EEL 6990 Microsystems and MEMS

EEL 5991 Introduction to MEMS and Microfabrication – (New Course at FIU)
EEL 6935 Eminent Scholar Seminar Series the Electrical Engineering cohort Spring 2009 (New course)
EEL 6935 Stem Cell Engineering (New Course, Co-developed with David Keefe College of Medicine)
EEL 6935 Introduction to MEMS (New course)
EEL 6938 CAD for MEMS (New Course)
EEL 6935 Design and Fabrication of MEMS (New course)
EEL 6768 Chemical/ biological Sensors and Microfabrication (New course)
EEL 6935 Stem Professional Development (New course)
EEL 6935 Biogeochemical Sensors (New course Co-developed with A. Pyrtle, College of Marine Science)
EEL 4906 Professional Issues in Engineering Design (Co-developed with Tom Weller)
EGN 3000 Foundations of Engineering
RMIT Introduction to Aircraft Materials

Administrative (Current):

Alcatel-Lucent Professor and Chair, Electrical and Computer Engineering Department: containing 31 Faculty and Instructors, 1011 Undergraduate students, 219 Master's and Doctoral students.

Research Group:

Current Researcher Associates/Post-Doctoral Fellows

Name	Years	
Dr. M. Pandiaraj	Aug 14- Present	
Dr. Yogeswaran Umasankar	Nov 14- Present	

Current Students

Name	Expected Graduation	Degree
Aparajita Singh	06/2017	Ph.D.
Syed Khalid Pasha	12/2018	Ph.D.
Patrick Roman	12/2018	Ph.D.
Krystine Pimentel	06/2018	Ph.D.
Ahmed Jalal	12/2019	Ph.D.
Sohini Choudhary	12/2019	Ph.D.
Michelle Pierre	06/2019	Ph.D.
Jairo Nelson	12/2019	Ph.D.
Lamar Burton	12/2021	Ph.D.

Past Post-Doctoral Fellows/Research Scientists

Name	Years	Currently at
Dr. P. Vepakomma	2014-2015	Motorola
Dr. Pratik Shah	2014	Stryker
Dr. Yvonne Davis	2014-2015	Beckman-Coulter
Dr. H. Hui	2014-2015	Semikron, AML Hong Kong
Dr. Ajeet Kaushik	2013-2014	Florida International University, Miami
Dr. Yuichi Tomizawa	2012	JAIST

Dr. Shankar Koiry	2011-2012	Bhabha Atomic Research Center, Mumbai, India
Dr. Subramanian Krishnan	2009-2011	Mustang Vacuum Systems
Dr. Sunil Arya	2009-2011	A*Star, Singapore
Dr. Puneet Khanna	2009-2010	Global Foundries, New York
Dr. Ganna Chornokur	2009-2010	H. Lee Moffitt Cancer Center, Tampa
Dr. Niranjan Ramgir	2006-2008	Bhabha Atomic Research Center, Mumbai, India
Dr. Rakesh Joshi	2007-2008	University of Manchester, UK
Dr. Sheetal Patil	2006-2007	Nanaosniff Tech, Mumbai, India
Dr. Sang Chae Kim	2004-2007	Wispry, San Jose
Dr. Senthil Sambandam	2002-2005	Eastman Chemical Company, CA
Dr. Vedawyas Mangasuli	2002-2003	Modison Metals Ltd., Gujarat, India

Students Graduated

Undergrad:

Name	Degree	Graduation	Currently at
Hayde Silva	REU	Dec-11	Cummins/M.S Student at Purdue
Oltion Tase	REU	May-11	LED Innovation
Sheila Jean	REU	May-11	Progress Energy, North Carolina
Howard Bailey	REU	Dec-10	Progress Energy, North Carolina
Jean Weatherwax	REU	Jan-10	MSc, Imperial College of London; Hewlett-Packard Labs
Joe Register	REU	Dec-08	Lockheed Martin
Joe Johns	REU	Dec-08	Ph.D. student at USF
Mariella Corcuera	REU	Dec-05	M.S student at Duke; SES ASTRA
Gabriel Saffold	REU	Dec-05	US Air Force
Sergio Melais	REU	Dec-04	Ph.D. Graduate - WAMI at USF; Computer Simulation Technology, San Mateo, CA
Kevin Luongo	REU	Dec-04	Ph.D. Graduate at USF; E5 Engineering

Masters:

Name	Degree	Graduation	Currently at
Karina Rincon	MS	Jul-15	CVS
Kelly Mesa	MS	Dec-14	Ph.D. candidate at UIUC
Brett Jones	MS	Dec-14	Ph.D. Candidate at FIU
Avigyan Datta	MS	Dec-14	Associate at Cognizant
Angela Clouci	MS	Jul-13	Intel
Alla Epshtien	MS	Oct-10	Draper Labs
Milorad Gordic	MS	Jul-08	Honeywell
Dorothy Wilkerson	MS	Dec-06	Saint-Gobain
Simone Ghirlanda	MS	Jun-06	Amtel

Kevin Luongo	MS	Apr-06	Ph.D. Student at USF
Bharath Bethala	MS	Dec-05	Protek Devices
Shreyas Bhat	MS	Dec-05	Mentor Graphics
Smitha Shetty	MS	Jun-05	PhD Student at CMU
Sriram Akella	MS	Apr-05	Qualcomm
Vandana Upadhayay	MS	Apr-05	Melbourne
Jessica (Otto) Weber	MS	Apr-05	Ph.D. Graduate, ME at USF; Nissan Technical Center, NA
Sriraj Manavalan	MS	Apr-05	Micron
Ashish Choudhary	MS	Nov-04	SRI International
Sunny Kedia	MS	Nov-04	SRI International
Ophir Ortiz	MS	Aug-04	ConMed
Helen Benjamin	MS	May-04	PhD Graduate – USF EE; Faculty/U. Virgin Islands
Mangesh Telrandhe	MS	Mar-04	Johnsons Controls
Kiran Potluri	MS	Mar-03	California
Baddam, Phalgunireddy	MS	Mar-03	Guidant Therapeutics
Challa, Vinod	MS	Mar-03	Ph.D. Student at Stevens Institute
Katapally, Manjula	MS	Mar-03	Amgen
Popuri, Rajsekhar	MS	Mar-03	Research Engineer, USF
Ravula, Murty	MS	Mar-03	Verizon
Peddanenikalva, Himani	MS	Oct-02	Boston

Ph.D.

Name	**Degree**	**Graduation**	**Currently at**
Ange Marie Patricia	Ph.D.	Jul-15	Entrepreneur
Michael Celestin	Ph.D.	Aug-14	Research Engineer, USF
Frank Alexander, Jr.	Ph.D.	Aug-14	Cellasys Gmbh, Munich, Germany
Abhay Vasudev	Ph.D.	May-13	Intel
Justin Huey	Ph.D.	May-13	Intel
Justin Boone	Ph.D.	May-13	Northrup Gruman
Edwardo Murphy-Perez	Ph.D.	May-13	Associate Professor Mexico
Rudraskandan Ratnadurai	Ph.D.	Dec-12	Global Foundries, New York
Dorielle (Tucker) Price	Ph.D.	May-12	Triquint
Al Aakhir Rogers	Ph.D.	Aug-11	C.S. Draper Labs, St. Petersburg
Puneet Khanna	MS/Ph.D.	May-09	Global Foundries, New York
Anne Shearrow	Ph.D.	May-09	Metrohm USA, Riverview FL
Colleen Spiegel	Ph.D.	Dec-08	C.S. Draper Labs
Subramanian Krishnan	MS/Ph.D.	Dec-08	Mustang Vacuum Systems
Praveen Kumar Sekhar	MS/Ph.D.	Dec-08	Assistant Professor, Washington State University-Vancouver
Harish Jeethigunta	Ph.D.	Aug-08	Intel, Oregon
Shyam Aravamudhan	Ph.D.	Oct-07	Assistant Professor NC A&T

Rahul Agarwal	MS/Ph.D.	Aug-07	Global Foundries, New York
Abdur Rahman Rub Rahman	Ph.D.	Aug-07	A*STAR, Singapore

Research Experience for Undergraduates/High School Students

Student	Institution	Dates
Alejandro Alfonso	FIU	Summer 2015
Ricardo Batista	FIU	Summer 2015
Sajay De la Puente	FIU	Summer 2015
Luis Vargas	FIU	Summer 2015
Pablo Gonzale	FIU	Summer 2015
Gregory Battle	FIU	Summer 2015
Jose Jimenez	FIU	Summer 2015
Brennan Mackinlay	FIU	Summer 2015
Reynaldo Puerto	FIU	Summer 2015
Guillermo Mejia-Ruedell	FIU	Summer 2015
Kory Sasaoka	FIU	Summer 2015
Mahmmoud Abdeldayem	FIU	Summer 2015
Roberto Medina	FIU	Summer 2015
Pablo Kropilnicki	FIU	Summer 2015
Michael Jantz	FIU	Spring 2015
Alejandra Renee Torres	FIU	Spring 2015
Edwin Ferman	FIU	Spring 2015
Kenneth Walker	FIU	Spring 2015
Xianpei Liu	FIU	Spring 2015
Yaowei Hu	FIU	Spring 2015
Guillermo Mejia-Ruedell	FIU	Spring 2015
Jose Jimenez	FIU	Spring 2015
Brennan Mackinlay	FIU	Spring 2015
Greg Batlle	FIU	Spring 2015
Reynaldo Puerto	FIU	Spring 2015
Nicholas Noda	FIU	Spring 2015
Joseph Dray	FIU	Spring 2015
Patrick Vega	FIU	Spring 2015
Christopher Sanchez	FIU	Spring 2015
Gustavo Archila	FIU	Spring 2015
Jonathan Estrada	FIU	Spring 2015
Wenceslao Garro	FIU	Spring 2015
Yusmany Ramirez	FIU	Spring 2015
Hongbo Zhang	FIU	Spring 2015
Alfonso Alejandro	FIU	Fall 2014
Batista Ricardo	FIU	Fall 2014
DelaPuente Sajay	FIU	Fall 2014
Gonzalez Pablo	FIU	Fall 2014
Vargas Luis	FIU	Fall 2014
Kory Sasaoka	FIU	Fall 2014
Mahmoud Abdeldayem	FIU	Fall 2014
Pablo A.Kropilnicki	FIU	Fall 2014
Roberto Medina	FIU	Fall 2014
Juan Gomez	FIU	Summer 2014

Shaun Degroff	FIU	Summer 2014
Ricardo Markland	FIU	Summer 2014
Aayush Chilakamarri	FIU	Spring 2014
Eric Ordonez	FIU	Summer 2013
Adrian Martin	FIU	Summer 2011-2013
Felipe Diaz	FIU	Summer 2011-2013
Juan Valancia	FIU	Summer 2011-2012
Nikolas Norena	FIU	Summer 2011-2013
Justin Kalap	FIU	Summer 2012-2013
Micheal Rivas	FIU	Spring 2012
Aylet	FIU	Spring 2012
Kathryn Tracy	FIU	Fall 2012 to Summer 2012
Randy Matos	FIU	Spring-Summer 2013
Mary	FIU	Spring-Summer 2013
Laura Perea-Artunduaga	FIU	Fall 2012 –Summer 2013
Sameer Castillo	FIU	Fall 2012 –Summer 2013
Aidin Alejo	High School	Summer July to August
Giovanni Sasson	High School	Summer July to August
Edwin Harwis	FIU	Summer July to August
Eric O.	FIU	Summer July to August
Jairy McNichols	High School	Summer July to August
Angela Acker-Garcia	USF	Fall ’05 to Fall’06
Helen Benjamin	USF	Fall ’02 to Spring ‘03
Natasha Borno*	USF	Summer ‘06
Eric Bunting	Bethune Cookman University	Summer ‘06
Mariella Corcuera	USF	Fall ’04 to Spring ‘05
Vanessa Gonzales	USF	Fall ’05 to Fall ‘06
Steve Heppler	USF	Fall ‘06
Estrella Jackson*	USF	Spring ‘06
Juan Jackson	Rochester Institute of Technology (NJ)	Summer ‘07
Joe Johns	USF	Spring ‘07 to Fall ‘08
Kevin Luongo	USF	Spring ’03 to Fall ‘05
Sergio Melias	USF	Fall ’02 to Spring ‘03
Cynthia Nwachukwu	USF	Summer ‘07
Monique Parker*	Tampa Blake High School	Summer ‘07
Johnnie Pierre	USF	Fall ’06 to Present
Joe Register	USF	Fall ’04 to Fall ’08
Clarice Richardson	Medgar Evers College (NY)	Summer ‘07
Gaberiel Saffold	USF	Fall ’03 to Spring ‘05
Altagrace Sine	USF	Fall ’04 to Fall ‘05
Paula Te	USF	Summer ‘06
David Broadwell	USF	Spring ‘08
Alexander Henry	USF	Fall ‘08 Spring 09
Hayde Silva	USF	Spring 09-present
Oltion Tase	USF	Spring 09-Fall 2010
Sheila Jean	USF	Spring 09-present
Carnell Hunter	Virginia Commonwealth University	Summer ‘09
Jean Weatherwax	USF	Spring 2009-Summer 2010

*Co-advised

Committees:

Dissertation Committee serving/served on as Chair/Member

Name	Degree	Year
Balaji Lakshminarayanan	Ph.D.	2005
Tom Ketterl	Ph.D.	2006
Hui Wang	Ph.D.	2006
Christopher Mann	Ph.D.	2006
Saravana Natarajan	Ph.D.	2007
Thomas Ricard	Ph.D.	2008
Ganna Chornukur	Ph.D.	2009
Srinath Balachandran	Ph.D.	2009
Xi Zhang	Ph.D.	2009
TaeHyun Kims	Ph.D.	2009
Deidra Hodges	Ph.D.	2009
Javier Pulecio	Ph.D.	2010
Erlange Omicia	Ph.D.	2010
Wilkistar Oliteno	Ph.D.	2010
Andrea Rocha	Ph.D.	2011
Erlande Omicia	Ph.D.	2011
Tony Price	Ph.D.	2011
Kathryn Bailey	Ph.D.	2012
Yvonne Davis	Ph.D.	2012
Mu Seong Kim	Ph.D.	2012
Michael Celestin	Ph.D.	2012
Prateek Shah	Ph.D.	2015

Graduate Committees served on as Member

Name	Degree	Year
Balaji Lakshminarayanan	M.S.	1999
Manoj Patel M.S. (Intel)	M.S.	1999
Brent Vandyke (Honeywell)	M.S.	2000
Srinivasan Ranganathan (Intel)	M.S.	2000
Parshuram Zantye (Intel)	M.S.	2001
Joshua Schumacher (NIST)	M.S.	2003
Harisudan Kannan (International Rectifiers)	M.S.	2003
Srinath Balachadran (IMT)	M.S.	2004
Henry LaRosa (TI)	M.S.	2007

FIU-Wide Committees

Co-Chair Provosts' Taskforce on minority doctoral recruitment, retention and graduation

USF-Wide Committees

USF Faculty Senate, 2010-2011
Research Advisory Committee, Office of Research and Innovation, 2010-2011
USF Centre of India Studies, Faculty Advisory Committee, 2009-2011
Florida Centre of Excellence in Bio molecular Techniques and Targeted Therapeutics, 2006-2010
Diverse Student Success, Graduate Studies, 2006-2009
Personal Effort Reporting System (PERT) Implementation Taskforce, 2005-2007
USF Taskforce for Homeland Defence, 2003-2004
President Taskforce on Bioengineering, 2001-2002

College Committees

Faculty Governance Committee, 2010-2011
Space Committee, 2007-2010

Department Committees

Research Committee 2009-2011
Personnel Committee 2009-2011
Biomedical Systems Committee 2010-2011
ABET Accreditation Sub-committee 2006-2009
Recruitment Sub-committee 2006-2009
Graduate Sub-committee 2000-2004
Senior Design Sub-committee 2001-2004
Microelectronics subcommittee 2005-2009
Space Sub-committee 2000-2003

Search Committees

2009	Member, Faculty Search Committee, Electrical Engineering, USF
2009	Member, Search Committee, BiTT-Director (Senior Leadership Position at USF)
2008	Chair, Search Committee, BiTT-Director (Senior Leadership Position at USF)
2008	Member, Chair Search Committee, Electrical Engineering, USF
2008	Member, Faculty Search Committee, Electrical Engineering USF
2007	Chair, Search Committee, BiTT-7 faculty positions across colleges, USF
2007	Chair, Faculty Search Committee, BiTT & Chemistry, USF
2007	Chair, Faculty Search Committee, BiTT & Engineering, USF
2007	Chair, Faculty Search Committee, BiTT& CMMI, USF
2007	Chair, Faculty Search Committee, BiTT& Medicine
2007	Chair Faculty Search Committee, BiTT& Medicine-II
2006	Member, Faculty Search Committee, Electrical Engineering
2003	Member, Faculty Search Committee, Mechanical Engineering
2003	Member, Chair Search Committee, Electrical Engineering
	Member of the USF search committee for position no 9844 (MEMS Materials Engineer)
	Member of the USF search committee for position no 9845 (MEMS Process Engineer)
	Member of the USF search committee for position no 9846 (MEMS Electrical Engineer)
	Member of the USF search committee for position no 9847 (MEMS Mechanical Engineer)
	Member of the USF search committee for position no 9848 (Process Support Technologist)
	Member of the USF search committee for position no 9849 (MEMS Packaging Engineer)
	Member of the USF search committee for position no 9850 (MEMS Biological Chemist)
	Member of the USF search committee for position no 5305 (Assistant/Associate Prof. MEM CMR)

Publications:

Patents Issued

1. US 9,324,565, Systems and methods for forming contact definitions,(Inventors: R Ratnadurai, S Krishnan, **S. Bhansali**)
2. US 9,267,822, Systems and methods for evaluating coupled components (Inventors: A. Rogers**, S. Bhansali)**
3. US 9,178,261, Vertical microcoaxial interconnects(Inventors: J. Boone, S. Krishnan, **S. Bhansali**)
4. US 20,150,247,816- Label-Free Electrochemical Biosensor (Inventors: S. Bhansali, A Vasudev)
5. US 9,121,806- Impedance spectroscopy-based cellular analysis device (Inventors: **S. Bhansali**, ARA Rahman)
6. US 9,123,690- Systems and methods for forming contact definitions (Inventors: R. Ratnadurai, S. Krishnan, **S. Bhansali**)
7. US 9,178,261 - Vertical micro axial interconnects (Inventors: J. Boone, S.Krishnan, **S. Bhansali**)
8. US 9,123,690 - Systems and methods for forming contact definitions (Inventors: R. Ratnadurai, S. Krishnan**, S. Bhansali**)
9. US 9,121,806 - Impedance spectroscopy-based cellular analysis device (Inventors: **S. Bhansali**, ARA Rahman)
10. US 8,908,089 - Implantable imaging device (Inventors: R. Gitlin, C. Lusk, **S. Bhansali**, A. Rosemurgy)
11. US 8,541,910 - MEMS microgenerator cell and microgenerator cell array (Inventors: **S. Bhansali**, R. Popuri)
12. US 8,416,342 - Implantable imaging device (Inventors: R. Gitlin, C. Lusk, **S. Bhansali**, A. Rosemurgy)
13. US 8,358,981 - Minimally invasive networked surgical system and method (Inventor: R. Gitlin, C. Lusk, **S. Bhansali**, A. Rosemurgy)
14. US 8,188,422 - Fabrication of three-dimensional ion optics assemblies by metallization of non-conductive substrates (Inventor: F.V. Ameron, A. Chaudhary, **S. Bhansali**, R.T. Short, G. Steimle)
15. US 8,115,683 - Rectenna solar energy harvester (Inventors: E.K. Stefanakos, D. Y. Goswami, **S. Bhansali**)
16. US 8,058,155 - Integrated nanowires/microelectrode array for biosensing (Inventors: **S. Bhansali**)
17. US 8,020,490 - Method of fabricating MEMS-based micro detonators (Inventor: **S. Bhansali**)
18. US 7,992,425 - Hydrogen sensor (Inventors: K. Luongo, **S. Bhansali**)
19. US 7,892,440 - Wet etching process (Inventors: **S. Bhansali**, ARA Rahman; S. Kedia)
20. US 7,856,885 - Reinforced piezoresistive pressure sensor (Inventors: **S. Bhansali**, L.C. Langebrake, S. Bhat)
21. US 7,700,911 - Fabrication of 3-D ion optics assemblies by metallization of non-conductive substrates (Inventors: F.V Amerom, A. Choudhary, **S. Bhansali**, R.T. Short; G. Steimle)
22. US 7,456,638 - MEMS based conductivity-temperature-depth sensor for harsh oceanic environment (Inventors: **S. Bhansali**, L.C. Langebrake, S. Bhat)
23. US 7,456,551 - Packaging and integration system for micro sensors in the marine environment (Inventors: **S. Bhansali**, A. Malshe, S. Aravamudhan)
24. US 7,225,800 - Wet etching process (Inventors: **S. Bhansali**, ARA Rahman; S. Kedia)
25. US 7,201,485 - Corner cube retroreflector (Inventors: R. Agarwal, **S. Bhansali**; S. Onishi, S. Samson)
26. US 7,118,,922 - System and method for immunosensor regeneration (Inventors: **S. Bhansali**, B.A. Rzigalinski, H. Cho)
27. US 7,112,816 - Carbon nanotube sensor and method of producing the same (Inventors: R. Schlaf, **S. Bhansali**)

28. US 7,112,525 - Method for the assembly of nanowire interconnects (Inventors: **S. Bhansali**, S. Aravamudhan; K. Luongo, S. Kedia)
29. US 7,091,918 - Rectifying antenna and method of manufacture (Inventors: **S. Bhansali**, K. Buckle; D.Y. Goswami, E. Stefanakos, T. Weller)
30. US 7,047,792 - Surface acoustic wave hydrogen sensor. (Inventors: V.R Bhethanabotla, **S. Bhansali**)

Invention Disclosures

1. A.Singh, Syed Khalid Pasha, **S. Bhansali**, "Thermally stable electrochemical immune sensor with long shelf life".
2. Pandiaraj Manickam and **S. Bhansali**, "Nanostructured molecularly imprinted sensors for direct electrochemical detection of analytes".
3. J. Boone, S.Krishnan, **S. Bhansali**, "Method of manufacturing a through wafer interconnect using 3D micro coax," U.S. Provisional Patent No. 61/670,231, July 2012.
4. S. Krishnan, R. Ratnadurai, **S. Bhansali**, "Method of manufacturing a self-aligned MIM devices," U.S. Provisional Patent No. 61/617,214, March 2012.
5. R.Ratnadurai, S. Krishnan, **S. Bhansali**, "Systems and Methods for forming Contact Definitions," U.S. Provisional Patent No. 61/559,894, November 2011.
6. U.S. Patent Application filed February 2014 - Title: Cryopreservation for whole cell sensors on a chip (**S. Bhansali**, F. Alexander, K. Pimentel)
7. U.S. Patent Application filed February 2014 – Title: Single Use Downstream Protein Quantification on a Microfluidic Chip Bhansali (**S. Bhansali**, F. Alexander, K. Pimentel, M. Nanjundan)

Books

1. Chemical Sensors and MEMS/NEMS, Co-editor, ISBN:1566775108
2. MEMS for Biomedical Applications, Editor, Woodhead Publisher. ISBN:9780857091291
3. Nanobiotechnology for Sensing Application: Laboratory to Field, edited by Ajeet Kaushik. Apple Academic Press. ISBN: 9781771883283

Book Chapters

1. S.K. Pasha, A. H. Jalal, A. Singh, and **S. Bhansali** "Nanobiotechnology for Sensing Applications" in Nanobiotechnology: An Abrupt Merger (Chapter 1)
   From Lab to Field, Editor in Chief: Ajeet Kumar Kaushik, Chandra K. Dixit , Apple Academic Press publication. S.K. Pasha, A.H. Jalal, A. Singh, and **S. Bhansali** "Nanobiotechnology for Sensing Applications" in Nanobiotechnology: An Abrupt Merger (Chapter 1) ISBN: 9781771883283
2. A. Singh, S.K. Pasha, and **S. Bhansali** "Nanobiotechnology for Sensing Applications" in Nanobiotechnology: An Abrupt Merger (Chapter 12) From Lab to Field, Editor in Chief: Ajeet Kumar Kaushik, Chandra K. Dixit , Apple Academic Press publication.) ISBN: 9781771883283
3. A. Vasudev and **S. Bhansali** "Implantable MEMS" in intelligent implantable sensor systems for medical applications Editors: Anderas Inmann and Diana Hodgins, Woodhead Publishing. ISBN:9780857091291
4. P. Sekhar and **S. Bhansali** "Silica Nanowires" in Handbook of Nanotechnology Editor in Chief: Bharat Bhushan, Elsevier Publications. ISBN: 9783642025259
5. D. Price, A.R.A. Rahman and **S. Bhansali** "Characterization of Cancer Cells using Electrical Impedance Spectroscopy"(Chapter 32) in Biosensors and Bio detection Technologies for Cancer Detection, Diagnostics and Research Editors: K.E. Herold and A.Rasooly. ISBN: 9781439841655
6. N. Ramgir and **S. Bhansali** "Porous Silicon Based Hydrogen Sensors" in Science and Technology of Chemiresistor Gas Sensors, Editors: Dinesh K. Aswal et al, Nova Publishers, ISBN: 9781600215148
7. P. Khanna, S. Hoath, R. Smallwood and **S. Bhansali** "The Challenge of Human Skin - Engineering the Biotic/Abiotic Interface" in Smart Biosensors Technology, editors G.K. Knopf and A.S. Bassi, CRC Press, ISBN: 0849337593

Journal Publications

1. P. Manickam, A. Kaushik, C. Karunakaran, **S. Bhansali,** "Recent advances in cytochrome c biosensing technologies", *Biosensors and Bioelectronics*,87, 654-668, 2017.
2. A.H. Jalal, Y. Umasankar, P. J Gonzalez, A. Alfonso, **S. Bhansali,** "Multimodal technique to eliminate humidity interference for specific detection of ethanol", *Biosensors and Bioelectronics*, 87, 522-608, 2017.
3. S. RoyChoudhury, V. Rawat, A.H. Jalal, SN Kale, **S. Bhansali** , "Recent advances in metamaterial split-ring-resonator circuits as biosensors and therapeutic agents" , *Biosensors and Bioelectronics*,86,595-608,2016 .
4. A. Singh, S.K. Pasha, P. Manickam, **S. Bhansali**, "Single-domain antibody based thermally stable electrochemical immunosensor", *Biosensors and Bioelectronics*,83, 162-168, 2016.
5. K. Rincon, P. Shah, J. Ramella-Roman, **S. Bhansali, "**A Review of Engineering Approaches for Lymphedema Detection", *IEEE Reviews in Biomedical Engineering*,9, 79-90, 2016.
6. S. RoyChoudhury, P. Manickam, Y. Umasankar, **S. Bhansali** , "Enzyme Functionalized Metal Nanostructures for Enhanced Electrochemical Detection of Lactate", *ECS Transactions*, 69, 7-15, 2015.
7. P. Manickam, Y. Umasankar, **S. Bhansali**, "Enzyme Functionalized Gold Nanoparticles for the Enhanced Electrochemical Detection of Lactate" *Meeting Abstracts*, 1795-1795, 2015.
8. A. Kaushik, S.K Arya, B.D. Malhotra, **S. Bhansali**, "Organic-Inorganic Hybrid Nanocomposites Based Gas Sensors for Environment Monitoring", *Chemical Reviews*, 115 (11), 4571-4606, 2015.
9. A. Kaushik, A. Yndart, R.D. Jayant, V Sagar, V Atluri, S. Bhansali, M. Nair, "Electrochemical sensing method for poi Znt-of-care cortisol detection in human immunodeficiency virus-infected patients", Int J Nanomedicine, 10, 677-85, 2015.
10. P.K. Vabbina, A. Kaushik, N. Pokhrel, **S. Bhansali**, N. Pala, "Electrochemical cortisol immune sensors based on son chemically synthesized zinc oxide 1D Nano rods and 2D Nano flakes" , *Biosensors and Bioelectronics*, 63, 124–130, 2015.
11. A.F.D. Cruz, N. Norena, A. Kaushik, **S. Bhansali**, "A low-cost miniaturized potentiostat for point-of-care diagnosis", *Biosensors and Bioelectronics*, 62, 249–254, 2014.
12. S.K. Pasha, A. Kaushik, A. Vasudeva, S.A. Snipes, **S. Bhansali**, "Electrochemical Immunosensing of Saliva Cortisol", *J. Electrochem*. Soc, 161 (2), B3077-B3082, 2014.
13. A. Singh, A. Kaushik, R. Kumar, M. Nair, **S. Bhansali**, "Electrochemical Sensing of Cortisol: A Recent Update", *Applied Biochemistry and Biotechnology*, 174 (3), 1115-1126, 2014.
14. A. Singh , R. Ratnadurai, R. Kumar, S. Krishnan, Y. Emirov, **S. Bhansali**, "Fabrication and current–voltage characteristics of NiOx/ZnO based MIIM tunnel diode", *Applied Surface Science*, 334, 197-204, 2015.
15. P.K. Vabbina, A. Kaushik, K. Tracy, **S. Bhansali**, N. Pala, "Zinc oxide nanostructures for electrochemical cortisol biosensing", SPIE Proceedings: Advances in Electrochemical Biosensing Materials and Devices, 9107, 91070U-91070U, 2014.
16. A. Kaushik**,** R. Kumar, E. Huey, **S. Bhansali**, M. Nair, "Silica Nanowires: Growth, Integration and Sensing Applications", *Microchimica Acta***,** 181 (15), 1759-1780, 2014.

17. M. Celestin, S. Krishnan, **S. Bhansali**, E. Stefanakos, D.Y. Goswami , "A review of self-assembled monolayers as potential terahertz frequency tunnel diodes", *Nano Research*, 7 (5), 589-625, 2014.

18. A. Kaushik, A. Vasudev, Sunil K. Arya , S.K. Pasha, **S. Bhansali** , "Recent advances in cortisol sensing technologies for point-of-care application", *Biosensors and Bioelectronics*, 53, 499–512, 2014.

19. M.P. Fievre, Al-Aakhir A. Rogers, **S. Bhansali**, "Effect of beam size, finite number of lines, and rotational misalignment on coupled subwavelength gratings", *Journal of the Optical Society of America A*, 31 (2), 2603-2609, 2014

20. A. Kaushik, A. Vasudev, S. Arya, **S. Bhansali**, "Mediator and label free estimation of stress biomarkers using electrophoretically deposited Ag@AgO-polyaniline hybrid nanocomposite", *Biosensors & Bioelectronics*, 50, 35-41, 2013.

21. K.Luongo, A. Holton, A. Kaushik, P. Spence, Beng Ng, S. Sundram, **S. Bhansali**, " Micro-fluidic Cancer Cell Biochip for Development of Personalize Chemotherapy Strategies using Electrochemical Impedance Spectroscopy" , *Bio microfluidics* 7, 34-108, 2013.

22. S.P. Koiry, M. E. Celestin, R. Ratnadurai, P. Veerender, C. Majumder, S. Krishnan, E. Stefanakos, Y. Goswami, D. K. Aswal, and **S. Bhansali**, "Ferroelectric like characteristics in redox active polymer of 5,10,15,20 tetra(4-hydroxyphenyl)-porphyrin at room temperature", *Applied Physics Letters*, 103 (3), 103-107, 2013.

23. A. Vasudev, A. Kaushik, Y. Tomizawa, N. Norena, **S. Bhansali**, "An LTCC-based microfluidic system for label-free, electrochemical detection of cortisol", *Sensors and Actuators B: Chemical*, 182, 139-146, 2013.

24. J. Boone, S. Krishnan, **S. Bhansali**, "Development of a through wafer 3D vertical micro-coaxial probe", *Journal of Micromechanics and Micro engineering*, 23 (7), 1-7, 2013.

25. F.A. Alexander, M. Celestin, D. Price, M. Nanjundan, **S. Bhansali** ,"Design and validation of a multi-electrode bio impedance system for enhancing spatial resolution of cellular impedance studies", *Analyst*, 138, 3728-3734, 2013.

26. K. Luongo, A. Holton, A. Kaushik, P. Spence, Beng Ng, R. Deschenes, S. Sundaram, **S. Bhansali**, "Microfluidic device for trapping and monitoring three dimensional multi cell spheroids using electrical impedance spectroscopy", *Bio microfluidics* 7 (3), 2013

27. S. Bhatt, ARA. Rahman, SK. Arya, **S. Bhansali**, "Twin-T Oscillator Containing Polymer Coated Parallel Plate Capacitor for Sea Water Salinity Sensing ", *Open Journal of Applied Biosensor*, 2, 57-64, 2013.

28. F.A. Alexander, D.T. Price, **S. Bhansali**, "From Cellular Cultures to Cellular Spheroids: Is Impedance Spectroscopy a Viable Tool for Monitoring Multicellular Spheroid (MCS) Drug Models", *Biomedical Engineering, IEEE Reviews in Biomedical Engineering*, 6, 63-76, 2013.

29. S. Koiry, R. Ratnadurai, S. Krishnan, M. Celestin, **S. Bhansali**, "One-pot, single step, room temperature deposition of gold nanoparticles on PET substrates" *Electrophoresis*, 34 (8), 2013.

30. A. Vasudev, A. Kaushik, K. Jones, **S. Bhansali**, "Prospects of low temperature co-fired ceramic (LTCC) based microfluidic systems for point-of-care bio sensing and environmental sensing", *Microfluidics and Nano fluidics* 14 (3), 683-702, 2013.

31. S. Arya, S. Krishnan, S. Jean, **S. Bhansali**, "Tin Nanoparticles Modified Interdigitated Micro Electrode Based Room Temperature Sensor for Reducing Gases: H_2 and CO", *Chemical Sensors*, 3 (7), 2013.

32. J. Boone, S. Krishnan, **S. Bhansali**," Silicon based microcoaxial vertical interconnect for high frequency packaging technologies", *Progress in Electromagnetic Research B*, 50, 1-17, 2013.

33. K. Luongo, A. Holton, A. Kaushik**,** P. Spence, Beng Ng, R. Deschenes, S.Sundram, **S. Bhansali**, "A Microfluidic Device for Trapping and Monitoring of 3D Multi-Cell Spheroids Using Electrochemical Impedance Spectroscopy" , *Bio microfluidics***,** 7, 2013.

34. A. Kaushik, S. K. Arya, A. Vasudev, **S. Bhansali**, "Recent Advances in Detection of Ochratoxin-A", *Open Journal of Applied Biosensor*, 2, 1-11, 2013.

35. A.K. Gupta, A. Kaushik , P.R. Solanki , C. Dhand , **S. Bhansali**, B. D. Malhotra, "Sol-gel derived SiO_2-CeO_2 nanocomposite films for triglyceride detection", *Journal of Nanoscience Letters*, 4 (8), 1-5, 2013.

36. A.Vasudev, A.Kaushik**, S. Bhansali**, "Electrochemical Immunosensor for label free epidermal growth factor receptor (EGFR) detection"**,** *Biosensors and Bioelectronics*, 39 (1), 300-305, 2013.

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38. S. Koiry, R. Ratnadurai, S. Krishnan, **S. Bhansali**, "High Frequency Clipper Like Behavior of tri-layer Nickel Oxide Stack," *Applied Physics Letters*, 100 (15), 2012.

39. E. Huey, S. Krishnan, S. Arya, A. Dey, **S. Bhansali**, "Optimized growth and integration of silica nanowires into interdigitated microelectrode structures for bio sensing," *Sensors and Actuators B: Chemical*, 175, 29-33, 2012.

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42. A. Kaushik, P.R. Solanki, P.M. Chavhan, **S. Bhansali**, B.D.Malhotra, "Sol-gel derived nanostructured zirconia for cholesterol detection", *Journal of Nanoscience Letters*, 3 (23), 2012.

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44. A. Dey, A. Kaushik**,** S.K. Arya, **S. Bhansali**, "Mediator Free highly sensitive Polyaniline-Gold Hybrid Nanocomposite Based Immunosensor for Prostate-Specific Antigen (PSA) Detection" ,*Journal of Materials Chemistry*, 22, 14763-14772, 2012.

45. S. Arya, S. Krishnan, H. Silva, S. Jean, **S. Bhansali**, "Advances in materials for room temperature hydrogen sensors," *Analyst*, 137, 2743-2756, 2012.

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47. P. Khanna, K. Luongo, B.R. Flam, B. Osborn, J.A. Strom, and **S. Bhansali**, "Skin penetration and fracture strength testing of silicon dioxide micro needles", *Sensors and Actuators A: Physical*, 170 (1-2), 180-186, 2011.

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49. S.K. Arya**, S. Bhansali**, "Anti-prostate specific antigen (anti-PSA) modified interdigitated µ-electrode based impedimetric biosensor for PSA detection", *Biosensors Journal*, 1, 2090-4967, 2011.

50. S.K. Arya and **S. Bhansali**, "Lung cancer and its early detection using biomarkers based biosensors", *Chemical Reviews*, 111 (11), 6783-6809, 2011.

51. E.M. Pérez, S.K. Arya, **S. Bhansali**, "Vapour–liquid–solid grown silica nanowire based electrochemical glucose biosensor", *Analyst*, 136, 1686-1689, 2011.

52. G.Chornokur, S.K. Arya, C. Phelan, R. Tanner and **S. Bhansali**, "Impedance-based miniaturized biosensor for ultrasensitive and fast prostate specific antigen detection", *Journal of Sensors*, 1-8, 2011.

53. Q. Huang, L Wang, T. Dasgupta, L. Zhu, P.K. Sekhar, **S. Bhansali**, Y. An, "Statistical weight kinetics modeling and estimation for silica nanowire growth catalysed by Pd thin film", *IEEE Transactions of Automation Science and Engineering*, 8 (2), 303-310, 2010.

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1. **S. Bhansali**, "Nanotechnology in Automobile Industry – Current Trends and Future Applications, Invited Talk, Second National Conference on Automobile Infotronics, Dec 10-11, 2004, IIT Madras, Chennai, India.

Invited Talks/ Papers

1. M.P. Fievre, Al-Aakhir A. Rogers, **S. Bhansali**, "Integrated Circuit Security: an Overview", JISS, 4(1), 18-37, 2015.
2. **S**. **Bhansali**,"Antibody-Free Electrochemical Detection of Cortisol Using Molecularly Imprinted Polymer" 227th ECS Meeting, May 24-28, 2015.
3. **S. Bhansali**, T.Vokata, P. Roman, A. Singh, A. Gupta, Joong-ho Moon, "Polymer-based Sensor for Continuous Monitoring of Ozone Exposure", on US-Korea Conference (UKC 2014)On Science, Technology, and Entrepreneurship, San Francisco, August 6-9,2014.
4. **S. Bhansali**, "Nanotechnologies, Environmental Sensing and Bioinformatics –The Impending Transformation of Public Health" on Seventh ISSS International Conference on Smart Materials Structures and Systems (ISSS-2014, Bangalore, 8-11 July 2014.
5. **S. Bhansali**, " Hybrid organic-inorganic thin film diodes for R-RAMs", Indo-Japanese Joint Workshop on "Bio molecular Electronics and Organic Nanotechnology Technology for Environment Preservation, Himeji, Japan 7-9 December, 2011
6. **S. Bhansali**, "MEMS for Homeland Security", International NAMIS Autumn School, Neuchâtel, 12-17 September, 2011
7. **S. Bhansali**, S. Krishnan, E. Stefanakos, D. Y.Goswami, " Tunnel Junctions Based Rectenna - A Key To Ultrahigh Efficiency Solar/Thermal Energy Conversion," International Conference On Physics Of Emerging Functional Materials (Pefm-2010), Mumbai, (India), 22–24 September 2010
8. S. Krishnan, Y.Emirov, **S. Bhansali**, E. Stefanakos, "Effects Of Thin Film Non-Linear Devices On Post-Deposition Annealing," Flavs-Fsm 2008, Orlando, Florida, 2008.
9. S. Krishnan, H. La Rosa, **S. Bhansali**, E. Stefanakos, "94 Ghz Millimetre Wave Sensor for Concealed Object Detection," Gordon Research Conferences, Big Sky, Montana, 2007. (Best Poster Award)

10. **S. Bhansali**, "Biosensors and Microfluidics with a "dash" of packaging", International Electronics Packaging Symposium- National Trends in Small Scale Systems and Microelectronics Packaging, GE Research Center Conference Center, July 31, 2007
11. **S. Bhansali** "The role of MEMS and Nanostructures in Marine Environment" ISSS workshop on Recent Advances in Micro and Nanotechnologies, Satish Dhawan Auditorium, Indian Institute of Science, Bangalore Dec 22, 2004
12. **S. Bhansali**, Micro and Nano Technologies in the New World Order: Opportunities and Challenges, Solid State Physics Laboratory, Defense Research and Development Organization, New Delhi, India, January 2, 2003
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14. **S. Bhansali**, MEMS Research at USF, Indian Institute of Technology Madras, India, December 20, 2002
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16. **S. Bhansali**, A Modular Approach For Development Of Miniature Detection Systems, SPIE Conference on Smart Materials Nano-, and Micro-Smart Systems, Melbourne Australia, December 16-18,2002
17. **S. Bhansali** and T. Short, Micro and Nanotechnologies in the Marine Environment- The challenges and opportunities, NSF-Tri-national workshop on Advances in Micro and Nanotechnologies for the Marine Environment, December 12-14,2002
18. **S. Bhansali** Microfluidic Systems – interdisciplinary technology approaches spread the risk, Intensive Tutorial on micro and Nano technologies, Madurai, India December 7-9, 2002
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Conference Papers

1. **S. Bhansali, "**Development and Characterization of Fuel Cell Sensor for Potential Transdermal Ethanol Sensing", *229th ECS Meeting*, 2016.

2. Y. Umasankar, A. H Jalal, P. J Gonzalez, M. Chowdhury, A. Alfonso, **S. Bhansali, "**Wearable alcohol monitoring device with auto-calibration ability for high chemical specificity", *2016 IEEE 13th International Conference on Wearable and Implantable Body Sensor Networks (BSN)*, 2016.
3. K. Denney, A Selcuk Uluagac, K. Akkaya, **S. Bhansali,** "A novel storage covert channel on wearable devices using status bar notifications*", 2016 13th IEEE Annual Consumer Communications & Networking Conference (CCNC)*,2016.

4. V. Misra, B. Lee, P. Manickam, M. Lim, S. K. Pasha, S. Mills, **S. Bhansali, "**Ultra-low power sensing platform for personal health and personal environmental monitoring", *2015 IEEE International Electron Devices Meeting (IEDM)*,2015.

5. P. Roman, X. Chen, W.K. Jones, A. Karbasi, C. M. Newton, T. Bates, J. Denkins, **S. Bhansali,** "Additive Manufacturing Design and Fabrication of Ceramic Cylindrical Ion Trap Mass Analyzer Chips for Miniaturized Mass Spectrometer Smart-Devices*", International Symposium on Microelectronics*,2015.

6. V. Misra, J. Lach, A. Bozkurt, B. Calhoun, S. Datta, O. Oralkan**, S. Bhansali**, M. Ozturk, J.Strohmaier, "Self-powered wearable sensor platforms for wellness", *Proceedings of the 2015 International Conference on Compilers, Architecture and Synthesis for Embedded Systems*,2015.

7. P Vepakomma, D De, SK Das, **S. Bhansa**li, "A-Wristocracy: Deep learning on wrist-worn sensing for recognition of user complex activities" *2015 IEEE 12th International Conference on Wearable and Implantable Body Sensor Networks (BSN)*, September 6, 2015.

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10. P. Manickam, S. Roychoudhury, Y. Umasankar , **S. Bhansali**, "Biosensor device for continuous monitoring of lactate", *2015 Defense Innovation Summit - SBIR/STTR Summit*, Dec 1-3 2015, Austin, Texas, United States.
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12. L.F. Vargas, P.J. Gonzalez, A. Alfonso, S.D.L. Padron, R. Batista, Y. Umasankar, A.H Jalal, **S. Bhansali**, "Wearable Platform for Electrochemical Sensors with Potentiostat Capabilities", *FIU Mcnair research conf.*, October 14-16, 2015
13. Z. M. Llaneras, J. L. Calderon, A.H. Jalal, P. Roman, **S. Bhansali**
, J. Roman, "Integration of Pressure Sensors in a Compression Garment for The Treatment of Hypertrophic Scars", *BMES Annual Meeting*, October 7-10, 2015.
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15. P. Roman, X.Chen, W.K. Jones, A. Karbasi, C.W. Mike, T. Bates, J. Denkins, **S. Bhansali**, "Additive Manufacturing Design and Fabrication of Ceramic Cylindrical Ion Trap Mass Analyzer Chips for Miniaturized Mass Spectrometer Smart-Devices", International Symposium on Microelectronics: FALL 2015, Vol. 2015, No. 1, pp. 000197-000202.
16. P Manickam, SK Pasha, **S. Bhansali**, Meeting Abstracts, 2111-2111 "Antibody-Free Electrochemical Detection of Cortisol Using Molecularly Imprinted Polymer" (May 24-28, 2015).
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18. K. Denny, A. Selcuk Uluagac, K. Akkaya, and **S. Bhansali,** "A Novel Storage Covert Channel on Wearable Devices Using Status Bar Notifications", in the Proceedings of IEEE Consumer Communications and Networking Conference (CCNC) (to appear).

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21. P. Vepakomma; D Debraj, SK Das, **S. Bhansali**, "A-Wristocracy: Deep learning on wrist-worn sensing for recognition of user complex activities", in Wearable and Implantable Body Sensor Networks (BSN), 2015 IEEE 12th International Conference, vol., no., pp.1-6, 9-12 June 2015.
22. S.K. Pasha, R. Kumar, and **S. Bhansali**, "Comparison of Ag and Ag@AgOx Nanoparticle based Electrochemical Cortisol Immunosensors"- 2nd USA International Conference on Surfaces, Coatings and Nanostructured Materials (NANOSMAT-USA).
23. **S. Bhansali**, S.A. Snipes, A.Vasudev, A. Kaushik, "An Automated Electrochemical Immunosensing of Cortisol at Point-of-Care (POC)", 224th ECS Meeting @2013 The Electrochemical Society.
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