Anthony Guiseppi-Elie, Sc.D., FAIMBE
Dow Chemical Professor, Clemson University
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President and Scientific Director, ABTECH Scientific, Inc.
guiseppi@abtechsci.com; +1 (804) 783 7829

Anthony Guiseppi-Elie is the Dow Chemical Professor of Chemical and Biomolecular Engineering, Professor of Bioengineering, Professor of Electrical and Computer Engineering and Director of the Center for Bioelectronics, Biosensors and Biochips (C3B) at Clemson University. He is also President and Scientific Director of ABTECH Scientific, Inc., a near-patient biomedical diagnostics company located in the Biotechnology Research Park, Richmond, Virginia. Dr. Guiseppi earned his Bachelor of Science degree (B.Sc. 1997, First Class Honors) with majors in Analytical Chemistry, Biochemistry and Applied Chemistry from the University of the West Indies (UWI), Jamaica, the Master of Science degree (M.Sc. 1980) in chemical/corrosion engineering from the University of Manchester Institute of Science and Technology (UMIST), England, and the Doctor of Science degree (Sc.D. 1980) in polymer materials science and engineering from the Massachusetts Institute of Technology (MIT). Following postdoctoral work at MIT, Dr. Guiseppi spent 15 years in intrapreneurial and entrepreneurial industrial research and development with such companies as W. R. Grace and Co., Molecular Electronics Corporation, Ohmicron Corporation, and ABTECH Scientific. Tony transitioned to the Academy first as a Visiting Scientist ('95-'96) in Biomedical Engineering in the School of Medicine at Johns Hopkins University before becoming a full Professor of Chemical and Life Science Engineering (1998) and Professor of Emergency Medicine (2000) at Virginia Commonwealth University. His research interests are in **engineered bioanalytical systems in the service of human health and medicine.** Amongst his interests are: bioelectrochemistry and bioelectronic devices, implantable bioactive hydrogels, *in vivo* biosensors for trauma management, and DNA biochips for biomedical diagnostics and prognostics. Dr. Guiseppi-Elie has published over 110 archival scientific papers (1267 citations, h-factor = 19), 31 book or proceedings chapters, holds 8 US and foreign patents, has given in excess of 200 invited lectures/colloquia, and has co-organized and lead 30 national and international scientific workshops, symposia and conferences.

Among his many honors and awards, Dr. Guiseppi holds Distinguished Professorships at the University of the West Indies and the University of Western Cape and has been an Adjunct Professor of Bioengineering at Cornell University and of Materials Science at Penn State University. Dr. Guiseppi is a Guest Editor of the journal *NanoBiotechnology*, is a member of the editorial boards of the *Journal of Bioactive and Compatible Polymers*, *NanoBiotechnology, Applied Biochemistry and Biotechnology* and *Your World* and was recently an inaugural member of the NIH NIBIB Study Section on Biomaterials and Biointerfaces. Prof. Guiseppi-Elie is a frequent reviewer for NIH, NSF and the DoD. In 1999, Prof. Guiseppi was the recipient of the SEAM Award from the Polymer Research Institute at Polytechnic University for his work on "…bio-technical properties and applications of electroactive polymers". He is a recipient of the 2003 "Pioneers in Biomedical Engineering" Lecture Award from Purdue University, a lecturer in the MIT Program in Polymer Science and Technology, and was named a Fellow of the American Institute for Medical and Biological Engineering (2006 FAIMBE). Dr. Guiseppi has been a Principal Investigator (PI) on over $20,000,000 worth of sponsored programs, gifts, and contracts including being PI on a $3,280,000 Grant from the US Department of Defense. Dr. Guiseppi is a senior member of IEEE, a lifetime Member of AIChE and holds memberships in RSC, AAAS, ACS, MRS and BMES. At Clemson University Prof. Guiseppi teaches engineering materials, biotransport, biomolecular engineering, biosensors and bioelectronics, and nanobiotechnology.

EDUCATION:

Visiting Scientist, 1995 – 1996; Department of Biomedical Engineering, School of Medicine, Johns Hopkins University, Baltimore, MD.

Postdoctoral Fellow 1983 (Owens Corning); Polymer Materials Science and Engineering; Massachusetts Institute of Technology (MIT).

Post Doc Topic: Surface chemical modification, functionalization, derivatization and surface energetics of conjugated polymers.

Post Doc Advisor: Prof. Gary E. Wnek

Doctor of Science (Sc.D.) 1980 - 1983;

Polymer Materials Science and Engineering (III);
Massachusetts Institute of Technology (MIT), Cambridge, MA.

Thesis: Synthesis and Characterization of Polyacetylene: 1. Stability of Doped Polyacetylene 2. Surface Chemistry of Polyacetylene

Thesis Advisor: Prof. Gary E. Wnek

Master of Science (M.Sc.) 1979 - 1980;

Corrosion Science and Engineering Program, Chemical Engineering;
University of Manchester Institute of Science and Technology (UMIST), England.

Thesis: Underfilm Corrosion of Coated Mild Steel

Thesis Advisor: Dr. David Scantlebury

Bachelor of Science (B.Sc., Hons. First Class) 1976 - 1979;

Applied Chemistry, Biochemistry, and Analytical Chemistry;
University of The West Indies (UWI), Mona, Jamaica. WI.

Thesis: Thermal Decomposition of Polyethylene

Thesis Advisor: Dr. Dow Maharaj

CONTINUING EDUCATION:

Clemson University, Office of Research Compliance (ORC) Workshops (September 22, 2010)
Session I - Understanding the Concept of "Dual Use Research" and "Dual Use Research of Concern"
Session II - Strategies for Promoting Responsible Research - Dual Use Research
Session III - General Panel Discussion and Audience Q&A on Dual Use Research

Immunological Techniques for Chemists (November 14 - 16, 1988): American Chemical Society Short Course.

Master of Technical Management and Business Administration (M.A.S.) 1984 - 1986 (Candidate, completed 9/18 courses); School of Continuing Studies and Applied Physics Laboratory, Johns Hopkins University (JHU).

Polymer Blends and Alloys (May 28 - 31, 1985): Plastics Institute of America Short Course; Prof. Charles Rogers, Case Western Reserve University.

Transport in Plastics (April 10 - 11, 1984): Plastics Institute of America; Prof. Harold B. Hopfenberg, North Carolina State University.

Industrial Membrane Technology (December 6 - 9, 1983): Center for Professional Advancement, P. O. Box H, New Brunswick, New Jersey.

HONORS AND AWARDS:

2010 Discussion Leader: 2010 Gordon Research Conference (GRC) on "***Electrochemistry***", **January 10-15, 2010.** Four Points Sheraton / Holiday Inn Express, Ventura, CA, USA.

2009 Appointed Member, International Panel of the Higher Education Authority (HEA) of Ireland. *Review of Programme for Research in Third Level Institutions, Cycle 5 Evaluation Process €300MM.* Other members included:

Prof. Tony Cass, Chemical Biology, Deputy Director and Research Director (Bionanotechnology) in the Institute of Biomedical Engineering at Imperial College London.

Dr. Barbara J. de Lateur, Distinguished Service Professor of Physical Medicine and Rehabilitation Lawrence Cardinal Shehan Professor and Director Emerita Joint Professor of Health Policy and Management, School of Hygiene and Public Health, Johns Hopkins University.

Prof. Kenneth A. Marx, Dept of Chemistry, UMass Lowell.

Prof. Philip Blower, School of Medicine, King's College London

2009 Discussion Leader: 2009 Gordon Research Conference (GRC) on ***Biomaterials: Biocompatibility and Tissue Engineering*** "The Engineering of Healing: From Molecular Mediation to Tissue Constructs" **July 19-24, 2009**, Holderness School, Plymouth, NH

2009 Invited Speaker: Symposium B: Nanomaterials for Bioimaging and Biosensing, International Conference on Materials for Advanced Technologies, (ICMAT 2009), Singapore. (June 28th – July 3rd, 2009)

2009 Invited Speaker: Institute for Biological Engineering (IBE 2009), Santa Clara, California, USA.

2009 Colloquium Address: Dept. of Chemical Engineering and Department of Biomedical Engineering, University of Illinois (UIC), Chicago, Illinois, USA. (April 30th, 2009)

2009 Appointed Member, National Academies Panel on Electronics and Electrical Engineering (2009), National Research Council. *"..will assess the scientific and technical work performed by the National Institute of Standards and Technology (NIST) Electronics and Electrical Engineering Laboratory."*

2008 Keynote Speaker: The 13th International Conference on Biomedical Engineering (ICBME2008), Singapore. December 3-6th, 2008.

2008 Profiled in January 2008 issue of *South Carolina Business*, the publication of the South Carolina Chamber of Commerce.

2007 Distinguished Lecture Award for BioNanoMaterials and Biomedical Nanotechnology (December, 2007), Institute of Bioengineering and Nanotechnology, (IBN) Singapore.

2007 Guest Editor: *NanoBiotechnology*

2006 Clemson Board of Trustees Award

2006 Fellow, American Institute of Medical and Biological Engineers

2005 Profiled in January 2005 issue of *Biotechniques* Vol. 38, No. 6 (**2005**) p 843, the journal of Biotechnology.

2005 Keynote address: 2005 Annual General Meeting of the Virginia Space Grant Consortium (VSGC)

2005 Keynote address: 2005 Annual General Meeting of the Richmond Joint Engineers Council (RJEC).

2004 Invited Lecturer in Nanobiotechnology (April 2004), Technology Forum on Nanobiotechnology, US Patent and Trademark Office (USPTO), Washington DC, USA.

2004 Distinguished Lecture in Bioengineering (March 2004), National Security Agency and University of Maryland, College Park, Maryland, USA.

2004-2006 Senior Fellow, Center for the Study of Biological Complexity, Virginia Commonwealth University

2003 Distinguished Lecture in Pioneering Biomedical Research (October 2003), Purdue University, West Lafayette, Indiana, USA.

2003 Distinguished Lecture in Polymer Research (October 2003), Program in Polymer Science and Technology (PPST), Massachusetts Institute of Technology.

1999 1999 SEAM Award "… for taking conductive polymers to biological applications". Herman Mark Polymer Institute, Polytechnic University, Brooklyn, New York.

1995 Invited Lecturer: The First Asia -Pacific Symposium on Biosensors; University of Wollongong: Australia; December 4 - 6, 1995.

1995	Visiting Scientist (06/1995 - 06/1996): Department of Biomedical Engineering, School of Medicine, Johns Hopkins University, Baltimore, MD 21218.
1995	Plenary Lecturer: The XI th Conference of Chemistry and Chemical Engineering; University of the West Indies, St. Augustine: Republic of Trinidad and Tobago; March 6 - 10, 1995.
1993	Adjunct Professor of Materials Science (09/1993 - 06/1995): Department of Materials Science, Polymer Science Program, Penn State University, University Park, PA 16802
1994	Co-chairman, Symposium on Field Responsive Polymers, 35th IUPAC Macro Meeting, Akron, Ohio, 1994.
1996	Fellow, American Institute of Chemists
	Life Member, American Institute of Chemical Engineers (AIChE)
	Life Member, MIT Chapter Sigma Xi.
1979-1980	Commonwealth Postgraduate Scholarship Award to attend the University of Manchester Institute of Science and Technology (UMIST), England.
1980-1983	UWI Postgraduate Scholarship Award to attend the Massachusetts Institute of Science and technology (MIT).
1977-1980	UWI Undergraduate Bursary Award for academic merit.
1975	High school (6th Form) awards for academic merit.

PROFESSIONAL EMPLOYMENT EXPERIENCE:

04/2010 – current	**Department of Electrical and Computer Engineering, College of Engineering and Science, Clemson University, Clemson, South Carolina 29634.**
01/2006 – current	**Dow Chemical Professor.**
01/2006 – current	**Department of Chemical and Biomolecular Engineering; College of Engineering and Science, Clemson University, Clemson, South Carolina 29634.**
01/2006 – current	**Department of Bioengineering; College of Engineering and Science, Clemson University, Clemson, South Carolina 29634.**
01/2006 – current	**Director, Center for Bioelectronics, Biosensors and Biochips, College of Engineering and Science, Clemson University, Clemson, South Carolina 29634.**
08/2000 – 12/2005	**Professor, Emergency Medicine, School of Medicine, Virginia Commonwealth University, Richmond, Virginia 23284.** Serve as a non-clinical faculty member within a newly formed department of

the School of Medicine with focus on the development of sensors for combat casualty care and trauma care, including expired breath sensors and implantable biosensors.

08/1998 – 12/2005 **Professor, Chemical Engineering, School of Engineering, Virginia Commonwealth University, Richmond, Virginia 23284.** The third faculty member hired to build a research -intensive program with a strong focus on personalized attention to undergraduates within an innovative ChE undergraduate curriculum that emphasized chemical engineering at the intersection with the life sciences. ABTET 2000 accredited. Introduced bioengineering and biotechnology to UG ChEs, Biosensors and Bioelectronics, Biomedical Nanotechnology, and a Graduate Seminar to the graduate curriculum.

03/1987 current **Founder, President and Scientific Director, ABTECH Scientific, Inc., P.O. Bo x 376, Yardley, Pennsylvania 19067, USA.** Contracts Management; Research Management; Product Development and Registration; Strategic Planning; Technology Transfer; Patent Disclosures and Filing -- In the fields of biomedical diagnostics and near-patient drug monitoring.

06/1995 - 06/1996: **Visiting Scientist, Department of Biomedical Engineering, School of Medicine, Johns Hopkins University, Baltimore, MD 21218.** Research on *in vivo* biosensors, polymer hydrogels, microanalytical devices, cell culture-based biosensors.

09/1993 - 06/1995: **Adjunct Professor of Materials Science, Department of Materials Science, Penn State University, University Park, PA 16802.** Performed research on electroconductive polymer thin (10 - 2,000Å) films. Applications of Spectroscopic Ellipsometry (SE), Polarized Light FTIR (PL -FTIR), Electrochemical Impedance Spectroscopy (EIS), Cyclic Voltammetry and Differential Pulse Polarography, and Forward Recoil Energy Loss Spectrometry (FRES) to the study of polypyrrole and its electropolymerized copolymers with 3 -(1-pyrrolyl)propionic acid.

04/1987 to 09/1987 **Director of Research, Ohmicron Corporation, 108 West Franklin Avenue, Pennington, New Jersey 08534, USA.** Research Management; Business and Technical Proposal Preparation; Technical Reporting.

07/1986 to 03/1987 **Applications Specialist, Molecular Electronics Corporation Torrance, California 90503, USA.** Product/Process Development, Technology Transfer, Marketing, Technical Project Management.

09/1983 to 06/1986 **Research Engineer, Research Division, W. R. Grace & Co., Columbia, Maryland 21044, USA.** Technical Project Management, Research Project Leader, Research Supervision.

05/'83 to 09/'83 **Postdoctoral Associate (Owens Corning), Department of Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts 01239.**

09/'80 to 05/'83 **Research Assistant, Department of Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts 01239.**

PROFESSIONAL ACTIVITIES AND SERVICE:

2009- Member, Committee on Underrepresented Minorities (CURM), American Institute for Medical and Biological Engineering (AIMBE).

2008- Member, Industry Council, American Institute for Medical and Biological Engineering (AIMBE).

2010 Strategic Planning Consultant, National Institute of Standards and Technology (NIST), Semiconductor Electronics Division (SED), Program in Bioelectronics. Gaithersburg, Maryland, USA. May 6-10th, 2010.

2009 Appointed Member, International Panel of the Higher Education Authority (HEA) of Ireland. *Review of Programme for Research in Third Level Institutions, Cycle 5 Evaluation Process €300MM.* Other members included:

Session Chair and Organizer, Biosensors Symposium, Institute for Biological Engineering (IBE) Annual Conference (2009). March 19-21, 2009, Santa Clara Marriott, Santa Clara, CA, USA.

Guest Editor, 2008-2009, *NanoBiotechnology*

Member (2009), National Academies Panel on Electronics and Electrical Engineering, National Research Council Board on Assessment. . *"..will assess the scientific and technical work performed by the National Institute of Standards and Technology (NIST) Electronics and Electrical Engineering Laboratory."*

Program Committee, Program Chair and Liaison to the College of Fellows, Industry Council, 2009 American Institute for Medical and Biological Engineering (AIMBE) Annual Meeting. February 2009, Washington, DC.

Program Chair and Liaison to the College of Fellows, Industry Council, 2008 American Institute for Medical and Biological Engineering (AIMBE) Annual Meeting, Washington, DC.

Guest Editor, 2007-2008, *NanoBiotechnology*

Member, Board of Directors, National EPSCoR/IDeA Foundation, 101 Constitution Avenue, NW, Suite 650 East Washington, DC 20001

Member, External Technical Advisory Board, West Virginia Research Infrastructure Program "*Next Generation Biometrics: Achieving Strength in Molecular Recognition and Transport"*.

Member, Editorial Advisory Board, *Applied Biochemistry and Biotechnology* (2010 - Current); Springer-Humana Press

Member, Editorial Advisory Board, *Journal of Bioactive and Compatible Polymers* (2002-Current); SAGE Publications

Founding Member, Editorial Advisory Board, *NanoBiotechnology* (2004 - Current); Springer-Humana Press

Member, Editorial Advisory Board, *Your World: Biotechnology and You* (2000 - Current); Biotechnology Institute

NIH Reviewer:

1. TMM DoD Study Section on Combat Casualty Care
2. NIH NIBIB Study Section on Biomaterials and Biointerfaces (2004 – 2008).
3. NIH Biophysical and Chemical Sciences Fellowship Panel ZRG1 F04A. July 15-16, 2004.
4. NIH Scientific Conferences Panel R13. July 13, 2004.
5. NIH Biophysical and Chemical Sciences Fellowship Panel ZRG1 F04A. March 11-12, 2004.
6. NIH Special Emphasis Panel: RFA DE02-002, "Development of Technologies for Saliva/Oral Based Diagnostics". July 18th ad 19th, 2002.
7. NIH Biophysical and Chemical Sciences Fellowship Panel ZRG1 F02A Fellowship Panel Review. March 2002.

NSF Reviewer:

1. NSF Science and Technology Center (NSF STC) Site Visit Review (2008). **The Nanobiotechnology Center (NBTC)**, Cornell University, Ithaca, NY. Site Review Report NSF Science and Technology Center, Nanobiotechnology Center (NBTC), Cornell University, Ithaca, NY. March 17-18, 2008.
2. NSF IGERT Panel Review, 2007. Review of NSF IGERT proposals for 2008.
3. NSF EPSCoR Site Visit Review (2005): **The Center for Molecular Biometrics*: Achieving Strength in Molecular Recognition and Transport***, West Virginia University, PO Box 6201, Morgantown, West Virginia 26506. Site Visit Review and Report. August 8-9, 2005.
4. NSF NSEC Site Visit Review: **The Center for Biological and Environmental Nanotechnology (CBEN)**, Rice University, 6100 Main, Houston, TX 77005, USA. Fifth Year Site Visit Report. June 19-20, 2005.
5. NSF NSEC Site Visit Review: **Center for Biologically-Enabled Advanced Materials and Micro/nanodevices (BEAM2),** Georgia Institute of Technology, Atlanta, GA 60208. Site Visit Review and Report. October 20 -21, 2004.

6. NSF SBIR/STTR Program on Biochips, 2004.
7. NSF NSEC Site Review: **Institute for Nanotechnology**, Northwestern University, Evanston, IL 60208. First Year Site Visit Report. April 17-18, 2002.
8. NSF SBIR/STTR Program on Biochips, 2002.
9. NSF ADVANCE Program for Increasing the Participation and Advancement of Women in Academic Science and Engineering Careers NSF 01-69: July, 2001
10. NSF Career Awards Panel Review Chemistry of Materials; November 2001
11. NSF EGRC Site Review: **Particle Science Center**, University of Florida, Gainesville, Florida.
12. NSF IUCRC Site Visit Team (1999) **– Center for Industrial Sensors and Measurements (CISM)**, Ohio State University. Site visit and Review and Report. (April and November 1999)

Other Professional Activities:

1. Member, International Organizing Committee, **Macro 2010 Frontiers of Polymers & Advanced Materials**, Indian Institute of Technology, Delhi & The Society for Polymer Science, India Habitat Centre, New Delhi, India. December 15 - 17, 2010
2. Member, International Organizing Committee, **5th IUPAC-Sponsored International Symposium on Macro- and Supramolecular Architectures and Materials (MAM-10) New Science & Technologies for the Improvement of Human Living Standards.** Sunset Jamaica Grande Resort and Spa, Montego Bay (Ocho Rios), Jamaica. August 15-20, 2010.
3. Member, International Organizing Committee, **Macro 2009 Recent Advances in Polymer Materials**. Indian Institute of Technology Madras, Chennai, India. March 9-11, 2009
4. Member, International Organizing Committee, **13th International Symposium on Macromolecular-Metal Complexes (MMC-13)**. Termas de Chillán, Concepción, Chile. November, 15-18, 2009.
5. Member, International Organizing Committee, **4th IUPAC International Symposium on Macro- and Supramolecular Architectures and Materials (MAM-8).** Düsseldorf, Germany. September 9-11, 2008. **http://www. uni-duesseldorf.de/MAM-08.**
6. Member, International Organizing Committee **12th International Symposium on Macromolecular-Metal Complexes (MMC-12)**. Fukuoka, Japan August 27-31, 2007. http://www.ed.yama.tus.ac.jp/~mmc-12/
7. Organizing Co-Chairman and Track Chair, ACS-IUPAC Conference on "**Macromolecules for a Sustainable, Safe and Healthy World"**, Brooklyn, New York, USA. June 10 - 13, 2007
8. Organizer and Chairman, ACS Symposium on "**Polymers in Biosensors and Biochips: Diagnostic Tools and Assays**" 232nd National American Chemical Society Meeting, San Francisco, CA, USA. September 10-14, 2006.
9. Member, International Organizing Committee **11th International Symposium on Macromolecular-Metal Complexes (MMC-11)**. Grand Hotel Golf, Tirrenia (Pisa), Italy, 10-13 September 10-13, 2005.

10. Member Executive Committee (1998 – 2005), Sate of South Carolina EPSCoR Program. State of South Carolina EPSCOR Program Review.
11. Third World Academy of Sciences and Third World Network of Scientific Organizations
12. Session Chair and Member of the Local Organizing Committee, **International Conference on Nanostructured Materials and Interfaces (ISCANA '03)**, Virginia Commonwealth University, Richmond, Virginia. October 2003.
13. Session Chair and Co-Organizer, Biosensors Track, The World Congress on Medical Physics and Biomedical Engineering, 24 – 29 August 2003, Sydney Convention & Exhibition Centre, Sydney, Australia.
14. Co-organizer and Co-chair, **BioChips 2002**, Virginia Commonwealth University, Richmond, VA. April, 2002.
15. Co-organizer and Co-chair, **BioChips 2001**, Polytechnic University, Brooklyn, NY. March 12-13, 2001.
16. Co-organizer, Symposium on "**Macromolecular Assemblies for Optical and Electronic Applications"** POLY-PMSE Divisions, ACS National Meeting, Chicago, August 26 – 31, 2001.
17. Co-organizer and Co-chair Symposium on "**Electrically Conducting Polymer Complexes, 9th International Symposium on Macromolecular-Metal Complexes (MMC9)"** Herman F. Mark Polymer Institute, Polytechnic University, Brooklyn, NY USA August 19 - 23, 2001.
18. Chairman and Organizer, ACS PMSE Symposium on **"Transducer-active Polymers"** 2000 (Fall ACS National Meeting, Washington DC).
19. Session Chair and Member of the Local Organizing Committee, International Conference on Nanostructured Materials and Interfaces (ISCANI '99), Virginia Commonwealth University, Richmond, Virginia. October 1999.
20. Chair and Organizer, Virginia Biotechnology Association (VBA) Workshop on **"Bioelectronics, Biosensors and Biochips".** October, 1998.
21. Member, Board of Directors and Chairman, Scientific Advisory Board, ABTECH Scientific, Inc. (ABTECH), (1995 - current).
22. Member, Board of Directors and Chairman, Scientific Advisory Board, Allage Associates, Inc. (AAI), (1987 - 1994).
23. Member, AAAS Host Committee, AAAS 150t h Anniversary Meeting, Philadelphia, PA. (1998)
24. Chairman and Organizer, ACS PMSE Symposium on **"Transducer-active Polymers"** 1994 (Fall ACS National Meeting, Washington DC).
25. Member, Executive Committee, Pennsylvania Biotechnology Association (PBA) (1993).
26. Member, Board of Directors, Bioprocess Resource Center (BRC), The Pennsylvania State University and Biotechnology Institute (1992 - 1997).
27. Chairman, Education Committee, Pennsylvania Biotechnology Association (1992 - 1993) Member, Education Committee, Pennsylvania Biotechnology Association (1990 - 1994) Reviewer of Journals: *Chemistry of Materials, Petroleum Research Fund, Langmuir, Analytical Chemistry, Biosensors and Bioelectronics, JACS, Nanotechnology, and*

Biomacromolecules. Reviewer of Other Publications: *Richmond Times Dispatch (2002), Marcel Dekker (2002).*

MEMBERSHIPS:

Fellow, American Institute of Medical and Biological Engineering (FAIMBE)

Life Member, American Institute of Chemical Engineers (AIChE)

Senior Member, IEEE Engineering in Medicine and Biology Society (IEEE-EMBS)

Member, Biomedical Engineering Society (BMES)

Member, Materials Research Society (MRS)

Member, American Chemical Society (ACS)

Division of Polymer Chemistry (POLY)

Division of Polymer Materials Science and Engineering (PMSE)

Division of Colloid and Surface Chemistry (COLL)

Member, American Association for the Advancement of Science (AAAS).

Life Member, Sigma Xi

CIVIC ACTIVITIES

Member (2009), An Med Ambassador's Panel, Anderson, SC

Member (2006 – 2008), Board of Directors, EPSCoR Foundation Board.

Member (2002 – 2006), Advisory Council, Biotechnology Research Park, Richmond, Virginia.

Councilor (2002 – 2006), Hope Church at Freedom House, Richmond, Virginia.

High School Science Mentor (1994 – current). Pennsbury School District, Pennsylvania, (1994 - 1998); Richmond Public Schools (1998 – 2005).

Member (1996), Organizing Committee on Health Care Delivery, Congressman Curt Weldon Working Group.

Member (1992 - 1998), Board of Directors, Bioprocessing Resource Center, Penn State University.

Member (1993 - 1995), Board of Directors, Alliance for Science Education

Member (1993 - 1994), Industry Resource Counsel, Temple University's Learning City Project

Member (1993-1995), Prine-Annenberg-Connaly Committee on Secondary

Science Education.

Member (1990 – 1998), MIT Club of Princeton Vice President (1992 - 93); Board of Governors (1994 - 1995).

TEACHING

Graduate Level

Biological Transport Phenomena, 3 credits (BMOLE 403/ 603 3(3,0))

BMOLE 403-603 is a required course in the BMOLE concentration and provides a measure of rigor not found in the traditional CHE program. This course is required of all Chemical and Biomolecular Engineering students who have selected the Biomolecular Engineering concentration. This course introduces analyses of single and multidimensional steady-state and transient problems in momentum, mass, and energy transfer in biological systems. Mathematical similarities and differences in these mechanisms are stressed, and mathematical descriptions of physiological and engineering systems are formulated. *Preq:* CH E 330, MTHSC 208.
Biotransport involving mass transfer (diffusive or convective) with and without associated chemical reactions is an integral part of chemical, biochemical and biomedical engineering. Transport phenomena is central in the analysis of biological systems at the molecular, cellular and organ levels as well in the design of drug releasing devices (stents, patches, etc.) and bioartificial organs (pancreas, liver, etc.). The focus of this course will be the development of the module in momentum, mass and energy transfer with reaction processes in physiological systems and biomedical devices – for the core Biomolecular Engineering (BMOLE) curriculum within the Chemical and Biomolecular Engineering (ChBE) Department. Specifically, the course demonstrates mass transfer fundamentals in the context of and primarily through biological and biomedical engineering examples, particularly, including relevant research examples from the biomedical engineering literature. In this way, students gain a deeper appreciation for the underlying mass transfer principles in the relevant literature. The goal is for the students to be able to identify these underlying principles and successfully apply them in their own problem solving.

Biosensors and Bioelectronics, 3 credits (ENGR 645, ChBE 845, BMOLE 426/626, BMOLE 810 3(3,0))
This course provides the advanced student with detailed methods and procedures used in the design, fabrication and application of biosensors and bioelectronic devices to problems in environmental, medical and industrial process monitoring. This courses features: i) The fundamentals of measurement science are applied to optical, electrochemical, mass, and thermal means of signal transduction. ii) The fundamentals of surface science, bioimmobilization, molecular recognition, and non-specific interactions of enzymes, antibodies and DNA at surfaces are applied to biorecognition. iii) Fundamental analytical methods for coupled transport with reaction and numerical models are developed and applied to biological reactions at surfaces. Advanced statistical analysis and digital signal processing techniques are introduced to data capture and analysis including the use of principal component analysis (PCA) and advanced neural networks (ANN) in data analysis and presentation.

Nanobiotechnology: Biomedical Nanoscience and Nanotechnology, 3 credits (ENGR 491, ChBE 845 3(3,0))
This course introduces the principles and concepts related to structures and phenomena on the scale of 10 – 100 nanometers. This includes attention to the thermodynamics and kinetics of spontaneous assembly, the fundamental forces between atoms and molecules and the scaling of materials properties with area to volume ratio. Examples of biomedical nanostructures discussed include; lipid bi-layers, DNA structures, the extra cellular matrix (ECM), ion channels proteins, the mitochondrial electron transfer chain and ATPase.

Biomolecular Engineering, 3 credits (BMOLE 425/ 625 3(3,0))

BMOLE 425-625 is an elective course for all Chemical and Biomolecular Engineering students and an anchoring course for those ChBE students who have selected the Biomolecular Engineering concentration. Biomolecular engineering is the purposeful manipulation of biological molecules and bioprocesses. This course introduces basic concepts and principles of biomolecular engineering to problems and issues in the life sciences, biotechnology and medicine. Topics include carbohydrates, proteins, nucleic acids and lipids with emphasis on the relation between structure, properties and function. Special attention is given to the thermodynamics and kinetics of molecular recognition in enzymes, antibodies, DNA hybridization and bio-immobilization. Attention also given to the rudiments of engineered biomolecules in cell signaling and growth kinetics, biochemical pathway engineering and bioreactor engineering. Specific topics covered include bioconjugations, bioimmobilizations, ELISAs, phage display, PCR, and DNA Microarrays.

Undergraduate Level

Engineering Materials (**CH E 319 3(3,0))**

Introduction to the fundamental properties and behavior of engineering materials, with attention to polymers, metals, electronic materials, ceramics, and composite materials and with emphasis on covering atomic and molecular, morphological and structural contributions to electrical, mechanical and optical properties of materials.

Bioengineering, 3 credits (EGRC 325)

A year-3 level introductory and survey level course that addresses the elementary concepts and principles of biochemical engineering and biotechnology for all chemical engineering students and for those who have selected the biotechnology concentration in chemical engineering. This course introduces concepts and principles of chemical engineering to problems and issues in the life sciences, biotechnology and medicine. Students apply heat and mass transfer concepts, separations, and controls to topics that include; clinical diagnostics; bioanalytical instrumentation, biosensors and biochips; bioprocess engineering including fermentation, biochemical pathway engineering, protein folding and aggregation, bioreactors and tissue engineering.

Unit Operations Laboratory, 2 credits (EGRC 410)

Year 4 introduction to the unit operations of chemical engineering – a 2-credit, six–contact-hours, laboratory-based course that introduces the units of operations in chemical engineering. Prof. Guiseppi-Elie revolutionized this course by introducing units on bioseparations (ultrafiltration and electrophoresis) of proteins, fermentation, bio-reactor performance, and cell culture.

Materials Chemistry, 3 credits (ENGR 122)

A year 1/year 2 level introduction to materials science and engineering covering atomic and molecular, morphological and structural contributions to electrical, mechanical and optical properties of materials, and introduction to the concepts of corrosion and semiconductor devices. Funded by the National Science Foundation, the development of this course emphasized the relationship between design and materials selection.

Freshman Honors Seminar, 1 credit (HONR 190)

A year 1 course that introduces a select group of engineering students, the Engineering Scholars, to the principles and expectations of leadership, teamwork, technical communication, and interdisciplinary required to achieve excellence in engineering. Students read and critique a novel with an engineering or technology position, write a learning plan, and make a technical presentation on a subject of their choice.

Chemical Engineering Tools: Introduction to Chemical and Biomolecular Engineering, 3 credits (ChBE 130) (3(3,0))
A year 1 course that introduces a select group of engineering students, the Engineering Scholars, to the principles and expectations of leadership, teamwork, technical communication, and interdisciplinary required to achieve excellence in engineering. Students read and critique a novel with an engineering or technology position, write a learning plan, and make a technical presentation on a subject of their choice.

VCU Life Sciences, 3 credits (LFSC 101)
A survey style introduction to contemporary topics in life sciences presented by research faculty. Contributed 1 week.

RESEARCH GRANTS RECEIVED

Teaching Scholarship:

$ 40,000.00 Camille and Henry Dreyfus Foundation (SoE Grant 99-0053-00) (*with Samy El Shall*) "Nanostructured materials and technology Across the Undergraduate Science and Engineering Curriculum"

$ 78,641.00 National Science Foundation (SoE Grant 99-0116-00) (*with Mark Palmer and Robert Pearson*) "Development of an Innovative Materials Science Course for Engineers"

$ 3,069.00 National Science Foundation ATE /J. Sargeant Reynolds (SoE Grant 99-0086-00) (*with Gary Wnek, George Flowers, Debbie Fisher, Roland Moore*)

"Planning Project for Advanced Technology Education for Merging Microtechnologies: The Microchip and the Biochip"

Engineering Research Scholarship:

ACTIVE GRANTS

ACTIVE

$1,600,018/1yr. "Feasibility Studies in Development of a Temporary Implantable Lactate Sensor Biochip for Monitoring During Hemorrhage", U.S. Army Medical Research and Material Command (USAMRMC). Grant Number: PR 023081. Contract Number: DAMD 17-03-1-0172. Total Award Period Covered: 03/07 - 04/08. Support: Cal: 0 Acad: 0 Sumr: 3.0

COMPLETED GRANTS

CLOSED

$15,903.00/1yr. "Review of Photocatalytic Oxidation" SPX Marley Engineered Products. Grant Number: Contract Number: 2006538 Total Award Period Covered: 02.01/2008 to 01/31/2009. Support: Cal: 0 Acad: 0 Sumr: 1.0

CLOSED

$ 120,658/1yr. "Acquisition of Metal Deposition Equipment for Integrated Electroactive Sensors, Nanostructures and Biotechnology Research and Training" (Atkinson, PI). National Science Foundation (NSF). Total Award Period Covered: 09/04 - 08/05. Support: Cal: 0 Acad: 0 Sumr: 0

CLOSED

$76,995.00/1yr. "Viability Assays for Monitoring Decontamination of Pathogenic Bacteria" Luna Innovations, Inc. Subcontract No. ARM-2T-1027/489-VCU, Prime Contract No. DAAD19-03-C-0115. Project No. ARM-2T-1027/489 Total Award Period Covered: 10/03 - 06/04. Support: Cal: 0 Acad: 0 Sumr: 0

CLOSED

$ 3,000,000/3yr. "Cancer Genomics & Development of Diagnostic Tools & Therapies", Commonwealth Technologies Research Fund (CTRF), Virginia Department of Planning & Budget Grant Number: SE2002-02. (Co-PI; M.Torr, P.I.) Total Award Period Covered: 07/01 - 12/04. Support: Cal: 4.25 Acad: 2.25 Sumr: 2.0

CLOSED

$2,849,627/3yr. "Feasibility Studies in Development of a Temporary Implantable Lactate Sensor Biochip for Monitoring During Hemorrhage", U.S. Army Medical Research and Material Command (USAMRMC). Grant Number: PR 023081. Contract Number: DAMD 17-03-1-0172. Total Award Period Covered: 03/03 - 04/06. Support: Cal: 5.97 Acad: 2.97 Sumr: 3.0

CLOSED

$150,000.00/5yr. Subscription to the Center for Bioelectronics, Biosensors, and Biochips. Dow Corning Corporation (DCC). Total Award Period Covered: 07/01 - 06/06. Support: Cal: 0 Acad: 0 Sumr: 0

CLOSED

$150,000.00/5yr. Subscription to the Center for Bioelectronics, Biosensors, and Biochips. Technovation, Inc. Total Award Period Covered: 07/01 - 06/06

Support: Support: Cal: 0 Acad: 0 Sumr: 0

CLOSED

$150,000.00/5yr. Subscription to the Center for Bioelectronics, Biosensors, and Biochips. Invensys Controls, Inc. Total Award Period Covered: 07/01 - 06/06

Support: Support: Cal: 0 Acad: 0 Sumr: 0

CLOSED

$150,000.00/5yr. Subscription to the Center for Bioelectronics, Biosensors, and Biochips. Philip Morris USA Total Award Period Covered: 07/01 - 06/06

Support: Support: Cal: 0 Acad: 0 Sumr: 0

CLOSED

$150,000.00/5yr. Subscription to the Center for Bioelectronics, Biosensors, and Biochips. Luna Innovations, Inc. Total Award Period Covered: 07/01 - 06/06. Support: Support: Cal: 0 Acad: 0 Sumr: 0

CLOSED

$125,000.00 "Acquisition of Metal Deposition Equipment for Integrated Electroactive Sensors, Nanostructures and Biotechnology Research and Training (CoPI, Atkinson, PI). National Science Foundation. Total Award Period Covered: 09/04 - 08/05. Support: Cal: 0 Acad: 0 Sumr: 0

$17,000.00 "Dendrimer Coated Long-Period-Grating Biosensors". Luna Innovations, Inc. Total Award Period Covered: 10/03 - 06/04. Support: Cal: 0 Acad: 0 Sumr: 0

$ 25,000.00 Virginia Center for Innovative Technology (VA CIT) BIO- 99-010 " Feasibility for a Center for Bioelectronics, Biosensors and Biochips" 1999 - 2000.

$ 1,000.00 Materials Research Society (MRS) Undergraduate Research Award. 1999-2000. *With undergraduate student, Kerrianne Cullen.*

$ 104,400.00 National Science Foundation (NSF-NATO) DGE-9902567 "Impedimetric Investigation of DNA Hybridization: Towards Rapid On-site, DNA Diagnostics". 1999 – 2001. *With and for postdoctoral associate, Dr. Marin Gheorghe, Romania.*

$ 2,5000,000.00/3yrs Defense Advanced Projects Agency – Technology Reinvestment Program DARPATRP/ ONR Agreement Number: NOOO14-95-2-0008 "Volatile Organic Compound (VOC) Sensors: Communications, Processing and Display". 1995 – 1998.

$ 52,000.00 Ben Franklin Technology Center (Similar to VA CIT) 90S.2055R-2 "A Blood Metabolite Analyzer". 1991 - 1992

$ 89,406.00 Ben Franklin Technology Center (Similar to VA CIT) 90S.2055R-2 "Electroactive Polymer Biosensor Device". 1989 - 1991.

UNIVERSITY SERVICE

2007 – current. Clemson University Research Council (member). Convened under the Vice President for Research and Economic Development, this committee oversees the

University's research policies, practices and strategies including intellectual property policies, practices and assets.

2007- 2010. Clemson University Intellectual Property Committee (member). This committee establishes and oversees the University's intellectual property policies, practices and assets.

2002-2003 Search Committee (member) Office of the Provost. Chaired by then Provost Rodrick McDavis this committee undertook to define the position requirements, develop the national advertising campaign, and pursue the recruitment of a new director for the VCU Honors Program. (Dr. Timothy Hulsey, Director, VCU Honors Program.)

2002-2003 Search Committee (member) Office of the Provost. Chaired by the Dean of the VCU School of Business, Dr. Michael Sesnowitz, this committee undertook to define the position requirements, develop the national advertising campaign, and pursue the recruitment of a new finance director for the Office of the Provost. (Ms. Teresa A. Atkinson, Associate Vice Provost for Finance.)

2001-2002 International Program Committee Chaired by Dean of the College of Humanities and Science and now interim Provost and Vice president for Academic Affairs, Stephen D. Gottfredson, this Committee undertook a review of the International Education Program and International Education Office of Virginia Commonwealth University and made recommendations on strategies and practices to improve performance of the IEP/IEO.

2000-2003 Internal Executive Committee of VCU Life Sciences (member). Chaired by Vice Provost, Thomas (Tom) Huff, this Committee provided broad strategic direction for the development and implementation of President Trani's vision for VCU Life Sciences, an integrating and integrative set of programs, facilities and faculty bridging the Academic and Medical Center campuses of Virginia Commonwealth University.

2000-2001 Ad-Hoc Committee on the VCU Honors Program (member) Chaired by Provost Roderick McDavis, this Committee reviewed internal and external reports and made recommendations on strategic directions for the Honors Program at Virginia Commonwealth University.

1999 Life Sciences Implementation Task Force (member). Chaired by Dean of the College of Humanities and Science, Dr. Stephen D. Gottfredson, this Task Force studied the findings of Life Sciences Task Force and made recommendations to the President on tactical implementation of the recommendations of the Life Sciences Task Force.

1999-2003 Promotion and Tenure Policy Review Committee (member) Presided, at the University level, in a comprehensive and thorough review of promotion and tenure policies and practices in all the schools and departments of Virginia Commonwealth University. Prof,. Guiseppi-Elie held specific responsibilities for the College of Humanities and Sciences and the School of Pharmacy.

1998-2001 Clinical Trials Review Committee (member). Provided technical and policy review of all clinical trials proposed within the VCU Medical Center and Health Science System.

COLLEGE OF ENGINEERING AND SCIENCE

2009 - current. Honors and Awards Committee (member), CoES, Clemson University. This committee, under a Chair appointed by the Dean, makes all college level awards for convocation and organizes the awards ceremony.

2007 - 2008. Lee and Marshall College Facilities Planning Committee (member), CoES, Clemson University. This committee, under the Dean, served to define the contributions of the CoES to the master plan at Clemson University.

2007 - 2008. Search Committee (member), Department of Electrical and Computer Engineering (ECE), CoES, Clemson University. This committee undertook to define the position requirements, develop the national advertising campaign, and pursue the recruitment of a new hire in bioelectronics in the Department of Electrical and Computer Engineering (ECE) at Clemson University.

2006 - 2007. Search Committee (member), Chair, Department of Chemistry, CoES, Clemson University. This committee undertook to define the position requirements, develop the national advertising campaign, and pursue the recruitment of a new Chair for the Department of Chemistry at Clemson University.

1998 – 2004: Member, Dean's Cabinet and Center Director, VCU

As Director, Center for Bioelectronics Biosensors and Biochips, Prof. Guiseppi-Elie serves as a member of the Dean's Cabinet. The Dean's Cabinet presides over the administration and management of the School of Engineering.

1998 – 2005: Honors Council (member), School of Engineering Representative , VCU

Provide strategic and programming guidance to the VCU Honors Program, review the dossiers of prospective honors graduates, review honors scholarship applications and provide honors advising within the School of Engineering.

2000 - 2004: Honor System Coordinator, School of Engineering, VCU

Administer school-level coordination of the VCU honor system, including hearing and resolving violations of the University's Honor System within the School of Engineering.

2001 - 2004: Graduate Program Committee (member), School of Engineering, VCU

Chaired by the Assistant Dean for Graduate Studies, the Graduate Program Committee establishes polices, courses and graduation guidelines for students of the graduate programs in Engineering and Biomedical Engineering.

2003 - 2004: Virginia Microelectronics Center Safety Committee (Chair), VCU

Preside over policies, practices, and training related to safety within the Wright Virginia Microelectronics Center.

2004: Tenure Committee (member) Mechanical Engineering, VCU

Tenure committee for Prof. Ramana Pidaparti (Full Professor), Department of Mechanical Engineering, School of Engineering at Virginia Commonwealth University.

S2003, S2004: Director, School of Engineering Seminar Series, VCU

Organize and Chair a series of lectures from engineering faculty and external presenters.

2003-2004: Search Committee (member) Mechanical Engineering, VCU

Identified and recruited three new faculty members to the Department of Mechanical Engineering, School of Engineering at Virginia Commonwealth University: Dr. Simion Ochi (Instructor), Dr. P. Worth Longest (Assistant Professor) and Prof. Ramana Pidaparti (Full Professor).

DEPARTMENT OF CHEMICAL ENGINEERING SERVICE

2008-current: Nominations Committee (Member), Chemical and Biomolecular Engineering Department, Clemson University.

2008-current: Library Committee (Member), Chemical and Biomolecular Engineering Department, Clemson University.

2008 -current: Undergraduate Committee, Chemical and Biomolecular Engineering Department, Clemson University.

2008 -current: Awards and Honors Committee, Chemical and Biomolecular Engineering Department, Clemson University.

2006-2009: Tenure and Promotion Review Committee (Member), Chemical and Biomolecular Engineering Department, Clemson University.

Participate in peer review and evaluation of candidates for tenure and promotion.

2006-2008: Graduate Program Committee (Member), Chemical and Biomolecular Engineering Department, Clemson University.

Recruit junior faculty in the biomolecular or biological engineering area.

2006-2007: Search Committee (Chair), Chemical and Biomolecular Engineering Department, Clemson University.

Recruit junior faculty in the biomolecular or biological engineering area.

2006: Strategic Planning Committee (Chair), Chemical and Biomolecular Engineering Department.

Develop a strategic plan and set of goals for the department.

2005: Search Committee (member), Chemical and Life Sciences Department.

Recruit junior faculty in the biomolecular engineering and biological engineering area.

2000 – 2004: Mentor to Biotechnology Program, Governor's School of Biotechnology.

Provide on-site guest lectures to the program, serve as an external reviewer and provide annual tours of the Center for Bioelectronics, Biosensors and Biochips to approximately 25 grade 11-12 high school students.

2000 – 2003: Dean's High School Adoption Program

Adopted: St. Catherines' School and Maggie L. Walker Governor's School for Government and International Studies.

2000 Search Committee Chemical (Chair) Engineering

Identified and recruited a new biochemical engineer to the Department of Chemical Engineering, School of Engineering at Virginia Commonwealth University. (Dr. Rachel Chen, Assistant Professor).

RESEARCH COLLABORATORS:

CURRENT COLLABORATORS

Prof. Raymond Baughman, Ph.D. Nanotechnology Center University of Texas at Dallas.	Biotechnical applications of carbon nanotubes.
Dr. Oliver Bögler, Ph.D. Hermelin Brain Tumor Center Henry Ford Hospital, Detroit.	Gene expression in response to organoplatinum drugs
Prof. William Broaddus M.D., Ph.D. Department of Neurosurgery, Virginia Commonwealth University.	Genetic anatomy of primary brain tumors.
Prof. Michael Kilbey, Ph.D. Department of Chemical Engineering Clemson University	Growth and characterization of electroconductive nanofilms for eNOSE.
Prof. Dyer Narinesingh, Ph.D. Department of Chemistry, University of the West Indies.	Bioanalytical applications of biosensors.
Prof. Michael Reed, Ph.D. Department of Electrical Engineering	Organic field effect transistors for eNOSE.

University of Virginia	
Dr. Kevin Ward, M.D. Department of Emergency Medicine, Virginia Commonwealth University.	Implantable biosensors for trauma care.

FORMER COLLABORATORS

Prof. Kenneth Wynne, Ph.D. Department of Chemical Engineering, Virginia Commonwealth University.	Surface science of biopolymers
Prof. Gary E. Wnek, Ph.D. Department of Chemical Engineering, Case Western Reserve University.	Electrospun biopolymers in biotechnology for whole cell biosensors
Prof. Nicholas Farrell, Ph.D. Department of Chemistry Virginia Commonwealth University.	Improving fidelity of DNA microarrays using organoplatinum compounds.
Prof. David L. Allara, Ph.D. Materials Research Institute and Materials Science, The Pennsylvania State University.	Surface chemistry and energetics for biosensors.
Prof. Alan J. McDiarmid (University of Pennsylvania)	Conductive Polymers
Prof. Joseph Schlenoff (The Florida State University)	
Dr. Fred Yamagishi (HRL Laboratories llc)	
Dr. Luiz H.C. Mattoso (EMBRAPA and University of Sao Carlos, Brazil)	
Prof. Dietmar Blohm, (University of Bremen, Germany)	

POST DOCTORAL ASSOCIATES AND VISITING SCIENTISTS

Gusphyl A. Justin (9/2007 – 5/2009)
Postdoctoral Fellow, Center for Bioelectronics, Biosensors and Biochips
Sponsor: DoD USAMRMC_PR023081

1) *In vitro* biocompatibility of electroconductive hydrogels, electrochemical impedance spectroscopy.
2) Formulation and synthesis of implantable, electroactive, bioactive hydrogels.

Dr. Abdur Rub Abdur Rahman (9/2007 – 12/2008)
Postdoctoral Fellow, Center for Bioelectronics, Biosensors and Biochips
Sponsor: DoD USAMRMC_PR023081

3) MEMS and BioMEMS devices, electrical and electrochemical impedance spectroscopy, modeling and simulation of MEMS devices

Dr. Ashwin Rao (5/2008 – 10/2008)
Postdoctoral Fellow, Center for Bioelectronics, Biosensors and Biochips
Sponsor: DoD USAMRMC_PR023081

1) Bioanalytical characterization of enzyme-immobilized biosensors.
2) Synthesis of electroactive and bioactive monomers for implantable hydrogels

Dr. Marta Plonska-Brzezinsk (2007)
Senior Scientist, Center for Bioelectronics, Biosensors and Biochips
Visiting Scholar, Department of Chemical and Biomolecular Engineering, Clemson University
Sponsor: DoD USAMRMC_PR023081

1) Bioelectrochemistry of mediated oxidoreductase enzymes within bioactive hydrogels

Dr. Walter Torres (2006 – 2007)
Postdoctoral Fellow, Center for Bioelectronics, Biosensors and Biochips
Visiting Research Professor, Department of Chemical and Biomolecular Engineering, Clemson University
Sponsor: DoD USAMRMC_PR023081

1) Bioelectrochemistry of mediated oxidoreductase enzymes within bioactive hydrogels

Dr. Nikil Shukla Ph.D. (2005 - 2006)
Senior Fellow, Center for Bioelectronics, Biosensors and Biochips
Visiting Associate Professor, Department of Chemical and Life Science Engineering, Virginia Commonwealth University
Sponsor: Government of India
Topic: 1) Ion transport in and bioimpedance of bio-smart synthetic polymers

2) Bioelectrochemistry of enzymes at chemically modified and immobilized carbon nanotubes

Previous Position: Reader, Mahatama Gandi Post graduate College

Dr. Sean Brahim (2001 - 2006)
Senior Scientist, Center for Bioelectronics, Biosensors and Biochips
Research Associate 2004 – 2006, Department of Chemical and Life Science Engineering, Virginia Commonwealth University
Ph.D. 2001, Bio-Analytical Chemistry, University of the West Indies, Trinidad

Sponsor: DoD USAMRMC_PR023081
Topic: Bio-smart Hydrogels: Molecularly Engineered Polymers for Biosensors and Biochips Sean Brahim
Previous Position: Postdoctoral Fellow, Center for Bioelectronics, Biosensors and Biochips (C3B)

Dr. Min Yang (2005)
Senior Scientist, Center for Bioelectronics, Biosensors and Biochips
Research Associate 2004, Department of Chemical and Life Science Engineering, Virginia Commonwealth University
Ph.D. 2001 Polymer Materials Science, Saitama University, Japan
Sponsor: Luna Innovations
Topic: Bio-immobilization of antibodies on microfabricated electrodes
Previous Position: Postdoctoral Fellow, Department of Chemistry, University of Florida
Current Position:

Dr. Arvind Kumar Srivastava (2004 - 2005)
Senior Scientist, Center for Bioelectronics, Biosensors and Biochips
Postdoctoral Fellow 2003- 2004, Department of Chemical and Life Science Engineering, Virginia Commonwealth University
Ph.D. 1999 Banaras Hindu University, India
Sponsor: Center for Bioelectronics, Biosensors and Biochips (C3B)
Topic: Design, fabrication and Performance Evaluation of a 2nd Generation e-NOSE – ANNN System
Previous Position: Postdoctoral Associate: University of Sydney, Australia
Current Position: Research Associate, NUANCE, Northwestern University, Evanston, Illinois

Prof. Dr. Dietmar Blohm (2001)
Principal Fellow, Center for Bioelectronics, Biosensors and Biochips
Visiting Professor 2002, Department of Chemical and Life Science Engineering, Virginia Commonwealth University
Ph.D. 1972 Plant Physiology and Biochemistry, Humboldt-University of Berlin
Sponsor: Center for Bioelectronics, Biosensors and Biochips (C3B)
Topic: Gene Expression Monitoring Using Oligo and cDNA Microarrays.
Current Position: Professor, Biotechnology and Molecular Genetics, UFT, University of Bremen, FB2-UFT, Leobener Straße, Biotechnology and Molecular Genetics, D-28359, Bremen, Germany.

Dr. Sean Brahim (2001 - 2004)
Senior Scientist, Center for Bioelectronics, Biosensors and Biochips
Postdoctoral Fellow 2002 - 2004
Ph.D. 2001 University of the West Indies
Sponsor: Center for Bioelectronics, Biosensors and Biochips (C3B)

Topic: Bio-smart Hydrogels as Molecularly Engineered Polymers for Biosensors and Biochips
Previous Position: Graduate Research Assistant, University of the West Indies, Trinidad
Current Position: Research Associate, Center for Bioelectronics, Biosensors and Biochips (C3B)

Mr. Mohamed Hassan El-Newehy (2003 - 2004)
Scientist, Center for Bioelectronics, Biosensors and Biochips
Pre-doctoral Fellow 2003-2004
M.S. 1999 University of Tanta, Tanta, Egypt
Graduate Research Assistant
Sponsor: Center for Bioelectronics, Biosensors and Biochips (C3B)
Topic: Synthesis of Biomimetic Monomers and Polymers for Bio-smart Hydrogels
Previous Position: Instructor, University of Tanta, Tanta, Egypt
Current Position: Assistant Lecturer, University of Tanta, Tanta, Egypt

Dr. Chenghong Lei (2000 - 2001)
Senior Scientist, Center for Bioelectronics, Biosensors and Biochips
Postdoctoral Fellow 2000-2002
Ph.D. 1996 Analytical Biochemistry, Fudan University, Shanghai, P.R. China
Sponsor: Center for Bioelectronics, Biosensors and Biochips (C3B) Topic: Immobilized Enzyme Biosensors
Previous Position: A Humboldt Research Fellow, University of Potsdam, Analytical Biochemistry, c/o Im Biotechnologiepark, 14943 Luckenwalde, Germany.
Current Position: Research Scientist U.S. Department of Energy's Pacific Northwest National Laboratory (PNNL)

Dr. Marin Gheorghe (1999-2001)
Senior Scientist, Center for Bioelectronics, Biosensors and Biochips
Postdoctoral Fellow 1999-2001
Ph.D. 1998 Bio-organic Chemistry, Bucharest University, Romania
Sponsor: NSF
Topic: Impedimetric Investigation of DNA Hybridization: Towards Rapid, On-site DNA Diagnostics
Previous Position: Senior Scientist, Institute for Microtechnology P.O. Box 38-160 72225, Bucharest, Romania.
Current Position: Research Scientist, Cork, Ireland

GRADUATE RESEARCH ADVISEES

STUDENTS	CUID	DEPARTMENT	DEGREE	YEAR
Olukayode **KARUNWI**	019992407	Bioengineering	Doctoral	2
Subhra **NAG**	696323020	Bioengineering	Doctoral	2
Christian N. **KOTANEN**	677638665	Bioengineering	Doctoral	2
Juan Manuel **MARMOLEJO TEJADA**	489755280	ECE	Masters to Doctoral	1
Tingting Eileen **HAN**	787616463	Materials Science and Engineering	Doctoral	1
Balu P. **RAMAMURTHY**	331845572	School of Computing	Masters to Doctoral	1

Past and Current Students	Pre or Post Degree sought	Training Period	Prior Academic Degree			Current Position Source of Support Topic
			Degree	Deg. Yr.	Institution	
PAST GRADUATE STUDENTS						
Atanu Sen *(Was advised that he was not meeting expectations and elected to discontinue)*	Predoctoral Ph.D. Bioengineering	08/2008 -	B.Tech.	2006	Sathyabama University, Chennai, India	Graduate Research Assistant Sponsor: DoD USAMRMC_PR023081 Topic: *In vivo* Performance of Implantable Biosensors
			M.S. Biological Engineering	2008	University of Missouri-Columbia	
Meng Zhang *(Became a disciplinary problem and was asked to discontinue)*	Predoctoral Ph.D. Chemical and Biomolecular Engineering	08/2008 -	B.S. Bioengineering	2004	Tianjin University, China	Graduate Research Assistant Sponsor: DoD USAMRMC_PR023081 Topic: Molecular Engineering of Enzymes for Implantable Biosensors
			M.S. Biochemical Engineering	2007	Tianjin University, China	

Past and Current Students	**Pre or Post Degree sought**	**Training Period**	**Prior Academic Degree**			**Current Position Source of Support Topic**
			Degree	**Deg. Yr.**	**Institution**	
Ali Botzas *(Did not meet requirements of the ChBE Graduate Program and choose to discontinue)*	Predoctoral Ph.D. Chemical and Biomolecular Engineering	01/2008 -	B.S. Chemical Engineering	2004	University of Turkey	Graduate Research Assistant Sponsor: DoD USAMRMC_PR023081 Topic: Hydrogels for Implant Biocompatibility
			M.S. Materials Science and Engineering	2006	GIST, Korea	
Past Graduate Students						
Manish Agrawal *(Could not relocate to Clemson, Continued at VCU)*	Predoctoral M.S. Chemical Engineering	01/2005-5/2007	B.S.	2002	University of Michigan	Graduate Research Assistant Sponsor: DoD USAMRMC_PR023081 Topic: Release from Hydrogels for Implant Biocompatibility
Gopakumar Sethuraman *(Could not relocate to Clemson, Continued at VCU)*	Predoctoral M.S.	09/2004-05/2006	B.E.	2003		Graduate Research Assistant Sponsor: DoD USAMRMC_PR023081 Topic: Molecularly Engineered Hydrogels for Implant Biocompatibility
Sheena Abraham *(Could not relocate to Clemson, Continued at VCU)*	Predoctoral M.S.	05/2002-5/2005	B.E.	2001	K.E.S N.N.P College of Engineering, Bombay University, India	Graduate Research Assistant Sponsor: DoD USAMRMC_PR023081 Topic: Molecularly Engineered Hydrogels for Implant Biocompatibility
Gerome Edmonson	Predoctoral M.S.	10/2003-05/2005	B.S.	2002	Virginia State University	Graduate Research Assistant

Past and Current Students	**Pre or Post Degree sought**	**Training Period**	**Prior Academic Degree**			**Current Position Source of Support Topic**
			Degree	**Deg. Yr.**	**Institution**	
(Discontinued) (co-supervised with Hobson at VCU)						Sponsor: Center for Bioelectronics, Biosensors and Biochips (C3B) Topic: Programming of an e-NOSE–ANN System
Vandana Gupta *(Completed at VCU)*	Predoctoral M.S.	10/2003-05/2005	B.S.	2003	Virginia Commonwealth University	Graduate Research Assistant Sponsor: Center for Bioelectronics, Biosensors and Biochips (C3B) Topic: Design, Fabrication and Performance Evaluation of an Impedimetric Urea Biosensors
G. Scott Taylor *(Completed at VCU)*	Predoctoral Ph.D.	05/2004-05/2006	M.S. Engineering	2004	Virginia Commonwealth University	Graduate Research Assistant Sponsor: Commonwealth Technologies Research Fund (CTRF) Topic: Genomic Classification of Brain Tumors Using DNA Microarrays
			M.S. Biology	2001	Virginia Commonwealth University	
			B.S. Biology	1999	Radford University	
Louise Lingerfelt *(Could not relocate to Clemson, Continued at VCU)*	Predoctoral Ph.D.	04/2004	M.S. Chemical Engineering	2004	University of Virginia	Graduate Teaching Assistant Sponsor: VCU Topic: Diagnostic DNA Biochips
			B.S. Chemistry	2002	Furman	

Past and Current Students	**Pre or Post Degree sought**	**Training Period**	**Prior Academic Degree**			**Current Position Source of Support Topic**
			Degree	**Deg. Yr.**	**Institution**	
Ann. M. Wilson *(Completed) (co-supervised with Narinesingh at UWI)*	Predoctoral Ph.D.	10/2002-05/2007	B.Sc. Chemistry	1985	University of the West Indies	Graduate Research Assistant Sponsor: ABTECH Scientific, Inc. Topic: Novel Composite Polyaniline-based Materials for Fluoxetine Monitoring and Calcium Release
G. Scott Taylor *(Completed at VCU)*	Predoctoral M.S.	09/2001-05/2004	M.S. Biology	2001	Virginia Commonwealth University	Graduate Research Assistant Sponsor: Commonwealth Technologies Research Fund (CTRF) Topic: Genomic Classification of Brain Tumors Using DNA Microarrays
			B.S. Biology	1999	Radford University	
Derk J. Bemeleit *(Completed at University of Bremen)*	Predoctoral Diploma	10/2002-10/2003	--	--	University of Bremen, Germany	Graduate Research Assistant Sponsor: Center for Bioelectronics, Germany Biosensors and Biochips (C3B) Topic: Pre-clinical Investigation of the Mechanism of Action of Novel Platinum Compounds in Malignant Glioma using Microarray Gene Expression Monitoring
Tin Chris Hang *(Completed at VCU)*	Predoctoral M.S.	9/2001-12/2003	B.S. Chemical Engineering	2001	Virginia Commonwealth University	Production Engineer Infinion Technologies Inc, Richmond, VA Sponsor: Center for Bioelectronics, Biosensors and Biochips (C3B) Topic: Frequency Dependent and Surface

Past and Current Students	**Pre or Post Degree sought**	**Training Period**	**Prior Academic Degree**			**Current Position Source of Support Topic**
			Degree	**Deg. Yr.**	**Institution**	
						Characterization of DNA Immobilization and Hybridization
Gymama Slaughter *(Completed at VCU)*	Predoctoral M.S.	10/2001 12/2003	B.S. Chemistry	2001	Virginia Commonwealth University	Graduate Research Assistant Sponsor: DoD USAMRMC_PR023081 Topic: Cell-based Biosensor for Monitoring

THESES SUPERVISED:

Student	**Degree**	**Year**	**Thesis Title**
Sheena Abraham	M.S.	May 2005	Molecularly Engineered Hydrogels for Implant Biocompatibility
Vandana Gupata	M.S.	August 2005	Design, Fabrication and Performance Evaluation of an Impedimetric Urea Biosensor System
G. Scott Taylor	Ph.D.	May 2006	Class Prediction of Primary Brain Tumors Using Microarray Gene Expression Analysis
Louise Lingerfelt	Ph.D.	Did not complete	A Diagnostic Biochip for Class Prediction of Primary Brain Tumors
Mr. G. Scott Taylor	M.S.	May 2004	A Study of the Influence of Production and Protocol Variables in Gene Expression Profiling Using Spotted Oligonucleotide Microarrays
Mr. Derk J. Bemeleit	Diploma	December 2003	Pre-clinical Investigation of the Mechanism of Action of Novel Platinum Compounds in Malignant Glioma using Microarray Gene Expression Monitoring
Ms. Gymama Slaughter	M.S.	December 2003	Improving Neuron-to-electrode Surface Attachment (NESA) Via Alkane Thiol Self-Assembly: An AC Impedance Study
Mr. T. Chris Hang	M.S.	May 2003	Frequency Dependent and Surface Characterization of DNA Immobilization

Student	Degree	Year	Thesis Title
			and Hybridization

UNDERGRADUATE RESEARCH ADVISEES

Rachelle Izdiak (Fall 2010) Pre-Med Biological Sciences, Clemson University. **Project title:** Transport of ions across poly(HEMA)-based hydrogel membranes

Jordan Byrd (Fall 2010) Department of Chemical and Biomolecular Engineering, Clemson University. **Project title:** Electrical Impedance of Tissue Mimetics

Mark Kalata (Fall 2010) Department of Chemical and Biomolecular Engineering, Clemson University. **Project title:** Dynamic Electrical Properties of Bioactive Hydrogels

Lorchan Ingham (Summer 2010) Department of Chemical and Biomolecular Engineering, Clemson University. **Project title:** Impedance of Electroconductive Hydrogels Using IMEs.

Ronodeep K. Srimani (Summer 2010) Department of Biomedical Engineering, Georgia Institute of Technology: **Project title:** Transport of ions across poly(HEMA)-based hydrogel membranes

Ruth Salas (Summer 2010) Department of Chemical and Biomolecular Engineering, Clemson University. **Project title:** Application of Matrix Metalloproteinases Inhibitors for Wound Healing

Elizabeth Savage (Summer 2010) Department of Chemical and Biomolecular Engineering, Clemson University. **Project title:** Impedimetric Characterization of Cell Cultures on Polymer Modified Electrodes

Britany Sezdiol (Summer 2010) Department of Chemical and Biomolecular Engineering, Clemson University. **Project title:** Dynamic Mechanical Properties of Bioactive Hydrogels

Dustin Flake (Summer 2009) Department of Chemical and Biomolecular Engineering, Clemson University. **Project title:** Impedance of Electroconductive Hydrogels.

Lorchan Ingham (Spring 2009) Department of Chemical and Biomolecular Engineering, Clemson University. **Project title:** Impedance of Electroconductive Hydrogels.

Justin Galloway (Spring 2009) Department of Chemical and Biomolecular Engineering, Clemson University. **Project title:** Modulus of Bioactive Hydrogels.

Lorchan Ingham (Fall 2008) Department of Chemical and Biomolecular Engineering, Clemson University. **Project title:** Impedance of Bioactive Hydrogels.

Lorchan Ingham (Summer 2008) Department of Chemical and Biomolecular Engineering, Clemson University. **Project title:** Impedance of Bioactive Hydrogels.

Chris Briere (Fall 2007) Department of Electrical and Computer Engineering, Clemson University. **Project title:** Electronic NOSE.

Chris Briere (EUREKA, Su 2007) Department of Chemical and Biomolecular Engineering, Clemson University. **Project title:** Electronic NOSE.

Meena Mirdamadi (EUREKA, Su 2007) Department of Chemical and Biomolecular Engineering, Clemson University. **Project title:** Electronic Tongue.

Stephen Finley (2006-2007) Department of Chemical and Biomolecular Engineering, Clemson University. **Project title:** pH Dependence of Bioactive Hydrogels.

Kely Sheldon (2006-2007) Department of Biology, Clemson University

Ryan Georgiana (Summer 2004) Department of Biology, Functional Genomics Program, University of North Carolina, Chapel Hill.

Laura Brewer (NSF REU, Summer 2004), Lafayette College, Pennsylvania.

Amber Smith (NSF REU, Summer 2004), Delaware State University, Delaware.

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PUBLICATIONS LIST

JOURNAL ARTICLES (Peer Reviewed)

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2. Adilah Guiseppi-Wilson and **Anthony Guiseppi-Elie** "Design Considerations in the Use of Interdigitated Microsensor Electrode Arrays (IMEs) for Voltammetric Characterization of Biomimetic Hydrogels" *Biomedical Microdevices: BioMEMS and Biomedical NanoTechnology* (**2010**) (under review). (IF: 2.92)
3. **Anthony Guiseppi-Elie**, Lorcan Ingham, Lauren Koch, Stephen H. Finley and Gary E. Wnek"Impedimetric characterization of temperature responsive p(HEMA-*co*-PEGMA-*co*-HMMA) hydrogels" *Biosensors and Bioelectronic*s (**2010**) (under review). (IF: 5.10)
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INVITED AND CONTRIBUTED TECHNICAL PRESENTATIONS:

1. *Invited Lecture:* Anthony Guiseppi-Elie, **An Implantable Biochip to Influence Outcomes following Trauma-induced Hemorrhage.** Department of Clinical Investigation, Tripler Army Medical Center, Honolulu, Hawaii. September 14th, 2010
2. *Invited Lecture and Paper:* Christian Kotanen and Anthony Guiseppi-Elie, **Resuscitation and Reanimation Decisions could benefit from an Implantable Diagnostic Biochip during Trauma-induced Hemorrhage.** Faraday Discussion 149: Analysis for Healthcare Diagnostics and Theranostics. University of Edinburgh, Edinburgh, United Kingdom. September 6 – 8. 2010.
3. *Keynote Lecture:* Anthony Guiseppi-Elie, **Electroconductive Hydrogels: Bioactive and Bio-smart Polymers.** 2nd Asia-Pacific Symposium on Nanobionics. The University of Wollongong, Wollongong, Australia. June 9-11, 2010**.**
4. *IP Disclosure:* Anthony Guiseppi-Elie, **An Implantable Biochip to Influence Patient Outcomes Following Trauma-induced Hemorrhage: The PSMBioChip℠**. CU IP Review Committee Disclosure Presentation. Clemson University, Clemson, South Carolina, USA. June 1st, 2010.
5. *Invited Lecture:* Anthony Guiseppi-Elie**, Engineering the Electrode-Tissue Interface of Implantable Biochips.** CMOS 2010 Emerging Technologies Workshop. Whistler, British Columbia, Canada. May 19-21, 2010.
6. *Invited Lecture:* Anthony Guiseppi-Elie**, Perspectives in Nano-Bio-Electronics in Human Health.** National Institute of Standards and Technology (NIST), Semiconductor Electronics Division (SED), Program in Bioelectronics. Gaithersburg, Maryland, USA. May 6th, 2010.
7. *Colloquium Address:* Anthony Guiseppi-Elie**, Nano-Bio in Human Health: The Good, the Bad and the Unpredictable.** Department of Nanoengineering , University of California, San Diego . March 17th, 2010.
8. *Invited Paper:* Anthony Guiseppi-Elie, Lorcan Ingham, Lauren Koch and Gary E. Wnek, **Impedimetric Characterization of Temperature Responsive p(HEMA)-PEG-HMMA Hydrogels.** Institute of Biological Engineering (IBE), 2010 Annual Conference. Cambridge, MA, USA. March 4 - 6th, 2010.
9. *Colloquium Address:* Anthony Guiseppi-Elie**, Electroconductive Hydrogels: Bioactive and Bio-smart Polymers in Implantable Biosensors, Electrostimulated Release Devices and Deep Brain Stimulation Electrodes.** Department of Chemical and Environmental Engineering, University of California, Riverside, CA, USA. February 19th, 2010.
10. *Colloquium Address:* Anthony Guiseppi-Elie**, Engineering the Electrode-Tissue Interface with Electroconductive Hydrogels.** Center for Functional Nanoscale Materials (CFNM), Clark-Atlanta University, Atlanta, GA, USA. February 9th, 2010.
11. *Invited Paper:* Anthony Guiseppi-Elie, **Electroconductive Hydrogels: Bioactive and Bio-smart Polymers in Implantable Biosensors, Electrostimulated Release Devices and Deep**

Brain Stimulation Electrodes. National Science Foundation Mauritius – USA Workshop on Biomaterials, University of Mauritius, Mauritius. November 30th - Dec. 4th, 2009.

12. *Discussion Leader:* Anthony Guiseppi-Elie, BIOELECTROCHEMISTRY. 2010 Gordon Research Conference (GRC) on **Electrochemistry.** Chair: Stephen Creager, Vice Chair: Daniel A. Scherson Four Points Sheraton / Holiday Inn Express, Ventura, California, USA. January 10-15, 2010.
13. *Colloquium Address:* Anthony Guiseppi-Elie**, Engineering the Electrode-Tissue Interface with Electroconductive Hydrogels.** Department of Biomedical Engineering, University of Texas at Austin, Texas, USA. November 19th, 2009
14. *Invited Paper:* Anthony Guiseppi-Elie, **An Implantable Biochip to Influence Outcomes in Trauma-induced Hemorrhage.** The 25th Annual Meeting, The American Society for Gravitational and Space Biology, Raleigh, North Carolina, USA. November, 5-8, 2009.
15. *Colloquium Address:* Anthony Guiseppi-Elie**, Electroconductive Hydrogels: Bioactive and Bio-smart Polymers in Implantable Biosensors, Electrostimulated Release Devices and Deep Brain Stimulation Electrodes.** Biomanufacturing Research Institute and Technology Enterprise (BRITE), Departments of Chemistry and Pharmaceutical Sciences, North Carolina Central University (NCCU), North Carolina, USA. November 7th, 2009.
16. *Colloquium Address:* Anthony Guiseppi-Elie**, Electroconductive Hydrogels: Biomimetic Interfaces of Implantable Biosensors, ESDR Devices and DBS Electrodes.** Department of Chemistry and Biochemistry Florida State University, Tallahassee, Florida, USA. October 30th, 2009.
17. *Invited Paper:* Anthony Guiseppi-Elie, **Electroconductive Hydrogels: Biomimetic Interfaces of Implantable Biosensors, ESDR Devices and DBS Electrodes**. 216th Electrochemical Society (ECS) Meeting. Vienna, Austria. October 4 -9, 2009.
18. *Keynote Lecture:* Anthony Guiseppi-Elie, **Physiologic Status Monitoring Using Implantable Biochiops: From Molecular through Systems Engineering.** Institute for Materials Research (IMR) Materials Week Symposium. Ohio State University, Ohio, USA. September 33d, 2009.
19. *Invited PI Paper:* Anthony Guiseppi-Elie, **Implantable Molecular Diagnostics: A Tool in the Management of Battlefield Hemorrhage.** Department of Defense (DOD) Military Health Research Forum (MHRF). Hallmark Crown Center, Kansas City, Missouri, USA. August 31 – September 3, 2009.
20. *Discussion Leader:* Anthony Guiseppi-Elie, MOLECULAR MEDIATION OF TISSUES AND CELLS. 2009 Gordon Research Conference (GRC) on **Biomaterials: Biocompatibility / Tissue Engineering The Engineering of Healing: From Molecular Mediation to Tissue Constructs**, Chair: William M. Reichert, Vice Chair: Joyce Y. Wong. Holderness School Holderness, New Hampshire, USA. July 19-24, 2009.
21. *Participant Paper:* Anthony Guiseppi-Elie, **Advanced Concepts in the Design of Neural Electrodes for Deep Brain Stimulation** Clemson MUSC Collaboration on Clemson, South Carolina, USA.
22. *Invited Lecture:* Anthony Guiseppi-Elie, **Electroconductive Hydrogels: Co-networks of Poly(HEMA-*co*-PEGMA-*co*-HMMA-*co*-MPC) and Polypyrrole for Implantable Biochips and Deep Brain Stimulation Electrodes**. The 5th International Conference on Materials for Advanced Technologies (ICMAT 2009) and International Union of Materials Research Societies' International Conference in Asia (IUMRS-ICA 2009). GEM4 Conference on

Cancer. Singapore Suntec, Singapore International Convention & Exhibition Centre. The Materials Research Society of Singapore, Singapore. June 28 –July 3rd, 2009.

23. *Colloquium Address:* Anthony Guiseppi-Elie, **An Implantable Biochip for Physiologic Status Monitoring: From Molecular to Systems Engineering.** Department of Chemical Engineering, University of Illinois, Chicago. April 30th, 2009.
24. *Invited Lecture:* Anthony Guiseppi-Elie, **Physiologic Status Monitoring Using Implant able biochips: From Battlefield to Cardiac Surgery.** South Carolina Bioengineering Symposium, Metropolitan Convention Center, Columbia, South Carolina, USA. April 14-15, 2009
25. *Keynote Paper:* Anthony Guiseppi-Elie, **An Implantable Biochip for Physiologic Status Monitoring During Hemorrhage and Shock.** *Symposium on Biomedical Microdevices and Diagnostics II.* Annual Meeting of the Institute of Biological Engineering (IBE2009); Santa Clara Marriott, Santa Clara, California, USA. March 19-21, 2009.
26. *Contributed Paper:* Gusphyl A Justin, Abdur Rub Abdur Rahman, and Anthony Guiseppi-Elie. **Electrochemical Characterization and In Vitro Biocompatibility of a Poly(HEMA)-Polypyrrole Conducting Hydrogel Membrane for Implantable Biosensors and Neural Tissue Electrodes.** *Symposium on Biomedical Microdevices and Diagnostics II.* Annual Meeting of the Institute of Biological Engineering (IBE2009); Santa Clara Marriott, Santa Clara, California, USA. March 19-21, 2009.
27. *Contributed Paper:* Abdur Rub Abdur Rahman, Gusphyl A Justin and Anthony Guiseppi-Elie **Fabrication, packaging and testing of an implantable biochip for physiologic status monitoring.** *Symposium on Biomedical Microdevices and Diagnostics II.* Annual Meeting of the Institute of Biological Engineering (IBE2009); Santa Clara Marriott, Santa Clara, California, USA. March 19-21, 2009.
28. *Contributed Paper:* Ali Boztas and Anthony Guiseppi-Elie. **Transport of Ferrocene Monocarboxylic Acid through p(HEMA)-PEG Hydrogels.** *Symposium on Biology-Inspired Sensor*s**.** Annual Meeting of the Institute of Biological Engineering (IBE2009); Santa Clara Marriott, Santa Clara, California, USA. March 19-21, 2009.
29. *Contributed Paper:* Atanu Sen and Anthony Guiseppi-Elie **Aging Membrane Response of Enzyme Containing p(HEMA)-based Hydrogels.** *Symposium on Biology Inspired Materials and Molecular Engineering and Biomimetics: Engineering Based on Biology.* Annual Meeting of the Institute of Biological Engineering (IBE2009); Santa Clara Marriott, Santa Clara, California, USA. March 19-21, 2009.
30. *Contributed Paper:* Meng Zhang and Anthony Guiseppi-Elie. **PEGylation of GOx and LOx** *Symposium on Biology Inspired Materials and Molecular Engineering and Biomimetics: Engineering Based on Biology.* Annual Meeting of the Institute of Biological Engineering (IBE2009); Santa Clara Marriott, Santa Clara, California, USA. March 19-21, 2009.
31. *Invited Paper:* Gusphyl Justin and Anthony Guiseppi-Elie, **An Implantable Biochip for Physiologic Status Monitoring During Hemorrhage and Shock.** The 13th International Conference on Search For Electroactive materials (SEAM 2008). Polytechnic Institute, Brooklyn, **New York, USA**. December 12th, 2008.
32. *Invited Keynote Lecture:* Anthony Guiseppi-Elie, **Immobilized Carbon Nanotubes for Direct Bioelectrochemistry and Amperometric Biosensors.** The 13th International Conference on Biomedical Engineering **(ICBME2008),** Singapore. December 3-6, 2008.

33. *Invited Keynote Lecture:* Anthony Guiseppi-Elie, **An Implantable Biochip for Physiologic Status Monitoring During Hemorrhage and Shock.** The 13th International Conference on Biomedical Engineering **(ICBME2008),** Singapore. December 3-6, 2008.
34. *Contributed Paper:* Anthony Guiseppi-Elie **Biotransducers of Hydrogel-coated Microdisc Electrode Arrays for Implantable Biochips used for In-vivio Biomedical Monitoring.** Device: Nano-Micro Symposium, Biomedical Engineering Society (BMES) 2008 Annual Fall Meeting, St. Louis Missouri, USA. October 2-4, 2008.
35. *Contributed Paper:* Abdur Rub Abdur Rahman, Gusphyl Justin and Anthony Guiseppi-Elie **Dynamic Electrochemical Simulations of Biotransducers based on Microdisc Electrode Arrays.** Device: Nano-Micro Symposium, Biomedical Engineering Society (BMES) 2008 Annual Fall Meeting, St. Louis Missouri, USA. October 2-4, 2008.
36. *Contributed Paper:* Ashwin Rao, Liju Yang and Anthony Guiseppi-Elie. **Electrochemical Characterization of Interdigitated Microsensors Electrodes (IME) Used for In-vivo Biomedical Applications.** Device: Nano-Micro Symposium, Biomedical Engineering Society (BMES) 2008 Annual Fall Meeting, St. Louis Missouri, USA. October 2-4, 2008.
37. *Contributed Paper:* Gusphyl Justin, Abdur Rub Abdur Rahman, and Anthony Guiseppi-Elie **Bioactive electrically conducting hydrogels for implantable biosensors and DBS electrodes.** Device: Nano-Micro Symposium, Biomedical Engineering Society (BMES) 2008 Annual Fall Meeting, St. Louis Missouri, USA. October 2-4, 2008.
38. *Colloquium Address:* Anthony Guiseppi-Elie**, Electroconductive Hydrogels: Stimuli Responsive Polymers for Biomedical Applications.** Graduate Program of the University of Georgia, Athens, Georgia, USA. September 25TH, 2008.
39. *Contributed Paper:* Anthony Guiseppi-Elie**, A Lactate Biosensor for Cardiac Care**. C3B Mini Symposium, Clemson Advanced materials Research Center, Anderson, South Carolina, USA. September 19th, 2008
40. *Invited Lecture:* Anthony Guiseppi-Elie, **Electroconductive Hydrogels: Stimuli Responsive Polymers for Implantable Biosensors.** 4th IUPAC-sponsored, International Symposium on Macro- and Supramolecular Architectures and Materials (**MAM-08**): Synthesis, Properties, and Applications. Düsseldorf, Germany. September 7-11. 2008.
41. *Keynote Lecture:* Anthony Guiseppi-Elie, **Immobilized Carbon Nanotubes for Direct Bioelectrochemistry and Amperometric Biosensors** 1st International Symposium on Electrochemistry (**ElectroChemSA2008**) University of Western Cape, Cape Town, South Africa. July 9-11, 2008.
42. *Contributed Paper:* Abdur Rub Abdur Rahman, Gusphyl A. Justin and Anthony Guiseppi-Elie "*Electrochemical Characterization of Implantable Biochips for Biosensing Application*" **Engineering Microfabricated Biodevices** Annual Meeting of the Institute of Biological Engineering (IBE) Sheraton Hotel, Chapel Hill, North Carolina. March 6-9, 2008.
43. *Contributed Paper:* Gusphyl A. Justin, Abdur Rub Abdur Rahman and Anthony Guiseppi-Elie "*Bioactive Hydrogels for Implantable Biosensors*" **Engineering Microfabricated Biodevices** Annual Meeting of the Institute of Biological Engineering (IBE) Sheraton Hotel, Chapel Hill, North Carolina. March 6-9, 2008.
44. *Invited Lecture:* Anthony Guiseppi-Elie, **"***Immobilized Carbon Nanotubes for Amperometric Biosensors*" Biology-Inspired Sensors Annual Meeting of the Institute of Biological Engineering (IBE) Sheraton Hotel, Chapel Hill, North Carolina. March 6-9, 2008.

45. *Invited Lecture:* Anthony Guiseppi-Elie, "*Engineering Implantable Biochips for Biomedical Monitoring*" **Engineering Microfabricated Biodevices,** Annual Meeting of the Institute of Biological Engineering (IBE) Sheraton Hotel, Chapel Hill, North Carolina. March 6-9, 2008.
46. *IBN BioNanoMaterials Award Lecture* Anthony Guiseppi-Elie, "Biomimetic Electroconductive Hydrogels: Biologically Inspired Co-networks of Polypyrrole and Poly(hydroxyethyl methacrylate) containing poly (ethylene glycol) and phosphorylcholine for Implantable Biochips" Institute of Bioengineering and Nanotechnology (IBN), 31 Biopolis Way, Singapore 138669. December 12th, 2007.
47. *Invited Paper:* Stephen Finley, Walter Torres and Anthony Guiseppi-Elie "Biomimetic Electroconductive Hydrogels: Biologically Inspired Co-networks of Polypyrrole and Poly(hydroxyethyl methacrylate) containing poly (ethylene glycol) and phosphorylcholine" Symposium QQ Fall MRS Fall 2007 Meeting, Boston, MA. November 26-30, 2007.
48. *Contributed Paper:* J.-Y. Shin, D. Debnath, W.-S. Lee, C. R. Kim, A. Guiseppi-Elie, and K. E. Geckeler, **Synthesis and Characterization of Single-Walled Carbon Nanotube-Polypyrrole Nanocomposites with a High Electrical Conductivity**. NAIST-GIST Joint Symposium on Advanced Materials, Gwangju, South Korea. November 22-23. 2007.
49. *Contributed Paper:* Gusphyl Justin, Kurt E. Geckeler and Anthony Guiseppi-Elie. **Bioactive and Biomimetic Hydrogel Membranes for Implantable Biosensors and Deep Brain Stimulating Electrodes.** Nanotechnology in Biology and Medicine, Cannon Research Center Auditorium Carolinas Medical Center, 1542 Garden Terrace Drive Charlotte, North Carolina 28203, USA. November 5th, 2007.
50. *Contributed Paper:* Bryan G. Splawn and Anthony Guiseppi-Elie, **Detecting DNA Hybridization Within Microflows Using an Interdigitated Microsensor Electrode and Ferrocene as an Electroactive Ligand**. The 2007 South East Regional Meeting of the American Chemical Society (SERMACS 2007), Greenville, South Carolina, USA. October 24-27, 2007.
51. *Invited Lecture:* Anthony Guiseppi-Elie, **Development of an Intramuscular Lactate and Glucose Biochip for Physiologic Status Monitoring During Hemorrhage and Shock.** TATRC'S INTEGRATED RESEARCH TEAM (IRT) MEETING **"Nanotechnology Solutions for the Development of Long-term Implantable Devices"** Institute for Molecular Medicine, University of Texas Health Science Center, Houston, Texas, USA. October 23 – 25, 2007.
52. *Contributed Paper:* J.-Y. Shin, D. Debnath, W.-S. Lee, D. Nepal, A. Guiseppi-Elie, and K. E. Geckeler, **Synthesis of Uniformly Shaped Single-Walled Carbon Nanotube-Polypyrrole Nanocomposites.** 3rd International Materials Symposium, Hsinchu, Taiwan. October 21-24, 2007. Book of Abstracts, p. 54.
53. *Invited Lecture:* Anthony Guiseppi-Elie, **Recent Developments in Bio-smart and Responsive Materials For Biosensors.** Emerging Technologies to Enable Quantitative Rapid Tests, Hyatt Islandia Hotel San Diego, California, USA. September 24 - 26, 2007.
54. *Colloquium Address:* Anthony Guiseppi-Elie, **Bioactive and Biomimetic Hydrogel Membranes for Implantable Biosensors and Stimulating Electrodes.** Presented at the Chemistry Colloquium Series, Department of Chemistry, Old Dominion University, Norfolk, Virginia. September 21st, 2007.

55. *Colloquium Address:* Anthony Guiseppi-Elie, **Bioactive and Biomimetic Hydrogel Membranes for Implantable Biosensors and Stimulating Electrodes.** Presented to the Research Staff, "Milliken Research Corporation", Spartanburg, Virginia, USA. September 13th, 2007.
56. *Invited Lecture:* Anthony Guiseppi-Elie, "**Clinical Diagnostics Using Electroconductive Bio-Smart Thin Film Biosensors"** Department of Biomedical Engineering, University of Pittsburgh, Pittsburgh, Pennsylvania, USA. June 28, 2007.
57. *Invited Lecture:* Anthony Guiseppi-Elie, "*On Biomedical Engineering Scholarship and Service: The Academic Entrepreneur's Perspective***"** Biomedical Engineering Department, Carnegie Mellon University, Pittsburgh, Pennsylvania, USA. June 27, 2007.
58. *Invited Lecture:* Anthony Guiseppi-Elie **"Technology Transfer: The Academic Entrepreneur's Perspective"** ASME-BED Summer Bioengineering Conference, AIMBE Panel on Technology Transfer, Keystone, Colorado, USA. June 20 - 23, 2007.
59. *Invited Lecture:* Anthony Guiseppi-Elie **"Molecular Diagnostics and Bioanalytics: Research at the Center for Bioelectronics, Biosensors and Biochips (C3B)" South Carolina Bioengineering Summit, Charleston, South Carolina, USA.** June 14-15, 2007.
60. *Invited Lecture:* Anthony Guiseppi-Elie "**"Bioactive and Biomimetic Hydrogel Membranes for Implantable Biosensors and Stimulating Electrodes "** ACS-IUPAC Conference on "**Macromolecules for a Sustainable, Safe and Healthy World"**, Brooklyn, New York, USA. June 10 - 13, 2007.
61. *Invited Lecture:* Anthony Guiseppi-Elie "Bioactive Hydrogels" National Institute of Science and Technology (**NIST), Gaithersburg, Maryland,** USA. June 1, 2007.
62. *Keynote Lecture:* Anthony Guiseppi-Elie "Bio-smart Organic Thin Films for Implantable Biosensors" **American Vacuum Society (AVS) Annual Meeting**, Ann Harbor, Michigan. May 9th, 2007.
63. *Invited Lecture:* Walter Torres and Anthony Guiseppi-Elie "Biotechnical Aspects of Conducting Polymers: Biosensors, Biochips and Biocompatibility" **30 Years of Conducting Polymers, American Chemical Society 233rd National Meeting & Exposition**, Chicago, Illinois, USA. March 25-29, 2007. ***Polymer Preprints.* Volume 48. Number 1. March 2007. Paper presented at the ACS meeting held Chicago, Il., 25th-30th March 2007; Washington, D.C., ACS, Division of Polymer Chemistry, 2007, p.5-6, CD-ROM, 012.**
64. *Invited Lecture:* Anthony Guiseppi-Elie "Electroconductive Hydrogels for an Implantable Biosensor useful in Trauma Management " **2007 International Workshop on Biomaterials and Nanomaterials**, Gwangju Institute of Science and Technology (GIST), Gwangju, Korea. February 22-23, 2007.
65. *Invited Lecture:* Anthony Guiseppi-Elie "Electroconductive Hydrogels for an Implantable Biosensor useful in Trauma Management" **Biomaterials Colloquium, Korea Institute of Science and Technology (KIST), Seoul, Korea. F**ebruary 21, 2007.
66. *Invited Lecture:* Anthony Guiseppi-Elie "Research in the Center for bioelectronics, biosensors and Biochips" **Graduate Research Colloquium, Inha University, Incheon, Korea. F**ebruary 20, 2007.
67. *Invited Lecture:* Anthony Guiseppi-Elie "Nanobiotechnology Research at the Center for Bioelectronics, Biosensors and Biochips (C3B)" **Clemson University AIChE Student Chapter,** Clemson University. November 28th, 2006.

68. *Invited Lecture:* Anthony Guiseppi-Elie "Nanobiotechnology Research at the Center for Bioelectronics, Biosensors and Biochips (C3B)" **US – Ireland R&D Partnership 2 DAY NANOTECHNOLOGY WORKSHOP**, Ramada Hotel, Shaw's Bridge, Belfast , Ireland October, 23 – 24, 2006.
69. *Invited Lecture:* Walter Torres and Anthony Guiseppi-Elie "**Biosensors for Molecular Diagnostics**" October 22, 2006
70. *Invited Lecture:* Jang B. Rampal and Anthony Guiseppi-Elie, "Practical Approaches to Microarrays for Diagnostics" **A "Hands-on" Microarray Workshop**, Sheraton Crystal City, Arlington, Virginia, USA. September 19-21, 2006.
71. *Invited Lecture:* Anthony Guiseppi-Elie, "Practical Approaches to Biosensors for Diagnostics" **A "Hands-on" Microarray Workshop**, Sheraton Crystal City, Arlington, Virginia, USA. September 19-21, 2006.
72. *Invited Lecture:* Anthony Guiseppi-Elie, "**Biosensors: Principles and Contemporary Issues 7th International Symposium on Bio-related Polymers,** 232nd National American Chemical Society Meeting, San Francisco, California, USA. September 10-14, 2006.
73. *Invited Lecture:* Anthony Guiseppi-Elie, "Biomimetic hydrogels for *in vivo* biosensor biocompatibility" **Polymers in Biosensors and Biochips: Diagnostic Tools and Assays** 232nd National American Chemical Society Meeting, San Francisco, California, USA. September 10-14, 2006.
74. *Invited Lecture:* Anthony Guiseppi-Elie "Chemically Modified Carbon Nanotubes for Amperometric Biosensing" **3rd IUPAC International Symposium on Macro- and Supramolecular Architectures and Materials (MAM-06): Practical Nano-Chemistry and Novel Approaches**. Waseda University, Tokyo, Japan. On May 28 – June 1, 2006.
75. *Invited Lecture:* Anthony Guiseppi-Elie "An Implantable Biochip for Remote Monitoring of Glucose and Lactate in the Combat Trauma Victim" at the **DoD Military Health Research Forum for the Peer Reviewed Medical Research Program (PRMRP),** San Juan, Puerto Rico. May 1-4, 2006.
76. *Invited Poster and Technology Demonstration:* **Anthony Guiseppi-Elie** "An Implantable Biochip for Remote Monitoring of Glucose and Lactate in the Combat Trauma Victim" at the **DoD Military Health Research Forum for the Peer Reviewed Medical Research Program (PRMRP),** San Juan, Puerto Rico. May 1-4, 2006.
77. *Keynote Lecture:* Anthony Guiseppi-Elie, **Biosensor Principles: What are they and how do they work?** The 1st Asia Biosensor and Biochip "Hands-on" Workshop Organized by GENE Co., Ltd. and Gene Tech (Shanghai) Co., Ltd. Beijing and Shanghai, Peoples Republic of China. April 6, 2006.
78. *Colloquium Address:* Anthony Guiseppi-Elie **"An Implantable Biochip for Telemetered Monitoring of Glucose and Lactate in the Combat Trauma Victim"** Presented at the Physics Colloquium Series, Department of Physics, University of South Florida, Florida. October 7th, 2005.
79. *Colloquium Address: Anthony Guiseppi-Elie* **"An Implantable Biochip for Telemetered Monitoring of Glucose and Lactate in the Combat Trauma Victim"** Presented at the CBIMMS/CBTE Seminar Series, Pratt School of Engineering, Duke University, Raligh, North Carolina. September 22, 2005.

80. Anthony Guiseppi-Elie **"Molecularly Engineered p(HEMA)-based Hydrogels Possessing Poly(Ethylene Glycol) and Phosphorylcholine For Implant Biocompatibility"** Presented at the 27th Annual International Conference of the IEEE Engineering In Medicine and Biology Society (EMBC'05) *(12.5.1 Biomaterials and Biological Interfaces I)*, Conference Center, Shanghi, China. September 1-5, 2005.
81. Sheena Abraham, Sean Brahim, and Anthony Guiseppi-Elie "**Molecularly Engineered Hydrogels for Implant Biocompatibility".** Presented at: ATACCC 2005 Conference; Tradewinds Island Grand Resort, St. Pete Beach, Florida. August 15-17, 2005.
82. Sean Brahim, Gopakumar Sethuraman, Sheena Abraham, and Anthony Guiseppi-Elie **"Novel Microdisc Electrode Array (MDEA) Biochip Sensor for Monitoring of Glucose and Lactate".** Presented at: ATACCC 2005 Conference, Tradewinds Island Grand Resort, St. Pete Beach, Florida. August 15-17, 2005.
83. Anthony Guiseppi-Elie**,** Kevin Ward, Sean Brahim, Wayne Barbee, Robert Dieglemann, Sheena Abraham, Daniel Contaifer, Robert Klenke and Peter Hansen **"An Implantable Biochip for Telemetered Monitoring of Glucose and Lactate in the Combat Trauma Victim"** Presented at: ATACCC 2005 Conference, Tradewinds Island Grand Resort, St. Pete Beach, Florida. August 15-17, 2005.
84. *Expert Panel Presentation:* Anthony Guiseppi-Elie "**QA and QC Issues in Gene Expression Analysis Using Oligonucleotide Microarrays**" Webex Seminar, Science Info. Friday, May 20th, 2005.
85. *Invited Paper:* Anthony Guiseppi-Elie "**Bio-inspired Organic Thin Films: Biosensors and Biocompatibility**" 2005 U.S. Army Workshop on Advanced Active Thin Film Materials for the Next Generation of Meso-Micro Scale Army Applications, Hilton Sandestin, Destin, FL. May 10-12, 2005.
86. Anthony Guiseppi-Elie "**Intelligent Electronic NOSE for Physiologic Status via Patient Breath Monitoring Following Trauma**" 2005 U.S. Army Workshop on Advanced Active Thin Film Materials for the Next Generation of Meso-Micro Scale Army Applications, Hilton Sandestin, Destin, FL. May 10-12, 2005.
87. *Keynote Address:* Anthony Guiseppi-Elie "What's all the Fuss about Small Stuff" Presented at the Virginia Space Grant Consortium Annual General Meeting, Hotel, Norfolk, Virginia. Friday, April 1st, 2005.
88. *Colloquium:* **Anthony Guiseppi-Elie** "Molecular Engineering in an Era of Nano and Bio" Department of Biomolecular Engineering, Baskin School of Engineering, University of California Santa Cruz. Monday, March 21st, 2005.
89. *Colloquium:* **Anthony Guiseppi-Elie, "**Brain Tumor Biochip: Fully Integrated Platform for the Clinical Classification of Primary Brain Tumors" Biomedical Engineering Seminar, Virginia Commonwealth University, Richmond, VA USA. March 08th, 2005.
90. *Keynote Address:* Anthony Guiseppi-Elie "Engineering in an Era of Nano and Bio" Richmond Joint Engineers Council Annual General Meeting, Jefferson Hotel, Richomond, Virginia. February 24th, 2005.
91. Anthony Guiseppi-Elie "Brain Tumor Biochip: Fully Integrated Platform for the Clinical Classification of Primary Brain Tumors" VCU School of Engineering Research Retreat. January 2005.

92. Anthony Guiseppi-Elie "An Implantable Biochip for Telemetered Monitoring of Glucose and Lactate in the Combat Trauma Victim". Presented at the IEEE Richmond Section Meeting, January 5th, 2006; Hilton Garden Inn, Glen Allen, Virginia.
93. **Anthony Guiseppi-Elie**, Kevin Ward, Sean Brahim, Wayne Barbee, Robert Dieglemann, Sheena Abraham, Daniel Contaifer "An Implantble Biochip for Combat Casulty Care" DoD PRMRP Product Assessment and Commercialization Team. November 8th, 2004.
94. *Colloquium:* **Anthony Guiseppi-Elie** "Electroconductive Hydrogels: "Bio-smart" Polymers for Implantable Biosensors" Department of Chemical Engineering, Clemson University, Clemson, SC, USA. October 28th, 2004.
95. Sheena Abraham, Sean Brahim and **Anthony Guiseppi-Elie** "Molecularly Engineered Hydrogels for Implant Biocompatibility" 26th Annual Int. Conference of the IEEE EMBS Track 12.5 : Biomaterials for Tissue Engineering. San Francisco, CA, USA. September 1 – 5th, 2004.
96. Sheena Abraham, Sean Brahim and **Anthony Guiseppi-Elie** "Molecularly Engineered Hydrogels for Implant Biocompatibility 6th International Biorelated Polymers Symposium" 228 ACS National Meeting. Philadelphia, PA, USA. August 22-26th, 2004.
97. **Anthony Guiseppi-Elie** "Microarray Basics" Bioinformatics and Bioengineering Summer Institute, VCU Life Sciences, Virginia Commonwealth University Richmond, VA, USA. August 13 - 15th, 2004.
98. *Invited Paper:* James Landers, Pamela Norris, Godwin Mbagwu and Anthony Guiseppi-Elie "Fully Integrated Biochip System For BioDefense" 2004 Virginia Nanotechnology Showcase: Exploring Research & Commercialization in Nanomanufacturing. Charlottesville, VA, USA. June 22-23, 2004.Arvind K. Srivastava and Anthony Guiseppi-Elie "A Novel Technique for the Impedimetric Measurement of Chemoresistive VOC Sensor" 2004 Virginia Nanotechnology Showcase: Exploring Research & Commercialization in Nanomanufacturing. Charlottesville, VA, USA. June 22-23, 2004.Anthony Guiseppi-Elie "Bioelectronic Detection of DNA Hybridization and Development of a Low Density DNA Microarray for Clinical Classification of Brain Tumors" Cambridge Healthtech Institute's Fourth Annual Macroresults for Microarrays: An Array of Possibilities World Trade Center. Boston, MA, USA. May 13-14, 2004. *Colloquium:* Anthony Guiseppi-Elie "Fundamental Studies of A Cell-based Neurotoxicity Biosensor Using Neuron to Electrode Surface Attachment (NESA)" Graduate Research Engineering Seminar Series, VCU School of Engineering, Virginia Commonwealth University, Richmond, VA, USA. April 19th, 2004.
102. Sean Brahim, Chenghong Lei, Gary Wnek, Ray Baughman and Anthony Guiseppi-Elie, "Carbon Nanotube Modified Electrodes for the Bioelectrochemistry of Redox Enzymes" Nanofiber Syposium, Virginia Biotechnology Research Park, Richmond, VA, USA. April, 16th, 2004.
103. **Anthony Guiseppi-Elie** Surface Properties of Gold: Sorption/Desorption and Activation/Deactivation Intel Corporation, Santa Clara, CA, USA. March 30th, 2004.
104. *Colloquium:* **Anthony Guiseppi-Elie** "Preclinical Investigation of the Mechanism of Action of Novel Platinum Compounds in Malignant Glioma using Microarray Gene Expression" Neuro-Onclogy Forum, Virginia Commonwealth University, Richmond, VA USA. March 19th, 2004.
105. *Invited Paper:* Anthony Guiseppi-Elie "Feasibility Studies in Development of a Temporary Implantable Lactate Sensor Biochip for Monitoring During Hemorrhage."

106. *Colloquium:* **Anthony Guiseppi-Elie** "Modification of Gold Electrodes for Improved Neuron-to-Electrode Surface Attachment (NESA)" Laboratory for Physical Sciences, University of Maryland, College Park, Maryland, USA. March 3rd, 2004.

107. Sean Brahim, Ehard Bieberich and Anthony Guiseppi-Elie ""Bio-smart" Materials for Implantable Biosensors". World Congress on Medical Physics and Biomedical Engineering, 24 - 29 August 2003, Sydney Convention & Exhibition Centre, Sydney, Australia.Anthony Guiseppi-Elie, Sean Brahim, Sheena Abraham, Gymama Slaughter, Felix Miranda, Noulie Theofylaktos, Rainee Simons, Robert Diegelmann, Luciana Torres, R. Wayne Barbee and Kevin Ward "Feasibility Studies in Development of a Temporary Implantable Lactate Biochip Sensor for Monitoring During Hemorrhage"Sean Brahim and Anthony Guiseppi-Elie (2003) "Characterization of electroconductive ppy-p(HEMA) composite hydrogels for sensing applications". Proceedings of the Virginia Academy of Sciences, University of Virginia, Charlottesville, Virginia. May 29th, 2003.*Invited Speaker* Anthony Guiseppi-Elie "Bio-smart Materials: Co-joined Molecular Recognition and Signal Transduction in Biosensors and Biochips". VIIIth International Seminar on the Technology of Inherently Conductive Polymers Niagara-on-the-Lake, Ontario, Canada June 18 - 20, 2001.*Invited Speaker* Anthony Guiseppi-Elie "Nano-Bio: Bioelectronics Using Carbon Nanotube and Colloidal Gold Nanoparticles", Center for Innovative Technology, Herendon, Virginia. June 05, 2001.Anthony Guiseppi-Elie *Invited Speaker.* Bioactive Electroconductive Hydrogel Polymers: Combining Molecular Recognition and Electrical Transduction" *4th International Symposium on* Frontiers in Biomedical Polymers Williamsburg, Virginia, USA May 16 - 19, 2001.Anthony Guiseppi-Elie *Invited Speaker.* "Bio-smart Materials: Co-joined Molecular Recognition and Signal Transduction in Bioelectrochemistry, Biosensors and Biochips" RCMI (Research Center for Minority Institutions) 2001 Spring Symposium Clark Atlanta University. April 26 - 27, 2001.Rosalyn Hobson and Anthony Guiseppi-Elie "The Applicability of Temperature Correction to Chemoresistive Sensors in an e-NOSE-ANN System". Conference on Modeling and Simulation of Microsystems: MSM 2001 Conference. Hilton Head, South Carolina. March 19–21, 2001.Anthony Guiseppi-Elie *Invited Speaker.* "Bioelectronic Detection of DNA Hybridization: Toward Point of Concern DNA Diagnostics". Research and Development Co-operation for Genesensors and UFT, University of Bremen, Bremen, Germany. March 15, 2001 Anthony Guiseppi-Elie *Plenary Speaker.* "Bio-smart Materials: Co-joined Molecular Recognition and Signal Transduction in Bioelectrochemistry, Biosensors and Biochips" IV International Congress on Chemistry (ICC) & The XIII Caribbean Conference on Chemistry and Chemical Engineering (CCCCEng) Palacio de Convenciones de La Habana, Havana, Cuba. April 16 - 20, 2001.Anthony Guiseppi-Elie *Invited Speaker.* "Bioelectronic Detection of DNA Hybridization: Toward Point of Concern DNA Diagnostics". BioChips 2001 Polytechnic University, Brooklyn, NY, March 12-13, 2001Anthony Guiseppi-Elie *Invited Speaker.* "Inherently Conductive Polymer-Biopolymer Complexes for Biosensors and Controlled Release". Departments of Chemistry and Chemical Engineering University of the West Indies, St. Augustine, Republic of Trinidad and Tobago. March 8, 2001.Anthony Guiseppi-Elie *Invited Speaker.* "Bioelectronic Detection of DNA Hybridization: Toward Point of Concern DNA Diagnostics". Motorola Clinical MicroSensors, Pasadena, California. March 2, 2001Anthony Guiseppi-Elie *Invited Speaker.* "Inherently Conductive Polymer-Biopolymer Complexes for Biosensors and Controlled Release". Hughes Research Laboratories (HRL), Malibu, California. March 1, 2001.

121. Anthony Guiseppi-Elie *Invited Speaker.* "Inherently Conductive Polymer-Biopolymer Complexes for Biosensors and Controlled Release". Medtronic Heart and valve Division, Santa Ana, California February 28, 2001.

122. Anthony Guiseppi-Elie, Chenghong Lei and Ray H. Baughman *Invited Speaker* "Direct Electron Transfer to Glucose Oxidase Using Carbon Nanotube Electrodes" The fifth workshop on multifunctional polymers and smart polymer systems: Technological Applications. The Intelligent Polymer Research Institute, University of Wollongong, Australia. January 4th – 6th, 2001.

123. Anthony Guiseppi-Elie *Invited Speaker.* "GenoSensors Using Inherently Conductive Polymer-DNA Complexes". SEAM 2000, Polytechnic University, New York. December 2nd, 2000.

124. Anthony Guiseppi-Elie *Colloquium Speaker.* "Bioactive Electroconductive Polymers: Combining Molecular Recognition and Electrical Transduction". Department of Chemical Engineering Seminar Series, Clemson University, South Carolina. October 12th, 2000.

125. Anthony Guiseppi-Elie, Rosalyn Hobson, Rob Pearson, and Richard M. Costanzo. "A VOC Responsive e-NOSE", Invensys Corporation, Richmond Virginia. August 22, 2000.

126. Anthony Guiseppi-Elie *Plenary Address.* "Biochips: Opportunities for Curriculum Enhancement at 2-yr and 4-yr Institutions" Sixth Annual Conference and Workshops on Advanced Technological Education in Semiconductor Manufacturing (ATESM 2000), Orlando, Florida. August 3rd, 2000.

127. Anthony Guiseppi-Elie *Invited Address.* "On-board Detection Strategies for Lab-on-Chip" Mallinckrodt Baker, New Jersey. July 21st, 2000.

128. Anthony Guiseppi-Elie *Invited Paper.* "Bioactive Electroconductive Polymers: Combining Molecular Recognition and Electrical Transduction" *Symposium S: Electrically Active Polymers.* Proceedings of the Spring 2000 MRS Meeting, San Francisco, California. April 24 - 27, 2000.

129. David Colby, Shahab Siddiqui, Catherine Branch, Jesus Ortega, Tuan Hoang, Samuel Anin, Lisa Moroni+, Patrick Hebert+, D. Robley Wood, Oliver Bögler, Anthony Guiseppi-Elie, "A Gene Chip for Expression Profiling in Brain Tumors". 13th Annual Meeting: Mid-Atlantic Bio-Engineering Consortium, University of Delaware. April 7th, 2000.

130. Kenneth Tuan Hoang, Chris T. Hang, Kerrianne Cullen and Anthony Guiseppi-Elie "Colloidal Gold Nanoparticles in DNA Diagnostics" (1st Place Paper). 13th Annual Meeting: Mid-Atlantic Bio-Engineering Consortium, University of Delaware. April 7th, 2000.

131. Samuel K. Anin, Catherine Ellen, Gary E. Wnek and Anthony Guiseppi-Elie "Chemoresistive Response of Carbon Nanotube-Polymer Composites to VOCs". 13th Annual Meeting: Mid-Atlantic Bio-Engineering Consortium, University of Delaware. April 7th, 2000.

132. Anthony Guiseppi-Elie *Invited Paper.* "Bioactive Electroconductive Polymers: Combining Molecular Recognition and Electrical Transduction Spring MRS Meeting, San Francisco, California" *Symposium on Electrified Polymer/Solution Interfaces* 219th ACS National Meeting, San Francisco, California Colloid and Surface Science Division. March 26-30, 2000.

133. Anthony Guiseppi-Elie *Invited Address.* "Silicon's Intersection with Biology: Bioelectronics, Biosensors and Biochips" Department of Pharmaceutics, Virginia Commonwealth University. March 14th, 2000.

134. Anthony Guiseppi-Elie *Invited Address.* "Silicon's Intersection with Biology: Bioelectronics, Biosensors and Biochips" University of Virginia Microelectronics Institute, University of Virginia. Friday, March 3rd, 2000.

135. David Colby, Catherine Branch, Shahab Siddiqui, Tuan Hoang, Samuel Anin, Jesus Ortaga, Lisa Mironi, Patrick Hebert, Anthony Guiseppi-Elie and Oliver Bögler A Centralized Biochip Facility at VCU/MCV. Engineering the Future of Medicine Seminar Series, Virginia Commonwealth University, Richmond, Virginia. March 2, 2000

136. Anthony Guiseppi-Elie and Oliver Bögler (*Invited Paper)* "Biochips:Background" *Symposium on* Merging Microtechnologies: The Biochip and the Microchip J. Sargeant Reynolds Community College, Richmond, Virginia. January 21, 2000.

137. Anthony Guiseppi-Elie *Colloquium Speaker.* "Two-dimensional Nanocomposites of Polyethylene and Polyaniline at Au (111)" Department of Physics, College of Humanities and Science, Virginia Commonwealth University, Richmond, Virginia, USA. October 1, 1999.

138. Anthony Guiseppi-Elie *(Invited Paper)* "Biotechnical Applications of Electroconductive Polymers: Biosensors and Biochips" 6th International Seminar on the Technology of Inherently Conductive Polymers, Ontario, Canada: September 26th – 29th, 1999.

139. Anthony Guiseppi-Elie *Invited Speaker.* "Conductive Polymer Biosensors" Department of Chemistry and Chemical Engineering, Polytechnic University, Brooklyn, New York. USA. June 16th, 1999.

140. Anthony Guiseppi-Elie *(Invited Paper)* "Biotechnical Applications of Electroconductive Polymers" Gordon Research Conference on "Organic Thin Films". Salve Regina University, Newport, Rhode Island, USA. June 15th, 1999.

141. Anthony Guiseppi-Elie *(Invited Speaker)* "Biotechnical Applications of Electroconductive Polymers" Xerox Research Center of Canada (XRCC), Mississauga, Ontario, Canada: June 4th, 1999.

142. Anthony Guiseppi-Elie *(Invited Speaker)* "Bioelectronics Biosensors and Biochips: A Collaborative Research Center of Excellence at VCU". Department of Chemistry and Chemical Engineering, Polytechnic University, Brooklyn, NY. June 2, 1999.

143. Anthony Guiseppi-Elie *(Invited Speaker)* "Bioelectronics Biosensors and Biochips: A Collaborative Research Center of Excellence at VCU". Massey Cancer Center, Medical College of Virginia Campus, Virginia Commonwealth University, Richmond Virginia, USA. April 7th, 1999.

144. Ann M. Wilson, Emmanuel Iwuoha, Dyer Narinesingh, Anthony Guiseppi-Elie "Divalent Cation Electrorelease from Electroconductive Hydrogels" XII Conference on Chemistry and Chemical Engineering; University of the West Indies, St. Augustine: Republic of Trinidad and Tobago; March 28-April 1, 1999.

145. Anthony Guiseppi-Elie *(Invited Speaker)* "Biotechnical Applications of Electroconductive Polymers: Biosensors, Biochips and Controlled Release Devices" 5th International Seminar on the Technology of Inherently Conductive Polymers, Clearwater Beach, Florida: March 1-4th, 1999.

146. Anthony Guiseppi-Elie *(Invited Speaker)* "A Collaborative Research Center of Excellence: Bioelectronics Biosensors and Biochips". Richmond Technology Council, Richmond, Virginia, USA. February 9th, 1999

147. Anthony Guiseppi-Elie *(Invited Speaker)* "NOSE: Natural Olfactory Sensor Emulator", Department of Physiology, Medical College of Virginia Campus, Virginia Commonwealth University, Richmond Virginia, USA. February 4th, 1999.

148. Anthony Guiseppi-Elie*(Invited Paper)* "Biotechnical Applications of Electroconductive Polymers: Electronic Noses, Biosensors, and Controlled Electrorelease Devices", International Symposium on Instrumentation in Agriculture, II SIERGO, EMBRAPA, Sao Carlos, Brazil. November 30th – December 4th, 1998.

149. Anthony Guiseppi-Elie *(Invited Speaker)* "Bioelectronics Biosensors and Biochips: The Good the Bad and the Absolutely Delightful", Chemical Sciences and Technology Division (CST) Colloquium Series, Los Alamos National Laboratory, Los Alamos, NM. November 18th, 1998.

150. Anthony Guiseppi-Elie *(Invited Speaker)* "Bioelectronics Biosensors and Biochips: The Good the Bad and the Absolutely Delightful", Biomedical Engineering Seminar, Biomedical Engineering Program, School of Engineering, Virginia Commonwealth University, Richmond, Virginia. November 10, 1998

151. Anthony Guiseppi-Elie *(Invited Speaker)* "Bioelectronics Biosensors and Biochips: A Collaborative Research Center of Excellence at VCU", Symposium on New Initiatives in the State of Virginia, Annual Convention and Exhibition of the Virginia Biotechnology Association, Richmond, VA. October 21, 1998.

152. Anthony Guiseppi-Elie, Gary E. Wnek, Philippe Lam, Gary C. Tepper, Oliver Bogler, Gary L. Bowlin, John Alexander and Robert J. Mattauch "Probing Biochemical and Biological Phenomena Using Electrical Impedance Techniques: Applications to Biochips" IBC's International Conference on Biochips. San Francisco, California. August 1998.

153. Anthony Guiseppi-Elie *(Invited Speaker)* "NOSE: Natural Olfactory Sensor Emulator", Department of Chemical Engineering, Virginia Tech and State University.

154. Anthony Guiseppi-Elie "Impedimetric Biosensors Using Smart Gels: Disposable Biosensors", Workshop on Bioelectronics, Biosensors and Biochips, Virginia Commonwealth University, Richmond, VA. October 20, 1998.

155. Anthony Guiseppi-Elie "Introduction and Connection Among Bioelectronics, Biosensors and Biochips", Workshop on Bioelectronics, Biosensors and Biochips, Virginia Commonwealth University, Richmond, VA. October 20, 1998.

156. Sheldon P. Wesson, Ann M. Wilson and Anthony Guiseppi-Elie "Impedance Spectroscopy and Inverse Phase Gas Chromatography for Evaluating Probe/Polymer Interactions in Cured Latex Coatings" Proc. Second International Symp. on Acid-Base Interactions: Relevance to Adhesion October 19 - 21, 1998. Newark, NJ.

157. Anthony Guiseppi-Elie "Bioelectronics Biosensors and Biochips: The Good the Bad and the Absolutely Delightful", Third National Biomedical Engineering Careers Symposium, Johns Hopkins University. August 10, 1998.

158. Anthony Guiseppi-Elie "Bioelectronics Biosensors and Biochips: The Good the Bad and the Absolutely Delightful", Symposium on Technology in Medicine, University of Virginia, June 10 1998.

159. Anthony Guiseppi-Elie "Combined Recognition-transduction in Electroconductive Polymer Biosensors" IBC's International Conference on Biosensor Technologies. The Tremont, Boston, Massachusetts. May 14 -15, 1998.

160. Anthony Guiseppi-Elie "Biotechnical Applications of Electroconductive Polymers: Biosensors, Electronic Noses and Controlled Electrorelease Devices" 25th Annual NOBCChE Conference, Rohm and Haas Macromolecular Symposium '98. Dallas, Texas April 13 - 16, 1998.

161. Anthony Guiseppi-Elie "Biotechnical Applications of Electroconductive Polymers" International Seminar on the Technology of Inherently Conductive Polymers, San Diego, CA: March 3-5th, 1998.

162. Anthony Guiseppi-Elie "Biotechnical Applications of Electroconductive Polymers" International Seminar on the Technology of Inherently Conductive Polymers, San Diego, CA: March 3-5th, 1998.

163. Anthony Guiseppi-Elie*, Andrew R. Sujdak and Ann M. Wilson, "Electroconductive Hydrogels: Electrical, Electrochemical and Electrochemical Impedance Properties". *Symposium J* Electrical, Optical, and Magnetic Properties of Organic Solid-State Materials IV, Molecular Engineering Section, Fall National Meeting, Materials Research Society, Boston, MA. December 1 - 5, 1997.

164. Anthony Guiseppi-Elie*, Ann M. Wilson, Andrew R. Sujdak and Kimberly E. Brown, "Electroconductive Hydrogels: Novel Materials for the Controlled Electrorelease of Bioactive Peptides" Proceedings of the 214th National ACS Meeting, Polymer Chemistry Division, Las Vegas, Nevada:. September 7 – 11, 1997.

165. Anthony Guiseppi-Elie* and Ann M. Wilson "Sensory Devices Based on Conductive Polymers: Chemical, Biological and Gas Sensors" International Seminar on the Technology of Inherently Conductive Polymers, San Diego, CA: March 3-5th, 1997.

166. K. Seshadri, S. V. Atre, D. L. Allara, Y.-T. Tao and A. Guiseppi-Elie "Nanoclusters of Polymethylene at Au(111) Surfaces" ACS Graduate Polymer Research Conference, Blacksburg, VA: June 1996.

167. Anthony Guiseppi-Elie* and Ann M. Wilson, "Chemical and Biological Sensor Devices Based on Electroconductive Polymers" International Seminar on the Technology of Inherently Conductive Polymers, Deerfield, Florida: February 26-28th, 1996.

168. Norman F. Sheppard, Jr., David J. Mears and Anthony Guiseppi-Elie "Model of a Conductimetric Urea Biosensor" Pacifichem '95; December 11- 16, 1995.

169. Anthony Guiseppi-Elie and Norman F. Sheppard, Jr. (Invited Lecture) Conductimetric Biosensors Formed From Electroconductive Polymer-based Devices. The First Asia-Pacific Symposium on Biosensors; University of Wollongong, NSW, Australia: December 4th - 6th, 1995.

170. Anthony Guiseppi-Elie, James M. Tour, David L. Allara and Norman F. Sheppard, Jr. "Bioactive Polypyrrole Thin Films with Conductimetric Response to Analyte" Symposium on Electrical, Optical, and Magnetic Properties of Organic Solid State Materials: Proceedings of the Fall 1995 MRS Meeting, Boston, Massachusetts. November 27 - December 1, 1995

171. Norman F. Sheppard, Jr., David J. Mears and Anthony Guiseppi-Elie "Model of an Immobilized Enzyme Conductimetric Urea Biosensor" 1995 Annual Fall Meeting of the Biomedical Engineering Society: November, 1995.

172. Anthony Guiseppi-Elie and Norman F. Sheppard, Jr. (Invited Lecture) "Conferring Biospecificity to Electroconductive Polymer-based Biosensor Devices" in symposium on

Polymers of Biological Significance; ACS NERM University of Rochester, Rochester, NY: October 22- 25, 1995.

173. Anthony Guiseppi-Elie* and Ann M. Wilson, "Electroconductive Polymer Thin Films with Internal Bioactive Moieties for Biosensor Applications" in symposium on "Polymeric and Organic Materials: Solid State Properties and Smart Materials", 209th National Meeting of the ACS, PMSE Division: Anaheim, April 2- 7, 1995.

174. Anthony Guiseppi-Elie (Plenary Lecture) "Biosensors: Bioanalytical Devices at the Interface Between Biotechnology and Microelectronics." The XIth Conference of Chemistry and Chemical Engineering; University of the West Indies, St. Augustine: Republic of Trinidad and Tobago; March 6 -10, 1995.

175. Anthony Guiseppi-Elie and Ann M. Wilson, "Novel Analytical Method for Conductimetric Chemical and Biosensors Formed from Electroconductive Polymers" in symposium on "Transducer-active Polymers", 208th National Meeting of the ACS, PMSE Division, August 21- 26, 1994.

176. Anthony Guiseppi-Elie, Ann M. Wilson, Charles L. Linden, Fred J. Pearce, William P. Wiesmann, David L. Glick "A Conductimetric H_2O_2 Sensitive Electroconductive Polymer Transducer for Development of Oxidoreductase Enzyme Biosensors and Oxidoreductase Labeled Immunosensors" in symposium on "Transducer-active Polymers", 208th National Meeting of the ACS, PMSE Division, August 21- 26, 1994.

177. Anthony Guiseppi-Elie; "Impedance Sensing" Chemical and Biological Sensors Symposium, University of Pittsburgh, Pittsburgh, Pennsylvania. June 9 - 11, 1993.

178. Anthony Guiseppi-Elie "Conductimetric Biosensors Developed Using the Electroactive Polymer Sensor Interrogation System - EPSIS" 1993 International Electroanalytical Symposium, Indianapolis, Indiana. May 19 - 23, 1993.

179. Anthony Guiseppi-Elie "Chemoresistive Chemical and Biosensor Devices Based on Electroactive Polymer Sensor Technology" Pittsburgh Conference, New Orleans, Louisianna. March 9-12, 1992.

180. Anthony Guiseppi-Elie "Biosensor Devices Formed From Transducer-Active Polymeric Thin Films"; AIChE Annual Meeting, Chicago, Illinois. November 11-16 1990.

181. Anthony Guiseppi-Elie and Ann M. Wilson "Microsensor Devices Formed From Transducer-Active Polymeric Thin Films"; Symposium on Monolayers and Thin Polymeric Films in Electronics, 64th Colloid and Surface Science Symposium, Lehigh University, Bethlehem, PA . June 18-20, 1990.

182. Anthony Guiseppi-Elie "Introduction of Polar Functionalities to the Near Surface of Built-up, Y-Type, L-B Films". The Second Annual Symposium of the North Carolina Section of the American Chemical Society; "Chemistry at Surfaces and Interfaces", Duke University, North Carolina. September 9-10, 1988.

183. Anthony Guiseppi-Elie "Biosensor Applications of Polyacetylene".The 15th Annual National Conference of the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE), Philadelphia, Pennsylvania. April 4-8, 1988.

184. Greg S. Galletti and Anthony Guiseppi-Elie "Vinyl Stearate Monolayers for L-B Film Applications", Second International Conference on Langmuir-Blodgett Films, Schenectady, New York. July 1-4, 1985.

185. Anthony Guiseppi-Elie, "Underfilm Corrosion of Coated Mild Steel". The 10th Caribbean Conference of Chemistry and Chemical Engineering, University of the West Indies, St. Augustine, Trinidad. January 3-7, 1983.

186. Anthony Guiseppi-Elie, A. and Gay E. Wnek, "Environmental Stability of Doped $(CH)_x$ Electrodes in Aqueous Solutions". The IUPAC 28th Macromolecular Symposium, University of Massachusetts, Amherst, Massachusetts. July 12-16, 1982.

NATIONAL AND INTERNATIONAL WORKSHOPS

187. *Keynote Lecture and Instructor:* **Theory and Practice of Point of Care Tests: From Development through Manufacturing.** San Diego Marriott Del Mar Hotel, San Diego, CA, USA. March 31 – April 2, 2009.

188. *Keynote Lecture and Instructor:* **The Emerging Technologies to Enable Quantitative Rapid Tests.** Hyatt Islandia Hotel, San Diego, California, USA. September 24-26, 2007.

189. *Keynote Lecture and Instructor:* **The X11th International Seminar on the Technology of Inherently Conductive Polymers:** "Clinical Diagnostics Using Bio-Smart Thin Film Biosensors" . LA PIETRA International Conference Center, Via Bolognese, 120 50139 Florence, ITALY. October 9-11, 2006.

190. *Keynote Lecture and Instructor:* **Practical Approaches to Microarrays for Diagnostics** Arlington, Virginia, USA. September 19-21, 2006

191. *Keynote Lecture and Instructor:* **The 1st Asia Biosensors and Biochip "Hands on" Workshop**. Organized by GENE Co., Ltd. and Gene Tech (Shanghai) Co., Ltd. Beijing and Shanghai, Peoples Republic of China. April 6-16, 2006.

INVITED PUBLIC PRESENTATIONS:

"Implantable Biochips: Research at the Center for Bioelectronics, Biosensors and Biochips at Clemson University." Rotary Club of Anderson, Anderson Civic Center, Anderson South Carolina. April 15th, 2008.

"Implantable Biochips: Research at the Center for Bioelectronics. Biosensors and Biochips at Clemson University." Anderson Economic Development Authority, Anderson, South Carolina. March 6th, 2008.

"Implantable Biochips: Research at the Center for Bioelectronics, Biosensors and Biochips at Clemson University." East Greenville Rotary, Greenville East, South Carolina. January 14th, 2008

"Implantable Biochips: Research at the Center for Bioelectronics, Biosensors and Biochips at Clemson University." Simpsonville Rotary, Simpsonville, South Carolina. October 17th, 2007.

"NanoBio: What's all the Fuss about Small Stuff" Honors Program, Virginia Commonwealth University, Richmond, Virginia. Friday 8th, April 2005.

Keynote Address: **"NanoBio: What's all the Fuss about Small Stuff"** 2005 Annual General Meeting of the Virginia Space Grant Consortium (VSGC), Omni Hotel, Norfolk, Virginia. Friday 1st, April 2005.

Keynote Address: **"Engineering in an Era of Nano and Bio"** 2005 Annual General Meeting of the Richmond Joint Engineers Council (RJEC), Jefferson Hotel, Richmond, Virginia. Thursday 24th, February 2005.

"NanoBio: What's all the Fuss about Small Stuff" Lunch Break Science Series, Science Museum of Virginia (SMVA), Richmond, Virginia. Friday 1st, April 2004.

"On-going Research in Bioelectronics, Biosensors and Biochips" Biotechnology Program, Godwin High School, Richmond, Virginia. Wednesday 17th, November 1999.

"A VCU Center for Bioelectronics, Biosensors and Biochips" Board of Advisors and Faculty, VCU Chemical Engineering Department, Virginia Commonwealth University, Richmond, Virginia. Friday 12th, November 1999.

"A VCU Center for Bioelectronics, Biosensors and Biochips" VCU Ad Center, Virginia Commonwealth University, Richmond Virginia. October 13th, 1999.

"Biotechnology: More Biochips Please" Jewish Women's Club of Richmond, Jewish Community Center, Thalhimer Adult Lounge, 5403 Monument Avenue, Richmond Virginia, USA 23284. October 12th, 1999.

"**From the Bench to the Biochip: Innovations from VCU".** The Charlottesville Venture Group, Charlottesville, Virginia, USA. June 12th, 1999.

"Bioelectronics, Biosensors and Biochips: A Collaborative Research Center of Excellence at VCU". Greater Richmond Technology Council, The Richmond Marriott, Richmond, Virginia, USA. February 9th, 1999.

"**The Future of Biomedical Engineering**" Alpha Eta Mu Beta Biomedical Engineering Scientific Honor Society, Johns Hopkins University School of Medicine, Baltimore, Maryland. Nov. 5th, 1997**.**

"**Bioactive Electroconductive Polymers: Multifunctional Materials for Biotransducers**" Monsanto Growth Enterprises, St. Louis, Missouri. May 23, 1996.

"Surviving in Turbulent Financial Markets and Climates" University City Science Center, Philadelphia, Pennsylvania. November 15, 1994.

"Environmental Diagnostics Using Biosensors" Wistar Symposium Series, Wistar Institute, Philadelphia, PA. May 11, 1994.

"Opportunities in Chemistry -- Biotechnology" Rensselaer Polytechnic Institute (RPI), Department of Chemistry, Troy, NY. April 8, 1994.

"On-site Monitoring of Environmental Pollutants Using Biosensors" Pennsylvania Biotechnology Association Annual Symposium, Pennsylvania Convention Center, Philadelphia, PA. April 26 -27, 1993.

"Careers in Biotechnology: The Picture and the Promise" Clarion University. Annual Symposium, Pennsylvania Science Teachers Association, Allentown, PA. November 4-5, 1993.

"High Technology Entrepreneurship: A Panel Discussion" Moderator, School of Business, Rider University, Lawrenceville, NJ. November 18, 1993.

"Corporate Partnership Management: How to Get Started" Annual Symposium, Northeastern Pennsylvania Technology Council, Wilkes Barrie, PA. October 21, 1993.

"Restructuring School Practices for Student Learning Outcomes: A Summit With Education Leaders. "Implications for Practice: Emerging Issues" Temple University Center for Research in Human Development and Education. April 23-24, 1993.

"A Conductimetric Glucose Biosensor for *in vivo* Monitoring of Blood Glucose Levels" Division of Surgery, Walter Reed Army Institute of Research, Washington, DC 20307. July 27, 1993.

"Conductimetric Chemical and Biosensors Devices Based on Electroactive Polymer Sensor Technology" Center for Bio/Molecular Science and Engineering, Naval Research Laboratory, Washington DC 20375. December 6, 1991.

"Biosensor Applications of Polyacetylene" Department of Materials Science and Laboratory for Research on the Structure of Matter, University of Pennsylvania, Philadelphia, Pennsylvania. December 14, 1987.

"Langmuir Blodgett Films: Obituaries and Opportunities" Department of Chemistry, College of Staten Island/City University of New York (CSI/CUNY), New York. November 19, 1987.

"Sensor Applications of Electroactive Polymers" MIT Summer Session Program, Cambridge, Massachusetts. July 22, 1987.

"Preparation and Applications of Langmuir-Blodgett Films" Research Division, W. R. Grace and Co., Columbia, Maryland. August 22, 1984.

"Fuel Cell Applications of Polyacetylene" Sandia National Labs., Albuquerque, New Mexico. August 19, 1983.

"Environmental Stability of Conducting Polyacetylene" Owens Corning Technical Center, Granville, Ohio. March 03, 1983.