

INDIRA CHATTERJEE
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Curriculum Vita

EDUCATION: Ph.D., Electrical Engineering, University of Utah, Salt Lake City, Utah, June 1981.
M.S., Physics, Case Western Reserve University, Cleveland, Ohio, June 1977.
M.S., Physics, Bangalore University, Bangalore, India, April 1975.
B.S., Physics (honors), Bangalore University, Bangalore, India, April 1973.

PROFESSIONAL EXPERIENCE:

Interim Dean, College of Engineering, July – August 2022
Associate Dean, College of Engineering, July 2009 - present
Professor, Department of Electrical and Biomedical Engineering, University of Nevada, Reno, Nevada, 2004 to present
Associate Professor, Department of Electrical Engineering, University of Nevada, Reno, Nevada, 1993 to 2004. Tenured 1993.
Member of the BioMedical Engineering Graduate Program faculty
Assistant Professor, Department of Electrical Engineering, University of Nevada, Reno, NV, 1988 to 1993.
Assistant Professor, Department of Electrical Engineering, University of Alabama, Tuscaloosa, Alabama, 1987 to 1988.
Research Assistant Professor, Department of Electrical Engineering, University of Utah, Salt Lake City, Utah, 1984 to 1985.
Research Associate, Department of Electrical Engineering, University of Utah, Salt Lake City, Utah, 1981 to 1984.
Graduate Research Assistant, Department of Electrical Engineering, University of Utah, 1977 to 1981.
Graduate Teaching Assistant, Department of Physics, Case Western Reserve University, Cleveland, Ohio, 1975 to 1977.

HONORS AND AWARDS: **FOUNDATION PROFESSOR**, the highest honor given to University of Nevada Professors to recognize and salute them for outstanding achievements, particularly in research and teaching, University of Nevada, Reno, 2015

ROSE HOEPER FACULTY AWARD for Excellence in Teaching and Advisement from the College of Engineering, 2009

SILVER COMPASS AWARD for Extraordinary Commitment to Students, University of Nevada, Reno, 2005

F. DONALD TIBBITS UNIVERSITY DISTINGUISHED TEACHER AWARD, University of Nevada, Reno, 1995.

UNIVERSITY OF NEVADA, RENO NOMINEE FOR THE NEVADA REGENTS TEACHING AWARD, 1999

SOCIETY OF WOMEN ENGINEERS REGION A SERVICE AWARD, 2008

UNIVERSITY OF NEVADA, RENO IEEE STUDENT SECTION AWARD for Excellence in Teaching, 2007-2008

Selected by the Senior Scholar, College of Engineering, as the faculty mentor who had the most significant influence on his academic achievements at the University of Nevada, Reno by senior scholars in Electrical Engineering Adam Blitstein, Spring 2005, Matthew Koepnick, Spring 2001, Charles Randall, Fall 2001

Nevada Women's Fund "Women of Achievement" honoree, 2001

National Women's History Month honoree, in recognition of outstanding accomplishments and contributions, Women's Resource Center, University of Nevada, Reno, 2001

Selected by Bradley Shochat as his mentor for the Honors Cording ceremony, May 2007

Who's Who in America's Teachers, 1994

Nominated to be a member of the Electromagnetics Academy, 1991 -present

Who's Who in Electromagnetics, 1991

Phi Kappa Phi, 1980

Eta Kappa Nu, 1989

National Deans List, 1979 - 1980

American Biographical Institute, The International Directory of Distinguished Leadership, First Edition, 1984

American Biographical Institute, International Youth in Achievement, 1981-1982

National Science Talent Search Scholarship Program, India, 1971 – 1975

RESEARCH INTERESTS:

Engineering Education (Currently funded by the National Science Foundation)
Numerical and Experimental Electromagnetics applied to the human body and biological systems.

Therapeutic and clinical applications of Radiofrequency/ Microwave/Millimeter Wave radiation

Bioeffects of high intensity nanoelectropulses (funded by the Air Force Office of Scientific Research)

RESEARCH PROJECTS AND GRANTS:

TOTAL RESEARCH FUNDING SINCE 1988:

Creating Retention and Engagement for Academically Talented Engineers (CREATE)

National Science Foundation S-STEM program

\$1 million (PI)

Starting date: 02/01/2019

Ending date: 31/01/2025

Engineering Pathways for Access, Community, and Transfer (EPACT)

National Science Foundation RED (Revolutionizing Engineering Departments) program

\$1.7 million (Co-PI)

\$659,074 (PI, sub-award)

Starting date: 08/15/2023

Ending date: 07/31/2028

The impact of engineering summer camps on middle school students' interest and identity

National Science Foundation

\$210,000 (PI)

Starting date: 1/1/2018

Ending date: 31/12/2021

Nanoelectropulse -induced changes in cell excitability: a new approach for neuromodulation

Air Force Office of Scientific Research

\$875000 (Co-PI)

Date Awarded: 06/15/14

End Date: 06/14/19

Knowledge fund NSHE-Industry unmanned autonomous systems collaborative project

Nevada Governor's Office of Economic Development

\$166667 (PI)

Date Awarded: 08/2014

End Date: 2017

Olea human presence detection & collision avoidance antenna development

Olea Systems Inc.

\$8597.28 (PI)

Date Awarded: 05/04/16

End Date: 210/11/16

NevadaTeach: UTeach Replication

National Math & Science Initiative

\$1,400,000 (Co-PI)

Starting date: 09/01/14

Ending date: 08/31/19

Electromagnetic Compatibility lecture and laboratory course at the University of Nevada, Reno
IEEE EMC Society John Howard Memorial Award

\$10,000 (PI)

Starting date: 01/01/2014

Ending date: 31/12/2014

Microwave Emitter Modeling

GE Energy

\$161,543 (PI)

Starting date: 03/01/ 2010

Ending Date: May 2012

Millimeter wave-based fatigue countermeasure technology for improving performance and prolonging combat effectiveness of warfighters

Air Force Office of Scientific Research

\$666,400 (PI)

Starting date: 07/01/2008

Ending date: 12/31/2010

High density nanoelectrode arrays for radiation detection

Department of Energy

\$400,000 (Co-PI)

Starting date: 09/30/2005

Ending date: 03/31/2007

Directed Energy Non-Lethal Weapons

Air Force Office of Scientific Research

\$750,000 (Co-PI)

Starting Date: 7/1/2007

Ending Date: 9/30/2009

Electronic bandgap (EBG) antenna development

Applied Research Initiative, University of Nevada, Reno

\$34,948 (PI)

Starting Date: 6/1/06

Ending Date: 5/31/08

Non-lethal weapons that use radiofrequency/microwave energy for stunning/immobilization

Air Force Office of Scientific Research

\$709,912 (Co-PI)

Starting Date: 5/15/06

Ending Date: 5/14/08

Research on non-lethal stunning/immobilization weapons

Air Force Office of Scientific Research

\$500,000 (Co-PI)

Starting Date: 5/1/05

Ending Date: 4/30/07

Exploring non-thermal radiofrequency bioeffects for novel military applications

DoD EPSCoR, Air Force Office of Scientific Research

\$500,000 plus \$272,440 in cost-share through in-kind and dollar match from non-federal sources
(Co-PI)

Starting Date: 6/01/03

Ending Date: 5/31/06

Interdisciplinary research project to explore the potential for developing non-lethal weapons based on radiofrequency/microwave bioeffects

Air Force Office of Scientific Research

\$500,000(Co-PI)

Starting Date: 3/15/04

Ending Date: 12/31/05

Expanding current research capabilities for investigating RF/Microwave bioeffects

Department of Defense DURIP (Defense University Research Instrumentation Program)

\$144,483.94 (PI)

Starting Date: 04/15/03

Ending Date: 04/14/04

Sensitivity of neurotransmitter release to radiofrequency fields

Air Force Office of Scientific Research

\$357,652 (Co-PI)

Starting Date: 5/1//2002

Ending Date: 4/30/2005

Cell Excitability Mechanisms of electromagnetic fields

National Institutes of Health

\$776,796 (Co-PI)

Effects of EMF's on Calcium Levels in Excitable Cells

National Institutes of Health

\$144,000 (Co-PI)

A microstripline-based radiofrequency sensor for the on-line monitoring of microbial activity

National Science Foundation EPSCoR

\$17,000 (PI)

Effect's of EMF's from VDT's on Excitable Cells using Fluorescence Imaging Techniques, ***Johns***

Hopkins Center for VDT and Health Research

\$149,681 (PI)

Communications Channel Modeling of High-Altitude Radio Communication Platforms,

Nevada TREC Program

\$8,000 (Co-PI)

Modification and further development of computational exercises in antenna design and analysis,
UNR Instructional Enhancement Grant Program
\$652 (PI)

High Rate visualization of biological processes, **National Institutes of Health**
\$200,000 (Co-PI)

Performance Assessment/Characterization of final waste forms by electrochemical impedance spectroscopy (EIS)
Department of Energy
\$72,678 (Co-PI)

Mine Waste Treatment and Remediation, **Environmental Protection Agency EPSCoR**,
\$209,714 (Faculty Collaborator)

Radar Based Lateral Guidance Modul
Hornet Foundation (California State University)
\$49,979 (Co-PI)

AC Impedance Spectroscopy to Determine Degradation of Coated Metal
US Department of Energy through Center for Infrastructure Studies, University of Nevada,
Reno
\$68,435 (PI)

Finite Element Thermal Modeling of the Human Body in Hyperthermic Cancer Treatment,
Pittsburgh Supercomputing Center through the National Institutes of Health (NIH) Division of Research Resources and the National Science Foundation, 103 service units (PI)

Surface Chemistry and Dielectric Heating of Tar Sand Asphalt Bitumen, **United States Department of Energy**, \$106,539 (Co-PI)

Non-Invasive Determination of Adsorbed Moisture, Air-Void and Asphalt Content in Asphalt-Aggregate Mixtures, **US Department of Energy through Center for Infrastructure Studies**, University of Nevada, \$36,896 (PI)

Development of an Applied Design, Measurement and Analysis Program in Electromagnetics,
Instructional Enhancement Grants Program, University of Nevada, Reno, \$1444 (PI)

Dielectric Properties of Rocks and Alteration Products with Applications to Remote Sensing,
UNS NASA Space Consortium, \$3,550 (PI)

Noninvasive Determination of Adsorbed Moisture in Asphalt Pavements using an Open-ended Coaxial Probe and Numerical Modeling of Asphalt using Microwave Heating, **Nuclear Waste Projects Office through Center for Infrastructure Studies**, University of Nevada, Reno, \$27,348 (PI)

Finite Element Thermal Modeling of the Human Body in Hyperthermic Cancer Treatment, **Research Advisory Board**, University of Nevada, Reno, \$6,400 (PI)

Dielectric Measurements **Software - Donation** obtained from Martin-Marietta Laboratories, Baltimore, Maryland, \$22,500

**PROFESSIONAL:
SOCIETIES**

IEEE, Senior Member, 1996 to present
IEEE, Member, 1981 to 1996
IEEE, Student Member, 1977 – 1981
American Society for Engineering Education, 2009 - present
Applied Computational Electromagnetics Society, Member, 1998-99
Bioelectromagnetics Society, Member, 1983 to present
Materials Research Society, Member, 1990 to 1992
Society of Women Engineers Sierra Nevada Professional Section, Vice President, 2000 - 2001
Society of Women Engineers, Senior Member and Faculty Advisor to the University of Nevada, Reno student section, 1988 to present
The Electromagnetics Academy, Nominated Member, 1991 to present
Phi Kappa Phi, 1980 to present
Eta Kappa Nu, 1989 to present

**NATIONAL
PROFESSIONAL
ACTIVITIES:**

Member, IEEE MTT-10 Committee on Biological effects and Medical Applications, 2011 – present

Past Member, Board of Directors, Bioelectromagnetics Society
Attended board meetings nationally and internationally, served as Chair of memorial sub-committee and member of the technology task force and website development sub-committee

Member of the editorial board of the Bioelectromagnetics Society, 2008 – present

Secretary, Northern Nevada IEEE section, 2005 – 2009

Member of jury for judging awards for the NCEES Engineering Award, held at Clemson, SC (two years)

Panel Reviewer for the National Institutes of Health (National Institute on Alcohol Abuse and Alcoholism) SBIR program

Panel Reviewer for the National Science Foundation for the CAREER program (Antennas and High Frequency Electronics), Instrumentation and Laboratory Development Program, Undergraduate Course and Curriculum Development Program and Graduate Fellowship Program. Have also reviewed proposals for other divisions of NSF.

Acting Director, National Science Foundation EPSCoR Women in Science Program, 1996-1997. As part of this, organized and ran the 1996 Summer Research Program for undergraduates, organized a “Critical Career Development” workshop for the women science and engineering faculty at the University of Nevada, Reno and organized the 1997 Summer Research Program for undergraduates.

Member of Technical Program Committee that reviewed papers for the 2000 IEEE Antennas and Propagation International Symposium and USNC/URSI Meeting, July 2000, Salt Lake City, Utah. Also, co-chair of the session on Safety Assessment and Medical Applications.

Technical Program Co-chair, Applied Computational Electromagnetics Society Meeting, March 1999, Monterey, CA

Member of the Technical Program Committee that reviewed abstracts for the Annual Bioelectromagnetics Meetings – multiple years. Judged poster and oral student presentations.

Organizer of a session on "21st Century Electrical Engineering Education Projects Today", American Society for Engineering Education Conference, University of Illinois, Urbana-Champaign, June 1993.

Chair and organizer of a session on Medical Applications of Computational Electromagnetics, Progress in Electromagnetics Research Symposium, Cambridge, Massachusetts, July 1 - 5, 1991.

REVIEWING OF MANUSCRIPTS, PROPOSALS AND BOOKS:

Reviewer for the following journal, conferences, agencies and publishers:

National Science Foundation
National Institutes of Health
IEEE Transactions on Microwave Theory and Techniques
IEEE Transactions on Plasma Science
IEEE Transactions on Evolutionary Computation
IEEE Antennas and Propagation International Symposium
IEEE Transactions on Education
IEEE Transactions on Dielectrics and Electrical Insulation
IEEE Transactions on Biomedical Engineering
IEEE Microwave Magazine
IEEE Transactions on Biomedical Engineering
IEEE Radio and Wireless Week Conference Proceedings
IEEE Microwave and Wireless Components Letters
Bioelectrochemistry
PLOS ONE

International Journal of Hyperthermia
Journal of Membrane Biology
Bioelectromagnetics Journal
Applied Computational Electromagnetics Society Journal
International Journal of Microwave and optical Technology
Bioelectromagnetics Journal
Frontiers in Education Conference
Radio Science
NASA EPSCoR proposals
Medical & Biological Engineering & Computing
Journal of Microwave Power and Electromagnetic Energy
Health Physics
Frontiers in Physics
Electromagnetic Biology & Medicine
Journal of Electromagnetic Waves and Applications
Computers and Electrical Engineering
International Journal of Computer Applications in Technology
West Publishing Company
Addison-Wesley Publishing Company
Prentice-Hall
SPIE Press
Microwave Engineering Handbook
Proposals on Applied Electromagnetics for Biology and Medicine, Leuven
Catholic University, Belgium
NASA Postdoctoral Program, ORAU
Ralph E. Powe Junior Faculty Awards Program, ORAU, multiple years
IEEE MTT-S Medical Graduate Fellowship
ASEE Conference & Exposition, multiple years
Bioelectromagnetics Conference and BioEM Conference, multiple years
Rising Researcher Award, multiple years
ORAU Ralph E. Powe Junior Faculty Awards

CONFERENCE ORGANIZATION:

Member, Technical Program Committee and Session chair (Dosimetry),
Bioelectromagnetics Annual Meeting, Halifax, Canada, June, 2011

Member, Technical Program Committee, Bioelectromagnetics Annual Meeting,
Kanazawa, Japan, June 2007

Member, Technical Program Committee, Bioelectromagnetics Annual Meeting,
Cancun, Mexico, June 2006

Member, Technical Program Committee and Chair of a session, IEEE Antennas
and Propagation Conference, Salt Lake City, Utah, July 2000

Technical Program Co-chair, Applied Computational Electromagnetics Society

Conference, Monterey, CA, March 1999.

Progress in Electromagnetics Research Symposium (PIERS), Cambridge, MA, July 1990, Chairperson and Co-Organizer for Session on Medical Applications of Computational Electromagnetics

International Symposium on Recent Advances in Microwave Technology (ISRAMT), Reno, NV, August 1991, Technical Exhibits Coordinator, Member of Technical Committee and Chairperson for session on Industrial/Biological Applications

Society of Women Engineers Golden West Regional Conference, Reno, NV, February 1992, Organizing Committee member and Exhibits coordinator.

Bioelectromagnetics Society 17th Annual Meeting, Boston, MA, June 1995, Member of Technical Program Committee and Chairperson for session on Mobile Telephones.

TEACHING:

*My teaching portfolio has appeared in the book **Successful use of Teaching Portfolios** by Peter Seldin, 1993, Anker Publishing*

Electromagnetic Compatibility (EE434/634)

Circuits I (EE220)

Engineering Electromagnetics (EE330 at University of Nevada and EE344 at University of Alabama)

Distributed Systems and Antenna Design (EE433/633)

Electromagnetic Compatibility (EE434/634)

Microwave Engineering (EE436/636)

Antenna Theory and Design (EE751)

Microwave Communication Systems (EE757)

Internship I, II and III (EE296, 396, 496)

One guest lecture in EE101 (Introduction to Electrical Engineering) several semesters

Taught problem sessions for Electromagnetic Fields (EE351 at University of Utah)

Basic Physics Laboratory for non-physics majors (1975-77 at Case Western Reserve University)

Two weeks of guest lectures for Biomedical Engineering (EE426/626), two weeks of guest lectures for Engineering Materials (EE202), one-week guest lecture for Introduction to Electrical Engineering (EE101), one week of guest lecture for Introduction to Biomedical Engineering (BME 601)

Taught FE (Fundamentals of Engineering) review sessions twice a year on Electric Circuits in 1988 –present, review session on Electromagnetics, 2000.

Laboratories developed and supervised:

Introduction to Network Analysis (EE220L)

Microwave Engineering (EE436L/636L)
Electromagnetic Compatibility (EE434/634)

INTERNSHIP COORDINATOR FOR THE ELECTRICAL AND BIOMEDICAL ENGINEERING DEPARTMENT, 1999 – 2010. Responsibilities include academic supervision of internships, grading of internship reports, contacting companies to provide internships, and advertising internships among students.

GRADUATE STUDENT SUPERVISION:

I have served as thesis and dissertation advisor for several graduate students, research mentor to two post-doctoral fellows and one research scientist. I have conducted comprehensive exams for many students.

I have served on innumerable graduate student thesis and dissertation committees as member, not only for engineering students but also students from the College of Science, College of Education and Liberal Arts.

TRAINING SEMINARS:

I arranged several training seminars by industry (Agilent, Sonnet) for students in my classes as well as for industry representatives

I initiated participation of electrical engineering students the Microwave Engineering course in the Agilent RF/Microwave student certification program

RECOMMENDATION LETTERS

I have written innumerable letters of recommendation for undergraduate and graduate students

UNDERGRADUATE RESEARCH:

Actively involved several undergraduate students in research projects both in funded research as well as in Undergraduate Research programs held on campus. Several papers were presented at conferences and published in conference proceedings and journals as a result of this activity. I was also served as research mentor for high school students.

UNIVERSITY, COLLEGE AND DEPARTMENT ASSIGNMENTS AND COMMITTEES:

University level:

University Courses and Curriculum Committee, 2011 - present

Distinguished Faculty Awards Committee, 2014 - 2016

Honors Program Advisory Council

Associate Deans Committee, 2009 - present

Vice President for Research and Innovation University Research Council, 2009 – 2022

University Research Committee Sub-Committee on Faculty Research Administrative Burden,
Chair

UTeach steering committee
 Raggio Research Center STEM Advisory Council
 College of Education Teacher Education Advisory Committee
 Facilities/Space Committee
 Retention Plan Committee
 Honors Program Advisory Council
 Honors Program Curriculum Committee
 Honors Program Capstone Committee
 Deans STEM Committee
 Deans Team – Goal 3 Diversified Knowledge Economy – University Strategic Planning Committee
 Deans Team – Goal 6 Sustainable Environment – University Strategic Planning committee
 Search Committee for Manager of the Tech Transfer Office
 University Morale Task Force, 2005-2006
 Status of Women Committee, co-chair, 2004-2006, member 2006-2007
 Status of Women Committee, member, 2002- 2004
 Member, Regents Teaching Award selection committee, 2006, 2007, 2008
 Member, Selection committee for nominees for the Regent’s teaching award, 2001
 Member, Advisory committee for the Excellence in Teaching Program, 1999- present
 Faculty Search Committee, Department of Physics, 1992-93.
 Member, Research Faculty Search Committee, School of Medicine, 1994.
 University Tenure and Promotion Committee, 1995-1998, 2000-2001
 Women’s Studies Advisory Board, 1998 – 2001
 Distinguished Faculty Award Committee, 1998 - 2001
 Instructional Enhancement Grants Review committee, 1997, **Chair**
 Instructional Enhancement Grants Review committee, 1996.
 Academic Standards Committee, University of Nevada, Reno, 1995 – 96, **Chair**
 Search Committee for Vice-President for Academic Affairs, 1996 - present.
 Steering Committee, University Self-Study Accreditation committee and co-chair for sub-committee in charge of Standard V (Effectiveness of Educational Programs), 1996 - present.
 University of Nevada, Reno, ad-hoc review committee on Personnel Policies and Procedures
 University of Nevada, Reno, Campus Affairs Committee, 1990 – 1994 (Served on sub-committee to investigate the implications of the federal legislation concerning persons with handicaps on campus (1990), sub-committee in charge of maintaining a calendar of evaluations of Deans and Vice-Presidents (1991-94), **Chair**.
 University of Nevada, Reno, Status of Women Committee, 1994 - 1995.
 Committee that reviewed applications for the NSF Women in Science Undergraduate Program, 1995.
 One of the university faculty chosen to conduct senior exit interviews in Spring 1992, 1993
 Member of the Core faculty who were involved in all aspects of creating the Biomedical Engineering program at the University of Nevada, Reno.

College level:

College of Engineering New Engineering Building Executive Committee, Liaison to university Facilities
 Selection Committee for architectural committee to do pre-design of the new engineering building

College of Engineering Curriculum Committee, **Chair**
College of Engineering Retention Team, **Chair**
College of Engineering Strategic Planning Committee
College of Engineering Scholarship Committee
College of Engineering Building Committee
College of Engineering Development Director Search Committee (multiple years)
College of Engineering Search Committee for the Grants and Projects Analyst, **Chair**
Innovation Day Steering Committee, 2010-present
College of Engineering search committee for Web Specialist
College of Engineering Differential Fee committee
College of Engineering Committee to restructure admin responsibilities, **Chair**
College of Engineering Lecturer search committee
College of Engineering Personnel Committee, 2005-2006, 2008-2009
College of Engineering Personnel committee, 2004 –2006, **Chair**
College of Engineering Faculty Awards Committee
College of Engineering Awards Committee, 1990-91
College of Engineering Bylaws Committee, 1991-92

Departmental (Electrical and Biomedical Engineering) level:

Admissions committee for the Biomedical Engineering Graduate program
Ad-hoc committee to prepare the self-study report for the Electrical Engineering program review, Fall 2000. I was responsible for putting together the report.
Faculty Search Committee, Fall 2000
Admissions Committee, Biomedical Engineering Graduate Program, 1995 -present.
Curriculum Committee, 1991-2009
Strategic Planning Committee, 2004 - 2009
Faculty Search Committee, 1997
Laboratory Development Committee, 1990-91

Faculty Advisor, Society of Women Engineers (SWE), 1988 - present. I was responsible for reactivating a dormant SWE chapter. This chapter has been very active since and successfully organized the Regional SWE meeting in Reno, February 1992, 2001 and 2008. SWE also organizes the annual Evening with Industry event. I work closely with the students on all their activities.

OUTREACH Engineering mentor for middle school students at Swope Middle School participating in the Future Cities competition, Have actively participated in Engineers Day, Science and Technology Day, Open House, Girl Scouts Day, Freshmen Orientation, Freshman Honors Retreat and several outreach programs like Your Own Way and Expanding Your Horizons Conference for girls, Math and Science Good Start conference etc. related to exposing middle school and high school female and minority students to engineering, “Your own way workshop” for middle school female students.

COMMUNITY AND SERVICE ACTIVITIES:

Corresponding secretary, Reno High School AAA, Reno, NV 2008- present
Secretary, Parents Group, Swope Middle School, Reno, NV, 1997-98.

Secretary, PTA board, George Westergard Elementary School, Reno, NV, 1994-95.
Member-at-large, PFA board, Roy Gomm Elementary School, Reno, NV, 1996-97.
Worked with several local and out-of-state companies helping them make lab measurements and unpaid consultations about technical problems.

SUMMARY OF ACTIVITIES AS ASSOCIATE DEAN OF ENGINEERING 2009 – present

As Associate Dean I oversee the following functions within the college:

1. As Associate Dean I have overseen all engineering undergraduate academic affairs, assessment, accreditation, recruitment, outreach, retention, advising and career placement. This includes: Interacting closely with advisement, recruiting, outreach and career placement personnel, providing leadership to improve retention and graduation rates to meet college and university goals, providing oversight to ongoing assessment procedures and monitoring their implementation. I oversaw the preparation effort and visit logistics for the 2017 ABET accreditation visit. I also have been the key person to establish several exchange agreements with overseas universities with the objective of giving engineering students a globally competitive education.
2. Have worked actively on many educational initiatives including establishment of minor degrees in Unmanned Autonomous Systems, and Manufacturing quality, a course on unmanned autonomous systems in partnership with industry, a course on High-Tech Entrepreneurship, and a BS-MBA program, all of which have the goal of implementing an engineering education that imparts knowledge to students on topics of current interest to STEM related industry and to make students competitive in a global engineering environment. In addition, I am part of the leadership team that organizes the annual engineering Innovation Day showcasing all senior engineering capstone design projects to industry, K-12 and the community. This event draws hundreds of high school students and their teachers, community members, and engineers from industry and is geared towards educating potential future engineers and the community about innovation and entrepreneurship in engineering.

Undergraduate and Graduate educational activities:

1. Worked on getting an Industrial Engineering BS, MS, and PhD program approved
2. Worked on establishing a BS-MBA program
3. Worked on establishing an industry-recognized certificate in Unmanned Aerial Vehicles with a company Insitu, based in Bingen, Washington – contract has been signed and the course will be taught this spring
4. Participated in establishing a minor in Unmanned Autonomous Systems and working on establishing a minor in Manufacturing quality/product excellence at the request of Tesla
5. Work on Innovation Day with the two faculty who organize the event showcasing all engineering senior design capstone courses. Several hundred 700 people from the community attend including middle and high school students
6. Participated in meetings with the College of Education regarding the hire of a faculty member in Engineering Education
7. Established a committee to oversee the Engineering Education program
8. Initiated establishment of honors sections in ENGR 100 (freshmen engineering class)
9. Facilitated inclusion of all engineering majors into a common ENGR 100 freshmen class and remodel of space in the Jot Travis building into a lab for ENGR 100

10. Facilitated meetings between the Biomedical Engineering faculty and School of Medicine to discuss the Biomedical Engineering undergraduate degree
11. Work closely with the Graduate Program Coordinators committee on various aspects of graduate education including differential fee assistantships

Industry/Research Related Partnerships

1. **NAASIC (Nevada Advanced Autonomous Systems Innovation Center)** – I was member of the core team that worked on the successfully funded \$3 million Knowledge Fund proposal to establish NAASIC. Since the funding of the proposal I:
 2. Worked with ETS-Lindgren on the refurbishing of the Anechoic Chamber that is used by companies for EMC pre-compliance testing as well as education
 3. Met with companies/industry individuals to establish partnerships. Companies include: Tesla, Panasonic, Cirrus Systems, Vital Systems, Shaffer and Shaffer Enterprises, RED Consultants, Project Elroy, Hamilton, Keystone Technologies (formerly Agilent), Airwave, Boeing, Dockon, GM/Carnegie Mellon, Pressure Device, Flirtey, Sustainable Water Solutions, Nitin Akarte (Cisco), Ian Cassidy, National Instruments, Drone America, Program Management Office, Biofilm Management, AJA Video, Boulder City consultant, UC Merced, Renown, Raven Electronics, Thermostone, Valley Tech Systems, Marketing Evolution, Bigelow Aerospace, JBA Consulting, NAS Fallon, 3G, RTAA, NVTEC, EDAWN, Bally Technologies, Insitu, Zuvo Water, NJVC, Unwired Planet, Stone Soup Labs, Armatterra, Micron, AM2T, Tripp Plastics, Vidtek, nSequence, InjectiMed, NV Secretary of State, Vidtek, Ormat, Hewlett Packard, Google, ENEL
 4. Given tours of labs to many companies, facilitated NDAs and arranged meetings with faculty
 5. Participated in many calls regarding UNR being part of the FAA consortium
 6. Participated in NVIE (Nevada Industry Excellence) panel review
 7. Facilitated the College of Engineering exhibit at the Northern Nevada Development Authority manufacturing conference
 8. Facilitated a joint electrical and mechanical engineering project (SeismoWave) funded by GE, Minden
 9. Coordinated the demo and display on UAVs on campus by Insitu
 10. Participated in planning of Titans of Industry event, Las Vegas, 2013
 11. Participated in many meetings regarding the UAS initiative in Nevada

Participation in University and College level proposals

- Sierra Nevada Corporation Solar Thermal project – funded for \$1 million – I coordinated all aspects of proposal writing and project management – this was a joint project with DRI
- UTeach (Gina Tempel PI, Chatterjee is one of the Co-PIs)– this is a joint proposal with the Colleges of Science and Education funded for \$1.4 million – a project via which students in STEM can get degrees in their major and a teaching certification
- PFI (Partnerships for Innovation) – NSF proposal (funded) PI was Kam Leang, I facilitated contacts in the first response community and participated in proposal planning meetings
- GOMRI (Gulf of Mexico Research Initiative) – proposal led by Louisiana State University, not funded, I participated as an investigator
- Collaborative Knowledge Fund proposal – funded for \$500K. I am the UNR Co-PI with Co-PIs from UNLV and DRI

Presentations:

1. Made a presentation to Nevada Legislators on NAASIC
2. Made a presentation on NAASIC at the Northern Nevada UAS Regional Coalition Meeting
3. Gave a welcome speech at the Advanced Automotive Applications Workshop
4. Presentations at Best and Brightest to students and parents, multiple years
5. Presentation to Tesla, February 2015
6. Keynote speaker at Coral Academy's Mathmatters Competition
7. Presentation to College of Engineering Advisory Board Fall 2013
8. Presentation on college activities to Maverick Group
9. Presentation about Unmanned Autonomous Systems capabilities at the Titans of Industry event, Las Vegas, 2013
10. Presentations and lab tours for NAIOP (commercial real estate development association)
11. Presentation at the Chemical and Materials Engineering department advisory board meeting, 2011

PUBLICATIONS: (names of students in bold)

Robinson, A. Kirn, J. Amos, I. Chatterjee, "The effects of engineering summer camps on middle and high school students' engineering interest and identity formation: A multi-methods study", *Journal of Pre-College Engineering Education Research*, Vol. 13, Issue 2, Article 6, 2023

K. Scalaro, I. Chatterjee, A-M. Vollstedt, J. LaCombe, and A. Kirn, "Interest -driven major pathways for mid-program undergraduate engineering students", abstract submitted to the 2023 ASEE Conference & Exposition, Baltimore, MD, June 2023.

I.Chatterjee, **K. Scalaro**, A-M. Vollstedt, J. LaCombe, J. Williams, C. Bauer, and A. Kirn, "S-STEM: Creating Retention and Engagement for Academically Talented Engineers – lessons learned", abstract submitted to the 2023 ASEE Conference & Exposition, Baltimore, MD, June 2023

K. Steinhorst, **R. Young**, **K. Scalaro**, I. Chatterjee, A-M. Vollstedt, J. C. LaCombe, and A. Kirn "Creating social capital: Developing resources in a cohort program", abstract submitted to the 2023 ASEE Conference & Exposition, Baltimore, MD, June 2023.

J. Gutual, **L. Robinson**, A. Kirn, and I. Chatterjee, "Cool It! Exploring the engineering design process and biomedical engineering", *Science Scope*, Vol. 46, Issue 5, May/June 2023.

H. Yamani, I. Chatterjee, H. Xu, N. Woo, J. Yoon, "Radar range enhancement using reflectarray technique", *International Journal of Microwave and Optical Technology*, Vol. 16, no. 5, September 2021.

J. Zaklit, I. Chatterjee, N. Leblanc, G.L. Craviso, "Ultrashort nanosecond electric pulses evoke heterogeneous patterns of Ca²⁺ release from the endoplasmic reticulum of adrenal chromaffin cells", *Biochimica et Biophysica (BBA) - Biomembranes*, 1861(6), 1180-1188, 2019.

J. Zaklit, I. Chatterjee, N. Leblanc, G.L. Craviso, “High intensity, 5 ns electric pulses mobilize Ca^{2+} from ER Ca^{2+} stores in adrenal chromaffin cells” 2018 BMES Annual Meeting Proceedings, 2018.

R. Sukhraj, **A. Shoaf**, I. Chatterjee, N. Leblanc, G.L. Craviso, “5 ns electric pulses evoke Ca^{2+} responses in adrenal chromaffin cells that are longer in duration than those evoked by a physiological stimulus”, Proceedings of the BioEM 2018 conference, 2018

I. Chatterjee, A. Kirn, J. Amos, “The effect of engineering summer camps on middle school students’ interest and identity”, Proceedings of the Annual ASEE Conference & Exposition, 2018.

L. Yang, S. Pierce, P.T. Vernier, I. Chatterjee, G. Craviso, N. Leblanc, “Differential effects of single and twin high intensity nanosecond electric pulses on membrane permeabilization and Na^{+} conductance in bovine chromaffin cells”, Proceedings of the Biophysical Society Annual Meeting, 2018.

A.C. Sabuncu, N. Leblanc, M. Stacey, G.L. Craviso, N. Semenova, P.T. Vernier, I. Chatterjee, J. Zaklit, “Dielectric properties of isolated adrenal chromaffin cells determined by microfluidic impedance spectroscopy”, *Bioelectrochemistry*, Vol. 119, pp. 84-91, 2018.

J. Yoon, N. Leblanc, **J. Zaklit**, P. T. Vernier, I. Chatterjee, and G. L. Craviso, “Enhanced Monitoring of Nanosecond Electric Pulse-Evoked Membrane Conductance Changes in Whole-Cell Patch Clamp Experiments”, *Journal of Membrane Biology*, Vol. 250, 2017, pp. 535 – 552.

L. Yang, G.L. Craviso, P.T. Vernier, I. Chatterjee, N. Leblanc, “Nanosecond electric pulses differentially affect inward and outward currents in patch clamped adrenal chromaffin cells”, *PLOS One*, July 10, 2017

J. Zaklit, G.L. Craviso, N. Leblanc, L. Yang, P.T. Vernier, I. Chatterjee, “Adrenal chromaffin cells exposed to 5 ns pulses require higher electric fields to porate intracellular membranes than the plasma membrane: an experimental and modeling study”, *Journal of Membrane Biology*, Vol. 250, 2017, pp. 535 – 552.

J. Yoon, N. Leblanc, **J. Zaklit**, P.T. Vernier, I. Chatterjee, G.L. Craviso, Enhanced Monitoring of nanosecond electric pulse-evoked membrane conductance changes in whole-cell patch clamp experiments, *Journal of Membrane Biology*, Vol. 249, 2016, pp. 633-644

J. Zaklit, G. L. Craviso, N. Leblanc, R. Terhune, and I. Chatterjee, Numerical modeling of intracellular adrenal chromaffin cell responses to high intensity 5 ns electric pulses, Proceedings of the BioEM 2016 conference, Ghent, Belgium, June 2016

G.L. Craviso, **C. Fisher**, I. Chatterjee and P.T. Vernier. Chromaffin cells do not swell when exposed to nanosecond electric pulses, *Bioelectrochemistry*, 103:98-102, 2015

J. El Zaklit, J. Yoon, I. Chatterjee, E. Evans, P.T. Vernier, N. Leblanc and G.L. Craviso. Ca^{2+} release from internal stores of adrenal chromaffin cells is not evoked by 5 ns electric pulses.

BioEM 2015 Joint meeting of the Bioelectromagnetics Society and the European Bioelectromagnetics Association conference proceedings, Asilomar, CA, June 14-19, 2015

J. Yoon, **J. El Zaklit**, I. Chatterjee, P.T. Vernier, N. Semenova, N. Leblanc and G.L. Craviso. Transient versus sustained Ca^{2+} responses evoked in adrenal chromaffin cells by 5 ns pulses: pulse delivery considerations. BioEM 2015 Joint meeting of the Bioelectromagnetics Society and the European Bioelectromagnetics Association conference proceedings, Asilomar, CA, June 14-19, 2015

R. Terhune, I. Chatterjee, J. Yoon and G.L. Craviso. Finite-Difference Time-Domain electromagnetic and thermal modeling of skeletal muscle exposed to millimeter waves. Proceedings of the IEEE 2014 International Microwave Symposium, Tampa, FL, June 1-5, 2014

J. Yoon, N. Leblanc, S. Pierce, I. Chatterjee, P.T. Vernier and G.L. Craviso, "Increase in chromaffin cell membrane conductance evoked by 5 nanosecond electric pulses", Proceedings of the BioEM conference, Capetown, S. Africa, June 8-13, 2014

I.Chatterjee and J. Yoon, "Utilization of the virtual family in the design of a novel multifunctional biosensor array for capsule endoscopy", Proceedings of the Computational Phantoms Workshop Proceedings, Zurich, Switzerland, IT'IS Foundation for Research on Information Technologies in Society, May 2013.

I.Chatterjee, J. Yoon, R. Wiese, S. Luongo, P. Mastin, L. Sadovnik and G.L. Craviso, "Millimeter wave bioeffects at 94 GHz on skeletal muscle contraction", Proceedings of the IEEE Radio and Wireless Week conference, Austin, TX, January 2013.

G.L. Craviso, I. Chatterjee and P.T. Vernier, "Nanoelectropulses: a novel electric stimulation modality for modulating neurosecretion", Gordon Research Conference, July 2012

A.Cerjanic, I. Chatterjee and B. Shiekman, "Method of Moments modeling of microstrip patch antennas with automatic GPU acceleration", Proceedings of the IEEE MTT-S International Microwave Symposium, Montreal, Canada, 2012.

G.L. Craviso, R. Wiese, **S. Shrestha**, I. Chatterjee and P. T. Vernier. "Nanoelectropulse stimulation of catecholamine release from adrenal chromaffin cells", Proceedings of the Bioelectromagnetics Conference, Brisbane, Australia, 2012.

G.L. Craviso, S. Choe, I. Chatterjee and P.T. Vernier. "Modulation of intracellular Ca^{2+} levels in chromaffin cells by nanoelectropulses", *Bioelectrochemistry*, Vol. 87:244-252, 2012

G.L. Craviso, S. Choe. I. Chatterjee and P.T. Vernier, "Temperature modulation of nanoelectropulse excitation of adrenal chromaffin cells", Proceedings of the Bioelectromagnetics conference, Halifax, Canada, June 12-17, 2011

J. Yoon, R. Weise, S. Luongo, P. Mastin, L. Sadovnik, I. Chatterjee and G.L. Craviso, "W-Band MMW exposure on skeletal muscle: Non-thermal effects on contraction", Proceedings of the Bioelectromagnetics conference, Halifax, Canada, June 12-17, 2011

J. Yoon, S. Luongo, R. Wiese, P. Mastin, P. Sadovnik, G.L. Craviso and I. Chatterjee. "W-band millimeter wave exposure system for studying non-thermal effects on skeletal muscle contraction", Proceedings of the International Microwave Symposium, Baltimore, MD, 2011.

G.L. Craviso, S. Choe, **P. Chatterjee**, I. Chatterjee and P.T. Vernier. Nanosecond electric pulses: a novel stimulus for triggering Ca^{2+} influx into chromaffin cells via voltage-gated Ca^{2+} channels. *Cell. Mol. Neurobiol.*, Vol. 30:1259-1265, 2010.

J. Yoon, I. Chatterjee, S. Luongo, R. Weise, P. Mastin, L. Sadovnik and G.L. Craviso. Design and characterization of an exposure system for studying effects of millimeter waves on skeletal muscle fatigue. Proceedings of the Bioelectromagnetics Society Meeting, Seoul, S. Korea, June 2010

G.L. Craviso, P. Chatterjee, S. Choe, W. Guan, I. Chatterjee and P.T. Vernier. Mechanisms underlying the nanosecond electric pulse-induced influx of calcium into adrenal chromaffin cells. Proceedings of the Bioelectromagnetics Society Meeting, Seoul, S. Korea, June 2010

G.L. Craviso, S. Choe, I. Chatterjee, P. Chatterjee and P.T. Vernier. Nanosecond electrostimulation of adrenal chromaffin cells. Proceedings of the Bioelectrics 201 Conference, Old Dominion University, 2010

G.L. Craviso, **P. Chatterjee**, G. Maalouf, A. *Cerjanic*, J. Yoon, I. Chatterjee and P.T. Vernier, Nanosecond electric pulse-induced increase in intracellular calcium in adrenal chromaffin cells triggers calcium-dependent catecholamine release. *IEEE Transactions on Dielectrics and Electrical Insulation*, Vol. 16: 1294-1301, 2009.

T. Gandhi, K.S. Raja, I. Chatterjee, M. Misra, X. Luo and P. Dzurella. Synthesis and characterization of CZT nanowire arrays for gamma ray detection. *International Journal of Nanotechnology*, Vol 5, no. 4/5, pp. 519-533, 2008

J. Yoon, I. Chatterjee, and G.L. Craviso. Feasibility study of using two types of microstripline bandpass filters for the detection of bacteria in water. *Proceedings of the European Microwave Week Conference*, October 8-11, 2007.

M. Lambrecht, I. Chatterjee, D. McPherson, J. Quinn, T. Hagan and G.L. Craviso, "Design, Characterization, and Optimization of a Waveguide-Based RF/MW Exposure System for Studying Nonthermal Effects on Skeletal Muscle Contraction", *IEEE Transactions on Plasma Science*, Special Issue - Non-thermal Medical and Biological Applications of Ionized Gases & EM Fields, Vol. 34, pp. 1470 -1479, 2006

J. Yoon, I. Chatterjee, D. McPherson and G.L. Craviso, ""Design, Characterization and Optimization of a Broadband Mini Exposure Chamber for Studying Catecholamine Release from Chromaffin Cells Exposed to Microwave Radiation:

Finite-Difference Time-Domain Technique”, *IEEE Transactions on Plasma Science*, Special Issue - Non-thermal Medical and Biological Applications of Ionized Gases & EM Fields, Vol. 34, pp. 1455-1469, 2006

T. Hagan, I. Chatterjee, D. McPherson and G.L. Craviso, “A novel waveguide-based radiofrequency exposure system for studying non-thermal effects on neurotransmitter release – Finite-difference Time-domain modeling, *IEEE Transactions on Plasma Science*, Vol. 32, ,2004, pp. 1668 – 1676

N. Hassan, I. Chatterjee, N.G. Publicover and G.L. Craviso, “Numerical study of induced current perturbations in the vicinity of excitable cells exposed to extremely low frequency magnetic fields”, *Physics in Medicine and Biology*, Vol. 48, 2003, pp. 1-17.

N. Hassan, I. Chatterjee, N.G. Publicover and G.L. Craviso, “A combined experimental and computational analysis of membrane potential variations in excitable cells in response to DC electric fields”, *2002 IEEE Conference on Electrical Insulation and Dielectric Phenomena (CEIDP) Annual Report*, pp. 91-94.

G.L. Craviso, I. Chatterjee, and N.G. Publicover, “Catecholamine Release from cultured bovine adrenal medullary chromaffin cells in the presence of 60-Hz magnetic fields”, *Bioelectrochemistry*, Vol. 59, 2003, pp. 57-64.

N. Hassan, I. Chatterjee, N.G. Publicover and G.L. Craviso, “Mapping membrane potential perturbations of chromaffin cells exposed to electric fields”, *IEEE Transactions on Plasma Science*, Vol.30, 2002, pp. 1-9.

G. Craviso, J. Poss, C. Lanctot, S.S. Lundback, I. Chatterjee and N.G. Publicover, “Effect of 60 Hz magnetic fields on the intracellular calcium levels in isolated bovine adrenal chromaffin cells”, *Bioelectromagnetics*, Vol. 23, 2002, pp. 557-567.

I. Chatterjee, **N. Hassan**, G.L. Craviso and N.G. Publicover, “Numerical Computation of distortions in magnetic fields and induced currents in physiological solutions produced by microscope objectives”, *Bioelectromagnetics*, Vol. 22, 2001, pp. 463-469.

I. Chatterjee and **D. Kokotovic**, “Antenna analysis and design exercises using windows-based software for senior/graduate level classes”, *Proceedings of the 2000 IEEE Antennas and Propagation International Symposium and USNC/URSI Meeting*, July 16-21, 2000, Salt Lake City, Utah.

J. Senkevich, D.A. Jones and I. Chatterjee, “Measuring the growth of oxide films on low carbon steel at 500° C by impedance spectroscopy”, *Corrosion Science*, Vol. 42, 2000, pp. 201-210.

D. Kokotovic, I. Chatterjee and J. Chisholm, “Numerical and Experimental Analysis of a novel aircraft landing antenna system”, *Journal of Electromagnetic Waves and Applications*, Vol. 13, 1999, pp. 1579-1601.

N.G. Publicover, C.G. Marsh, **C.A. Vincze**, G.L. Craviso and I. Chatterjee, “Effects of

microscope objectives on magnetic field exposures”, *Bioelectromagnetics*, Vol. 20, 1999, pp. 387-395.

K. Narayanan, R. Mehta, **R. Sucaldito** and I. Chatterjee, “Corrosion Study of microencapsulated surrogate waste forms using AC Electrochemical Impedance Spectroscopy”, *Proceedings of the International Conference on Corrosion CONCORN’97*, December 3-6, 1997, Mumbai, India.

Y. Liu and I. Chatterjee, "Impedance Method Computation of Induced Currents in a Simple Model of a Child Exposed to Electromagnetic Fields of an Electric Blanket", *Health Physics*, Vol. 71, No. 5, 1996.

P. C. Subedi and I. Chatterjee, "Inclusion Detection Analysis in Arbitrary Dielectric Structures using the Finite-Difference Time-Domain Technique", *Journal of Electromagnetic Waves and Applications*, Vol. 10, pp. 845-870, 1996.

F. Wei, I. Chatterjee and D.A. Jones, 'Evaluation of Corrosive Degradation in Coated Steel using AC Impedance Spectroscopy', *Corrosion*, Vol. 51, pp. 97-104, 1995.

I. Chatterjee and **R.E. Adams**, 'Finite Element Thermal Modeling of the Human Body under Hyperthermia Treatment for Cancer', *International Journal of Computer Applications in Technology*, Vol. 7, pp. 151-159, 1994.

P. Subedi and I. Chatterjee, 'Dielectric Mixture Model for Asphalt-Aggregate Mixtures', *Journal of Microwave Power and Electromagnetic Energy*, Vol. 28, 1993, pp. 68-72.

B. Johnson, I. Chatterjee, **D.J. Hodder** and **B. Carone**, 'A Lateral Guidance Radar Module', *Proceedings of the 26th International Symposium on Automotive Technology and Automation*, Aachen, Germany, 13-17 September, 1993.

I. Chatterjee and M. Misra, 'Dielectric Properties of Various Ranks of Coal', *Journal of Microwave Power and Electromagnetic Energy*, Vol. 25, 1990, pp. 224-229.

M. Misra, **S. Kumar** and I. Chatterjee, 'Flotability and Dielectric Characterization of the Intrinsic Moisture of Coals of Different Ranks', *Coal Preparation*, Vol. 9, 1991, pp. 131-140.

G.K. Livingston, K.L. Witt, O.P. Gandhi, I. Chatterjee and J.L. Roti Roti, 'The Reproductive Integrity of Mammalian Cells Exposed to Power Frequency Electromagnetic Fields', *Environmental and Molecular Mutagenesis*, Vol. 17, 1991, 49-58.

I. Chatterjee and M. Misra, 'Electromagnetic and Thermal Modeling of Microwave Drying of Fine Coal', *Minerals and Metallurgical Processing*, May 1991, 110-114.

I. Chatterjee, M. Misra, G.W. Warren and C. Neve, 'Effect of Moisture and Contaminants on the Dielectric Properties of Thin-Film Alumina Substrates', *Materials Reliability Issues in Microelectronics*, Materials Research Society, Vol. 225, November 1991.

I. Chatterjee, 'Numerical Modeling of the Human Body Under Electromagnetic Exposure -A

Review", *Institute of Electronics and Telecommunication Engineers Journal (India)*, Vol. 38, pp. 283-289, 1992.

D.A. Jones, **R.L. Howryla**, I. Chatterjee and **F. Wei**, "Galvanostatic Measurement of Polarization Resistance", *Proceedings of Corrosion/92*, National Association of Corrosion Engineers, April 1992.

G.W. Warren and I. Chatterjee, 'An Analysis of the Moisture Adsorption Process: Important Parameters and Investigation Techniques', *Proceedings of the First International Symposium on Corrosion of Electronic Materials and Devices*, Ed. J.D. Sinclair, Vol. 91-2, pp. 176-185, 1991.

I. Chatterjee and M. Misra, 'Dielectric Properties of Various Ranks of Coal and Numerical Modeling Under Electromagnetic Irradiation', *Microwave Processing of Materials*, eds. Snyder, Sutton, Johnson and Iskander, Materials Research Society, Vol. 189, 1991.

P. Subedi and I. Chatterjee, 'Numerical Electromagnetic and Thermal Modeling of Asphalt-Aggregate Mixtures under Microwave Heating', *Proceedings of the 3rd International Symposium on Recent Advances in Microwave Technology*, Reno, NV, 1991, 382-385.

I. Chatterjee and **R.E. Adams**, 'Application of ANSYS to the Therapeutic Electromagnetic Heating of the Human Body in Cancer Treatment', *Proceedings of the ANSYS Fifth International Conference*, Pittsburgh, PA, 1991, 41-48.

I. Chatterjee, **R.A. Adams** and **N. Saniei**, 'Temperature Profiles in a Finite Element Thermal Model of the Prostate Region Under Hyperthermia Treatment', *Microwave Processing of Materials*, eds. Snyder, Sutton, Johnson and Iskander, Materials Research Society, Vol. 189, 1991.

M. Misra, **S. Kumar** and I. Chatterjee, 'Correlation between the Hydrophobicity, Flotability, Intrinsic Moisture and Dielectric Properties of Various Ranks of Coals', *Proceedings of the Third International Symposium on Beneficiation and Agglomeration*, January 1991, p.137.

I. Chatterjee, D. Wu and O.P. Gandhi, 'Human Body Impedance and Threshold Currents for Perception and Pain for Contact Hazard Analysis in the VLF-MF Band', *IEEE Transactions on Biomedical Engineering*, Vol. BME-33, 1986, pp. 486-494.

O.P. Gandhi, I. Chatterjee, D. Wu and Y-G. Gu, 'Likelihood of High Rates at the ANSI Recommended 3-30 MHz RF Safety Levels', *Proceedings of the IEEE*, Vol. 73, 1985, pp. 1145-1147.

I. Chatterjee, Y-G. Gu and O.P. Gandhi, 'Quantification of Electromagnetic Absorption in Humans from Body-Mounted Communication Transceivers', *IEEE Transactions on Vehicular Technology*, Vol. VT-34, 1985, pp. 55-62.

H. Kanai, I. Chatterjee and O.P. Gandhi, 'Human Body Impedance for Electromagnetic Hazard Analysis in the VLF to MF Band', *IEEE Transactions on Microwave Theory and Techniques*, Vol. MTT-32, 1984, pp. 763-772.

I. Chatterjee and O.P. Gandhi, 'An Inhomogeneous Thermal Block Model of Man for the Electromagnetic Environment', *IEEE Transactions on Biomedical Engineering*, Vol. BME-30, 1983, pp. 707-715.

O.P. Gandhi and I. Chatterjee, 'Radio-Frequency Hazards in the VLF to MF Band', *Proceedings of the IEEE*, Vol. 70, 1982, pp. 1462-1464.

I. Chatterjee, O.P. Gandhi and M.J. Hagmann, 'Numerical and Experimental Results for Near-Field Electromagnetic Absorption in Man', *IEEE Transactions on Microwave Theory and Techniques*, Vol. MTT-30, 1982, pp. 2000-2005.

I. Chatterjee, M.J. Hagmann and O.P. Gandhi, 'An Empirical Relationship for Electromagnetic Absorption in Man for Near-Field Exposure Conditions', *IEEE Transactions on Microwave Theory and Techniques*, Vol. MTT-29, 1981, pp. 1235-1238.

M.J. Hagmann, I. Chatterjee and O.P. Gandhi, 'Dependence of Electromagnetic Energy Deposition Upon Angle of Incidence for an Inhomogeneous Block Model of Man under Plane-Wave Irradiation', *IEEE Transactions on Microwave Theory and Techniques*, Vol. MTT-29, 1981, pp. 252-255.

I. Chatterjee, O.P. Gandhi, M.J. Hagmann and A. Riazi, 'Plane-Wave Spectrum Approach for the Calculation of Electromagnetic Absorption Under Near-Field Exposure Conditions', *Bioelectromagnetics*, Vol. 1, 1980, pp. 363-377.

I. Chatterjee, M.J. Hagmann and O.P. Gandhi, 'Electromagnetic Absorption in a Multilayered Slab Model of Tissue Under Near-Field Exposure Conditions', *Bioelectromagnetics*, Vol. 1, 1980, pp. 379-388.

I. Chatterjee, M.J. Hagmann and O.P. Gandhi, 'Electromagnetic Energy Deposition in an Inhomogeneous Block Model of Man for Near-Field Irradiation Conditions', *IEEE Transactions on Microwave Theory and Techniques*, Vol. MTT-28, 1980, pp. 1452-1459.

M.J. Hagmann, O.P. Gandhi, J.A. D'Andrea and I. Chatterjee, 'Head Resonance: Numerical Solutions and Experimental Results', *IEEE Transactions on Microwave Theory and Techniques*, Vol. MTT-27, 1979, pp. 809-813.

P.W. Barber, O.P. Gandhi, M.J. Hagmann and I. Chatterjee, 'Electromagnetic Absorption in a Multilayered Model of Man', *IEEE Transactions on Biomedical Engineering*, Vol. BME-26, 1979, pp. 400-405.

RESEARCH REPORTS:

I. Chatterjee, A-M. Vollstedt, A. Kirn, J. LaCombe, Creating Retention and Engagement for Academically Talented Engineers (CREATE), National Science Foundation, 2020, 2021, 2022, 2023.

I.Chatterjee, “Millimeter wave-based fatigue countermeasure technology for improving performance and prolonging combat effectiveness of warfighters, Final Performance Report. Air Force Office of Scientific Research, 2011

I. Chatterjee and G.L. Craviso, “Expanding current research capabilities for investigating RF/Microwave bioeffects “, Final report submitted to the Air Force Office of Scientific Research, 2004.

I.Chatterjee, “A microstripline-based radio frequency sensor for the on-line monitoring of microbial activity”, Final report submitted to the EPA EPSCoR Seed grant program, 2002.

D.J. Hodder and I. Chatterjee, “High Altitude Radio Platform Communication Channel Modeling, Progress Report 1, Nevada TREC Program, March 13, 1998.

D.J. Hodder and I. Chatterjee, “High Altitude Radio Platform Communication Channel Modeling, Progress Report 1, Nevada TREC Program, July 1, 1998.

D.J. Hodder and I. Chatterjee, “Communications Channel Modeling of High-Altitude Radio Communications Platforms”, Progress Report 1, Nevada TREC Program, June 25, 1997.

D.J. Hodder and I. Chatterjee, “Communications Channel Modeling of High-Altitude Radio Communications Platforms”, Progress Report 1, Nevada TREC Program, June 25, 1997.

I. Chatterjee and N.G. Publicover, 'Effects of EMF's from VDT's on Excitable Cells using Fluorescence Imaging Techniques', Final report to the Johns Hopkins University Center for VDT and Health Research, May 1997.

R.K. Mehta, I. Chatterjee, K. Yang and R. Sualdito, “Characterization/Performance assessment of final waste forms by electrochemical impedance spectroscopy”, Final report, Department of Energy, 1997.

I. Chatterjee and N.G. Publicover, 'Effects of EMF's from VDT's on Excitable Cells using Fluorescence Imaging Techniques', Annual report to the Johns Hopkins University Center for VDT and Health Research, February 1996.

I. Chatterjee and N.G. Publicover, 'Effects of EMF's from VDT's on Excitable Cells using Fluorescence Imaging Techniques', Interim progress report to the Johns Hopkins University Center for VDT and Health Research, September 1996.

I. Chatterjee and N.G. Publicover, 'Effects of EMF's from VDT's on Excitable Cells using Fluorescence Imaging Techniques', Annual report to the Johns Hopkins University Center for VDT and Health Research, January, 1995.

R.K. Mehta, I. Chatterjee, K. Yang and R. Sualdito, “Characterization/Performance assessment of final waste forms by electrochemical impedance spectroscopy”, Quarterly Report, Department of Energy, July 1996.

I. Chatterjee, F. Wei and D.A. Jones, 'AC Impedance Spectroscopy to Determine Degradation of Coated Metals', Final Report to the Center for Infrastructure Studies, University of Nevada, Reno, September 30, 1992.

B. Johnson and I. Chatterjee, 'A Lateral Guidance Radar Module', Final report to California State University, Sacramento, 1993.

I. Chatterjee and P. Subedi, 'Noninvasive Determination of Adsorbed Moisture, Air-Void and Asphalt Content in Asphalt-Aggregate Mixtures', Final Report to the Center for Infrastructure Studies, University of Nevada, Reno, September 1992.

I. Chatterjee and P. Subedi, 'Noninvasive Determination of Adsorbed Moisture in Asphalt Pavements using an Open-Ended Coaxial Probe and Numerical Modeling of Asphalt under Microwave Heating', Final Report to the Center for Infrastructure Studies, University of Nevada, Reno, August 1991.

M. Stroup-Gardiner, I. Chatterjee and P. Subedi, 'Use of Dielectric Measurements to Detect Moisture in Asphalt Concrete Mixtures', report to Auburn University, SHRP (Strategic Highway Research Program) A-003B Contract, September 1991.

I. Chatterjee, 'Finite Element Thermal Modeling of the Human Body under Hyperthermic Cancer Treatment', Final Report to the Research Advisory Board, University of Nevada, Reno, August, 1990.

M. Misra and I. Chatterjee, Quarterly Report to the Department of Energy on Tar Sand Research, January 1, 1990 - March 31, 1990.

M. Misra and I. Chatterjee, Quarterly Report to the Department of Energy on Tar Sand Research, April 1, 1990 - June 30, 1990.

CONFERENCE PRESENTATIONS (Student names are in bold):

K. Scalaro, I. Chatterjee, A-M. Vollstedt, J. LaCombe, and A. Kirn, "Interest -driven major pathways for mid-program undergraduate engineering students", abstract submitted to the 2023 ASEE Conference & Exposition, Baltimore, MD, June 2023.

I.Chatterjee, **K. Scalaro**, A-M. Vollstedt, J. LaCombe, J. Williams, C. Bauer, and A. Kirn, "S-STEM: Creating Retention and Engagement for Academically Talented Engineers – lessons learned", abstract submitted to the 2023 ASEE Conference & Exposition, Baltimore, MD, June 2023.

K. Steinhorst, **R. Young**, **K. Scalaro**, I. Chatterjee, A-M. Vollstedt, J. C. LaCombe, and A. Kirn "Creating social capital: Developing resources in a cohort program", abstract submitted to the 2023 ASEE Conference & Exposition, Baltimore, MD, June 2023.

K. Scalaro, I. Chatterjee, A-M. Vollstedt, J.C. Lacombe, and A. Kirn, "From knowing to doing: Changes in performance/competence beliefs of developing engineers", Proceedings of

the ASEE 2022 Conference & Exposition, Minneapolis, MN, June 26-30, 2022.

I.Chatterjee, **K. Scalaro**, A-M. Vollstedt, J. Lacombe, J.M. Williams, and A. Kirn, "S-STEM: Creating Retention and Engagement for Academically Talented Engineers successes and challenges, ASEE 2022 Conference & Exposition, Minneapolis, MN, June 26-30, 2022.

K. Scalaro, I. Chatterjee, A-M. Vollstedt, J. Lacombe, and A. Kirn, "Creating Retention and Engagement for Academically Talented Engineers (CREATE)", 2022 S-STEM Symposium, September 29 – October 1, 2022.

I.Chatterjee, **K. Scalaro**, A-M. Vollstedt, J. Lacombe, J. Williams, A. Kirn, "S-STEM: Creating Retention and Engagement for Academically Talented Engineers", Proceedings of the 2021 Virtual Annual ASEE Conference & Exposition, July 26-29, 2021

K. Scalaro, I. Chatterjee, A-M. Vollstedt, J.C. Lacombe, and A. Kirn, "A two-step model for the interpretation of meaningful recognition", Proceedings of the 2021 Virtual ASEE Annual Conference & Exposition, July 26-29, 2021.

K. Scalaro, I. Chatterjee, A-M. Vollstedt, J.C. Lacombe, and A. Kirn, "Is this the real life? Exploring how virtual learning environments influence engineering identity", Proceedings of the Frontiers in Education Conference, October 13-16, 2021, Lincoln, Nebraska.

I.Chatterjee, **K. Scalaro**, A-M. Vollstedt, J. Lacombe, and A. Kirn, "Creating Retention and Engagement for Academically Talented Engineers (CREATE)", 2021 Virtual S-STEM Fall Forum, September 9 – October 1, 2021.

I.Chatterjee, T. **Robinson**, A. Kirn, J. Amos, 2019 ASEE Conference & Exposition, Academic, Conference, "Progress on a mixed methods research project studying interest an identity of participants engaged in engineering camp activities: methods and preliminary results", Invited, ASEE Conference & Exposition, June 16, 2019.

T. Robinson, A. Kirn, J. Amos, I. Chatterjee, 2019 ASEE Conference & Exposition, "Influencing student engineering interest and identity: A study investigating the effect of engineering summer camps on middle and high school students (work in progress)", June 16, 2019.

J. Zaklit, I. Chatterjee, N. Leblanc, G.L. Craviso, 2018 BMES Annual Meeting, Academic, Conference, "High intensity, 5 ns electric pulses mobilize CA2+ from ER Ca2+ stores in adrenal chromaffin cells", BMES. October 17, 2018.

I.Chatterjee, A. Kirn, J. Amos, Annual ASEE Conference & Exposition, Academic, Conference, "The effect of engineering summer camps on middle school students interest an identity", ASEE Conference & Exposition, June 24, 2018.

R. Sukhraj, **A. Shoaf**, I. Chatterjee, N. Leblanc, G.L. Craviso, BioEM 2018 annual conference, Academic, Conference, "5 ns electric pulses evoke Ca2+ responses in adrenal chromaffin cells that are longer in duration than those evoked by a physiological stimulus",

Bioelectromagnetics Society and European Bioelectromagnetics Association. June 24, 2018.

L. Yang, S. Pierce, P.T. Vernier, I. Chatterjee, G.L. Craviso, N. Leblanc, Biophysical Society Annual Meeting, Academic, Conference, "Differential effects of single and twin high intensity nanosecond electric pulses on membrane permeabilization and Na⁺ conductance in bovine chromaffin cells", Biophysical Society. February 17, 2018.

G. Aramendia, G.L. Craviso, N. Leblanc, **J. Zaklit**, K. Burckhardt, E. Neufeld, I. Chatterjee, 2nd World Congress on Electroporation, Academic, Conference, "Detailed adrenal chromaffin cell model for studying the interaction of high intensity electric fields with membranes of secretory granules", ISBETT. September 24, 2017.

L. Yang, N. Leblanc, P.T. Vernier, I. Chatterjee, G.L. Craviso, 2nd World Congress on Electroporation, Academic, Conference, "Paradoxical effects of single and twin high-intensity nanosecond electric pulses on inward Na⁺ currents in bovine chromaffin cells", ISBETT. September 24, 2017.

Shaw, A., T. Bagalkot, **R. Sukhraj**, K. Murray, I. Chatterjee, G.L. Craviso, N. Leblanc, 2nd World Congress on Electroporation, Academic, Conference, "Real-time monitoring of chromaffin cell secretory granules by total internal reflection fluorescence microscopy reveals a stimulatory effect of nanosecond electric pulses (nsPEF) on exocytosis", The international Society for Electroporation-Based Technologies and Treatments (ISBETT). September 24, 2017.

J. Zaklit, G. L. Craviso, N. Leblanc, R. Terhune, and I. Chatterjee, Numerical modeling of intracellular adrenal chromaffin cell responses to high intensity 5 ns electric pulses, Presented at the BioEM 2016 conference, Ghent, Belgium, June 2016

J. El Zaklit, J. Yoon, I. Chatterjee, E. Evans, P.T. Vernier, N. Leblanc and G.L. Craviso. Ca²⁺ release from internal stores of adrenal chromaffin cells is not evoked by 5 ns electric pulses. Presented at the BioEM 2015 Joint meeting of the Bioelectromagnetics Society and the European Bioelectromagnetics Association conference, Asilomar, CA, June 14-19, 2015

J. Yoon, **J. El Zaklit**, I. Chatterjee, P.T. Vernier, N. Semenova, N. Leblanc and G.L. Craviso. Transient versus sustained CA²⁺ responses evoked in adrenal chromaffin cells by 5 ns pulses: pulse delivery considerations. Presented at the BioEM 2015 Joint meeting of the Bioelectromagnetics Society and the European Bioelectromagnetics Association conference, Asilomar, CA, June 14-19, 2015

R. Terhune, I. Chatterjee, J. Yoon and G.L. Craviso, "Finite-Difference Time-Domain electromagnetic and thermal modeling of skeletal muscle exposed to millimeter waves", IEEE 2014 International Microwave Symposium, Tampa, FL, June 1-5, 2014

J. Yoon, N. Leblanc, S. Pierce, I. Chatterjee, P.T. Vernier and G.L. Craviso, "Increase in chromaffin cell membrane conductance evoked by 5 nanosecond electric pulses", BioEM conference, Capetown, S. Africa, June 8-13, 2014

I.Chatterjee, “Finite-Difference Time-Domain electromagnetic characterization and thermal modeling of skeletal muscle exposed to millimeter waves”, **Invited presentation**, Workshop on Characterizing the impact and benefits of millimeter waves on biomaterials, IEEE 2014 International Microwave Symposium, Tampa, FL, June 1-5, 2014

I.Chatterjee and J. Yoon, “Utilization of the virtual family in the design of a novel multifunctional biosensor array for capsule endoscopy”, Computational Phantoms Workshop Proceedings, Zurich, Switzerland, IT’IS Foundation for Research on Information Technologies in Society, May 2013.

I.Chatterjee, J. Yoon, R. Wiese, S. Luongo, P. Mastin, L. Sadovnik and G.L. Craviso, “Millimeter wave bioeffects at 94 GHz on skeletal muscle contraction”. IEEE Radio and Wireless Week conference, **Invited presentation**, Austin, TX, January 2013.

G.L. Craviso, R. Wiese, *S. Shrestha*, I. Chatterjee and P. T. Vernier, “Nanoelectropulse stimulation of catecholamine release from adrenal chromaffin cells”, Bioelectromagnetics Conference, Brisbane, Australia, June 2012.

G.L. Craviso, I. Chatterjee and P.T. Vernier, “Nanoelectropulses: a novel electric stimulation modality for modulating neurosecretion”, Gordon Research Conference, July 2012

A. Cerjanic, I. Chatterjee and B. Shiekman, “Method of Moments modeling of microstrip patch antennas with automatic GPU acceleration”, IEEE MTT-S International Microwave Symposium, Montreal, Canada, June 2012.

J. Yoon, S. Luongo, R. Wiese, P. Mastin, L.Sadovnik, G. L. Craviso, and I. Chatterjee, “W-band Millimeter Wave Exposure System for Studying Non-thermal Effects on Skeletal Muscle Contraction”, IEEE MTT-S International Microwave Symposium, Baltimore, MD, June 5-10, 2011.

J. Yoon, R. Weise, S. Luongo, P. Mastin, L. Sadovik, I. Chatterjee and G.L. Craviso, “W-Band MMW exposure on skeletal muscle: Non-thermal effects on contraction”, Bioelectromagnetics conference, Halifax, Canada, June 12-17, 2011

G.L. Craviso, S. Choe. I. Chatterjee and P.T. Vernier, “Temperature modulation of nanoelectropulse excitation of adrenal chromaffin cells”, Bioelectromagnetics conference, Halifax, Canada, June 12-17, 2011.

J. Yoon, I. Chatterjee, S. Luongo, R. Weise, P. Mastin, L. Sadovnik and G.L. Craviso. Design and characterization of an exposure system for studying effects of millimeter waves on skeletal muscle fatigue. Bioelectromagnetics Society Meeting, Seoul, S. Korea, June 2010

G.L. Craviso, P. Chatterjee, S. Choe, W. Guan, I. Chatterjee and P.T. Vernier. Mechanisms underlying the nanosecond electric pulse-induced influx of calcium into adrenal chromaffin cells. Bioelectromagnetics Society Meeting, Seoul, S. Korea, June 2010

G.L. Craviso, S. Choe, I. Chatterjee, P. Chatterjee and P.T. Vernier. Nanosecond electrostimulation of adrenal chromaffin cells. Bioelectrics 201 Conference, Old Dominion

University, 2010

Chatterjee and J. Yoon, "Use of commercially available Finite-Difference Time-Domain sign of nanosecond/microwave/millimeter wave exposure systems and dosimetry", US Air Force Special Session (Workshop) on Advances in Computational Dosimetry, **Invited presentation**, Bioelectromagnetics Society meeting, Seoul, S. Korea. June 2010.

J. Yoon, R. Weise, S. Luongo, P. Mastin, L. Sadovnik, I. Chatterjee and G.L. Craviso, "W-Band MMW exposure on skeletal muscle: Non-thermal effects on contraction", Bioelectromagnetics conference, Halifax, Canada, June 12-17, 2011

G.L. Craviso, S. Choe, I. Chatterjee, P. Chatterjee and P.T. Vernier, "Nanosecond electrostimulation of adrenal chromaffin cells", Bioelectrics Conference, Old Dominion University, 2010.

J. Yoon, I. Chatterjee, S. Luongo, R. Weise, P. Mastin, L. Sadovnik and G.L. Craviso, "Design and characterization of an exposure system for studying effects of millimeter waves on skeletal muscle fatigue", Bioelectromagnetics Society Meeting, June 2010.

G.L. Craviso, P. Chatterjee, S. Choe, W. Guan, I. Chatterjee and P.T. Vernier, "Mechanisms underlying the nanosecond electric pulse-induced influx of calcium into adrenal chromaffin cells", Bioelectromagnetics Society Meeting, June 2010.

J. Yoon, I. Chatterjee, D. McPherson and G.L. Craviso. Microwave fields cause changes in catecholamine release from chromaffin cells. Joint Meeting of the Bioelectromagnetics Society and the European Bioelectromagnetics Association, BioEM2009, Davos, Switzerland, June 2009

A.Cerjanic, I. Chatterjee, D. McPherson and G.L. Craviso. Design and fabrication of a perfusion microelectrode chamber for high intensity electric field stimulation using rapid prototyping techniques. Joint Meeting of the Bioelectromagnetics Society and the European Bioelectromagnetics Association, BioEM2009, Davos, Switzerland, June 2009.

P. Chatterjee, P.T. Vernier, I. Chatterjee and G.L. Craviso. Single nanosecond electric pulse-induced influx of calcium into adrenal chromaffin cells requires extracellular sodium. Joint Meeting of the Bioelectromagnetics Society and the European Bioelectromagnetics Association, BioEM2009, Davos, Switzerland, June 2009, accepted for presentation.

G.L. Craviso, G. Maalouf, S. Choe, M-T. Chen, D. McPherson, I. Chatterjee, M. Gundersen and P.T. Vernier. Nanosecond electric pulse stimulates catecholamine release from chromaffin cells. 30th Annual Meeting of the Bioelectromagnetics Society, San Diego, June 9-12, 2008.

W. Guan, **T. Hagan**, I. Chatterjee, D. McPherson and G. Craviso. Narrowband and Broadband radiofrequency/microwave exposure system for real-time monitoring of cellular responses. 30th Annual Meeting of the Bioelectromagnetics Society, San Diego, June 9-12, 2008.

J. Yoon, I. Chatterjee, and G.L. Craviso. Feasibility study of using two types of microstripline

bandpass filters for the detection of bacteria in water. European Microwave Week Conference, October 8-11, 2007.

J. Yoon, I. Chatterjee, D. McPherson and G.L. Craviso, “Improvements to a free space broadband in vitro microwave exposure system for on-line monitoring of catecholamine release from chromaffin cells”, 29th Annual Meeting of the Bioelectromagnetics Society, Kanazawa, Japan, June 10-15, 2007.

R. Misra, I. Chatterjee, **J. Yoon**, D. McPherson and G.L. Craviso, “Thermal modeling of a free space exposure system for on-line monitoring of catecholamine release from chromaffin cells exposed to microwave fields”, 29th Annual Meeting of the Bioelectromagnetics Society, Kanazawa, Japan, June 10-15, 2007

G. Craviso, **P. Vandenberg**, S. Baird, R. Wiese, D. McPherson and I. Chatterjee, “Contractile force of mouse flexor digitorum brevis at suprphysiological temperatures”, 29th Annual Meeting of the Bioelectromagnetics Society, Kanazawa, Japan, June 10-15, 2007

T. Hagan, I. Chatterjee, D. McPherson and G.L. Craviso, “Design and Finite-Difference Time-Domain characterization of a novel in vitro exposure device for real-time monitoring of changes in intracellular calcium due to pulsed RF/Microwave electric fields”, 28th Annual Meeting of the Bioelectromagnetics Society, Cancun, Mexico, June 10 – 16, 2006

M. Lambrecht, I. Chatterjee, D. McPherson, J. Quinn and G.L. Craviso, “Finite-Difference Time-Domain computations of SAR distribution within an exposure system for studying the effects of radiofrequency/microwave fields on skeletal muscle contraction, 27th Annual Meeting of the Bioelectromagnetics Society, Dublin, Ireland, June 18 – 24, 2006

G. Craviso, D. Brouse, **T. Hagan**, D. McPherson and I. Chatterjee, “Use of cultured adrenal chromaffin cells as an in vitro model system to study non-thermal effects of RF radiation on exocytosis”, 27th Annual Meeting of the Bioelectromagnetics Society, Dublin, Ireland, June 18 – 24, 2006.

J. Yoon, I. Chatterjee, D. McPherson and G. L. Craviso, “Design and characterization of a broadband mini exposure chamber for studying catecholamine release from chromaffin cells due to non-thermal levels of 1 – 6 GHz continuous and pulsed microwave radiation – Finite-Difference Time-Domain computations”, ElectroMed 2005, Fourth International Symposium on Nonthermal Medical/Biological Treatments using Electromagnetic Fields and Ionized Gases, Portland, OR, May 16 -18, 2005

M. Lambrecht, I. Chatterjee, J. Quinn, D. McPherson and G.L. Craviso, “Design and optimization of a radiofrequency/microwave exposure system for assessing effects on skeletal muscle contraction”, ElectroMed 2005, Fourth International Symposium on Nonthermal Medical/Biological Treatments using Electromagnetic Fields and Ionized Gases, Portland, OR, May 16 -18, 2005

G.L. Craviso, D. Brouse, **T. Hagan**, D. McPherson and I. Chatterjee, “Investigations into non-thermal radiofrequency effects on the release of catecholamines from adrenal chromaffin cells”, ElectroMed 2005, Fourth International Symposium on Nonthermal Medical/Biological Treatments using Electromagnetic Fields and Ionized Gases, Portland, OR, May 16 -18, 2005

T. Hagan, I. Chatterjee, D. McPherson and G. L. Craviso, “Finite-Difference Time-Domain Modeling of a Waveguide-Based Radiofrequency Exposure System for Studying Non-Thermal Effects on Catecholamine Release from Chromaffin Cells”, Electromed 2003, San Antonio, TX, June 2003

I. Chatterjee, **N. Hassan**, N.G. Publicover and G.L. Craviso, “A combined experimental and computational analysis of membrane potential variations in excitable cells in response to DC electric fields”, 2002 IEEE Conference on Electrical Insulation and Dielectric Phenomena (CEIDP), Cancun, Mexico, October 20 – 24, 2002.

N. Hassan, I. Chatterjee, N.G. Publicover and G.L. Craviso, “Mapping membrane potential perturbations of chromaffin cells exposed to electric fields”, Electromed 2001, Second International Symposium on nonthermal medical/biological treatments using electromagnetic fields and ionized gases, Portsmouth, VA, May 2001

I. Chatterjee and **D. Kokotovic**, “Antenna analysis and design exercises using windows-based software for senior/graduate level classes”, 2000 IEEE Antennas and Propagation International Symposium and USNC/URSI Meeting, July 16-21, 2000, Salt Lake City, Utah.

G.L. Craviso, J. Schmidt, I. Chatterjee and N.G. Publicover, “Measurement of catecholamine release from cultured bovine adrenal medullary chromaffin cells exposed to 60-Hz EMFs”, 22nd Annual Meeting of the Bioelectromagnetics Society, Munich, Germany, June 9-16, 2000.

I. Chatterjee and **D. Kokotovic**, “Antenna Analysis and design exercises using windows-based software for senior/graduate level classes”, IEEE Antennas and Propagation Conference, Salt Lake City, Utah, July 2000.

N. Hassan, I. Chatterjee, G.L. Craviso and N.G. Publicover, “Experimental and numerical evaluation of the perturbation of the membrane potential of chromaffin cells exposed to very low frequency magnetic fields, 21st Annual Meeting of the Bioelectromagnetics Society, Long Beach, CA, June 20 – 24, 1999.

G.L. Craviso, J. Poss, C. Lanctot, S.S. Lundback, I. Chatterjee and N.G. Publicover, “Intracellular calcium levels in primary cultures of adrenal chromaffin cells exposed to 60 Hz EMFs: Influence of culture conditions and cell responsiveness to nicotinic stimulation”, 21st Annual Meeting of the Bioelectromagnetics Society, Long Beach, CA, June 20 – 24, 1999.

G. Craviso, S. Lundback, I. Chatterjee and N.G. Publicover, “Fluorescence imaging of intracellular calcium levels in primary cultures of adrenal chromaffin cells during exposure to 60Hz EMFs”, 20th Annual Meeting of the Bioelectromagnetics Society, St. Petersburg, Florida, June 7 – 11, 1998.

I. Chatterjee, **N. Hassan**, G.L. Craviso and N.G. Publicover, “Numerical Computation of Magnetic Field Distortion Produced by Microscope Objectives”, Annual Review of Research on Biological Effects of Electric and Magnetic Fields from the Generation, Delivery & Use of Electricity, San Diego, CA, November 1997.

I. Chatterjee, **N. Hassan**, G.L. Craviso and N.G. Publicover, "Finite Element Computation of Induced Currents in Cell Cultures", 19th Annual Meeting of the Bioelectromagnetics Society, June 1997, Bologna, Italy.

I. Chatterjee and D.C. Williams, "Computational Exercises in Antenna Analysis and Design for Electrical Engineering Senior Technical Elective-Graduate Courses", Frontiers in Education, 26th Annual Conference, November 1996, Salt Lake City, Utah.

C. Vincze, I. Chatterjee, G.L. Craviso and N.G. Publicover, "Numerical Computation of Magnetic Field Distortions produced by Microscope Objectives", 18th Annual Meeting of the Bioelectromagnetics Society, June 1996, Victoria, B.C., Canada.

N.G. Publicover, C.G. Marsh, G.L. Craviso and I. Chatterjee, "Distortion of Magnetic Fields produced by metallic microscope objectives", FASEB (Federation of American Societies for Experimental Biology), Conference, April 1996, Washington D.C.

G.L. Craviso, I. Chatterjee, D.C. Williams and N.G. Publicover, '60 Hz Electromagnetic Fields cause a rise in intracellular calcium and stimulation of catecholamine secretion in isolated adrenal chromaffin cells', 17th Annual Bioelectromagnetics Meeting, Boston, MA, June 1995.

M. Misra, **X. Su** and I. Chatterjee, 'Application of Impedance Spectroscopy for the Prediction of Reactivity of Acid Mine Tailings', 1994 TMS Annual Conference, February 1994.

B. Johnson, I. Chatterjee, **D.J. Hodder** and **B. Carone**, 'A Lateral Guidance Radar Module', 26th International Symposium on Automotive Technology and Automation, Aachen, Germany, 13-17 September, 1993.

I. Chatterjee, **Y. Liu** and R. Schweitzer, 'Currents induced in simple models of an eight-year-old child due to exposure to magnetic fields from an electric blanket', The Annual Review of Research on Biological Effects of Electric and Magnetic Fields from the Generation, Delivery and Use of Electricity, San Diego, CA, 8-12 November, 1992.

M. Misra, **H. Puttanna**, **C. Reese** and I. Chatterjee, 'Microwave Roasting of Refractory Gold Ores and Numerical Modeling under Electromagnetic Irradiation', Annual Meeting of the Society of Mining Engineers, Reno, NV, January 1993.

D.A. Jones, **D.F. Wei** and I. Chatterjee, 'AC Impedance Spectroscopy for Evaluating Corrosive Degradation of Coated Steel', Corrosion 93, National Association of Corrosion Engineers, New Orleans, LA, 1993.

M. Misra and I. Chatterjee, 'Characterization of Equilibrium Moisture Present in Different Tar Sands and Extracted Bitumens', 1992 Eastern Oil Shale Symposium, Lexington, Kentucky, November 17-20, 1992.

I. Chatterjee, **K. Wood** and D.A. Jones, 'In-Situ Electromagnetic Heating to Mitigate Corrosion under Disbonded Coatings on Buried Pipelines', International Conference on Pipeline Reliability, Calgary, Alberta, June 2-5, 1992.

D.A. Jones, **R.L. Howryla**, I. Chatterjee and **F. Wei**, "Galvanostatic Measurement of Polarization Resistance", Corrosion 92, National Association of Corrosion Engineers, Nashville, TN, April 1992.

P. Subedi, I. Chatterjee and B. Johnson, 'Automated Non-Invasive Permittivity Measurement', International Society for Mini and MicroComputers Society Symposium, Orlando, FL, March 10-13, 1992.

R.E. Adams and I. Chatterjee, 'A Three-Dimensional Finite Element Thermal Model of the Prostate Region of the Human Body Under Hyperthermia Treatment', Progress in Electromagnetics Research Symposium, Cambridge, MA., July 1-5, 1991.

I. Chatterjee and **R.E. Adams**, 'Application of ANSYS to the Therapeutic Electromagnetic Heating of the Human Body in Cancer Treatment', Fifth International ANSYS Conference and Exhibition, Pittsburgh, PA, May 22-25, 1991.

P. Subedi and I. Chatterjee, 'Numerical Electromagnetic and Thermal Modeling of Asphalt-Aggregate Mixtures under Microwave Heating', Third International Symposium on Recent Advances in Microwave Technology, Reno, NV, August 18-21, 1991.

I. Chatterjee, M. Misra, G.W. Warren and **C. Neve**, 'Effect of Moisture and Contaminants on the Dielectric Properties of Thin-Film Alumina Substrates', Materials Research Symposium, Anaheim, CA, April 29 - May 4, 1991.

G.W. Warren and I. Chatterjee, 'An Analysis of the Moisture Adsorption Process: Important Parameters and Investigation Techniques', Symposium on Corrosion of Electronic Materials and Devices, Seattle, WA, October 14-19, 1990.

I. Chatterjee and M. Misra, 'Dielectric Properties of Various Ranks of Coal and Numerical Modeling under Electromagnetic Irradiation', Materials Research Society Symposium L on Microwave Processing of Materials, San Francisco, CA, April 16-21, 1990.

I. Chatterjee, **R.E. Adams** and **N. Saniei**, 'Temperature Profiles in a Finite Element Thermal Model of the Prostate Region under Hyperthermia Treatment', Materials Research Society Symposium L on Microwave Processing of Materials, San Francisco, CA, April 16-21, 1990.

R.E. Adams and I. Chatterjee, 'Transient Temperature Distributions in a Finite Element Thermal Model of the Prostate Region Undergoing Hyperthermia Treatment', Twelfth Annual Meeting of the Bioelectromagnetics Society, San Antonio, TX, June 10-14, 1990.

M. Misra and I. Chatterjee, 'Numerical Modeling in the Microwave Dewatering of Fine Coal', 1990 Society of Mining Engineers Annual Meeting, Salt Lake City, UT, February 26 - March 1, 1990.

M. Misra, **S. Kumar** and I. Chatterjee, 'Dielectric Properties of Bound Water at Hydrophobic and Hydrophilic Mineral Surfaces', 1990 Society of Mining Engineers Annual Meeting, Salt Lake

City, UT, February 26 -March 1, 1990.

O.P. Gandhi, **J.Y. Chen** and I. Chatterjee, 'Currents Induced in a Human for Applicators Simulating RF Sealers and for Plane-Wave Exposure Conditions', Seventh Annual Meeting of the Bioelectromagnetics Society, San Francisco, CA, June 16-20, 1985.

I. Chatterjee, D. Wu and O.P. Gandhi, 'Contact Hazards in the VLF to MF Band', Seventh Annual Meeting of the Bioelectromagnetics Society, San Francisco, CA, June 16-20, 1985.

G. Livingston, K. Witt, I. Chatterjee and O.P. Gandhi, 'Cytogenetic Studies of Mammalian Cells Exposed to 60 Hz Electromagnetic Fields During Culture', Sixth Annual Meeting of the Bioelectromagnetics Society, Atlanta, GA, July 15-19, 1984.

D. Wu, O.P. Gandhi, Y-G. Gu, I. Chatterjee and R. Ruhling, 'Contact Hazards in the Frequency Band 10 kHz - 3 MHz', Sixth Annual Meeting of the Bioelectromagnetics Society, Atlanta, GA, July 15-19, 1984.

G. Livingston, I. Chatterjee, K. Witt and O.P. Gandhi, 'Cytogenetic Evaluation of Human Lymphocytes Exposed to ELF Fields Associated with High Voltage Power Transmission Lines', Fifth Annual Meeting of the Bioelectromagnetics Society, Boulder, CO, June 12-16, 1983.

H. Kanai, I. Chatterjee and O.P. Gandhi, 'Body Impedance for Contact Electric Hazard in the VLF to MF Band', Fifth Annual Meeting of the Bioelectromagnetics Society, Boulder, CO, June 12-16, 1983.

I. Chatterjee, Y-G. Gu and O.P. Gandhi, 'Quantification of Electromagnetic Absorption in Humans from Body-Mounted Communication Transceivers', Fifth Annual Meeting of the Bioelectromagnetics Society, Boulder, CO, June 12-16, 1983.

J.A. D'Andrea, I. Chatterjee, C.M. Bailey, M.J. Haggmann and O.P. Gandhi, 'Comparison of Experimental and Theoretical Dosimetry Methods in the Laboratory Rat', Fourth Annual Scientific Session of the Bioelectromagnetics Society, Los Angeles, CA, June 28-July 2, 1982.

I. Chatterjee and O.P. Gandhi, 'Thermal Response of an Inhomogeneous Block Model of Man Under Near-Field Electromagnetic Exposure Conditions', Fourth Annual Scientific Session of the Bioelectromagnetics Society, Los Angeles, CA, June 28-July 2, 1982.

I. Chatterjee, O.P. Gandhi and M.J. Haggmann, 'Numerical and Experimental Results for Near-Field Energy Absorption in Man', Third Annual Conference of the Bioelectromagnetics Society, Washington D.C., August 9-12, 1981.

M.J. Haggmann, I. Chatterjee and O.P. Gandhi, 'Improved Matrix Procedures for Moment-Method Solutions in Theoretical Dosimetry', Second Annual Meeting of the Bioelectromagnetics Society, San Antonio, TX, September 14-18, 1980.

I. Chatterjee, M.J. Haggmann and O.P. Gandhi, 'Electromagnetic Energy Deposition in Man for Near-Field Exposure Conditions', Second Annual Meeting of the Bioelectromagnetics Society,

San Antonio, TX, September 14-18, 1980.

I. Chatterjee, M.J. Haggmann and O.P. Gandhi, 'Electromagnetic Energy Deposition in an Inhomogeneous Block Model of Man for Near-Field Irradiation Conditions', 1980 MTT-S International Microwave Symposium, Washington D.C., May 28-30, 1980.

I.Chatterjee, O.P. Gandhi, M.J. Haggmann and A. Riazi, 'A Method of Calculating Electromagnetic Absorption Under Near-Field Exposure Conditions', National Radio Science Meeting and Bioelectromagnetics Symposium, Seattle, WA, June 18-22, 1979