

## Sukesh K Aghara

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Prairie View A&M University  
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P.O. Box 519; MS 2505  
Prairie View, Texas 77446

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### **EDUCATION**

- 2003 Ph.D.(Mechanical Engineering\*)** **The University of Texas at Austin**  
**Title:** Characterization of an In-core Irradiator for Testing of Microelectronics in a Mixed Radiation Environment  
**Advisor:** Dr. William Charlton
- 2001 M. S. (Mechanical Engineering\*)** **The University of Texas at Austin**  
**Title:** Feasibility Study of Proliferation Resistant Actinide Based Fuel for Light Water Reactors (LWR's)  
**Advisor:** Dr. Carl Beard
- 1999 M. S. (Environmental Engineering)** **Vanderbilt University, Nashville**  
**Title:** Risk Assessment of Exposure to Chemical Contaminated during the D&D activities of Contaminated Structures at DOE sites  
**Advisor:** Dr. Frank Parker
- 1996 B. Eng. (Environmental Engineering)** **L. D. College of Engineering, Gujarat, India**

\*Nuclear and Radiation Engineering program

### **PROFESSIONAL EXPERIENCE**

<b>Teaching:</b>	2004 – Present	Assistant Professor, PVAMU, Chemical Engineering Department
	2003 – 2004	Research Professor, UT Austin, Mechanical Engineering Department (Nuclear Program)
	1999 – 2000	Teaching Assistant, UT Austin, Mechanical Engineering
<b>Research:</b>	2004 – Present	Faculty Researcher, NASA Center for Applied Radiation Research
	2008 – Present	NASA Research Scientist, NASA Langley Research Center (LaRC)
	2007 – 2008	NASA Administrator's Fellow, NASA Langley Research Center (LaRC)
	2005, 2006	Visiting Scientist to Oak Ridge National Laboratory (ORNL)
	2003 – 2004	Research Associate, Nuclear Engineering Teaching Laboratory, Austin, TX

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1999 – 2003	Research Assistant, UT Austin, Mechanical Engineering Department (Nuclear Program)
1997 – 1999	Research Assistant, Vanderbilt University, Environmental Engineering Department

### **PROFESSIONAL GROWTH**

1. Intermediate user MCNPX workshop Fall 2004
2. IEEE Nuclear and Space Radiation Effects Conference Short courses 2004, 2005, 2006
3. Radiation safety training Oak Ridge (2005), Los Alamos National Laboratory (2005)
4. NSF CAREER workshop (won competitive travel award to attend) Spring 2006
5. Attended 2<sup>nd</sup> Annual Junior Faculty Workshop at Prairie View A&M University, Fall 2006
6. NSF MRI workshop (won competitive travel award to attend) Fall 2006
7. NSF-NASA research opportunities (won competitive travel award to attend) Spring 2007
8. Radical Leadership I, Lake Geneva, WI, October 21<sup>st</sup> – 24<sup>th</sup>, 2007
9. International Nuclear Codes Workshop/MCNEG, Birchwood Conference Centre, Warrington, Cheshire UK, 3rd – 6th March 2008
10. Radical Leadership II, Lake Geneva, WI, April 7<sup>th</sup> – 10<sup>th</sup> 2008
11. Project Management Training, Huntsville, Al, September 16<sup>th</sup> – 19<sup>th</sup> 2008

### **TEACHING**

#### Undergraduate Courses Taught

Material Science  
Thermodynamics I  
Professional Engineering I  
Unit Operations  
Introduction to Nuclear Engineering I (new course)  
Introduction to Nuclear Theory I (new course)

#### Graduate Courses Taught

Radiation Shielding (at UT Austin)  
Reactor Theory (at UT Austin)  
Radiation and Radiation Protection Laboratory (at UT Austin)  
Global Energy Systems (new course)  
Space and Terrestrial Radiation Effects on Materials and Devices (assisted)

## **RESEARCH**

### **RESEARCH INTERESTS**

- Nuclear Fuel Cycle Management
  - Applications of nuclear codes (MCNP, MCNPX, PHITS) to model nuclear systems, control and management of nuclear materials (ORIGEN, HELIOS, NJOY)
  - Proliferation resistance fuel
  - Radiological and environmental risk analysis of spent fuel disposal
  
- Space Radiation
  - Testing of parametric degradation of microelectronics in mixed radiation environment
  - Characterization (computational and experimental) of radiation environment (neutrons, gamma and X-rays) for fundamental materials research
  - Computational and experimental radiation shielding analysis for ground based nuclear systems and space radiation environment
  
- Radiation Detector Development and Applications
  - Radiation detector signal acquisition and analysis
  - Modeling detector response using Monte Carlo simulation
  
- Nuclear Analytical Methods
  - Development and application of gamma detector systems for: nuclear analytical techniques, monitoring of special nuclear materials (SNM), non-proliferation and safeguards of nuclear materials
  - Prompt gamma-ray activation analysis (PGAA) for detection of trace low-Z materials (Hydrogen, Boron, etc) in engineering, geological and composite materials
  - Characterization and detection of trace elements in environmental samples using neutron activation analysis (NAA)

### **RESEARCH AWARDS and CONTRACTS**

#### ***Currently Funded Contracts/Awards***

NASA University Research Center – Center for Radiation Engineering and Science for Space Exploration (CRESSE), Co-PI (2008 – 2013)

NASA Research Contract - Verification and Validation Using Monte Carlo, PI (2008 – 2011)

NSF - Metastable State Nuclear Particle Detectors, Co-PI/PI (2008 – 2012)

UNCFSP-NASA Research Award - Monte Carlo Space Radiation Transport Code Simulations, PI (2008 – 2009)

U.S. Department of Energy (DOE) GNEP readiness grant, PI (2007 – 2009)

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National Nuclear Security Administration (NNSA) Radiation Detectors and Sensors Research, Co-PI (2006 - 2009)

NASA Radiation Interuniversity Science and Engineering (RISE) Program, Co-PI (2005 - 2008)

NASA Administrator's Fellow, PI (2007 – 2009)

### **SERVICE**

#### COMMITTEES

##### Department

Graduate Student Advisor, 2005 - present

Laboratory Improvement Committee, 2008

Coordinator, Nuclear Engineering Seminar Series, 2004- present

Member, Department Scholarship Committee, 2006, 2007

Member, Curriculum Committee, 2006, 2007

##### College

Chair and committee organizer, College of Engineering Scholarship Committee – 2006-2007

##### University and Community

Senator for College of Engineering, Faculty Senate, 2007-2009

Member, Distance Learning Council, 2004-2006

##### External

Member, Computational Methods for Medical Physics, American Nuclear Society (ANS) technical group, (2005- present)

Judge, Texas A&M University Systems Symposium, 2006

Panel Member, Texas A&M University System, Energy Initiative, 2006

Faculty Advisor, American Nuclear Society at Prairie View, 2005-2007

#### PROFESSIONAL MEMBERSHIP

American Nuclear Society (ANS)

Institute of Electrical & Electronics Engineers (IEEE)

American Society for Engineering Education (ASEE)

International Nuclear Materials Management Society (INMM)

American Institute of Aeronautics and Astronautics (AIAA)

PROFESSIONAL ACTIVITIES

Session Organizer and Chair, Computational Needs in Clinical Medical Physics, American Nuclear Society, Boston, MA, June 2007

Session Chair, Biomedical and Medicine General, ANS, Reno NV June 2006

Member of the American Nuclear Society (ANS) technical group, Computational Methods for Medical Physics (2005- present)

Member of the Biomedical & Medicine division (2004 – present)

Member of the Radiation Protection and Shielding division (2004 – present)

Member of the executive committee of the Materials Science and Technology division (2006-2007)

College of Engineering Scholarship Committee, Prairie View A&M University - Committee Chairman (2006 - 2007)

Chemical Engineering Graduate School, Committee member, Prairie View A&M University - Committee Chairman (2005- Present)

Distance Learning Council, Prairie View A&M University - Committee Member (2004 – 2006)

APPOINTMENTS AND POSITIONS

**2004 – present**

**Assistant Professor, Prairie View A&M University, Prairie View, Texas**

Selected for the NASA Administrator's Fellowship (NAFP) award. Youngest faculty member among the last 4 cohorts. During the fellowship had the opportunity to engage in not only NASA research but more importantly in project review, program planning, personnel and budget administration, and NASA vision assessment.

Participated in radical leadership training, project management training and research grant writing training.

Responsible for conceptualization, development and implementation of a college of engineering (CoE) level plan for a concentration in nuclear engineering.

Lead the way in establishing radiation detector laboratory, designing a nuclear science and engineering curriculum

Organized technical and administrative visits by faculty, researchers, project managers, and Naval Reactors admirals to PV campus. These visits enhance student exposure to outside expertise and opportunities. Additionally, it provided visibility to PVAMU.

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Served as a faculty advisor on Ph. D. and M.S. committees at University of Texas, Austin, and at PVAMU

Won the best undergraduate research paper award for a student project presented at the 2007 Texas A&M University Pathways Symposium

Received more than \$7 million dollars in funding for research and service projects.

**2006-2007**

**Organized and Chair, College of Engineering Scholarship Committee**

Lead the effort to organize and chaired the College of Engineering (CoE) Scholarship Committee. Responsibility included development of a process, rubric and matrix for the selection, distribution and assessment of scholarships given at the college of engineering students.

**2004-2005**

**Member, Distance Learning Council**

College of engineering representative on the university committee responsible on identifying new methods of course delivery. The committee was responsible to identify enabling technology, articulating policies and regulation for the approval and delivery of web based teaching.

**2003-2004**

**Research Faculty, University of Texas at Austin**

This was a non-tenure-track faculty position in the Mechanical Engineering Department (Nuclear Program). Responsibilities include but not limited to teach classes (I taught undergraduate, graduate and laboratory classes), mentor students, serve on Ph.D and M.S. committees, serve on Ph.D qualify exam committee and perform research.

### **HONORS AND ACCOMPLISHMENTS**

Monte Carlo N-Particle eXtended (MCNPX) is a Los Alamos developed, three dimensional, general purpose, Monte Carlo coupled heavy ions, neutron, photon, electron radiation transport code. The MCNPX code package has been used by a number of agencies worldwide to model the complex geometry of spacecraft, extraterrestrial bases (planetary habitats), medical physics community nuclear reactor core simulations, radiation detector simulations and many other applications. The code was developed during the WWII under the Manhattan project.

As a beta user I won one of the most prestigious \$20 cash award from the MCNPX team for finding the 28<sup>th</sup> code error. The value of the award is the letter (included in the package under “others” section).

I also received two \$2 cash award from the MCNPX team for finding 53<sup>rd</sup> and 54<sup>th</sup> bugs in the physics code LAQGSM embedded within MCNPX.

NASA Administrator's Fellow (Cohort 11) – 2007-08

Recipient of the competitive NAFP faculty research award - \$25,000

Student won the best undergraduate research paper award for a project presented at the 2007 Texas A&M University Pathways Symposium

Visiting scientist at Oak Ridge National Laboratory (ORNL), Nuclear Science and Technology Division (NSTD) – 2005, 2006

The research presented on radiation damage at San Diego, CA was extensively reported in the August 2003 edition of Nuclear News (page 53) as leading research in the use of nuclear research reactors for materials research

Best Presentation and Paper Award (2000), Materials Research, American Nuclear Society and European Nuclear Society International Meeting, Washington D.C.

Outstanding Achievement in Teaching Award (2000-01) Center for Teaching Effectiveness, U. T. Austin.

President Of American Nuclear Society (ANS) UT chapter 2001-2002

Invited speaker and panelist at the International Teaching Assistant Program, Teaching Workshop 2000, 2001, 2002

## **PUBLICATIONS**

### **PEER REVIEWED JOURNAL PAPER**

1. T.C. Slaba, S.R. Blattnig, **S.K. Aghara**, "Coupled Neutron Transport for HZETRN," Radiation Measurements (submitted)
2. **S.K. Aghara**, S. R. Blattnig, J. W. Norbury and R. C. Singleterry, "Monte Carlo Analysis of Pion Contribution to Absorbed Dose from Galactic Cosmic Rays," *Nucl. Instrum. Meth. B*, 267 (2009) 1115–1124
3. B. Gersey, **S. K. Aghara**, R. Wilkins, J. Wedeking, R.C. Dwivedi, "Comparison of a Tissue Equivalent and a Silicon Equivalent Proportional Counter Microdosimeter to High-Energy Proton and Neutron Fields," *IEEE Trans. on Nuclear Science*, VOL. 54, NO. 6, pp. 2276-2281, DEC. 2007
4. **S. K. Aghara**, and W.S. Charlton, "Characterization and Quantification of an In-Core Neutron Irradiation Facility at a TRIGA II Research Reactor" *Nucl. Instrum. Meth. B*, Vol 248/1 pp 181-190 (2006). DOI: 10.1016/j.nimb.2006.04.074
5. J.P. Spratt, **Sukesh Aghara**, Bruce Fu, Joseph D. Lichtenhan, and Roland Leadon, "A Conformal Coating for Shielding Against Naturally Occurring Thermal Neutrons," *IEEE Trans. on Nuclear Science*, VOL. 52, NO. 6, pp. 2340-2344 (2005)

6. **S. K. Aghara**, S. Venkatraman, A. Manthiram, "Investigation of Hydrogen Content in Chemically Delithiated Lithium-ion Battery Cathodes using Prompt Gamma-ray Activation Analysis," *J. Radioanal. Nucl. Chem*, Vol. 265, No. 2 (August, 2005).
7. S.R. Biegalski, T.C. Green, E. Alvarez, **S. Aghara**, "Sources of Background at The University of Texas PGAA Facility," *J. Radioanal. Nucl. Chem*. Vol. 265, No. 2 (2005)
8. **S K. Aghara**, C A Beard. "Feasibility Study of a Proliferation-Resistant Fuel Form for Plutonium Recycling." *Nucl. Tech.*, pp 1-9. Vol. 137, JAN (2002)

PEER REVIEWED FULL CONFERENCE PAPER

1. **S. K. Aghara**, E. Wright, R. Wilkins, J. Zhou, B. Gersey, "Spectral Characterization of Secondary Radiation from Regolith Materials," AIAA, Space 2007 Conference and Expo Long Beach Convention Center, CA, September 18-20 2007
2. B. Gersey, **S. K. Aghara**, R. Wilkins, J. Wedeking, R.C. Dwivedi, "Comparison of a Tissue Equivalent and a Silicon Equivalent Proportional Counter Microdosimeter to High-Energy Proton and Neutron Fields," IEEE Nuclear Space Radiation Effects Conference (NSREC), Honolulu, Hawaii, July 23-27, 2007
3. J. Deason, **S. Aghara**, I. Remec, J. Johnson, E. Wright, "Benchmarking of Monte Carlo Codes and Sensitivity Analysis of Physics models in MCNPX for High Energy Projectile-Target Interaction," American Nuclear Society (ANS) Annual Meeting, Space Nuclear Conference, ANS embedded tropical meeting, Boston, MA, June 24 - 28, 2007
4. J.P. Spratt, **Sukesh Aghara**, Bruce Fu, Joseph D. Lichtenhan, and Roland Leadon, "A Conformal Coating for Shielding Against Naturally Occurring Thermal Neutrons," IEEE Nuclear Space Radiation Effects Conference (NSREC), Seattle, WA., July 11-15, 2005
5. **S. Aghara**, I. Osborne-Lee, Mehran Visehb, Richard Wilkins, "Development of a Nuclear Engineering Program at Prairie View A&M University, a Historically Black University (HBCU)," ASEE annual conference, Portland, Oregon July (2005).
6. John Ford, William Burchill, Marvin Adams, Ron Hart, Dan Suson, Paul Cox, Lionel Hewett, Henry Leckenby, Milton Bryant, Irvin Osborne-Lee, **Sukesh Aghara** and Richard Wilkins, K. L. Peddicord "A Multi-Dimensional Nuclear Engineering Partnership," ASEE annual conference, Portland, Oregon July (2005).
7. **S.K. Aghara**, R. Fink, J. A. Ochoa, J. R. Porter, "Comparison of Performance Degradation of Commercially Available DAC ICs in Mixed-Radiation Environment," 14th Pacific Basin Nuclear Conference, Honolulu, HI, March, (2004)
8. **S.K. Aghara**, R. Fink, W.S. Charlton, "Degradation of Commercially Available DAC ICs in Mixed-Radiation Environment," IEEE Nuclear Space Radiation Effects Conference (NSREC), Data Workshop, Monterey, CA, p. 34-37, July (2003)
9. **S K. Aghara**, C A Beard. "Development of Proliferation Resistant Fuel Form for Commercial Power Reactors." Ninth International Conference on Nuclear Engineering (ICONE-9), Vol. 1, P. 404, April 8-12 (2001)
10. Frank L. Parker, Kenneth W. Ayers, Mark D. Abkowitz, **Sukesh Aghara**, John Boren, Douglas Borkowsky, Nicloe Darnell, Tara Deal, and Amyu Stephens, "Reuse of Concrete from Contaminated Structures," Proceedings, Spectrum 1998, pp. 71-74, Denver, Colorado, September 1998



REFEREED ARCHIVAL CONFERENCE PROCEEDINGS

1. Robert C. Singleterry Jr., **Sukesh K. Aghara**, Suzanne L. Maddock‡ “Simple Comparisons of Stochastic and Deterministic Codes to OLTARIS for Space Radiation Models and Continuation into a Benchmark Set,” International Nuclear Codes Workshop/MCNEG, Birchwood Conference Centre, Warrington, Cheshire UK, 3rd – 6th March 2008
2. Emilio Alvarez II, **S.K. Aghara**, “Time Dependent Neutron Fluence Measurements at UT-NETL PGAA Facility,” ANS Annual Meeting, Washington, DC, November 14-18, (2004)
3. **S. K. Aghara**, S. Venkatraman, A. Manthiram, “Investigation of Trace Hydrogen Uptake in Lithium-Ion Battery using Prompt Gamma Activation Analysis, ” ANS Annual Meeting, Pittsburg, PA, June 13 - 17, 2004
4. S.R. Biegalski, **S.K. Aghara**, E. Alvarez, T.C. Green “Detection Limits Improvements at The University of Texas PGAA Facility” *Invited speaker*, 227th ACS National Meeting, Anaheim, CA, March 28-April 1, 2004 in Anaheim
5. **S.K. Aghara**, W.S. Charlton, R. Fink, “Fast Neutron Damage to Digital-to-Analog Converters in a Mixed Radiation Environment,” Trans. Am. Nucl. Soc., 88, p. 63-65 (2003)
6. William S. Charlton, Ryan F. LeBouf, **Sukesh Aghara**, “Proliferation Resistance Assessment Method for Analyzing ATW Fuel Cycles”, Trans. Am. Nucl. Soc., 86, p. 930-939, (2003)
7. **S.K. Aghara**, W.S. Charlton, S. O’Kelly, “Characterization of an In-Core Location at the University of Texas TRIGA II for Electronic Hardness Assurance Testing”, Trans. Am. Nucl. Soc., 86, p. 359-360 (2002)
8. Frank L. Parker, Kenneth W. Ayers, Mark D. Abkowitz, **Sukesh Aghara**, John Boren, Douglas Borkowsky, Nicloe Darnell, Tara Deal, and Amyu Stephens, "Reuse of Concrete from Contaminated Structures," Proceedings, Spectrum 1998, pp. 71-74, Denver, Colorado, September 1998

ARCHIVAL SYMPOSIUM POSTER PAPERS

1. Eric Wright, **S. K. Aghara**, “Review of MCNPX application in Nuclear Engineering,” Texas A&M Pathways Symposium, Prairie View, TX November 2006.
2. Jerrad Deason, **S.K. Aghara**, Igor Remec, “Monte Carlo Computation Code Simulation of Photoneutron Spectra Produced by Electron Interactions with a Tungsten Slab,” Texas A&M Pathways Symposium, Prairie View, TX November 2006.
3. Ryan Hariston, Kim Pham, **S. K. Aghara** “Hydrogen Production - comparing and contrasting electrolysis and Thermo-chemical processes,” Texas A&M Pathways Symposium, Prairie View, TX November 2006.
4. Preston Perry, Leslie Beloney, **S. K. Aghara**, J. Fuller, I. Chang, W. Ali, R. Dwivedi “Development of an Acquisition System for Nuclear Radiation Detectors” Texas A&M Pathways Symposium, Prairie View, TX November 2006.
5. Femi-Fowode Temitayo and **S.K. Aghara** “Demonstration of use of Scintillators (NaI) and Solid State (HPGe) Detectors,” Texas A&M Pathways Symposium, Prairie View, TX November 2006.

6. Jerrad Deason, **Sukesh Aghara**, Eric Wright “Benchmarking of Monte Carlo Codes and Sensitivity Analysis of Physics models in MCNPX for High Energy Projectile-Target Interaction,” Texas A&M Pathways Symposium, Kingsville, TX October 2005.
7. Eric Wright, **Sukesh Aghara**, Jerrad Deason “Numerical Analysis of Benchmark Data using MCNPX,” Texas A&M Pathways Symposium, Kingsville, TX October 2005.
8. Eric Wright, S. Shojah-Ardalan, Brad Gersey, **S. K. Aghara** and Richard Wilkins, “Development of Instrumentation for Neutron Time-of-Flight Measurements,” The Texas A&M University System 2<sup>nd</sup> Annual TAMUS Pathways Student Research Symposium, October 2004.

ACCEPTED BUT DID NOT PRESENT

1. J. Deason, **S. K. Aghara**, I. Remec, “Monte Carlo Computation Code MCNPX Simulation of Photoneutron Spectra Produced by Electron Interactions with a Tungsten Slab,” ANS Annual Meeting, Boston, MA, June 24 - 28, 2007 (Submitted)
2. Jerrad Deason, **Sukesh Aghara**, Igor Remec, J. O. Johnson, “Benchmarking of Monte Carlo Codes and Sensitivity Analysis of Physics models in MCNPX for High Energy Projectile-Target Interaction,” PHYSOR 2006,
3. **S. K. Aghara** and J. L. Christian, Jr. “Suitability of Raw Martian Soil For Reactor Radiation Shielding,” IEEE Aerospace Conference, Big Sky, Montana, March 5-12 2005, accepted for presentation.
4. **S. Agahara**, P. B. Saganti, and M. F. Moyers, “Monte Carlo Transport of Primary and Secondary Radiation through Multi Layer Space Suits,” Monte Carlo Tropical Meeting 2005, Chattanooga, TN, April 17-21 2005, accepted for presentation
5. P. B. Saganti, **S. Agahara**, and M. F. Moyers, “Model Calculations and Visualization of the Radiation Transport through Space Suits,” Monte Carlo Tropical Meeting 2005, Chattanooga, TN, April 17-21 2005, accepted for presentation

PEER REVIEWED TECHNICAL GOVERNMENT REPORTS

1. **S.K. Aghara**, S. R. Blattnig, J. W. Norbury and R. C. Singleterry, “Benchmark Analysis of Pion Contribution from Galactic Cosmic Rays,” *NASA/TP-2008-215556*
2. John H. Heinbockel, Tony C. Slaba, **S. K. Aghara**, et. al. “Comparison of Radiation Transport Codes, HZETRN, HETC and FLUKA, using the 1956Webber SPE Spectrum,” *Technical Report TP-3495 NASA, October 2008.*
3. Ayers, Kenneth W., Frank L. Parker, Mark D. Abkowitz, Mark A. Cohen, **Sukesh K. Aghara**, John K. Boren, Douglas D. Borkosky, Nicole M. Darnall, Tara A. Deal, Dean Kim, Thomas Pagnani, Clifford Russell and Amy Stephen. “Reuse of Concrete from Contaminated Structures,” Report to the Office of Science and Technology, U.S. Department of Energy under Grant #DE-FG05-94OR22343, January 29, 1999.

**PRESENTATIONS**

Technical presentations are listed under conference proceedings. The presentations listed below are technical presentation given by invitation at various venues.

1. "Space Radiation Research - Challenges and Opportunities," NASA Ames Research Center 2008 Summer Internship Program, San Jose, CA, July 26<sup>th</sup> 2008
2. "Space Radiation Transport for Lunar and Mars Missions," 2008 NASA Programs Symposium, Baltimore, Maryland, July 21 – 25, 2008
3. "NAFP Panel Discussion: NASA Administrator's Fellowship Program," ASEE annual meeting, Pittsburg Convention Center, Pittsburg, PA June 22-25, 2008
4. "Monte Carlo Transport," Space Radiation Transport Group, NASA Langley Research Center, Hampton, Virginia, February 14<sup>th</sup> 2008
5. "Radiation Environments" Materials Research Group, NASA Langley Research Center, Hampton, Virginia, March 26<sup>th</sup> 2008
6. "Advance Monte Carlo Transport" Space Radiation Transport Group, NASA Langley Research Center, Hampton, Virginia, March 28<sup>th</sup> 2008.
7. "Radiation Effects Work for Space Exploration at Prairie View A&M University," ESCG/JSC/EV5 - Radiation Effects Team, Johnson Space Center, Houston, August 2007
8. "Prairie View A&M University – Research and Education," Lawrence Livermore National Laboratory, CA, July 2007
9. "Radiation Transport Methods – Research, Education and Applications," College of Engineering, University of South Carolina, June 2007
10. "Energy Conference," Panelist, Texas A&M University, Energy Conference, August 2006
11. "Radiation Transport Codes," Boeing Houston, May 2006
12. "Application of Computational Methods to Radiation Interaction and Transport" May 1<sup>st</sup> 2006. Presentation to graduate students in computer science.
13. L. M. College of Engineering, Rajkot, Gujarat, "International Graduate Students," 2005, 2006
14. Rajkumar College Rajkot, India "Future in Space Science and Technologies" January 2005.
15. CARR Interns, CARR Conference room, "Radiation Science; A Carrier Option," August 2005.
16. SEI Students, Prairie View A&M University, CARR conference room, "Nuclear Engineers: What do they do?," November 2005
17. Invited speaker at Nuclear Science and Technology Division at Oak Ridge National Laboratory "Radiation Effects Studies at NASA's Center for Radiation Research (CARR)" August 2004.
18. CARR Interns, CARR Conference room, "Radiation: Interactions, Characterization, Applications," June 2004.
19. Dr. Osborne-Lee's Freshman Class, S.R. Collins, 210, "Nuclear Engineers: What do they do?," October 2004