

PREMKUMAR B. SAGANTI, PH. D.

Professor in Physics and NASA-CARR Faculty

Department of Physics, Prairie View A&M University, TX

Coordinator – Physics Program; Chair – Research Advisory Committee

PI: Radiation Model QMSFRG Expansion and Application Support, a NASA Co-op Agreement, NASA-JSC

PI: Imaging Detectors for Space Radiation Detection and Astronomy, NASA-JSC/TAMU

Co-PI: NASA-University Research Center, CRESSE at PVAMU

Co-I: NIH- IRACDA with Baylor College of Medicine

PI and Research Director: Chancellor's Research Initiative (CRI), Radiation Institute for Science and Eng (RaISE)

<http://www.pvamu.edu/pages/2811.asp>

Education:

- B. Sc.** [*Physics & Mathematics*] Andhra Christian College, India 1982
M. Sc. [*Nuclear Physics*] Andhra University, Waltair, India 1986
M. S. [*Electro Optics*] University of Houston-Clear Lake, Texas 1991
(Prof. AG Houston-UHCL, Dr. Pitts-NASA-JSC, and Prof RJ Babaian-UTMDACC)
Ph. D. [*Physics*] Andhra University, Waltair, India 1994
(Prof. RD Ratnaraju-AU and Prof. KT Hecht, U of Michigan, Ann Arbor)



Harvard University, Boston, MA: Harvard School of Public Health – Executive Radiation Safety Officer (RSO) for Laboratory Professionals, Training and Certification (April 2015)

Harvard University, Boston, MA: Harvard School of Public Health – Radiological Emergency Planning: Terrorism, Security, and Communication, Training and Certification (Jul-Aug 2014)

ICTP, Trieste, Italy – Abdus Salam International Centre for Theoretical Physics and American Physical Society (APS) AIP Industrial Physics Forum 2012 (April 2012)

Stanford University, Stanford, CA: National Light Source – Stanford Linear Accelerator Center (SLAC), Training in Advanced Light Sources Operation and Research (University of California - Berkeley and Stanford University), INCREASE Workshop (July 2011)

Oxford University, Oxford, UK – Invitee for Oxford Round Table – Teaching with Mentorship in Sciences, International Partnership for next Generation STEM Programs (Aug 2008)

University of Southern California – Computing Cluster Development and Training for Department of Defense Applications, University of Southern California (Jan 2007)

Brookhaven National Laboratory, Upton, NY – Guest Scientist: NASA Space Radiation Laboratory, Training and User Certification (2001 – Present)

Los Alamos National Laboratory, Los Alamos, NM – Guest Scientist: Working with Weapons Neutron Research (WNR) of Los Alamos Neutron Science Center (LANSCE), Training and User Certification (2004 – Present)

Professional Background:

Professor and Coordinator Physics Program, Department of Physics, College of Arts and Sciences, Prairie View A&M University, Prairie View, 2012- Present

Professor of Physics, Department of Physics, and NASA Research Faculty, NASA Center for Applied Radiation Research, Prairie View A&M University, Prairie View, TX (2008 – Present) Tenured

Associate Professor, Department of Physics, and NASA Research Faculty, NASA Center for Applied Radiation Research, Prairie View A&M University, Prairie View, TX (2003 – 2008) Tenure Track

Sr. Research Scientist, Space Radiation Health Project, and Image Science and Analysis Group, NASA Johnson Space Center, Lockheed Martin Space Operations, Houston, TX (1994-2003)
Research Associate and Teaching Fellow, NASA Research Institute for Computing and Information Systems, University of Houston-Clear Lake, Houston, TX (1989-1994)
Adjunct Professor in Physics and Chemistry, Teaching Astronomy Classes (UG) – University of St. Thomas, Houston, TX (2008 – Present)
Adjunct Professor in Computer Science, Adjunct Professor in Computer Engineering, and Specialist in Image Processing - Robotics Research, University of Houston-Clear Lake, Houston, TX (1994 – Present)

Biographical Sketch:

Dr. **Saganti** has been leading the efforts to establish first CRI (Chancellor's Research Initiative) at Prairie View A&M University from 2013 - currently, we obtained all of our CRI equipment (\$ 2 M) and the CRI Laboratories are progressing rapidly with renovations and construction for placing 40+ laboratory items of advanced capabilities and high performance computing and visualization including advanced Confocal Microscope system (a pride possession - first of its kind in the State of Texas).

Dr. **Saganti** lead first Prairie View designed and developed payload Shinen2 spacecraft that was launched from Japan in December 2014 as part of Hayabusa2 (Asteroid Explorer), a JAXA mission. Prairie View payload (Radiation Particle Pixel Detector – PPD) reached deep-space beyond moon orbit will continue its trajectory for next three to five years orbiting and collecting unique radiation data around the Sun between Venus and Mars orbits. <https://www.youtube.com/watch?v=-9TlwZobc4>

Dr. **Saganti** is currently a NASA Research Faculty with the NASA Center for Applied Radiation Research (CARR / CRESSE) and a tenured Professor in the Department of Physics at the Prairie View A&M University, Prairie View, TX. He served as a PI on several NASA Grants - MARIE (Martian Radiation Environment Experiment), RaISE (Radiation Interuniversity Science and Engineering), and as a PI on NASA Co-op Agreement - QMSFRG (Quantum Multiple Scattering and Fragmentation).

Dr. **Saganti** has been working with the GCR radiation environment modeling at Mars and of the near earth orbit including the GCR modulation studies under the mentorship of Dr. Cucinotta (2004). Contributions in the expansion of the GCR environment and HZETRN model calculated predictions of dose rate at Mars showed a significant correlation of within 5% with the MARIE measured data. Model calculated GCR environment and transport calculations were presented at several national and international conferences world-wide. Most recent published data from the first radiation measurements (2014) on surface of Mars by Curiosity Rover are within 2% of the predicted estimates of Dr Saganti (2004). Some of the visualization of radiation environment work appeared in several NASA publications and NASA websites as well as **National Geographic**, **DISCOVER**, and **SCIENCE** journals.

Dr. **Saganti**, for more than 20 years, contributed to the NASA's Exploration Vision through Image Science Analysis Group at NASA-JSC supporting more than 30 Space Shuttle missions (launch and landing) including Hubble Space Telescope repair missions, MIR and ISS space operations. Most recently served on the Space Shuttle Columbia accident (2003) investigation team on a special assignment for developing image analysis techniques required for the NASA investigation.

Dr. **Saganti** also received 15 years 'State of Texas Service Award' recognition in 2006 from President Wright of the Prairie View A&M University for serving the University of Houston and the Texas A&M University Systems. Dr. **Saganti** has been teaching at Higher Educations Institutions in the State of Texas for the past 24+ yrs continuously (as of 2014).

Dr. **Saganti** is an author and co-author of ten books (including NASA publications) and nearly 200 research publications in peer-reviewed and conference proceedings. According to Google Books, Dr. Saganti's published work has been cited in more than 100 books / reports around the world and his NASA space radiation work is being referenced in several hundreds of NASA and other WebPages.

GoogleBooks-<http://www.google.com/search?q=P+Saganti&btnG=Search+Books&tbn=bks&tbo=1>

Relevant Awards and Significant Recognitions

- 2010: Award of Honor recognizing Chancellor's Teaching Excellence Award – Dean, College of Arts & Sciences, Prairie View A&M University
- 2010: Chancellor's Teaching Excellence Award (Chancellor, Texas A&M University System)
- 2009: Chancellor's Teaching Excellence Award (Chancellor, Texas A&M University System)
- 2008: Oxford Round Table invitee and presenter at St Anne's and Rhodes House, Oxford, UK
- 2007: Outstanding Teacher in Physics, College of Arts & Sciences, Prairie View A&M University
- 2007: NASA VIP Invitee for Space Shuttle Launch (STS-118) live observation at NASA-KSC (7th August) – Department of Education, NASA-HQ
- 2006: State of Texas Service Award (15 yrs) by President Wright of Prairie View A&M University
- 2006: For sustained research funding, international conferences, and novel research collaborations – department of physics, Prairie View A&M University, TX
- 2004: NASA Special Recognition - Space Science Education and Public Outreach. For contribution to the public outreach material on the space radiation environment at Mars, NASA-HQ in June 2004.
- 2003: Space Flight Special Team Award for Image Analysis Support of the Columbia Accident Investigation, Space and Life Sciences Directorate, NASA-JSC, June 2003.
- 2003: Top Flight Award – Lockheed Martin: For the support of the Columbia investigation work with the Image Science and Analysis Group, June 2003.
- 2003: Recognition – in the SCIENCE on-line (April 2003) for the radiation damage to DNA illustration and the space radiation studies
- 2002: Recognition - Mars Radiation Model visualization pictures appeared in DISCOVER magazine (05/2002) and as Cover Pictures of NASA-JPL website (03/2002)
- 2001: Special Space Flight Achievement Award for Radiation Risk Factors Team, Space and Life Sciences Directorate, NASA Johnson Space Center, November 2001.
- 2001: Recognition - in the National Geographic January 2001 issue for the contribution of the space radiation effects related data and graphics.
- 1999: Lightning Award – Lockheed Martin: Special recognition for innovative work for providing the Space Shuttle Image Analysis reports on-line in a short time.
- 1998: Phase-I Shuttle-Mir Program Commemorative Certificate - NASA Johnson Space Center.
- 1998: Group Achievement Award of Recognition - NASA Johnson Space Center for the support of the DTO-1118 of the Shuttle/Mir Program and for the research work as a Principle Investigator on the Mir Window Survey Project.
- 1997: Going an Extra Mile (GEM) award of recognition for supporting the Hubble Space Telescope, Service Mission-2, NASA Johnson Space Center.
- 1995: Best Thesis Award (doctoral degree) - Gold Medal of Honor: Andhra University, Waltair, India
- 1995: Highest honor of recognition for best research contribution - Gold Medal of Honor: Department of Physics, Andhra University, Waltair, India
- 1995: Group Achievement Award of Recognition - NASA Johnson Space Center, for the support of the first Shuttle-Mir work on STS-63.
- 1994 and 1993: Directors Merit Award, RICIS, University of Houston-Clear Lake, Houston, Texas
- 1986: Highest Distinction in Radiation Physics for M.Sc. graduate course work, Department of Nuclear Physics, Andhra University, Waltair, India

Current Research Grants at Prairie View A&M University (2003 – Present):

- *Principal Investigator:* Radiation Modeling at Mars for Martian Radiation Environment Experiment (MARIE) Project, NASA-JSC (2004-2008) ~ \$ 200,000
- *Principal Investigator:* Radiation Interuniversity Science and Engineering Program, NASA-JSC and NASA-HQ (2005-2008) ~ \$ 300,000
- *Principal Investigator:* Radiation Assessment of Space Suit Proposed Material in Support of NASA's Phase-I and Phase-II grants to MER Corp., AZ through NASA-JSC (2005-2007) ~ \$ 100,000
- *Principal Investigator:* Space Radiation QMSFRG Model Development and Application in Support of NASA- PI, Dr. Cucinotta of NASA-JSC [a NASA Co-Op Agreement] (2007-2010) ~ \$ 200,000
- *Principal Investigator:* Imaging Detectors for Space Radiation Detection and Astronomical Observations for NASA Applications – through Space Engineering Institute (SEI), Texas A&M University (TAMU), TM / S. D. Holland of NASA-JSC (2009-2011) ~ \$ 100,000
- *Co-Principal Investigator and Group Leader:* Radiation Modeling and Visualization - NASA Center for Applied Radiation Research, NASA-HQ and NASA-JSC (2005-2006) ~ \$ 450, 000
- *Co-Principal Investigator:* NASA University Research Center (URC) [a NASA Co-Op Agreement] PI-Dr. Wilkins of PVAMU (2008-2013) ~ \$ 5,000,000
- *Mentor/Co-Investigator:* NIH IRACDA (Institutional Research Award for Career Development and Advancement) for Baylor College of Medicine Post-doctoral Fellows in partnership with Prairie View A & M U, St. Thomas U and the U of Houston – Down Town, PI-Dr. Slaughter of BMC (2008-2013) ~ \$ 6,000,000
- *Activity Coordinator:* Title-III Grant for Expanding Astronomy Studies and Laboratories in the Physics Program from Department of Education through Ms. L. Williams of PVAMU (2012-2017) ~ \$ 600,000
- *Mentor/Co-Investigator:* NIH IRACDA (Institutional Research Award for Career Development and Advancement) for Baylor College of Medicine Post-doctoral Fellows in partnership with Prairie View A & M U, St. Thomas U and the U of Houston – Down Town, PI-Dr. Slaughter of BMC (2014-2019) ~ \$ 7,500,000
- *PI and Research Director:* Chancellor's Research Initiative (CRI) Radiation Institute for Science and Engineering (RaISE), Texas A&M University to Prairie View A&M University – (2013-2018) ~ \$ 8,000,000

Public Outreach/Television Interviews/Press Releases (2000-2006):

- “Indian-Americans ...U.S. Space Missions”, An interview report by Francis Assisi for Indolink.Com, published in May from the comments of R. Tripathi (NASA-LaRC) and **P. Saganti** (PVAMU), 2006
- "Space Radiation Health and Shielding Strategies", NASA Scientist Profiles for NASA-TV, F. A. Cucinotta, H. Wu, **P. B. Saganti**, and E. Simmens, NASA-JSC and NASA-MSFC, December 2003
- “Galactic Cosmic Radiation and Human Health Concerns”, DISCOVERY-TV program in Danish language, co-produced with the Denmark crew for the interview of Dr. Cucinotta, February 2002
- “Space Radiation - The Sun”, Developed and produced for the Sun-Day NASA display at the Houston Museum of natural Sciences, 2001, 2002, 2003
- “Space Radiation Health” Developed and Presented Material for Open House and for Public Outreach – RRS Brisbane-2003, NASA-JSC 2000, 2001, and 2002. Current displays are at NASA-JSC, NASA-JPL, and NSRL/BNL
- IEEE Presentation at the Gilruth Center - NASA Johnson Space Center (NASA-JSC): “On Detection of Prostate Cancer from Ultrasound Images” February 1998
- IEEE Presentation at the John Seally Auditorium at the University of Texas Medical Center (UTMB), Galveston. “On Detection of Prostate Cancer from Ultrasound Images” April 1998

Organizer and Chairman for the International Conferences (2006-2010):

- 2006: Material Research Society (MRS) San Francisco April 2006 and Guest Editor on for a MRS Book Publication [Materials in Extreme Environment, Ed: Ila, Mailhiot, and **Saganti** (ISBN-978-1-55899-886-5)]
- 2006: AOGS, Singapore, Conference Organizer and Guest Editor; Convener session PS, July 2006
- 2007: AOGS, Bangkok, Conference Organizer and Guest Editor; Convener session PS, July 2007
- 2007: Session Chair – Solar Heliospheric Modeling – AGU Fall Meeting, San Francisco, CA, December 2007
- 2008: AOGS, Busan, Korea, Conference Organizer and Guest Editor, 2007; Convener session PS, June 2008
- 2008: Organizer/Chair, Extreme Environment: Radiation; Progress in Electromagnetics Research Symposium, PIERS 2008 Organized by MIT in Hangzhou, CHINA, March 2008
- 2008: RPS-2008, Atlanta, GA, Conference Organizer and Reviewer, April 2008
- 2009: AOGS, Singapore, Conference Organizer and Convener - Session PS, August 2009
- 2010: AOGS, Hyderabad, Conference Organizer and Convener - Session PS, July 2010
- 2010: COSPAR Meeting in Bremen, Germany - Session Organizer and Chair - F24, July 2010

Books / Book Chapters / NASA-Publications

1. **Book [ISBN: 978-1-46526-857-0]** Editors – Erickson and Saganti: Physics II- 2121/2521 Laboratory Manual, Authors - Cudnik, Bentley, Ciftja, Storr, and Rahman, 2015
2. **Book [ISBN: 978-1-46525-598-3]** Editors – Erickson and Saganti: Physics I- 2111/2511 Laboratory Manual, Authors - Cudnik, Bentley, and Rahman, 2014
3. **Book [ISBN: 978-1-55899-886-5]** Materials in Extreme Environment, Editors: Daryush Ila, Christian Mailhiot, and **Premkumar Saganti**, MRS Publication, 2006
4. **Book Chapter [ISBN: 1402-01696-4]** P. B. **Saganti**, F. A. Cucinotta, J. W. Wilson, et al., Radiation Climate Map for Analyzing Risks to Astronauts on the Mars, **2001 Mars Odyssey**, Edited C.T. Russell, Springer Verlag, NY, April 2004
5. **Book [NASA-TP-212051]** F. A. Cucinotta, M. R. Shavers, **P. B. Saganti**, and J. Miller (Editors): Radiation Protection Studies of International Space Station Extravehicular Activity Space Suits, *NASA/TP-JSC-212051*, December 2003
6. **Book [NASA-TP-210792]** F. A. Cucinotta, J. W. Wilson, **P. B. Saganti**, X. Hu, M. Y. Kim, T. F. Cleghorn, C. J. Zeitlin, and R. K. Tripathi, Physics of the Isotopic Dependence of GCR Fluence Behind Shielding, *NASA-TP-2003-210792*, February 2003.
7. **Book [NASA-TP-29295]** F. A. Cucinotta, W. Shimmerling, J. W. Wilson, L. Peterson, G.D. Badhwar, **P. B. Saganti**, and J. Dicello, Space Radiation Cancer Risk Projections for Exploration Missions: Uncertainty Reduction and Mitigation, *NASA/TP-JSC-29295*, 2001
8. **Book Chapter [ISBN-0-471-39005-4]** **P. B. Saganti** and K. P. Lulla, Windows of Opportunity - A Photo Illustration of the Mir Windows; Published as a textbook chapter, Wiley, **ISBN-0-471-39005-4**: Dynamic Earth Environments Ed. KP Lulla and LV Dessinov. Contributed Ch-8 as a PI of the work of the NASA Shuttle-Mir.
9. **Book [NASA-TP-28578]** **P. B. Saganti**, Mir Window Survey; *A NASA JSC Technical Document*, **JSC-28578**, 1999.
10. **Book [NASA-TP-27698]** **P. B. Saganti**, Viewing Study of the International Space Station (ISS): *A NASA JSC Technical Document*, **JSC-27698**, 1996.

Selected Recent Scientific Publications and Conference Proceedings by Dr. Saganti (2003-2012)

2012

- [1] Demond Roland*, Gary Erickson, and Premkumar Saganti; The Effects of Space Radiation and Microgravity on Salmonella; Biology Symposium at Prairie View A&M University, November 2012
- [2] James Williams*, Gary Erickson, and Premkumar Saganti; Variation of Nuclear Particle Flux in the Current Solar Cycle: C, N, O, Si, and Fe; Biology Symposium at Prairie View A&M University, November 2012
- [3] Myegan Griffin*, Gary Erickson, and Premkumar Saganti; Variation of Proton Flux in the Current Solar Cycle: Biological Consequences; Biology Symposium at Prairie View A&M University, November 2012
- [4] Shani Williams*, Premkumar Saganti, Gary Erickson, and Jainren Zhou; Secondary Radiation Effects in Robotic Material: Extreme Radiation Environments; Biology Symposium at Prairie View A&M University, November 2012
- [5] Demond Roland*, Gary Erickson, and Premkumar Saganti; The Effects of Space Radiation and Microgravity on Salmonella; 10th Annual TAMUS Pathways Student Research Symposium, Texas A&M University, Galveston, November 2012
- [6] James Williams*, Gary Erickson, and Premkumar Saganti; Variation of Nuclear Particle Flux in the Current Solar Cycle: C, N, O, Si, and Fe; 10th Annual TAMUS Pathways Student Research Symposium, Texas A&M University, Galveston, November 2012
- [7] Myegan Griffin*, Gary Erickson, and Premkumar Saganti; Variation of Proton Flux in the Current Solar Cycle: Biological Consequences; 10th Annual TAMUS Pathways Student Research Symposium, Texas A&M University, Galveston, November 2012
- [8] Shani Williams*, Premkumar Saganti, Gary Erickson, and Jainren Zhou; Secondary Radiation Effects in Robotic Material: Extreme Radiation Environments; 10th Annual TAMUS Pathways Student Research Symposium, Texas A&M University, Galveston, November 2012
- [9] Ashley Way*, Gary Erickson, and Premkumar Saganti; Space Radiation at High Altitudes and EVA: Extra Vehicular Activities; 10th Annual TAMUS Pathways Student Research Symposium, Texas A&M University, Galveston, November 2012
- [10] Myegan Griffin*, Gary Erickson, and Premkumar Saganti; Variation of Proton Flux in the Current Solar Cycle: Biological Consequences; LSAMP Symposium, Texas A&M University, College Station, February 2013.
- [11] ¹A. R. Way*, S. P. Saganti*, G. M. Erickson, P. B. Saganti, and F. A. Cucinotta; Human Space Exploration and Radiation Exposure from EVA: 1981-2011, 22nd Annual NASA Space Radiation Investigators' Workshop, League City, TX (Sept-2011)
- [12] ²S. P. Saganti*, A. R. Way, G. M. Erickson, P. B. Saganti, and F. A. Cucinotta; Long-Duration Human Space Expeditions and Radiation Exposure: 2000-2011, 22nd Annual NASA Space Radiation Investigators' Workshop, League City, TX (Sept-2011)
- [13] P. B. Saganti and F. A. Cucinotta; Assessment of "QMSFRG" Model Calculations in the Current GCR Environment, 22nd Annual NASA Space Radiation Investigators' Workshop, League City, TX (Sept-2011)
- [14] A. R. Way*, S. P. Saganti*, G. M. Erickson, P. B. Saganti, and F. A. Cucinotta; Human Space Exploration and Radiation Exposure from EVA: 1981-2011, 22nd Annual NASA Space Radiation Investigators' Workshop, League City, TX (Oct-2011)
- [15] S. P. Saganti*, A. R. Way*, G. M. Erickson, P. B. Saganti, and F. A. Cucinotta; Long-Duration Human Space Expeditions and Radiation Exposure: 2000-2011, 22nd Annual NASA Space Radiation Investigators' Workshop, League City, TX (Oct-2011)
- [16] M. Griffin*, G.M. Erickson, and P.B. Saganti; Space Radiation Environment: Measurements and Biological Consequences with Alpha Particles, Annual BIOLOGY-2011 Symposium, Prairie View A&M University (November 2011)
- [17] A. Harris*, G.M. Erickson, and P.B. Saganti; Proton Induced Radiation Damage and Assessment with Biological Tissue, Annual BIOLOGY-2011 Symposium, Prairie View A&M University (November 2011)

¹ Winner of Special Undergraduate Recognition Award (first ever undergraduate students with post-docs)

² Winner of Special Undergraduate Recognition Award (first ever undergraduate students with post-docs)

- [18] A. Scott-Turner*, G.M. Erickson, and P.B. Saganti; Neutron Monitor Data and Assessment of Galactic Particle Flux Variation, Annual BIOLOGY-2011 Symposium, Prairie View A&M University (November 2011)
- [19] A.R. Way*, G.M. Erickson, and P.B. Saganti; Human Space Exploration and Radiation: Extra Vehicular Activities, Annual BIOLOGY-2011 Symposium, Prairie View A&M University (November 2011)
- [20] J. Williams*, G.M. Erickson, and P.B. Saganti; Nuclear Data for Space Radiation Particles: C, N, O, Si, and Fe, Annual BIOLOGY-2011 Symposium, Prairie View A&M University (November 2011)
- [21] A. Harris*, G.M. Erickson, and P.B. Saganti; Proton Induced Radiation Damage and Assessment with Biological Tissue, 9th Annual Texas A&M University System Pathways Student Research Symposium, College Station (November-2011)
- [22] A. Scott-Turner*, G.M. Erickson, and P.B. Saganti; Neutron Monitor Data and Assessment of Galactic Particle Flux Variation, 9th Annual Texas A&M University System Pathways Student Research Symposium, College Station (November-2011)
- [23] A.R. Way*, G.M. Erickson, and P.B. Saganti; Human Space Exploration and Radiation: Extra Vehicular Activities, 9th Annual Texas A&M University System Pathways Student Research Symposium, College Station (November-2011)
- [24] D. Burks* and P.B. Saganti; Nuclear Excitation Energies and Space Radiation Environment, 9th Annual Texas A&M University System Pathways Student Research Symposium, College Station (November-2011)
- [25] J. Williams*, G.M. Erickson, and P.B. Saganti; Nuclear Data for Space Radiation Particles: C, N, O, Si, and Fe, 9th Annual Texas A&M University System Pathways Student Research Symposium, College Station (November-2011)
- [26] ³A. R. Way*, S. P. Saganti, G. M. Erickson, P. B. Saganti, and F. A. Cucinotta; Human Space Exploration and Radiation Exposure from EVA: 1981-2011, AGU Annual Fall Meeting, San Francisco, CA (December-2011).
- [27] D. J. Burks*, P. B. Saganti, and G. M. Erickson (2012). "Space Radiation Environment and Nuclear Excitations: C-N-O, Si-Ni, and Au Nuclei". 3rd STEAM Research Symposium, Prairie View A&M University, April 2012.
- [28] A. Harris*, P. B. Saganti, and G. M. Erickson (2012). "Radiation Induced Damage to Biological Tissue: Protons." 3rd STEAM Research Symposium, Prairie View A&M University, April 2012.
- [29] A. R. Way*, P. B. Saganti, and G. M. Erickson (2012). "Human Space Exploration and Radiation: Extra Vehicular Activities" 3rd STEAM Research Symposium, Prairie View A&M University, April 2012.
- [30] J. Williams*, D. J. Burks, and P. B. Saganti (2012). "Nuclear Data for Selected Space Radiation Particles." 3rd STEAM Research Symposium, Prairie View A&M University, April 2012.
- [31] S. Williams**, P. B. Saganti, G.M. Erickson, and J. Zhou (2012), "Secondary Radiation Effects in Robotic Material: Extreme Radiation Environments", 3rd STEAM Research Symposium, Prairie View A&M University, April 2012.
- [32] ⁴A. Scott-Turner*, P. B. Saganti, and G. M. Erickson (2012). "Galactic Particle Flux Variation: Assessment with Neutron Monitor Data." 3rd STEAM Research Symposium, Prairie View A&M University, April 2012.
- [33] ⁵A. R. Way*, P. B. Saganti, and G. M. Erickson (2012). "Human Space Exploration and Radiation: Extra Vehicular Activities" LSAMP-2012 Symposium - Texas A&M University, Corpus Christy, April 2012.
- [34] ⁶A. Scott-Turner*, P. B. Saganti, and G. M. Erickson (2012). "Galactic Particle Flux Variation: Assessment with Neutron Monitor Data." LSAMP-2012 Symposium - Texas A&M University, Corpus Christy, April 2012.
- [35] P. B. Saganti, and F. A. Cucinotta (2012), "Model Calculated Radiation Environment at Mars: 2012 and Beyond" IAF - Global Space Exploration Conference, Washington DC, May 2012
- [36] P. B. Saganti, D. R. Burks*, G. M. Erickson, and F. A. Cucinotta (2012), "3D Visualization Depicting the Far Side of the Sun: Radiation Risk Assessment", 23rd Annual Space Radiation Investigator's Workshop, Duke University, July 2012
- [37] P. B. Saganti and F. A. Cucinotta (2012), "Model Calculated Radiation Environment: 2012 and Beyond", 39th COSPAR Scientific Assembly, Mysore, India, July 2012

³ A. R. Way is the recipient of prestigious student travel award from AGU.

⁴ Award Winner STEAM-2012

⁵ Recipient of LSAMP Scholarship 2011-2012

⁶ Recipient of LSAMP Scholarship 2011-2012

- [38] S. P. Saganti[§], A. R. Way*, G. M. Erickson, P. B. Saganti, and F. A. Cucinotta (2012), "Radiation Risk Assessment of Long-Duration Expeditions to ISS: 2000-2011", 39th COSPAR Scientific Assembly, Mysore, India, July 2012
- [39] A.R. Way*, S. P. Saganti*, G. M. Erickson, P. B. Saganti, and F. A. Cucinotta (2012), "Space Exploration and Radiation Exposure during EVA: 1981-2011", 39th COSPAR Scientific Assembly, Mysore, India, July 2012

2011

- [40]⁷D. J. Burks*, **P. B. Saganti** and F. A. Cucinotta (2011). "Space Radiation Environment and Nuclear Isotopic Abundances." 2nd STEAM Research Symposium, Prairie View A&M University, April 2011.
- [41] D. J. Burks*, J. Williams, **P. B. Saganti**, G. M. Erickson and B. M. Cudnik (2011). "Nuclear Isotopic Data and Radiation Transport of Space Environment." 1st Annual University of Houston Symposium for Undergraduates in Physics, February 19, 2011, Sponsored by the Society of Physics Students (SPS) of the American Physical Society (APS).
- [42] B. M. Cudnik, **P. B. Saganti**, G. M. Erickson and S. D. Holland (2011). "Imaging Detectors in Planetary and Space Science." 42nd Lunar and Planetary Science, March 11-17, 2011, Wood Lands, TX.
- [43] B. M. Cudnik, **P. B. Saganti**, G. M. Erickson and S. D. Holland (2011). "Lunar and Planetary Meteors." 42nd Lunar and Planetary Science, March 11-17, 2011, Wood Lands, TX.
- [44] A. R. Harris*, A. M. Morrow, S. J. Wolf, **P. B. Saganti**, G. M. Erickson and B. M. Cudnik (2011). "Space Radiation Environment and Recent Ground-Based Biological Experiments." 1st Annual University of Houston Symposium for Undergraduates in Physics, February 19, 2011, Sponsored by the Society of Physics Students (SPS) of the American Physical Society (APS).
- [45] A. R. Harris*, **P. B. Saganti**, G. M. Erickson and B. M. Cudnik (2011). "Radiation Induced Damage to Biological Tissue: Protons." 2nd STEAM Research Symposium, Prairie View A&M University, April 2011.
- [46] A. M. Morrow*, A. Scott-Turner, B. M. Cudnik, G. M. Erickson and **P. B. Saganti** (2011). "Radiation Induced Damage to Biological Tissue: Assessment with Neutrons." 2nd STEAM Research Symposium, Prairie View A&M University, April 2011.
- [47]⁸D. Price*, D. J. Burks, **P. B. Saganti**, G. M. Erickson and B. M. Cudnik (2011). "Current Solar Minimum and Variations in Proton Flux: 2008-2010." 2nd STEAM Research Symposium, Prairie View A&M University, April 2011.
- [48] D. Price*, **P. B. Saganti**, G. M. Erickson and B. M. Cudnik (2011). "Current Solar Minimum and Variations in Proton Flux: 2008-2010." 1st Annual University of Houston Symposium for Undergraduates in Physics, February 19, 2011, Sponsored by the Society of Physics Students (SPS) of the American Physical Society (APS).
- [49] **P. B. Saganti** and F. A. Cucinotta (2011). "Model Calculated GCR Particle Flux Variations: Assessment for Deep-Space Human Explorations." 18th Humans in Space Symposium of the International Academy of Astronautics (IAA), April 11–15, 2011 in Houston, TX.
- [50] **P. B. Saganti**, S. D. Holland, O. Belyakov, Z. Patel, F. A. Cucinotta and N. Fotiadis (2011). "Radiation Particle Assessment with Pixel Detectors for 3-D Tissue Interpretation." International Symposium for Radiation Research and Medical Physics, Shanghai, China.
- [51] **P. B. Saganti**, S. D. Holland, O. Belyakov, Z. Patel, F. A. Cucinotta and N. Fotiadis (2011). "Radiation Particle Interactions and Assessment with Pixel Detectors for 3-D Tissue Interpretation." 18th Humans in Space Symposium of the International Academy of Astronautics (IAA), April 11–15, 2011 in Houston, TX.
- [52]⁹A. Scott-Turner*, **P. B. Saganti**, G. M. Erickson and B. M. Cudnik (2011). "Galactic Particle Flux Variation: Assessment with Neutron Monitor Data." LSAMP-2011 Symposium - Texas A&M University.
- [53]¹⁰A. Scott-Turner*, **P. B. Saganti**, G. M. Erickson and B. M. Cudnik (2011). "Galactic Particle Flux Variation: Assessment with Neutron Monitor Data." 2nd STEAM Research Symposium, Prairie View A&M University, April 2011.

⁷ Award Winner STEAM-2011

⁸ Award Winner STEAM-2011

⁹ Recipient of LSAMP Scholarship 2010-2011

¹⁰ Award Winner STEAM-2011

- [54]¹¹A. Scott-Turner*, **P. B. Saganti**, G. M. Erickson and B. M. Cudnik (2011). "Galactic Particle Flux Variation: Assessment with Neutron Monitor Data." 1st Annual University of Houston Symposium for Undergraduates in Physics, February 19, 2011, Sponsored by the Society of Physics Students (SPS) of the American Physical Society (APS).
- [55]A. R. Way*, N. O. Becktemba, S. P. Saganti, **P. B. Saganti**, G. M. Erickson and B. M. Cudnik (2011). "Human Space Exploration and Radiation: Extra Vehicular Activities " 1st Annual University of Houston Symposium for Undergraduates in Physics, February 19, 2011, Sponsored by the Society of Physics Students (SPS) of the American Physical Society (APS).
- [56]¹²A. R. Way*, **P. B. Saganti**, G. M. Erickson and B. M. Cudnik (2011). "Human Space Exploration and Radiation: Extra Vehicular Activities " LSAMP-2011 Symposium - Texas A&M University.
- [57]¹³A. R. Way*, **P. B. Saganti**, G. M. Erickson and B. M. Cudnik (2011). "Human Space Exploration and Radiation: Extra Vehicular Activities " STEAM-2011 Symposium at PVAMU.
- [58]¹⁴J. Williams*, D. J. Burks and **P. B. Saganti** (2011). "Nuclear Data for Selected Space Radiation Particles." STEAM-2011 Symposium at PVAMU.
- [59]S. Wolf*, **P. B. Saganti**, G. M. Erickson and B. M. Cudnik (2011). "Radiation Induced Damage to Biological Tissue: Heavy Ions." STEAM-2011 Symposium at PVAMU.

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- [60]P. B. **Saganti**, S. D. Holland, O. Belyakov, N. Fotiadis, and F.A. Cucinotta, Radiation Particle Assessment and Track Interpretation in 3D Tissue, PIXEL-2010, 5th International Workshop on Semiconductor Pixel Detectors for Particles and Imaging, Grindelwald, Switzerland, September, 2010
- [61]P. B. **Saganti**, S. D. Holland, O. Belyakov, Z. Patel, J. Huff, N. Fotiadis, and F. Cucinotta, Radiation Particle Assessment with Pixel Detectors for Tissue Interpretation, COSPAR Meeting, Bremen, Germany, July 2010
- [62]P. B. **Saganti**, N. Becktemba*, A. Scott-Turner*, C. Nguyen*, and F.A. Cucinotta, Modeling of GCR Environment Variations and Interpretation for Human Explorations, COSPAR Meeting, Bremen, Germany, July 2010
- [63]P. B. **Saganti**, D. Burks*, D. Price*, and F. A. Cucinotta, Solar Activity and GCR Particle Flux Variations: Assessment and Modeling with Ulysses and ACE/CRIS, COSPAR Meeting, Bremen, Germany, July 2010
- [64]P. B. **Saganti** and F. A. Cucinotta, Expansions of "QMSFRG" Model Calculations in the Context of Current GCR, Annual NASA Space Radiation Health Investigators Workshop, Port Jefferson, NY
- [65]P. B. **Saganti**, F. A. Cucinotta, and T. F. Cleghorn, Solar Minimum Condition and Galactic Particle Flux Assessment with Voyager, Ulysses and ACE/CRIS Data; AOGS-2010, Hyderabad, India (Invited)
- [66]P. B. **Saganti**, F. A. Cucinotta and T. F. Cleghorn, Current Solar Minimum and Radiation Environment at Mars: Model Calculations and Assessment 2009-2010; AOGS-2010, Hyderabad, India (Invited)
- [67]D. Burks* and P. B. **Saganti**, Nuclear Isotopic Abundances for Assessment of Radiation Biology Applications, Annual Juvenile Justice Sponsored Symposium (JJSS), Prairie View A&M University, TX, April 2010
- [68]T. Y. Christie* and P. B. **Saganti**, Epidemiological Assessment of Long-Term Radiation Effects – Hiroshima, Nagasaki, and Chernobyl, Annual Juvenile Justice Sponsored Symposium (JJSS), Prairie View A&M University, TX, April 2010
- [69]D. Davis* and P. B. **Saganti**, Long-Term Space Radiation: An Epidemiological Perspective, Annual Juvenile Justice Sponsored Symposium (JJSS), Prairie View A&M University, TX, April 2010

¹¹ Award Winner UH-SPS/APS-2011

¹² Recipient of LSAMP Scholarship 2010-2011

¹³ Award Winner STEAM-2011

¹⁴ Award Winner STEAM-2011

¹⁵ N. Becktemba received \$ 5,000 scholarship from Texas A&M System as part of LSAMP program

¹⁶ A. Scott-Turner received 1st place for her research poster as part of the Research Symposium at PVAMU

¹⁷ D. Price received 2nd place for his research poster as part of the Research Symposium at PVAMU

¹⁸ T. Christy received 3rd place for her research poster as part of the Research Symposium at PVAMU

- [70] C. Nguyen* and P. B. **Saganti**, Variations in solar activity and biological consequences for space exploration, Annual Juvenile Justice Sponsored Symposium (JJSS), Prairie View A&M University, TX, April 2010
- [71] D. Price* and P. B. **Saganti**, Space Radiation and Biological Assessment with RBE, Annual Juvenile Justice Sponsored Symposium (JJSS), Prairie View A&M University, TX, April 2010
- [72] J. E. Williams* and P. B. **Saganti**, Space Radiation and Relative Biological Effectiveness (RBE) Studies, Annual Juvenile Justice Sponsored Symposium (JJSS), Prairie View A&M University, TX, April 2010
- [73] A. Scott-Turner*, D. Burks*, and P. **Saganti**, Radiation Particle Flux Variations: Ulysses and ACE/CRIS Data, AIAA Student Conference, NASA-JSC, April 2010
- [74] D. Price*, P. **Saganti**, B. Cudnik, G. Erickson, Current Solar Minimum and Measured Proton Flux with GOES Data: 2008-2010, AIAA Student Conference, NASA-JSC, April 2010
- [75] N. Becktemba*, D. Price, and P. **Saganti**, Space Radiation Environment and Space Travel: First 500 Explorers, AIAA Student Conference, NASA-JSC, April 2010
- [76] T. Christie*, D. Davis*, and P. **Saganti**, Radiation Particle Detection and Assessment for Biological Applications, AIAA Student Conference, NASA-JSC, April 2010
- [77] N. Becktemba* and P. **Saganti**, Space Radiation Environment and Space Travel: First 500 Explorers, LSAMP Symposium, Texas A&M University, March 2010
- [78] D. Burks* and P. B. **Saganti**, Nuclear Isotopic Abundances for Assessment of Radiation Biology Applications, Research Symposium – CARC, Prairie View A&M University, Prairie View, February 2010.
- [79] T. Y. Christie* and P. B. **Saganti**, Epidemiological Assessment of Long-Term Radiation Effects – Hiroshima, Nagasaki, and Chernobyl, Research Symposium – CARC, Prairie View A&M University, Prairie View, February 2010.
- [80] D. Davis* and P. B. **Saganti**, Long-Term Space Radiation: An Epidemiological Perspective, Research Symposium – CARC, Prairie View A&M University, Prairie View, February 2010.
- [81] C. Nguyen* and P. B. **Saganti**, Variations in solar activity and biological consequences for space exploration, Research Symposium – CARC, Prairie View A&M University, Prairie View, February 2010.
- [82] A. Scott-Turner*, A. Marati, and P. B. **Saganti**, Biological Consequences in Space: Proton and Helium Particle Flux Measurements from Ulysses 2005-2009, Research Symposium – CARC, Prairie View A&M University, Prairie View, February 2010.
- [83] D. Price* and P. B. **Saganti**, Space Radiation and Biological Assessment with RBE, Research Symposium – CARC, Prairie View A&M University, Prairie View, February 2010.
- [84] J. E. Williams* and P. B. **Saganti**, Space Radiation and Relative Biological Effectiveness (RBE) Studies, Research Symposium – CARC, Prairie View A&M University, Prairie View, February 2010.
- [85] M. Hada, B. Gersey, P.B. **Saganti**, R. Wilkins, F.A. Cucinotta, H. Wu, mBAND analysis of chromosome aberrations in human epithelial cells induced by γ -rays and secondary neutrons of low dose rate, *Mutat. Res.* **701** (2010) 67-74

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- [86] P. B. **Saganti** and F. A. Cucinotta, Expansion of “QMSFRG” Radiation Model Calculations in the Context of GCR Nuclei Fragmentation, Heavy Ions in Space Symposium 2009, Köln, Germany; 2009.
- [87] P. B. **Saganti**, J. Alvaro, A. Scott-Turner, and F. A. Cucinotta, Radiation Dose Variations from Galactic Particle Flux (2001-2008): Assessment with Ulysses, ACE/CRIS and MO/MARIE Data, 31st International Cosmic Ray Conference (ICRC), Lodz, Poland, 2009.
- [88] P. B. **Saganti**, and F. A. Cucinotta, Radiation Environment at Mars: Model Calculations and Assessment with Measurements (2001-2008), 6th Asia Oceania Geosciences Society (AOGS) AOGS-2009, Singapore, Singapore (Invited).
- [89] P. B. **Saganti**, A. Scott-Turner, F. A. Cucinotta, Galactic Particle Flux Variations: Assessment with Ulysses and ACE/CRIS Data, 6th Asia Oceania Geosciences Society (AOGS) AOGS-2009, Singapore, Singapore.
- [90] P. B. **Saganti** and F. A. Cucinotta, Radiation Model Calculations and GCR Particle Flux Variations: Assessment for Deep-Space Human Explorations, 60th International Astronautical Congress (IAC-2009), Daejeon, S. Korea.

¹⁹ Arielle Scott-Turner won the 1st place in the physical sciences category at undergraduate level amongst all of the Texas A&M Universities at the PATHWAYS-2009 Symposium (November 2009)

- [91] P. B. **Saganti**, R. Wilkins, M. Moyers, and S. Rightnar, Proton Radiation Threshold Assessment of Composite Nano-materials: Model Calculations and Measurements, Chemistry of Nano-Materials and Synthesis, A UGC Sponsored Workshop, November 2009, Andhra Christian College, Guntur, India (Invited)
- [92] N. O. Bectemba* and P. B. **Saganti**, Radiation Damage to DNA and Repair Mechanism, 7th Texas A&M Annual PATHWAYS Students Research Symposium, Texas A&M International University, Laredo, TX, 13-14 November, 2009
- [93] D. Burks* and P. B. **Saganti**, Nuclear Isotopic Abundances for Assessment of Radiation Biology Applications, 7th Texas A&M Annual PATHWAYS Students Research Symposium, Texas A&M International University, Laredo, TX, 13-14 November, 2009
- [94] T. Y. Christie* and P. B. **Saganti**, Epidemiological Assessment of Long-Term Radiation Effects – Hiroshima, Nagasaki, and Chernobyl, 7th Texas A&M Annual PATHWAYS Students Research Symposium, Texas A&M International University, Laredo, TX, 13-14 November, 2009
- [95] D. Davis* and P. B. **Saganti**, Long-Term Space Radiation: An Epidemiological Perspective, 7th Texas A&M Annual PATHWAYS Students Research Symposium, Texas A&M International University, Laredo, TX, 13-14 November, 2009
- [96] C. Nguyen* and P. B. **Saganti**, Variations in solar activity and biological consequences for space exploration, 7th Texas A&M Annual PATHWAYS Students Research Symposium, Texas A&M International University, Laredo, TX, 13-14 November, 2009
- [97] A. Scott-Turner*, A. Marati, and P. B. **Saganti**, Biological Consequences in Space: Proton and Helium Particle Flux Measurements from Ulysses 2005-2009, 7th Texas A&M Annual PATHWAYS Students Research Symposium, Texas A&M International University, Laredo, TX, 13-14 November, 2009
- [98] D. Price* and P. B. **Saganti**, Space Radiation and Biological Assessment with RBE, 7th Texas A&M Annual PATHWAYS Students Research Symposium, Texas A&M International University, Laredo, TX, 13-14 November, 2009
- [99] J. E. Williams* and P. B. **Saganti**, Space Radiation and Relative Biological Effectiveness (RBE) Studies, 7th Texas A&M Annual PATHWAYS Students Research Symposium, Texas A&M International University, Laredo, TX, 13-14 November, 2009
- [100] P. B. **Saganti**, A. Scott-Turner*, C. Nguyen*, B. M. Cudnik, G. M. Erickson, F. A. Cucinotta, Low Solar Activity and High GCR Particle Flux Variations: Assessment With Ulysses and ACE/CRIS Data 2007-2009 (Poster), Fall Meeting of the American Geophysical Union, 13-18 December 2009.

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- [101] **Saganti, P.B.**, Space Radiation Environment: Model Calculations and Ground Based Studies - NASA Sponsored Research at Prairie View AM University, in Alabama A&M University Research Forum. 2008.
- [102] **Saganti, P.B.**, F.A. Cucinotta, T.F. Cleghorn, C.J. Zeitlin, and J.W. Wilson, Radiation Environment at Mars: Measured Data and Model Calculations (2001-2007), in 5th Asia Oceania Geosciences Society (AOGS) Meeting. 2008, AOGS: Busan, Korea. (Invited)
- [103] **Saganti, P.B.**, E.L. Towns*, and F.A. Cucinotta, Variations of Galactic Particle Flux (2001-2007): Voyager, Ulysses, ACE/CRIS and MO/MARIE Data, in 5th Asia Oceania Geosciences Society (AOGS) Meeting. 2008, AOGS: Busan, Korea.
- [104] Hawkins*, E., J.I. Zhou, and **P. B. Saganti**, Radiation Assessment of Simulated Lunar Regolith Composite Materials, in 5th Asia Oceania Geosciences Society (AOGS) Meeting. 2008, AOGS: Busan, Korea.
- [105] Towns*, E.L., J.I. Zhou, and **P. B. Saganti**, Radiation Assessment of Martian Regolith Composite Materials, in 5th Asia Oceania Geosciences Society (AOGS) Meeting. 2008, AOGS: Busan, Korea.
- [106] **Saganti, P.B.** and F.A. Cucinotta, Expansion of Selective-Core Model Calculations for Low Mass Nuclei Fragmentation with Current GCR Data, in NASA Space Radiation Health Investigators Workshop. 2008, SRHP-USRA: Philadelphia, PA.

²⁰ N. Becktemba received special recognition at the PATHWAYS symposium and invited for graduate school scholarship program.

- [107] **Saganti, P.B.**, L.M. Porter, and F.A. Cucinotta, Visualization of Space Radiation Transport: Assessment with High Resolution Human Head Data, in Committee on Space Research, COSPAR-2008. 2008, COSPAR: Montréal, Canada. (Invited)
- [108] **Saganti, P.B.** and F.A. Cucinotta, Model Estimated GCR Particle Flux Variation - Assessment with CRIS Data, in Committee on Space Research, COSPAR-2008. 2008, COSPAR: Montréal, Canada.
- [109] **Saganti, P.B.** and F.A. Cucinotta, Model Calculations with Excited Nuclear Fragmentations and Implications of Current GCR Spectra in Committee on Space Research, COSPAR-2008. 2008, COSPAR: Montréal, Canada.
- [110] **Saganti, P.S.**, Current Context of the Physics Curricula: Teacher vs. Mentor, in Oxford Round Table. 2008, Journal of Oxford Round Table Oxford, UK. (Invited)
- [111] Alvaro*, J., J. Swift*, and **P. B. Saganti**, Nuclear Isotopic Abundances and Cross-Sectional Data for Space Radiation Transport Applications, in PVAMU Annual Biology Conference. 2008: Prairie View A&M University.
- [112] Becktemba*, N.O. and **P. B. Saganti**, Radiation Damage to DNA and Repair Mechanism, in PVAMU Annual Biology Conference. 2008: Prairie View A&M University.
- [113] Freeman*, M.N. and **P. B. Saganti**, Space Radiation and Assessment with RBE, in PVAMU Annual Biology Conference. 2008: Prairie View A&M University.
- [114] Royal*, C., T. Childress*, and **P. B. Saganti**, Radiation Effects on the Human Eye- Early Onset of Cataracts, in PVAMU Annual Biology Conference. 2008. Prairie View A&M University.
- [115] Scott-Turner*, A., A. Marati*, and **P. B. Saganti**, Proton and Helium Particle Flux from Ulysses Spacecraft: Assessment of Space Radiation, in PVAMU Annual Biology Conference. 2008.
- [116] Williams*, J.E. and **P. B. Saganti**, A Database of Radiation Studies: Biology and Physics, in PVAMU Annual Biology Conference. 2008. Prairie View A&M University
- [117] Alvaro*, J., J. Swift*, and **P. B. Saganti**, Nuclear Isotopic Abundances and Cross-Sectional Data for Space Radiation Transport Applications, in Texas A&M University System (TAMUS) PATHWAYS Symposium. 2008: Commerce, TX.
- [118] Becktemba*, N.O. and **P. B. Saganti**, Radiation Damage to DNA and Repair Mechanism, in Texas A&M University System (TAMUS) PATHWAYS Symposium. 2008: Commerce, TX.
- [119] Childress*, T. and **P. B. Saganti**, Radiation Effects on the Human Eye- Early Onset of Cataracts – An Assessment of Ophthalmic Biology, in Texas A&M University System (TAMUS) PATHWAYS Symposium. 2008: Commerce, TX.
- [120] Christy*, T. and **P. B. Saganti**, Epidemiological Assessment of Long Term Radiation Effects – Hiroshima, Nagasaki, and Chernobyl, in Texas A&M University System (TAMUS) PATHWAYS Symposium. 2008: Commerce, TX.
- [121] Freeman*, M.N. and **P. B. Saganti**, Space Radiation and Assessment with RBE, in Texas A&M University System (TAMUS) PATHWAYS Symposium. 2008: Commerce, TX.
- [122] Royal*, C. and **P. B. Saganti**, Radiation Effects on the Human Eye- Early Onset of Cataracts - A Measure of Optical Lens Opacity, in Texas A&M University System (TAMUS) PATHWAYS Symposium. 2008: Commerce, TX.
- [123] Scott-Turner*, A., A. Marati*, and **P. B. Saganti**, Proton and Helium Particle Flux from Ulysses Spacecraft: Assessment of Space Radiation, in Texas A&M University System (TAMUS) PATHWAYS Symposium. 2008: Commerce, TX.
- [124] Williams*, J.E. and **P. B. Saganti**, A Database of Radiation Studies: Biology and Physics, in Texas A&M University System (TAMUS) PATHWAYS Symposium. 2008: Commerce, TX.
- [125] Freeman*, M.N. and **P. B. Saganti**, Space Radiation and Assessment with RBE, in Annual Biomedical Research Conference for Minorities (ABRCMS) 2008, ABRCMS: Orlando, FL
- [126] Becktemba*, N.O. and **P. B. Saganti**, Radiation Damage to DNA and Repair Mechanism, in Annual Biomedical Research Conference for Minorities (ABRCMS) 2008, ABRCMS: Orlando, FL.
- [127] **Saganti, P.B.** and F.A. Cucinotta, Model Calculated GCR Particle Flux Variations and Assessment of Biological Consequences for Deep-space Human Explorations, in International Conference on Radiation Biology as part of 9th Biennial Meeting of Indian Society for Radiation Biology (ISRB). 2008, Indian J of Radiation Biology: University of Rajasthan, Jaipur, India, November 10-12, 2008 (Invited)
- [128] **Saganti, P.B.**, G.M. Erickson, and F.A. Cucinotta, 3-D Visualization of SPE and Correlations with Data from the Other Side of the Sun, in American Geophysical Sciences (AGS) Fall Meeting. 2008, AGS: San Francisco, CA.

- [129] **Saganti, P.B.**, E.L. Towns, and F.A. Cucinotta, Radiation environment and galactic particle flux variations: Voyager, Ulysses, ACE/CRIS and MO/MARIE data, in 16th IAA Humans in Space Symposium. 2007, PS7-2: LPHIS07-01: Beijing, China.
- [130] Hada, M., **P. B. Saganti**, B. Gersey, R. Wilkins, F.A. Cucinotta, and H. Wu, Chromosomal Aberrations in Human Epithelial Cells Exposed to Secondary Neutrons at LANSCE: An “m-BAND” Analysis, , in LUG-2007 (LANSCE Users Group) of the Los Alamos Neutron Science Center. 2007: Santa Fe, NM.
- [131] Hada, M., **P. B. Saganti**, B. Gersey, R. Wilkins, F.A. Cucinotta, and H. Wu, M-BAND analyses of chromosome aberration in human epithelial cells exposed to g-rays and secondary neutrons, in 13th International Congress of Radiation Research (ICRR), San Francisco, CA, July 2007 (14th ICRR will be held in Warsaw, Poland in 2011; 12th ICRR was held in Brisbane, Australia in 2003) 2007, ICRR: San Francisco, CA.
- [132] **Saganti, P.B.** and F.A. Cucinotta, Selective-Core Model Calculations of Oxygen Nuclei Fragmentation and the Implications with the Current GCR Data, in 18th Annual NASA Space Radiation Investigators' Workshop 2007: Sonoma, Rohnert Park, CA.
- [133] Hassler, D.M., F.A. Cucinotta, and the Radiation Team, The Radiation Assessment Detector (RAD) on the Mars Science Laboratory (MSL): Objectives and Updates; , in AOGS-2007. 2007, AOGS: Bangkok, Thailand. (Invited, Presenter - **P. B. Saganti**)
- [134] **Saganti, P.B.** and T.F.C. F. A. Cucinotta, C. J. Zeitlin, and J. W. Wilson, Radiation Environment at Mars: Models vs. Measurements, in AOGS-2007. 2007, AOGS: Bangkok, Thailand. (Invited)
- [135] Zhou, J.I., E.L. Towns*, and **P. B. Saganti**, Assessment of Composite Materials with Martian Regolith, in AOGS-2007. 2007: Bangkok, Thailand.
- [136] Towns*, E.L., **P. B. Saganti**, and F.A. Cucinotta, Galactic Particle Flux Variations: Voyager, Ulysses, ACE/CRIS and MO/MARIE Data, in AOGS-2007. 2007: Bangkok, Thailand.
- [137] **Saganti, P.B.**, E.L. Towns, F.A. Cucinotta, T.F. Cleghorn, and C.J. Zeitlin, Assessment of SPE Enhanced Radiation Doses at Earth and at Mars; AOGS-2007, Bangkok, in AOGS-2007. 2007: Bangkok, Thailand.
- [138] **Saganti, P.**, A. Kumar, B. Cudnik, V. Obot, P. Denkins, and R. Singleterry, An Interuniversity Radiation Science Program at PVAMU; , in American Physical Society (APS) Physics Teachers Association. 2007, APS: Greensboro, NC.
- [139] Cudnik, B.M., A.A. Kumar, **P. B. Saganti**, and N. Richardson, Project XLR8 and its Work in Physics and Physical Science, in American Physical Society (APS) Physics Teachers Association. 2007, APS: Greensboro, NC.
- [140] Wang, F., **P. B. Saganti**, B.M. Cudnik, and A.A. Kumar, Assessment of Physics Teaching and Training at PVAMU, in American Physical Society (APS) Physics Teachers Association. 2007, APS: Greensboro, NC.
- [141] Towns*, E.L. and **P. B. Saganti**, Radiation Environment Particle Flux: Assessment with MARIE Data, in AIAA Space-2007. 2007, AIAA: San Diego, CA.
- [142] Calvin*, T. and **P. B. Saganti**, Radiation Particle Flux Assessment: ACE/CRIS Data, in AIAA Space-2007. 2007, AIAA: San Diego, CA.
- [143] Swift*, J. and **P. B. Saganti**, Nuclear Cross-Sectional Data for Space Radiation Transport Applications, in Texas A&M University System (TAMUS) PATHWAYS Symposium. 2007: Tarleton State University, TX.
- [144] Becktemba*, N.O. and **P. B. Saganti**, Radiation Damage to DNA and Repair Mechanism, in Texas A&M University System (TAMUS) PATHWAYS Symposium. 2007: Tarleton State University, TX.
- [145] Jelks*, B. and **P. B. Saganti**, Long-Term Space Radiation Effects: An Epidemiological Perspective, in Texas A&M University System (TAMUS) PATHWAYS Symposium. 2007: Tarleton State University, TX.
- [146] Freeman*, M.N. and **P. B. Saganti**, Space Radiation and Assessment with RBE, in Texas A&M University System (TAMUS) PATHWAYS Symposium. 2007: Tarleton State University, TX.

²¹ B. Jelks was selected for graduate studies with scholarship at Texas A&M University (Fall-2008)

- [147] Williams*, J.E. and **P. B. Saganti**, A Database of Radiation Studies: Biology and Physics, in Texas A&M University System (TAMUS) PATHWAYS Symposium. 2007: Tarleton State University, TX.
- [148] Sigers*, Z. J. and **P. B. Saganti**, Long Duration Space Travel and Psychological Issues for Consideration, in Texas A&M University System (TAMUS) PATHWAYS Symposium. 2007: Tarleton State University, TX.
- [149] **Saganti, P.B.**, E.L. Towns, and F.A. Cucinotta, Radiation Environment at Mars: Measured Data and Model Calculations 2002 - 2007, in 59th International Astronautical Congress (IAC) 2007: Hyderabad, India.
- [150] **Saganti, P.**, E. Towns, G. Erickson, and F. Cucinotta, 3D Visualization of Solar Disk: Martian Radiation Assessment of Solar Particle Events, in AGS. 2007, AGS: San Francisco, CA.

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- [151] **Book: ISBN-978-1-55899-886-5**; Materials in Extreme Environment, Editors: Daryush Ila, Christian Mailhiot, and **Premkumar Saganti**, MRS Publication, 2006
- [152] **P. B. Saganti**, F. A. Cucinotta, J. W. Wilson, T. F. Cleghorn, C. J. Zeitlin; Model Calculations of the Particle Spectrum of the Galactic Cosmic Ray (GCR) Environment: Assessment with ACE/CRIS and MARIE Measurements, Rad Meas **41** (9-10) 1152-1157, 2006
- [153] M.F. Moyers, **P. B. Saganti** and G.A. Nelson; EVA space suit proton and electron threshold energy measurements by XCT and range shifting, Rad Meas **41** (9-10) 1216-1226, 2006
- [154] Kerry Lee, Lawrence Pinsky, Vic Andersen, Cary Zeitlin, Tim Cleghorn, Frank Cucinotta, **Premkumar Saganti**, William Atwell and Ron Turner; Helium cosmic ray flux measurements at Mars, Rad Meas **41** (9-10) 1123-1125, 2006
- [155] F. A. Cucinotta, J. W. Wilson, **P. B. Saganti**, X. Hu1, M. Y. Kim, T. F. Cleghorn, C. J. Zeitlin, R. K. Tripathi; Isotopic Dependence of GCR Fluence behind Shielding, Rad Meas **41** (9-10) 1235-1249, 2006
- [156] Ebony Towns* and Premkumar **Saganti**; Radiation Environment from MARIE, ULYSSES, and VOYAGER data: Assessment of Shielding Material. 4th Annual Patways Symposium, TAMU, 2006
- [157] Bryon Jennings*, Premkumar **Saganti**, and Gloria Regisford; Space Radiation Environment and Relative Biological Effectiveness, 4th Annual Patways Symposium, TAMU, 2006
- [158] Porsha Melcher, Premkumar **Saganti**, and Richard Wilkins; Radiation Biophysical Studies for Space Applications with Neutrons, 4th Annual Patways Symposium, TAMU, 2006
- [159] P. Denkins, **P. Saganti**, V. Obot, R. Singleterry; The NASA Radiation Interuniversity Science and Engineering (RaISE) Project: A Model for Intercolaboration and Distance Learning in Radiation Physics and Nucelar Engineering; 57th International Astronautical Congress, Valancia, Spain, October 2006
- [160] **P. Saganti**, E. Towns*, F. Cucinotta, C. Zeitlin; Radiation Enviromment Modeling for Human Exploration: Calculations and Assessment with Measured Data for 2004-2006; 57th International Astronautical Congress, Valancia, Spain, October 2006
- [161] **Premkumar B. Saganti**, Francis A. Cucinotta, and Cary Zeitlin; Mars Radiation Environment Modeling Consequent to Results of Orbiter Measurements, 2nd AOGS (Asia Oceania Geosciences Society) 10-14 July 2006, Singapore (Invited Presentation)
- [162] C. Zeitlin, R. Turner, T. Cleghorn, F. Cucinotta, and **P. Saganti**; Radiation Measurements in Mars Orbit with Odyssey Instrument Suite, 2nd AOGS (Asia Oceania Geosciences Society) 10-14 July 2006, Singapore (Invited)
- [163] E. Towns*; **P. Saganti**, F. Cucinotta, T. Cleghorn, C. Zeitlin; Model estimated GCR Particle Flux Variations-Assessment with CRIS and MARIE Data; COSPAR2006-A-03518; D2.4-0007-06, Beijing, China
- [164] **P. Saganti**, E. Towns*, F. Cucinotta, T. Cleghorn, C. Zeitlin; 3D-Visualization of Solar Disk: Radiation Assessment of Solar Particle Events at Mars and Earth; COSPAR2006-A-03520; D1.1-0057-06, Beijing, China
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²² B. Jelks received special recognition at the PATHWAYS symposium for his poster and invited for graduate school.

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- [167] **P. Saganti**, H. Wu, M. Hada, B. Gersey, R. Wilkins, M. Bernard*, S. Aghara; Assessment of Neutron Particle Flux Spectral Data for Radiation Biology Applications; COSPAR-Mutagenic Consequences of the Space Environment, July 23-25, 2006, Xian, China (Invited)
- [168] M. Hada, **P. Saganti**, W. Hu, B. Gersey, R. Wilkins; Inter and Intra Chromosomal Aberrations in Human Cells Exposed invitro to High and Low LET Radiations, COSPAR-Mutagenic Consequences of the Space Environment, July 23-25, 2006, Xian, China (Invited)
- [169] **P. B. Saganti**, F.A. Cucinotta, and A. Rusek, Characterization of Heavy Ion Induced Secondary Particle Spectra and Assessment of Radiation Environment: Experiments with Martian Regolith at NSRL/BNL, 4th International Radiation Health Worker Investigators' Workshop, Moscow, Russia
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2005²³²⁴²⁵

- [171] Ebony Towns* and Premkumar **Saganti**; Radiation Dose Estimations in the Deep Space from MARIE and ULYSSES Data; ABRCMS, Atlanta, 2005
- [172] Tausha Calvin* and Premkumar **Saganti**; Radiation Dose Estimations in the Deep Space from the ACE/CRIS Data; ABRCMS, Atlanta, 2005
- [173] Kevin Calvin* and Premkumar **Saganti**; Radiation Dose Visualization in the Human Body: Head, ABRCMS, Atlanta, 2005
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- [177] K.T. Lee, V. Andersen, L.S. Pinsky, W. Atwell, T. Cleghorn, F. Cucinotta, R. Turner, **P. Saganti**, and C. Zeitlin; MARIE Solar Quiet Time Flux Measurements of H and He Ions below 300 MeV/n; 29th International Cosmic Ray Conference Pune (2005) **3**, 81-84
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- [180] T. Calvin*, **P. Saganti**, R. Wilkins, K. Kirby, Radiation Particle Assessment with ACE/CRIS Data, AIAA-Space-2005 Conference, Long Beach, CA, August 30 – September 3, 2005.
- [181] **P. B. Saganti**, F. Cucinotta, T. Calvin, E. Towns, T. Cleghorn, C. Zeitlin, Radiation Environment for Deep Space Human Exploration with CRIS and MARIE Data, 15th Annual Humans in Space conference held in Graz, Austria, May 22-26, 2005.
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- [183] K. R. Calvin* and **P. B. Saganti**, Visualization of Human Tissue Model for Radiation Transport Applications, a poster presented at the Annual SCAR (Society for Computer Assisted Radiology) held in Bethesda, MD, January 2005.

²³ E. Towns received full support (mechanical engineering) through TAMUS Bridges to graduate studies program.

²⁴ T. Calvin received 1st place for her research as part of the Research Symposium at PVAMU

²⁵ E. Towns received 2nd place for her research as part of the Research Symposium at PVAMU

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- [186] F. A. Cucinotta, W. Schimmerling, J. W. Wilson, L. E. Peterson, **P. B. Saganti**, J.F. Dicello, Uncertainties in estimates of the risks of late effects from space radiation, *Advances in Space Research*, **34** (1) 1383-1389, 2004 (invited paper)
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- [190] T. Calvin*, **P. B. Saganti**, and R. Wilkins, Variation of Radiation Environment During Current Solar Cycle: ACE / CRIS Data; student poster presentation at the 2nd Annual TAMUS Pathways Student Research Symposium held in October 2004 at the Texas A&M University – Corpus Christi (**won 3rd place among nine Texas A&M universities in Comp Science**)
- [191] K. Calvin*, **P. B. Saganti**, and R. Wilkins, Visualization of Human Tissue Model for Space Radiation Dose Assessment, student poster presentation at the 2nd Annual TAMUS Pathways Student Research Symposium to be held in October 2004 at the Texas A&M University – Corpus Christi
- [192] E. L. Towns*, **P. B. Saganti**, and R. Wilkins, Radiation Environment at Mars: MARIE Data Analyses, A NASA Project; student poster presentation at the 2nd Annual TAMUS Pathways Student Research Symposium to be held in October 2004 at the Texas A&M University – Corpus Christi
- [193] **P. B. Saganti**, F. A. Cucinotta, C. J. Zeitlin, and T. F. Cleghorn, Martian Radiation Environment - Model Calculations and Recent Measurements with MARIE - An invited paper for the COSPAR meeting held in Paris, France, July 2004.
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- [197] C. Zeitlin, T. Cleghorn, F. Cucinotta, **P. Saganti**, V. Anderson, K. Lee, L. Pinsky, R. Turner, W. Atwell, Radiation Monitoring at Mars – Status and Future Plans, contributed paper for the COSPAR meeting held in Paris, France, July 2004.
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²⁶ T. Calvin received 3rd place for her research poster at the PATHWAYS Symposium among all of the TAMU system campuses in computer sciences category.

- [200] R. Wilkins, E. Bacon*, J. Sims*, **P. B. Saganti**, B. G. Gersey, Development of Cryogenic Liquid Target for Radiation Shielding Studies, 14th Annual Radiation Workers Investigators Conference, New York, May 2004
- [201] **P. B. Saganti**, F. A. Cucinotta, C. J. Zeitlin, and T. F. Cleghorn, Model Calculated GCR Modulations at Mars: Comparisons with MARIE - ICRS-10 / RPS-2004 conference proceedings special issue of *Radiation Protection Dosimetry* journal, Oxford University Press, 2005.
- [202] **P. B. Saganti**, F. A. Cucinotta, C. J. Zeitlin, and T. F. Cleghorn, Radiation Environment at Mars: Particle Flux Shielding in Martian Atmosphere - ICRS-10 / RPS-2004 conference proceedings special issue of *Radiation Protection Dosimetry* journal, Oxford University Press, 2005.
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- [218] T. F. Cleghorn, **P. B. Saganti**, C. J. Zeitlin, F. A. Cucinotta, Solar Particle Events Observed by the Odyssey MARIE Instrument at Mars: Dose and Model Calculations, *Lunar and Planetary Science XXXIV*-March 2003 (Invited Presentation)

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- [225] **Book Chapter:** **P. B. Saganti** and K. P. Lulla, Windows of Opportunity - A Photo Illustration of the Mir Windows; Published as a textbook chapter, Wiley, **ISBN-0-471-39005-4**: Dynamic Earth Environments Ed. KP Lulla and LV Dessinov. Contributed Chapter-8 as a PI of the work of the NASA Shuttle-Mir Phase-I Program, 2000.
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- [227] Parallel Image Texture Analysis, Liwen Shih and SB **Premkumar**, Proceedings of the NASA-URC TC-98, February 21-26, 1998.
- [228] **Book:** **P. B. Saganti**, Mir Window Survey; *A NASA JSC Technical Document*, **JSC-28578**, 1999.
- [229] **Book:** **P. B. Saganti**, Viewing Study of the International Space Station (ISS): *A NASA JSC Technical Document*, **JSC-27698**, 1996.

Other Publications of Interest:

- [230] Prostate ultrasound image analysis: localization of cancer lesions to assist biopsy, A Glen Houston, SB **Premkumar**, David E. Pitts and RJ Babaian, IEEE Computer Based Medical Systems, Proceedings of the IEEE-CBMS-95, June (1995).
- [231] Medical image processing via parallel programming, L Shih, Jai-Wen Yang, SB **Premkumar**, Proceedings of SETS-95, May (1995).
- [232] Laser range precision for treatment applications of a simple robot, T. L. Harman, S.B. **Premkumar** and L. A. Nguyen, Optical Society of America, Proceedings of the OSA Annual Meeting (1994)
- [233] Robot vision: Laser range for depth perception, S.B. **Premkumar**, T.L. Harman and L. A. Nguyen, Proceedings of the American Physical Society, ILS-X: 10th Interdisciplinary Laser Science (1994)

- [234] Microscopic description of back-bending phenomenon in dysprosium nuclei, S. B. **Premkumar**, University of Houston-Clear Lake, Houston, Texas and R. D. Ratnaraju, Dept. of Physics, Andhra University, Waltair, India, Fall Meeting of the Texas Section of the American Physical Society: Texas A & M University, College Station, TX, 22-23 October, 1993. Bulletin of American Physical Society, October 1993
- [235] Microscopic description of the back-bending phenomenon in ytterbium nuclei: R. D. Ratnaraju, Dept. of Physics, Andhra University, Waltair, India and S. B. **Premkumar**, University of Houston-Clear Lake, Houston, Texas; Dept. of Atomic Energy (DAE) Symposium on Nuclear Physics held at the University of Calicut, Kerala, India, during 27-30 December, 1993. DAE Symposium Proceedings Vol. 36B, 1993.
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- [237] A microscopic description of back-bending effect in rare-earth nuclei, S. B. **Premkumar**, Ph. D. Thesis (Physics): Andhra University, Waltair, India, 1993
- [238] Statistical approach for detecting cancer lesions from prostate ultrasound images, A. Glen Houston, S. B. **Premkumar**, Richard J. Babaian, David E. Pitts, SPIE Vol. 1905: Biomedical Image Processing and Three-Dimensional Microscopy, 672-676 (1993)
- [239] Texture analysis of digitized prostate pathologic cross-sections, David E. Pitts, S. B. **Premkumar**, A. Glen Houston, R. J. Babaian, Patricia Troncoso, SPIE Vol. 1898: Medical Imaging VII: Image Processing, 465-470 (1993)
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- [242] Real-time digital disk applications for micro region analysis and ultra-fast events, Clyde A. Sapp, David E. Pitts, S. B. **Premkumar**, A. Glen Houston, SPIE Vol. 1660 Biomedical Image Processing and Three-Dimensional Microscopy, 813-818, (1992)
- [243] Statistical differentiation between benign and malignant prostate lesions from ultrasound images, S. B. **Premkumar**, A. Glen Houston, David E. Pitts, R. J. Babaian, SPIE Vol. 1652 Medical Imaging VI: Image Processing, 652-659, (1992)
- [244] Statistical description of prostate cancer from ultrasound imagery, S. B. **Premkumar**, A. Glen Houston, David E. Pitts, R. J. Babaian, R. B. Evans, Journal of Ultrasound in Medicine Vol. 11, No. 3 (suppl.), S1, (1992)
- [245] Statistical texture analysis of digitized prostatic ultrasound images to predict pathology, S. B. **Premkumar**, Richard J. Babaian, A. Glen Houston, David E. Pitts, Patricia Troncoso. Proceedings of the 85th American Urological Association - Annual conference: Prostate Cancer: Diagnosis and Imaging, Washington, DC, May 1992., Journal of Urology 147(4:2) 229A, (1992)
- [246] On detection of carcinogenic cells from prostate ultrasound images, S. B. **Premkumar**, M. S. Thesis (Electro Optics): University of Houston-Clear Lake (1991, Dr. Houston).
- [247] B(E2) Transition rates of even-even nuclei, G. V. Saradhi, M. S. John, S. B. **Premkumar**, I. S. Kishore and A. V. S. Narayana, Proc. of Symp. on Nuclear Physics, DAE, India, Vol. 28B, 1985

* Student Authors

Graduate Research Theses (Advisor / Committee Member, 1993-Present): Dr. Saganti

1. 2014: Doctoral Dissertation (Electrical Engineering), S. Kyatsandra, Total Ionizing Dose X-Ray Radiation Effects on Un-functionalized and Functionalized MWCNT/PMMA Thin Film Composites (Dr Wilkins, Chair)
2. 2013: M. S. Thesis (Chemical Engineering) – L. Harrison, Mars Soil Composition and Radiation Assessment
3. 2012: M. S. Thesis (Mechanical Engineering) – S. Williams, Space Robotics and Radiation Effects from Material Composition.
4. 2008: Radiation Environment Modeling with GCR Flux from Spacecraft Data, **Tausha Calvin**, Department of Computer Science, Prairie View A&M University (2008)
5. 2008: Visualization of Radiation Transport in the Human Body, **Kevin Calvin**, Department of Computer Science, Prairie View A&M University (2008)
6. 2007: Assessment of Radiation Environment at Mars – Contributions of Martian Regolith, **Ebony L. Towns**, Dept of Mechanical Engineering, Prairie View A&M University (2007)
7. 2002: A Framework for Performing Textural Analysis and Classification of Prostate Ultrasound Images, **Mark A. Sheppard**, M. S. Thesis (Computer Science): University of Houston-Clear Lake (2002, Dr. Shih).
8. 1996: Parallel Research Methods for Texture Analysis, **Peries, C.**, M. S. Thesis (Computer Science): University of Houston-Clear Lake (1996, Dr. Shih).
9. 1996: Ultrasound Image Calibration for Prostate Cancer Detection, **Jayawardena, I.**, Internship Project (Mathematics): University of Houston-Clear Lake (1996, Dr. Houston).
10. 1995: Volume Visualization of the Prostate Gland Using 2-D Transrectal Ultrasound Images, **Abeyesekera, R.**, M. S. Thesis (Computer Science): University of Houston-Clear Lake (1995, Dr. Houston).
11. 1994: Investigation of Artificial Intelligence Techniques for Detection of Cancer Lesions in Medical Images, **Enombo, J. B.**, M. S. Thesis (Computer Science): University of Houston-Clear Lake (1994, Dr. Houston).
12. 1993: Digital Image Processing of Diagnostic Medical images, **Selvan, AAD**, M. S. Thesis (Computer Science): University of Houston-Clear Lake (1993, Dr. Houston).

Past Students Mentored through Dr. Saganti's Research Lab (2003 – Present): NASA Grant Support

1. B. Jelks (B.S. Biology and B.S. Chemistry) Pursuing graduate studies at Texas A&M University
2. D. Burks (B.S. Computer Science) Pursuing graduate studies, Prairie View A&M University
3. D. Burks (M.S. Computer Science) Graduated and working in Industry (HP)
4. D. Davis (B.S. Biology) Pursuing graduate studies, Prairie View A&M University
5. E. Towns (M.S. Mechanical Engineering) Employed with Lockheed Martin Space Operations, NASA-JSC
6. G. Opoku (B.S. Biology and B.S. Chemistry) Pursuing Optometry Program, U of Houston
7. J. Alvaro (B.S. Physics and B.S. Chemistry) Commissioned Officer in Naval Nuclear Program, US Navy
8. J. Swift (B.S. Physics and B.S. Chemistry) Pursuing MD/PhD studies, Duke University
9. K. Calvin (M.S. Computer Information Systems) Employed with Lone Star College System
10. M. Freeman (B.S. Biology) Pursuing medical assistance training, UT MD Anderson Cancer Center
11. N. Becktemba (B. S. Biology and B. S. Chemistry), Pursuing medical studies, University of Miami
12. T. Calvin (M.S. Computer Information Systems) Employed with Boeing Space Operations, NASA-JSC
13. T. Childress (B.S. Biology) Pursuing graduate studies, Howard University, Washington, DC.
14. T. Christy (B. S. Biology and B.S. Chemistry) Pursuing graduate studies, University of Houston
15. A. Scott-Turner (B. S. Biology and B.S. Chemistry) Pursuing Medical School, Ohio
16. D. Price (B. S. Biology and B.S. Chemistry) Pursuing Dental School, Texas
17. A. Way (B.S. Physics), Pursuing medical school, the Carrabin and New York
18. G. Horn (B.S. Physics), Pursuing career in the US NAVY as a Commissioned Officer
19. G. Vargas (B.S. Physics), Pursuing graduate studies at Cornell University, NY
20. J. Williams (B.S. Physics and B.S. Mechanical Engineering), Pursuing teaching career, Spring ISD
21. T. Rasco (B.S. Physics), Pursuing Medical Physics career
22. S. Dunn (B.S. Physics) Pursuing career in the US NAVY as a Commissioned Officer
23. M. Griffin (B.S. Physics and B.S. Biology), Pursuing Medical career
24. G. Paredes (B.S. Physics) Pursuing career in the US NAVY as a Commissioned Officer
25. E. LeDarion (B.S. Physics), Pursuing teaching career, Spring ISD

Working Experiences at National Laboratories (2003 – Present): Dr. Saganti

- **Brookhaven National Laboratory (BNL)**
 - NASA Space Radiation Laboratory (NSRL) 2001 - Present
 - Assisted in NASA-JSC radiation biology experiments for Dr. Cucinotta (2001-2003)
 - As a PI worked with Fe, Si and C beams on Martian and Lunar Regolith material for secondary particle assessment (2004, 2005, and 2006)
 - As a PI participated in more than 10 different experimental beam times and supported graduate research and thesis work including NASA-SBIR Phase-I & II grants

- **Los Alamos National Laboratory (LANL)**
 - Los Alamos Neutron Science Center (LANSCE) 2003 - Present
 - As a Co-PI participated on several NASA-CARR related experiments with Aerospace Materials and NASA SBIR Phase-I grants (2005)
 - As a Co-PI conducted experiments for secondary particle assessment from “blue room” experiments with high energy and high current protons on Martian Regolith (2006)
 - As a Co-PI initiated experiments with biology as an extension of radiation biology studies through PVAMU in collaboration with NASA-CARR (2007)
 - As a PI introduced the development of new detectors for secondary particle energy and trajectory assessment in collaboration with NASA-JSC (Dr. Holland / Dr Wu of NASA-JSC) (2008)
 - As a PI introduced the development of new detectors for secondary particle energy and trajectory assessment for biological tissue application in collaboration with NASA-JSC (Dr. Holland / Dr. Cucinotta / Dr. Huff of NASA-JSC) (2009)
 - As a PI introduced the development of new detectors for secondary particle energy and trajectory assessment of Martian and Lunar regolith in collaboration with NASA-JSC (Dr. Holland / Dr. Cucinotta of NASA-JSC) (2010)

- **NASA Proton Beam Facility (LLU)**
 - Loma Linda University Medical Center – Proton Therapy Center 2001– Present
 - As a collaborator assisted radiation experiments in support of Dr. Cucinotta (2001-2003)
 - As a PI conducted experiments with data collection and modeling (2005 and 2007) with Martian and Lunar Regolith samples for graduate thesis work
 - As a PI conducted experiments with data collection and modeling (2006) in support of NASA-SBIR Phase-I grants
 - As a PI conducted experiments with data collection and modeling (2007) in support of NASA research investigations with Martian and Lunar regolith polymer materials