David Garrison, Ph.D.

Education

Ph.D. Physics, Pennsylvania State University
Department of Physics, 1997-2002

Dissertation: "Testing Binary Black Hole Codes in Strong Field Regimes"

Dissertation Committee: Jorge Pullin, Pablo Laguna, Abhay Ashtekar, Steinn Sigurdsson.

B.S. Physics, Massachusetts Institute of Technology

Undergraduate studies, 1993-1997

Major in Physics, Minor in Earth Atmospheric & Planetary Science, and Concentration in Political Science.

Undergraduate Thesis: Gravitational Lensing of Extended Radio Sources

Leadership Training

- Cottrell Scholars Collaborative 2025 Academic Leadership Training Workshop at Johns Hopkins University

Certifications

- Computing for Data Analysis – Coursera
- Leading Strategic Innovation in Organizations – Coursera
- Foundations of Business Strategy – Coursera
- Grow to Greatness: Smart Growth for Private Business, Part I – Coursera
- Grow to Greatness: Smart Growth for Private Business, Part II - Coursera

Audited Courses

- Introduction to Quantum Information – Coursera
- Machine Learning in Python – Coursera
- Neural Networks and Deep Learning - Coursera

Administrative/Teaching Experience

Associate Dean for the College of Science and Engineering & Professor of Physics,
University of Houston-Clear Lake - 2019-Present

- Serving as Associate Dean for the College of Science and Engineering (Interim from 2019-2022).
- Provides Organizational Leadership of the College of Science and Engineering, manages day-to-day operations of 3 locations, 6 departments, 18 academic

programs, 200 full and part-time employees, over 2,000 student majors and a budget of over $10M.
- Responsible for Change Management and Change Transition within the College for Performance Optimization.
- Redesigned Graduate Admissions process.
- Deeply involved in Strategic Planning and Assessment processes.
- Involves Stakeholders in decision making through Shared Governance and enhanced Teamwork.
- Resolves disputes between faculty and students.
- Provides input into budgetary decisions.
- Improves Policy and Procedure documents and information distribution systems.
- Improves College By-laws and Procedures in concert with College Shared Governance.
- Produces college annual reports.
- Evaluates employees.
- Launched effort to overhaul website.
- Spearheaded effort to develop faculty mentoring.
- Lead effort to develop peer evaluation system.
- Served as Acting Dean.
- Helped roughly 120 faculty pivot to online teaching in March 2020.
- Involved in Reaffirmation Process with our Regional Accreditor in 2022.
- Manages all college changes to the catalog.
- Manages the building of course schedules
- Manages Assessment Metrics for all Academic Programs and Centers for Performance Improvement.

Director of Graduate Programs for the College of Science and Engineering & Professor of Physics, University of Houston-Clear Lake - 2014-2019

- Supervises the recruitment and admissions of students into all CSE Graduate Programs.
- Ensures that admissions standards are consistent.
- Reorganized a paper-based admissions process to a fully digital system.
- Supervises 3 staff members for processing admissions applications.
- My efforts result in stable enrollment and smother processes.

Faculty Senate President, University of Houston-Clear Lake **-** 2012-2016

- Co-Founded UHCL's Center for Faculty Development
- Partnered with upper administration on university policy (such as the introduction of academic minors to UHCL's curriculum).
- Helped implement the addition of Freshman and Sophomore classes into UHCL (before 2014, UHCL only had Juniors, Seniors and master's degree students).
- Elected twice as Faculty Senate President by the UHCL faculty.

Physics Program Chair & Associate Professor of Physics, University of Houston-Clear Lake – 2003-2015

- Created the UHCL Physics Program (BS, MS, Collaborative PhD, PSM Physics sub-plan in Technical Management, BS Engineering Physics sub-plan and BS Computational Physics sub-plan).

- Lead Physics Program to become the 7th highest producing master's Level Physics Program in US.
- Established the UHCL Physics Guest Lecture Series and Distinguished Lecture Series.
- Created Physics Advisory Board.
- Helped develop the UHCL Computational Physics Laboratory, Physics Teaching Laboratory and Plasma Physics Laboratory.
- Made it possible for over 60 Physics bachelor's degrees and 80 Physics master's degrees to be earned by UHCL students.
- PI on a multi-university FAA Center of Excellence in Commercial Space Transportation grant involving several corporate partners. The proposal involved 125 participants and was completed in less than one month.

***Professor**,* University of Houston-Clear Lake –2002-Present

- Originally hired as a non-tenure track Visiting Assistant Professor and Chair of Physical Sciences (2002-2003) but progressed from Assistant Professor (2003-2008), Associate Professor (2008-2018) and Full Professor (2018 to Present)
- Appeared on an episode of "The Universe" on the History Channel
- Interviewed on Television, Radio, and the World Wide Web
- Interviewed as part of the HistoryMakers – ScienceMakers series now housed at the Library of Congress.
- Awarded just under $1M in grants and fellowships throughout career.
- Taught advanced undergraduate and graduate level physics courses (Including Classical Mechanics, Electrodynamics, Special Relativity, General Relativity, Computational Physics, Special Topics, Research Project & Seminar and Mathematical Methods in Physics I & II).
- Developed several collaborations with NASA Johnson Space Center in areas such as Advanced Space Propulsion.
- Conducted advanced research in Numerical Relativity, Cosmology, and Relativistic Plasma Physics.
- Published over 25 articles, many with student co-authors.
- Gave over 40 invited and contributed presentations at domestic and international venues.
- Lead committee to Organize the Fall 2021 Hybrid Meeting of the Texas Section of the American Physical Society Meeting at UHCL. Over 200 people attended in person and online.
- Built High Performance Computing cluster for the UHCL Physics Program.
- Created online and flipped classes using active learning techniques.

Instructor, Kaplan in State College, PA --1999-2001

- Prepared Students for the Physics section of the MCAT Medical School Admissions exam using a series of three-hour lectures.
- Taught test taking techniques and worked to improve student confidence.

Research Experience

***Professor**,* University of Houston-Clear Lake –2002-Present

Various research projects both independently and in collaboration with NASA JSC. Research

topics include numerical relativity, cosmology, computational physics, nonlinear dynamics and relativistic plasma physics. My focus is on studying the early universe using cosmological numerical simulations.

Research Assistant, Pennsylvania State University --1998-2002

Worked with Prof. Jorge Pullin and Prof. Pablo Laguna on several projects to develop numerical codes to solve the problem of the 3D spiraling coalescence of two black holes. This project was done in Penn State's Center for Gravitational Physics and Geometry to realize the top candidate for a gravitational wave source that was later observed by LIGO. Most of my work was based on developing a method of testing the stability of the numerical codes using periodic cosmological systems, which lack singularities. Using these modes, I induced constraint violating and gauge modes in unstable codes and identified early clues to their instability. Additional projects included a study of gravitational gradient noise in gravity wave detectors, applying causal differencing to our evolution methods and the development of black hole spectroscopy, a method of using data from gravitational wave detectors to determine the mass and angular momentum of a black hole.

B.S. Physics Thesis Project, Massachusetts Institute of Technology -- 1996-1997

Worked with Prof. Jacqueline Hewitt simulating the gravitational lensing of observed images to determine the conditions under which a gravitational lens is detectable. I used Monte Carlo techniques and an unlensed radio image of Cygnus-A to generate statistical data on the luminosity ratios of lensed radio lobes. Next, I compared the results to the natural range of luminosity ratios of unlensed radio lobes caused by varying the orientation of the radio lobes with respect to the observer. I then attempted to show whether gravitational lenses could be detected by simply looking at the luminosity ratios of the radio lobes. This knowledge could lead to new techniques in the detection of dark matter.

Research Assistant, Washington University --1995

Worked with Prof. Ogilvie and Prof. Will of Washington University on several projects in theoretical Physics such as variable calculations and computer simulations, which provided me with an introduction to General Relativity and gauge theory. Many of the simulations used Unix based visualization packages although some of the work was based on using symbolic manipulators to plot analytic functions.

Research Assistant**,** Massachusetts Institute of Technology --1995

Worked with Prof. David Pritchard on a project to measure the mass of ions more precisely than ever before. The data gained from this experiment will be used to develop a new atomic standard for the kilogram and is accurate enough to find the "rest mass" of both gamma waves and atomic bonds. Much of my work included building electronics and analyzing data.

Research Assistant, Massachusetts Institute of Technology -- 1994

Worked in the Undergraduate Research Opportunity Program (UROP) with Prof. John King to develop an ultrasonic whistle capable of producing high frequency sounds (25 kHz) at 145 dB of intensity. Based on a Hartman Whistle, I machined several models myself using a metal lathe and brass stock and tested them using high frequency microphones.

Publications

1. Initial Conditions for GRMHD Simulations of Electroweak and QCD Phase Transitions in the Early Universe by Joshua Barerra, Aleisha Warren and David Garrison, *Class. Quantum Grav.* **40** 215012, https://doi.org/10.1088/1361-6382/acfd00 (2023).

2. The Universe's Earliest Moments by David Garrison, Sky and Telescope Magazine, September 2021, 22-27 (2021).
3. Numerical Analysis of the Magnetogenesis from early universe phase transitions by David Garrison, Astronomische Nachrichten, ASNA342, Issue 1-2, 75-80, http://dx.doi.org/10.1002/asna.202113884 (2021).
4. Numerical Analysis of Magnetogenesis' Primordial Mechanism by David Garrison, Astronomische Nachrichten, ASNA302, 16404290, 10.1002/asna.201913627, http://dx.doi.org/10.1002/asna.201913627 (2019).
5. Relativistic Magnetohydrodynamic Turbulence in the Early Universe by David Garrison, Proceedings of the 10th Chaotic Modeling and Simulation International Conference, International Journal of Nonlinear Science, 102017, 493-498 (2017).
6. Extracting Gravitational Waves Induced by Plasma Turbulence in the Early Universe through an Averaging Process by David Garrison and Christopher Rameriz, arXiv:1503.04764, Classical and Quantum Gravity 34, 145008 (2017).
7. Using Gravitational Waves to put limits on Primordial Magnetic Fields by David Garrison, arXiv: 1608.01005, *GJSFR-A Volume 17, Issue 1 (2017).*
8. Invariants in Relativistic MHD Turbulence by David Garrison and Phu Nguyen, *Journal of Modern Physics*, **7**, 281-289. doi: 10.4236/jmp.2016.73028, arXiv:1501.06068
9. Gauge Field Turbulence as a Cause of Inflation in Chern-Simons Modified Gravity by David Garrison, to appear in the Proceedings of the 7th Chaotic Modeling and Simulation International Conference (2014).
10. Numerical Relativity as a tool for studying the Early Universe by David Garrison, Journal of Gravity, vol. 2014, Article ID 407197, 11 pages, 2014. doi:10.1155/2014/407197, gr-qc/1207.7097
11. A Numerical Simulation of Chern-Simons Inflation by David Garrison and Christopher Underwood, Advances in Astronomy, Volume 2013, 207218, hep-th/1208.2660.
12. What Every Successful Physics Graduate Student Should Know by David Garrison, Smashwords, 2013
13. TESTING BINARY BLACK HOLE CODES IN STRONG FIELD REGIMES: UNDERSTANDING NUMERICAL INSTABILITIES THROUGH COMPUTATIONAL EXPERIMENTS by David Garrison, LAP Lambert Academic Publishing, 2011
14. Numerical Cosmology: Building a dynamical universe by David Garrison, AIP Conf. Proc., 2010 -- Volume 1280, pp. 65-69.
15. Gravitational Waves and the Evolution of the Universe by David Garrison, AIP Conf. Proc., 2009 -- Volume 1140, pp. 42-45.
16. Did Gravitational Waves Affect the Evolution of the Universe? by David Garrison, gr-qc/808.1764.
17. Numerical analysis of simplified Relic-Birefringent gravitational waves by David Garrison and Rafael de la Torre, Classical and Quantum Gravity 24 (2007) 5889
18. Serving Nontraditional Graduate Students by David Garrison, Physics Today, January 2007
19. Development of a Comprehensive Physics Program at a non-traditional upper-level undergraduate and graduate small university by David Garrison, APS Forum On Education Spring 2006 Newsletter
20. Testing Binary Black Hole codes with Cosmological Spacetimes by David Garrison, Proceedings of the Tenth Marcel Grossman Meeting on General Relativity, 2006

21. Gravity Gradients in LIGO: a proposal for Data Analysis by David Garrison and Gabriela Gonzalez, Proceedings of the Tenth Marcel Grossman Meeting on General Relativity, 2006
22. Black Hole Spectroscopy: testing general relativity through gravitational-wave observations by Olaf Dreyer, Lee Finn, Ramon Lopez-Aleman, Badri Krishnan, Bernard J. Kelly, David Garrison, Classical and Quantum Gravity 21 (2004) 787-803
23. Causal Differencing in ADM and Conformal ADM Formulations: A Comparison in Spherical Symmetry. by Luis Lehner, Mijan Huq, David Garrison. 2000. Physical Review D. Volume 62, 084016
24. Notes on causal differencing in ADM/CADM formulations: a 1D comparison by Luis Lehner, Mijan Huq, David Garrison, gr-qc/0004065
25. Accurate Mass Spectrometry of Trapped Ions by M. Bradley, F. Palmer, D. Garrison, L.llich, S. Rusinkiewicz & D.E. Pritchard, Hyperfine Interactions 108, 227-238 (1997)

Selected Presentations and Posters

1. College Park, MD: Laboratory for Physical Sciences – December 2023 – Invited talk on Simulating the Early Universe
2. Rice University Houston, TX: 2022 Joint Meeting of the TSAPS, TSAAPT and SPS Zone 13 – October 14, 2022 – Talk on Computer Simulations of the Early Universe
3. Virtual: Mexico City, Mexico: International Workshop on Astronomy and Relativistic Astrophysics (IWARA2022) – September 6, 2022 – Talk on Simulating the Early Universe
4. Honolulu, Hi: 2022 Hawaii University International Conferences on STEM/STEAM and Education – June 9, 2022 – Talk on Simulating the Early Universe
5. Virtual: Space Center Houston's Annual Space Exploration Educators Conference (SEEC) – February 4, 2022 – Talk on Seeing the Birth of the Universe
6. Virtual: 2020 International Workshop on Astronomy and Relativistic Astrophysics (IWARA2020) – September 17, 2020 – Invited talk on Computer Simulations of the Early Universe
7. Chania, GR: 12th Chaotic Modeling and Simulation International Conference – June 20, 2019 – Contributed talk on The Spontaneous Development of Magnetic Fields in the Early Universe from Relativistic MHD Turbulence
8. Houston, TX: Texas Section of the American Physical Society Meeting (TSAPS) – October 19, 2018 – Invited talk on Numerical Analysis of the Biermann Battery Mechanism of Magnetogenesis for Relativistic MHD Turbulence
9. Ollantaytambo, Peru: 8th International Workshop on Astronomy and Relativistic Astrophysics (IWARA2018) – September 9, 2018 – Invited talk on Numerical Analysis of the Biermann Battery Mechanism of Magnetogenesis for Relativistic MHD Turbulence
10. Barcelona, Spain: 10th Chaotic Modeling and Simulation International Conference – May 31, 2017 - Relativistic Magnetohydrodynamic Turbulence in the Early Universe
11. Berkley, CA: Sustainable Pathways Workshop – December 7, 2016 – Poster on Gravitational Waves induced by Plasma Turbulence in the Early Universe
12. New York, NY: 21st General Relativity International Conference – July 11, 2016 – Poster

on Numerical Simulations of Cosmological Gravitational Waves from MHD Turbulence.

13. Commerce, TX – March 26, 2015 – Invited talk on Characterization of Gravitational Waves from Primordial Relativistic Turbulence.
14. Lisbon, Portugal: 7th Chaotic Modeling and Simulation International Conference – June 7, 2014 – Gauge Field Turbulence as a Cause of Inflation in Chern-Simons Modified Gravity.
15. Houston, TX: University of Houston – April 4, 2014 - Invited talk on Numerical Relativity as a tool for studying the Early Universe.
16. Houston, TX: Rice University – October 23, 2013 – Invited talk on Numerical Relativity as a tool for studying the Early Universe.
17. Houston, TX: WALIPP TSU Preparatory Academy – September 27, 2013 – Back to School with the History Makers.
18. Houston, TX: North Houston Astronomy Club – March 22, 2013 – Invited talk on Numerical Cosmology
19. Austin, TX: National Society of Black Physicists – September 24, 2011 – Invited Talk – Spectral Methods in General Relativistic MHD Simulations
20. Houston, TX: Houston Astronomical Society – September 2, 2011 – Invited Talk – Gravitational Radiation from the Early Universe
21. Houston, TX: United Space School – July 26, 2011 – Invited talk about the Physics Program at UHCL
22. Pittsburgh, PA: Carnegie Mellon University – April 15, 2011 – Invited talk on Numerical Simulations of Gravitational Waves from Primordial Turbulence
23. Houston, TX: Johnson Space Center – February 16, 2011 – Invited talk on African American Scientists and Engineers: Standing on the Shoulders of Giants
24. Houston, TX: Foundation for International Space Education – July 27, 2010 – Invited talk about the Physics Program at UHCL
25. Houston, TX: JSC Astronomical Society – November 13, 2009 – Invited talk - Gravitational Wave Astronomy 101
26. Houston, TX: Annual Banquet of the Houston Astronomical Society – October 10, 2009 – Keynote Address – Gravitational Wave Astronomy 101
27. Tampa, FL: University of South Florida – September 26, 2008 – Invited talk on Numerical Cosmology – Building a Dynamical Universe
28. Washington, DC: National Society of Black Physicists – February 22, 2008 – Invited talk on Gravitational Waves and the Evolution of the Universe
29. Houston, TX: University of Houston Clear Lake – November 29, 2007 – Invited talk on Numerical Cosmology for Poets
30. Houston, TX: University of Houston – October 9, 2007 – Invited talk on Cosmic Structure Formation via Gravitational Radiation
31. Eugene, OR: University of Oregon – May 11, 2006 – Invited talk on Cosmic Structure Formation via Gravitational Radiation
32. Orlando, FL: National Society of Black Physicists – February 19, 2005 – Invited talk on Computational Electromagnetism

33. Grinnell, IA: Grinnell College – May 4, 2004 – Invited talk on Gravitational Wave Physics.
34. Rio de Janeiro, Brazil: Tenth Marcel Grossmann Meeting on General Relativity – July 21, 2003 – Talk on Testing Binary Black Hole Codes with Cosmological Spacetimes, July 25, 2003 – Talk on Gravitational Gradient Noise.
35. Atlanta, GA: National Society of Black Physicists – February 13, 2003– Invited talk on Gravitational Wave Physics.
36. Paris, France: UNESCO - July 22, 2002 - Poster on Testing Numerical Relativity Codes in Strong Field Regimes.
37. Houston, TX: Texas Southern University – February 11, 2002 – Invited talk on Gravitational Wave Research.

References

1. George Abbey Jr – Member of the UHCL Physics Program, Advisory Committee. - gwsajr@gmail.com
2. Chris Ward – Past President of UHCL Faculty Senate – WardChris@UHCL.edu
3. Lee Morin – Astronaut, UHCL Physics Program Alumni - lee.m.morin@nasa.gov
4. John Shebalin – Retired JSC Civil Servant - jshebali@gmu.edu
5. Neal Lane – Senior Fellow Baker Institute, Former Chief Science Advisor to President Bill Clinton - neal@rice.edu
6. Jim Clarage –Professor of Physics at University of St. Thomas - claragj@stthom.edu
7. Shreerekha Pillai – Associate Dean and Professor of Literature at UHCL - Pillai@uhcl.edu
8. Cynthia Howard – Department Chair of Environmental Sciences at UHCL – howard@uhcl.edu
9. Michelle Gutierrez – Director of Academic Advising for CSE - GutierrezM@UHCL.edu
10. Ron Mills – Professor Emeritus UHCL – mills@uhcl.edu
11. Brian Stephens – Associate Professor and Chair of Biology – stephensB@uhcl.edu
12. Bill Staples – UHCL President Emeritus - b.staples44@gmail.com
13. Brad Sims – President of Capitol Technology University - bsims@captechu.edu
14. Gaurav Khanna – Director of Research Computing URI – gkhanna@uri.edu
15. Ira Blake – UHCL President Emeritus - ikblake2016@gmail.com

Notable Achievements

- Transitioned over 100 faculty to online teaching in March 2020
- Re-engineered the college graduate admissions process from a paper-based to digital system
- Founded the Physics program at UHCL (BS, MS, Collaborative PhD) and grew it to the 7th highest producing Master's Level Physics Program in the US
- Developed the Collaborative UHCL-UH Physics PhD Program through agreement with the UH Physics Department
- Established the UHCL Physics guest lecture series and Distinguished lecture series
- Developed the Professional Science Master of Physics: Technical Management sub-plan
- Developed the undergraduate Engineering Physics and Computational Physics sub-plans
- Developed an advisory board for the UHCL Physics program
- Helped develop the UHCL Computational Physics Laboratory, Physics Teaching Laboratory and Plasma Physics Laboratory

- PI of a multi-university unfunded FAA Center of Excellence in Commercial Space Transportation. The proposal involved 125 participants and was completed in less than one month.
- Co-founded UHCL's Center for Faculty Development
- Appeared on an episode of "The Universe" on the History Channel.
- Interviewed several times on Television, Radio and the World Wide Web.
- Interviewed for HistoryMakers - ScienceMakers series

Honors, Grants and Fellowships

- Sloan Scholars Mentoring Network Higher Educational Professional of the Year Award, 2024
- NASA Bridge Program Seed Funding Co-I 2023, $300,000
- The National Society of Leadership and Success – Honorary Membership, 2019
- 2018-19 UHCL Faculty Fellowship Award
- UHCL Faculty Development Fund Award Total, $24,913
- UHCL Faculty Research Support Fund Awards Total, $24,916
- NSF SSTEM Co-I, 2013, $592,468
- HistoryMakers – ScienceMaker, 2012
- Institute for Space Systems Operations Grant, 2010, $66,800
- Fort Zumwalt North Hall of Fame Inductee, 2009
- Institute for Space Systems Operations Mini-Grant, 2006, $7,077
- Institute for Space Systems Operations Mini-Grant, 2005, $6,666
- Council of Graduate Schools PSM implementation grant, 2005-2007, $25,000
- NASA Faculty Fellowship Program at JSC, 2004, $12,000
- Institute for Space Systems Operations Post-Doctoral Aerospace Grant, 2004, $20,000
- Council of Graduate Schools Professional Science M.S. planning grant, 2004, $6,000
- NASA GSRP Fellowship, 2001-2002, $27,000
- Academic Computing Fellowship, 2001-2002, $15,000
- Sloan Scholar, 1998-2002
- Bayer Fellowship, 1997-1998, $3,000
- Minority Scholars Award, 1997-1998
- MIT Class of 1961 Clarke E. Swannack Scholarship Recipient, 1995-1997
- University Club Scholarship Recipient, 1993-1997
- National Merit Scholarship Commended Student, 1993

Skills

Experience with: Macintosh, UNIX, LINUX, Windows, and Android operating systems; Networking systems including Internet Web Servers; Mathematics software such as Maple, Matlab, and Mathematica; R, C, C++, Visual Basic, Perl, Python, HTML, Java, JSP, ASP, SQL, and Fortran programming languages; high performance computing clusters utilizing networked CPU and GPUs; PeopleSoft, Navigate, Blackboard, Canvas, Digital Measures and Slate. Other Skills include Organizational Leadership, Assessment of Success Metrics, Complaint Management, College Recruiting, Fundraising, Admissions, Business Process Improvement, Policy Writing, Crisis Management, Operations Management, Change Management, Change Transition, Strategic Planning and Mentoring.

Service Activities & Organizations

Served as a member or chair of over a dozen faculty and staff search committees including for UHCL President, Provost and CSE Dean
Member-At-Large of TSAPS Executive Committee – 2022 – 2025
Editorial Board Member for the Journal of Astronomy and Space Science – 2022 – Present
UHCL National Society of Black Engineers Chapter – Faculty Advisor – 2021-Present
Co-Founder and Owner of Belle Transformations Medical Spa – 2020 - Present
Chairperson of the Fall 2021 Hybrid Meeting of the Texas Section of the American Physical Society – 2019-2021
Academic Editor for the International Astronomy and Astrophysics Research Journal – 2018 – Present
AUM Clean Energy Group, Investment Board – 2013-2014
Space Center Houston, Educational Advisory Board Member – 2012-Present
Latin Deaf Services, Inc., Advisory Board Member – 2011-Present
UHCL Faculty Senate – 2007-2009, 2012-2016
UHCL Faculty Senate Executive Committee - 2008-2009, 2012-2016
UHCL Faculty Senate President Elect, President, Past President, President – 2012-2016
UHCL University Council – 2008-2009, 2012-2016
UHCL Academic Council – 2008-2009, 2012-2016
UHCL Faculty Senate Research Committee – 2007-2009 – Chair -- 2008-2009
UHCL Planning and Budget Committee – 2007-2009
UHCL Black Students Association – Faculty Advisor – 2005-2007
Organized UHCL Physics and Space Science Guest Lecture Series – 2003-Present
UHCL Physics Club – Faculty Co-advisor – 2002-Present
American Association of Physics Teachers Member -- 2002-2003
National Society of Black Physicists Member -- 2002-Present
American Physical Society Member -- 1994-Present
NCAA Division III Linebacker-- 1993, 1994 & 1996
National Society of Black Engineers Member --1993-1997
MIT Black Student Union Member – 1993-1997
Society of Physics Students Member --1993-1997
Helped organize 1997 National Conference for Black Physics Students -- 1997
National Honor Society Member -- 1989-1993
Jazz Band improvisational soloist --1989-1993