Education

**Johns Hopkins University**

PhD in Physics (1995), MA in Physics and Astronomy (1992)

* PhD Thesis: *Tests of the Charged Weak Current in Correlated Hadronic* $τ$ *Decays Using L3 at LEP*.

**Syracuse University**

PhD (1993) and MS (1988) in Electrical Engineering

* PhD Thesis: *Multiconductor Transmission Lines in Multilayered Dielectric Media Over a Gridded Ground Plane.*
* MS Thesis: *Scattering from Waveguide Backed Apertures in an Infinite Conducting Cylinder.*

**University of Mississippi**

BS in Electrical Engineering (1987), *Summa Cum Laude*

Experience

**Delta State University**

| Cleveland, MS

Director of the Honors Program July 2018 – Present

* Founder and chair of the Honors Program Advisory committee.
* Created the roadmap to a robust and active program.
* Worked with the division of Languages and Literature to institute our first subject specific honors course.
* Launched the Post-baccalaureate Scholars Program to assist students in finding and applying for prestigious national and international fellowships and grants.
* Increased enrollment from 14 students in July 2018 to 76 students in August 2020, just shy of the university’s target of 80.
* Revised admissions requirements to open pathways for underserved minority populations.

Associate/Assistant Professor of Physics *Aug 2014* – Present

* University COVID-19 Task Force, Synchronous Online Instruction Task Force, and Calendar Committee: 2020-2021.
* University Tenure and Promotion Task Force: 2019-2020.
* President’s Foundation Task Force: fall 2018 to present.
* Faculty Senator for Mathematics and Sciences from Jan 2019 to present. Chair Academic Affairs Subcommittee: 2020-21.
* Chair Physics Search in 2015 and 2019. Co-Chair Science-Ed Search 2020.
* Dean’s Honors Program Task Force to revitalize the program, fall 2016.
* Curriculum Chair for Chemistry (2014-2017) and Physics (2014-present).
* Planetarium installation and grand opening, summer 2016.

**CapitolMed**

 | Haskell, NJ

Senior Account Manager *Oct 2008* – July 2014

* Consultant to top 5 pharmaceutical and top 5 health insurance companies.
* Instrumental in the launch of a $1.5 billion per year specialty drug with responsibility for shaping messaging for physicians and training the salesforce.
* Created and operated physician call centers for insurance reimbursement assistance.
* Created and operated a print shop for publishing the explanation of benefits for an insurer.
* Projected market size and penetration for a variety of clients.

**EqualNox Consulting**

 | Yorktown, VA

President *October 2000* – October 2008

* Primary Customer: Air Combat Command Surgeon General’s Medical Modernization Office (ACC-SGR).
* Two time winner of a Joint Expeditionary Force Exercise (JEFX) development prize of over $1 million for most outstanding proof-of-concept.
* Designed, developed, and deployed the first field capable electronic medical record system – the Global Expeditionary Medical System (GEMS) - first medical system to meet DoD information security requirements.
* Coordinated medical data collection at deployed USAF facilities and a number of smaller individual units around the globe - collected and analyzed over 500,000 medical records.
* Instrumental in modernizing the medical manpower footprint for expeditionary forces.
* Institutionalized real time medical data surveillance and diseases management.
* Paved the way for the eventual DoD solution for electronic medical records and surveillance.

**Government Contractor**

* | Langley AFB, VA

Chief Scientist *January 1998* – October 2000

* Worked directly with ACC-SGR.
* Launched data driven disease management protocols across the 18 clinics within Air Combat Command with a focus on long term outcomes.
* Supported testing and evaluation of medical modernization efforts.

**Christopher Newport University**

* | Newport News, VA

Assistant Professor *August 1997* – May 1998

* Taught electromagnetics, electronics, computer algorithms, introductory physics, and optics.

**University of Minnesota**

* | Brookhaven National Labs, NY

Postdoctoral Research Associate *February 1996* – August 1997

* Managed the hyperbaryon experiment at BNL.
* Helped design and modernize the data acquisition system.

Significant Community Service

**Williamsburg Unitarian Universalists** | Williamsburg, VA

Head Worship Leader, 2013 – 2014, Worship Leader 2012

* Organized services for the minister, and scheduled other worship leaders to cover each service.
* Served as meditation leader for early morning services.
* Helped integrate smaller religious groups into the broader community.
* Occasionally responsible for the homily.

Recent Grants

**Development of Curriculum and Materials for Medical and Biological Physics I and II,** $24,861 over 1 year beginning May 2017. Funded by a Mississippi INBRE Grant from the University of Southern Mississippi. PI – James Gerald.

**A Bachelor’s of Science in Applied Physics (Meteorology) for the Military Meteorology Workforce**, $996,610.63 over 5 years beginning November 2016. Funded by the Office of Naval Research. PI – Talbot Brooks. Co-PI – James Gerald.

Recent Presentations

**Active Learning Using a Two Pass Strategy in a Calculus Based Introductory Physics Course.**

James A. Gerald, 85th Annual Meeting of the Southeastern Section of the American Physical Society (SESAPS 2018), Knoxville, TN. November, 2018.

**Effective Education in the 21st Century: Thinking Critically About Instruction on Your Campus.**

James A. Gerald and James R. Tarr, 2018 American Association of University Administrators Leadership Seminar, Philadelphia, PA. June, 2018.

**Active Learning and DSU.**

James A. Gerald, 2018 Café Scientifique, Delta State University. April, 2018.

**Active Learning’s Impact on Underprepared Students.**

James A. Gerald, 2018 Mississippi Academy of Sciences, Hattiesburg, MS. February, 2018.

**Open Source and Collaboration Using PressBooks Textbooks**.

James A. Gerald and Sharon L. Gerald, 2016 Creating Futures through Technology Conference, Biloxi, MS. March 2016.

**Designing E-books, Designing Engagement.**

James A. Gerald and Sharon L. Gerald, 2015 Creating Futures through Technology Conference, Biloxi, MS. March 2015.

Workshops and Professional Development

**2019 American Association of Colleges and Universities PKAL STEM Knowledge Exchange Institute** on Critical Inquiry Based Reform for Broadening Participation in STEM,

Alexandria, VA, 5/21-5/24/2019. Focused on creating student pathways into STEM for underserved minority populations.

**2018 American Association of Colleges and Universities PKAL STEM Leadership Institute,** Adamstown, MD, 7/17-7/22/2018. Focused on both student and faculty pathways in STEM for underserved minority populations.

**2018 American Association of University Administrators Leadership Seminar,** Widener University, PA, 6/5-6/8/2018.

Publications

**Performance of the L3 plastic scintillating fibre calibration system**

G. Alverson, J. Bao, P. Fisher, J. Gerald, A. Gougas, I. Leedom, A. Pevsner, C. Spartiotis, S. Reucroft, L. Taylor. Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, Volume 380, Issue 3, 11 October 1996, Pages 555–561. ISSN 0168-9002.

**Measurement of the Michel parameters and the average tau-neutrino helicity from tau decays in e+ e- ---> tau+ tau-**

L3 Collaboration (M. Acciarri et al.). Mar 1996. 15 pp. Phys.Lett. B377 (1996) 313-324.

**Tests of the charged weak current in correlated hadronic tau decays using L3 at LEP**

James A. Gerald (Johns Hopkins U.). 1995. 134 pp. UMI-96-17520, CERN-THESIS-98-007.

**Multiconductor transmission lines in multilayered dielectric media over a gridded ground plane**

Gerald, James A. (1993). Electrical Engineering and Computer Science - Dissertations. Paper 216.

**Mode extraction from an electromagnetic slow wave system**

James A. Gerald, Dec. 1987. Universal Energy Systems, Inc., United States Air Force Graduate Student Summer Support Program, Volume 1 20 p (SEE N89-12754 04-31)

Publications with Significant Contributions

Large collaborations like L3 at LEP contain author lists numbering in the 100s. Of the 59 papers bearing my name as a part of that collaboration, I have selected to list only those to which I believe I made a direct and significant contribution.

**Measurement of the Michel parameters and the average tau-neutrino helicity from tau decays at LEP**

L3 Collaboration (M. Acciarri et al.). Jul 1998. 15 pp. Phys.Lett. B438 (1998) 405-416.

**Measurement of the anomalous magnetic and electric dipole moments of the tau lepton**

L3 Collaboration (M. Acciarri et al.). Mar 1998. 13 pp. Phys.Lett. B434 (1998) 169-179.

**Measurement of tau polarization at LEP**

L3 Collaboration (M. Acciarri et al.). Feb 1998. 19 pp. Phys.Lett. B429 (1998) 387-398.

**Measurement of the weak dipole moments of the tau lepton**

L3 Collaboration (M. Acciarri et al.). Feb 1998. 14 pp. Phys.Lett. B426 (1998) 207-216.

**Measurement of D(s)- ---> tau- anti-tau-neutrino and a new limit for B- ---> tau- anti-tau-neutrino**

L3 Collaboration (M. Acciarri et al.). Dec 1996. 18 pp. Phys.Lett. B396 (1997) 327-337.

**Measurement of the lifetime of the tau lepton**

L3 Collaboration (M. Acciarri et al.). Sep 1996. 14 pp. Phys.Lett. B389 (1996) 187-196.

**Measurement of the branching ratios b --> e neutrino X, mu neutrino X, tau-neutrino X and neutrino X**

L3 Collaboration (M. Acciarri et al.). Apr 1996. 27 pp. Z.Phys. C71 (1996) 379-390.

**One prong tau decays with neutral kaons**

L3 Collaboration (M. Acciarri et al.). Apr 1995. 17 pp. Phys.Lett. B352 (1995) 487-497.

**Measurement of exclusive branching fractions of hadronic one space prong tau decays**

L3 Collaboration (M. Acciarri et al.). Nov 1994. 15 pp. Phys.Lett. B345 (1995) 93-102.

**A Measurement of tau polarization at LEP**

L3 Collaboration (M. Acciarri et al.). Sep 1994. 20 pp. Phys.Lett. B341 (1994) 245-256.