Professor and Chair of Physics and Pre-Engineering Department

Specialty: Physics (Optics, laser spectroscopy, EPR Specs, material Science, Laser Ablation)

Office Location: Stern Hall Room 305/307

Office Telephone Number: (504)-816-4840/4877

Email address(es): adarwish@dillard.edu, adarwish@bellsouth.net

Courses Taught :
- College Physics
- General Physics
- Physical Sciences
- Earth Sciences
- Mechanics
- Thermodynamics
- Heat Transfer
- Static-Dynamics
- Electricity and Magnetism
- Optics
- Quantum Mechanics
- Laser systems
- Modern physics
- Research Methodology
- Relativity
- Solid State Physics
- Engineering Drawings

Research and/or Teaching Interests:

Teaching Interests: Using new pedagogies in teaching and research like simulation programs, Critical thinking and inquiry , virtual and Video experiments , On-time-Teaching pedagogy and Technology in classroom and Laboratory. In addition, I have established and sustained a systemic Mentoring program in the Division of Natural Sciences to support hands-on training on research project for STEM students and to prepare them for graduate schools.

Research Interests: Interaction of lasers with materials, Laser spectroscopy, EPR, Thin film fabrication by Pulse laser Deposition PLD technique and its optical characterization.

University Service:

Faculty Senate, Chair of the Faculty Hand Book committee, Chair of the Merit Raise

Committee, and many other Divisional/Departmental committees, Member of the Civil Service Board for the City of Kenner, NO, LA, Academic Advisor of NSBE, OSA, NSBP, Sigma Pi Sigma, Physics honor Societies,

Director and Campus coordinator of DU-LAMP, DU-GAELA, and DU- TESSE programs. Chair of the Physics and Pre-Engineering Department. Chair of the graduate Committee and Summer placement committee. Member of division handbook committee. Member of research committee. Member of faculty search committee. Member of summer placement committee.

Professional Affiliations:

The international society of Optical Science and Technology (SPIE), member since 1992.
The optical Society of America (OSA), member since 1984.
The International Society of electrical and electronic engineers (IEEE), member since 1994.
The American physics Society, APS, member since 1992.
The students, physics society, SPS, member since 1984.
The Alabama Science academy association (ASAA), member since 1988.
The American physics teachers association (APTA).
The physics honor society Sigma Delta Sigma.
National Society of Black Engineers
National Society of Black Physicist

Selected Publications out of 79 Publications:

1. Abdalla Darwish, Brent Koplitz, Nickolai Kukhtarev, Xiaodong Zhang, Robert Combs, Hadi Alkahby, Ahmed Darwish, Khadijah Ransom, Brayn Conyer. Nonlinear Optical and electrical Properties of SiC/PMMA/Ge/Fe Waveguide for Device Applications. photonic Fiber and crystal Devices: Advances in Materials and Innovations in Devices Applications. Vol. 6689, 2007, pp. 1 – 9.
2. Abdalla. M. Darwish with Abraham F. Jalbout and Hadi Alkahby. On the HNO?HNO Isomerization mechanism: High Level Ab Initio and Density Functional Theory Study. Theo. Chem. Vol. 585 (2002a), 199 pp. 203.
3. Abdalla Darwish with Eric Williams, D. Ila, and D. Boker “Characterization of silver colloids formed in LiNbO3 by Ag and O implantation at room and elevated temperatures”, J. Nuclear inst. & Methods in Phy. Res. B 148, 1074-1078, 1999.
4. Darwish, J. Izat and J. Peterson “Infrared-Infrared double resonance spectroscopy of H2CS” J. Opt. Eng., Technical series Vol., pp.96-102 , 1999
5. Abdalla Darwish with M. Sastery and P. Venkateswarlu, “Experimental evidence of photoinduced valance change of Fe3+ in BaTiO3 and mechanism for growth of new grating in depleted pump condition : an EPR investigation”, Pramana Int. Journal of physics, Vol 56, No. 5, pp. 667-684, 2001
6. A. Darwish with .N.Kukhtarev, T.Kukhtareva, D.Edwards, F.Okafor, J.Jones, and J.Wang "Laser photophoresis and pulsed electrophoresis for microorganisms manipulation", Int. J. of Optical Engineering Technical Digest, Vol.8314, PP. 1-8, (2006).
7. Abdalla Darwish with Hadi Alkahby “ The effect of Newtonian cooling on vertically propagating magneto-acoustic waves in a thermally conducting isothermal atmosphere (III). Accepted for publication in the International Journal of Geophysics and Astrophysics fluid Dynamics Jan 2009

Selected Presentations out of 89 national and international presentations:

1. “TRANSFORMING EARTH SYSTEMS SCIENCE EDUCATION THROUGH TEACHER AND HIGHER EDUCATION INSTITUTION PARTNERSHIPS” paper presented during the Geological Society of America ,Northeastern Section - 42nd Annual Meeting (12–14 March 2007) , and publisher in the conference proceeding with PSU, UNH, and ESCU.http://gsa.confex.com/gsa/2007NE/finalprogram/index.html
2. Presented “CO2 Laser ablation of liver cancerous cells, new technique”. at American Chemical Society, Division of Chemical Education, 231st ACS National Meeting, Atlanta, GA ,March 26-30, 2006.
3. Presented "Laser photophoresis and pulsed electrophoresis for microorganisms manipulation" during the Int. meeting of Optical Engineering ,2006.
4. SPIE Chaired the photonic Fiber and Crystal Devices conference: Advances in Materials and Innovations in Device Applications materials conference VIII /session III part of The international Symposium on Optical Science and Technology SPIE's 52nd Annual Meeting 26-31 August 2007, San Diego, CA.
5. SPIE Chaired the photonic Fiber and Crystal Devices conference: Advances in Materials and Innovations in Device Applications materials conference VIII /session III part of The international Symposium on Optical Science and Technology SPIE's 53rd Annual Meeting 10-17 August 2007, San Diego, CA.
6. Chair the MSIRP 2008, New Orleans,LA NASA session.
7. Special invited speaker in the OEM workshop for HBCU/MI faculty enhancement in presentation and proposal writing 2008. http://qemnetwork.qem.org/HBCU-UPStudentProfDevFinalAgenda.htm
8. SPIE Chaired the photonic Fiber and Crystal Devices conference: Advances in Materials and Innovations in Device Applications materials conference VIII /session III part of The international Symposium on Optical Science and Technology SPIE's 54th Annual Meeting 10-17 August 2008, San Diego, CA.

Selected Grants/Awards:

1. Recipient of Dillard University Ruth Simmons Distinguished University Faculty Award 2001.
2. Recipient of Dillard University Williams Sutton Excellence in Research and innovations Award 2001.
3. Dillard University Mentor of the Year for five years 2001-2006

Grants: Selected;

1. 2001BOR-LESQF: NMR spectrometer a tool for the enhancement of Teaching and research 2. 2001DOD: NMR spectrometer a tool for the enhancement of Teaching and research 3. 2002BOR-LESQF Enhancement of Teaching and research infrastructure in the pre-engineering department
4. 2001BOR-NSF Louisiana Alliance for Minority participant program (LAMP) Phase II
5. 2002 NSF HBCU-UP planning grant
6. 20042009: NSF GAELA program with Tulane University Alliance for Graduate Education and the professorate (AGAP) (Tulane University, LSU, SUBR, DU, Xavier)
7. 2006-2011: BOR-NSF, Louisiana Alliance for Minority participant program (LAMP) Phase III

8. 2007BOR-LESQF Enhancement of the Learning Center at the Physics Department
9. 2007-2010: NSF (with University of New Hampshire) Transforming Earth Science System Education (TESSE
10. 8/1/01-7/31/04 COPI with Brent Koplitz the PI Tulane University "Toward Improving the Pulsed Laser Deposition (PLD) of Hard Materials Such as SiC"NASA/State of Louisiana
11. 8/1/04-7/31/07 COPI with Brent Koplitz the PI Tulane University "Toward Improving the Pulsed Laser Deposition (PLD) of Hard Materials Such as SiC" NASA/State of Louisiana
12. 2008-2009 Laser Ablation system DOD (Air Force office of Scientific Research)