Summary

The Department of Physics was established in 1935. Our mission is “the advancement of Physics through excellence in research and the extension of scientific heritage through education.” Over the years the department has created and nurtured a unique blend of applied and fundamental research to improve our understanding of the world around us and to respond to the needs of our community. Our research efforts are primarily in the areas of acoustics, computational physics, cosmology, Earth and planetary sciences, environmental physics, ion beam physics, geophysics, and materials science (physics.louisiana.edu). The department consists of seven full-time research-oriented faculty, one instructor, four emeritus professors, and about 40 undergraduate and graduate students. We offer both Bachelor’s of Science (BS) and Master’s of Science (MS) degrees in Physics. The department has partnered with the School of Geosciences to build an interdisciplinary doctoral program which will focus on research in energy, the environment, and the physics of the Earth.

This report summarizes the professional accomplishments of the research-active physics faculty from 2011 to 2016. Since 2011 the physics faculty have served as Principal or Co-Principal Investigators on 43 research grants totaling $8,557,150, which, on average, amounts to $178,274 per year per faculty member. Since 2011, we have published 88 peer-reviewed journal articles (1.83 per faculty per year), 11 book chapters, and 23 conference proceedings papers. The expertise of the physics faculty is recognized by invitations to deliver 28 plenary and invited international conference talks and to serve as referees of 44 scientific journals, including Science and Nature. The faculty also authored and co-authored 25 conference presentations and organized 10 special sessions and meetings. Our faculty pride themselves in educating future scientists and teachers; we served as chairs and co-chairs on 19 MS Thesis and Doctoral dissertation committees.
Publications, Presentations, Editorships, and Talks

Refereed Journal Papers (Published)


82. H.J. Whitlow, System on Chip (SoC) microcontrollers (μC) as low-cost digitisers for ion beam analysis (IBA) instruments. Nucl. Instrum. Methods B. B 383 (2016) 245–249 http://dx.doi.org/10.1016/j.nimb.2016.05.033


Refered Journal Papers (Accepted)
89. **J.B. Dent.** “Review of the possible role of self-ordering scalar fields in production of a stochastic background of gravitational waves.” Accepted for publication by the International Journal of Modern Physics D.


95. **Sidorovskai, N.A.** and Li, K. “Decadal evolution of the Northern Gulf of Mexico soundscapes,” Proc. of Meetings on Acoustics (accepted, to be published in 2017)

**Book Chapters**


105. Luc Stoppini, Harry J Whitlow, Edouard Guibert; Patrick Jeanneret; Alexandra Homsy; Joy Roth; Sven Krause; Adrien Roux; Post-focus expansion of ion beams for low fluence and large area MeV ion irradiation Application to human brain tissue and electronics devices. Nucl. Instrum. Methods. B. (In press)


Conference Proceeding Papers


119. Thomas M Daley, Curtis M Oldenburg, Andrea Borgia, Rui Zhang, Christine Doughty, Yoojin Jung, Bilgin Altundas, Nikita Chugunov and T S Ramakrishnan, 2016, Enhanced characterization of faults and fractures at EGS sites by CO2 injection coupled with active seismic monitoring, pressure-transient testing, and well logging, AGU fall meeting H130-05.

120. Warren Wood, Taylor Runyan and Rui Zhang, 2016, A machine learning approach to quantifying geologic similarities between sites of gas hydrate accumulation, AGU fall meeting OS51B.

121. Rui Zhang, Kui Zhang and Jude E. Alekhue, 2016, Depth domain seismic reflectivity inversion with compressed sensing technique, SEG 86th Annual meeting Dallas.


simulations of carbon dioxide injection and geophysical monitoring to improve imaging and characterization of faults and fractures at EGS sites, Stanford Geothermal Workshop 41 Annual Meeting.


Plenary and Keynote Presentations


Invited Conference / Workshop Talks

James B. Dent

- J.B. Dent: Mitchell Institute Workshop on Collider, Dark Matter, and Neutrino Physics, Texas A&M University, May 2016
- J.B. Dent: Speaker at COSMOS International Conference, University of Michigan, August 2016
- J.B. Dent: Invited Speaker, Effective Field Theories as Discovery Tools, Mainz Institute of Theoretical Physics, Mainz, Germany, September 2016
- Fermilab meeting on Dark Matter at a Future 100TeV Collider, December 2015 at Fermilab in Batavia, Illinois.
- Coherent Neutrino Scattering Workshop held at Texas A&M University in November 2015.
- Mitchell Institute’s Dark Matter Workshop held at Texas A&M University in May of 2015.
- Aspects of Inflation Workshop, Texas A\&M University, April 2011.

William A. Hollerman
- Using Luminescent Materials as the Active Element for Radiation Sensors, Naval Surface Warfare Center Carderock Division, West Bethesda, Maryland, April 20, 2016.
- Research Opportunities at the Louisiana Accelerator Center, Naval Surface Warfare Center Carderock Division, West Bethesda, Maryland, May 25, 2016.
- Collaborations on EuD,TEA Research, Army Research Laboratory, Sensors and Electron Devices (SEDD), Adelphi, Maryland, July 26, 2016.
- Inexpensive Student-Based Payload Projects, NASA Academy of Aerospace Quality (AAQ) Mini-Workshop, Port Canaveral, Florida, March 27, 2012.
- Overview of the Student-Related Payload Projects at UL Lafayette, Next Generation Suborbital Researchers Conference, University of Central Florida, Orlando, FL, March 2, 2011.

John J. Matese

Gabriele Morra
- University of Lausanne - special workshop for the 50 years of Yuri Podlatchikov, 2014.

Andi Petculesscu
- Molecular acoustics: Theory and applications, Universite de Montreal, Canada, June 2013.
- Molecular acoustics: Modeling sound propagation in polyatomic gases, University of New Orleans, February 2012.

Natalia Sidorovskaia

Colloquia and Seminar Talks

**James B. Dent**
- J.B. Dent, Seminar at the University of New Orleans, April 2016
- Seminar speaker at the University of Louisiana at Lafayette, November 2015
- Invited seminar speaker at LSU in April 2015
- Invited seminar speaker for the Fermilab VHEPP meeting, October 2015 (talk done by phone)
- Invited Seminar on Inflation given at the University of New Orleans, April 2014
- Invited Seminar, Arizona State University, November 2013
- Public Lecture, SMART Festival, Lafayette, LA, October 2013
- Invited Talk, LSU-S, October 2013
- Invited Seminar, Vanderbilt University, April 2013
- Invited Colloquium, University of Louisiana-Lafayette, Feb 2012
- Invited Seminar, University of New Mexico, March 2011
- Invited Seminar, University of Melbourne, March 2011

**William A. Hollerman**
- Triboluminescent Materials: Uses in Smart Sensors and Technology, Department of Physics, Auburn University, Auburn, AL, November 20, 2015.
- Effects of Ionizing Radiation on Materials, Lecture to students in a 600 Level Course in Materials Science/Applied Physics, Department of Physics, Alabama A&M University, February 12, 2013.
- Beyond Glow Ammo: Behind the Scenes at a Student-Inspired Research and Development Program:
  - Department of Chemistry and Physics, Southeastern Louisiana University, Hammond, LA, March 23, 2012.
- Department of Physics, University of New Orleans, New Orleans, LA, February 22, 2012.
- Department of Physics, University of Louisiana at Lafayette, Lafayette LA, February 11, 2011.

**Gabriele Morra**
- Hierarchical Plate Tectonics and Plate Reorganizations, 2016, Invited Department Seminar at the LMU Munich, Germany
- Invited department seminar at the University of Minnesota in Minneapolis, 2015
  Gabriele Morra, David A Yuen, Sang Mook Lee, Computational Methods for Volcanology: application to Central Asian Volcanism, 20-minute seminar at the School of Geosciences, University of Wuhan, Hubei, China, June 10, 2015
- Fractal Plate Tectonics and Global Plate Reorganizations” - University of Texas at Dallas - Geosciences Dep - Department Seminar, 2014
- "Subduction, megathrusts and underwater landslides: What the 2011 Japanese tsunami has taught us about tsunami hazards" - University of Texas at Dallas - Geosciences Dep - Lunch Seminar, 2014
- "Plate tectonics, megaquakes and underwater landslides: What the 2011 Japanese earthquake taught us about tsunami hazard" - University of New Orleans - Physics Dep. - Department Seminar, 2014
- Seminar talk at the Department of Physics, UL Lafayette, September 11, 2013

**Andi Petculescu**
- Molecular acoustics: Theory and applications. Universite de Montreal, Canada, June 2013 (invited).

**Gabriela Petculescu**
- Presentation: “Ultrasonic probe for sensitization,” to ONR and NSWC-CD NDE branch, Carderock, MD, July 16th, 2015.
- Seminar: “Sensitization of Aluminum Alloys - Ultrasound as a Possible Characterization Tool,” ONR Summer Faculty Program – Seminar Series, NSWC - CD, MD and sister NSWC centers (by broadcast), Carderock, MD, July 15th, 2015.
- “Elastic Interactions in Ferromagnetic Fe-based Alloys,” ONR Summer Faculty Program – Seminar Series, NSWC at Carderock, MD and also broadcasted, July 8th, 2014.

**Natalia Sidorovskaia**
- Seminar, Institute of Applied Physics (Russia), November 2012.
- Seminar, Nizhny Novgorod State University (Russia), November 2012.
• Seminar, Physics Department, UL Lafayette November 2011.
• “Modeling Short Term Dynamics of Marine Mammal Populations near the BP Oil Spill Site (Gulf of Mexico),” Poster, LSU, April 2011.

Rui Zhang
• Sinopec Houston LLC, 2016
• The University of Texas at Austin, 2015

Contributed Talks

William A. Hollerman

John J. Matese

Gabriele Morra
• “Deep Earthquakes Spatial Distribution from of Numerical Modeling the Stress within a Subducting Lithosphere”, 2016, P. M. Gunawardana, G. Morra
• “Numerical Modeling of fluid flow and heat transfer in fault systems”, Conlin, Daniel, Gottardi, Raphaël, Morra, Gabriele and Spezia, Kyle, South-Central Section - 50th Annual Meeting - 2016
• “Trench Advance By the Subduction of Buoyant Features-Application to the Izu-Bonin-Marianas Arc”, 2014, SDB Goes, L Fourel, G Morra, AGU Fall Meeting Abstracts 1, 4629
• Contribution of Elasticity in Slab Bending, 2014, L Fourel, SDB Goes, G Morra, AGU Fall Meeting Abstracts 1, 4628
• The seismic cycle on subduction thrusts: a laboratory validation and implications from large-scale geodynamic simulations, 2013, Y van Dinther, T Gerya, L Dalguer, M Mai, F Corbi, F Funiciello, G Morra, EGU General Assembly Conference Abstracts 15, 6875

Andi Petculescu
• Absorption and Dispersion in Venus' Lower and Middle Atmospheres, ASA Pittsburgh, June 2015.
• A physical model for predicting the sound speed and attenuation coefficient in Titan’s atmosphere based on Cassini-Huygens data, ICA-ASA 2013, Montreal, Canada, June


Gabriela Petculescu


- 2 contributed talks given by collaborators on common projects at 59th MMM conference, Honolulu, HI, Nov. 2014.


- “Temperature dependence of magnetoelastic properties of Fe100-xSix (5<x<20).” 56th MMM Conference, Scottsdale AZ, October 2011.

Natalia Sidorovskaia


Stochastic Matrix Models, 2016 Gulf of Mexico oil spill & ecosystem science conference, February 1-4, 2016, Tampa, FL


- Carl Richter, Lindsey Horton, Gary Acton, **N.A. Sidorovskaia**, Francisco Sierro, Chuang Xuan, Kenneth Verosub (2014). “Relative Geomagnetic Paleointensity, Environmental Magnetism, and Cyclicity of Contourites from the West Iberian Margin (IODP Site U1389),” presented as a poster (GP23B-3686) at the AGU meeting, 15-19 December 2014, San Francisco, CA.


Journal Referees

James B. Dent
• Monthly Notices of the Royal Society (2013)
• Astroparticle Physics (2013)

William A. Hollerman
• Journal of Luminescence (2009-Present)
• IEEE Sensors Journal (2012-Present)
• Journal of Physics D: Applied Physics (2012-Present)
• IEEE Transactions on Nuclear Science (1998-Present)

Gabriele Morra
• Geophysical Journal International
• Editor-in-Chief, AGU Book, “Subduction Dynamics: From Mantle Flow to Mega Disasters”
• Journal of Geodynamics
• Journal of Geophysical Research
• Physics of the Earth and Planetary Interiors
• Earth and Planetary Science Letters
• Acta Geotechnica
• Geoscience Frontiers
• Tectonophysics
• Annuals of Geophyscs
• Science

Andi Petculescu
• Journal of the Acoustical Society of America
• Icarus
• Planetary and Space Sciences
- IEEE Sensors

**Gabriela Petculescu**
- AIP Advances
- Elsevier, Physica B
- IEEE Transactions on Magnetics
- Journal of Applied Physics
- Journal of Alloys and Compounds
- Journal of the Acoustical Society of America
- Wave Motion
- Europhysics Letters
- Journal of Materials Science
- Nature
- National Science Foundation

**Natalia Sidorovskaia**
- Journal of Acoustical Society of America
- Canadian Acoustics Journal
- Physics Essays
- AIP
- McGraw-Hill, Addison Wesley
- PLOS One
- Annals of Marine Biology and Research

**Rui Zhang**
- Deputy Associate editor, Interpretation
- Geophysics
- Petroleum Geosciences
- Journal of Applied geophysics
- International Journal of Greenhouse Gas control
- Journal of Earth Science
- Journal of Natural Gas Science and Technologies
- Journal of Petroleum Science and Engineering

**Other**

**Organized Special Sessions and Conferences**

**James B. Dent**
- Organizing Committee for the SMART Festival, Lafayette, October 2013
- Organizing Committee for the Primordial Magnetism Workshop held at ASU, April 2011
- Organizing Committee for the New Directions in Cosmology Workshop held at ASU, January 2012.
William A. Hollerman


Gabriele Morra

- GSA The geodynamics of plate tectonics. Session at the American Geophysical Union Fall Meeting, December 2012.
- First international conference on geodynamics. Title of the conference "Slab Dynamics". Jeju Island, South Korea. August 2011. Main organizer and Chief Editor of the following AGU Book.

Natalia Sidorovskaia

- “Fusion of Bio-physical Data and Predictive Modeling to Understand Gulf of Mexico Marine Species Resilience to Environmental Stresses and Disasters”, 2016 Oil Spill Science conference, February 2016, Tampa, Florida
- “Modeling and Observing the Physical-Biological Interactions that Organize the Spatiotemporal Distribution of Biomass in Marine Ecosystems,” 2016 Ocean Sciences meeting, New Orleans, Louisiana, February, 2016

Graduate Student Production

Graduate Students

James B. Dent

Chair of the Committee, Master of Science in Physics, UL Lafayette
Alex Sylvester, December 2015
Chase Gaudet, December 2013

Gary A. Glass

Chair of the Committee, Master of Science in Physics, UL Lafayette
Jack Manuel, Fall 2011
Dustin Phillips, Fall 2011
Henry Luyombya, Summer 2011
Boyko Perfanov, Fall 2011

William A. Hollerman

Chair of the Committee, Master of Science in Physics, UL Lafayette
Mark Roberts, Spring 2011
Lika Kobakhidze, Fall 2012
Stephen Williams, Summer 2016
Member of the Ph.D. Committee
Ross S. Fontenot, May 2013, Alabama A&M University
Noah Bergeron, February 2014, Louisiana Tech University

Member of the Committee, Master of Science in Physics, UL Lafayette
Dustin Z. Phillips, Fall 2011.
Henry Luyombya, Fall 2011.
Boyko Perfanov, Fall 2012.

Andi Petculescu
Chair of the Committee, Master of Science in Physics, UL Lafayette
Kevin Pitre, Spring 2016
Mathbar Raut, Spring 2015
Caleb O’Connor, Summer 2014
Akinjide Akintunde, Spring 2014
Joshua Riner, Spring 2011

Member of the Committee, Master of Science in Physics, UL Lafayette
C. U. Chukwunonye, May 2014

Gabriela Petculescu
Chair of the Committee, Master of Science in Physics, UL Lafayette
C. U. Chukwunonye, May 2014
Kobe Ledet, Fall 2012

Natalia Sidorovskaia
Chair of the Committee, Master of Science in Physics, UL Lafayette
Fatemeh Karbalaei Saleh, Spring 2014

Member of the Committee, Master of Science in Physics, UL Lafayette
Jack Manuel, Summer 2011
Boyko Perfanov, Fall 2012
Joshua Riner, Spring 2011
Mark Roberts, Spring 2011
Lika Kobakhidze, Fall 2012
Prasanna Gunawardana, Spring 2016
Stephen Williams, Spring 2016
Mathbar Raut, Spring 2016
Jacque Meche, Fall 2016

Funding

External Funding

James B. Dent
• Co-PI with Dr. Hollerman on a $6000 LYRA award for undergraduate student John Miller, 2015.
• PFUND Grant, $8050, 2013.

Gary Glass
• Installation of Magnetic Quadrupole Focusing System at The University of Massachusetts – Lowell, 2011 $114,000.
• Installation of Magnetic Quadrupole Doublet Focusing System at Amethyst Research Corporation, Office of Naval Research, 2010-2011, $206,000.

William A. Hollerman
• Low Energy Nuclear Astrophysics Research for Student John Miller Using the 5SDH-2 Pelletron at the Louisiana Accelerator Center, Louisiana Space Grant (LASPACE) Undergraduate Research Assistantship (LURA), $6,000, 2015-2016, Principal Investigator.
• Feasibility of EuD₄TEA-Based Sensors to Detect Space Radiation, Louisiana Space Grant (LaSPACE) Consortium, Additional Funds of $6,500 for Total of $35,200, 2014-2015, Principal Investigator.
• Special Travel for Aerospace Researchers and Students (STARS), Louisiana NASA Experimental Program to Stimulate Competitive Research (EPSCOR), Principal Investigator.
• Building a Robust Geiger Counter to Fly on the HASP Balloon, Louisiana Space Grant (LaSPACE) Consortium, $52,150, 2009-2011, Principal Investigator.
• Developing Prototype Hybrid Luminescent Ammunition (HLA). U.S. Army Armament Research, Development and Engineering Center (ARDEC), Picatinny Arsenal, New Jersey, $630,000, 2009-2011, Principal Investigator.
• Collecting High-Speed Camera Data from Microwave Induced Visible Electroluminescence, Links with Industry. Research Centers, and National Labs (LINK), Louisiana Board of Regents, $4,000, Principal Investigator.

John Meriwether

Gabriele Morra
• A Fast Multipole Approach to Modeling Tsunami Waves. Board of Regents - pFund. $10,000 (PI), 2014-....
• Computational Development of the Fast Multipole Boundary Element Method for Modeling Three Dimensional Geodynamic Problems, Board of Regents - RCS. $119,000 (PI), 2014-…
• Planet-scale reorganizations of the plate–mantle system. Australian Research Council Discovery Grant, AUD 300,000 ($262,747 USD), 2009-2012

Andi Petculescu
• Infrasound Sensing on Mars Based on Deployable Dome Structures: A Feasibility Study. (Louisiana Space Consortium GSRA Award #101623), $7,775, 2015.
• Pilot Study for a Distributed Acoustic Interface for Manned Space Habitats Louisiana Space Consortium GSRA Award #101623, $33,700, awarded in 2015.
• Computational Fluid Dynamics Simulation of Thunder on Titan (Louisiana Space Consortium LURA Award #51968), $6,000, 2011-2012.
• Pilot Study: Modeling Thunder on Titan, as a Tool to Corroborate Titanian Lightning (Louisiana Space Consortium LURA Award #44305), $6,000, 2011-2012.

Gabriela Petculescu
• “Failure prevention for sensitized structural alloys used in coastal transportation” TIRE-DoT, 30K, 07/2016-06/2017.
• Contract: SFRF–ONR, includes $22,000, laboratory, and summer student, May-July 2015.
• SFRF – ONR, including $20,000, laboratory space with instrumentation not available at ULL, samples, and physics student for 10 weeks, May-July 2014.
• ONR Summer Fellowship, total amount $102,000, (2008-2013).
• NSF-LINK award NSF (2013)-LINK-81, amount $6,000, 2013
• RCS grant, LA Board of Regents Support Fund, amount: $121,000, 2007-2011.
• NASA–LaSPACE award # NNX10AI40H, amount: $20,000, 2010-2011.

Natalia Sidorovskaia
• Littoral Acoustic Demonstration Center (LADC)”, $5,238,174; BP/GOMRI, RFP IV (awarded for 2015-2017, Lead PI).
• “Development of the Ocean Acoustic Propagation Model for the Louisiana Immersive Technologies Enterprise (LITE) environment.” Information Technology Initiative (ITI), UL Lafayette, $49,164.
• Source Characterization Study 2007 (Data Analysis/Modeling Component) Amnd. 2; OGP; $34,016 to UL, August 2010-June, 2011.
• Travel grant from the Russian ministry of education, $10,000 (2012-2013).
• Travel Grant from the organizing committee of the International Conference on “The Effects of Noise on Aquatic Life.” Budapest, August 11-16, 2013, $3,000 (2013).
• Travel Grant from the American Petroleum Institution $3,000 (2013).

Rui Zhang
• Sinopec Houston LLC, Research for New Real Time Seismic Processing Technique, 2016-2017, $16,000

Awards / Honors

James B. Dent
• Outstanding Advisor Award from the University of Louisiana at Lafayette, 2015.
• KITP Scholar (Kavli Institute of Theoretical Physics at the University of California at Santa Barbara), 2015.
• The Dr. and Mrs. Sammie W. Cosper Endowed Professorship, 2014-2017.
• Blavatnik Award Nominee for UL-Lafayette, 2014.
• Rising Star Award for the College of Sciences, 2014.
• Blavatnik Nominee for UL-Lafayette, 2013.

Gary A. Glass
• Dr. and Mrs. Sammie W. Cosper/BORSF Endowed Professor of Physics, 2008-2011.

William A. Hollerman
• Innovator Award, UL Lafayette Research Office. Completed research as part of the non-burning tracer patent, May 2013.

Gabriele Morra
• Hensarling/Chapman Endowed Professorship in Geology from the School of Geosciences at UL Lafayette, 2016-2018.

Gabriela Petculescu
• National award: Office of Naval Research (ONR) Summer Fellowship (SFFP), May-July 2015.
• Innovator award – UL Lafayette for academic year 2013-2014.

Natalia Sidorovskaia

Other Professional Activities

James B. Dent
• TedX speaker at TedX Vermilionville, September 2015 in Lafayette, LA
  Youtube link: https://www.youtube.com/watch?v=pFAPepiieIA.

Memberships
• Official Member of the Mitchell Institute Neutrino Experiment at a Reactor (MINER).
• Member, American Physical Society.
• Member, American Association of Physics Teachers.

William A. Hollerman
Patents

Memberships
• American Institute of Aeronautics and Astronautics
• IEEE Nuclear and Plasma Society
• International Society for Optical Engineering (SPIE)
• Sigma Pi Sigma, Physics Honor Society

Gabriele Morra
Memberships
• American Association of Physics Teachers
• American Geophysical Union
• European Geosciences Union
• Geological Society of America

Andi Petculescu
Memberships
Gabriela Petculescu
Memberships
- Acoustical Society of America
- American Physical Society
- Sigma Xi, The Scientific Research Society
- Research program evaluation for promotion for an outside institution, 2015.
- National Science Foundation Graduate Research Fellowship Program, Jan. 2015, National Panel Review for proposal review and selection.
- Part of approved proposal to Oak Ridge National Lab CNMS, ID: CNMS2014-256. Project Title: “Investigation into the BCC Structure of Iron and its anomalies above 400 K.” This grant provides access to the User Nanoscience Research Program at the Center for Nanophase Materials Sciences (CNMS) for one week for our group.

Natalia Sidorovskaia
Memberships
- Acoustical Society of America
- American Geophysical Union
- Sigma Pi Sigma National Physics Honor Society
- Active in the Technical Committees on Underwater Acoustics and Signal Processing
- Participated in organizing the 75th Anniversary meeting of Acoustical Society of America; - Chairing the session at the 75th Anniversary meeting of Acoustical Society of America.
- Participated in four Technical Program Organizing Meetings for Signal Processing, Underwater acoustics, and Animal Bioacoustics Technical Committees.

Rui Zhang
Membership
- Society of Exploration Geophysics
- American Geophysical Union
- European Association of Geoscientists & Engineers
Outreach

James B. Dent

Head of and Speaker for the Physics portion of Science Day

Member of the College of Sciences Recruitment team

Organizer of a teaching workshop for area high school teachers, Summer 2016

Talk at Comeaux High School, Spring 2016

Talk at Fontainebleau High School, Spring 2016

William A. Hollerman

- Louisiana Board of Regents Speaking of Science (SoS):
  - *Rockets and Starships: Overview of Space Travel for the 21st Century*:
    - Lake Castle Private School, Madisonville, LA, October 26, 2016.

  - *Understanding Wintergreen Candy*:
    - Lake Castle Private School, Madisonville, LA, January 12, 2016.
    - Judice Middle School, Duson, LA, February 22, 2016.


Gabriela Petculescu

Observe the Moon Night (InOMN) at the Lafayette Science Museum - Optics Demonstrations, Oct 8th, 2016.
ULL Chem-E Car (held by AIChE) - counsel for kinematic motion with variable acceleration, numerical solutions, 2016.

National History Day: Marie Curie project - interviewed by student from the Academy of Sacred Heart (won regional and state competition), April 2016.

Natalia Sidorovskaia