

The Hispanic Physicist

The Newsletter of the National Society of Hispanic Physicists

Year 17

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2014 Edward A. Bouchet Award Recipient

Luz Martinez-Miranda
University of Maryland, College Park

Citation:

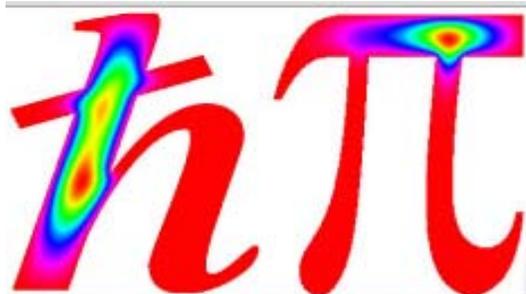
"For her pioneering research on liquid crystals, in particular on the interactions of ordered liquid crystals and nanoparticles and their applications and extensive effort in mentoring and increasing diversity in physics and materials science."

Background:

Luz J. Martínez-Miranda received her BS and MS in Physics from the Universidad de Puerto Rico in Río Piedras and her PhD from MIT. She received her BMus in music performance from the Conservatorio de Música of Puerto Rico. She did her postdoctoral work at the University of California at Berkeley. At present, she is an associate professor in the Department of Materials Science and Engineering at the University of Maryland in College Park. Prof. Martínez-Miranda's research involves the study of the interaction, both local and long-range, of ordered (smectic) liquid crystals with different nanoparticles, which is important for diverse applications, such as photovoltaics and biological applications. She has been a visiting professor at the Liquid Crystal Institute at Kent State University, at the Centre de Recherche Paul Pascal, CNRS, in France and at the University of Chile in Santiago because of her work with liquid crystals. Dr Martínez-Miranda is the president of the National Society of Hispanic Physicists. She has served in the CSWP and the COM of the APS and on the board for the Society for the Advancement of Chicanos and Native Americans in Science (SACNAS). She is a fellow of the AAAS and the APS.

Congratulations Luz!

Congratulate Luz: ljmm@umd.edu



This Month

[Jorge Muñoz](#)

"Life as a grad student at Caltech"

HISPANIC PHYSICISTS
PROFILING OUTSTANDING RESEARCHERS

<http://www.visual-physics.org/Hispanic-Physicists/HP.html>

In this interview Dr. Jorge Muñoz tells us about his origins, his area of research and life as a graduate student at Caltech in the area of materials. Dr. Muñoz graduated in 2013 and went to work for Intel. **Congratulate Jorge: jorge.munoz@alumni.caltech.edu**

Please forward to local high school teachers!

REU hosted by Council on Undergraduate Research's Physics and Astronomy division

Applications are due by March 21.



Members of the Council on Undergraduate Research's Physics and Astronomy division will be hosting a new REU program funded by the National Science Foundation. This ten week program provides undergraduates the opportunity to participate in experimental and computational projects from diverse areas of physics and astronomy. We are interested in applications submitted by undergraduates from any university, with a goal of serving students enrolled at institutions where research opportunities for undergraduates are minimal or non-existent. This includes, but is not limited to, students attending community colleges and four-year colleges/universities. Women and students from traditionally underrepresented groups are also encouraged to apply. Do you know of a student who would benefit from this REU experience? If so, please encourage them to visit our website at: <http://www.cwu.edu/physics/reuprogram>

Mount Holyoke College - Postdoctoral Researcher in Nanomagnetism



Applications are invited for a postdoctoral fellowship with Katherine Aidala in the physics department at Mount Holyoke College, in the field of nanomagnetism. Scanning probe microscopy is used to both manipulate and measure nanostructures, using the tip to apply a local, circular field. (see <http://www.mtholyoke.edu/~kaidala/>). The project is in collaboration with Prof. Mark Tuominen at the neighboring University of Massachusetts, Amherst. Mentored teaching opportunities will be provided for applicants seeking teaching experience in a liberal arts college environment.

The qualified applicant will have a Ph.D. in physics or a related discipline with a strong background in experimental condensed matter physics or nanoscience more broadly. Previous experience with nanomagnetism, nanofabrication, and/or scanning probe microscopy is preferred, though talented applicants with a desire to work at a liberal arts college will be considered from a wider range of backgrounds. To apply, please arrange to send your curriculum vitae, two letters of recommendation, and a cover letter to Sarah Byrne (sbyrne@mtholyoke.edu). Review of applications will begin in March, and a flexible start date around May is anticipated.

Mount Holyoke College is a selective liberal arts college for undergraduate women in the Pioneer Valley of Western Massachusetts, under two hours by car from Boston. Mount Holyoke is a member of the 5-College Consortium along with Smith, Hampshire, and Amherst Colleges and the University of Massachusetts, providing a vibrant community of scholars and scientists and local access to advanced instrumentation and facilities. Mount Holyoke is committed to fostering multicultural diversity and awareness in its faculty, staff, and student body and is an Affirmative Action, Equal Opportunity Employer. Women and people of color are especially encouraged to apply.

National Science Foundation - Program Director - Electromagnetic Spectrum Management Unit



The NSF is seeking a qualified candidate for the position of Program Director in the Electromagnetic Spectrum Management Unit (ESMU), which is housed within Division of Astronomical Sciences (AST), Directorate for Mathematical and Physical Sciences (MPS). The objective of NSF's ESMU is to ensure the access of the scientific community to portions of the radio spectrum that are needed for research purposes. The ESMU staff accomplishes its objective by representing the interests of the NSF and the scientific community in various national and international regulatory bodies, including the National Telecommunications and Information Administration (NTIA), the Federal Communications Commission (FCC), the Inter-American Telecommunication Commission (CITEL), and the International Telecommunication Union (ITU); and by communicating with the science community about spectrum-related issues that impact scientific use of the radio spectrum. ESMU provides spectrum management support for the entire NSF, including radio astronomy, remote sensing, satellite systems, oceanography, ionospheric and magnetospheric radars, and routine operational systems that require spectrum support. Although the primary focus of this position is on electromagnetic spectrum management, the selected candidate may also be called on to assist or lead in managing portions of NSF's "Enhancing Access to the Radio Spectrum" (EARS) grant program. EARS supports research into innovative ways to use and manage the electromagnetic spectrum for increased access, and is intended to be responsive to the Nation's broadband goals. Program management of EARS may include soliciting grant proposals, interfacing with current and prospective Principal Investigators (PIs), organizing and running proposal review panels, and making funding recommendations.

Applications close on March 31, 2014. Application instructions and further details may be found through USAJOBS, at <https://www.usajobs.gov/GetJob/ViewDetails/361729900>

Exotic Beam Summer School, July 27 - Aug. 1, 2014 at Oak Ridge National Lab

Applications are now being accepted for the next Exotic Beam Summer School, to be held from July 27 - Aug. 1, 2014 at Oak Ridge National Lab in Oak Ridge, Tennessee. This will be the thirteenth in the series of annual summer schools devoted to the exciting developments in the study of exotic nuclei. The school is jointly organized by ANL, LBNL, LLNL, MSU, ORNL, and ARUNA. Development of the Facility for Rare Isotope Beams (FRIB) continues and, along with other existing and planned exotic beam facilities around the world, will present wonderful opportunities for future discoveries and technical innovations. The school will introduce students and young researchers to the various facets of the science of exotic nuclei including nuclear structure, nuclear astrophysics, fundamental interactions, and the application of nuclear science and technology in the modern world. To APPLY, to see the schedule and speakers, and more details, please visit http://fribusers.org/4_GATHERINGS/2_SCHOOLS/2014/EBSS2014.html



Graduate Internship opportunities at Oak Ridge National Laboratory

The Computational Data Analytics Research Group (CDAG) at the Oak Ridge National Laboratory (ORNL) has multiple openings for Graduate Interns in the field of Data Analytics Research. https://www3.ornl.gov/ORNL_TOppS/Posting/Details/516

The Computing and Computational Science Directorate (CCSD) at ORNL oversees ORNL's store of computing power and its talented staff of computational scientists and mathematicians. CCSD has multiple Graduate Internship openings in the fields of: High-Performance File Systems and Storage; Communications Middleware; HPC Languages and Tools (programming languages, compilers, runtimes, and tools for high-performance computers); Large-Scale and Data-Intensive, Collaborative, Scientific Applications: https://www3.ornl.gov/ORNL_TOppS/Posting/Details/515



SunShot Postdoctoral Research Awards - The U.S. Department of Energy

Application Deadline: April 30, 2014



Solar research opportunities for recent Ph.D. graduates. The SunShot Postdoctoral Research Awards support innovative solar research by offering recent Ph.D. recipients the opportunity to conduct applied R&D at universities, national laboratories, and other research facilities.

Award Highlights: Yearly stipend with two years of support, Research and travel allowance, Health insurance, Relocation allowance.

Requirements: U.S. Citizenship or lawful permanent resident status, Economics, Social Science, Computer Science, Engineering, Materials Science, Physics, and Chemistry are just a few of the disciplines that may apply, Have a Ph.D. for no more than five years. **Application Deadline: April 30, 2014.** For more information and to apply, visit: <http://www1.eere.energy.gov/education/postdoctoral>

Scholarships for Gordon Research Conference on Image Science - June 8-13, 2014

This GRC will present a unique opportunity for advanced, interdisciplinary training of young scientists interested in image science in general and the application of image science principles to further advances in disease detection, clinical management, and clinical trials methodologies to evaluate imaging systems or use imaging endpoints.



We anticipate being able to sponsor scholarships for early-career investigators as a means of ensuring significant participation by the most promising young scientists in the field. This GRC will offer them the opportunity to develop collaborations and supportive mentoring relationships with senior researchers. There are no extra charges or special meal tickets involved, so students are guaranteed a place at every meal table alongside more experienced researchers. In addition, Gordon Research Conferences are known for their lengthy discussion periods during the formal sessions as well as free times each afternoon for informal discussions and networking. This is a unique learning/mentoring environment that most other large conferences cannot provide.

We are making a concerted effort to encourage attendance by women, under-represented minorities, and persons with disabilities. Please let me know how we can reach your membership, particularly students, post-docs and young investigators, to notify them of this meeting and the scholarships anticipated for under-represented groups. The meeting website is here: <http://www.grc.org/programs.aspx?year=2014&program=imagesci>

Am. Assoc. of Physicists in Medicine: Opportunities

- 2014 Summer Undergraduate Fellowship Program
- 2014 DREAM
- AAPM Research Seed Grant 2014
- 2014 AAPM Graduate Fellowship



Complete list: <http://www.aapm.org/education/GrantsFellowships/Default.aspx>

Contact: Paul Gueye, Hampton University, Physics Department - 102E, Hampton, VA 23668, (757) 727-5542, (757) 728-6910, paul.gueye@hamptonu.edu

2014 Gordon Research Conference on Physics Research and Education: The Complex Intersection of Biology and Physics (June 8-13, 2014 at Mount Holyoke College.)



Please consider attending the 2014 Gordon Research Conference on Physics Research and Education: The Complex Intersection of Biology and Physics (June 8-13, 2014 at Mount Holyoke College.) The full program as well as the link to apply and register for the conference is available at

<https://www.grc.org/programs.aspx?year=2014&program=physres>.

The fields of biological physics and the physics education of biology and other health-science students have experienced tremendous growth in recent years. New findings, applications, and technologies in biological and medical physics are having far reaching consequences that affect and influence the science community, the education of future scientists and health-care workers, and the general population. As a result, leaders in Physics Education Research have begun to focus their attention on the specific needs of students in the biological sciences, the different ways physicists and biologists view the nature of science and the interactions of scientists in these disciplines.

This conference is an opportunity for:

- Biophysicists and medical physicists to discuss discoveries, technologies, and experiments that excite students and emphasize the physics content in ways that help physicists use them in their teaching at all levels
- Teachers of physics to discuss the development of new laboratories and curricula by infusing them with biologically- and medically-related topics
- Physics education researchers and teachers of physics to reflect on: the type of content that is appropriate and motivational for biology and health-science majors, the types of skills that are important for this population and how these skills differ from engineers and physicists, and the types of resources that exist for teaching at the interface of physics and biology (e.g. textbooks, labs, assessment tools, etc.).

Speakers and Discussants: Howard Berg, Eric Brewster, Juan R. Burciaga, Ashley R. Carter, Carlos Castro, Ruth Chabay, Todd Cooke, Catherine H. Crouch, Enrique M. De La Cruz, Jennifer Ross, Kenneth Heller, Robert C. Hilborn, Jonathon Howard, Barbara Hughey, Wonmuk Hwang, Mike Klymkowsky, Jani Kondev, Wolfgang Losert, Dawn C. Meredith, Ross Nehm, Philip Nelson, Manu O. Platt, Edward F. Redish, Mark Reeves, Sean P. Robinson, Kimberly D Tanner, Steven Vogel, Steven Wasserman, David A. Weitz, Ralf Widenhorn, Edit Yerushalmi.

The registration fee covers registration, lodging, and meals. A limited amount of funding is available to defray costs for graduate students, postdoctoral fellows, two year college faculty, minority serving institution faculty, underrepresented minority faculty and students, female faculty and students, early career investigators, and members of specific professional organizations. If you are interested in requesting this funding please fill out the form at:

<https://docs.google.com/forms/d/1ZTArk5V4S1fjYxWTTbhHco1UMch58tnBYZzLSO5OY/viewform>

NSF Program Director in the Theoretical Elementary Particle and Theoretical Astrophysics and Cosmology Physics



National Science Foundation
Directorate for Mathematical & Physical Sciences

The Physics Division at the National Science Foundation is seeking applicants

for the position of Program Director in the Theoretical Elementary Particle and Theoretical Astrophysics and Cosmology Physics program. Reference to the posting is given on the NSF Mathematical & Physical Sciences Directorate webpage at the URL http://www.nsf.gov/publications/vacancy.jsp?org=MPS&nsf_org=MPS. Details about the program, and all programs in the Physics Division are given on the PHY page as well at <http://www.nsf.gov/mps/phy/about.jsp>.

The Hispanic Physicist. Published whenever there is news and the Editor has enough time. Send news, letters, congratulations, etc. to Jorge A. Lopez, jorgelopez@utep.edu. <http://www.hispanicphysicists.org/>.