

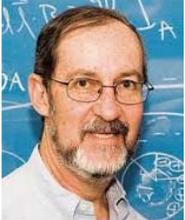


The Hispanic Physicist

The Newsletter of the National Society of Hispanic Physicists

Year 20

November 9, 2015



Luis Mochán

New APS Fellows

NSHP congratulates Jorge Morfin, from Fermi National Accelerator Lab, and Luis Mochán, from Instituto de Ciencias Físicas-UNAM, for being elected to Fellows of International Physics of the American Physical Society.



Jorge Morfin

Jorge Morfin citation reads "For uniting theorists and experimentalists, particle and nuclear physicists, and physicists from North, Central and South America in understanding strong interactions in the nucleon, in the nucleus, and in neutrino interactions on nuclei." Luis Mochán received the honor "For pioneering and imaginative work on the theoretical description of optical properties of surfaces and nanostructured materials, as well as for continuing efforts to communicate physics to a broad audience."

Congratulations to Jorge and Luis from NSHP!

Argonne-INCREASE partnership opens collaboration



Scientific solutions to global issues increasingly rely on the powerful facilities, tools and expertise located on national laboratory campuses. Researchers at historically black colleges and universities (HBCUs) and other minority-serving institutions (MSIs) may not have the same networks and access as others. Tucked away in academic silos, many lack direct connections to use these vital resources. See full article of Justin Breaux here: <http://www.anl.gov/articles/keys-access-argonne-increase-partnership-opens-doors-collaboration>

2016 Summer Internships - U.S. Department of Homeland Security

Undergraduate students receive a \$6,000 stipend plus travel expenses, Graduate students receive a \$7,000 stipend plus travel expenses. 10-week



research experiences are offered at: Coast Guard Research and Development Center • Homeland Security Studies and Analysis Institute • Customs and Borders Protection • Engineer Research and Development Center • Federal Emergency Management Agency • National Security Technologies • National Urban Security Technology Laboratory • Naval Research Laboratory • Transportation Security Laboratory • DOE National Laboratories: Argonne, Berkeley, Livermore, Los Alamos, Oak Ridge, Pacific Northwest, and Sandia.

Areas of research: Engineering, computer science, mathematics, physics, chemistry, biological / life sciences, environmental science, emergency and incident management, social sciences, and more.

U.S. citizenship required, Application deadline: December 16, 2015, 11:59PM EST

How to Apply: Applications and supporting materials must be submitted at www.zintellelect.com/Posting/Details/1468
Detailed information about the internships can be found at <http://www.orau.gov/dhseducation/internships/>



COLORADO SCHOOL OF MINES
EARTH • ENERGY • ENVIRONMENT

Physics Assistant Professor – Condensed Matter Physics

The Department of Physics anticipates filling at least one tenure-track Assistant Professor position in experimental condensed matter physics, to begin as soon as the Fall 2016 semester. Appointments at a more senior level may be considered for exceptional candidates. We are interested in a candidate or candidates who can collaborate with our experimental and theoretical faculty at the frontiers of condensed matter physics. The current research activities and strengths of the department can be found at <http://physics.mines.edu>.

Responsibilities: We seek candidates who will develop externally funded and internationally recognized research programs in areas that complement the current research efforts in the department and who will collaborate well with colleagues both in and outside the department.

Qualifications: Candidates must have earned a doctoral degree in physics or a related field and the demonstrated potential for successful teaching, scholarship and service. The successful candidate must have a strong commitment to undergraduate/graduate education, excellent communication skills, and excellent interpersonal skills to work effectively as a member of a teaching team.

How to Apply: Applicants must submit a cover letter, complete curriculum vitae, a plan of proposed research plan, a description of teaching philosophy and methods, and the names and contact information (mailing and email addresses, phone number) for three professional references. The research and teaching statements should describe both the intellectual merit and some broader impacts of the plans (e.g. opportunities for industrial and community outreach, mentoring, promoting diversity, or development of facilities). Send materials to: Colorado School of Mines, Human Resources Office, Search **16-CASE4X**, 1500 Illinois Street, Golden, CO 80401, Fax: (303) 384-2025. Electronic applications will be accepted at fsearch@mines.edu.

Review of applications will begin by December 1, 2015. For inquiries regarding the position, please contact the chair of the search committee: Professor Chip Durfee, cdurfee@mines.edu.

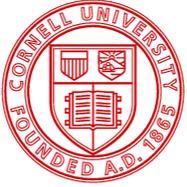
Physics Teaching Assistant/Associate Professor

Colorado School of Mines invites applications for the position of Teaching Assistant Professor or Teaching Associate Professor position in the Department of Physics. This position does not involve formal tenure. However, the position occupies a budget line in the department, and will be a continuing appointment.

Responsibilities: The primary responsibility is delivering introductory calculus-based physics using a studio approach. In addition, the successful candidate may be assigned to teach other parts of the undergraduate curriculum as appropriate. Additional responsibilities include training and supervising teaching assistants, departmental and campus committee service, and advising.

Qualifications: Candidates must have earned a doctoral degree (preferred) in physics or a related field and must have a strong commitment to undergraduate education, excellent communication skills, and excellent interpersonal skills to work effectively as a member of a teaching team.

How to Apply: Applicants must submit a CV, a statement of teaching philosophy and experience, and the names of three professional references to: Colorado School of Mines, Human Resources Office, Search **16-111100**, 1500 Illinois Street, Golden, CO 80401, Fax: (303) 384-2025. Electronic applications will be accepted at fsearch@mines.edu. **Review of applications will begin by December 1, 2015.** Questions about this position may be directed to Dr. Pat Kohl (pkohl@mines.edu), Department of Physics: <http://physics.mines.edu>



Cornell University Cornell High Energy Synchrotron Source

Staff Scientist at MacCHESS

The Macromolecular Diffraction Facility of the Cornell High-Energy Synchrotron Source (MacCHESS) has an opening for a Staff Scientist (Research Associate) to pursue the development of novel techniques in x-ray scattering as applied to structural biology, and to support users at

MacCHESS. There will also be opportunities to pursue projects in structural biology, using current crystallographic and SAXS methods. Areas of particular interest are serial microcrystallography and study of macromolecular dynamics through diffuse scattering and/or trapping of intermediate states of reactions *in crystallo*. Other research in the lab includes BioSAXS (focus areas include time-resolved and cryogenic techniques), microfluidics, pressure cryocooling, and user interfaces for beamline operation. A Ph.D. in structural biology, biophysics, or a related field, and at least 3 years of experience beyond the degree in a relevant field is required. A solid publication record is essential, and experience working at a synchrotron facility is highly desirable. Excellent communication skills are a must, including fluency in the English language. Appointments are nominally for three years with the possibility for renewal, subject to mutual satisfaction and the availability of funds.

Applications should be submitted at <http://academicjobsonline.org/> (posting #6664) and should include a cover letter, a CV, a list of publications, and a detailed summary of research experience and interests. Applicants must arrange to have at least three letters of recommendation sent, as per instructions on the academicjobsonline website. The starting date is negotiable, but not before March 2016.



A Call to Minority Mathematicians from Dr. Jim Gates

Dear Colleague,

I am a member of the "Transforming Post Secondary Education" of Mathematics group, <http://www.tpsemath.org/>, which is an organization driving a national discussion of goals around the teaching of undergraduate mathematics especially in the first two years after high school. This is, of course, a wide ranging subject covering topics such as access, alternative pathways, curriculum reform, pedagogy, and the use of information technology, among other foci of attention. TPSE has the goal of allowing the mathematics community to take charge of this discussion and ultimately decide on directions to be undertaken.

As can be seen from the webpage at http://www.tpsemath.org/regional_mtgs on-line, TPSE has been organizing a series of regional meetings in order to seek the input of the mathematics community. As noted at the second website, there is an approaching meeting to be held at Duke University in the period of 5-6 Dec 2015. Also I do not have to tell you that there are national and international trends that point toward putting a premium on the enhanced effectiveness of teaching mathematics across a broad spectrum. The globalized economy with an emphasis of innovation as a major driver for the creation of new wealth, points toward STEM disciplines being at the center of opening employment opportunities for the citizens of the USA to secure the American Dream into this new millennium. As was noted in the 2012 report "Engage to Excel" ...

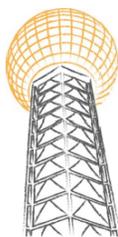
See complete letter from Professor Gates here:

<http://us10.campaign-archive2.com/?u=af0188a0bbeafe8d0055c2589&id=bfd1b38627&e=446b1adaf0>.

Please forward to your colleagues and contact Dr. Gates at: gatess@wam.umd.edu.

Nuclear Structure 2016

Preliminary Announcement



We are pleased to announce that the Physics Division of Oak Ridge National Laboratory (ORNL) will host the conference **Nuclear Structure 2016** (NS2016) at the Hilton Hotel in downtown Knoxville, on July 24 --- 29, 2016. NS2016 will be the 16th in this series of biennial conferences organized by

North American national laboratories. Previous meetings have been held in East Lansing (2008), Berkeley (2010), Argonne (2012), and most recently in Vancouver (2014).

The scientific program will be devoted to the latest research and development in experimental and theoretical nuclear structure physics, with emphasis on the properties of nuclei at the extremes of isospin, excitation energy, mass, and angular momentum.

The conference will begin with a reception in the evening of Sunday, July 24th and the formal conference program will finish on the afternoon of Friday, July 29th. NS2016 will be followed by the **Neutrinos in Nuclear Physics Workshop** that will extend into Sunday, July 31th. Please reserve these dates on your calendar if you plan to attend. A conference website is under construction and an announcement with more details will be sent soon. We look forward to seeing you in Knoxville!

Alfredo Galindo-Uribarri

(On behalf of the Local Organizing Committee) Inquiries: ns2016@ornl.gov



NOAA

NOAA scholarships for undergraduate students

The National Oceanic and Atmospheric Administration (NOAA) is pleased to announce the availability of scholarships for undergraduate students majoring in disciplines related to oceanic and atmospheric science, research, or technology, and supportive of the purposes of NOAA's programs and mission. Over 100 students are selected each year for participation in the **Ernest F. Hollings (Hollings)** and **Educational Partnership Program (EPP)** scholarship programs. These scholarships include support for two years of undergraduate study and summer internship opportunities at NOAA facilities across the country.

For information on program benefits and how to apply, visit our web sites:

http://www.epp.noaa.gov/ssp_undergrad_page.html

Application Deadline: **January 29, 2016**

Ernest F. Hollings Undergraduate Scholarship: <http://www.oesd.noaa.gov/scholarships/hollings.html>

Application Deadline: **January 29, 2016**

Eligibility Requirements:

- US Citizen
- 3.0 GPA (Hollings) or 3.2 GPA (EPP)
- Full-time second year student at an accredited four-year undergraduate program or third year student at a five-year undergraduate program
- Majoring in NOAA mission disciplines, including but not limited to: atmospheric science, biology, cartography, chemistry, computer science, education, engineering, environmental science, geodesy, geography, marine science, mathematics, meteorology, oceanography, physical science, photogrammetry, physics, etc.
- Enrolled at a Minority Serving Institution (EPP Scholarship only)

For further information, contact the Office of Education Scholarship Programs at: StudentScholarshipPrograms@noaa.gov or (301) 628-2913.

RESEARCH EXPERIENCES FOR UNDERGRADUATES

Yale University | Summer 2016



INTERDISCIPLINARY RESEARCH

- Atomic scale design, control and characterization of complex oxide interfaces
- studying the novel chemical, electronic, and magnetic properties of nanomaterials
- Multi-scale surface engineering with bulk metallic glasses
- Theoretical modeling of nanomaterials, surfaces, and interfaces at the atomic level
- Synthesis of materials at the atomic scale

Applications due by Feb. 1, 2016

http://crisp.southernct.edu/index.php/Research_Experiences

 *Center for Research on Interface Structures and Phenomena*

The CRISP REU program provides students with the opportunity to conduct team-based interdisciplinary research. During the course of this eight-week research program, REU students will be conducting research under the advisement of university faculty and researchers.

RESIDENTIAL REU PROGRAM: June 6– August 1, 2016

STIPEND:

Each REU participant will receive a stipend of **\$4000** (which includes \$1000 for food). This is a residential program and university housing will be provided on the Yale campus.

ELIGIBILITY:

This program is open to highly motivated undergraduate students who have completed their junior year, although consideration is given to exceptionally well qualified underclassmen. **US citizenship or permanent residency is required.** Minorities, women and persons with disabilities are strongly encouraged to apply.

APPLICATION PROCESS:

Starting **Nov. 1** candidates **must** apply directly to the Yale SURF program through the Leadership Alliance at www.theleadershipalliance.org. Students **must** also complete the CRISP supplementary application to indicate interest available at http://crisp.southernct.edu/index.php/Research_Experiences.



CRISP is an NSF-funded Materials Research Science & Engineering Center

2016 ChemMatCARS Faculty Development Summer Research Program

CALL FOR PROPOSALS: The ChemMatCARS sector (<https://chemmatcars.uchicago.edu/>) at the Advanced Photon Source (APS) at Argonne National Laboratory (ANL) is sponsoring summer research experiences for faculty of Minority Serving Institutions (MSIs) such as Historically Black Colleges and Universities (HBCUs), Hispanic-Serving Institutions (HSIs), Tribal Colleges and Universities (TCUs), Alaska Native-Serving Institutions and Native Hawaiian-Serving Institutions (ANNHSIs) and Asian American and Native American Pacific Islander Serving Institutions (AANAPISIs). The aim of our program is to foster research collaborations between ChemMatCARS and MSI faculty.

Interested faculty should submit a proposal by **January 20, 2016, 5:00 p.m. CST**. Selected applicants will perform research and work with ChemMatCARS research staff for a four-week period. Faculty applicants are encouraged to involve a talented undergraduate or graduate student in this research experience if funding for the student can be supplied by the MSI. **Application deadline: January 20, 2016, 5:00 p.m. CST**

Eligibility and benefits: The program is open to full-time faculty at post-secondary institutions designated by the federal government as MSIs. The program will sponsor round-trip transportation to ANL, on-site lodging, a one-month stipend of \$3,000.00, and an allowance for materials and supplies of max. \$2,000.00.

Duration and location: The successful applicant will be hosted by ChemMatCARS for a continuous four-week period from **mid-June to mid-July 2016**; exact dates will be negotiated with the applicants following proposal acceptance. An extension to 6 weeks is possible with the additional two weeks financially supported by the MSI.

Research area: 2016 research project proposals should focus on high precision crystallography to study microcrystals, charge (i.e., electron) densities, bonding, resonant diffraction, and/or highpressure single crystal diffraction for structure elucidation in the area of chemistry and materials science. Applicants may be novices in crystallography with synthetic projects that benefit from crystallographic characterization. Alternatively, they may have advanced knowledge of diffraction methods and crystallography requiring complex crystallography experiments to advance their research.

Inquiries and application submission: For general program information and application submission please contact **Dr. Binhua Lin**, ChemMatCARS, lin@cars.uchicago.edu, (630) 252-0463. Lead contact for the Advanced Crystallography experiments is **Dr. Yu-Sheng Chen**, yschen@cars.uchicago.edu, (630) 252-0471.

The Biophysical Society Summer Research Program

The Biophysical Society Summer Research Program is an 11 week course for undergraduate minority students, disadvantaged students, and students with disabilities, that offers the opportunity to learn from top scientists from all over the country. Students attend lectures by local and visiting professors and engage in hands on lab work at the University of North Carolina's Chapel Hill campus. Students will have an opportunity to strengthen their presentation skills, prepare for the GRE's, develop a personal statement, and receive invaluable career advice while gaining graduate-level research experience. Several previous participants have even published alongside leading researchers as a result of their Summer Program experience. While the focus is on rigorous academics and learning, the social experience that results from bringing students together is also an integral part of the program. The 2016 Summer Program will take place from May 10-July 21. For more information and to apply visit biophysics.org.

Priority Application Deadline*: February 15, 2016. Course expenses, travel costs, meals, and housing are covered for program participants. Contact: Daniel McNulty, Programs & Outreach Coordinator| Biophysical Society, 11400 Rockville Pike, Suite 800, Rockville, MD 20852, 240-290-5611 | Fax: 240-290-5555.





Stony Brook University Center for Inclusive Education and The Graduate School Recruitment Event

On **Friday, November 20th**, the Stony Brook University Center for Inclusive Education and The Graduate School will be sponsoring a recruitment event at our beautiful Long Island campus. This is a special opportunity for interested applicants to meet our graduate students, post docs and faculty to learn about exactly what it means to pursue a Ph.D. There will also be workshops on the admissions processes as well as funding your degree. We will also have a Networking Session during lunch where students can speak to faculty, staff and students from several departments about their particular graduate programs as well as available **summer research opportunities** here on campus.

All students that attend and plan to apply for fall 2016 start will be eligible for an Application Fee Waiver.

Research universities like Stony Brook are built on a synergy among outstanding faculty, students, and staff, and graduate students from around the world play an essential role in bringing passion, diversity, and creativity to the community of scholars. We invite your students to become part of this movement. If you know undergraduate students who are planning to go to graduate school or would like to hear about summer research programs available at Stony Brook, are highly motivated, and have the potential to be good scientists, we would appreciate your recommending this event and passing on the attached flyer. More information can be found here:

<http://www.stonybrook.edu/commcms/cie/events/GradSchoolPreviewDay.html>.

Please contact CIE_GraduateSchool@stonybrook.edu if you have any questions. We hope to see you and your students on November 20th!



Faculty position in computational materials or condensed matter physics

The School of Physics and Astronomy at the

Rochester Institute of Technology invites applications for a tenure-track faculty position in computational physics within the general area of materials or condensed matter physics to begin August 2016.

HOW TO APPLY: Apply online at <http://careers.rit.edu/faculty>. Search: **2061BR**. Please submit your application, curriculum vitae and cover letter, and upload the following:

- Statement of research goals and plans for securing external funding
- Teaching philosophy statement
- List of three current professional references, along with their contact information

Within the cover letter, candidates must include a statement about their contributions to diversity ([please refer to the Contribution to Diversity Statement: A guide for RIT candidates](#)). Candidates should arrange to have their three references send letters of support directly to Chair, Faculty Search Committee, RIT School of Physics & Astronomy. These letters must be submitted to physsrch@rit.edu and must be in PDF format. Inquiries regarding the position may also be sent electronically to physsrch@rit.edu. To receive full consideration, all application materials should be received by November 20, 2015.

Rochester Institute of Technology seeks student in Astrophysical Science and Technology

The Rochester Institute of Technology MS/PhD program in Astrophysical Science and Technology (AST) invites applications from students interested in pursuing graduate studies with us. You can download a brochure on this webpage: <http://www.rit.edu/cos/astrophysics/how-apply-ast-program> or you can find more information about our program at: <http://www.rit.edu/cos/astrophysics/>. The application deadline is 15 January, 2016. Questions can be sent to astroinfo@astro.rit.edu.



ORISE Fellow Position Description and Qualifications- Office of International Climate and Clean Energy

The successful applicant will have experience with a broad set of clean energy and climate change policy topics and analyses. The successful applicant will also have demonstrated project management experience (i.e., leading and coordinating the efforts of an initiative to complete certain tasks in a designated period of time), analytical capabilities, writing skills, and strong interpersonal skills. International experience, prior work in energy and/or climate change policy, and private-sector experience are preferred.

The office is seeking a talented and committed Fellow to pursue a range of activities related to clean energy technology innovation and deployment, and development of related enabling policies. Energy technology or engineering expertise is highly desirable. Experience with policy or international issues is a plus, in particular, knowledge of China if preferred. For more information on the Clean Energy Ministerial and its initiatives, please see <http://www.cleanenergyministerial.org>

FACULTY POSITION IN THEORETICAL CONDENSED MATTER PHYSICS



School of Arts and Sciences

The Department of Physics and Astronomy at Rutgers, The State University of New Jersey, invites applicants for a tenure-track Assistant Professor position in Theoretical Condensed Matter Physics. For an exceptional candidate, appointment at a more senior level may be considered. Applicant must have a Ph.D. degree and an outstanding record of research and publication, preferably in a field related to correlated, topological, magnetic or electroactive materials; non-equilibrium systems; nanostructures; or large-scale computation or computational design. The successful candidate will be expected to establish an independent research program that will attract external funding, and should be strongly committed to teaching. A start date on or after 1 September 2016 is anticipated. Applicants should apply online by clicking the button below, providing a cover letter, a CV including list of publications, a statement of research plans, and a teaching statement, and should also arrange for three letters of recommendation to be requested and uploaded via Interfolio. Applications should be received by 15 November 2015. APPLICATION INSTRUCTIONS: [HTTP://APPLY.INTERFOLIO.COM/31139](http://apply.interfolio.com/31139)



The Mickey Leland Energy Fellowship (MLEF) Program provides students with an opportunity to gain and develop research skills with the Department of Energy's Office of Fossil Energy for 10 weeks over the summer. For 20 years, this program has increased awareness of DOE research opportunities to students pursuing STEM degrees (science, technology, engineering and math). The goal of the program is to improve opportunities for women and minority students in these fields, however all eligible candidates are encouraged to apply. Stipends start at \$600 per week and eligible Fellows will receive an additional travel and housing allowance. For more information, visit <http://orise.orau.gov/mlf/>.

Eligibility: Be at least 18 years of age at time of application, Be a U.S. Citizen, Have a cumulative GPA of at least 3.0, Be currently enrolled full-time in a STEM program or continuing in a STEM program Fall of 2016 at an accredited college or university. Available to participate in the full 10-week program

Application closes Monday, December 21, 2015 – click <http://orise.orau.gov/mlf/> to get started NOW!



Higher Education Research Experiences at ORNL

Opportunities for qualified students, alumni, and faculty to participate in hands-on research

- Experience the thrill of research or technical projects at a cutting edge national laboratory and camaraderie with prestigious scientists, researchers and engineers
- Meet and collaborate with the people who are world and international experts in fields of interest
- Contribute to the U.S. technical prowess that will enhance living standards and set the nation at the top of a global community
- Work on solutions to pressing scientific and technical problems

Highlights of the program include:

- Open to Undergraduates, Post-BS and AAS, MS, PhD and Faculty – Appointments are primarily for Science, Engineering, Technology and Mathematics (STEM) majors but all majors can apply
- Applications are accepted year-round
- Appointments can start and end at any time during the year based on your availability and the needs of the ORNL mentor/project
- Full-time and part-time appointments
- Minimum GPA - 2.5/4.0
- U.S. Citizen or Legal Permanent Resident (LPR)
- Stipend based on academic status
- Limited travel and housing allowances (if eligible)
- Professional development activities

Visit <http://www.ornl.gov/hereatornl/> or contact ORNL Science Education Programs at ornledu@ornl.gov for more information!

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/>.