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PHYSICS REPORT ON THINGS OF NOTE

VOLUME 7 NUMBER 8

Spotlight on Physics Outreach Programs



UF Teach (<http://ufteach.clas.ufl.edu>) UF Teach is designed to dramatically strengthen the recruitment and retention of middle and high school mathematics and science teachers, a critical workforce need in Florida and across the nation. The University of Florida will undertake an unprecedented effort in Florida to bolster science and mathematics educator development that will not only supply highly qualified new teachers but also support new teachers of these subjects through their induction years. This mission will be accomplished through new partnerships between the University of Florida's College of Liberal Arts and Sciences and College of

Education and several Florida school districts. UF Teach will use imaginative recruiting strategies to bring UF's best and brightest into teaching. UF Teach is an innovative initiative based on the successful UTeach model at the University of Texas at Austin. Program Coordinators are **Alan Dorsey**, Dorsey@phys.ufl.edu, and **Tom Dana**, tdana@coe.ufl.edu. UF Teach was recently featured in the College of Education's annual "Newszine", *Education Times*, <http://news.education.ufl.edu/files/news/et08.pdf>



Fall 2008 SEMINAR Schedule

Astrophysics
Fridays @ 4:00pm
2165 NPB

Condensed Matter Physics
Mondays @ 4:05pm
2205 NPB

High Energy Physics
Tuesdays & Fridays
@ 2:00pm
2165 NPB

Physics Colloquium
Thursdays @ 4:05
1002 NPB

Quantum Theory
Wednesdays @
4:05pm
2205 NPB

EDITORS
Alan Dorsey, Chair
Pam Marlin



college of liberal arts & sciences

UF UNIVERSITY of FLORIDA
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International Summer Research Program in Gravitational-Wave Physics: Research Experiences for Undergraduates around the World

(<http://www.phys.ufl.edu/ireu/>) This program, made possible by the National Science Foundation, is designed to expose students to the rigors of gravitational physics research within a setting that truly reflects its international character. For a period of 8-10 weeks during the summer, participants work on research projects in some of the best gravitational physics labs in Europe, Japan, and Australia. The program is only open

to US residents, with a special interest in recruiting women and minority students. There are several exciting projects planned for this year. For more information on those projects visit <http://www.phys.ufl.edu/ireu/projects.html>. Please take time to explore the website for more details on the program. We invite you to apply and partake of this wonderful opportunity! The IREU projects and photos from 2008 can be viewed at <http://www.phys.ufl.edu/~bernard/IREU2008/>. Program coordinators are **Bernard Whiting**, bernard@phys.ufl.edu and **Guido Mueller**, mueller@phys.ufl.edu.



CHEPREO (<http://www.chepreo.org>) CHEPREO (Center for High Energy Physics Research, Education and Outreach) has established an unusually broad program involving physics education, high energy physics research, computing and international networking. The effort,

based at Florida International University and supported by NSF (PHY-0312038), has partner institutions at University of Florida, Florida State University and Caltech. UF provides physics and computing support for FIU physicists and students, and additionally offers computing resources for physicists and students at the Florida institutions participating in the CMS experiment at CERN. One of CHEPREO's long-term achievements has been the transformation of FIU's undergraduate experience through modeling-based, guided-inquiry introductory physics classes, a fellowship program, and the establishment of the Physics Learning Center (PLC). Program coordinator is **Paul Avery**, avery@phys.ufl.edu.



Spotlight on **Physics Outreach Programs con't** To view online visit <http://www.phys.ufl.edu/department/outreach.shtml>

UF Physics Research Experience for Undergraduates (REU)

(<http://www.phys.ufl.edu/reu/>) Since 1999, the department has run a 10-week summer research program for students who are contemplating a career in the physical sciences. Supported by the National Science Foundation and UF, the Research Experiences for Undergraduates (REU) program serves fifteen undergraduates per year, drawn to Gainesville from all over the country. Each participant carries out original research under the careful guidance of a physics faculty member. The program also offers professional-development workshops covering scientific communication skills and graduate school applications, seminars on active areas of physics research, and field trips to other scientific laboratories such as the National High Magnetic Field Laboratory in Tallahassee. The summer ends on a high note with a symposium at which each student presents a talk on his/her project. Program coordinator is **Kevin Ingersent**, kevin@phys.ufl.edu.



Quarknet

(<http://quarknet.fnal.gov/>) QuarkNet has ~50 centers in universities and laboratories participating in high-energy physics experiments. Initially, each center includes two mentor physicists and two high school physics teachers. Goals for teachers include a deeper understanding of physics content, an appreciation for the machinery of modern science, an introduction to inquiry-based teaching as well as evolution in individual teaching to a more student-centered mode of instruction. Teachers, with the help of local mentors, will take part in the construction and testing of detector components, create data sets and develop online experiments for students and help develop classroom detectors. In succeeding academic years the teachers extend their research work to the classroom. They also work with the physicists to design a research-oriented institute for up to ten other area teachers who will be the center in the second year. The center receives ongoing support in following years. Though it used to be, UF is no longer a QuarkNet center. However, Thomas Jordan is an official UF employee with the Physics department and is project coordinator of QuarkNet so UF is again an active center in the project. Recently, Thomas visited Buchholz High School to work with the physics teacher and install a cosmic ray detector for student use. Program Coordinator, **Thomas Jordan**, jordant@phys.ufl.edu.



FACULTY NEWS



Andrey Korytov, Professor, has been approved by the CMS Collaboration Board as the new Convener (leader) of the CMS Higgs Physics group. The CMS Collaboration Board is the body which approves all the important decisions in CMS, it consists from representatives of all the CMS Institutions (~140). In this capacity, Andrey will coordinate for the next two years (2009 and 2010), all the CMS work related to the Higgs searches. Higgs unquestionably is the #1 physics priority for LHC. A large number of the very best people, from many institutions in CMS, will work on this subject. Congratulations to Andrey!

Heather Ray, Assistant Professor, was elected to be a representative of the 2008/2009 Users Executive Committee, a group of people who are the go between for users and management of Fermilab. It's a 2 year position.

Sam Trickey, Professor Emeritus, gave a five-day, 10 lecture, Short Course on Density Functional Theory and Applications, on the invitation of the Physics Department at Michigan Technological University in Houghton, Michigan. There were about 15 graduate students, postdocs, and a couple of faculty who attended.

IN RESEARCH

Celebration of first test run of largest particle accelerator

On September 10, the Large Hadron Collider (LHC) in Geneva, Switzerland, was "switched on" and circulated its first successful beam of protons. The Department of Physics played an important and visible role in developing one of the detectors (CMS), and will continue to contribute during the analysis and discovery phase of the project. To commemorate the event, the department held a party with a direct video link to CERN, with Professor **Darin Acosta** reporting live from the LHC answering questions. The photo shows Professor **Guenakh Mitselmakher** (far left) discussing the LHC with students with Professor Darin Acosta on the back screen.



Cryogenics Staff Commended... **Art Edison**, Associate Professor with Advanced Magnetic Resonance Imaging and Spectroscopy Facility (AMRIS) at UF, recently mentioned in an email to Professor **Neil Sullivan**, "AMRIS has always gotten great help and support from the cryogenics facility in physics, but recently **Greg Labbe** has been helping us tackle several difficult (and potentially magnet-threatening) situations. I really appreciate the help and dedication that Greg and other staff members have provided."

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Moving On.... **Nathan Williams** (pictured left), Program Assistant with Physics since October 2005, recently left the department to become Copywriter for SEO Advantage, Inc, writing web content. We wish you the best, Nathan!



UPCOMING SEMINARS

FOR TIMES PLEASE SEE PAGE 1 OR VISIT
<http://www.phys.ufl.edu/seminars>

ASTROPHYSICS

OCT 14, LEE LINDBLOM, CALTECH
 OCT 17, CHRIS BEETLE, FAU
 OCT 27, PETER DIENER, CCT

COLLOQUIUM

OCT 2, DARIN ACOSTA, UF PHYSICS
 OCT 16, JIM CHANNEL, UF GEOLOGY
 OCTOBER 23, ROBERT GILMORE, DREXEL
 OCT 30, MICHAEL TURNER,
 UNIVERSITY OF CHICAGO

CONDENSED MATTER

OCT 13, JONGSOO YOON,
 UNIVERSITY OF VIRGINIA
 OCT 27, ANDREY ZHELUEV,
 OAK RIDGE NATL LAB

HIGH ENERGY

OCT 7, DIANA VAMAN,
 UNIVERSITY OF VIRGINIA
 OCT 14, LEE LINDBLOM, CALTECH
 OCT 17, HANK THACKER,
 UNIVERSITY OF VIRGINIA
 OCT 21, ANDREW SONNENSCHEIN,
 FERMILAB

QTP

OCT 1, MEERA SITHARAM,
 UF COMPUTER SCIENCE
 OCT 8, VICTOR ALBERT, QTP
 OCT 15, SAUMIL MERCHANT, UF
 OCT 22, ASHLEY RINGER,
 GEORGIA TECH

Foreign seminars of interest being attended by our faculty ...

Professor **Greg Stewart** will be attending a talk given by **Bruce Brandt**, former facilities director at the NHMFL in Tallahassee and currently working at the new Chinese High Magnetic Field Laboratory in Hefei. The talk will be on the Chinese high field effort, and be held October 2, at the Physics Department in Seoul National University.



Free One-Year Trial Membership for Under- graduate and Graduate

Students Full-time enrolled undergraduate and graduate students are highly encouraged to take advantage of the American Physical Society's free one year membership to introduce you to the American and international community of physics. Visit:
<http://www.aps.org/membership/student.cfm>

Upcoming American Association of Physics Teachers meeting

The American Association of Physics Teachers Meeting is taking place October 17 - 18 in the Department of Physics. Professor **Rick Field** will be giving a presentation about the state of particle physics, and Professor **Fred Gregory** of the History Department will be discussing Isaac Newton's contributions to physics from a historical perspective.

UF Office of Technology Licensing Presentation

Dr. **Leonard Terry**, of the UF Office of Technology Licensing, will give a presentation entitled "Office of Technology Licensing - Facilitating Technology Transfer to Serve Faculty and the Community" on Tuesday, October 14, at 4:00PM in NPB 2205. This might be of interest to those who may have produced (or will produce) something that is patentable. This presentation is open to all physics faculty, staff, and graduate students.

STUDENTS & ALUMNI



Ramanujan Fellowship awarded to alumnus

The Government of India, through the Department of Science and Technology, has awarded **Dr. Sudarshan Ananth** the prestigious Ramanujan Fellowship for the period 2008-2013. Dr. Ananth is an Assistant Professor at the Indian Institute of Science Education and Research (IISER) in Pune, India. He works in theoretical particle physics. Sudarshan came to UF in the Fall of 2000 on an Alumni Fellowship. He worked on supersymmetric quantum field theories under the guidance of Professor **Pierre Ramond**, Distinguished

Professor of Physics. After graduating from UF, Sudarshan worked as a Junior Scientist at the Max Planck Institute for Gravitational Physics (Albert Einstein Institute) for two years before moving back to India.

Deepak Kar, Physics graduate student, gave an invited talk "Multiplicities and Underlying Event" on behalf of the CDF collaboration at International Symposium on Multiparticle Dynamics (ISMD 2008) held in DESY, Hamburg, Germany from September 15-20, 2008.

Update from Physics Alumnus, Lewis Dudley Miller, PhD: "I graduated from the UF Physics program in 1971 and have recently retired from a senior physicist position with the National Ground Intelligence Center. My graduate education at UF prepared me very well for my 37 year career in government and academia."

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CCMS

Center for Condensed Matter Sciences

CCMS Undergraduate Fellowships for 2008-09 have been awarded to the following students carrying out research under the mentorship of a CCMS faculty member (listed in parentheses) these can be viewed on line at <http://www.phys.ufl.edu/ccms>:

Allessandra Gallestegui (Biswas)	Adam Ross (Andraka)
Ryan Honeyager (Tanner)	Ivan Rozano (Ihas)
Lukas Jawaorski (Lee)	Todd Schumann (Hebard)
Sarah Joy (Hershfield)	Eric Swanson (Lee)
Mauriccio Pilo-Pais (Sullivan)	Cameron Thacker (Hirschfeld)

