

# PROTON



PHYSICS REPORT ON THINGS OF NOTE

VOLUME 6 NUMBER 5



## Graduation Spring 2007

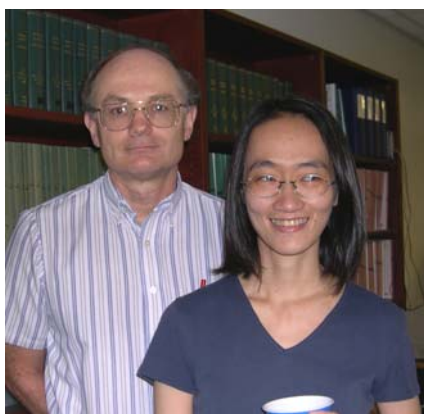
The department of Physics hosted a reception in honor of all those graduating in Spring 2007. Congratulations!

### PhD Graduates

**Anand Balaraman** (Jim Fry)  
**Hyunchang Choi** (Yoonseok Lee)  
**Shu-Chen Liu** (Gary Ihas)  
**Costel Rotundu** (Bohdan Andraka)  
**Karthik Shankar** (Bernard Whiting)



PhD Graduate **Karthik Shankar** with Advisor **Bernard Whiting** (L)



**Shun-Pei Miao**, with Advisor **Richard Woodard** (L) will graduate with a PhD in Summer 2007



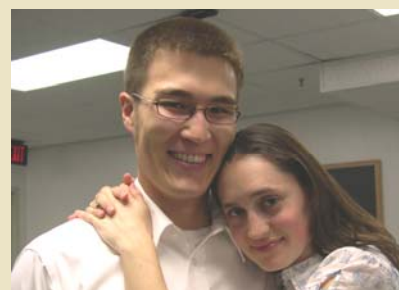
**Dr. Richard Garrett** presents **Erica Bolin** with the Gene & Richard Garrett Award



**Mauricio Pilo-Pais** is presented the Ruth & Earl Sawyer award by **Dr. Eugene Dunnam**



Undergraduate Major, **Mandi Hughes** with her father, **Bob Hughes**



Undergraduate Major, **Nick Park**, with girlfriend, **Betsy Thomas**



PhD Graduate **Shu-Chen Liu** with Advisor **Gary Ihas** (L) and her parents ( R)

**EDITORS**  
Alan Dorsey, Chair  
Pam Marlin



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## FACULTY NEWS



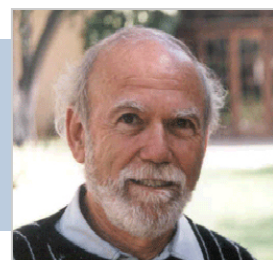
Professor **Peter Hirschfeld** has been selected to receive a 2007-2010 University of Florida Research Foundation Professorship. These professorships recognize faculty who have established a distinguished record of research and scholarship that is expected to lead to continuing distinction in their field. Congratulations to Peter for a well earned distinction!



### A symposium in honor of N. Yngve Öhrn

Quantum Molecular Response and Reaction Dynamics: Theory and Computations. A symposium in honor of **N. Yngve Öhrn** will be held in September 2007. This symposium will focus on areas of research exemplified in the career of Professor Öhrn: Nonadiabatic approaches to reactive atomic and molecular processes; dynamics without potential energy surfaces; alternative descriptions of time

dependent phenomena; propagator methods and response properties. For more information please visit <http://www.phys.ufl.edu/ohrn>



The Department of Physics hosted **Dr. Barry Barish**, the Linde Professor of Physics at Caltech who received an honorary degree from the University of Florida on May 2. Congratulations, Dr. Barish.

## CCMS *Summer Lecture Series*

The first Center for Condensed Matter Sciences (CCMS) Summer Lecture Series (SLS) will begin in July. The goal of the SLS is to provide interested students, postdocs and faculty with an in-depth look at frontier topics in Condensed Matter Physics. We hope that this informal, non-credit (ungraded) mini-course will be of intrinsic interest to many of you and inaugurate the first of many such programs. CCMS Summer 2007 Lecture Series: "Fermi- and Non-Fermi Liquids" July 9 - July 27 *Monday, Wednesday, Friday in 90 minute lectures*

If you have questions please contact **Dimitrii Maslov** [maslov@phys.ufl.edu](mailto:maslov@phys.ufl.edu).

### *Introducing Adrian*



Congratulations to Professor **Aneta Petkova** and her husband, Christo Palamarev, on the birth of their son, **Adrian Emmanuel Palamarev** (7 lb 13 oz, 21 in), who was born at 8:17 am on Sunday, April 8, 2007. Adrian has dark eyes, light hair and a charming smile.

### News Bits

## DISCOVER

The May 2007 issue of Discover Magazine features an article on Dark Matter detections and the CDMS experiment which involves Professor **Tarek Saab**.



*Professor Hirschfeld takes time to relax at the end of Spring semester*





## STUDENT NEWS

### Physics Students selected as University Scholars

Four Physics majors were selected as 2007-2008 University Scholars: **Victor Albert**, **Bradford Barker**, **Jaymin Jhaveri**, and **Travis Miller**. The University Scholars program includes funding for summer research at UF. All participants are required to submit a research paper to the Journal of Undergraduate Research and may also present their findings at the University Scholars Symposium in Spring 2008.



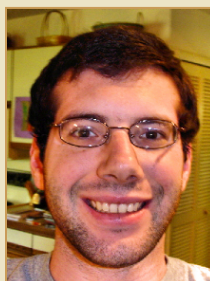
The National Institutes of Health is holding its annual Graduate Student Research Festival October 11-12, 2007 at the NIH campus in Bethesda, MD (near Washington DC). PhD students are invited to apply for travel awards to the festival. These awards will cover travel, lodging, and meal expenses for attending the event. There will be about 250 travel awards given. If your research has any kind of biochemical, biophysical, or bioengineering component, you are strongly encouraged to apply.

For event details see:  
<http://www.training.nih.gov/postdoctoral/ngsrf/index.asp>



**Dan Sindhikara**, a physics graduate student working with Professor Roitberg, received a Teaching Assistant Award from the Graduate School. Professors Dorsey, Meisel, and van Rinsvelt attended the

ceremony held in the Friends of Music Room, University Auditorium on April 26.



On April 24, Provost Janie Fouke hosted a reception in honor of all student scholarship award recipients.

**Bradford Barker**, Goldwater Scholarship recipient, was invited to attend along with his family members.

### Student Travel Awards for Summer 2007



**Naveen Margankunte**, a 5th year student working with Professor **David Tanner**, has received a CLAS Graduate Student Travel Award of \$250 and a Department Award of an additional \$250. Naveen will attend the International Conference on Strongly Correlated Electron Systems (SCES) to be held in Houston, TX, on May 13-18, 2007. He has contributed an abstract entitled "Phonon Modes in LPCMO Thin Films".

**Deepak Kar**, a 4th year student working with Professor **Rick Field**, has received a Department Award of \$250. Deepak plans to attend the Summer School entitled "Standard Model and Beyond" to be held in Princeton, NJ, July 16 - 27, 2007.

**Aravind Natarajan**, a 5th year student working with Professor **Pierre Sikivie**, has received a Department Award of \$250. Aravind plans to attend the conference entitled "The Hunt for Dark Matter" that will be held at Fermi Lab in Batavia, IL, on May 10, 2007. He has requested the opportunity to present a paper entitled "Caustics and the Search for Dark Matter".





# Spring 2007 Exams

## QUALIFYING EXAMS for PhD

January 23, **Rajiv Misra**

"In Situ Measurements on Ultrathin Magnetic Films"  
*Chair, Prof Hebard*

February 27, **Alix Preston**

"Stable Structures for Interferometric Gravitational Wave Detectors" *Chair, Prof Mueller*

March 23, **Nathan Heston**

"Room Temperature Space-Charge-Limited Mobility Studies on Conjugated Polymers"  
*Chair, Prof Tanner*

March 27, **Sung Su Kim**

"High Frequency Electron Paramagnetic Resonance Studies of the Spin Gap Compound NiCl<sub>2</sub>-4SC(NH<sub>2</sub>)<sub>2</sub>" *Chair, Prof Hill*

March 28, **Saiti Datta**

"High Frequency EPR Studies of an Antiferromagnetic Supramolecular Grid" *Chair, Prof Hill*

April 4, **Ritesh Das**

"Nanomagnetism in Granular Ni/Al<sub>2</sub>O<sub>3</sub> and Layered Fe/Pd Thin Films" *Chair, Prof Hebard*

April 17, **Gregory Boyd**

"Transport in Cuprates" *Chair, Prof Hirschfeld*

April 17, **Iuri Oksuzian**

"Search for the TT-Bar Resonance on CDF"  
*Chair, Prof Jacobo Konigsberg*  
*Co-Chair, Prof Korytov*

April 24, **Daniel Sindhikara**

"Studies in Replica Exchange Molecular Dynamics"  
*Chair, Prof Roitberg*

April 25, **Andrew Hill**

"Helium Recombination in the Early Universe"  
*Chair, Prof Fry*

April 26, **Gill Brubaker**

"Spin-Coat Assembly of Photonic Crystals and Nano Arrays" *Chair, Prof Tanner*

April 26, **Alexander Kemper**

"Impurity Studies in Cuprate Superconductors"  
*Chair, Prof Cheng*

May 10, **Daniel Arenas**

"Proposed Experiments Using a Free Electron Laser"  
*Chair, Prof Tanner*

## FINAL EXAMS for PhD

April 9, **Shu-Chen Liu**

"Quantum Turbulence: Decay of Grid Turbulence in a Dissipationless Fluid" *Chair, Prof Ihas*

April 12, **Karthik Shankar**

"Black Hole Evaporation: Validity of Quasi-static Approximation" *Chair, Prof Whiting*

April 19, **Anand Balaraman**

"Cell Count Moments in the Halo Model"  
*Chair, Prof Fry*

April 24, **Shun-Pei Miao**

"The Fermion Self-Energy During Inflation"  
*Chair, Prof Woodard*

May 7, **Aravind Natarajan**

"A Study of the Inner Caustics of Cold Dark Matter Halos" *Chair, Prof Sikivie*

May 31, **Alexei Drozdetski**

"The Standard Model Higgs Boson Discovery Potential in the Decay Channel  $H \rightarrow ZZ^{(*)} \rightarrow 4 \text{ MU}$  with the CMS Detector"  
*Chair, Prof Mitselmakher*  
*Co-Chair, Prof Korytov*

## The Law's the Law

from the Gainesville Sun April 2007

Politicians often imagine that the law doesn't apply to them. But the laws of physics almost always do. New Jersey Gov. Jon Corzine suffered a broken thigh bone, cracked a dozen ribs and fractured his sternum and collar bone after his SUV crashed on the Garden State Parkway. Now we learn that the governor's SUV, driven by a state trooper, no less, was traveling at about 91mph, 26mph over the speed limit, and that Corzine wasn't wearing a seat belt. A word to the wise, Governor: Speed kills and seat belts save lives. Even pols aren't immune from the law of physics.