

Duftyfest Ends in Boom!

.....by *Amruta Deshpande*

Well not quite a boom, but close enough. DuftyFest, a symposium held in honor of Jim Dufty's retirement and 65th birthday ended with a visit to the Heart of Florida Gainesville Airshow. It was a three-day event (September 22nd - 24th) that began with a special colloquium given by Dufty's former graduate student Christina Marchetti, continued with distinguished speakers in the field, and ended at Dr. Dufty's home after a visit to the first air show in Gainesville in 15 years.

All in all it was a festive event paying tribute to Jim Dufty's contributions to physics. After poking fun at the title and research field by calling the event Dustyfest and Professor Dufty a chief knight of its medieval order, more serious talks began with Christina Marchetti. She was a first year graduate student under Dufty in 1979, and is now distinguished professor at Syracuse University in New York. Marchetti spoke of Jim Dufty's earlier days and enlightened the audience about the universally applicable modern approach of hydrodynamics. More research presentations and comments on professor Dufty continued through Friday ending with a special talk entitled "The Yin and Yang of Jim Dufty." Speakers included current graduate students of Jim Dufty as well as distinguished individuals in the field of hydrodynamical studies.

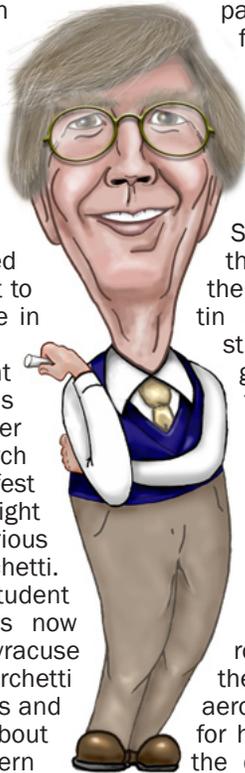
Before the procession of these accomplished bodies settled for a lovely meal at the Dufty residence, many professors and Duftyfest attendees headed off in the smoldering heat and traffic to view an air extravaganza. For the first time in 15 years the Gainesville airport was flocked with people squinting and peering at the sky for the mere glimpse of a thrill. It was a fantastic show featuring aircrafts of many ages and a variety of aviation excitement.

Hurricane Rita had oddly adorned the morning sky giving depth perception to the Red Baron Pizza Pilots' performances

on their Steerman biplanes. Contrails identified the loop-de-loops, rolls, vertical flight engine cut offs, and other patterns against the clouds. Then followed a stunning display (partly due to the booming noise it produced) of F-15 jet planes, the newest of the line. A heritage flight which on Saturday was a paired flight of the first jet plane, the F-85 Saber, and the newest jet plane, the F-15, showed the advance of the aircraft industry. The blotchy tin exterior of the F-85 Saber strikingly contrasts the solid, gray, wall-like construction of the F-15. The B-25 bomber flown in the middle of the show was another plane that wore a blotchy exterior, and it showed the fighting abilities of early wartime aircrafts.

There were two highlights to the show in the sky: Patty Wagstaff and the Blue Angels routine. Patty Wagstaff is the most distinguished female aerobatics pilot. Nicknamed Gypsy for her love of travel, she dazzled the crowd with her maneuvering abilities in her red and white Extra 300L. The Blue Angels featured the C 130 Hercules with its JATO rockets and reverse pitch propellers as well as six F-18 jets in formation flight. The crowds covered their eyes during near miss head on approaches and shielded their ears during low pass flights. Their low altitudes periodically set off car alarms in the giant fairground parking lot.

Helicopters moving in directions not expected of them augmented the afternoon air stunts. Helicopter rides were also available for a price and on much safer trajectories. And for when the air lays silent there were static displays that included fueling planes, jets, and others as well as a delectable selection of ice cream to cool the core in what seemed to be desert heat. Weather including, it was a great experience for any aviation enthusiast, and was a fantastic way to spend one of the last days of paying tribute to Jim Dufty's work.



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who we are

UP is a monthly undergraduate physics newsletter sponsored by the University of Florida's chapter of the Society of Physics Students, for students, by students. We seek to strengthen the undergraduate physics community at the University of Florida by providing a forum for undergraduates to share their views and experiences with each other and acting as a source of information for opportunities and events in physics.

Undergraduate Advisors

They're here to help you!

by Katherine Keller



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Favorite Physics Class:
Applied Classical Mechanics



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Research: Experimental Nuclear
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Hobbies: Sings in the Gainesville
Civic Chorus, building a pipe organ
in his home
Favorite Gainesville Restaurant:
Szechuan Panda
Favorite Physics Course:
Modern Physics and Honors Energy



Professor Lee

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Research: Low Temperature
Physics
Hobbies: Cooking, listening to
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Favorite Gainesville Restaurant:
Pio's Pasta Co., Paramount Grill,
Chutnees
Favorite Physics Course:
Thermodynamics



Professor Baudis

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and Cosmology; particle dark
matter
Hobbies: Spending time with her
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Bistro 1245
Favorite Physics Course:
Modern Physics



Professor Hershfield

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Research: Condensed Matter
Theory
Hobbies: Spending time with
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Leonardo's 706
Favorite Physics Course:
Quantum Mechanics



Professor Matcheva

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Planets
Hobbies: Playing with her son
Favorite Gainesville Restaurant:
Leonardo's
Favorite Physics Course:
Electromagnetism

SESAPS 2005: Annual Meeting

by Youssef Faltas

Whether it is the first time you're picking up this newsletter, out of boredom, looking for something to read before your next challenging physics class that you are taking as part of the requirements of your college, or you are a hardcore physics student, a true fan of the UP News newsletter and wait same time each month for it to come out, there is a good chance this article might leave your unanswered questions about Physics still unanswered. It might even give you a chance to come across a few more puzzles to wonder about, a chance to see clouded versions of a few of your long-held notions about nature and its "laws". Can you imagine a better opportunity to do all of this than one of the annual meetings of the American Physical Society?

Well, believe it or not it is that time of the year again when the South Eastern Section of the American Physical Society (SESAPS) holds its annual meeting. What is so special this year is that our University of Florida is hosting this 72nd annual gathering of physicists (south-eastern physicists, that is) which starts on November the 10th and ends on November 12th. The festivities include

talks from invited speakers covering the main active research areas in Physics. The talks will be on topics like Particle Physics, Dark Matter/Energy, Nanoscience, Astrophysics, Biophysics, Condensed Matter, and oh yeah our favorite topic: the History of Physics. In addition to the invited oral presentations, there is going to be contributed oral presentations and poster contributions. Research poster presentations are great; you can actually take the time to read them, ask the presenter questions, and sometimes get something out of their answers. There is no tentative schedule of talks yet, but keep checking as it should soon be posted on <http://www.phys.ufl.edu/department/conf/sesaps05/index.html>.

The Society of Physics Students (SPS) here at UF is also going to have a part in this event. SPS is organizing a contributed session and a poster session for undergraduate students to present the research they have been working on through the academic year. These SPS sessions will be held on Friday, November 11 and Saturday, November 12. Once more, check the above link for more updates on the detailed program,

and if you are lucky there might be a talk in an area that interests you and fits in your Friday schedule. If you are thinking about presenting your research results in these SPS sessions, here is some useful information for you. Abstracts for the SPS sessions should be emailed to Dr. Robert DeSerio (deserio@phys.ufl.edu) with a deadline set at October 7. Although there is no registration fee for undergraduate presenters, all participants should fill-out a reply form, which can be found at the above website, and email it to Dr. DeSerio. Also, all students who present at one of the SPS sessions are eligible for the Marsh White Award, which will be given to the best undergraduate presenter.

The main point is that this year's SESAPS meeting and the SPS sessions in conjunction with it are great opportunities for us physics students. So, don't let this event pass you by. Go to a talk, or read a research poster, - it's all going to take place right here in the Physics Building. If you are already involved in research, here's a chance present it to your colleagues. In short, this is a chance to learn or to at least think about some new physics; use it.

Applying for the NSF fellowship? *Time to get with it*

by Jacob Tosado

For those you who do not know what the NSF fellowship is, pay attention. This is a fellowship program sponsored by the National Science Foundation and has been around since the early 50's. The program promotes masters and doctoral research in the areas of science, technology, engineering and mathematics.

Recipients of this fellowship are expected to be quite exceptional. That is, your area of devoted research needs to result in a significant contribution and innovation to your field. These chosen fellows are a hand picked 10% of all applicants. More specifically, out of nearly 10,000 of last year's applicants only 1,000 are awarded annually. Is it worth it? Well, the benefits of being a fellow begin with three years of financial support. This scholarly nurturing includes a \$30,000 annual stipend (not including the benefits of your research institution) and a coverage of \$10,500 allowance in annual education costs. You are also given the opportunity to pursue your own original research project design within a five-year period. Of course all this is limited.

All applicants must be eligible. Primarily you must be a U.S. Citizen, national or permanent resident. Secondly, these applicants must be students applying to graduate school or have completed no more than 12 months of research based graduate studies in an NSF-supported field. Once all requirements are met the application itself falls into two main parts on which the application review committee will focus. Part one is the proposal of an original scientific question and the manner by which you address it. This review committee expects to be presented a rigorous plan of research. This is to be supervised and reviewed by a mentor of your choosing. The second main part is slightly more aesthetic however; its purpose is to encourage diversity and creativity in the use of the fellowship's resources and can be generalized in four main points. First is the Intellectual Merit Criterion, which in essence is a demonstration of your ability to compose material in a format that is generally accepted by researchers in your field of application. Second is the Broader Impact Criterion, which exemplifies the

applicant's ability to utilize the fellowship in other areas such as in ones own community. Third is the development of a personal statement. This is important in characterizing who you are to others in a simple and concise manner. The fourth and final criterion is that the applicants need to provide supporting application materials, which include GRE scores, transcripts and recommendation letters.

On completion of gathering these four elements, review them again and again. Aiming for perfection is not aiming too high. Make sure that all materials presented are an easy read. That is, the main ideas and goals of your proposal can be clearly understood within 15 minutes of reading because this is the average amount of time the review committee will give in considering your application. Given all this the application is due in November. Actual dates, deadlines and details may be found by exploring the website: <http://www.faslane.nsf.gov/>. If you have already made it this far then expect to hear a reply in late March. **Good Luck!**



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One tip for a good night's sleep

by Erica Bolin

Sweet Dreams. No, not the cliché phrase – the ice cream shop; our local homemade ice cream shop to be precise. Every flavor is homemade each week and over 100 different flavors are rotated through the frosty glass case from week to week. Tasty treats range from classics such as chocolate and cookies and cream to the very unusual, like avocado or Guinness to the uniquely scrumptious like mint oreo or Italian coffee; not to mention their wide selection of dairy free Italian ice. And that's not all. Sweet Dreams

has teamed up with Satellite Magazine and Video Rodeo to show a movie for free on Sunday evenings at nine o'clock. The video selection has been just as varied as the ice cream flavors, including multiple volumes of the sci-fi classic Mystery Science Theatre 3000 as well as other cult classics like "This is Spinal Tap". Rumor is the next batch of flicks will be awesome old horror movies (the ones that make you laugh and wet your pants at the same time), so make sure you check out the Satellite to find exact titles and dates;

Events & Opportunities

NSF Graduate Fellowship Deadline

NSF Graduate fellowship applications are due **November 7th** for Physics and Astronomy Applications. See article in this issue as well as the website below for more information.
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf05601

If you're going to do this, get cracking now!

GRE Review Sessions

Review sessions for the Physics GRE are held **every Wednesday** in room NPB 2205 from 6 – 8 pm. They will be going on through October 26th before the GRE on November 12th, so go practice!

REU Info Session/Student presentations

SPS is hosting student research presentations on **October 11th**. Research is an exciting way to get involved in physics in your undergraduate years. See what students your age are doing by attending these presentations and find out how you can do your own research during the REU information session at the same meeting.

SESAPS Student Presentations/Posters

SESAPS abstracts due to Dr. Deserio via email on **October 7th**. More information in the article in this issue as well as on the webpage: <http://www.phys.ufl.edu/sesaps05.html>.

As many people should present as can. It's a good way to practice giving talks and don't forget about the AWARD for best presentation/poster. Be sure to attend to conference/SPS zone meeting on November 11th and 12th.

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Submissions

We welcome your news!

Please send submissions to
upnews@phys.ufl.edu by the third
Monday of each month

or you can just show up every Sunday night to a pleasant surprise. Also to look forward to this fall, specialty flavors such as pumpkin as well as a treat that tastes yummy and will help keep you warm - hot chocolate. Sweet Dreams is one Gainesville Treasure you won't want to miss.

Phillips Center Events

Starving for some culture? Being a UF student offers you a great advantage to catch all the cultural shows you want. At \$10 a ticket (balcony seating), you can see ballets, operas, plays, and more for the price of a cheap meal at your favorite casual dining restaurant. Here are a few shows that might interest you, all with seating still available.

10/20	TRIO	7:30pm
		<i>(Jazz and Bluegrass)</i>
10/30	Borodin Quartet	4:00pm
		<i>(String Quartet)</i>
11/1	Beijing Modern Dance	7:30pm
11/22	Chi	7:30pm
		<i>(Shanghai Acrobatic Group)</i>
11/25	Oklahoma	7:30pm
		<i>(Rogers and Hammerstein Version)</i>

Box office phone: 352-392-ARTS
<http://www.performingarts.ufl.edu>