



SPOTLIGHT ON Dr. John Klauder

by Bryce Bolin

John Klauder is a professor in both the physics and mathematics departments here at UF and has distinguished himself in both fields not limited to his publications. Dr. Klauder also possesses an eclectic appreciation of the arts. As a teacher he is enthusiastic about helping students learn to recognize the beauty of math and physics.

UPNews: How long have you been here at the University of Florida and where are you coming from?

John Klauder: 20 years. I was in New Jersey at AT&T Bell Telephone Laboratory where I was a research department head for 9 years.

UP: How do you like the environment here at UF? Is it vastly different?

JK: I lived in a congested part of New Jersey that was dominated by New York, and I do not miss the snow. I like teaching and I enjoy my work that branches out in physics and math.

UP: What are you currently working on?

JK: One topic that I am working on is quantum gravity, which is a very, very difficult problem for which I am taking a different approach to solve. I am also working with the Air Force dealing with RADAR. I am also interested in quantum field theory.

UP: Are you currently teaching any courses and what will you be teaching in the coming semesters?

JK: I teach every semester. I taught PHY 2048 in the fall with a graduate math course and now I am continuing with the 2nd part of the graduate math course this spring.

UP: How did you come about an interest in physics?

JK: In high school, I wanted to study architecture and I did well in my physics classes. My father was

an 'efficiency engineer', although trained as a chemical engineer and saw that the physicists had the more interesting problems. He said that I was going to go to study physics and in those days you did what your father said to do, so I enrolled in the university's physics program. There, the program placed an emphasis on engineering with physics so instead of taking liberal arts courses for my electives, I took engineering classes. Quite recently, I audited an art appreciation course here at UF and enjoy that immensely.

UP: What are some of your favorite artists?

JK: I like Van Gogh, I like Picasso, I like the Native American artist Amado Peña, Jr., among others.

UP: How did your interest in physics develop?

JK: I started work at Bell Labs with a bachelor's degree and did RADAR where I saw that people with Ph.D.'s had the most interesting problems. After a few years, I went back to graduate school at Princeton where I was surrounded by famous physicists and exciting work.

UP: What do you look forward to the most in physics?

JK: Making progress and occasionally solving insoluble problems. I have found other ways to solve problems which would be impossible to do with conventional techniques of quantization. In a way, I have unscrewed the inscrutable.

UP: Do you have any advice for physics students and for those interested in physics?

JK: Learn more math than you think you need to know. Do not be afraid to go beyond the standard and think beyond the box.

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 to act as a source of information for opportunities and events in physics.

**Visit Department
Coffee Time
Mondays & Tuesdays
3-3:45pm In NPB 2205
Professors, staff, and
students are all invited!
Coffee, tea, hot cocoa, and
cookies only 50 cents**

what's UP in this issue

- Front
- Professor Spotlight
- Inside
- Course Reviews
- Planetarium: Seeing Stars
- A weather station without a green screen?
- Back
- Book Review: *Cosmicomics*
- UPcoming Dates

A COLLECTION OF COURSE *recommendations*

by James Stankowicz

Of course as a physicist in training, you have no time for such trivialities as checking 'ratemyprofessor.com' to see what others have to say about the professors you have this semester. So, being the nice folks we are, we've gone and compiled a review of (almost) all professors and upper level classes in the physics department this semester. These comments come directly from the mouths (or e-mail equivalents) of your fellow students. Their names were changed to protect their identities, and the quotes were in some cases altered for content.

PHY 4550

Cryogenics

Prof. Ihas

Learn about UF's secret underground tunnels...for helium. - Pilonse

It's the only class in the department where field trips are offered. - Tae

PHY 3323

Electromagnetism 1

Prof. Hagen

"If you can pass EM1, you will get a Physics degree at U.F."
- Rumored to be a quote from Prof. Cheng

Really learn the meaning of 'script-r'! - Various students

PHY 3513

Thermal Physics

Prof. Biswas

Turns out partial derivatives are good for a lot of things. In this class, you'll learn about most of those things. - Taled

Biswas is good. - Aetz

PHY 3063

Gen Physics 4 Honors

Prof. Meisel

This course under another professor was half special relativity, and half quantum mechanics. If you didn't know linear algebra, you learned it along the way. - Taled

PHY 4422

Optics

Prof. Mueller

Don't be afraid to go to office hours! There're people joining the class come from diverse backgrounds, and some may already know the material. If you fall behind, get clarification! The professor knows so much about the subject that he sometimes forgets to clarify simple concepts. - Student Magam

PHY 3101

Introduction To Modern

Physics *Prof. Detweiler*

Run Away! - Lapha

Detweiler teaches like a graduate course. You will learn the material well, but expect to do a lot of work. - Etba

PHY 4523

Statistical Physics

Prof. Hill

Take any class you can with Prof. Hill. He's an excellent professor, one of the best. - Lapha

Prof. Hill is always prepared, knows what he's talking about, and admits when he does not. - Magam.

PHY 4802L

Laboratory Physics 1

Prof. Chan

It takes a while to adjust to the rhythm of the class. Aside from the mandatory six hours per week, expect to dedicate an extra four or so in catch-up time. - Magam

With past professors, (take home) quizzes have been a large portion of the grade - Pilonse

PHY 4803L

Laboratory Physics 2

Profs. Hebard and Saab

In his past classes, Saab seemed like somewhat of a tough grader, but there is not much of a scale for Advance Lab 2, so that wouldn't matter much. - Aetz

PHY 3221

Mechanics 1

Prof. Yelton

The class often involved proofs and mathematical tools that didn't necessarily apply only to mechanics. Therefore, just because you may already know Mechanics doesn't mean it won't be a bumpy ride. - Magam

Yelton is funny and likes to answer questions via e-mail. - Aetz

That's all we've got for ya, so time to start paying attention the professor again. Best of luck with the new semester!

SFCC *planetarium*

by Alicia Swift

"The sky is falling, the sky is falling!" exclaimed Chicken Little, but he might have known better had he been a University of Florida Physics major, or perhaps had visited the Kika Silva Pla Planetarium at Santa Fe Community College. If you are sitting at home on a Friday night and have nothing to do (which is likely, we are Physics students after all), you can attend the 7 pm show, titled "Southern Nights", which will project the current night sky and teach you about the visible planets and constellations. On Saturdays at 5 pm, you can watch Black Holes: The Other Side of Infinity, a movie funded by the likes of NOVA and the National Science

Foundation. 'Black Holes' portrays computer simulations of the formation of the early universe, as well as the births and deaths of stars and a

Lore" at 7 pm, which details Native American history and beliefs as they related to the constellations. All of these shows cost \$4 for adults and \$3 for children and seniors. If you just so happen to be lucky enough to have a Santa Fe Community College ID, you can visit any of these shows for free. Additionally, on Friday and Saturday nights at 9 pm, you can attend a "Cosmic Concert", where you can listen to techno, club and rave music, and, pardon the pun, dance with the stars. The cost for this is \$10. After closing for the holidays, shows resumed on January 11, 2008. For further information, you can access their website, www.sfcc.edu/planetarium.



simulated flight to the Milky Way's very own black hole. If you stick around after the show, you can view "Night Spirits: Native American

PHYSICS WEATHER STATION

Not quite the "Weather-Control Device" from Red Alert 2 but still cool nonetheless.

by Steven Hochman

If you go to the physics building you will notice a box with equipment in it on the west side of the atrium. That equipment is the Texas Weather Instruments WRL-25 weather station located at UF and it's available for everyone to see. What you might not see, however, is the weather sensors on the roof that the box is connected to.

pressure, as well as some more esoteric data like lighting counts and solar intensity. The weather station records and logs the weather data in its internal memory.



The sensors can detect the standard array of weather phenomena: temperature, wind speed/direction, rainfall, humidity, and

The data is then downloaded to a computer through a network connection and is displayed graphically. If you are not in the physics

building for some odd reason and thus cannot look at the display in person there is a website that displays the same info. (<http://www.phys.ufl.edu/weather/>).



UP Staff

.....

Editor-in-Chief
Larry Camarota

Layout Director
Erica Bolin

Online Editor
Harold Rodriguez

Production Manager
Alicia Swift

Assistant Editor
James Stankowicz

Staff Writers
Steven Hochman
Bryce Bolin
Miorel Palli
Stephanie Lewkowitz

Faculty Advisor
Dr. Yoonseok Lee

.....

CALL FOR WRITERS
UPNews is always looking for undergraduates who want to contribute. If you'd like to get involved, e-mail us at upnews@phys.ufl.edu

BOOK REVIEW

cosmicomics by italo calvino

by Erica Bolin

Fiction you can easily understand is barely worth reading – much like physics texts. *Cosmicomics* is an eccentric collection of short stories by Italian author Italo Calvino. They explore the beginnings of the earth, the development of space, form, signs, up to dinosaurs and other living things in a way that will never make logical sense; therein lies the beauty. The names of the characters entirely unpronounceable.

The entity guiding this trek through time and space is 'old Qfwfq'. He (for lack of a better pronoun) materializes as a particle, an idea, a dinosaur, and at the last, a mollusk. The descriptions are unfathomable, yet paint your imagination better than Marjorie Kinnan Rawlings in 'The Yearling'. My favorite story is the last – 'The Spiral'. It's an expressive look at the development of sight intertwined with the idea of

perception. If you're attracted to things that alter your perception with a glimpse into unrealities that somehow still fit in the realm of existence that you've come to be comfortable with, you'll love this collection too.

UPCOMING EVENTS

society of physics students

by Larry Camarota

As classes start to wind up, the Society of Physics Students will begin to get this semester going in earnest.

On Wednesday, January 23 at 6:30, the first general meeting of SPS will be held at NPB2205 (the upstairs conference room). All physics students are invited to attend. The meeting will discuss other upcoming events for this semester.

The SPS website states that some of the events to be discussed include the ever-popular Physics Is Phun show, GRE study groups, and the spring picnic. A second general meeting is scheduled to take place on February 11.

Mark your calendars, because the SPS Zone 6 meeting is on March 1. The SPS zone meetings are a great place to find out what kind of research

is being done today. Last year's presentations included micro-quasars, single-molecule magnets, hurricane wind patterns, and a demonstration of recent inventions from the Applied Physics Lab at Kennedy Space Center. This year, the meeting will be held at the University of Central Florida. If you are interested in going e-mail sps@phys.ufl.edu as our chapter may caravan down.