

Physics & Astronomy

Letter from the DEO

COMING SOON!

February 2012

“Physics & Astronomy
Demonstration Show”

To be presented at

Van Allen Hall
Iowa City, Iowa

Full details to be posted
online at
www.physics.uiowa.edu/

We’ve had a very successful year of research and teaching in the Department of Physics and Astronomy. Despite a difficult economy, external funding of research remains high, with fiscal year FY11 funding coming in at \$18.5M. Faculty, staff, post-docs, graduate students and many undergraduates are engaged in a wide range of research activities here at Iowa in Van Allen Hall and the Iowa Advanced Technology Laboratories, on the medical campus, and at national and international laboratories and observatories.

Over the past year, the Department has seen a number of

changes. Some classroom renovations are described in the article below, and we anticipate future renovations of Lecture Rooms 1 and 2.

Prof. Maxim Khodas, a condensed matter theorist, joined our faculty in January of 2011, and we have a faculty search for an assistant professor specializing in plasma theory.

In our look to the future, the Department is undergoing a self study in Spring 2012 in preparation for our external review, a process that last occurred about a decade ago.

On the University scale, enrollments have increased this year, with an incoming class of undergraduates of more than 4,500 students. We are seeing more

students in our introductory courses and an increased number of students in our introductory classes for physics and astronomy majors. We are always looking for more!

I hope you enjoy this edition of the newsletter. Please send us any news you would like us to share.

— Mary Hall Reno



Mary Hall Reno

Van Allen Classroom Renovations

Over time, one thing that is always a certainty is change. Such is the case with the renovation and remodeling of space in Van Allen Hall.

On the third floor of Van Allen, the space which formerly housed the Physics Library has been converted into two TILE rooms. The TILE spaces are designed for students to “Transform, Interact, Learn, Engage.” Since opening in the spring of 2011, the TILE rooms have seen a lot of use and have been

well received by students.

One room is a study space that includes computer workstations, desks, comfortable seating, full wall-size whiteboards, monitors, and soundproof study rooms, available for use to all UI students. The second room, a class-

room, is equipped with nine tables seating a total of 81 students. The classroom, with whiteboards and projection screens around the classroom and three laptop computers on each table, is designed to promote interactive learning and group work. Detailed information on the TILE project can be found at <http://its.uiowa.edu/instruction/tile/>.

Three faculty members from Physics and Astronomy (Lang, Mutel and Reno) attended the May 2011 ITS and Center for Teaching sponsored TILE Institute for UI faculty to learn about



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Faculty Directory

Astronomy/Astrophysics

Kenneth Gayley, Assoc. Professor
Philip Kaaret, Professor
Cornelia Lang, Assoc. Professor
Randall McEntaffer,
Assistant Professor
Robert Mutel, Professor
Steven Spangler, Professor
John Neff, Professor Emeritus

Atmospheric & Environmental Physics

Paul Kleiber, Professor

Condensed Matter/Materials Physics

Theoretical

Michael Flatté, Professor
Maxim Khodas, Asst. Professor
Craig Pryor, Associate Professor
John Schweitzer,
Professor Emeritus

Experimental

Thomas Boggess, Professor
John Prineas, Associate Professor
Arthur Smirl, Professor
Markus Wohlgenannt,
Associate Professor

Elementary Particle Physics

Theoretical

Yannick Meurice, Professor
Mary Hall Reno, Professor
Vincent Rodgers, Professor

Experimental

Usha Mallik, Professor
Jane Nachtman,
Associate Professor
Charles Newsom,
Associate Professor
Yasar Onel, Professor
Edward McCliment,
Professor Emeritus
Edwin Norbeck,
Professor Emeritus

Nuclear Physics

Theoretical

Wayne Polyzou, Professor
William Klink, Professor Emeritus
Gerald Payne, Professor Emeritus

Experimental

Edwin Norbeck,
Professor Emeritus

Faculty Highlights/Research

In February 2011, Prof. **Gregory Howes** received a National Science Foundation Faculty Early Career Development Award. The five-year \$1 million grant will be used to study the near-Earth solar wind which influences phenomena such as the northern lights and can interfere with satellite-based communications systems.



Craig Kletzing

Prof. **Craig Kletzing's** research group in collaboration with members of Prof. **Donald Gurnett's** group led by **Bill Kurth** have delivered two sets of instruments for NASA's Radiation Belt Storm Probes (RBSP) mission. The investigation, led by Prof. Kletzing, will measure wave electric and magnetic fields as well as DC magnetic fields and is a consortium of the University of Iowa, the University of New Hampshire, and Goddard Space Flight Center. The RBSP mission is scheduled to launch in August of 2012.

Prof. Kletzing's group also continues to build flight hardware for NASA's four satellite Magnetospheric MultiScale (MMS) mission and begins deliveries of these units in Fall of 2011. The MMS mission is scheduled to launch in 2014.

Craig Kletzing was named F. Wendell Miller Professor in September 2011.

A Major Research Instrumentation (MRI) proposal with Prof. **Usha Mallik** (lead institution, University of California, Santa Cruz) was successful in funding the US upgrade effort for the insertable silicon pixel detector (IBL) for the ATLAS experiment; the University of Iowa is constructing the LVPP4 assembly that will supply all the low voltages, currents, etc. and control them via the Detector Control System (DCS).

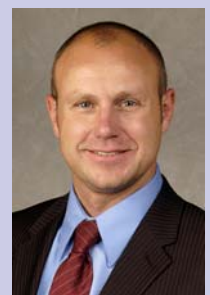
Mallik was notified that she has been included in *MarQuis Who's Who* in 2011.

Maaik Limper, a postdoc from Mallik's group, has completed the responsibility of the prompt reconstruction coordinator (PROC) for all ATLAS data processing at CERN in Geneva, Switzerland. A NIKHEF graduate, Limper was invited and presented the ATLAS results at the Fermilab Wine and Cheese seminar on Friday, August 12, 2011. She also represented the ATLAS collaboration at the International Symposium on Multiparticle Dynamics in Hiroshima, Japan in late September 2011. She has been offered a CERN fellowship as well as a fellowship from NIKHEF for next year. In late September, in addition to Mallik, two postdocs from the group, Remi Zaidan and Garabed Halladjian, presented the improved resolution performance of the new Particle Flow Algorithm from Iowa.

Assistant Professor **Randall McEntaffer** was recently awarded a 2-year, \$1,000,000 grant from NASA to develop X-ray spectrometers for future space-based astronomical missions. The award is part of NASA's Strategic Astrophysics Technology program. McEntaffer's group specializes in off-plane reflection gratings that are capable of delivering much higher throughput and spectral resolution than previous mission spectrometers. Fabrication and testing of high fidelity spectrometer flight components is a major goal of the study. Participating institutions include Goddard Space Flight Center, Marshall Space Flight Center, Northrop Grumman Aerospace Systems, the University of Colorado, and the Open University in the UK.

Howes Receives National PECASE Award

Prof. Gregory Howes was one of 94 national recipients to be awarded the Presidential Early Career Awards for Scientists and Engineers (PECASE), the highest honor given by the U.S. government to scientists and engineers



who are in the early stages of their research careers. He was recognized "for outstanding contributions to improve understanding of the dissipation of turbulence and the resulting heating of heliospheric plasmas, and for leadership in education and outreach activities." In October Prof. Howes was presented the award in a ceremony at the National Museum of Natural History in Washington, DC and also met with President Obama.

Faculty Highlights/Research

The high energy nuclear physics group with **Yasar Onel**, **Edwin Norbeck**, and **Jane Nachtman**, along with a number of graduate and undergraduate students, are testing and calibrating new photomultiplier tubes, PMTs, at a rate of more than 100 per month. The 1728 PMTs will cost \$2,000,000, and even more for the associated electronics and mounting hardware. This new design of PMT will improve the capabilities of the Hadron Forward (HF), a part of the huge Compact Muon Solenoid (CMS) detector array at the Large Hadron Collider (LHC), the world's highest energy accelerator. HF has been an Iowa project from the beginning. The LHC is rapidly ramping up the beam current toward the goal of having a billion, 7 TeV proton-proton collisions per second in CMS. With the upgrade HF will deal effectively with even larger collision rates at an energy of 14 TeV. The huge number of reactions is needed because of the extremely low production rates of objects of particular interest, the Higgs boson, supersymmetric partners, and black holes. The Higgs particle is a necessary consequence of the currently accepted explanation as to why some particles have mass. Elementary particle theorists love supersymmetry because it removes many difficult problems in the theory. The lightest, and therefore stable, supersymmetric particle is a leading candidate for the dark matter that provides most of the mass of our galaxy. Black holes are interesting because they can be made at LHC energies only if there are extra spatial dimensions that are effective in the microscopic world.

Craig Pryor was promoted to Associate Professor.



Vincent Rodgers

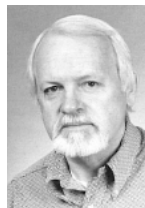
Professor **Vincent Rodgers** was the first recipient of the newly created College of Liberal Arts and Sciences Diversity Award for 2011. This new award recognizes faculty for service which builds diversity in the community. He is co-director of the Hawk-Eyes on Science program and organizer of the Summer Theoretical Physics Sessions whose participants include high school and graduate students of ethnically diverse groups from across the nation. He is also co-director of the Iowa Biosciences Advantage Program for undergraduate students at the University of Iowa.

Prof. Rodgers received a three-year grant from the National Science Foundation for his proposal entitled "Confining Geometries and Quantum Chromodynamics." Quantum Chromodynamics is the most successful mathematical theory for the strong nuclear force. However, it is difficult to solve in low energies. String theory may provide a clever mechanism for solving some aspects of QCD in low energy environments by mapping the theory into a gravitational theory or geometries that can be "easily" solved. Part of the research effort of Rodgers and his research students is to find these geometries that correspond to QCD.

In the Fall of 2010, **Fred Skiff** was elected vice-chair of the American Physical Society's Division of Plasma Physics. In addition to becoming automatically chair-elect in 2011, chair of the division in 2012, and numerous committee assignments, his duties include heading the program committee for the divisional meeting in 2012.

In Memoriam: Raymon Thompson Carpenter

Raymon Thompson Carpenter, Professor Emeritus, passed away September 11, 2011. He was 82 years old. Tom was born on January 14, 1929, in Topeka, KS. After graduating from Yates Center, KS High School, he served two years in the US Navy. He studied at the University of Kansas where he earned his BS (1954) and MS (1956) degrees and then attended Northwestern University where he received his PhD in physics (1962). From 1957-1962 he worked as an assistant physicist at Argonne National Laboratory, and in September 1962, he joined the University of Iowa where he worked until his retirement in June 1996. At the UI, he was an experimental physicist who specialized in nuclear and plasma physics, and was recognized widely as a dedicated teacher. After retiring, he lived in Shelburne, VT and Lady Lake, FL. Tom is survived by his wife Martha, his sister Terry Chesnut of Wichita, KS, his four children, Debra Berks of Salem, OR, Louisa Tripp of Barre, VT, James Tripp of Government Camp, OR, Clark Tripp of Indian, AK, and two grandchildren.



Faculty Directory

(continued)

Photonics & Quantum Electronics

Theoretical

Michael Flatté, Professor

Craig Pryor, Associate Professor

Experimental

Thomas Boggess, Professor

John Prineas, Associate Professor

Arthur Smirl, Professor

Markus Wohlgenannt,

Associate Professor

Plasma Physics

Theoretical

Gregory Howes, Asst. Professor

Georg Knorr, Professor Emeritus

Experimental

John Goree, Professor

Robert Merlino, Professor

Frederick Skiff, Professor

Space Physics

Theoretical

Jack Scudder, Professor

Experimental

Donald Gurnett, Professor

Craig Kletzing, Professor

Louis Frank, Professor Emeritus

VISITING PROFESSOR

E. G. D. Cohen

ADJUNCT ASSOC. PROFESSOR

David Berman

ADJUNCT ASST. PROFESSORS

Su-Hyun Kim

William Peterson

JOINT FACULTY APPOINTMENTS

David Andersen, Professor

(Electrical & Computer
Engineering)

Richard Hichwa, Professor

(Radiology)

Mark Madsen, Professor

(Radiology)

Alfredo Siochi, Assistant Professor

(Radiation Oncology)

John Sunderland, Assoc. Professor

(Radiology)

Students Receiving Degrees

Undergraduate

Michael Baker, B.S. physics
Matthew Bonney, B.S. physics
Matthew Cain, B.A. physics
Peter Foster, B.S. physics & math
Mark Gorski, B.S. physics & astronomy
Michelle Hruby, B.S. applied physics
Christopher King, B.S. physics
Richard Klein, B.A. physics
Brent Kraninger, B.S. physics & astron.
Alicia Maxwell, B.S. physics & astron.
Emily Richards, B.S. physics & astron.
Allison Savage, B.S. physics & astron.
Andrew Sullivan, B.S. applied physics

Graduate

Burak Bilki, Ph.D. experimental high energy physics (postdoc, Univ. of Iowa)
Alan DenBleyker, M.S. physics
Daping Du, Ph.D. theoretical high energy physics (postdoc, Univ. of Illinois)
Timothy Flanagan, Ph.D. plasma physics (Sandia National Laboratory)
Elizabeth Golovatski, Ph.D. condensed matter physics (visiting assistant professor, Luther College)
Jia Hou, M.S. condensed matter physics
YuSeon Jeong, Ph.D. theoretical high energy physics (postdoc, Yonsei Univ.)
Wesley Johnston, Ph.D. condensed matter physics (Mozilla)
Xing Li, M.S. physics
Brian Meland, Ph.D. atmospheric physics (postdoc, Univ. of Colorado)
Anthony Moeller, M.S. physics (laboratory coordinator, Dept. of Physics & Astronomy, Univ. of Iowa)
Vikram Patel, M.S. plasma physics
William Peterson, Ph.D. astrophysics (adjunct assistant professor, Dept. of Physics & Astronomy, Univ. of Iowa)
Zachary Prieskorn, Ph.D. astrophysics (postdoc, Penn State Univ.)
Leo Rodriguez, Ph.D. theoretical high energy physics (postdoctoral fellow/adjunct faculty, Grinnell College)
Shanshan Rodriguez, Ph.D. space physics (U. of Maryland, Baltimore, subcontractor to NASA GSFC)
Saravanan Veerasamy, Ph.D. nuclear physics (postdoctoral fellow, nuclear theory group, Ohio University)
Murat Yildirim, Ph.D. photonics (postdoc, Dalhousie Univ.)

Graduate/Undergraduate News

Student Awards and Presentations

For the 2010-2011 academic year, students received the following awards:

Brian D. Strayer and Richard L. Rairden Scholarship in Physics

Johnathan Kingyon (renewal)
 Nolan Grieves (renewal)

James A. Van Allen Award

Christopher R. King
 Alicia A. Maxwell

Myrtle K. Maier Scholarship

Suzanne H. Carter (renewal)
 Amanda S. Parker

Goertz/Nicholson Memorial Scholarship

Stephen R. Kaeppeler

John and Stacey Wahl Scholarship Award

Alaa Alfaiakawi
 Jershon Y. Lopez

Goldwater Scholarship

Suzanne Carter

Students have also been busy giving talk and poster presentations of their research over the past year. For example, in Fall 2010, Phillip Kopp, graduate student of Prof. Wayne Polyzou, gave a talk on Euclidean Relativistic Quantum Mechanics at the 23rd Annual Midwest Theory Get-Together that was held at the Argonne National Laboratory. He gave a second talk on

the same subject at the 2011 American Physical Society Division of Nuclear Physics meeting in East Lansing, Michigan.

In August 2011, Catherine Whiting, a Ph.D. candidate working with Prof. Vincent Rodgers, won the best theory poster and took third place for all posters at the American Physical Society's Meeting of the Division of Particles and Fields held at Brown University, Providence, Rhode Island. The title of her poster was "NS₅ Branes on the Resolved Cone over Y^{p,q}."

Congratulations to all of our students for their continuing excellence in academics, research, and teaching.

Fall 2011 Student Enrollment

Following are departmental student enrollment numbers for Fall 2011:

Total undergraduate majors—130
 New students—52
 Male students—115
 Female students—15

Total graduate students—76
 New students—19
 The new grad students come from Vietnam, China (3), Turkey (4) and the USA (11).
 Domestic students—48
 International students—28
 Male students—61
 Female students—15

Staff News

2011 CLAS Staff Awards

At this spring's College of Liberal Arts & Sciences 11th Annual Staff Recognition Reception, longevity awards were given to Ivar Christopher (10 years) and Marcia Rogers (20 years) for their years of service in the College.

Sharon Kutcher received the College's Mary Louise Kelley Staff Excellence Award for her responsibilities for assembly and interconnection of circuitry that is onboard a number of spacecraft, both in flight and

awaiting launch. Her efforts required long hours of work and sacrificing personal time to meet the tight deadlines and high workmanship standards required by NASA contracts. Sharon is a longtime member of the Department who has been working at the University of Iowa since the 1970's.

Staff Retirements

This past year, we said goodbye to retirees, James Phillips, Steven Remington, and Ronald Vogel, and wish them the best of luck in their retirement.

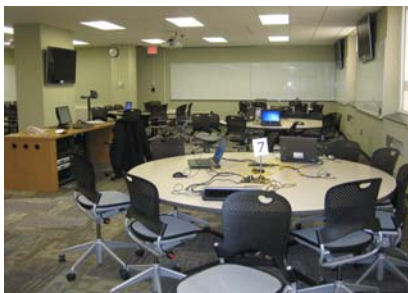
What's New

Physics Doctorate Program Ranked in Top 50

In the annual issue of *U.S. News and World Report's* "America's Best Graduate Schools 2012", the UI physics doctorate program was ranked 35th nationally among public universities. The rankings are based on expert opinions about program excellence and statistics which measure the quality of a school's faculty, research and students. The data is collected from the surveys of administrators at 1,200 programs and 13,000 academics and professionals.

Renovations (continued)

strategies to implement this type of interactive teaching. This fall, Professors Lang and Mutel updated some Stars, Galaxies and the Universe and Solar System Astronomy labs to make them more interactive. In Introductory Physics II, the TILE classroom is being used by two TAs, James Wetzel and Alan DenBleyker, for all the discussion sections focused on problem solving.



TILE classroom in Van Allen Hall

The TILE facility, including classrooms and study area, cost \$1.2 million to complete and was funded by the American Reinstatement and Recovery Act, the State of Iowa, and College of Liberal Arts and Sciences. The Department is remodeling Room 666, an astronomy lab, with interactive technology instructional resources to make a dedicated departmental lab room based on TILE principles. The renovation will be completed over the winter break and is expected to be ready by the start of the spring 2012 semester.

Another ongoing renovation is in Van Allen Room 358, formerly a storage room. Room 358 will have a capacity for 25 students and will include technologically advanced interactive monitors and a demonstrations bench. Construction in Room 358 is expected to begin soon with anticipated completion in early 2012.

With the completion of these renovations, faculty will have access to better instructional facilities with which to educate students, and students will be provided with more high-tech resources outside of the typical classroom to help them better understand their coursework.

Another Iowa Experiment Heads for Jupiter

On August 5, 2011, an Atlas V rocket carrying the Juno spacecraft including an experiment built at the University of Iowa lifted off from the Cape Canaveral Air Force Station in Florida for a 5-year trek to Jupiter. Once it arrives, it will enter a polar orbit that will take it just above Jupiter's atmosphere and just below Jupiter's ring system for a ~1-year study of Jupiter's interior and polar magnetosphere. Juno carries a total of nine science investigations, including a camera that will be used as an education and public outreach tool, which are designed to probe the deep interior of the planet using gravity, magnetic fields, and microwaves to understand the origin of the largest planet in the solar system. Understanding Jupiter's origins is a primary step in understanding the origin of other planets, including Earth. Other instruments are included to study the fields, particles, and optical emissions associated with Jupiter's polar regions, especially its auroras. No spacecraft has made observations in this region as Juno will be the first polar orbiter of the planet.



The Iowa instrument, Waves, will measure radio and plasma waves, primarily associated with Jupiter's auroras. Jupiter emits intense radio waves in the frequency range of a few hundred kHz to 40 MHz that are produced by the same processes that create the auroras themselves. Juno provides the first opportunity to study the source for these radio emissions in situ. Waves will also measure plasma waves that are thought to heat and accelerate charged particles in the auroral region. Waves utilizes a short electric dipole antenna with 2.8 meter long elements to measure the electric component of waves in the frequency range of 50 Hz to above 40 MHz. It also uses a magnetic search coil to measure the magnetic component of waves in the frequency range of 50 Hz to 20 kHz. Waves is the seventh U. of Iowa instrument to go to Jupiter, following those on Pioneers 10 and 11, Voyagers 1 and 2, Galileo, and Cassini. On August 9th, the Waves instrument was powered on for the first time, the antennas were successfully deployed, and the initial instrument checkout was accomplished.

The Juno mission Principal Investigator is Dr. Scott Bolton of Southwest Research Institute in San Antonio, Texas. The lead co-investigator for the Waves instrument is William Kurth who is joined by Dr. George Hospodarsky and Prof. Don Gurnett comprising the Waves science team. Don Kirchner led a team of about a dozen engineers and technicians in the design, development, and testing of the instrumentation, with strong support from the Department's electronic assembly shop led by Sharon Kutcher and machine shop led by Mike Fountain.

Outreach

2011 a Busy Year for Outreach Program

The Department's "Hawk-Eyes on Science" Outreach program has been having a busy year. The first large scale event was in February with the annual Physics and Astronomy Demonstration show. This year the show featured all things related to "sound" including demonstrations of a flame tube, breaking glass with sound, music with laser instruments, audience traveling waves, resonance bowls, and an audience palm pipe song, to name a few. A great time was had by all who attended. Plans are being made for the 2012 demonstration show in February. Information will be posted at <http://faraday.physics.uiowa.edu/hes/> as it becomes available.

Two other areas of focus have been the increased participation in STEM (Science, Technology, Engineering, and Math) events and after school programs for elementary and middle schools. These events mirror the increased awareness that schools are placing on science and math education at the lower grade levels. The high-



With the help of an assistant, Professor Vincent Rodgers explains an experiment to the audience at Go! Girls STEM Day.

light STEM events for 2011 were the iExploreSTEM event that

took place at the new State Hygienic Lab at Oakdale on the 18th of September and the "Go! Girls STEM Day" that was organized by the UI Engineering Department on November 15th. Some of the after school programs that the

Department participated in include Lemme Elementary, Lucas Elementary, Horace Mann Elementary, Hoover Elementary, and an upcoming event at Grant Wood Elementary.

The Café Scientifique of Iowa City program is in its sixth year and still going strong. Café Scientifique is a meeting in a casual environment where you can enjoy a cup of coffee while discussing the latest ideas in science, math, medicine and technology. The meetings are held at T.Spoons Cafe located at the corner of Linn and Market Streets in Iowa City, typically once a month from September to May. Topics of discussion for 2011 included parents and children's communication skills, endangered pollinators, the velocity of neutrinos, and viruses. To find out about upcoming Café Scientifique events, visit the website at <http://www.physics.uiowa.edu/events/cafe.html>.



In February, the Hawk-Eyes on Science gave a presentation to a packed house at Hoover Elementary's Math and Science Night.

In October Hawk-Eyes on Science co-coordinator Prof. Greg Howes was honored with a Presidential Early Career Award for Scientists and Engineers. Not only was he recognized for excellence in research, but also for his leadership in education and outreach activities. Besides involvement with the Hawk-Eyes on Science program, Prof. Howes also hosts an annual high-performing computing summer school, where students become proficient with the use of supercomputers. The Department's outreach program is extremely lucky and proud to have him as a faculty member who goes above and beyond the call of duty to educate others and make a difference.

Involvement in outreach activities can be very rewarding and fun. If you'd like to participate in outreach as a presenter or volunteer, contact the coordinators, Dale Stille (dale-stille@uiowa.edu), Vincent Rodgers (vincent-rodgers@uiowa.edu) or Greg Howes (gregory-howes@uiowa.edu).

Your support benefits Physics and Astronomy education and research!

To make a contribution, go to the Department's online gift web site at

<http://www.givetoioowa.org/physics>

Your gifts are greatly appreciated!

Alumni

Solomon Billign (Ph.D., 1991) has been named one of nine individuals to receive the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring. The award recognizes the important role of mentoring in the academic and personal development of students studying science and engineering, in particular, those belonging to underrepresented groups in these fields. Solomon will receive the award at the White House later this year.

Following graduation from the University of Iowa, **Andrew (Andy) Cowan** (BS 2005) received a JD from Cornell University in 2008, and began work as a public defender in Massachusetts later that year. In 2009, after a Supreme Court decision increased the focus on scientific evidence in the criminal courts, he was invited by the public defender's office to write a glossary of forensic chemistry terms for lawyers. In 2010, he received a promotion to felony trial attorney, and authored the Scientific Evidence chapter of "Trying Drug Cases in Massachusetts," published by Mass. Continuing Legal Education, Inc.

Ralph Lano (PhD 1996) is currently teaching media and software engineering at Georg Simon Ohm University in Nuremberg, Germany (www.ohm-hochschule.de). Before that he worked at HTW Berlin, FH Hof, Siemens and Pearson Education. He is always interested in hearing from old and new friends.

George Ludwig (MS 1959) authored the book entitled, *Opening Space Research: Dreams, Technology, and Scientific Discovery*, which was published by the American Geophysical Union. The book describes the early development of space-based electromagnetic physics, with a focus on the first U.S. space launches and the discovery of the Van Allen radiation belts.

In Spring 2011, **James Shelton Meyer** (PhD 1972) retired after 36 years at St. Gregory's University.

In October 2011, **Christina Othon** (BS 2000), assistant professor in the Department of Physics at Wesleyan University in Middletown, Conn., spoke at the UI Physics and Astronomy Department's weekly colloquia. Her presentation was entitled, "Solvent Dynamics: Governing Structure in Biological Systems."

Jongho Seon (PhD 1996) is currently an associate professor at Kyung Hee University in Yong-In, Republic of Korea.

Daniel Weimer (PhD 1984) moved to a new position as Research Professor with Virginia Tech in 2008 in The Center for Space Science and Engineering Research. He is a resident at the National Institute of Aerospace in Hampton, VA.

Deaths

John Sigwarth (PhD 1989), died 12/13/2010.

We want to hear from you!

Be part of the next newsletter by sending us your latest accomplishments. You can submit your news items on the web at

www.physics.uiowa.edu/alumni/

and click the "Alumni Update Form" link.

We look forward to hearing from you soon!

Crossing Paths with Alumni

After students graduate and move on in their careers, they may cross paths again with the Department, and sometimes not for many years. Recently, Prof. John Goree had such a chance meeting with a former student when he phoned a vendor who makes telescope mirrors. Prof. Goree had contacted Waite Research in Shrewsbury, NJ, and was looking for a quote on a service. He later made the pleasant discovery that he had spoken to an alumnus of the Department, Gordon Waite. Following is an excerpt from Gordon's email, reprinted with his permission:

"It was really great to talk with you yesterday. I have to tell you how excited I was to get your call, as I was a physics and astronomy major at Iowa in the mid 70's. Your call brought back a lot of memories for me. Dr. Van Allen was my undergraduate advisor. And I worked for a couple of years for Dr. William Savage, operating experiments and helping his graduate students with their projects. So I have spent many, many days walking the halls of the physics building, and reading and working in my office there. It was a real treat to get your call and to have a chance to think about those times again."

THE UNIVERSITY OF IOWA

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203 Van Allen Hall
Iowa City, Iowa 52242-1479



COLLEGE OF LIBERAL ARTS & SCIENCES

Department of Physics and Astronomy
203 Van Allen Hall
Iowa City, Iowa 52242-1479

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Email: aaron-votroubek@uiowa.edu
Web: <http://www.physics.uiowa.edu/>

**Visit the Alumni
web site!**
www.physics.uiowa.edu/alumni

Alumni Update Form

To update our mailing list and include your latest accomplishments in the next newsletter, complete the form below and return it to Aaron Votroubek, Department of Physics and Astronomy, 211 Van Allen Hall, The University of Iowa, Iowa City, IA 52242-1479. Or submit your information electronically by completing the alumni update form online at <http://www.physics.uiowa.edu/alumni/update.html>. We look forward to hearing from you soon!

Name _____
First Middle Last

Home Address _____
City State Zip

Employer _____ Title _____

Work Address _____
City State Zip

Home Phone _____ Email _____

Year Graduated _____ Degree _____

Career Accomplishments and Other Information _____

Yes, I would be willing to serve as a mentor for a graduate or undergraduate student.