The 2013 calendar year has been another great year for the Department of Physics and Astronomy. Faculty members were recognized by the University and nationally: Michael Flatté was awarded the 2013 Regents Award for Faculty Excellence, Cornelia Lang was awarded the President and Provost Award for Teaching Excellence, Gregory Howes is a 2013-2015 recipient of the College of Liberal Arts and Sciences Dean’s Scholar Award, Randall McEntaffer was awarded a Presidential Early Career Award for Scientists and Engineers (PECASE) in addition to his NASA Nancy Grace Roman Technology Development Phase Fellowship, and Thomas Boggess was named a Fellow of the American Physical Society.

Our students have been recognized in a number of ways including an Iowa Space Grant Consortium Memorial Scholarship for undergraduate student Kenneth Heitritter, and graduate student James Schroeder received an NSF Research Fellowship to do work in plasma physics.

Our excellent research and administrative staff are among the College’s and University’s long term employees, including longevity awards for 10, 20, 25, 30 and 35 years of service. George Hospodarsky and Chris Piker received CLAS Mary Louise Kelley Staff Excellence awards. Jeff Dolan was honored with a Board of Regents Staff Excellence award for his work as lead system engineer on the Van Allen Probe spacecraft. In a September public lecture on “Voyager’s Epic Journey into Interstellar Space,” Professor Donald Gurnett and Dr. William Kurth presented results of the UI plasma wave instrument’s evidence that Voyager had moved into interstellar space. Many of the researchers and staff members involved in the project attended the lecture.

When asked to stand, the roar of applause for the group effort was gratifying to hear.

This year we welcome the addition of a new faculty member, Assistant Professor Hai Fu. Professor Fu’s research includes extragalactic observational astronomy. With his joining the department, we are now members of the Sloan Digital Sky Survey IV.

I am sorry to report that Professor Emeritus Ed Norbeck passed away in July. He had a long tenure in the department, and even after “retirement,” he was active in departmental research in the CMS high energy experimental group.

For me, changes are ahead as this is my last year of a five-year term as department chair. It has been a rewarding experience and I appreciate all the support I’ve had during my term.

— Mary Hall Reno

Inside this issue:

Faculty Highlights/Research 2
Faculty Directory 2
New Faculty 3
In Memoriam: Edwin Norbeck 3
Origins of Life in the Universe Class 4
Outreach 5
What’s New 6
Staff News 6
Graduate/Undergraduate 8
Alumni 9
Alumni Update Form 10

Roy J. Carver Charitable Trust Funding of Physics and Astronomy Laboratories

The Roy J. Carver Charitable Trust has funded renovation and equipment upgrades to undergraduate physics and astronomy laboratories in the Department of Physics and Astronomy. The most noticeable change is the new dome on the roof of Van Allen Hall that houses upgraded telescopes, thanks to Carver Trust funding. The old dome had deteriorated to the point that the telescopic equipment could no longer safely be stationed in the dome. The motors and gearing that operated the shutter and dome rotator had become inoperable.

Thanks to the efforts of Prof. Bob Mutel, a hired crane and crane operator, and student volunteers, the roof-top observatory is now outfitted with a modern clam-shell opening style dome. The upgraded telescope cluster that includes a new solar telescope system complements

(continued on page 4)
Professor **Thomas Boggess** was named Fellow of the American Physical Society. “For extensive and influential use of ultrafast optical probes to determine carrier dynamics in infrared semiconductors, superlattices, and quantum dots, especially in narrow-gap semiconductors, aiding their application to infrared detectors, lasers and scene projectors.”

Professor **Michael Flatté** was awarded the 2013 Regents Award for Faculty Excellence. University President Sally Mason gave the following comments about Prof. Flatté’s award at this year’s Faculty and Staff Awards Banquet:

An established authority on electronic, optical, and magnetic properties of semiconductors, Professor Flatté pioneered the science and application of electron spin, or “spintronics,” in the design of a new generation of semiconductor electronics. Since 2010, he has directed the Optical Sciences and Technology Center (OSTC). The Center fosters interdisciplinary collaboration and research with the goal of developing solutions to commercial, environmental, and health problems important to the state of Iowa and the world. Professor Flatté has taught at all levels, and he is a committed mentor to students, postdoctoral scholars, and junior faculty. A 2002 Faculty Scholar and 2006 Van Allen Fellow, he has been an F. Wendell Miller Professor of Physics since 2009. In 2007, Professor Flatté was elected as a fellow of both the American Physical Society and the American Association for the Advancement of Science.

**Gregory Howes** was named a 2013-2015 Dean’s Scholar by the College of Liberal Arts and Sciences.

**Gregory Howes** was promoted to Associate Professor.

At this year’s Faculty and Staff Awards Banquet, **Cornelia Lang** was awarded the University’s President and Provost Award for Teaching Excellence. Professor Erika Lawrence, President of the UI Faculty Senate introduced Prof. Lang and gave the following:

Cornelia C. Lang has been an enthusiastic early adopter of new techniques for promoting active learning. With her colleague Robert Mutel, she led an effort to transform the laboratory component of several large-enrollment General Education courses, to emphasize critical thinking and group work. Recently, she expanded her reach even further by developing a new, interdisciplinary General Education course called “Origins of Life in the Universe.” This year-long, cross-disciplinary course, developed with funding from the university’s Student Success Initiative, involves faculty from five departments teaching course modules in an innovative pedagogical model she calls “TILE constellation” teaching. Outside of the classroom, she is a dedicated mentor to graduate students, has supervised many successful undergraduate research projects, and serves as faculty advisor to the Society of Physics Students. She received the Collegiate Teaching Award in 2007.

**McEntaffer Receives National PECASE Award**

Prof. Randall McEntaffer was named a recipient of one of the 102 Presidential Early Career Awards for Scientists and Engineers (PECASE). He will receive the award in Washington, D.C. in 2014. The Presidential Awards honor scientists and engineers in the early stages of their careers, the highest honor to this group bestowed by the US government. Prof. McEntaffer is also a winner of the NASA Nancy Grace Roman Technology Fellowship in Astrophysics.
Faculty Directory (continued)

Photonics & Quantum Electronics
Theoretical
Michael Flatté, Professor
Craig Pryor, Associate Professor
Experimental
Thomas Boggs, Professor
John Prineas, Associate Professor
Arthur Smirl, Professor
Markus Wohlgenannt, Associate Professor

Plasma Physics
Theoretical
Scott Baalrud, Asst. Professor
Gregory Howes, Assoc. 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

VISITING ASSISTANT PROFESSOR
Shea Brown

ADJUNCT ASSOC. PROFESSOR
David Berman

ADJUNCT ASST. PROFESSOR
Ugur Akgun

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)

New Faculty

This fall the Department welcomes assistant professor, Hai Fu, to the University of Iowa.

Prof. Fu received his M.S. and Ph.D. degrees in astronomy at the University of Hawai‘i and was previously a postdoctoral researcher at the California Institute of Technology and a postdoctoral research associate at the University of California, Irvine. His research interests include galaxy formation and evolution and aims to improve our understanding of the physics that drives the global evolution of galaxies and quasars.

In Memoriam: Edwin Norbeck

Edwin Norbeck, professor emeritus, passed away July 13, 2013. He was 83 years old.

Ed was born on June 10, 1930, in Seattle, Washington. He received his BS degree from Reed College in 1952, and his MA and PhD from the University of Chicago in 1956. He was a postdoc at the University of Chicago and University of Minnesota before joining the faculty at the University of Iowa in 1960 as an assistant professor. Since 1967 he was a full professor until becoming professor emeritus in 2002.

Ed spent most of his career in nuclear physics, and did pioneering work in using computers to record data from nuclear physics experiments. He was awarded inaugural “Computer Applications in Nuclear and Plasma Physics” by the IEEE in 1987 for this work done in the early 1960’s.

A Fellow of the American Physical Society, Ed was a leader of the Iowa van der Graff accelerator. He worked on experiments at the Michigan State Medium Energy Heavy Ion accelerator. Part of his work was to build a silicon tracker for an experiment in this facility. In 2000, he joined the UI high energy physics group, part of the CMS collaboration at CERN. He was very active on CMS, working on a small quartz fiber calorimeter ZDC (zero degree calorimeter) to be situated near the beam interactions at the Large Hadron Collider. He also did research on heavy ion physics and contributed to detector R&D for hadronic calorimeter upgrades. Our Iowa group will greatly miss his advice and expertise.

Faculty Highlights/Research

This year, Prof. Randall McEntaffer received a 4-year Development Phase award for his NASA Roman Technology Fellowship. Prof. McEntaffer was one of two recipients nationally in the inaugural implementation of this award. The goal of the project is to develop a novel fabrication technique for X-ray diffraction gratings. Such gratings are being developed for current and future NASA spaceflight missions. The technique combines several lithographic processes common to the semiconductor industry using a new method developed by McEntaffer’s group. To this end, the $1.4M project, along with assistance from the Office of the Vice President for Research and the Physics & Astronomy Department, has purchased a new $0.4M Nanonex NX-1006, a state-of-the-art nanoimprint lithography machine. The new tool is housed in the cleanroom of the Optical Science and Technology Center’s microfabrication facility at IATL.

Yannick Meurice received Army Research funding, in collaboration with Professor Shan-Wen Tsai (UC Riverside) for work on quantum engineering of dynamical gauge fields on optical lattices. In May-June 2013, Prof. Meurice was a conference organizer for the workshop “Lattice Gauge Theory in the LHC Era” at the Aspen Center for Physics.
Origins of Life in the Universe Class

The big questions about the Cosmos, Earth, Life and Humanity are topics of the University of Iowa’s first TILE Constellation course led by Physics and Astronomy professor Cornelia Lang. Building on the success of the departmental “Life in the Universe” course and using teaching techniques highlighted in the UI Center for Teaching’s TILE workshop in 2011, Professor Lang and colleagues from several departments developed “Origins of Life in the Universe.” Fall 2013 was the first opportunity for undergraduates to enroll in this two-semester course sequence that integrates a “constellation” of disciplines (astronomy, chemistry, biology, geosciences and anthropology) for cross-disciplinary analyses of the origin of the Universe, the origin of life, the origin and evolution of life on Earth, the origin of humanity, and the search for life in the Universe. The development of the course was funded by the Provost’s Office through a Student Success initiative.

The TILE format – transform, interact, learn and engage – involves a transition from lectures to an active learning format with interactive student activities in a classroom designed for group work. Students have hands-on activities in the classroom and spring semester laboratory sections. Field trips to campus museums, the Palisades-Dows Observatory near Mt. Vernon and the Field Museum in Chicago are among the activities for students in the class. More information about the Origins of Life in the Universe class can be found at http://cft.uiowa.edu/featured/origins-life-universe.

Carver Charitable Trust (continued)

our rooftop radio spectrometer and the UI’s Rigel robotic telescope located at the Winer Observatory in Arizona. The telescopes are used for undergraduate general education courses, courses for undergraduate majors and for student research projects.

Funding for equipment upgrades in the Intermediate Laboratory course impacts every undergraduate major in the department. The modern equipment and computer based data acquisition tools have augmented existing equipment and allowed us to retire outdated equipment. It is versatile in its use to experimentally study the subfields of atomic physics, statistical and classical mechanics, laser physics, electricity and magnetism and particle physics. Fred Skiff integrated the new equipment into the curriculum in Fall 2013.
Outreach

Hawk-Eyes in Space

This year initiates the new Hawk-Eyes in Space Program as part of the Physics and Astronomy Outreach efforts. Seed funding for this new initiative came from the University of Iowa “Expanding and Enhancing STEM Initiatives Within CLAS” which is part of the “Better Future for Iowans” initiative funded through the Provost’s Office. Further funding from Prof. Craig Kletzing’s EMFISIS NASA grant allows this outreach component to become a mainstay. The timing was perfect as this year both the Van Allen Probes and JUNO missions were launched and are already returning data that is being analyzed by various research groups. This year’s Physics and Astronomy Demonstration Show featured these missions.

The Hawk-Eyes on Science Program collaborated with Project HOPE this year to buy equipment for outreach projects related to robot building and electronics. In January, the students from Project HOPE studied the physics of medical equipment such as the sphygmomanometer and built lie detectors from kits. Later groups worked with graduate students to build light seeking/light avoiding robotic bugs that they got to keep as souvenirs. The new electronics component of the Hawk-Eyes on Science was a big success with more than 120 robots being built by area middle school students. For more about Project HOPE contact Prof. Saba Ali at saba-ali@uiowa.edu.

Both the Hawk-Eyes on Science and Hawk-Eyes in Space programs continued working with STEM initiatives throughout the University of Iowa and the State of Iowa with more than 40 presentations given by faculty, staff and students to elementary schools, high schools and other groups across the state of Iowa. Scott Bounds and Dale Stille also gave ten presentations using demonstrations on space science at the STEM Institute held at the University of Iowa Medical Education and Research Facility.

Another outreach program, Café Scientifique, is now in its eighth year and continues to provide public lectures to the community on various scientific topics including snail sex, federal scientific funding and the health risk due to sports head injuries.

In May 2013, the Center for Diversity and Enrichment awarded Dale Stille and Vincent Rodgers with the Certificate of Achievement to honor their outstanding contributions to the university in their efforts to communicate science to the general Iowa population.

If you’d like to suggest a topic for an outreach activity, or 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.givetoiowa.org/physics

Your gifts are greatly appreciated!
What’s New

Student James Wetzel Partners with M.C. Ginsberg’s and Artist B. Thammavong in Dubuque Art Installation

In 2013 graduate student James Wetzel partnered with Mark Ginsberg of M.C. Ginsberg and artist Bounnak Thammavong to create an art installation called Cone Flower Cluster for the Port of Dubuque’s Art on the River Exhibit in Dubuque, Iowa. The display houses LED lighting powered by solar panels, allowing the sculpture to blink, like a firefly at dusk.

M.C. Ginsberg’s in Iowa City printed the ‘cone’ of the dome using a 3D printer. The electronics and solar cells used to detect muons and trigger the LEDs in the sculpture were made in Prof. Yasar Onel’s lab in the Department of Physics and Astronomy. The sculpture was assembled and manufactured at Bounnak Thammavong’s art studio in Swisher, Iowa.

Information and photos about the display are available online at http://www.cityofdubuque.org/index.aspx?NID=1776.

The Cone Flower Cluster art sculpture displayed at the Port of Dubuque along the Mississippi Riverwalk.

Staff News

Departmental staff were recognized by the College, University and Board of Regents for longevity and work excellence.

CLAS Longevity Award
Sharon Kutcher – 30 years
Jolene Pickett – 30 years
Doug Menietti – 20 years
Ed West – 10 years

University Longevity Award
Terrance Averkamp – 35 years
Donald Kirchner – 35 years
Larry Granroth – 30 years
Joseph Loria – 30 years
Sharon Kutcher – 25 years
Andrea Shaevitz – 25 years

CLAS Mary Louise Kelley Staff Excellence
George Hospodarsky,
Christopher Piker

At the 2013 Faculty and Staff Awards Banquet held in October, Jeff Dolan was presented with the Board of Regents Staff Excellence Award. Following is an excerpt about his award:

Mr. Dolan served as the lead system engineer for the design, delivery, and assembly of electric and magnetic field instruments flown on the NASA-sponsored Van Allen Probe spacecraft. He successfully collaborated on this project with colleagues across the nation, supporting the integration and testing of the instruments following their installation. Due to his efforts, the instruments have performed exceptionally well since their space launch in August 2012. Mr. Dolan’s commitment to the UI and research began in the early 1990s as a student engineer. His dedication to the UI and his work have continued to blossom throughout his career, including his service as the operations manager and hardware engineer for the renowned National Advanced Driving Simulator.
What’s New (continued)

Say “Hi” to Juno

Donald Kirchner, UI research engineer in the Department of Physics and Astronomy, was one of the volunteer coordinators of amateur radio operators’ greetings to the Juno spacecraft on October 9, 2013. Launched two years ago, the NASA Juno spacecraft carries the Waves instrument, build at the University of Iowa under the direction of William Kurth. After its launch and initial trajectory to the orbit of Mars, Juno was targeted to fly by the Earth to take advantage of a “gravitational slingshot,” gaining enough energy to send the satellite to its final destination of Jupiter. During its return to Earth, the radio operators’ coordinated Morse code message “HI” was detected by the Waves instrument from a range of 23,250 miles to the closest approach at 350 miles and later decoded on Earth. The event was featured on a JPL video: http://www.jpl.nasa.gov/video/?id=1262. When Juno reaches Jupiter, the instruments on board will be used to study the auroras and plasma at Jupiter as well as mapping its internal structure.

Cassini Research Group Waves at Saturn

On July 19, 2013, NASA’s Cassini spacecraft orbiting Saturn took a panoramic image of Saturn’s system, including the planet, seven of its moons, and its inner rings while the spacecraft was in the shadow of the planet. Earth was visible in the image as a tiny dot. In advance of taking the image, the Cassini Project notified the public of the time that Cassini would be taking Earth’s photo and invited people across the globe to look up and wave at Cassini for the photo. People from more than 40 countries participated and took ‘selfies’ of themselves as they waved. Of course, none of the participants would be visible in the actual image taken by Cassini because of the large distance between Earth and Saturn. However, NASA created a mosaic of Earth from the 1400+ photos submitted by the public. Members of the Cassini research group at Iowa participated in the Wave at Saturn event from the roof of Van Allen Hall and contributed the photo below that was included in the mosaic.

Voyager 1 Spacecraft Reaches Interstellar Space

The University of Iowa Voyager plasma wave instrument provided the first solid evidence that NASA’s Voyager 1 spacecraft is the first man-made object to reach interstellar space.

“On April 9, the Voyager 1 Plasma Wave instrument, built at the UI in the mid-1970s, began detecting locally generated waves, called electron plasma oscillations, at a frequency that corresponds to an electron density about 40 times greater than the density inside the heliosphere—the region of the Sun’s influence,” says Prof. Don Gurnett, principal investigator for the plasma wave instrument. “The increased electron density is very close to the value scientists expected to find in the interstellar medium.” At age 36, Voyager 1 is the most distant human-made object at more than 11.6 billion miles from the Sun, or about 125 astronomical units.

“At that distance it takes more than 17 hours for a radio signal to travel from the spacecraft to one of NASA’s Deep Space Network antennas. The signal strength is so incredibly weak that it takes both a 230-foot and a 110-foot-diameter antenna to receive our highest resolution data,” Gurnett says. “Even though Voyager 1 has passed into interstellar space, it does not mean that its journey is over,” says Bill Kurth, UI research scientist and a Co-I for the Voyager plasma wave instrument.

“Now we begin the exploration of the interstellar space, the region between the stars.”

Following the NASA press briefing and the release of the results published in the Sept. 27th issue of Science, Don Gurnett and Bill Kurth gave a public lecture entitled “Voyager’s Epic Journey into Interstellar Space” on Sept. 16 to a packed audience of over 300 people in Lecture Room 1. A video of their lecture is available online (http://youtu.be/8yHcBaljoEB) and sounds of the electron plasma oscillations heralding Voyager’s entry into interstellar space can be heard by visiting https://www.youtube.com/watch?feature=player_embedded&v=LIAYWbg_si4, which has had up to 2.7 million hits, or our UI space audio web page (http://www-pw.physics.uiowa.edu/space-audio/).
Students Receiving Degrees

Graduate
Thomas Brantseg, Ph.D. physics, “Core-Collapse Supernova Remnants and Interactions with Their Surroundings”
Warren Clarida, Ph.D. physics, “Same Sign Dimuon Search for Heavy Majorana Mass Neutrinos at the CMS Experiment at CERN and Design Studies of a Quartz Plate Calorimeter Prototype”
Kamuran Dilsiz, M.S. physics, “Effects of Aging in the Hadronic Forward Calorimeter on the Vector Boson Fusion Higgs Search,” pursuing Ph.D. here at Iowa
Stephen Kaeppler, Ph.D. physics, “A Rocket-Bourne Investigation of Auroral Electrodynamic within the Auroral-Ionospher”
Mark Kane, M.S. physics, “Transient Subsurface Features in Mars Express Radar Data: An Explanation Based on Ionospheric Holes”
Yuzhi Liu, Ph.D. physics, “Renormalization Group and Phase Transitions in Spin, Gauge and QCD-like Theories”
Lee Murray, Ph.D. physics, “Investigations into Molecular Beam Epitaxial Growth of InAs/GaSb Superlattices”
Kevin Nielson, Ph.D. physics, “Analysis and Gyrokinetic Simulation of MHD Alfvén Wave Interactions”
Dennis Norton, Ph.D. physics, “Type-II InAs/GaSb Superlattice LEDs: Applications for Infrared Scene Projector Systems”
Hasan Ogul, M.S. physics, “Studies of Muon Efficiences for Measurement of W Charge Asymmetry in Inclusive pp→W(μν) Production at √s=7 TeV,” pursuing Ph.D. here at Iowa
Benjamin Olson, Ph.D. physics, “Time-Resolved Measurements of Charge Carrier Dynamics and Optical Nonlinearities in Narrow-Bandgap Semiconductors”
Allison Savage, M.S. astronomy, “Probing the Rosette Nebula Stellar Bubble with Faraday Rotation,” pursuing Ph.D. here at Iowa
Timothy Harrington-Taber, Ph.D. physics, “Heavy Flavor Decay of Z gamma at CDF”
Michael (Ben) Wootten, M.S. physics, “Superluminescence Diodes at 2.4 Microns from GaInAsSb/AlGaAsSb Quantum Well Heterostructures for Optical Glucose Sensing”

Undergraduate
Alex Boeke, B.S. physics (graduate school, Univ. of Massachusetts)
Patrick Fischer, B.S. physics & astronomy (graduate school, Caltech)
Garrett Funk, B.S. physics (graduate school, University of California, Davis)
Nolan Grieves, B.S. physics & astronomy (graduate school, University of Florida, Gainesville)
Jeremy Johnson, B.S. physics
Sunny Kothari, B.S. applied physics (year off for travel, fall 2014 medical school)
Amanda Parker, B.A. English, B.S. physics, M.S. mathematics (graduate school, University of California, Davis)
Ian Spangenberg, B.A. science education (physics emphasis), B.S. physics (hopes to acquire high school teaching position)
Alex Strieder, B.S. physics
Vaibhav Sutrave, B.S. physics & mathematics
Christopher Wilkerson, B.S. physics & astronomy
Darrelle Wilkinson, B.S. physics

Student Achievements

For the 2012-2013 academic year, students received the following awards, scholarships and fellowships:

Brian D. Strayer and Richard L. Raizen Scholarship in Physics
Nolan Grieves (renewal), Drew M. Miles (renewal), Helaina Thompson
James A. Van Allen Award
Patrick D. Fischer, Nicholas J. Rolston
Myrtle K. Maier Scholarship
Teresa M. Lackey (renewal), Susan K. Schmitz (renewal)
Distinguished Service Award
Michael J. McKinlay
Undergraduate Scholar Award
Nolan S. Grieves
Goertz/Nicholson Memorial Scholarship
John and Stacey Wahl Scholarship Award
Bradly K. Button, Jershon Y. Lopez
Iowa Space Grant Consortium NASA Scholarship
Kenneth Heitritter
NASA Earth and Space Science Fellowship
Hannah Marlowe
NSF Graduate Research Fellowship
Jim Schroeder

Throughout the year, students give talks and presentations on their research at national conferences and also here on campus. At the University’s 2013 Spring Undergraduate Research Festival, undergraduate student Susan Schmitz received the 1st place prize for Physics and Astronomy Posters, for her poster titled “Radio Observations of Molecular Clouds near the Galactic Center.” Congratulations to all of our students for their continuing excellence in academics and research.
Alumni

Antonio Boveia (BS 2001) is a postdoctoral scholar at Enrico Fermi Institute, University of Chicago. Last fall at the Departmental Colloquia, he gave a talk entitled, “The Search for the Higgs at ATLAS.”

Mitchell Day (BS 2002) is an Instructor of Otology and Laryngology at Harvard Medical School and an Investigator in the Eaton-Peabody Laboratories (EPL) at Massachusetts Eye and Ear. EPL is the premiere hearing research center in the US. His expertise is in the neural circuits underlying sound localization, and more generally how sensory information is encoded and then decoded in the brain. Previously, Mitchell was a high school mathematics teacher in Boston’s Public Schools until 2003. In 2009, he received his PhD in Neural Science from New York University, and was a Postdoctoral Fellow at Massachusetts Eye and Ear until 2013.

Fred Erskine III (PhD 1976) has published a book on the full history of the Naval Research Laboratory’s Acoustics Division. The book entitled, A history of the Acoustics Division of the Naval Research Laboratory: the first eight decades, 1923-2008 [Washington, D.C.: Naval Research Laboratory, 2013], is the result of a proposal that was funded by the Office of Naval Research and took five years to complete.

Stephen Fuselier (PhD 1984) was recently promoted to Director of the Department of Space Science at Southwest Research Institute in San Antonio, TX.

M. Wayne Greene (PhD 1968) is the President and CEO of the Pacific Northwest Preparedness Society in Vancouver, British Columbia.

Kenan Gundogdu (PhD 2004) was awarded the Office of Naval Research Young Investigator Award for his research project, “Diffusion, Relaxation, and Charge Separation Dynamics of Photoexcitations in Semiconductor Polymers.” He is an assistant professor at North Carolina State University.

Joseph Schmitt (BS 2012) is currently a graduate student at Yale University. He joined the exoplanet group and has made some exciting discoveries. He is the first author on a paper recently submitted to the Astronomical Journal entitled, “Discovery of the first seven planet system and a dozen other exoplanets from the archive of Kepler data.” http://adsabs.harvard.edu/abs/2013arXiv1310.5912S

In May 2000, Nadia Sifri (BS 1996) received her M.S. in Physiology and Biophysics from the University of Iowa. She has experience in Patenting and Licensing with the University of Wisconsin-Madison as well as International Student Advising at Morningside College. Most recently, she is teaching Physiology at Western Iowa Tech Community College. She is married to Andrew C. Plumb (BS, Physics May 1997 from Univ. of Iowa and Ph.D. 2005 from University of Wisconsin-Madison), and they have three children, Zade, Mazin and Kalila.

John Webster (BA 1984) is Vice President of Purchasing for Wells Vehicle Electronics in Fon du Lac, WI. Wells manufactures sensors, coils, etc.

Deaths

George Ludwig (MS 1959), died 1/22/2013.

Stamatios ‘Tom’ Krimigis Named 2013 CLAS Alumni Fellow

Dr. Stamatios ‘Tom’ Krimigis was named a 2013 College of Liberal Arts and Sciences Alumni Fellow.

In September, Dr. Krimigis came to the University to accept the Alumni Fellow award, to visit with departmental faculty, staff and students, and to present a Public Lecture on the 36-year history of the Voyager spacecraft.

In 1963 and 1965, Dr. Krimigis received his MS and PhD degrees in physics from the UI. He served on the faculty at Iowa until 1968, when he moved to the Applied Physics Laboratory of Johns Hopkins University. While there he became Chief Scientist in 1980, Space Department Head in 1991, and Emeritus Head in 2004.

He is Principal Investigator on several NASA spacecraft, including Voyagers 1 and 2 to the Outer Planets and the Voyager Interstellar Mission, and the Cassini-Huygens mission to Saturn and Titan. He has designed and built instruments that have flown to all eight planets, including the New Horizons mission currently headed to Pluto. He has published more than 530 papers in peer-reviewed journals and books on the physics of the sun, interplanetary medium, planetary magnetospheres, and the heliosphere. In recognition of his research, he has received many awards including two NASA’s Exceptional Scientific Achievement Medals, the Smithsonian Institution Trophy, and COSPAR’s Space Science Award. He is a Fellow of the American Physical Society, American Geophysical Union, American Association for the Advancement of Science, and American Institute of Aeronautics and Astronautics. Since 2005, he has been an Academician at the Academy of Athens occupying the Chair of “Science of Space”, and chairman of Greece’s National Council of Research and Technology.
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/alumni-update-form. We look forward to hearing from you soon!

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

Alumni ... 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!