SNAPSHOT

Sounds of summer

Concertgoers brought lawn chairs, blankets and picnics to the Goizueta Business School’s Jenkins Courtyard for a free evening of music July 9 with the Emory Summer Concert Band. Scott Stewart, senior lecturer and director of wind studies, conducted the all-instrumental program, featuring Bernard Flythe on the tuba. The mostly American pieces included selections from Rodgers and Hammerstein’s “Oklahoma” as a preview of the production of that musical coming next spring from Theater Emory and the Emory Wind Symphony.

Youth get immersed in the spirit of service

By LAUREL HANNA

The Youth Theological Initiative (YTI) 2009 Summer Academy at Candler School of Theology drew to a close July 18, ending a three-week intensive, residential program on the Emory campus. Forty-five rising high school seniors came to the academy to learn to analyze and address public issues from Christian theological perspectives and to build a “covenant community” committed to open-minded and honest dialogue and mutual support. In addition to participating in classes, students engaged in ecumenical worship, attended workshops with members of Candler’s faculty, and volunteered at social service sites around Atlanta.

One highlight of the program was the Interfaith Day of Youth Service, which brought together youth from YTI and local Jewish, Muslim, Hindu, and Buddhist faith groups to participate in interfaith dialogue and service.

The 2009 academy also featured a special program exploring ethical issues, including ecology and environmental justice; racial justice and civil rights; and migration, immigration and labor.

Look for a video from the 2009 Youth Theological Institute coming soon on Emory Report online.

Get active in benefits planning

By MARGIE FISHMAN

Katherine Hinson knew it was time to see an investment counselor when she contemplated dipping into her retirement savings to fund a home repair.

In the midst of an economic downturn with her teenager’s future college education weighing on her mind, Hinson, director of communications for Human Resources, signed up for an on-campus session with a Vanguard representative.

What followed was a 45-minute conversation that eliminated the static surrounding her investment strategy.

“The majority of employees are not really active in retirement planning or savings,” says Hinson. “It takes almost a life event to go, ‘I need to see somebody and talk to them about this.’”

For years, Emory has offered free individual counseling sessions through its three plan.

Please see RETIREMENT page 4

Building digital literacy

By TANIA DOWDY

With the advent of blogging, podcasts and digital video, technology is changing the way we teach, learn and work.

To help faculty, staff and students incorporate technology in various projects, Emory’s Center for Interactive Teaching (ECIT) provides training workshops to build a digitally literate community.

“It’s important to be good digital citizens,” says Wayne Morse, ECIT director, particularly to stay current on skill sets to engage the millennial generation of students.

The Center’s resources are available to all members of the University community.

Please see ECIT page 4
EMORY REPORT
JULY 20, 2009

People

NEWMAKERS

EMORY PROFILE
Brian Dyer

Bringing new energy to solar quest
Chemist integrates research with physics and biology

By CAROL CLARK

Can microbes that live in swamp mud help us produce green energy?

Chemistry Professor Brian Dyer is researching that possibility, through his work at the intersection of chemistry, physics and biology. "I'm really into blurring the lines between traditional disciplines," he says.

Formerly with the Los Alamos National Laboratory in New Mexico, Dyer joined Emory this summer to help unite the University's multi-disciplinary research into renewable energy sources.

"The need for renewable energy is one of the key problems of our time," Dyer says, "and Emory is well-positioned to really make an impact in this area."

Dyer uses laser spectroscopy to study how light can interact with materials. Early in his career, he began working with proteins that can do photochemistry, drawing his inspiration from natural photosynthesis.

"Ultimately, plants are taking light and storing it as chemical energy," Dyer explains. "The elegance of some of these reactions is astounding. It's an incredibly complex process, done with a series of proteins that are highly optimized for a specific function, such as light harvesting and water oxidation. The proteins are like tiny machines. A good analogy is an internal combustion engine, where you actually have integrated, working parts."

Artificial photosynthesis

In recent years, science and industry have started searching for ways to develop systems of artificial photosynthesis, to help solve the energy shortage and reduce carbon emissions. So far, man's attempts at tapping the sun's power have fallen far short of Mother Nature's.

While living in Los Alamos, located at 7,500 feet above sea level on the Pajarito Plateau, Dyer installed solar panels on his family home. "I wanted to understand the issues of solar energy at the practical level of a home owner," he says. Even with 320 days a year of New Mexico sunshine, he found conventional solar panels to be inefficient and not cost effective.

"As an even bigger problem is the batteries required to store the intermittent solar flux," Dyer says. "Their storage capacity is limited and their lifetime is short. They also contain hazardous chemicals, like lead and sulfuric acid."

Mimicking Mother Nature

Dyer is focused on solving this solar energy storage problem. He wants to covert solar energy to fuel, using a particular protein to develop a photocatalyst for solar hydrogen production — which brings up the swamp hug.

A type of anaerobic bacteria that lives deep in the mud of swamps, where there is little oxygen, survives by splitting water into hydrogen and oxygen. While humans need to use expensive systems to perform this process on a large scale, the bacteria does it naturally by generating the protein hydrogenase — the most efficient catalyst known for making hydrogen.

By studying the biological system, Dyer hopes to find ways to adapt the microbial catalysis of hydrogenase so that it can be harnessed for solar hydrogen production.

"You can trick bugs to make lots of certain kinds of proteins, like a little factory," Dyer explains. "It's called directed evolution," where you push bacteria a certain way, forcing it to adapt and to produce an evolved protein that has the properties you need."

His goal is to generate hydrogenase in a form that allows the protein to bond to quantum dots, which are good at absorbing light and could provide the energy to drive the reaction. "We envision producing hydrogen in a photocatalytically driven process, where the electrons and protons needed to produce the hydrogen are furnished by water," Dyer explains. "You could then burn the hydrogen as fuel and get water back. It would be a perfectly clean cycle."

Renewable energy center

At Emory, Dyer is teamed with other scientists in his experiments, including Tim Lian, William Henry Emerson Professor of Chemistry and a leader in quantum dot technology, and Stefan Lutz, an associate professor of biomolecular chemistry who specializes in protein engineering.

Dyer will also serve as the director of a renewable energy center on campus, to launch this fall. The aim is to further integrate ongoing energy research among chemists, physicists, biologists and computer scientists.

"The energy field has suffered from 30 years of people saying that the search for more energy is an engineering problem," Dyer says. "Actually, it's primarily a science problem. Emory has a good track record of bringing together interdisciplinary teams, and tremendous strengths in the bio-sciences, as well as the physical sciences. Most of the advances in renewable energy are going to be made at that interface."
Yerkes a meaningful spot
for staffers to tie knot

By LESLIE KING

An interest in and a career with non-human primates led to a marriage between two primates of the human kind.

Yerkes National Primate Research Center was the setting for the wedding of Rachel Fest and Chris Souder on Wednesday, July 15 at 1:30 p.m. in the courtyard. The bride is assistant operations manager of animal care at the main Yerkes Center, and Souder a supervising research specialist in the animal resources division. The entire staff was invited, says Fest.

"Yerkes was the only thing that really made sense, that seemed obvious," she explained. "We became engaged in October and wanted a small, simple wedding. We toyed around with the idea of having it at Piedmont Park, she said. "But the couple had never really spent any time at the city green spot. Instead, they spent time at their jobs at Yerkes, both having been there approximately 10 years each. They met or have been there," Fest says, adding, "having had a "series of very good friends" who've worked at Yerkes over the years and whose careers have taken them elsewhere.

So they sought and received permission from Stuart Zola, Yerkes director, to hold the wedding on site. "We decided on a Wednesday because that's when most of the staff is working," she says. Denise Bonenberger, who also works in animal resources, served as Fest’s maid of honor. Souder’s twin brother, another Yerkes staffer, was in the wedding party, and his best "man" (who’s a woman), was Kim Neu, a former Yerkes’ footie brother officiated. “He’s not a minister,” she explained.

Following the ceremony, a reception was held in the conference room, catered by MyCafe on site at Yerkes. "the cakes and everything," says Fest. Later, they’ll take a trip to Vegas. "It's time for annual evaluations." Fest says, explaining the postponed honeymoon.

"And we're supervisors and managers." Yerkes employees Rachel Fest and Chris Souder were married July 15.

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Summer brings change of scene for Emory artists

By JESSICA MOORE

Lights are dimmed for summer in Emory performance spaces, but arts faculty and staff work on local and international creative projects. Here are just a few examples:

Timothy McDonough, associate professor of Music, Myer graduated with distinction in Music and was most interested in music as a field of study. He began playing the clarinet at age seven and continued his studies at the College of the University of Wisconsin-Madison. He received his Ph.D. in Music Education from the University of Wisconsin-Madison in 2005.

William Ransom, Mary Emerson Professor of Piano, Music Department, doubles as artistic director of the Highlands-Cashiers Chamber Music Festival from May 5–Aug. 8. For its 28th season the festival features the Erich Trio, Biava Quartet and Vega String Quartet.

Richard Prior, director, orchestral studies, Music Department, premiered an original composition and a new transcription in June at the Amelia Island Chamber Music Festival. Prior led the orchestra in a concert featuring euphonium soloist, Adam Frey. He conducted Ukraine’s National Symphony Orchestra in Odessa recording several works including Nicola Resanovic’s "Collateral Damage," a concerto for clarinet and orchestra dedicated to civilian victims of war. In Oporto, Portugal, he heard a performance of his work "The Darkening Land" that was selected for the International Clarinet Association’s conference.

Georgia Staib, senior lecturer, Dance Department, traveled with his company StaibDance to Houston this June to perform in the 7th annual Big Range Dance Festival at the Barnesaulder Theatre. Staib was interviewed on KUHR, Houston’s NPR affiliate. Neil Bells of Dance Source Houston, wrote “the company proved to be highly skilled dancers…” and showed a strong command of a diverse movement vocabulary.” Staib traveled to San Francisco for the American College Dance Festival class, is invited to national board meeting. He will perform in New York with Atlanta’s Gathering Wild Dance Company, and return to rehearse three new pieces with StaibDance for a January premiere at 7 Stages here in Atlanta. "Cut out on a Wednesday because that's when most of the staff is working," she says.

Amanda Klement, senior lecturer, Visual Arts Department, participated in a two-and-a-half month residency at Goldaagergaard, an international ceramic research center in Denmark, with 10-15 international ceramicists at work on independent projects in a communal setting. Klement’s work concentrates on her impressions from her recent research in India. She has traveled to Copenhagen several times for museum visits and reports spending non-working hours taking tai and meditation classes, walking and eating chocolate.

To read about more of the summer activities of the arts faculty, including Pat Miller’s theater study abroad in Oxford, UK; Leslie Taylor’s set design for “Blood Knot” (Theatrical Outfit, through Aug. 21; Gary Molloy’s jazz performance (Callanwolde, July 31; Greg Catellier at Bates Dance Festival,ival in May; 3–Aug. 10; Anna Leo’s new choreography; Sally Radel’s dance paper presentation, Lori League with Moving in the Spirit; Linda Armstrong’s residency in Berlin; Julia Kjeldgaard’s year in France; Jason Francisco’s photography and Bill Brown’s video and new media projects, visit www.arts.emory.edu/about/artist.

To receive K-Newsletter, visit www.arts.emory.edu/email.
continued from cover

administrators: Fidelity Investments, TIAA-CREF and Vanguard. The popular service experienced a spike in demand last year and additional counseling sessions were added to assist employees with changes to the investment lineup in the 403b Retirement Plan.

Employees sign up for the sessions by calling plan administrators directly or by scheduling an appointment through Emory’s benefits Web site. Confidential sessions are held several times a month on the first floor of the 1599 Clifton Rd. building in an office designated for the counseling sessions.

Despite having the ability to have a face-to-face, one-on-one meeting with an investment counselor, more than half of Emory employees don’t take an active approach to managing their investments, and the plan selects the default investment for them, says Director of Employee Benefits Jodi Martin.

The counselors “know the Emory plan in detail and they know the funds intimately,” says Martin. “The face-to-face session helps them get to know the person, their finances and risk tolerance, when selecting the investments that are right for them.”

The counselors, who don’t work on commission, study an employee’s current contributions and ask questions about upcoming life changes, such as putting a down payment on a first home or saving for college tuition or medical expenses.

Employees are encouraged to bring along their spouses, and can schedule multiple sessions with multiple vendors. Session topics range from examining the benefits of a traditional vs. a Roth IRA, to better diversifying a portfolio.

For Hinson, it was time well spent. As a new employee six years ago, she recalled receiving her retirement plan information among a stack of orientation materials and thinking, “Oh, I’ll get to this later,” but that, “later never comes.”

The sessions are geared toward new employees, those pushing retirement, and everyone in between.

Schedule your session

Fidelity (1-800-642-7131) Aug. 11 and 26; Sept. 8 and 21; Oct. 13 and 28.

TIAA-CREF (1-800-772-8353) Aug. 4–6; Sept. 1–3; Oct. 8–10.


Call each plan provider for an appointment.

All sessions are held at 1599 Clifton Road.

Continued from the cover

Staff and faculty can take advantage of the increased campus activity in the summer at ECIT’s free workshops, where they can learn how to apply programs such as Audacity, Movie, Garageband and Blackboard to diverse aspects of their position.

“We have introduced several new methods of incorporating technology and pedagogy into our summer sessions,” says Chris Pearrington, ECIT coordinator. “We are also looking forward to introducing new technologies and collaborating with other departments in the fall semester.”

Both Kurylo, communications director of the Emory Center for Myth and Ritual in American Life (MARIAL), says attending ECIT’s summer workshops has helped her learn to use technology as a promotional tool for MARIAL’s new online publication, the Journal of Family Life.

“In so many ways the summer is a good time for learning,” says Kurylo. “I can concentrate on technology and take the time I need to figure it out.”

Workshop participants obtain hands-on experience creating photo slideshows, enhanced podcasts, and video content to upload to iTunes U and other Emory channels.

“Our goal is to work with you when using and learning about technology,” explains Pearrington. “This allows the user to learn and achieve their goals by working with the application themselves. We are always here to help and to provide training during the learning process.”

ECIT’s state-of-the-art facilities include three “Smart” classrooms, which accommodate up to 20 students. ECIT Classroom 214 — for example — contains 16 Mac computers with dual boot capabilities, which allow users to work in Mac or Windows with the touch of a button.

Videoconferencing facilities are also available. Videoconferencing is convenient for language courses taught by a single professor servicing students at Oxford College and Emory College simultaneously, for example. ECIT also has a Teaching Theater with a touch-screen plasma and laptop wireless connectivity for intimate group settings.

Thus far, response to ECIT’s new summer training has been tremendous, says Morse.

“We have waiting lists for most of our sessions this summer,” he says. “We have been lucky enough to partner with the Center for Faculty Development and Excellence, and they have helped us really get the word out to everyone on campus that we are having these sessions.”

ECIT’s goal is to empower the Emory community by using technology as a tool to enhance materials.

“From ECIT’s point of view,” says Morse, “if we don’t take our knowledge and help everybody else reach a comfort level, then we are missing a huge opportunity.”

Get interactive

Visit the ECIT events calendar at http://ecit.emory.edu to take advantage of upcoming training opportunities.
U.S. News ranks Emory among best hospitals

By LANCE SKELLY

Emory University Hospital again joins the prestigious ranks of America’s top medical institutions in the annual U.S. News & World Report guide to “America’s Best Hospitals.”

For 2009, Emory ranked among the nation’s best hospitals in 11 specialties, including five top 20 rankings. Overall, Emory is one of only 17 hospitals out of more than 5,400 medical centers in the country to be named in even one of the magazine’s top 50 specialty rankings. Emory is the only acute care hospital in Georgia named in these rankings.

Emory Healthcare is focusing on marketing procedures using minimally-invasive robotic assisted surgery with the da Vinci Si HD Surgical System, a robot capable of performing a multitude of laparoscopic surgeries.

The Neuroendocrine Pituitary Center provides a regionally unique and differentiated service line to patients with pituitary tumors and/or other complex neuroendocrine diseases and is the only center in Georgia named in these rankings.

In the four other specialties — ophthalmology, psychiatry, rehabilitation, and rheumatology — ranking is based solely on reputation, derived from the three most recent physician surveys.

Emory’s ongoing promise to patients and physicians across all subspecialties who embrace the challenge of advancing the possibilities in diagnosis, treatment and prevention of disease,” Fox continues.

The U.S. News rankings in 12 of the 16 specialties weigh three elements equally: reputation, death rate, and of care-related factors such as nursing and patient services. In those 12 specialties, hospitals have to pass through several gates to be ranked and considered a Best Hospital.

In the four other specialties — ophthalmology, psychiatry, rehabilitation, and rheumatology — ranking is based solely on reputation, derived from the three most recent physician surveys.

Emory Healthcare’s scores

- Ophthalmology 9
- Psychiatry 10
- Genitourinary 13
- Heart & Heart Surgery 13
- Neurology & Neurosurgery 14
- Ear, Nose & Throat 22
- Kidney 25
- Diabetes & Endocrinology 31
- Gynecology 34
- Urology 44
- Cancer 46
- Cardiac 46
- Dermatology 46

Campus recycling expands to plastics 1–6

Emory has expanded its plastics recycling program to accept items with Plastic Identification Code (PIC) 1–6. The PIC identification code is a number usually found on the bottom of plastic containers in a triangular, three-chasing arrow recycling symbol. The code identifies the type of resin used in each plastic item. Plastics with varying resin content are recycled into different products. Emory previously accepted codes 1 and 2.

What are some new plastic items that Emory will recycle? Juice bottles, squeezeable bottles, yogurt containers, disposable cutlery, cups and plates are among a few that will be accepted. Because the expanded program is costly to operate, please do not bring your plastic recyclables from home — instead enroll in your community’s recycling program or drop them off at public facilities that take recycling such as U.S. Post Offices, Market and many frat houses.

All recyclable plastics can be returned to the plastic recycling bins in academic buildings, creating an easy halt around Emory’s campus for more information on recycling at Emory, contact Claire Wall at 404-712-8921 or claire.wall@emory.edu.

— David Payne

Bike Emory pedals ‘deals for gear and accessories’

By KELLY GRAY

Admit it, you’ve bought a new bicycle, or recently dusted off that old one that was gathering dust in your garage. You’ve even worked up courage to cycle to work and local shopping centers. Whether bicycling for commuting or leisure, cycling becomes safer and more fun when participants have the right gear and accessories, says Jamie Smith, manager for business operations at Bike Emory.

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Cycling is a relatively new technology called Vision RT, which will allow an improved accuracy for the set-up of radiation therapy for prostate cancer patients.

The Department of Radiology would like to highlight its multiple research advancements in Breast Imaging including Stereo (3D) Mammography and a Breast CT system.

Top medical advances vie for marketing grants

Top medical advances vie for marketing grants during FY 2010.

Customers can also opt to pick up all merchandise on campus at the Bike Emory Web site, on campus at the Mobile Repair Center at the Dobbs Center at the Emory University Hospital West site. Bike Emory offers free of any delivery charges.

Just about everything needed to ride is available online, including helmets, safety accessories, baskets, locks and lights. Now customers can buy items individually, where before things were sold in packages," adds Smith. "If you have a bike already and only need a light or a helmet, you can buy these items separately and at a price reduction."

The new online store comes as a direct response from users requesting the ability to purchase accessories on the Bike Emory Web site. Visit bike.emory.edu/accessories for details.

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Down Under dinosaurs dug dens in polar winter

By CAROL CLARK

A year after his Montana discovery of the first fossil traces of a dinosaur burrow, Emory paleontologist Anthony Martin visited Victoria, Australia. During a hike to a remote site west of Melbourne, Martin rounded the corner of an outcropping and was astounded to see, right at eye level, the trace fossil of what appeared to be a burrow almost identical to the one he had identified in Montana.

“I stared at it for a long time,” recalls Martin, senior lecturer in environmental studies. “In paleontology, the saying, ‘where luck meets preparation’ really holds true.”

Martin’s Australia find, to be published in Cretaceous Research, suggests that burrowing behaviors were shared by dinosaurs of different species, in different hemispheres, and spanned millions of years during the Cretaceous Period, when some dinosaurs lived in polar environments.

“This research helps us to better understand long-term geologic change, and how organisms may have adapted as the Earth has undergone periods of global cooling and warming,” says Martin.

In 2006, in collaboration with colleagues from Montana State University and Japan, Martin identified the 95-million-year-old skeletal remains of a small adult dinosaur and two juveniles in a fossilized burrow in southwestern Montana.

After the Montana find, Martin used a Winship Award from Emory College to spend time at Monash University in Melbourne. With local paleontologists, he visited many sites along the Victoria coast, which marks the seam where Australia once snuggled against Antarctica.

The probable dinosaur burrow that Martin found etched into the Early Cretaceous outcrop is about 6-feet long and 1-foot in diameter. It gently descends in a semi-spiral, ending in an enlarged chamber. Martin later found two similar trace fossils in the same area.

The Victoria fossils are about 110 million years old, around the time that Australia split from Antarctica, and dinosaurs roamed in prolonged polar darkness along forested southern Australia river plains. It was one of the last times the Earth experienced global warming, with an average temperature of 68 degrees Fahrenheit — about 10 degrees higher than today.

During the polar winter, though, the temperature could plunge below freezing. Previously, researchers theorized that the small dinosaurs in the region survived harsh weather by sheltering beneath large tree roots or in hollows. Martin’s find, however, indicates that they may have dug into the soft banks of rivers flowing out of the rift valley.

“The age, size and shape of the likely burrows led Martin to hypothesize that they were made by small ornithopod dinosaurs — herbivores that were prevalent in the region. These ornithopods stood upright on their hind legs and were about the size of a large, modern-day iguana.”

“It’s fascinating to find evidence connecting a type of behavior between dinosaurs that are probably unrelated, and lived in different hemispheres during different times,” Martin says. “It fills in another gap in our understanding of the evolution of dinosaurs, and ways they may have survived extreme environments.”

A specialist in trace fossils — including tracks, scat and burrows — Martin is known for detecting subtle paleontology clues. He also identified the first tracks of a large, carnivorous dinosaur in Victoria, and the first fossil crayfish burrows from the same area.

Martin teaches a seminar at Emory on modern-day animal tracking, a skill that he says aids him in finding signs of prehistoric life. “It’s important to do as much field work as possible, because it gives your mind a better library of search images,” he says.

The trace fossils indicate that small dinosaurs may have burrowed into the soft banks of a river to survive the polar winters.

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For more information about the center, please visit www.chdwb.emory.edu or call 404-686-6190
Teaching Tibetan monks: Better religion through science

By ARRI EISEN

"Do bacteria require light?" Tashi, one of my best students, wants to know. He sits there in Dharamsala, India, like his Buddhist monk colleagues, cross-legged on the floor in maroon robes, six hours a day learning science from a tall white Jewish guy from North Carolina.

Religion often has a hard time of it, especially among academics, and especially among scientists. Of course academics have problem studying religion and raising big money to establish endowed chairs, centers and institutes devoted to just that. But actually being religious or Buddhist monk colleagues, cross-legged on the floor in maroon robes, six hours a day learning science from a tall white Jewish guy from North Carolina...

Several years ago, His Holiness the Dalai Lama requested that Emory University educators develop a modern science curriculum to eventually become part of the regular centuries-old curriculum of all Tibetan Buddhist monks in India. Since the Dalai Lama was forced from China in 1959, India has graciously hosted him, the Tibetan government in exile, and thousands of Tibetans, including many monastics in new monasteries and nunneries. Unlike for Westerners, it is relatively common for Tibetans to become monks (even today, 1 in 10 Tibetans do).

We just completed our second year of a five-year pilot with 91 monks and nuns. The project is designed for monks and nuns to learn Buddhism and Tibetan culture, but also for us to simultaneously build the capacity for the Tibetans eventually to take over the science teaching and learning.

If you're like many of my administrators and colleagues, you might be asking, ‘What?!’ Beyond the oddness factor, what in the world is the point of teaching science to a bunch of monks halfway around the world? Can you say ‘globalization,’ ‘religion,’ ‘science and technology’?

Whether we like it or not, the world is becoming flatter by the day. This could be a disaster or, if we aggressively develop models to address the world’s complex problems — environmental degradation, racism, poverty — through profound cultural exchange and integration, this could be a boon. A vast majority of the globalizing world (including 100 million Americans) is deeply grounded in religious belief, and many of them have worldviews lacking any stark separation of spirituality from science. How do we integrate, and not reject, belittle, or ignore religion and the religious, moving toward developing approaches and potential solutions to our most profound problems? And, finally, then, as all of us are participants in this grand and inexorable globalization experiment, there is that most challenging and central question for all educators and learners: how do we most effectively teach and learn across cultural and intellectual gaps?

In its own small way, our project is a model and provides a laboratory for addressing these big questions. The components are there for a good experiment: a religious leader and a religion, Tibetan Buddhism, unusually open to discussion and integration, science educators eager to teach and learn, and all open to the opportunity for new ideas and knowledge to emerge.

Take Tashi’s question about bacteria and light. We'd spent the whole week teaching the monks and nun cellular and molecular biology around the question. Can bacteria sense? The question is unresolved and not trivial among Buddhists, because if bacteria are sentient beings, they should not be killed and would be reincarnated beings. So, you see the implications.

"Yes," I answered, "Some bacteria require light and use it to make energy via photosynthesis." Tashi’s was a typically insightful question from the monks, and also typical in its "double-meaning" nature: I was thinking this was a great science question, integrating much of our discussion, but when I asked Tashi why he asked the question, he said it was because in the Buddhist view, consciousness requires light. So, if bacteria are sentient and therefore conscious, they would require light. See what I mean by double meaning and cultural interchange?

Religion is rich and valuable; science also has much to offer. Being human constructs, both of course have their failings and limitations, but both have given much and can give more. Dhondup, another of the monk students, had this pearl to offer when I asked him why he was participating in our science project, a statement that turned my worldview on its head and sums up how such cultural exchanges might just make a difference. "I am studying modern science because I believe it can help me understand my Buddhism better."

This essay first appeared on Religion Dispatches (www.religiondispatches.org).
**Chamber season brings top talent**

By JESSICA MOORE

Celebrating its 17th season, the Emory Chamber Music Society of Atlanta (ECMSA), Atlanta’s largest and most active chamber music organization, brings together some of the city’s finest musicians with internationally known guests for a packed 2009–2010 season. In spring 2010, ECMSA celebrates the Frederic Chopin/Robert Schumann bicentennials through its Emerson, Family, and Noontime series. A schedule of all ECMSA concerts is available online at www.arts.emory.edu.

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**Family Series**

Family concerts in the Carlos Museum include “Dinosaurs (and other Musical Animals) at the Carls!” (Oct. 18) and “Happy Birthday, Mr. Chopin and Mr. Schumann!” (March 21). Tickets are $4, and free (limit four) for museum family-level and above members.

Tickets are available by phone at 404-727-5050 and online at www.arts.emory.edu. Tickets go on sale Sept. 11 (special pre-sale for Emory faculty, staff, students and Friends group members, Sept. 9–10).

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**Seminars**

**Wednesday, July 29**

**RADIOLOGY GRAND ROUNDS:** "Conflict of Interest?" Claudia Atkinson, School of Medicine, presenting. 7:30 a.m. Emory Hospital Auditerium. Free. 404-727-5673.

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**SPECIAL**

**Tuesday, July 21**


Families Market. 2–6 p.m. Cox Hall Bridge. jule.shaffer@emory.edu. Every Tuesday.

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**Visual Arts**

**Now Showing**


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**Support groups for caregivers form**

Families in transition offers free education and support for family, friends and/or caregivers of older adults with twice a month sessions beginning Aug. 6.

Emory employees can find support and advice on a variety of issues and challenges, including mental or physical illness, memory loss and role changes.

Sessions meet the first and third Thursday of each month beginning Aug. 6, from noon to 1 p.m. at the Center for Women Conference Room on the third floor of Cox Hall, and beginning Aug. 11, 6:30–7:30 p.m., the first and third Monday of each month at 52 Executive Park South, Suite 5200.

Pat Rich, a counselor and geriatric care manager at the Wesley Woods Transitions Senior Programs, will facilitate the sessions. For more information call 404-728-6975.

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**CLOSING**

**Events**

Last chance to view ‘Wonderful Things’

“Wonderful Things: The Harry Burton Photographs and the Discovery of the Tomb of Tutankhamun” will close on July 26.

Aficionados of ancient Egypt and its influence on contemporary art and architecture will have a last chance to view 60 photographs taken by Harry Burton, chronicling Howard Carter’s discovery of Tutankhamun's tomb in 1922. For more information, visit www.carlos.emory.edu.