

# EMORY RadReport

It's what's on the inside that counts!

February, 2011

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## Empower Yourself to Grow

We are very fortunate to work at an academic institution with leaders who are supportive of continual professional growth. Signs of this support can be seen at all levels within Emory University, both the Healthcare and academic arms of the organization. Resources have been put into place to ensure that the faculty and staff have the tools available to perpetually grow. Each individual within the Emory organization has the power to enrich their skill set, if they so choose to take the initiative.

Reenergize by learning something new. Better yet, have a goal and then seek the new skills that can help you meet that goal. If your interests extend beyond the offerings at Emory, get involved in an organization that will spark your interest. Emory also offers programs for tuition reimbursement if you seek a formal setting for growth. (For details contact your HR Representative.)

At the organization level, Emory Healthcare and University have both invested in centers to focus on offering courses in soft skills, computer skills and policy training. Healthcare faculty and staff can access these resources through Healthstream Learning Center (HLC). University faculty, Staff and Trainees can enroll in courses and certificate programs through Emory University Learning Services, which will help to develop the skills and knowledge base at all levels of professional goals. Both of these offices work to provide

courses and workshops that will help to refine and enhance the interpersonal skills, as well as practical and technical skills.

The School of Medicine (SOM) has two offices devoted to the development of our faculty and staff. The SOM Office of Faculty Development is lead by Dr. Sharon Weiss and offers several programs and lecture series. This office is dedicated to providing resources to our faculty to progress in their careers and improve their network. In 2008, the SOM brought on Dr. Rochelle Lehner to focus on staff development and created the Office of Staff Development. Dr. Lehner considers her office a central resource for all staff in the SOM and welcomes any inquiries to programs or courses that may be of interest.

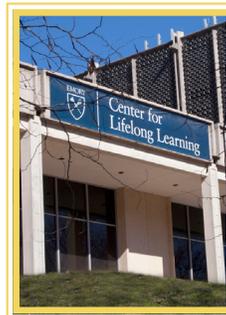
Within Radiology, our chair, Dr. Carolyn Meltzer has been an example for our Department by investing her own time and providing support for the development of several radiology growth endeavors. Our faculty have benefited through skills building at retreats on the leadership and Jr. Faculty levels. These retreats are designed to inspire involvement in the greater radiology community and provide individuals with the tools to advance in an academic institution. With the help of Dr. James Provenzale, Dr. Meltzer has launched the Jr. Faculty Mentorship Program. This year, with members of the Faculty Development Committee, they have launched a series of workshops to further enhance the program's

value. Endeavors of the Radiology Department relating to both faculty and staff include customer service training offered by the Service Excellence Committee (SEC) and the Radiology Leadership Academy (RLA). The customer service training features playful videos to highlight the "dos and don'ts" of patient interactions. The RLA is in its second year, catalyzing the development of leadership, communication and group dynamic skills. This program was designed to provide and enhance the leadership skills of those who excel in their position. The participants of this program are selected on a nomination basis. If you are interested building or polishing your leadership skills, please express your interest to your Division Director, Lab Director or the Assistant Director in your area.

With all of the programs available across Emory, you have the power to be inspired professionally and personally. Take advantage of the academic culture and empower yourself to grow.

Turn to **page 6** for a list of Emory's educational offices and programs.

- Monica Salama  
Communications Manager



The Emory Center for Lifelong Learning is located on the Briarcliff campus and open to both Emory Healthcare and Emory University employees.

## Rad Report 4<sup>th</sup> Year Anniversary

Use your 2010 Rad Report knowledge to win a prize by completing the Crossword Puzzle on Pages 4-5.

- First 25 entries will win a prize
- All answers must be correct
- Entries must be received by Feb. 18
- Include your contact information on your entry
- Answers will be posted on the website on Feb. 21 [www.radiology.emory.edu](http://www.radiology.emory.edu)

Submit your completed crossword to EUH-CG20 or Fax to 404-712-4730

# LETTER FROM THE CHAIR

Dear Colleagues,

The Ice Monster. I have lived in several Northeast cities including a multiple-year stint in the snowbelt of Upstate New York. Yet I wasn't quite prepared for Atlanta's worst.

It was a challenging several days for those who went through extraordinary efforts to get to the hospitals and stay there or nearby, ensuring care for all inpatients and those outpatients who braved the elements. Walt Carpenter and Dan Lee slept in-house at their posts, several of us who live close by trekked in on foot including Terry Howell who creatively took advantage of the traction of golf shoes (I knew I should have saved my

old metal spikes), and those with four-wheel drive vehicles picked up those stranded. The chief residents rallied the troops to make sure those residents who could get in helped out wherever there was a need.

As the cold days and colder nights progressed, further packing of snow and ice brought little relief and some of our staff hadn't seen their homes and families in several days. Each morning at "rush hour" I stood in the middle of Clifton Rd looking in each direction to see only an occasional sign of a motorized vehicle. It was a peculiar sight indeed. Supplies started to

run a bit thin but we managed. Thankfully, power outages did not occur. One faculty and two resident candidates made it to Atlanta just before the storm and were stranded here. They took their adventure in stride and enjoyed more informal visits than originally planned.

We are still playing catch-up from the week of the Ice Monster, with tight outpatient scheduling and screening mammography clinics on Saturdays to make up for lost patient appointments. We and our patients benefited from the dedication of both faculty and staff.

There were many lessons learned from this



experience that will help us to craft a more comprehensive procedure to guide us in potential future disasters, whether they be weather-related or otherwise. If you have not already done so, please share your input and ideas with your supervisor.

Best to all,  
Carolyn C. Meltzer, MD, FACR  
Chair of Radiology

## AWARDS & RECOGNITION



**Arthur E Stillman MD, PhD**  
Professor of Radiology

Open Medical Institute in Salzburg Austria Invited Lecturer

Dr. Stillman was recently invited to lecture at the Open Medical Institute in Salzburg Austria. Their slogan is "medical education without borders." The purpose is to provide postgraduate medical education to physicians from developing countries who have limited access to similar programs. Dr. Stillman feels that this opportunity "was an interesting and rewarding experience!" More details about the Open Medical Institute may be seen at <http://www.aaf-online.org/open-medical-institute.html>.



**Trudie Denise Parker**  
Interventional Radiology Technologist - EUH

Vascular Interventional Radiology, (VIT), Examination Completion

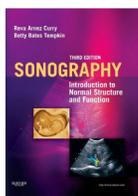
Ms. Parker has been a member of the Emory staff since 2006, beginning her career here as an interventional technologist in the Radiology Department and later transferring to the Operating Room staff. Ms. Parker continues to divide her duties here in the healthcare area working in the OR, IR, and CT sections of EUH, and also working in IR at Emory Midtown. As a registered technologist, Ms. Parker is accredited with the ARRT, a member of the ASRT, member of the GSRT, has accreditation by the American Heart Association for ACLS, and continues to hold her license in Florida.

## CHECK IT OUT

Asrani AV, Johnson JO, Novelline RA. Benefit of follow-up CT in emergency department patients with persistent non-traumatic abdominal pain. *Emerg Radiol* 2011; 18:5-9.

Provenzale JM. Proposal of a method for deciding whether an AJR manuscript merits publication: The 25% rule. *Am J Roentgenol* 2010; 195:278-280.

Sharma P, Kalb B, Kitajima HD, Salman KN, Burrow B, Ray GL, Martin DR. Optimization of single injection liver arterial phase gadolinium enhanced MRI using bolus track real-time imaging. *J Magn Reson Imaging*. 2011 Jan;33(1):110-8.



Reva Arnez Curry and Betty Bates Tempkin recently authored the third edition of *Sonography: Introduction to Normal Structure and Function*. Marilyn Dickerson, Radiology Ultrasound Supervisor, was a contributor for two of the chapters used in the published edition and Bobbie Hollis, Ultrasound Technologist, contributed a few of her images to be used in the text book, as well.

# MESSAGE FROM THE VICE CHAIR FOR RESEARCH

## Research Energy

I feel an excitement in the air surrounding research. Consider: institutionally, there is a renewed dedication to the academic mission. Our provost has made strengthening the faculty a priority. In the past several years, Radiology has added numerous faculty with an expressed interest in Research. On behalf of the Siemens/Emory Master Research Agreement, I recently sent out a request for proposals and received 34 completed applications! In reading these, I see that there are quite a few excellent ideas ready to take off.

How should we proceed? How should we capture this energy to benefit our Department? Having a critical mass of people excited by research projects will propagate the excitement. Properly harnessed, new research ideas lead to new clinical approaches which lead to new paradigms to teach our students.

One of my missions is to support the efforts of investigators so that they have

several opportunities to request funding for a project thus improving their overall success rate. I am confident that if we can mobilize the research interest in our department and sustain it through the inevitable funding challenges, then the totality of the studies will have a positive impact on all of our missions.

I encourage research groups and clinical divisions to seek ways to leverage their resources. It makes more sense to acquire resources (human or equipment) that benefit several areas rather than have that resource idle for a significant fraction of the time. Think broadly knowing that we are always open to considering new and innovative solutions.

Research starts with collecting data but data collection is expensive in time and money. I can offer some advice. First, seek out a mentor who has had success starting a research program. If you need help finding a mentor, James Provenzale is in charge of the faculty mentoring

program and could help. Next, come to my office. We see 3-5 grants a week and know the trends in funding. We also have access to several databases for finding non-conventional sources, such as private foundations, that might be interested in your project. Finally, the University has several (competitive) mechanisms for funding pilot studies. As Vivian Smith says in the "Striving for Excellence" column in this RadReport, ask for help when you need it – give help when you can.

This is an exciting time for research. The current national health care climate is hungry for new energy and ideas. Join the movement!



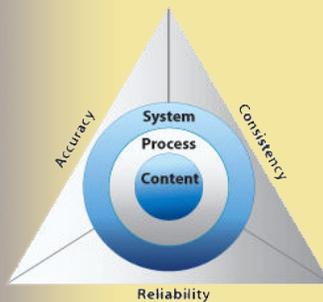
Sincerely,  
- John Votaw, PhD,  
Vice Chair for Research

## Quality Corner

### Teaming Up to Make a Difference

From a quality perspective, data integrity is one of the most important components of imaging. But...what does it really mean? As I was searching for some definitions, I found some good information that I would like to share.

Wikipedia states that data integrity is a term that can mean ensuring that data is "whole" or complete....simply put it is the assurance that data is consistent, correct and accessible. How we contribute to this as technologists is through adhering to a strict standard of value and completeness...i.e., our standard workflow. The data must be both accurate and relevant, and make it to PACS (both GE and Siemens) in order to be accessible to our physicians for both interpretation and patient management. The credibility of our data (patient images and information) solely rests on us...those acquiring the information and storing it to PACS.



The diagram to the left (<http://simplecomplexity.net/>) is a picture representation of what it takes to have and maintain data integrity:

These components were considered and developed into a standardized process for workflow. Along with standard workflow, our protocols also ensure that the information that we are obtaining on the patient is exactly the information that is needed. Making sure that the use of the workflow checklist, end-of-shift checklist, and completion of each exam both in RadNet, GE and Siemens PACS (at the end of each exam rather than batching) is our way of not only making data healthy but keeping its integrity.

Let's remember to ask ourselves that for every patient that we do and follow standard workflow as one day it may be our data that needs integrity.

- Starla Longfellow, RT(R), BBA, Assistant Director, Imaging Services



# ANNUAL CROSSWORD PUZZLE CHALLENGE

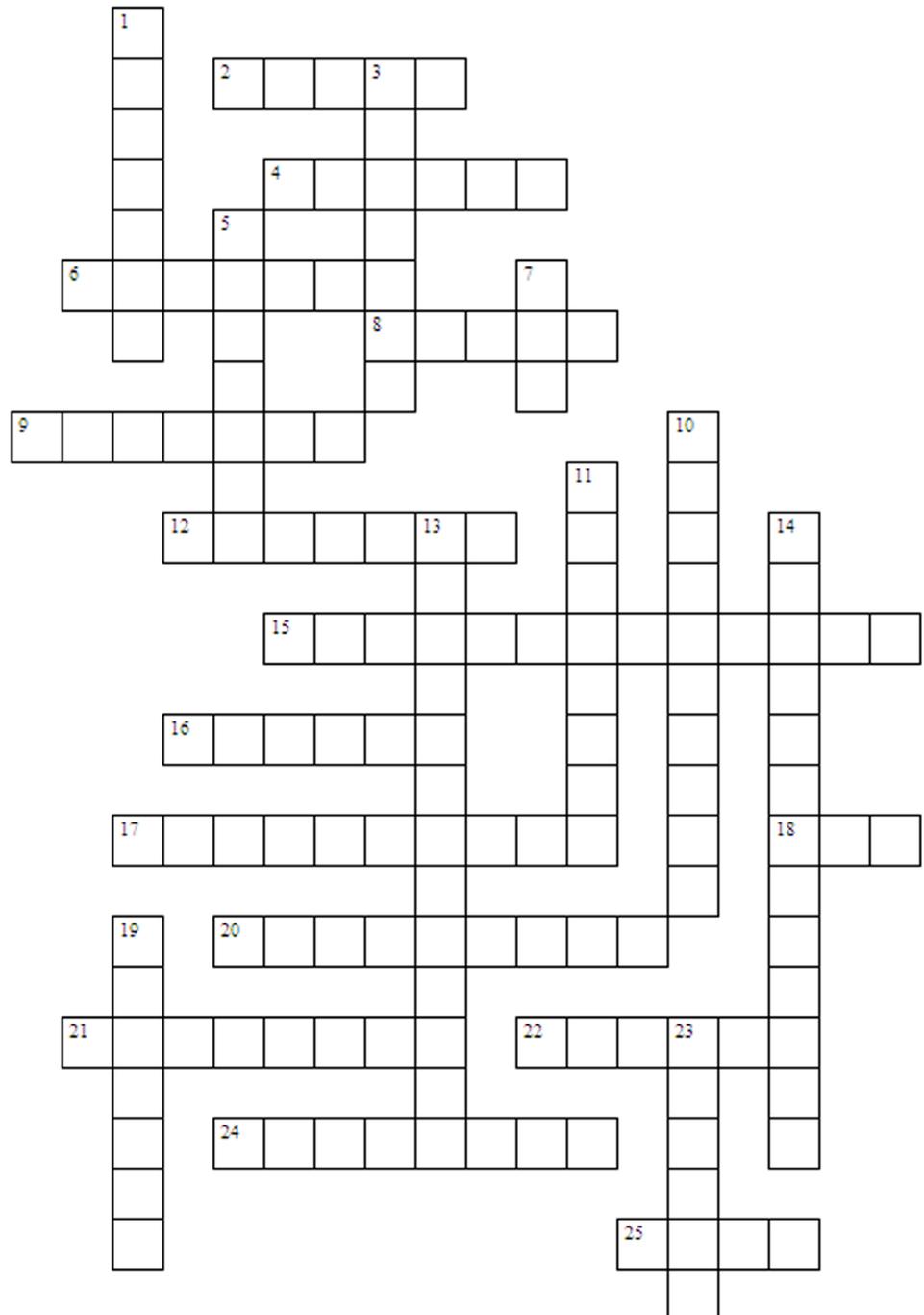
This issue marks the four-year anniversary of the *Rad Report*. Over the last year, many different types of stories have been covered, throughout radiology. Test your *Rad Report* knowledge by completing the crossword puzzle featuring items that have appeared over the last year. For clues, refer to page 5. More details and directions can also be found on the adjacent page.

## Rad Report 4<sup>th</sup> Year Anniversary

Use your 2010 *Rad Report* knowledge to win a prize by completing the Crossword Puzzle. First 25 entries will win a prize. The first 5 entries have an option of prizes to choose from. All answers submitted must be correct before prize can be awarded. Entries must be received by February 18, 2011 to qualify for a prize. Be sure to include your contact information on your entry.

Submit your completed crossword to  
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Fax to  
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Feb. 21 [www.radiology.emory.edu](http://www.radiology.emory.edu).



### ACROSS

- 2 This annual lecture was held on October 15, 2010, and featured a presentation by Robert Spano, Atlanta Symphony Orchestra Music Director.
- 4 This faculty member and Director of the MEDI 725 radiology course played a vital role in integrating this course into the seven other clerkships of specialty training taught to the medical students.
- 6 This faculty member was appointed as the President of the American Society of Neuroradiology (ASNR) in May of 2010.
- 8 Dr. John Malko, is one of the two dozen Emory faculty members who travel to this location each summer to teach the Tibetan Monks a semester's worth of material in a one-week time span.

# ANNUAL CROSSWORD PUZZLE CHALLENGE

- 9 \_\_\_\_\_ and Family Centered Care is a central goal of our quality initiative that will evolutionize the culture of healthcare.
- 12 The Care Transformation Model, also known as the “egg”, strives to ingrate the highest level of \_\_\_\_\_ and safety practices and fostering our culture in our Department and throughout Emory Healthcare.
- 15 In early March 2010, this was the first professional location to launch the new GE PACS system.
- 16 Modeled after the ABR’s \_\_\_\_\_ Research Pathway, our Research Residency track will offer two incoming residents the opportunity to gain valuable experience in both clinical and research operations.
- 17 Patient Service Advocates are also known as Radiology \_\_\_\_\_, who work to minimize call time and maximize appointments for our patients.
- 18 Drs. Baron and Vydareny were awarded the Lifetime Service Award in acknowledgement and appreciation of their ongoing exceptional service for this professional organization (abbreviation).
- 20 This newly established Radiology division extends our services and around-the-clock coverage of subspecialty trained radiologists to Emory’s network of hospitals.
- 21 This retired member of the Emory Radiology faculty passed away in September 2010 and was an outstanding teacher, researcher and role model for many radiology and non-radiology residents during his career.
- 22 Dr. \_\_\_\_\_ was the course director and primary organizer of the 4th Annual Body MRI course hosted by the American College of Radiology.
- 24 With the September 2010, addition of a state-of-the-art Interventional Radiology suite at this location, physicians can now treat many vascular anomalies less invasively with image guided medicine techniques.
- 25 In April 2010, the Emory Center for Systems Imaging hosted an event to launch the new MR/PET scanner that is one of \_\_\_\_\_ world-wide and one of only two in the United States.

## DOWN

- 1 This Assistant Professor of Radiology recently took on a new role overseeing the further growth and development of our department’s community-based imaging services as the Director of Community Radiology Specialists.
- 3 One of this year’s adopted residents, Dr.Nnenna Aguocha, proposed a plan to take the global theme of assisting with medical advancements to this poverty stricken country.
- 5 Our Department’s first “adopted” resident, Dr. Jay Patel, completed his podcasting project he set out to accomplish that will use Emory’s \_\_\_\_\_ to broadcast Radiology presentations.
- 7 This Assistant Professor of Radiology was appointed as the Director of Interventional Services for EUHM.
- 10 In June, the inaugural year of the RLA, graduates refined these skills to forward our Department’s strategic efforts.
- 11 Linda Zimmerman and Lee Ann Harvey are the Radiology Patient and Family \_\_\_\_\_ who joined our team to help transform the care we provide to our patients.
- 13 Clinical Instructors are a group of Radiology \_\_\_\_\_ that volunteer their time to the Emory Medical Imaging Program (MIP) to assist in furthering the education of the MIP students.
- 14 The Atlanta Clinical & \_\_\_\_\_ Science Institute has helped ease the process of bringing biomedical research to reality in healthcare and has funded several of our department’s promising faculty members’ research.
- 19 Drs. Baumgarten and Hudgins were selected as \_\_\_\_\_ of the American College of Radiology.
- 23 In recognition of his achievements and contributions to the field of renal nuclear medicine, the International Society of Radionuclides in Nephrourology awarded this faculty member with the coveted Lifetime Achievement Award.

## NEED FOR NEWS

### Would you like to contribute to the Rad Report?

This February we are celebrating the fourth year of publication for the Rad Report. Our readership has grown with new subscribers each month and generates more than 400 hits on our website the day it is released.

The primary goal of our newsletter is to serve as a vehicle to communicate across our divisions and create a better understanding of how each of us contributes to the department as a whole. Through the continuous content submissions, the commitment of the editors, and the dedication of the readers, this newsletter is a success.

Thank you to all who, through monthly content submissions, have utilized this tool to disseminate pertinent information and recognize the accomplishments within our department.

Thank you to the editing team for reviewing the content each month before going to print. Editors: Dr. Carolyn Meltzer, Dr. William Torres, Habib Tannir, Dr. John Votaw, Dr. Mark Mullins, Dr. Kimberly Applegate, Alaina Shapiro, Nancy Costello, and photographs by Kevin Makowski and Eric Jablonowski. Thank you to the readers who make the effort worth while. Without your readership, the newsletter would fail to serve its purpose.

If you have an idea for a story or would like to acknowledge a professional accomplishment, you can become involved with the Rad Report by sending an e-mail to



RadiologyComm@emoryhealthcare.org. When submitting content for consideration, please copy your supervisor, manager or director.

- Monica Salama  
Communications Manager

# STRIVING FOR EXCELLENCE

## Making Your Day More Productive

Time is your most valuable resource. Alan Lakein, author on personal time management stated, "Time is all you have. Master your time and you master your life." We all have very busy schedules at home and work. We are challenged with handling multiple tasks, maximizing our time, and being highly productive. The question that seldom arises is, how can we get more done with less time and effort? Xerox, one of the world's leading enterprise for business process, offers many excellent articles on productivity. Below are five of the suggested principles to make your work day more productive:

### Make a Daily Action List

Start the day with a list of the things you want to accomplish. You can group the tasks by category, such as email, phone calls, meetings, and etc. . .

### Prioritize Your Tasks

The action list should be organized by priority and created the day before. This will allow you to arrive at work and know exactly what you need to focus on at the start of your day. One of the side benefits of keeping a priority list is that you will have a sense of accomplishment when completing a task and then crossing them off your list.

### Put Large Projects on a Schedule

Large projects can be daunting. Break them down

into manageable steps. Set-up a master schedule and add the incremental steps to your daily action list.

### Delegate- Ask for help

Most of co-workers are eager to learn new skills. When you ask for help, focus on the objective, not the process. Provide guidance as needed, but give your co-workers the freedom to do things their own way.

### Leverage Technology

New technology provides opportunities to streamline your work. Whether it's as simple as a keyboard shortcut or a new approach to an old process, little things add up to incremental time savings.

As Emory and the Department of Radiology strives for great patient care and strong concentration on research and teaching, being successful requires each of us to be efficient and highly productive. Continuous improvements in making action lists, delegating tasks, and streamlining assignments are key principles to job satisfaction and increased productivity. We all do certain tasks out of habit. Take a few moments to ask yourself, if your routine tasks are still contributing to the success of your group or organization? Are there more efficient ways to get your job done? Rethink your routine, and remember to stay organized, motivated, think positive and be highly productive.

- Vivian Smith, Assoc. Clinical Administrator



## Updates from Imaging Applications Support (IAS)

### What's coming up next in the Imaging arena?

#### GE PACS Workstations

- Image upgrade is underway and the IAS will work off-hour shifts to accomplish this without impeding on the clinical work.

#### GE Web Roll-out

- A small pilot group went live the second week in January. A larger pilot group went live at the end of January. The system optimization will be based on these pilot groups' feedback.

#### Teaching Files

- The interim solution is to use RadNet Interesting Case Files as "teaching files". This is currently being evaluated to determine the amount of work required for implementation. Research with GE is being established to determine performance impact of using GE WEB for teaching files.

#### Critical Results Reporting

- Quality issues and initiatives were reprioritized to begin implementation of the Veriphy software system that automatically contacts referring providers with our urgent and incidental imaging findings. We have hired a Radiology contractor to manage the project. More soon. . .

## Emory Educational Offices & Programs

The programs and offices listed below are available to work with groups at their request and present opportunities to develop special programs.

### Available to all

#### Center for Lifelong Learning (CLL)

Courses ranging from dance to leadership, and languages to computer skills

<http://cll.emory.edu/>

#### Equal Opportunity Programs (EOP)

Get in touch with other cultures, religions and diversity opportunities through courses, seminars and events.

<http://www.emory.edu/EEO/>

#### Faculty Staff Assistance Program (FSAP)

Programs and resources ranging from stress relief and conflict to health promotion and work life balance.

<http://fsap.emory.edu/>

### Healthcare Employees

#### HealthStream Learning Center (HLC)

Courses in leadership development, job skills and personal enrichment

<http://www.emoryhealthcare.org/employee/hlc/index.html>

### Emory University Employees

#### Emory University Learning Services

Training in soft skills at all levels, computer training and Certificate Programs

<http://www.hr.emory.edu/eu/employeestoolkit/professionaldevelopment/learningopportunities.html>

#### Emory Worklife Resource Center

Promotes and strengthens the work-life culture and integrates a wide range of practices, programs and processes that sustain individuals and families within the University environment

<http://www.worklife.emory.edu/>

#### SOM Office of Faculty Development

Faculty Development Lecture Series and videos, leadership courses and teaching resources are a few of the resources available.

<http://www.med.emory.edu/dean/facultyaffairs.cfm>

#### SOM Office of Staff Development

This office is in place to connect you to the development resources you need. Please contact Rochelle or Christine to explore your options, including developing a program for your group.

Rochelle Lehner, PhD      Christie Kuropatwa  
rlehner@emory.edu      cnkuropatwa@emory.edu  
Ph# 404-727-4529      Ph# 404-727-3407

## GET INVOLVED

### Breast Cancer Survivors – Georgia Tech Wants to Honor You!

The Emory Breast Center and Winship Cancer Institute of Emory University are partnering with Georgia Tech's women's basketball team to raise awareness for breast cancer. The team's home game against NC State on Sunday, February 13 (5 p.m.) will be a "PINK" game where the players will wear pink jerseys. Breast cancer survivors will form the tunnel for the team to come on court just before tip-off.

**We are recruiting breast cancer survivors to form the team's tunnel!** As an honoree, survivors will receive a free ticket to the game and a pink Emory Breast Center t-shirt to wear on game day. It is not necessary to have been treated at Winship at Emory to participate.

To register, please call 404-778-7777 or visit [www.emoryhealthcare.org/pink](http://www.emoryhealthcare.org/pink) for more information. Tickets must be reserved by February 4 to ensure on-time delivery.

Discounted Tickets: Emory Healthcare and Emory University employees can purchase \$2 tickets to the game! Order online today. (<http://ev9.eventue.net/cgi-bin/ncommerce3/ExecMacro/eventue/ev69/se/DisplayPromoList.d2w/report?linkID=gatech&RSRC=&RDAT=&caller=PR>).

### Deborah Baumgarten: 2<sup>nd</sup> Place for Visual Arts in the Emory Arts Showcase 2011

"In an effort to promote a sense of community and to increase the awareness of the arts on the Emory campus, the Emory Arts Showcase annually offers the opportunity for faculty, staff and students across the campus to showcase their talents in the areas of music and visual arts. The Emory Arts Showcase, formerly called the Emory Arts Competition, is an annual event presented as a creative collaboration between the Emory College Center for Creativity & Arts and Emory University Creativity: Art and Innovation. There are three categories for entry to the Arts Showcase: Original Music, Performed Music and Original Visual Arts. Individuals can only participate in one entry under each category. The 2011 Emory Arts Showcase Night was held Saturday, January 29, 2011, 8 p.m. in the Emerson Concert Hall of the Donna & Marvin Schwartz Center for Performing Arts." (<http://creativity.emory.edu/arts-showcase/about/index.php>)

Dr. Baumgarten won 2<sup>nd</sup> place in the Visual Arts category. She describes her piece (*right*) by telling the story of when she was on her honeymoon in Amsterdam this past fall. "I was fascinated by the many bicycles lined up and locked all around the city. In addition, the buildings were often adorned with colorful graffiti. I made a study of each and this was a rare combination! I am a photo tourist, a dabbler in the world of photography. Dealing predominantly in the shades of gray used to image human anatomy and pathology in my day job as an Abdominal Radiologist, I relish the escape into the colors and forms around me."



## Radiology Calendar

### Week of February 7, 2011

Wed., February 9 –  
Grand Rounds -  
Bonnie Joe, MD, PhD  
*Breast MRI: Artifacts and Pitfalls*

Thurs., February 10 –  
Research In Progress Series (RIPS) -  
Fanxing Zeng, PhD  
*Efforts towards the development of PET  
imaging agents for the norepinephrine  
transporter*

### Week of February 14, 2011

Wed., February 16 –  
Grand Rounds - Charles Mistretta, PhD  
*Sub-Nyquist Acquisition and Constrained  
Reconstruction in Time Resolved Angiography  
and Accelerated Medical Imaging Applications*

Thurs., February 17 –  
Research In Progress Series (RIPS) -  
Charles Mistretta, PhD  
*Imaging Research at University of Wisconsin*

### Week of February 21, 2011

Wed., February 23 –  
Grand Rounds - Howard Rowley, MD  
*Emergency Stroke Imaging: The Time is Now*

Thurs., February 24 –  
Research In Progress Series (RIPS) -  
Samuel Hong  
*Use of CT for lung fibrosis detection*

### Week of February 28, 2011

Mon., February 28 –  
Cancer Imaging Lecture Series -  
James H. Prestegard, PhD  
*Monitoring Glycosaminoglycan Synthesis with  
NMR: Research Resources at UGA*

Wed., March 2 –  
Grand Rounds -  
Deborah Baumgarten, MD  
and Patricia Hudgins, MD  
*Thyroid Gland Imaging:  
Update and Pitfalls*

Thurs., March 3 –  
NO RIPS

For times & locations visit the website:  
[www.radiology.emory.edu](http://www.radiology.emory.edu)

# GETTING TO KNOW YOU

## Physics and Computing Research Lab

The roots of the Physics and Computing Lab are based in improving Nuclear Medicine imaging and extracting physiologic information from medical images. Over the years, we have had a very strong collaboration with the Radiopharmaceutical Discovery Lab – they are the source of many of the test substances we use to probe biological systems. More recently, we have broadened our efforts to extracting information from all types of images collected in the Radiology Department, such as modeling the flow of Gd through the kidney to calculate Renal Blood Flow and Glomerular Filtration Rate.

Our research emphasis is on extracting information from molecular imaging. The main tools our group uses are: basic physics, applied mathematics, computer programming, and collaborators to contribute medical knowledge. A typical investigation starts with an expert describing some physiology



*The Physics and Computing Research Lab works to develop methods to extract the maximum possible information from molecular imaging studies.*

in sufficient detail so that we can express it mathematically. We then recommend a protocol for collecting image data such that when the equations are applied, we can infer the values of physiologic parameters in absolute terms, such as the ml of blood flowing into a cubic cm of tissue per second. Among other benefits, absolute quantification permits greater sensitivity in longitudinal experiments and normal/abnormal comparisons.

Through this process of mathematical quantization, we aim to better understand normal and diseased physiology over a broad range of applications.

Current research projects include: calculating absolute myocardial blood flow to enable diagnosing triple vessel disease (Votaw), incorporating patient motion information into image reconstruction to eliminate blur

(Raghunath), estimating the dynamic nature of endogenous dopamine following drug (cocaine) challenge to better understand substance abuse (Nye), measuring changes in the serotonin system to investigate neuronal development (Votaw), building tools for image guided prostate biopsies and photo dynamic therapy for prostate (and other) cancer (Fei), estimating folate receptor density to better evaluate the state of pituitary adenomas (Galt), critically testing new

nuclear medicine equipment (Aarsvold), quality control of PET images (J David), and establishing protocols for collecting and analyzing fMRI data (May).

The Physics and Computing Lab also has a service mission. Clinical Nuclear Medicine support is provided by John Aarsvold at the VA and James Galt at EUH. Jon Nye and James Galt support the PET efforts at the clinic, EUH and EUHM. John Votaw and Jon Nye oversee microPET imaging at CSI and Yerkes. In addition, James Galt directs the Nuclear Medicine Physics course.

We are always looking for new projects to challenge and stimulate our curiosity. Please feel free to contact me or any of us if you would like to explore extracting quantitative information from your images.



- John Votaw, PhD, Vice Chair for Research

## NEW FACES & APPOINTMENTS



**Christopher Ho, MD**  
Asst. Program Director, Radiology Residency  
As Assistant Program Director, Dr. Ho will join the education team led by Dr. Mark Mullins. Some of his experience while in training at the University of Virginia include tutoring undergraduate physics courses, mentoring medical students and residents, and developing an interactive web-based radiology teaching tool. Dr. Ho joined Emory in July 2010.



**Xuenxian Sean Yan, MD**  
Senior Associate - Nuclear Medicine  
Dr. Yan received his Bachelor and Master of Medicine from Chongqing Medical University, China. He continued his education with an Internal Medicine Residency from North General Hospital in NY and then started a Nuclear Medicine Residency from the University of Tennessee Medical Center before he completed his residency from Vanderbilt University Medical Center.



**Tracy Powell, MSN, RN, CS**  
Adult Nurse Practitioner – EUH  
Tracy has 12 total service years at Emory. She received her Bachelor of Science in Nursing from the University of Alabama at Birmingham. Tracy relocated to Atlanta and continued her nursing career as an RN in Emory Hospital's 5EICU. In 1997, she completed the Master of Science Program at Emory's Nell Hodgson School of Nursing.

**New Year, New Look!**

Recently, the Radiology front desk and file room personnel received new uniforms similar to those used in The Emory Clinic. This new look will provide a more established appearance for our customers to associate with our Department at our various locations throughout Emory University Hospital.

**Look** for a new issue of the Rad Report the first full week of March