



# The Restriction Digest

## GSA Newsletter

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the Graduate Student Association  
Johns Hopkins University School of Medicine

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### **Aural examinations:**

Arcade Fire/The National  
DAR Constitution Hall  
Washington, DC  
Friday May 4th, 2007

By Greg Szeto

The Arcade Fire are a Cinderella act hailing from Montreal who released an indie rock coup de grace in the form of their debut LP *Funeral* back in 2004. With that album, they managed to capture that ever elusive appeal to diverse audiences: winning over the harshest critics, many of the pretentious hipsters and the thousands caught in between. Combining a diverse, quaint-yet-powerful sound, the dueling, wedded vocalists Regine Chassagne and Win Butler, and genuine, raw emotion by the barrelful, there was little on that album not to love. When details began to leak on their second full-length (*Neon Bible*) released earlier this year, expectations rocketed into the stratosphere. To satisfy, it seemed like Arcade Fire would need to find some long-extinct  
*(continued on p. 2)*

### **Tech Corner: Technological Telekinesis?**

By Jonathon Trow

There are several companies creating buzz (but no products yet) around the idea of allowing humans to interface with technology via "brainwaves." Sci-fi film and literature have often made use of telepathic link technology, promising that in the future we would need neither keyboard nor mouse but would instead multiply our productivity by simply thinking our commands- computers would become mere extensions of ourselves, just another appendage. Well, those days are still seated firmly in "the future," but modern technology will soon allow us to inch closer to that ultimate nerdvana of becoming one with our computers.

EEG (electroencephalography) technology has been in use in medicine for decades, but research grade headsets for measuring electrical impulses

*(continued on p. 7)*

### **HopkinsLIFE: Students with Green Envy**

By Ian Kaplan

As a research institution, we are inherently wasteful. It's the nature of the game. Nearly everything we touch within the lab is required to be disposed of as Biohazardous Waste. We avoid reusable products for the convenience and confidence afforded by single-use, sterile, sometimes singly packaged labware. And who can argue with these rules, regulations and traditions. For the safety of everyone who comes into contact with our lab waste we must treat it with the utmost precaution and spare environmental concerns. For the sake of our experiments and our time we choose disposable over reusable products to minimize the possibility of unknown contamination. Does that mean that we can't be a little bit green outside of the lab?

Our East Baltimore campus leaves a lot to be desired when it comes to making recycling convenient. *(continued on p.3)*



*The Arcade Fire at DAR Constitution Hall*

*(continued from p. 1)*

ancient muses to funnel into their new release along with a crisp new \$50 to even attempt meeting the standards set by rabid fans. It was only made worse when it was leaked they recorded in churches with a real live pipe organ and got endorsements from musical heavyweights such as Bowie and Bono. Approaching with guarded excitement, I came to love the new album almost as much as the first and found the dreaded “sophomore slump” was happily absent. Most fans and critics felt the same and the Arcade Fire proceeded up the step ladder to indie super-stardom, and climbed into the rarified air of my personal must-see-before-I-die’s along with Neutral Milk Hotel, Dream Theater and Stan Bush.

Constitution Hall, in my eyes, fills a niche role as a venue for live music. Larger and more formal than smaller venues such as 930 Club and the Ottobar, it can accommodate bands that have a large fan-base and appeal; but at the same time, for a stadium-class venue, it easily has one of the best designs imaginable. Seating is more akin to a stadium seating movie-theater, with excellent lines of sight from nearly all areas and spread out without really needing opera glasses or jumbotrons to see who is doing what on stage. Though acoustically not as live and nuanced as the Strathmore in Bethesda (my current high watermark for high quality sound), the sound is close; a big improvement over the cold and hollow sound often found in arena venues like Verizon Center, and 1st Mariner Arena.

Openers the National didn’t really captivate as I expected them to. Playing intricate, intense songs, they could be considered purveyors of laser rock: precise and exacting, impressive music in that respect but never awe-inspiring. Lyrically, their songs are often first-person and expository, and delivered in a conversationalist manner. This approach works extremely well in small, intimate venues with more easily set mood, but was diluted in the venue super-size from club to hall. It’s hard to relate to something personally, individual to individual, if you are separated by distance and throngs of people. The performance was impassioned but it often felt the band was at a loss with how to handle the venue, consequently, the impact of their music was blunted. Ultimately, the National turned out a good but forgettable performance.

As the A/V techs began setting up the Arcade Fire’s instruments and set, you really began to notice the equipment: 2 megaphones on mic-stands, 6 large monitors cradling the stage in an arc, pipe organ, French horns, cornet, sax, baritone/mellophone, accordion, drums, string bass, violins, standard array of guitars...you just had to marvel at the sight. Opening with “Black Mirror”, the first track off *Neon Bible*, the rumble of the drums, bass and organ creates a cacophonous storm in the hall; I don’t think I’ve ever heard bass as powerful and crisp as this. As Win begins to phase in his quavering, haunting vocals, the swell of the song becomes mesmerizing. The band really began to take off with “Haiti,” which had a particularly inspired performance. The calypso groove of the track was accentuated by perfectly balanced sound; the xylophone and Regine’s vocals were at higher levels than on the album, proving to be vibrant and infectious. The band followed with “Black Wave/Bad Vibrations,” another track emphasizing Regine’s vocals as much as Win’s, if not more. Since the first album, her vocals have undoubtedly matured, providing her stylistic range room to grow outside of variations on “mousy”. In concert, her performance truly comes alive. After a nearly exhausting beginning of the set, the band has been impressive, but largely operating in the “wall of sound” mode

*(continued on p. 7)*

# 2007 Biennial and Reunion Weekend!

By Joceyln Lynch  
*Office of Development and Alumni Relations*

Mark your calendars for May 31 – June 2 for the Johns Hopkins Medical and Surgical Association Biennial Meeting and School of Medicine Reunion Weekend! It promises to be a fun-filled and education-filled weekend.

There will be symposia on Friday and Saturday addressing Stem Cells and Medical Education. Additionally, there are over 20 departments presenting academic programs concurrently on Friday morning, including the History of Medicine, Neurology and Neurosurgery, and the Institute of Genetic Medicine. There will be an exhibit featuring artwork of the 2007 graduates of the Art as Applied to Medicine program, portrait and award presentations, and an update by the Dean and CEO of Johns Hopkins Medicine, Edward D. Miller.

Registration is complimentary for all graduate students, although pre-registration is required. To register for the Biennial Meeting, visit <http://www.hopkinscme.net/pdfs/07-511555regform.pdf>. For more information about the 20+ departmental programs and other exciting events going on this weekend, please visit the Continuing Medical Education website at: [http://hopkinscme.net/CourseDetail.aspx?course\\_code=07-511555](http://hopkinscme.net/CourseDetail.aspx?course_code=07-511555)

Finally, we have one request. If you are interested in giving campus tours during Biennial Weekend on the afternoon of Friday, June 1 or the afternoon of Saturday, June 2, please contact Jocelyn Lynch at 410-516-3803 or [jlynch21@jhmi.edu](mailto:jlynch21@jhmi.edu). It would be a wonderful networking opportunity!

*(continued from p. 1)*

Why doesn't every break room, conference room, kitchen, café and Happy Hour have proper receptacles for recyclables? Think of all the lunch time talks you have attended where cans of soda were served without a proper place to dispose of them. Or all the Happy Hours with only garbage cans in clear view. All the places where food is consumed and waste produced with no nearby option for recycling. After all, the majority of us are more likely to recycle if the option is convenient and at many other places it is.

We want Hopkins to be a positive example. We are HopkinsLIFE (Leadership Initiative for the Environment), a group of students concerned with the impact that this institution has on the environment. You might remember us from the Earth Day Happy Hour - where about 500 people came together to recycle enough electronics to fill a medium sized bedroom. If you don't remember us, you either had a blast or you need to keep reading. We want to know what the barriers are to recycling on campus and what we can do to get everyone here to think twice about trashing recyclables. Is it because there are not enough recycling containers placed conveniently? Are the containers not clearly marked? Do we not care to make the effort to separate our waste? Do we not believe that our recyclables are actually recycled? We have set out to figure out why and what we can do.

A few months back we met with the head honchos in Facilities Management to find out how they operate and most importantly, what we could do to help them. Surprisingly, they appreciated our interest and our willingness to work with them. They also saw us as an avenue for them to toot their horn a little bit. They have already started lessening the impact that our campus has on the environment but few of us know about their efforts and ongoing projects.

We learned that the Broadway Research Building was constructed with a state of the art rainwater collection system. The BRB collects rainwater from the rooftop to use in the animal facility for the first round of cage washing, flushing the toilets on the first and second floors and watering

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that little lawn. They are also in the process of replacing all of the fluorescent lights on campus (with low mercury “green end cap” bulbs. In one of our first endeavors, Facilities Management supplied us with floor plans of the entire campus so that we could map out where trash and all types of recycling bins are located. We believe that people are more likely to dispose of waste properly if the recycling option is as convenient as possible. Facilities has already spent around \$60,000 expanding the fleet of those large green totes for paper, pipet tip boxes and soon for commingled recyclables. We plan on using the results from our mapping project in order to place the new receptacles appropriately to make the recycling option more ubiquitous on campus.

At this point we are hopeful that our relationship with facilities will continue to flourish. They have agreed to set up monthly meetings and even suggested that we attend some of their staff meetings so that we can better understand how the housekeeping staff operates. We are also working on a combined website to serve as a resource for recycling information as well as the progress of our ongoing projects.

It appears now that the major barriers to recycling on campus are apathy, doubt and space. Facilities can only recycle if they have a place to store the material before it is collected. Free space is limited on our urban campus and because waste management doesn't put Hopkins on the cover of the paper, collection space has been lost numerous times for the sake of research resources. The new area between CRB I and II is fully loaded with a paper compacter, allowing a central area where all the paper from campus can be collected, compacted and picked up. A new commingled dumpster is also supposed to be installed sometime in the near future at the CRB loading dock.

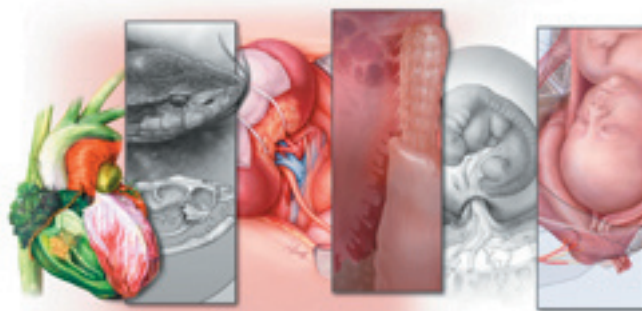
Recyclables used to be collected at the Ross loading dock. During the construction of the BRB the space at the loading dock was lost temporarily and recycling was suspended on campus. During that time, recycling containers were still located around campus and rumors flew as people

started seeing the contents of those receptacles thrown into dumpsters outside of the BRB construction site. It seems that the fallout from that time is still present on campus in the form of a lack of trust. The system is now in place, we hope to regain everyone's trust.

Finally, just because the city we live in is full of litter and a lack of respect for our surroundings doesn't make it ok for those of us on campus—who are mostly visitors—to take a ‘when in Rome’ attitude towards waste disposal. Don't just stand in line and throw away that can of soda or your junk mail. Take a mug to get coffee. Recycle those pipet tip boxes. Carry that soda bottle a few steps. Think twice about what you toss in the trash. Educate yourself and everyone around you.

Next Meeting: June 11th, 5 PM, Room 2-108, 1830 Bldg.

*If you have questions or want to get involved feel free to email HopkinsLIFE@gmail.com; for electronics recycling in the SOM, please contact Mike Humpries at Facilities at 5-0880.*



## Reception for the Graduate Exhibition of Medical and Biological Illustration

The graduate students of the department of Art as Applied to Medicine at the Johns Hopkins School of Medicine will be exhibiting 100 new illustrations depicting a wide range of medical and biological subject matter. In the tradition of the program started in 1911, students have worked closely with doctors and scientific professionals in order to create highly educational illustrations. Join the graduates as they celebrate with a reception including refreshments and entertainment. The reception will be held on Wednesday, May 16th from 5 – 7 PM, in the Turner Concourse. The show will run from May 16th to June 4th, and is free to the public.

# Interview: Elaine Fuchs, invited BCMB speaker

By Laura Koontz

This past April, the students of the BCMB program invited Dr. Elaine Fuchs as their annual seminar speaker. Dr. Fuchs presented her lab's research in a talk entitled "Stem Cells of the Skin and Their Lineages". During the day of her visit, I had the pleasure of interviewing her for the *Restriction Digest*.

Elaine Fuchs grew up outside of Chicago, in a family with 3 scientists. At an early age, she knew she wanted to pursue a career in science, although she wasn't sure what area. In 1972 she obtained her undergraduate degree in Chemistry from the University of Illinois, where she was one of three women in many of her classes. Chemistry and physics didn't excite her, and she decided to apply to more biologically applicable graduate programs. Motivated by her activism during the Vietnam War, she also applied to the Peace Corps at the same time, hoping to be assigned to Chile. However, she was assigned to Uganda, which was controlled by totalitarian dictator Idi Amin at the time. Luckily for the scientific community, she went to graduate school at Princeton instead. While at Princeton, Dr. Fuchs was frugal with her \$3000/year stipend, and thus able to travel extensively across five continents before graduating with her PhD from Charles Gilvarg's lab. She then went on to a post-doc in Howard Green's lab at MIT, where she was first exposed to work with epidermal keratinocytes. She has remained interested in the biology of the skin ever since.

In 1980, she accepted a faculty position at the University of Chicago, making her the first woman faculty member in the Biochemistry Department there. She continued her work in Chicago until 2002, when her lab moved to Rockefeller, where she is the Rebecca C. Lancefield Professor of Mammalian Cell Biology and Development.

**Restriction Digest:** I know that you grew up in a family of scientists, and I was wondering what that was like?



Dr. Elaine Fuchs

**Elaine Fuchs:** *[laughs]* Well, my mother was actually a housewife, so let's see... My dad worked as a geochemist at Argonne National Labs. He and my aunt both were undergraduates at the University of Chicago, which is why I ended up working at the University of Chicago later on. My father graduated from college during WWII and then served as a Navy pilot. After the war, he had a choice of becoming a Pan-Am pilot, or a scientist at Argonne, where they were hiring scientists without PhDs. So, he chose to work at Argonne, where he studied extra-terrestrial minerals in meteorites. When he retired, there were 13 known extra-terrestrial minerals; he personally identified 8 of them. He was mostly a one man show – he occasionally had a graduate student, but never had a technician. He published occasionally in Science, yet he always felt very humbled by the fact that he didn't have a degree. I always saw him as being very dedicated – going to work on his own and trying to accomplish something. That had a huge impact on me growing up.

My aunt has an equally interesting story. She lived in the house right next door to us, and was like a second mother to me. She wanted to go to medical school, and had much better grades than my dad, who could have easily gotten in. But, she didn't get in because of the fact that she was female. They only accepted a few females into  
*(continued on p. 6)*

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medical school at that time. So, she became a biologist and was a research technician at Argonne National Labs. She became very much a feminist, was very involved in the NOW [National Organization of Women] organization in the early days, and she even used to march. Growing up, she was another big influence on me.

Now my sister, who was four years older, was really interested in biology and that sort of left my mother. My mother painted, gardened, and played the piano. The artistic side of me really comes from her. She was also a very hard worker. I think her motivation very much steered what I ended up doing, even though I had sort of this circuitous route do it. I really took whatever I was doing very seriously. Well, seriously to a point, I guess.

**RD:** What qualities do you see in graduate students who are most successful?

**EF:** Most of my students have been successful. But, first and foremost the most important quality is motivation. I haven't seen any students who are motivated and passionate about science who haven't succeed in some way. You can help a student who hasn't yet seen the passion in their science capture it, but you can't teach the motivation that goes along with that. You can't teach a student to have the motivation to work through failed experiments and still be in the lab, unlike those who leave the lab when their experiments aren't going well - that's actually a good indication of students who are going to make it. Beyond that, there's a certain level of intelligence. But, most students who are coming into graduate school are going to have that level of intelligence. There's also a certain level of technical ability. There are students that are technically gifted, and those that aren't technically gifted. Now if there's an extreme case of those that aren't technically gifted...

**RD:** *[laughs]* Bad hands?

**EF:** ... but it's rare that people don't have enough good hands to be able to do the experiment. I think that most students come with a certain confluence of ability, but it's that motivation and creativity that needs to come out. That's why I

think it's important to really allow students to be creative and come up with ideas. Beyond that, I think it's most important that students learn to do a well controlled experiment. I really think that if they are able to do that, and have the creativity to put together their own research project, then I think that they'll be successful.

**RD:** Switching gears, what do you think the scientists' role in educating the public is, and how do you think we can be more productive in that?

**EF:** I definitely think we have a role in that... a responsibility. From the professor side, the responsibility really rests with being involved in societies that have political liaisons with their state governments. It's also important to write mass letters when there are important bills coming up, and send them to Senators and Congressmen. We have that responsibility to educate the politicians. With regards to the public, I see our responsibility all the time played out all the time in New York with talking to various different groups that want to know more about stem cells, for instance. It's also important to talk to undergraduates and high school students, so there are lots of different levels of public speaking. Paul Nurse, our president [Rockefeller University], is on the Charlie Rose show in New York regularly, educating the public about various different aspects of science. When Bruce Alberts was the president of the National Academy of Sciences, he played a big role in interfacing K-12 education with scientists and coming up with ways that the communication barrier can be broken down. But also internationally, [Alberts] made the comment that science was an international language. We, as scientists, interact with people all over the world. We don't care that they are Iranian scientists or Icelandic scientists. We have a common language and a common understanding amongst each other that exists across communities and countries. It's up to us to bridge communication where our governments might be more rigid. So, we have a responsibility to not only educate our public our politicians, but we also have a responsibility to build avenues of communication between countries.



*(continued from p. 2)*

where the energy and power of the group was on display. With the ominous “Neon Bible,” the growing despair of “Windowsill” and the wistful lament in “Ocean of Noise,” the Arcade Fire decides to flex its muscles and reveal that they are just as capable of creating the feeling of intimacy and resonance that make their albums so powerful. The key to their power and appeal is that everything feels genuine, every emotion, every melodrama which delivered by any other group might seem pretentious or a façade, is communicated so effectively and preciously they become your own for that moment. “Neighborhood #1: Tunnels” was given some extra crunch to ramp energy up for “Power Out,” when the crowd surged from the seats to the stage, readily engulfed in an explosive nova of chords and light. The encore began with the swell of the pipe organ and a soul-shaking rendition of “Intervention” followed by a lush, night-ending version of “Wake Up”.

There is no doubt that the Arcade Fire are a sight to behold. Each member (10 total for the current tour) is a multitasking performance artist, playing a set-long game of musical chairs with vocal and instrument duties. They exude a measure of confidence, competence, sincerity, artistic energy and talent that is rarely seen; however, none of this proves detrimental to the flow of performance or the quality of musicianship. The group plays as one giant amalgamation of flailing limbs, myriad instruments and faux-chaos, yet through some mystical synergy, generate an impressive, cohesive and consistent sound mustering as much power as they can tenderness.

#### **Arcade Fire Set List**

Black Mirror  
No Cars Go  
Neighborhood #2: Laika  
Haiti  
Black Wave/Bad Vibrations  
Neon Bible  
Windowsill  
The Well & The Lighthouse  
Ocean of Noise  
Neighborhood #1: Tunnels  
Neighborhood #3: Power Out  
Rebellion (Lies)  
Keep the car running  
*Encore break*  
Intervention  
Wake Up

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in the brain may contain scores of electrodes that require a conductive gel between them and the skin, and the necessary receiving/analyzing equipment is expensive. One startup company in particular, NeuroSky, is trying to bring similar technology to the masses by working with electrodes that do not require gel, can fit into a form factor resembling nothing more than a large headset and retail for \$20. Furthermore, their analysis algorithms allow simple computers to do the grunt work of interpreting the electrical signals into data usable by another program, be it a video game or a readout of mental focus.

While their device is smaller, cheaper, and easier to use than current technology, the caveat is that it is also less sensitive. Ok, a lot less sensitive. But the applications they are hoping to introduce their product for don't require medical precision. Certainly they eventually hope to produce devices and algorithms that will allow us to do things like control video games with our minds, but early forms of their technology will be debuting in relatively simple toys (the first of which will be announced this year). They hope these will eventually find use in helping children with ADHD or mood disorders improve their mental focus and control. Further application could include monitoring long-haul truckers for signs of drowsiness.

NeuroSky's prototype really reads something like emotional states- “like a focused awareness, a meditative state, or drowsiness” according to their website. Current models they have demo'd allow users to do things like control lights going on and off by focusing on them or to move simple objects around on a video screen. These tasks are concentration dependent, a lack of focus or external distraction causes a drop in speed of your virtual object on screen. This kind of EEG technology has been used by professional athletes to train themselves to maintain focus during competition for years. There is of course some debate about whether this type of “artificial” preparation yields real world benefits when the feedback from training is absent. However, individuals looking for any advantage they can muster will undoubtedly continue to use this sort

*(continued on p. 9)*

## ***Fun and Free (or really cheap) things to do this summer in Baltimore:***

**Visit the Walters Art Gallery** – The Walters' stunning collection of art, sculpture, taxidermy (really), armor and weapons, and much more is now free for everyone! Make sure to keep an eye out for the collection's two Faberge eggs while you're there. Located on N. Charles Street at the Washington Monument. [www.thewalters.org](http://www.thewalters.org)

**Dig through the stacks at Book Thing** – If you've got some time to spare and nothing to read, head up to the Book Thing in Waverly and get yourself some free (yes, free) books. Open 9 am to 6 pm on the weekends. Be warned, the building is not air conditioned, so don't pick the hottest day of the summer to go. 3001 Vineyard Lane, Baltimore 21218. [www.bookthing.org](http://www.bookthing.org)

**Hike or Bike the Jones Falls Urban Trail** – The Jones Falls trail currently runs from Druid Hill Park down to Penn Station along the banks of the Jones Falls as well as parallel to some of the old train tracks running into the train station. The trail head can be picked up across from the Steiff Silver building off Sisson St. [www.jonesfalls.org/trail.htm](http://www.jonesfalls.org/trail.htm)

**HonFest** - June 9th and 10th, on "the avenue". This year, Hampden's annual festival expands from one day to two! So put on your biggest beehive, your kitchiest kitten eye sunglasses and get on up to 36th Street for live music, lots of great food, and the Best Hon contest! [www.honfest.net](http://www.honfest.net)

**Artscape Baltimore** – July 20th to the 22nd on Mount Royal Avenue. Live music, lots of great food, awesome vendors, and art cars! [www.myspace.com/artscapebaltimore](http://www.myspace.com/artscapebaltimore)

**30th Annual Baltimore Farmer's Market** – Starting May 6th and running every Sunday morning until December 23rd. 8am until sell out. Underneath the JFX near Saratoga Street.

**Waverly Farmer's Market** – Year-round, Saturdays, 7 am until noon. E. 32nd St. and Barclay. [www.32ndstreetmarket.org](http://www.32ndstreetmarket.org)

**National Public Works Week** - May 20th - 26th.

\$1.00 admission to the Baltimore Public Works Museum all week long!  
[www.baltimorepublicworksmuseum.org](http://www.baltimorepublicworksmuseum.org)

**Baltimore Pride 2007** - June 16th and 17th. Presented by the GLCCB (Gay and Lesbian Community Center of Baltimore), Baltimore's annual Pride weekend is one of the biggest in the celebrations on the East Coast. Saturday's celebration will be held in Mt. Vernon, while Sunday's festivities are in Druid Hill Park. [www.baltimorepride.org](http://www.baltimorepride.org)

## ***Baltimore City's Summer International Festivals:***

**Polish Festival** – June 1st – 3rd, Patterson Park. \$ [www.polishcommunity.com/](http://www.polishcommunity.com/)

**St. Nicholas Greek Folk Festival** – June 8th – 9th, 520 S. Ponca Street. FREE [www.greekfolkfestival.com](http://www.greekfolkfestival.com)

**LatinoFest** – June 23rd – 24th, Patterson Park. \$ [www.latinofest.org](http://www.latinofest.org)

**African American Heritage Festival** – July 6th – 8th. Oriole Park at Camden Yards. FREE [www.aahf.net](http://www.aahf.net)

**Caribbean Carnival Festival** – July 13th – 15th. Druid Hill Park. \$ [www.bcacarnival.net](http://www.bcacarnival.net)

**International Festival** – July 28th – 29th. Poly/Western High School. FREE [www.baltimoreinternationalfestival.com](http://www.baltimoreinternationalfestival.com)

**NAIJA (Nigerian) Festival** – August 11th – 12th. Patterson Park. [info@nyamaryland.org](mailto:info@nyamaryland.org)

**PowWow Native American Festival** – August 24th – 26th. Patterson Park. \$ [www.baic.org](http://www.baic.org)

**Ukrainian Festival** – September 8th – 9th. Patterson Park. FREE

**Korean American Festival** – September 22nd. War Memorial Plaza at Fayette and Gay Streets. FREE

**Russian Festival** – October 19th – 21st. 1723 East Fairmount Avenue. \$ [www.holytrinityorthodox.com/festival/index.htm](http://www.holytrinityorthodox.com/festival/index.htm)



(continued from p. 7)

of exercise and NeuroSky hopes to bring an affordable version to the masses. What was once the sole domain of elite athletes may become standard fare in high school locker rooms.

Of course, NeuroSky and other companies like them (such as Cyber Learning Technology and Emotiv Systems) hope to bring about video games we control by thinking and computers that can read our thoughts (forget about typing, how many words per minute can you think?), but these types of applications are not close. Basic devices that interface with gaming consoles such as the Playstation 2 or Xbox are already available, but offer only rudimentary control of on-screen events. However, expect to see continual evolution of this technology cropping up in toys and somewhat fringe applications on its trek to a mainstream break out. In other words, the future is now... kind of- but hey, we need something to look forward to right?

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**Print out a copy online at:**

**[http://www.hopkinsmedicine.org/  
gsa/newsletter/index.shtml](http://www.hopkinsmedicine.org/gsa/newsletter/index.shtml)**

**Next submission deadline: June  
15th**

## **Another GSA Success! Celebrating Grad Student Appreciation Week on the Clipper City Booze Cruise May 10th, 2007**

