

Stony Brook University, Stony Brook, NY 11794-3880

Did you know . . .

◆ Two local high school students were awarded WISE certificates for their outstanding science and engineering projects. They are Ishwarya Ananth-abhotla from Kings Park High School for her CESAME Engineering Summer Camp project and Alyssa Bluenthal from Long Beach High School for her LISEF project.

◆ Citi is offering its WISE Winter Internship again this winter break. Up to four WISE students will be selected to participate.

◆ Several Citi scholarships of \$6,000 will be offered to outstanding WISE students. Check your email for application details in the next coming weeks.

◆ The Anne Sayre Prize of \$500 will be awarded in 2010. Check for the application soon!

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Director's Message by Carrie-Ann Miller



Dear WISE Students, Faculty and Staff:

Welcome back to Stony Brook! I am pleased to announce that this year we have 60 new WISE students. This includes 21 students enrolled in the College of Engineering and Applied Sciences, 34 enrolled in the College of Arts and Science and 5 SOMAS Students. The students were chosen from

close to 1000 applicants! Becoming a WISE student is highly competitive. Our new WISE students should all be congratulated! We are eagerly awaiting your arrival and excited about your contribution to WISE and the Stony Brook community. We have selected 12 junior mentors this year who will be working closely with our new students to assist with them with their adjustment to college life. Sharon Pavualaan will instruct our WISE class entitled Society and Gender in Science and Engineering (WSE 242) this fall and Spring 2010. She is the Coordinator of our High School WISE program and has enjoyed teaching WISE

242 in the past.

We have our own instructors for SBU 101 including Dr. Harvard Lyman, Mary Bernero, Jennifer Dellaposta and Chirstine Szaraz. This fall we will welcome two new graduate students, Alana Lowe from the School of Social Welfare and Jessica Arnold from Geosciences. Lauren Macri, who is a graduate student in Biomedical Engineering, will continue to coordinate WISE 187, Introduction to Research class. WISE 187 is a three credit class that is mandatory for WISE first year students. The students choose from many wonderful and exciting

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New Media for WISE by Doreen Aveni



Women in Science & Engineering (WISE)

After a much needed facelift, the WISE website has recently been re-vamped. I updated the look of the website to fit in with the style of Stony Brook University. New to the page is easier navigation, making it a breeze to find out what you need to know! I've enhanced our pages relating to admissions and the Scholars for Medicine Program. I added tons of new pictures and useful links. I think the site looks great, and I want to hear what you think! Please take a few minutes and check us out! www.stonybrook.edu/wise

Another great way that WISE is reaching out is our

Facebook group pages! We have three groups for our current students, WISE Stony Brook Class of 2013, WISE Stony Brook Class of 2012 and WISE Class of 2011. Log into Facebook and search for your year. In addition, we have a general WISE group for everyone to join, including current students, alumni and community members. Look for WISE!



We can't get enough of new media, so we also have a WISE blog! This is a great community of dedicated

WISE students who comment on student life, campus goings-on and all things WISE. The blog is the brainchild of WISE student Sanhita Reddy, class of 2010, who is the blog moderator.

Recent topics include the SISTERS summer program, TechPREP and student profiles. Check out the great snapshots shared by our users! Please point your browser to stonybrookwise.wordpress.com



Girls Learn Int'l by Sharon Pavulaan

Last November, Carrie-Ann Miller, then social-work intern Faneza Hoossain and I learned about an organization called Girls Learn International ®(GLI), which pairs American students with students in countries where young women and girls have traditionally been denied access to education. We were interested in becoming involved with GLI and hoped to establish a link between it and WISE. The program allows young women in the United States the opportunity to learn about global issues of human rights and cultural diversity through active participation in GLI community projects and active participation in meetings and campaigns. Throughout the Spring 2009 semester, Faneza took the reins in researching GLI's program's goals and structure and contacted the organization about the possibility of Stony Brook becoming involved in the program. She surveyed our WISE students and many showed immediate interest in becoming involved.

This Fall Stony Brook has become the second University

Chapter of GLI (Tufts was the first). Our first project is partnering with the Once a Month Campaign, which provides girls in Zambia, Africa with sanitary pads so that they do not have to miss classes during the times during the month when they have their periods. Missing a whole week of school during times of the month is something that may seem inconceivable to students in America, but is commonplace for these girls. Thus providing those students with this simple need makes a huge difference in their lives.

The following students are the elected GLI board members:

President: Priya Madhavan
Co-Vice Presidents: Riddhi Doshi and Priya Sabu
Treasurer: Sanche Graham
Secretary: Himadri Kakran

If you are interested in becoming involved with GLI, contact the group at girlslearn.sbu@gmail.com and you can learn more about the organization at their website: www.girlslearn.org

WISE SLC by Rebecca Solomon

The WISE Student Leadership Council (SLC) was started in fall 2004 as a way for students to become more involved in the WISE Program by planning programs to help WISE women grow personally, professionally, and academically. The SLC also assists the WISE director and faculty and organizations affiliated with WISE such as Society of Women Engineers (SWE) and Girls Learn International (GLI).

The SLC hopes to host several programs this semester. We kicked off the semester with expressing our creative side at craft night. Our First General Body Meeting went great! Many WISE girls and freshmen attended and were very enthusiastic about the program. We had our election for the Gray College Liaison position and congratulations to Jaclyn Chen for winning. We are hoping to coordinate events with the Gray College Hall Council.

This year the mentoring groups have come up with their own teams and there are a lot of events planned for them to

compete against each other. All the mentoring groups are also getting involved with the SLC on planning events this year. The Amazing Race is back! It will be a nice way for the WISE women to mingle and work on teams and also will help the freshmen to get around campus.

There are also many academic events planned for this semester, like Research 101, where WISE upperclassmen get to talk to other WISE students about research. We are also celebrating Halloween with a costume party this semester. More fun, exciting and informative programs are planned out for the semester.

SLC is a student run organization and we want all of you to be involved. Check your email, Blackboard and Facebook for more info on upcoming events.

All the best for an exciting, fun filled year.

What We Did in the Summer of 2009 (continued from p. 4)

Pooja Parekh, WISE junior: I participated in the New York STEM Mentoring Program which involved mentoring middle school students. The goal of the program was to promote the students' interest in math, science and engineering. All of the students were from New York school districts that are afflicted with gang violence and are economically disadvantaged.

Victoria Pisarevskaya, WISE Junior: This summer I had the privilege and the pleasure to work in the Genetics Department under Dr. Eli Hatchwell in conjunction with the Pediatrics Department at Stony Brook University Medical Center. This opportunity was

made possible by funding from the Cody Center for Autism and Developmental Disabilities which I am very thankful for. The goal of my research was the study of Autism and the discovery of gene polymorphisms in children with Autism Spectrum Disorder. The syndrome's frequency is estimated to be as high as 1 in 150 American children yet its etiology remains largely unknown. This research has further fueled the passion I have in my pursuit of an MD/PhD degree with a focus on pediatric neurodevelopment disorders. Also, this summer I had the wonderful opportunity of being a Mentor in the Middle School STEM Project and formed amazing bonds with two charismatic girls entering the eighth grade.

Jacqueline Rodriguez, WISE Senior: I conducted research

at the Jackson Laboratory in Bar Harbor, Maine. I worked in the Beverly Paigen Lab under the mentorship of Ron Korstanje. My project was called "A Mouse Model for the Effects of Tenofovir on the Vitamin D pathway, Calcium Homeostasis, and Bone Mineral Density in HIV patients." My study will provide a potential mouse model to help study these negative side effects, and hopefully lend toward eliminating them.

Veronica Scorcio, WISE senior: I spent spring semester helping a graduate student with her research on historical waterway obstruction in Maine and read articles dating all the way back to the early 1600's. As soon as school ended, I spent a month taking a Marine Culture and Biology class in France through Towson University. I did my

own research comparing hypoxia tolerance and mitochondrial output in the Turbot. I was given the opportunity to work with published scientists from France, Britain, Germany, and America. When I got back, I worked for two weeks as a STEM mentor at Stony Brook with middle-school children. The rest of the summer was spent rehearsing for a play in Brooklyn that I sang in, and studying for my GRE's.

Faye Marie Vassel, WISE junior: I ended up doing the International REU in Graz, Austria. Austria was amazing! I worked with a group in the Institute for Molecular Biotechnology at the Technical University Graz. The internship ended August 7th, then I was off to Poland for a week.

TechPREP by Laura Gurick

It is so hard to believe that another year has gone by, and a full year of TechPREP has successfully been completed. The success can be attributed to the collaborative effort of various programs and departments at Stony Brook University and the generosity of the Motorola Foundation. The Liberty Partnerships Program, the Science and Technology Entry Program (STEP), the Outreach Program for Long Island Technology Education (OPLITE), the Department of Technology and Society, and the Women in Science and Engineering (WISE) Program all worked together to ensure first year success.

The first year of TechPREP focused on concepts and applications of computer science and was taught by Dr. Lori Scarlatos of the Department of Technology and Society. The young ladies from Brentwood and Longwood came to Stony Brook on seven Saturdays in the spring as well as two weeks in the summer for camp. During the

program we talked about animation and how it is defined as "coming to life." I found that to be very appropriate, as I had the opportunity to watch the program come to life from a front row seat!

Every week, the young ladies brought their enthusiasm to learn and excitement to participate in the day's activities. For the duration of camp, the ladies worked on short animations using Flash and soundtracks created with Garage Band. The last day we invited families and friends to watch the creations and celebrate the accomplishments of the students.

A key aspect of the program's success was the Sisters in Science, Technology, Engineering, and Research (SISTER) mentoring program. Activities were led by the SISTER Mentors during break and ranged from bridge building with marshmallows, to boat racing with cardboard and duct tape in the fountains, to making homemade ice

cream. Everyone seemed to have a lot of fun and the hardest part was saying goodbye at the end of the camp.

Due to the generosity of the Motorola Foundation, we are able to continue the TechPREP Program this year with a curriculum in Physics and Mathematics, as well as hire additional SISTER Mentors. The young ladies have already expressed their interest in returning to TechPREP which makes planning for this year that much more exciting!



Seen here are TechPREP students working together on a project.

Director's Message (continued from page 1)

laboratory experiences and participate in three rotations over the course of the semester. This past year we added the opportunity for our students to go to Brookhaven National Laboratory on Saturdays to do research with faculty. At the end of the semester all WISE students will do a presentation of one of their experiences during the academic year. Faculty, graduate students and their peers are invited to attend. This gives the WISE students an opportunity to share their findings and practice presenting their material in front of others. Many of our students go on to participate in Stony Brook's Undergraduate Research Celebration (URECA) event in the spring. Other upper division students present with faculty at national conferences. WISE 187 is the springboard for participating in research, developing students as professional and becoming confident in public speaking.

We are very pleased to announce that our TechPREP program, funded by the Motorola Foundation "Innovation Generation" grant was a

tremendous success. Forty middle school students participated in our TechPREP computer science curriculum. We hired 6 college WISE students to mentor the middle school girls. This year, TechPREP's focus will be on developing mathematics and physics skills. We will once again be able to hire college WISE students as mentors. The Sisters in Science, Technology, Engineering and Research (SISTERS) mentors provided role models for the younger girls. We provided mentoring and leadership training for the college students as part of their preparation to work with the students. If you are interested in learning more about the TechPREP program our Coordinator, Laura Gurick has written an article for the newsletter. (See page 3.)

The Student Leadership Council (SLC) is going to be in touch with you through black board to announce their programs and tell you how to get more involved with WISE. The SLC works with me to plan and implement our programs so that they are programs

that are of interest to the students. Their activities are both educational and social.

In addition, we are starting a new club this fall called Girls Learn International. This service learning club will focus on learning about issues that relate to girls and education. The students will plan events to help educate other Stony Brook students regarding global issues of education, healthcare and poverty. The club's participants will help their peers to understand global human rights issues and promote cross-cultural understanding and communication. It is a great opportunity to "make a difference" and take what you are learning in the classroom and bring it to life. Stony Brook's chapter will be the second chapter of this organization on any college campus!

Again I would like to welcome you to WISE if you are a new student! Welcome back if you are a returning student! The faculty, staff and other WISE students are eager to work, study, and enjoy Stony Brook with you! Our door is always open so come by the office and introduce yourselves.

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To apply to WISE:

Apply to Stony Brook University by Dec. 1.

Complete the online supplemental application by Dec. 31.

For details and to apply, visit:
www.stonybrook.edu/wise/admissions.shtml

Comments or questions about this Newsletter may be directed to the editor, Doreen Aveni, by phone (631) 632-6947 or email doreen.aveni@stonybrook.edu



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What We Did in the Summer of 2009

Sriya Adhya, WISE Alum, Class of 2009: I did an internship at BAE Systems, Inc. under their Energy Management team and worked on projects that helped save the corporation \$100,000+ annually just on energy consumption. In the Fall of 2009, I will be attending the Cooper Union with a full scholarship for my Master's in Mechanical Engineering.

Carolina Capunay, WISE Junior: Since February I have been volunteering at the Stony Brook Medical Center at Pediatric Oncology. I will be continuing to volunteer there this fall. During the summer I returned to work for a program called Upward Bound. I was promoted from tutor to teacher this year. I taught two classes, Biology and English.

Faith Consiglio, WISE Freshman: I spent time working at the Lower Hudson Valley Challenger Center as a counselor in the Space Camp program. I helped children learn about space, build rockets, perform experiments and take simulated missions to the moon and Mars. I also volunteered at Farmony, a local non-profit organization which educates children about healthy eating habits. I received an award from NYU for my many hours of research during the past two years related to testing Aged Garlic Extract as a treatment for malaria. The sulfurous compounds in garlic show evidence of interfering with the cysteine proteases in the parasite. I also spent one week in Spain where I practiced Spanish and saw artworks that I've studied.

Amorita R. Davidson, WISE Junior: I recently completed the 2009 summer session of the Science and Research Awareness Series (SARAS) at the Stony Brook Health Sciences Center. I also did research on campus in the Futuyama lab in the evolution and ecology department of biology. There were two projects in the lab dealing with the evolution of plants and insects. The first project tested fruit fly preference for different

morning glory flowers used as mating sites. The second project used molecular techniques to investigate how population structure and migration affect coevolution of a plant and an herbivore. During the Spring 2009 semester I served as a teaching assistant in an anatomy lab class for high school students in the Science and Technology Entry Program (STEP). I also served as the Stony Brook ambassador for the Collegiate Science and Technology Entry Program (CSTEP) at the statewide conference in Lake George, New York.

Muskan Ghotra, WISE sophomore: I did research with Dr. Harvey Lyman in the Life Sciences Building. I started this research during my WISE rotation and I loved it so much that I continued to do research with him on the topic of euglena. Also I volunteered at Nassau Community Medical Center on Saturdays. I went to a veterinary clinic in Wisconsin to volunteer for a couple of weeks to find out what is it like to work with animals.

Sara Goldgraben, WISE Alum, Class of 2006: Since graduating from Stony Brook, I went on to New York Medical College, Valhalla, New York. I expect to earn my MD in May, 2011. While there I have attained the following awards: American Association of University Women (AAUW) Educational Foundation, Selected Focus; Professions Fellowship; New York Medical College Four year Student Scholarship and the John L. Dales Scholarship.

Niya Grozeva, WISE junior: This summer I participated in an REU program at the Geophysical Laboratory of the Carnegie Institution of Washington, located in Washington, DC. I worked with Dionysis Foustoukos to assess the stability of methane in the presence of several oxidizing agents. I also investigated the catalyzed decomposition of H₂O₂, which has been proposed to

form radicals that would further oxidize organic compounds. Both projects will ultimately help evaluate the stability of organics on Mars, and thus will be important in determining how probable it is to find life on the planet under present-day conditions. In addition to conducting research, I wrote a research proposal and presented my work to scientists from the Geophysical Lab at the end of the summer.

Kristine Horvat, WISE Senior: I worked for a second summer at Brookhaven National Laboratory researching methane hydrates. Methane hydrates are formed when an icy cage surrounds a molecule of methane, and they can be found naturally in areas of permafrost or under the seafloor. These compounds are of interest to researchers because their dissociation releases methane gas into the atmosphere, further accelerating global warming. At BNL, I worked on forming methane hydrates on a microscale in small pressure cells to collect pressure data to be used at the National Synchrotron Light Source (NSLS) for x-ray computed microtomography (CMT) imaging. Then at the NSLS, I took CMT images, and these images were converted into 3-D volume pictures of methane hydrates. At the end of the summer, the History Channel also came to my lab to film a segment for a special program about methane hydrates. I took part in forming methane hydrates to be shown in the film and got to watch the filming behind the scenes. I had a wonderful experience at BNL and learned so much about research in engineering.

Sadhika Mudunuri, WISE Freshman: I volunteered at Union Memorial Hospital in Maryland for the summer.

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