A STRONG SUPPORT TO OUR STUDENTS

OSCAR is proud to support 11 DSU student members of National Society of Black Engineers (NSBE) attending its Annual Convention in Nashville, TN this past March. The integration of the education of a diverse population if students is at the core of the OSCAR’s mission. Providing students with the opportunity of entering fields in optics, engineering, aerospace, etc. is key to meeting the demands in STEM workforce with an increased diversity. We are so glad that with the support from OSCAR, our students were able to attend workshops to stretch their skills in job interviewing, to converse with professionals from world-renowned tech companies, to explore graduate programs from prestigious universities and most importantly, to land themselves a place to apply what they have learned here to the solving of real world problems. Notably, Samuel Jennifer, a senior who participated in OSCAR research on biopolymer-functionalized nanodiamonds, successfully secured a mechanical engineer position at the production unit of Nissan North America. A poster presentation by Samuel was featured in the Spring 2012 issue of LightView. Good job, Sam!

In the meanwhile, our faculty and staff continue to shine in their research, teaching and serving our students. They publish, present, develop and excel. Congratulations to Dr. Lu and Ms. Jones for the Excellence Awards they received! Thank you, Drs. Boukari and Liu for disseminating your work to professional conferences and making OSCAR better recognized among professional societies.

The research results produced at OSCAR continue to be highlights at such major DSU events as Honors Day and Graduate Research Symposium. Our students even made prominent presence this year at the Annual Research Symposium of Delaware Space Grant Consortium, a collaborative effort that increases the awareness of NASA’s missions.

OSCAR is reaching out to more and more people, as far as the NSBE Convention in Tennessee and as close as the local kids in Dover Public Library.

OSCAR never stops to amaze me, hopefully you as well. Let’s find out together in this issue of LightView!

OSCAR Sponsors DSU Students Attend National Society of Black Engineers 40th Annual Convention

With the support from OSCAR, the Delaware State University Chapter of National Society of Black Engineers (NSBE) was able to send 11 students to NSBE’s 40th Annual Convention in Nashville, TN from March 26-30, 2014. The NSBE National Convention provides opportunity for students and professionals to network and build their interpersonal skills. There were professional development workshops for students to acquire non-technical yet vital professional skills to build success in future careers. There was also a two day career and graduate school fair that showcases such world renowned companies and schools as Boeing, Google, IBM, Harvard, Stanford and more.

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FACULTY HIGHLIGHT

OSCAR Faculty Publish, Present and Attend Professional Workshops

• Dr. Hacene Boukari, a biophysicist at OSCAR, presented his research “Probing the dynamics of biomacromolecules in polymeric systems” at the Annual Meeting of the Materials Research Society in Boston, MA on December 02, 2013.

• Dr. Jinjie Liu, a mathematician at OSCAR, attended the US AFOSR Nonlinear Optics Meeting from September 4 to 5 in 2013 at Arlington, VA and presented a poster "Transformation optics based local mesh refinement for solving Maxwell’s equations". A paper with the same title was recently published on the Journal of Computational Physics.

• Dr. Lu, an experimental physicist at OSCAR, attended a “Proposal Development Workshop for the NSF’s CAREER Program” held by Quality Education for Minorities (QEM) Network in Linthicum Heights, MD from March 14 to 15 in 2014.

OSCAR Faculty and Staff Receive Excellence Awards in Teaching and Service

Dr. Qi Lu, a faculty member of OSCAR, and Ms. Jacquelyn Jones, the Associate Director for Outreach of OSCAR, received recognition at the annual luncheon of College of Math, Natural Sciences, and Technology (CMNST) on May 13, 2014. Dr. Lu received Excellence Award in Junior Faculty Teaching and Ms. Jones received Excellence Award in Service. The awardees were nominated by fellow workers for the exemplary work performed in the past school year and then reviewed and selected by the award committee. Dr. Lu had been actively participating in OSCAR-sponsored events and research since she joined center in 2012. Her engaging teaching style with clarity was well liked by students in introductory and advanced physics classes. She also transferred teaching skills effectively in mentoring OSCAR students in research on finding the biophysical principles ruling the interactions between nanoparticles and biomolecules. Ms. Jones has been with OSCAR for many years. Her dedication to the service of students and outreach events is an indispensable force that holds together the functioning of OSCAR. Her sacrifice of weekend times on many outreach events allows the resources of OSCAR be extended to local communities and reach a broader audience.

NSBE CONVENTION continued from page 1

The DSU NSBE students attending the convention were privileged with the interview opportunities with companies such as Boston Scientific, Cook Medical, BP, Jacobs Engineering, Turner Construction, John Deere, Northrop Grumman, Thermo-Fisher Scientific, Nissan, and Ford. They were also invited to the hospitality suites of Purdue University, Vanderbilt University, Georgia Tech, NASA, Boeing, Kiewit Companies, and Eaton Corporation. One popular workshop most DSU students attended was “The Parallels of Job Seeking and Dating” hosted by WHOA Solutions. Students learned about the DOs and DON’Ts of networking and interviewing as well as how to maximize the gain from a job fair, and even be proactive of asking for an interview.

In particular, one OSCAR student Samuel Jenifer, a senior majoring in Engineering Physics, was able to secure a job with Nissan as a mechanical engineer at the convention. The DSU NSBE also successfully acquired a mentorship connection with the NSBE Philly Professionals Chapter. This connection will allow the DSU NSBE members the opportunity to gain first-hand knowledge and career advice through interacting with other professional NSBE chapters.
STUDENT SPOTLIGHT

8th Annual Delaware Space Grant Research Symposium

8th Annual Research Symposium of Delaware Space Grant Consortium (DESGC) was held in the Bank of America Building here at Delaware State University on May 9th, 2014. The symposium highlighted the research work that is being done by graduate and undergraduate students whose funding came from DESGC.

This year’s symposium featured oral and poster presentations by the graduate fellows and undergraduate interns. Dr. Jenifer Biddle, provided the keynote address entitled, “Analog Science in a Digital World: Pavilion Lake Microbialites”. Dr. Biddle is a Research Infrastructure Recipient and Assistant Professor in the School of Marine Science and Policy, of University of Delaware, Lewes Campus.

Alissa Mezacappa, a Doctoral student working under supervision of OSCAR Director Dr. Noureddine Melikechi was one of the recipients of DESGC 2013 graduate fellowships and provided oral presentation in the Symposium. Jebari Weekes, a senior in the Department of Physics and Engineering of DSU and working with OSCAR Faculty member Dr. Mukti Rana was one the recipients of DESGC undergraduate summer internship in 2013. Jebari presented his poster entitled “Design of a Microbolometer with Tunable Micromirror for Mid and Long Wave Infrared Detection” in the symposium.

The Delaware Space Grant Consortium is a group of Delaware colleges, universities and industrial partners who collaborate to award fellowships, scholarships and internships to deserving graduate and undergraduate students in the STEM areas. The consortium is comprised of the following colleges and universities; University of Delaware, Delaware State University, all four campuses of Delaware Technical and Community College, Wesley College and Wilmington University.

Nineteen OSCAR Undergraduate Students Presented at DSU’s 41st Honors Day

On April 3rd, the DSU Honors Program hosted the 41st Honors Day Program to recognize the accomplishments of DSU students. The program consisted of an Honors Recital, Honors Art Show and Honors Symposium. This year 19 OSCAR undergraduate research interns (sponsored by or worked in OSCAR labs) presented results of the work they performed during the 2013-2014 academic year.

OSCAR Grads Participated in DSU’s 4th Annual Graduate Research Symposium

OSCAR graduate students participated in the fourth annual Graduate Research Symposium of Delaware State University which was held on April 25 in the Bank of America Building and Martian Luther King Student Center. “Advancing Academic Excellence through Research, Innovation, and Outreach”, was the title of this year’s Graduate Research Symposium. The day began at 7:45 am with registration and a continental breakfast and ended with an awards ceremony at 3:00 pm. In-between there were welcome remarks, oral and poster presentations and keynote presentation. It was a full and exciting day for all attendees. This year 6 OSCAR students made oral presentations and 4 OSCAR students participated in poster presentations.
OUTREACH

OSCAR and Its Graduate Programs Exhibited at NSBE Annual Convention

Dr. Mukti Rana and Ms. Jacquelyn Jones attended the 40th Annual National Society of Black Engineers (NSBE) Convention. The Convention was held at Gaylord Opryland Hotel, Nashville, TN from March 26 – 30, 2014. They exhibited OSCAR’s graduate and undergraduate programs at the University Fair to various audiences.

NSBE, with more than 30,000 members around the world, is one of the largest student-governed organizations based in the United States. In the annual conventions, NSBE has more than 8,000 attendees each year. The convention events include a 2-day Career Fair, College/Grad School Fair, Professional Development Workshops, General Sessions, Hospitality Suites, Panel Discussions, and our Annual Golden Torch Awards Ceremony.

OSCAR Demonstrates Optics and Nanotechnology at the USA Science & Engineering Festival Satellite Event

OSCAR faculty Drs. Amir Khan, Jinjie Liu, and Qi Lu, along with the OSCAR Associate Director for Outreach Ms. Jacquelyn Jones presented science demonstrations in the Dover Public Library to the local community on April 26, 2014. This is the first time that the Dover Public Library ever hosted a satellite event of the USA Science & Engineering Festival. The same weekend, the 3rd USA Science & Engineering Festival took place in Washington, D.C.. The mission of the event is to stimulate and sustain the interest of our nation’s youth in science, technology, engineering and math (STEM) by producing and presenting the most compelling, exciting, and educational festival in the world.

OSCAR shared the excitement with other satellite sites across the nation of bringing to the local youth quite a few demonstrations and hand-on kits in optics and nanotechnology. The program brought by OSCAR is "The Very Small and the Very Bright – Exploring Nanotechnology and Optics". For nanotechnology, the event attendees were able to explore concepts including nanofabrication, nanomaterials, nanomanipulation, and nanoengineering using such kits as memory metal, liquid crystal displays, gummy capsules, mystery shapes, etc. For optics, the event attendees were able to explore concepts including refraction, birefringence, light diffraction, and optical communication using such kits as optical illusion, double refraction, holography, light telephone, etc. The target age group for the program is 8-12 and 13-19. Through personal interactions with the wonder in the demonstration kits, great amount of interest and excitement were inspired inside the minds of young attendees and hopefully turned into long-term passion in science and engineering for some of them.

Thanks to everyone that contributed to this edition of the LightView!