



# COSMOS UC San Diego

California State Summer School for Mathematics and Science

## Alumni Newsletter Winter 2011

### COSMOS Alumni:

This is your newsletter, so let us know what you want to see! Send us your updates, your accomplishments, your photos, anything you'd like to share with your fellow alumni!

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### Message from Director Charles Tu

Dear COSMOS-UCSD Alumni,  
Welcome to the inaugural issue of COSMOS-UC San Diego Alumni Newsletter. COSMOS (California State Summer School for Mathematics and Science) at UC San Diego was launched in 2004. You were challenged intellectually and experienced residential life. With about 160 students each year, there are more than 1,000 COSMOS-UCSD alumni. Many of you have written us that COSMOS was a life-changing event for you; you have bonded very quickly through working and playing and living together; and you formed alumni groups right after your COSMOS experience ended. We would love to hear from you.

The mission of COSMOS is to provide outstanding high school students in, science, technology, engineering, and mathematics (STEM) disciplines with opportunities to delve deeply into

their subjects and to prepare for university careers in the STEM fields. With the difficult economic climate in the State of California, outreach programs like COSMOS are always on the chopping block, so it is all the more important that we need to know how effective COSMOS is. Some of you are still in high school, some of you are in college, some of you are in graduate schools, and some of you are working now. We would like to know what you are doing, how your COSMOS experience has influenced you, and how you think COSMOS can be improved.

This newsletter is also for you to stay connected with each other and with us. We are profiling our alumni and our dedicated COSMOS instructors in this newsletter. Look to learn more about your friends and your favorite instructors. Contact them, and they will be



thrilled to hear from you.

Enjoy and give us feedback. Thank you.

Charles W. Tu  
Director, COSMOS at UCSD  
Associate Dean, Jacobs School  
of Engineering

### Alumni Profile: Philip "PJ" Loury

In each issue of the Alumni Newsletter, we'll take the opportunity to catch up with one of you, to see what you've accomplished since your time at COSMOS. This issue, we profile PJ Loury, 2008 COSMOS alum and current UCSD Bioengineering student. PJ is one of the Jacobs School Scholars, a group of undergraduate student lead-

ers here at UCSD that came into UCSD. Our highly renowned UCSD COSMOS going into my senior year of high school, I was offered the Jacobs School of Engineering Scholarship to come

to UCSD. Since choosing to come to this school, I've worked hard to continue to grow as an engineer and as a leader."

Why he chose Bioengineering: "Bioengineering lies at the inter-

## Alumni Profile continued



“The first and most important step is to find your passion.”

section of science and engineering, medicine and technology. Exciting breakthroughs are announced in these areas almost every day, and I wanted to participate in developing technology to change the face of personal health.”

On his favorite classes, two of my favorite courses have been MAE 3 and BENG 140A, a Robot Design course and Bioengineering Physiology. I really enjoyed going through the hands-on experience of designing and building a competitive robot in MAE 3, and it was really interesting to learn how the human body works as a system in BENG 140A at both a macroscopic and microscopic level.”

What he's up to outside of class: “The past two years I worked under Dr. Shu Chien and Dr. Jason Haga studying the effects of mechanical strain on vascular endothelial cells. This project aims to better understand how forces from pulsatile bloodflow regulate cell behavior. This

year, I have begun a project under Dr. Loren Mell in Radiation Oncology at Moores Cancer Center on improving radiation treatment planning for cervical cancer patients. The project goal is to validate a new medical imaging technique used to identify pelvic bone marrow sub regions associated with hematological toxicities that setback cancer treatment. I am also currently serving as Co-President of Engineering World Health at UCSD and running a medical technology project team working with Dr. Davey Smith in the UCSD School of Medicine to prototype an inexpensive PCR device to test for HIV treatment efficacy.”

On how COSMOS helped prepare him: “COSMOS made the transition from high school to attending UCSD a lot easier. Having a jump start on knowing the ins and outs of campus life allowed me to get involved and meet people right away. COSMOS was also a determining factor in my decision to pursue a career in engineering by showing me the impact that

technology has on the world.”

On his future plans: “I am interested in applying my bioengineering education to both product design and entrepreneurship. My dream is to develop new products using mobile technology to monitor health that will help people take better care of themselves.”

His advice for fellow alumni: “The first and most important step is to find your passion. There is a lot of room for exploration within both science and engineering, so stay curious and get involved in opportunities to expose yourself to new and exciting fields of technology!”

If you would like to be the next alumni profiled, just let us know!

