



THE VOYAGER

YOUR VEHICLE TO STELLAR OPPORTUNITIES

The New sletter for COSMOS Alumni - September/October 2004 - Volume I, Issue 1

Welcome to our World!

The COSMOS Alumni community welcomes our newest members, the participants of the 2004 COSMOS Program. This newsletter is designed to keep you informed about new things happening within the COSMOS program, keep you up-to-date on what other alumni are doing, and provide information about additional educational opportunities. We hope you find the information provided in the newsletter help-



ful and engaging. As an alumnus, your feedback is extremely important, so feel free to send us suggestions for improvement!

Introducing the COSMOS Alumni Network

With the completion of the 2004 programs, COSMOS is proud to announce that more than 1,900 high school students have participated in the program statewide! The high number of COSMOS alumni marks a significant milestone in the program's history, an achievement that has prompted the COSMOS program to create a new resource for previous participants - the COSMOS Alumni Network!

The Alumni Network strives to serve the interests and needs of program alumni as indicated by our Statement of Purpose (*page 2*). The Network will begin to rollout both redesigned and new services beginning this Fall.

To better serve your needs, we may ask for your input to ensure we are offering services and events that you find valuable – feel free to email cosmos@ucdavis.edu if you have any suggestions.

The Right Answer

Source: <http://www.albany.edu/faculty/pm157/teaching/assess/physicsexam.html>

The following question on a physics exam at the University of Copenhagen made for quite a controversy: "Describe how to determine the height of a skyscraper with a barometer."

One student replied: "You tie a long piece of string to the neck of the barometer, then lower the barometer from the roof of the skyscraper to the ground. The length of the string plus the length

of the barometer will equal the height of the building." This highly original answer so incensed the examiner that the student was failed. The student appealed on the grounds that his answer was indisputably correct, and the university appointed an independent arbiter to decide the case. The arbiter judged that the answer was indeed correct but

see Answer on page 4

In this issue!

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THE RIGHT ANSWER (CONT'D)

Upcoming COSMOS Alumni Events:

10/21 (*Thursday*)
COSMOS Alumni Focus
Group in Irvine

10/23 (*Saturday*)
College Preparation Work-
shop at UC Davis - Writing
Your Personal Statement

10/29 (*Friday*)
COSMOS Alumni Network
Website Launch

For more detailed information,
email Manuel Carmona at
mcarmona@ucdavis.edu

COSMOS ALUMNI NETWORK - STATEMENT OF PURPOSE

The COSMOS Alumni Network is dedicated to supporting the educational and career aspirations of COSMOS program alumni. To achieve this goal, the network promotes activities that will help prepare students for college and future careers, highlights opportunities for students to engage in educational or work-related experiences, and fosters ties to other participants and the COSMOS program. The COSMOS Alumni Network is committed to spotlighting programs that will enhance COSMOS participant college preparedness and interest in pursuing courses of study and careers in math, engineering, or science related fields.

COSMOS Finishes Largest Program Ever

COSMOS has done it again! For the fifth straight year, the program has surpassed the attendance from the previous year. A total of 461 students participated in a COSMOS program during the summer of 2004. To date, 1,936 students have participated in a COSMOS program. Just under 1,000 applications were received in March, making it the largest applicant pool in the history of the program. COSMOS is proud to provide our services to such a distinguished group of high school students.

Help us continue the tradi-

Tips for Writing Your Personal Statement

Source: <http://www.smc.edu/scholars/transfer.htm>

This Fall, students across the state will begin to prepare their university applications. One of the most important components of the application is the personal statement. Here are some tips that you can use to shape your personal statement!

Do You Have Ideas for the Alumni Network?

The COSMOS Alumni Network is gearing up for its initial offering of activities and services. Although some ideas are already in the works, alumni input is invaluable to making sure our offerings meet the needs and desires of our alumni community.

By the numbers:

- ◆ 461 students attended COSMOS in 2004
- ◆ 39 of California's 58 counties were represented
- ◆ 52% of program attendees were female

tion of recruiting the state's finest students. Please pass along our program information to any eligible student you think might be interested!

Applications for the 2005 COSMOS programs will be available online at www.ucop.edu/cosmos beginning January 15th. The process will continue to be com-

petitive and first year applicants deemed qualified to participate will be given preference to both program and clusters of choice.

A new COSMOS site is opening in southern California, UC San Diego is preparing to offer its inaugural COSMOS program <http://www.jacobsschool.ucsd.edu/cosmos/>. More details will be included in the next newsletter.

SUMMER 2005 DATES:
UC Davis July 10 - August 6
UC Irvine July 10 - August 6
UC San Diego July 10 - August 6
UC Santa Cruz June 26 - July 23

DO:

- Read the instructions carefully
- Reveal why you are an interesting and thoughtful person
- Reflect on your values, educational goals, and vision for the future
- Explain who you are and

what you will bring to the UC student body

- Write about any experiences that show your tenacity or self-discipline
- Include relevant work experience, emphasizing your maturity *see Tips on page 4*

COSMOS Alumni Network is hosting two focus groups; one in Santa Cruz (to be scheduled) and another in Irvine on Thursday, October 21st.

If you would like to help shape the alumni network, let us know you are *see Ideas on page 4*

YES Competition

The Young Epidemiology Scholars (YES) Competition for original student research is designed to inspire talented students to investigate the many behavioral, biological, environmental and social factors that affect health and, based upon this knowledge, to identify ways to improve the health of the public.

The YES Competition offers college scholarship awards to high school *juniors and seniors* who conduct research projects that apply epidemiological methods of analysis to a health-related issue. The YES website provides guidelines to help you better understand the types of problems examined by epidemiologists, the methods they use to tackle them, and how you can make use of those methods in your project.

Competition winners are awarded up to \$50,000 to cover the costs of higher education. **The deadline to submit your research project is February 1, 2005.** For more information, visit www.collegeboard.com/yes/index.html.

Important Dates for the UC & CSU Systems

October 1st, 2004
First day to apply to a CSU school for Fall 2005

November 1st, 2004
First day to apply to a UC school for Fall 2005

November 30th, 2004
Last day to apply to a CSU/UC school for Fall 2005

Intel Promising Young Scientist Award

This prestigious prize will be awarded to the *two* most promising 9th or 10th grade scientists who compete at an Intel sponsored regional competition in Sacramento, San Diego, or San Jose - applications are available at the websites listed in the box below.

- Each of the Intel Promising Young Scientists will receive:
- a full scholarship in the summer of 2005 to COSMOS (<http://www.ucop.edu/cosmos>)
 - an on-going mentoring relationship with a COSMOS faculty member or Teacher Fellow
 - a full travel stipend to attend

the Intel International Science and Engineering Fair in Phoenix, Arizona from May 8-13 as a student observer

- recognition at the Regional Competition Awards Ceremony



To be eligible for the COSMOS scholarship, interested applicants must submit all application materials prior to March 15, 2005. *see PYS on page 4*

VISIT THESE WEBSITES FOR APPLICATIONS AND INFORMATION

COSMOS – www.ucop.edu/cosmos

San Diego Regional Competition - www.gsdsef.org

Santa Clara Regional Competition - www.science-fair.org

Sacramento Regional Competition - www.srsefair.org

Intel ISEF - www.intel.com/education/isef

Intel STS - www.intel.com/education/sts

Achievement Award at UC Berkeley

Are you planning to apply to the University of California, Berkeley for the Fall of 2005? The Alumni Association at UC Berkeley is offering a scholarship called the Achievement Award. The award is for students with extreme financial need who have demonstrated high potential by achieving academic success while overcoming difficult circumstances.

Scholarship applicants must demonstrate enthusiasm and commitment to helping pre-collegiate *see Achievement on page 4*

Internships for Central CA Alumni

Do you want to stay involved with COSMOS? Have you always wanted to get some “real world experience?” Are you interested in an internship for Summer 2005? Then check out the UCSC Career Center’s COSMOS PTP Internship page (<http://www2.ucsc.edu/careers/ptp/cosmos/>). Not only will you find the Internship Application (<http://www2.ucsc.edu/careers/ptp/cosmos/application.pdf>), but you can see all the cool things past interns experienced. This internship is open to all COSMOS Alums from Santa Cruz, Santa Clara, and Monterey counties. Deadline to apply is Wednesday, October 27th, 2004.

Achievement (from page 3)

students in college preparation programs. Up to \$5,700 per year (renewable at up to \$5,700 per year for 3 years). The actual award amount given is based on your level of need and determined by the Office of Financial Aid. Approximately 20-25 awards are given each year.

The deadline to apply is February 19th, 2005. Applications become available in November and can be downloaded. For more information on eligibility, selection criteria, and application information, visit http://alumni.berkeley.edu/Students/Scholarships_and_Awards/Achievement_Award.asp.

Tips (from page 2)

and problem-solving skills

- Write a draft and let it sit at least a few days. Then, read it aloud to a friend or family member and ask for constructive criticism
- Type your essay
- Review your essay for mechanical problems, spelling, and grammar
- Use standard size (at least 1") margins
- Use plain, single-type font rather than anything fancy

DO NOT:

- Do not go into all of the hardships that have affected your performance; pick and choose which experiences you focus on
- Do not manufacture hardship
- Do not blame anyone else for negative things that have happened in your life
- Do not try to be funny
- Do not list accomplishments if you noted them in your application

Answer (from page 1)

but did not display any noticeable knowledge of physics. To resolve the problem it was decided to call the student in and allow him six minutes in which to provide a verbal answer, which showed at least a minimal familiarity with the basic principles of physics.

For five minutes the student sat in silence, forehead creased in thought. The arbiter reminded him that time was running out, to which the student replied that he had several extremely relevant answers, but couldn't make up his mind which to use. On being advised to hurry up the student replied as follows: "Firstly, you could take the barometer up to the roof of the skyscraper, drop it over the edge, and measure the time it takes to reach the ground. The height of the building can then be worked out from the formula $H = 0.5g \times t^2$. But bad luck on the barometer."

"Or if the sun is shining you could measure the height of the barometer, then set it on end and measure the length of its shadow. Then you measure the length of the skyscraper's shadow, and thereafter it is a simple matter of proportional arithmetic to work out the height of the skyscraper."

"But if you wanted to be highly scientific about it, you could tie a short piece of string to the barometer

PYS (from page 3)

COSMOS applications can be downloaded from the COSMOS website beginning January 15, 2005.

The goal of this comprehensive award is to encourage and develop promising young local scientists to continue their pursuit of science research at advanced levels and possibly become future Intel ISEF or Intel STS finalists.

and swing it like a pendulum, first at ground level and then on the roof of the skyscraper. The height is worked out by the difference in the gravitational restoring force $T = 2 \pi \sqrt{l/g}$."

"Or if the skyscraper has an outside emergency staircase, it would be easier to walk up it and mark off the height of the skyscraper in barometer lengths, then add them up."

"If you merely wanted to be boring and orthodox about it, of course, you could use the barometer to measure the air pressure on the roof of the skyscraper and on the ground, and convert the difference in millibars into feet to give the height of the building."

"If we were not constantly being exhorted to exercise independence of mind and apply scientific methods, undoubtedly the best way would be to knock on the janitor's door and say to him 'If you would like a nice new barometer, I will give you this one if you tell me the height of this skyscraper?'"

The obvious moral here is that education should not consist merely of memorization and regurgitation. Instead, education should require students to think about and solve problems using whatever tools are available. All the answers provided by the student in the story are correct.

Ideas (from page 2)

interested by sending an email to cosmos@ucdavis.edu. Note, the focus groups are designed to be small in nature to promote dialogue. Therefore, it is possible that not everyone who expresses interest will be invited to participate.