

# Undergraduate Research Summer Newsletter

Issue 4, July 1, 2008

## What's Happening!

**July 2, 2008** Eric Newhall, English & Comparative Lit. Studies  
Moshers One, includes lunch  
12:00 pm

**July 2, 2008** A night at the Americana! (Glendale)  
RSVP with ResLife's David Martinez  
6:30 pm

**July 3, 2008** Volleyball Game and BBQ!  
Alumni Gym and Swan Hall  
5:30 pm  
Sign up to participate by emailing the URC: [urc@oxy.edu](mailto:urc@oxy.edu)

**July 2-4, 2008** Fireworks Spectacular at the Hollywood Bowl!  
2301 North Highland Avenue  
<http://www.hollywoodbowl.com/tickets/calendar.cfm>  
7:30 pm

**July 4, 2008** Fourth of July Celebration at the Rose Bowl  
TBD  
[http://www.rosebowlstadium.com/RoseBowl\\_Americafest.htm](http://www.rosebowlstadium.com/RoseBowl_Americafest.htm)

**July 4, 2008** Fourth of July Celebration at Hansen Dam Recreation Area  
11770 Foothill Blvd, Lake View Terrace  
12:00 noon to 12:00 pm

**July 6, 2008** Beach Trip! Fun in the sun!  
Please RSVP with ResLife  
10:00 am

**July 9, 2008** Betchen Barber, Professor Emeritus of Linguistics  
Lower Herrick, includes lunch  
12:00 noon

*URC and ResLife Present*

# VOLLEYBALL GAME AND BBQ!

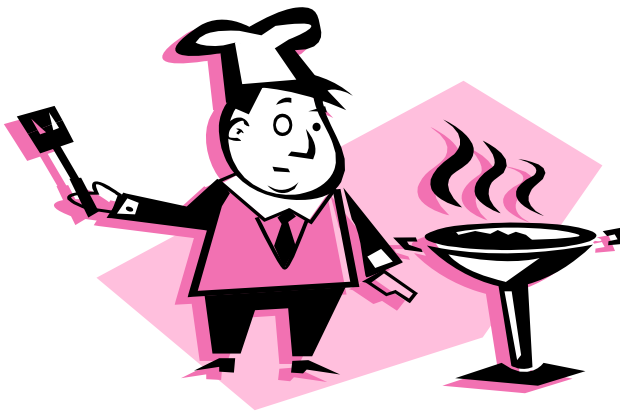


July 3, 2008  
Alumni Gym

Join us for an  
evening of fun &  
celebration!

Game will begin @5:30 pm

*Game sign-ups will end Wednesday, 5 pm*  
*(If interested in attending or playing, please email Vanda at*  
*[tayrapetyan@oxy.edu](mailto:tayrapetyan@oxy.edu))*



All are welcome to participate (faculty and students)  
**FREE** hot dogs, soft drinks, ice-cream and more!  
**MUST RSVP** by this Wednesday (6/2), 5 pm!

# NATIONAL AWARDS!

(Fellowships and Scholarships)

Occidental has produced many winners of prestigious awards such as the *Fulbright, Marshall, Rhodes, Beckman, Goldwater, and many more!*



*Want to learn how you can also make Oxy history?? Come hear the panel on National Awards, moderated by ECLS Professor and Chair of the National Awards Committee, Eric Newhall!*

*This week's luncheon  
Mosher 1*

*For more information, please visit the National Awards website: <http://departments.oxy.edu/dean-of-coll/NationalAwards/index.htm>*



### **“Mathematical Models for Traffic Flow”**

*Traffic...A single word that evokes antagonistic feelings in us all and makes even a Mister Rogers' type transform into a yelling, swearing, honking monster on the 10 Freeway. Junior Economics and Mathematics double major, Zhengyi Zhou, an international student from Singapore, hopes to ease our traffic pain by investigating calculus-based mathematical equations that regulate traffic flows. Inspired by a Math 341 course (“Ordinary differential equations and dynamic systems”) taught by her mentor, Professor Angela Gallegos, Zhou decided to focus her summer research on ordinary and partial differential equations and models. Realizing that not much has been published on the ordinary differential model, Zhou has been studying the model in-depth to determine if the OD model can perhaps provide new insight on traffic regulation. As she explains, “The OD model is a very simple system, but it can be made more complex. Zhou is attempting to build a comparable model of the two systems based on the same set of assumptions and symbols. Using a computer program known as MATLAB, she’s been generating graphs that analyze traffic laws and patterns of inflow and outflow. These graphs chart the density flow of traffic versus time and help*

*determine how long red and green lights should remain to ensure traffic is neither too slow nor too congested (hence, why some traffic lights seem to take forever to turn green in comparison to others). While we all wish Zhou can simply eradicate traffic altogether, for now we'll just take all the help we can get!*

*(Below) Zhengyi Zhou ('10) enjoying some quiet time near the roses away from LA traffic*



Newsletter by Vanda Ayrapetyan