Happy New Year!

新年快樂
Welcome CAP Executive Board

February 3, 2011
CAP Leadership 2010 - 2011

CAP Chairman:
Danny Brown, Ph.D.
VP Technology Development,
Cymer

CAP Vice Chairman:
Anton Monk, Ph.D. UCSD ‘94
Co-founder & VP Technology
Entropic Communications
Welcome Distinguished Students

Jacobs School Scholars and Fellows

Gordon Leadership Scholars and Fellows

connecting you to talent and technology
Welcome Jacobs School Student Organization Leaders

Triton Engineering Student Council (TESC)

Society of Civil and Structural Engineers (SCSE)

American Institute of Aeronautics and Astronauts (AIAA)
Enspire | DECaF |
Junkyard Derby

Jack Kevin Ly
Aerospace Eng ’11
jkly@ucsd.edu
tesc.ucsd.edu/eweek
Largest outreach event of the year!
Price Center
400 middle school students
175 volunteers
Lab / campus tours
Student org fair
Creativity competition

Wednesday, February 16, 2011
PC West Ballrooms
8:00am-3:00pm
Disciplines of Engineering Career Fair

9:30am - 3:00pm
February 18, 2011
Price Center West
tesc.ucsd.edu/decaf
Don’t Drive Drunk… Drive JUNK!

Sponsor: Yahoo!

5-6-11...DeLorean anyone?
TESC invites YOU:
Series of E-Week community building events

- **Enspire** - Introduce middle school’ers to engineering!
- **Lab Expo** - Come check out incredible research!
- **DECaF** - Disciplines of Engineering Career Fair
- **suPRise Activity iN weeK 8**
- **E-Games** - Engineering Olympics!
- **TESC’s Got Talent**
- **Impulse** - Engineering Semi-Formal

[tesc.ucsd.edu/eweek](tesc.ucsd.edu/eweek)
TESC prep:
Prepping Engineering Talent to meet you at DECaF

• Dress for Success
• Resume Marathon
• Approaching Employers at Networking Events
• Mock Interviews
• Mock Interviews Reception (RSVP Only)
• Mastering the Engineering Interview

tesc.ucsd.edu/eweek
Corporate Affiliates Program Board Meeting
Winter 2011

Vivian Li
TESC Representative

Jeniene Knight
VP, Finance

http://scse.ucsd.edu

scse.ucsd@gmail.com
UCSD Seismic Outreach Program

700+ Middle school kids and 60+ volunteers
CASINO NIGHT 2011

A Fundraising Event Hosted by
UCSD Society of Civil and Structural Engineers
SDSU American Society of Civil Engineering

Friday, February 11th, 2011
at Hyatt Regency La Jolla
From 8 pm - 11 pm

A Social event for
Students and Professionals
A Night of Casino
Games, Music, Drinks,
Raffles, Prizes, and...Fun!

Donations:
$15 - Students
$20 - others
(100% tax-deductible)

For more information please contact:
Jarah Fung (UCSD SCSE Fundraising Coordinator) sykfung@ucsd.edu
Jill Knight (UCSD SCSE VP President) jlknight@ucsd.edu
Sean Sudol (SDSU ASCE Funding Chair) seanusu0@yahoo.com

Sponsored by:
KLEINFELDER
Right People. Right Solutions.
Activities

- Miramar Air Show
- Flight Test Engineering
- SR-71 History
- Naval Centennial of Aviation
- Northrop Grumman Tour
Project Highlights

- AUVSI – 5th/20 teams
- Autopilot Optical Target Search & ID

- Design-Build-Fly - 20th/68 teams
- RC piloted specific mission design
Contact Information

Jason Hale, Chair, jthale@ucsd.edu
Andrew Swingle, AUVSI Project Manager, aswingle@ucsd.edu
Denise Choi, Vice Chair, Microgravity – choi.denise@gmail.com
Matt Smallcomb, Design-Build-Fly PM – msmallco@ucsd.edu
Kevin Yuen, California Flight Museum Restoration – klyuen@ucsd.edu
Website: aiaa.ucsd.edu
New CAP Member:

Randy Jones, President and Chief Executive Officer
Magma Mission Technologies Group
Dean’s Report

Dean Frieder Seible
Jacobs School of Engineering
Have you seen this man?
Congratulations and Thank You Dave Esbeck!

- Over 15 years of dedication as CAP Executive and leadership service as two term Chairman and Vice Chairman
- 15 CAP Executive cruises aboard the ‘Spirit of Solar’
- 27 Years of Service at Solar Turbines
- 42 Years of Experience in the turbomachinery industry
Budget Outlook: Research Expenditures Up, State Funding Cuts Continue

Jacobs School 09/10 Expenditures
$203M

- Federal Research, $74.4
- Industry & Private Research, $55.5
- Instruction & Faculty Salaries, $49.3
- State Funded Operations, $9.9
- Scholarships and Fellowships, $3.9
- State Research, $9.6
What The Budget Means: more cuts

State Funds and Student Fees

Fee revenue figures include financial aid, but exclude nonresident tuition

*Patrick Lenz, University of California Budget Update
Jacobs School IDEA Engineering Student Center

- Promote Inclusion, Diversity, Excellence, and Advancement
- Foster growth of diverse innovative technology leaders for today’s global society.

Three main divisions:

- Outreach and Recruitment
- Professional Development and Retention
- Research Support
Meet the IDEA Center Team: Jacobs School Center for Inclusion, Diversity, Excellence, and Advancement

**Terrance Mayes**
Director

**Gennie Miranda**
Assistant Director/Retention Programs

**Melinda Beyerle**
Student Life Coordinator

**Aisha Hollins**
Outreach & Recruitment Coordinator
Faculty Recruitment:

6 Active Faculty Recruitments

• 2 School-wide searches for Excellence and Diversity
  ➢ 180+ applicants

• 4 Departmental:
  ➢ Bioengineering
  ➢ Mechanical and Aerospace Engineering
  ➢ Structural Engineering
  ➢ LSOE in Computer Science
Wireless Health Innovation Challenge
Accelerate commercialization of wireless technologies
to improve healthcare delivery.

Open to Faculty/Researchers at universities and research institutes throughout Southern California

Presentations to External Review Panel: February 1-2
3 Projects will be selected to receive commercialization assistance/seed funding

45 Proposals Submitted
2 Caltech 3 UC Riverside 4 USC
5 UC Irvine 2 UC Santa Barbara 5 Scripps Institute, Salk
10 UC LA 13 UC San Diego 1 San Diego State Univ

Sponsors

Program Partners
## Wireless Health Innovation Challenge Finalists

<table>
<thead>
<tr>
<th>Project title</th>
<th>Institution affiliation(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handheld, low-cost integrated CMOS sensor for the detection of biomolecules</td>
<td>Caltech</td>
</tr>
<tr>
<td>Smart Phone Application for Malaria Diagnostics</td>
<td>Caltech</td>
</tr>
<tr>
<td>Wireless lab-on-a-chip apparatus for implantable cardiac devices</td>
<td>UCI</td>
</tr>
<tr>
<td>Microscopy on a Cell-phone as a Diagnostic Tool</td>
<td>UCLA</td>
</tr>
<tr>
<td>Evaluation of auxiliary haptic feedback on gait and activities of daily living for persons with lower-limb sensory deficit or loss</td>
<td>UCLA</td>
</tr>
<tr>
<td>Rapid Pathogenic Bacterial-Sensing and Identification Technology Using Cell Phones</td>
<td>UCR</td>
</tr>
<tr>
<td>Wireless Assessment of Traumatic Brain Injury via Bioelectronic Information Processing</td>
<td>UCSD</td>
</tr>
<tr>
<td>Ultra-High Photosensitivity Wireless Nanowire Arrays for Retinal Prosthesis</td>
<td>UCSD</td>
</tr>
<tr>
<td>A wireless brain-computer interface for motor rehabilitation</td>
<td>UCSD</td>
</tr>
<tr>
<td>Wireless Drug Delivery System for Remote Chronic Pain Management</td>
<td>USC</td>
</tr>
<tr>
<td>Integrated wireless health monitoring of metabolic and physiological parameters in the Field Under Severe Power and Bandwidth Constraints</td>
<td>USC, Children’s Hospital Los Angeles</td>
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SMART CITY SAN DIEGO –
Five key electric vehicle initiatives

1. Utilize smart technology to enable rapid electric vehicle growth while ensuring safe, reliable and efficient power delivery for consumers.

2. Streamline home and public charging deployment processes.

3. Research and demonstrate systems to power electric vehicles through clean, renewable energy sources, such as solar.


5. Study consumer behavior to better understand their decisions and identify additional electric vehicle initiatives.
Master of Advanced Studies:

<table>
<thead>
<tr>
<th>Program</th>
<th>Departments</th>
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<tbody>
<tr>
<td>Medical Device Engineering*</td>
<td>MAE BE</td>
</tr>
<tr>
<td>Structural Health Monitoring*</td>
<td>SE ECE</td>
</tr>
<tr>
<td>Embedded Systems Engineering*</td>
<td>CSE ECE</td>
</tr>
<tr>
<td>Architecture-Based Enterprise Systems Engineering</td>
<td>CSE MAE</td>
</tr>
<tr>
<td>Simulation-Based Engineering*</td>
<td>SE MAE</td>
</tr>
</tbody>
</table>

- Learning at the intersection of traditional engineering disciplines
- Electives chosen from any of the MAS programs
- Business and entrepreneurship

* UC approval pending
Professor Yuri Bazilevs
Structural Engineering
UC San Diego
Questions: jbazilevs@ucsd.edu

“Applications of Simulation-Based Engineering”
Anne O’Donnell
Director,
Corporate Affiliates Program (CAP)
Gearing up for Summer 2011
January 28, 2011

- 120+ students filled the room
- Panel of past TIP interns sharing their experiences
- Students are ready to work for you!
Now accepting projects

Erica Kosa, TIP Manager
ekosa@eng.ucsd.edu
Gear up

Summer 2011 TIP sponsors so far...

- CISCO
- SDGE
- Laserfiche
- SPAWAR
- TUG
- ViaSat
Envision a conference that seeks to unveil the world of opportunity offered by engineering and computer science to local high school girls… IT IS RIGHT HERE.

Envision 2011
Jan 30th
Growing Numbers

- 100+ San Diego County high school girls registered to attend
- 12 Engineering Faculty
- 20+ Graduate and 50+ Undergraduate Volunteers
- Co-hosted by Society of Women Engineers & Computer Science and Engineering Society

The idea of one UCSD Bioengineering Undergraduate back in January 2010...

Our Sponsors:
The curriculum exhibits a cohesive blend of: **faculty laboratory tours**, **robot design projects**, **website programming**, and **mentorship** by current Jacobs students.
Molecular Medicine... it starts now!
Mike Lafferty, VP of Advanced Systems, Life Technologies

A 3D-enabled Surgical System

Multiscale Modeling of A Red Blood Cell and Its Fluid-Structure Interaction

Spatially Patterned Electrical Stimulation of the Retina for Improved Specificity
12:30 p.m.  Poster Session
3:00 p.m.   Technical Breakout Sessions
5:00 p.m.   Plenary Keynote Address by Greg Lucier, CEO Life Technologies
            “Engineering Advances in Medicine”
            Best Poster Awards
6:00 p.m.   Networking Reception
            Extended poster viewing

“Best access to research at the Jacobs School”
Master of Advanced Studies:

- Medical Device Engineering*
- Structural Health Monitoring*
- Embedded Systems Engineering*
- Architecture-Based Enterprise Systems Engineering
- Simulation-Based Engineering*

Faculty relying on input from CAP partners

* UC approval pending
CAP Business: Anne O’Donnell, Director

Dates to Remember:

Wed, Feb. 17          Jacobs Grad Student Council Innovation Forum: *Engineering in Medicine*
Fri, Feb. 18          Disciplines of Engineering Career Fair (DECaF)
Thurs, April 14       Research Expo 2011
Thurs, June 2          CAP Executive Board Meeting
Thurs, Oct. 6          CAP Executive Board Meeting