Viasat-1 launch with Proton/Breeze-M from Baikonur

October 19th, 2011
Welcome CAP Executive Board
CAP Leadership 2011 - 2012

CAP Chairman:
Anton Monk, Ph.D. UCSD ‘94
Co-Founder & VP Technology
Entropic Communications

CAP Vice Chairman:
Rusty Sailors
Chief Project Engineer, Director
BAE Systems
Welcome New CAP Members!

Bentley®
Sustaining Infrastructure

CliniComp, Intl.

mitchell

Miva Merchant
Ecommerce Software & Hosting

Schlumberger
Welcome Distinguished Students

Triton Engineering Student Council

Jacobs Graduate Student Council

IDEA Scholars
Welcome Jacobs School Student Organization Leaders

Justin Huang, CSE’12
President
Triton Engineering Student Council (TESC)
New event:
Aperture Laboratories at Jacobs

Enspire 2012: From t-shirts to robots

New event: $e^n$
INCREASING INVOLVEMENT

Who’s in charge: Salome Vasquez
1st year, Mechanical Engineering

Who’s in charge: Avital Slavin
2nd year, Chemical Engineering
New collaborators and sponsors:

- GEN-PROBE
- VALVE
- ORIGINATE
- Girl Scouts
- Stuart Art Collection

DECaF Corporate Sponsors:

- Pixar Animation Studios
- Hunter
- L3 Communications
- ViaSat
- Solar Turbines
CAP MEMBERS AT DECaF

- Amazon.com
- BAE Systems
- Cisco
- Cymer
- Entropic Communications
- Facebook
- General Atomics
- Google
- Hughes Network Systems
- Intuit
- L3 Communications
- NavAir
- Northrop Grumman
- Solar Turbines (A Caterpillar Company)
- Teradata
- Viasat
- Yahoo!
- U.S. Navy
\[ y = \begin{cases} 
(x-4)^2, & 4 < t \leq 27 \\
(x-27)^2, & 27 < t \leq 2012 
\end{cases} \]
Welcome Jacobs School Student Organization Leaders

Ludovic Vincent, PhD BIOENG’14

Academic Committee Chairman
Jacobs Graduate Student Council
Professor Raymond A. de Callafon, MAE
"From data to dynamic models for simulation, prediction and validation”

Matthew de Stadler, MAE
"High resolution simulation of the turbulent wake behind a sphere in a stratified fluid"

Matthew Gonzales, BE
"Patient-specific Models of Human Atrial Fibrillation"

Mehrdad Yazdani, ECE
"Convex Combination of Simple Bang-Bang Control Policies in Fast Human Movements"

RSVP to lvincent@ucsd.edu by Monday, February 6th

Hosted by
with support from the Dean's Office
Dean’s Report

Dean Frieder Seible
Jacobs School of Engineering
UC San Diego #1
Second Consecutive Year

and

Washington Monthly
2011 College Rankings
TOP 10

Institution

Overall Score

University of California—San Diego (CA)*
100

Washington Monthly
2010 College Rankings
TOP 10

Institution

Overall Score

Univ. of California, San Diego*
100
UC San Diego #1

Strength in:

• Social Mobility
• Research
• Service
Jacobs School Recognized for Excellence in Diversity and Inclusion

An individual, a center, and a committee each earned 2011 Diversity Awards

IDEA Scholars at Summer PrEP program, one of several new programs from the IDEA Center to recruit, retain, and reward underrepresented students at the Jacobs School

CSE Prof. Jeanne Ferrante, Associate Dean at the Jacobs School and Associate Vice Chancellor for Faculty Equity

SE Prof. Ahmed Elgamal, co-chair of the 2010-11 school-wide Excellence Search Committee
Jacobs School Applications Increase Continues

Applications (Academic Years ’10, ’11, ’12)

- Fall 2010
  - Total: 15825
    - Grads: 5390
    - Transfers: 1749
    - Freshmen: 8686

- Fall 2011
  - Total: 18104
    - Grads: 6037
    - Transfers: 2214
    - Freshmen: 9583

- Fall 2012
  - Total: 21386
    - Grads: 6887
    - Transfers: 2316
    - Freshmen: 12183

Total: 21386
Jacobs School Applications Increase Continues

Total: 21386

- Total: 21386
- Graduates: 6887 (30% Admit, 7% Accept)
- Transfers: 2316 (21% Admit, 7% Accept)
- Freshmen: 12183 (40% Admit, 20% Accept)

Fall 2012
Jacobs School Research Partnership With Industry

In FY11, 41% of research expenditures came from industry/private funding

Total Jacobs Research Expenditures rise from $144M to $147M in from FY’10 to FY’11
Jacobs School Research Partnership With Industry

Fellow Mentor Advisor (FMA) Sponsorship

1 Faculty Advisor
1 Student Fellow
1 Industry Mentor
Professor in Practice

New Opportunity at UCSD for Industry Executives

Goals:

• Continue meaningful engagement on campus outside industry role
• Avail faculty and students of industry leader’s experience
• Increase industry involvement in both the Academies and Universities
  e.g. NAE targets 30% Academics, 10% Government, 60% Industry
The UCSD Microgrid
A Living Laboratory
Showing the Future of Electricity ... Today
UCSD Advanced Energy Initiative

Make ground-breaking discoveries and innovations in energy production and use to meet the energy needs of humanity in a clean and sustainable manner; and partner to move those discoveries into the marketplace.

Current UCSD funding for energy-related research=$20M/Year
Connecting Research to the Campus Testbeds

Solar PV
Energy Storage
Forecasting
Power Analytics

Use Campus to Test, Develop, Evaluate & Enable High Reliability, High Penetration Renewably Generated Electricity
Von Liebig Center Accelerates Innovation
improve innovation quality and probability of commercialization

University Discoveries

von Liebig Center

Commercial Development

Proof of Concept Grants
Business Mentors
Entrepreneurial Culture
Collaboration with the Region’s Ecosystem
Entrepreneurial Education

32 companies, one non profit
$100 million invested
200+ jobs
2012 DOE Renewable Energy Technology: Regional Expansion of von Liebig Program

Call For Proposals: January 2012

From Open Solicitations to Jacobs Faculty only to Topical solicitations open to industry university teams across the region
TIP Sponsors: Highly Satisfied

100% would host a TIP team again

"I set out a wish list and was amazed at the team's velocity. I ask them to look at a technology, and they fearlessly make it happen with no handholding."

- Derek Poulin,
  Mitchell International
2012 Summer Team Internship Program off to quick start!

TIP FEST Students in Attendance by Department

- BioE: 6%
- CSE: 11%
- ECE: 17%
- MAE: 22%
- Nano: 17%
- SE: 27%

TIP FEST Students in Attendance by Year

- Freshman: 3%
- Sophomore: 3%
- Junior: 12%
- Senior: 26%
- MS: 38%
- PhD: 3%

TIP 2012 Sponsors thus far include:

[Logos of sponsors]

and you!
Sponsors: We heard you!

We’re taking action:

✓ Simplified process for hiring managers
✓ Integrated and streamlined web tools to scale program growth
✓ Engage CAP partners for technical interview preparation
✓ Working with IDEA Center to promote TIP to underrepresented engineering students
✓ Interviewing skills workshops
Professor Todd Coleman
Bioengineering, Electrical and Computer Engineering

"Wireless tattoo electronics for biomedical and consumer products applications"
Anne O’Donnell
Director
Corporate Affiliates Program (CAP)
Welcome NEW CAP Team Member!

Faye Kurpanek
Program Manager
Executive Education
CAP Members receive 2 for 1 admission
Call for Expo Judges

1:30P – 4:30P  Poster Sessions
2:30P – 4:30P  Faculty Research Talks

4:30P – 6:00P  Awards Presentation and Networking Reception
Engineering Research Center (ERC) NanoMACHs – Nano Manufacturing

• $18.5 M over five years with five year renewal option
• UCSD teamed with UT El Paso
• Diversity and K-12 education feature
• Commercialization a priority ‘translational medicine’
• Examples from work in Four thrust areas:
  ▪ Functional 3D Cardiac tissue
  ▪ Battery-less pacemaker and self powered drug delivery implants
  ▪ Self powered sensors and actuators
  ▪ 3D chemical nano-sensor arrays for monitoring of processes in tissues
• Outstanding opportunity for our newest engineering dept.
Next week:
Jacobs School will celebrate FOUR Faculty who will be inducted into National Academies….stay tuned!

We do know one who has earned this honor……