

Best Practices for How to Sustain a BMES Student Chapter

Moderator

- ▶ **Matt Brown**



BMES Board of Directors Student
Representative

Pre-Doctoral Student, Mayo Graduate School

Announcements

- ▶ The archived recording will be available shortly after the webinar on the BMES website.
- ▶ You may submit questions throughout the webinar by using the online chat function. Your questions will be addressed after the featured speaker presentations.
- ▶ Please take a few minutes to complete the brief survey following the webinar to provide us with your feedback.

5 Keys to Starting & Sustaining a BMES Student Chapter

1. Activate an enthusiastic group of students to serve key roles within the chapter
2. Engage and openly communicate with your chapter's faculty advisor
3. Develop and refine your chapter's goals and objectives
4. Plan and organize activities that drive student participation & support your chapter's goals
5. Actively interface with BMES (i.e. CDR)
<http://www.bmes.org/students>.

What Does BMES Expect From a Student Chapter?

- ▶ A yearly Student Chapter Development Report (CDR) **due June 1st** to include:
 - Overview, Membership, Budget, & Activities
 - Industry & Professional Development Programs
 - Outreach Programs
 - Mentoring Programs } Highlighting diversity
- Awards for
 - Outstanding and Commendable chapters
 - Outstanding Industry Program
 - Outstanding Outreach Program
 - Outstanding Mentoring Program

Today's Presenters



Previous Co-
President
Alexandra Muise
amuise@ucsd.edu



Current President
Alexandra Kasper
aikasper@ucsd.edu



Previous Co-
President
Bryan Yeh
bjyeh@ucsd.edu

2016-2017 Executive Board



Co-President
Alexandra Muise



Co-President
Bryan Yeh



Vice President Internal
Prashila Amatyia



Vice President External
Eti Sinha



Vice President Finance
Christopher Um

UC San Diego Bioengineering

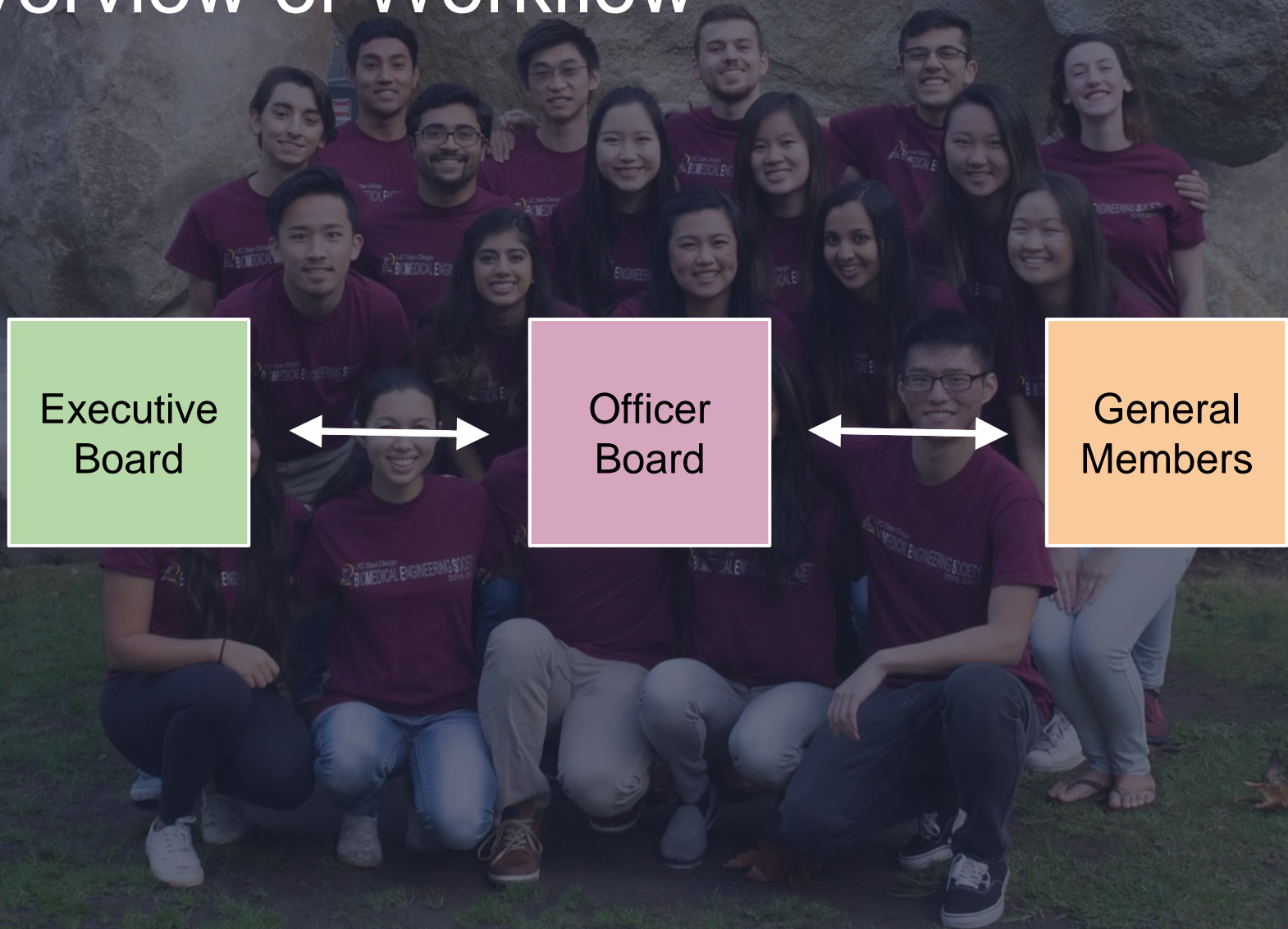
- 4 majors within the Bioengineering Department
 - Bioengineering: Bioengineering
 - Bioengineering: Biotechnology
 - Bioengineering: Bioinformatics
 - Bioengineering: Biosystems
- Our chapter only has undergraduate members

A large, light-colored stone sculpture of a bear is the central focus, sitting on a green lawn. The bear is composed of several large, rounded stone blocks, giving it a textured, natural appearance. In the background, a modern building with large windows and a tree are visible under a clear blue sky. The overall scene is bright and sunny.

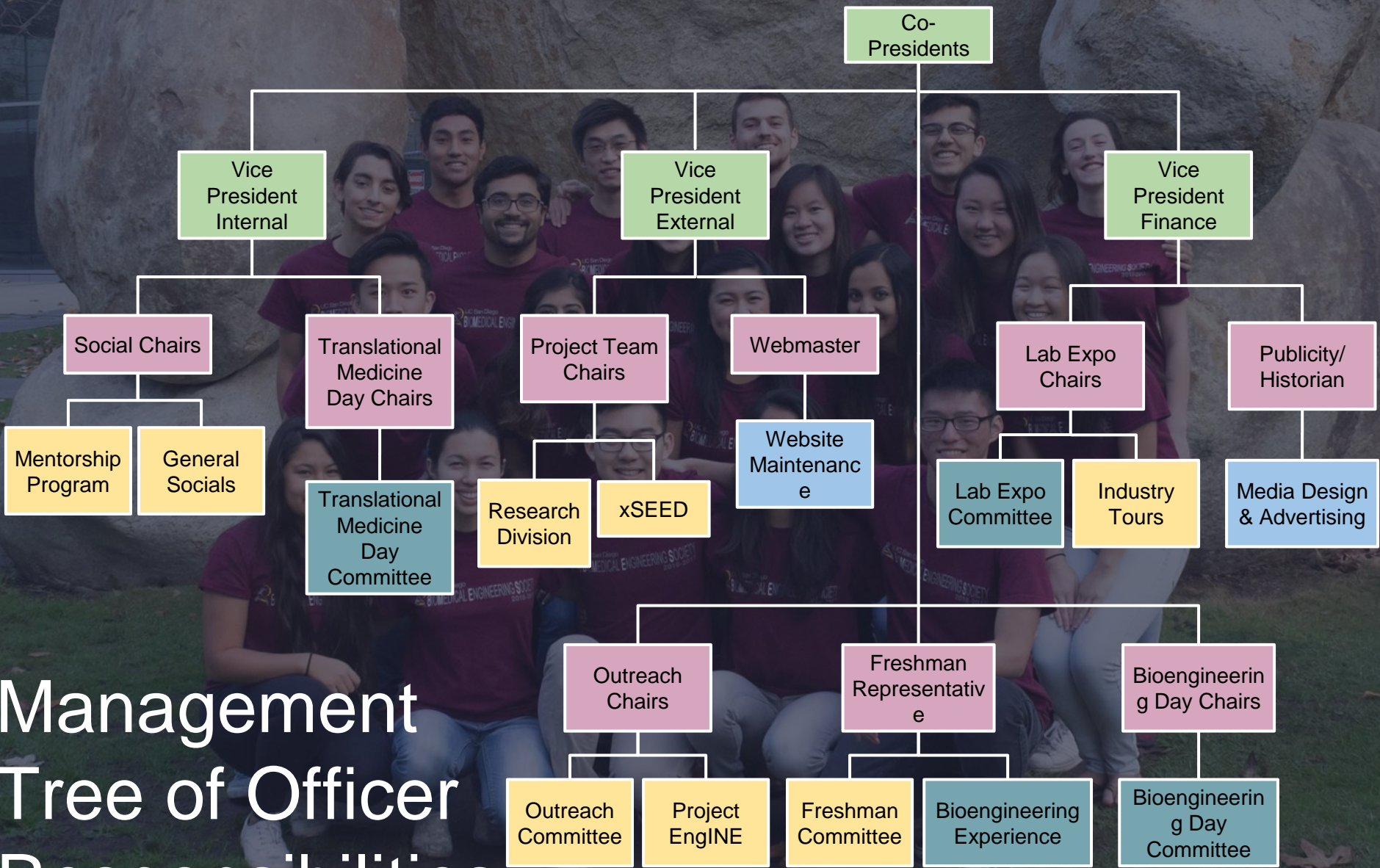
Vision Statement

To enrich the undergraduate experience of our members by fostering **lasting relationships, professionalism, technical development, and leadership.**

Overview of Workflow



Management Tree of Officer Responsibilities

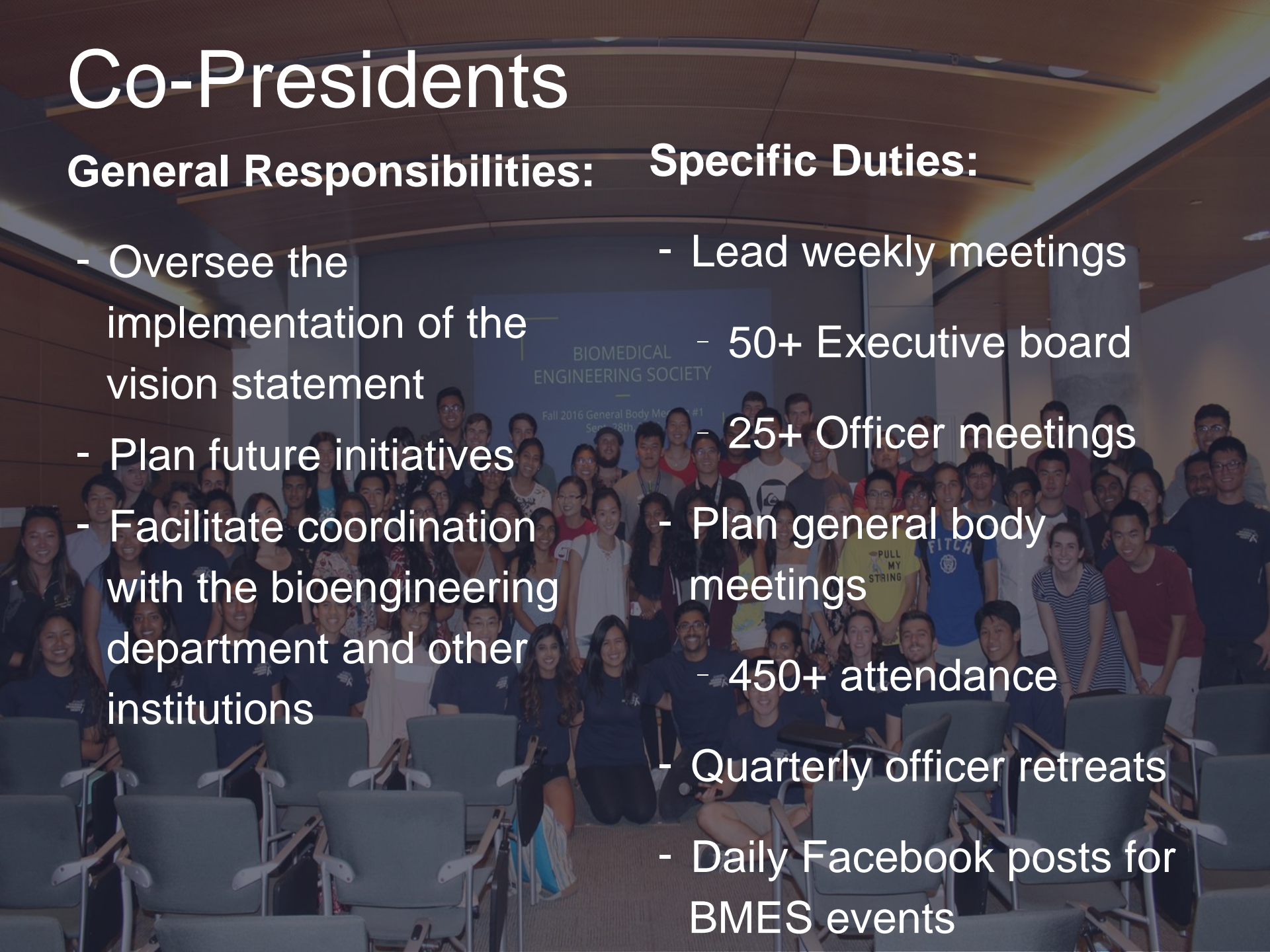


Co-Presidents

General Responsibilities: Specific Duties:

- Oversee the implementation of the vision statement
- Plan future initiatives
- Facilitate coordination with the bioengineering department and other institutions

- Lead weekly meetings
- 50+ Executive board
- 25+ Officer meetings
- Plan general body meetings
- 450+ attendance
- Quarterly officer retreats
- Daily Facebook posts for BMES events



Vice President Internal

General Responsibilities:

- membership logistics
- **147** members this year
- facilitating communication between the officers and members
- keeping administrative tabs on officer board

Specific Duties:

- Document meeting notes
- Send out weekly newsletters
- Collect weekly reports from officers
- Plan the End of the Year Banquet
- Compile the CDR

Vice President External

General Responsibilities: The Events:

- Prepare students for post-graduation
- Foster relationships between the undergraduates and
 - Biotechnology industry
 - Graduate schools
- 3 Workshops
- 6 Informational and Recruiting Sessions
- 4 Industry & Academia Panels
- 30+ hours of office hours
- 400+ total attendees



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SeaSpine

Vice President Finance

General Responsibilities: 2016-2017 Fiscal Year

- Maintaining an up-to-date balance statement
- Using alternative sources of funding to cover events
- Running fundraisers
- Providing reimbursements
- \$5000 available for new officer board's operations
- Membership was priced at \$25
- Gross income = \$2940.00
- Fundraising generated \$6365.50



UCSD BMES Officer Board 2016-2017

Outreach



Juhi Madan
Outreach Chair



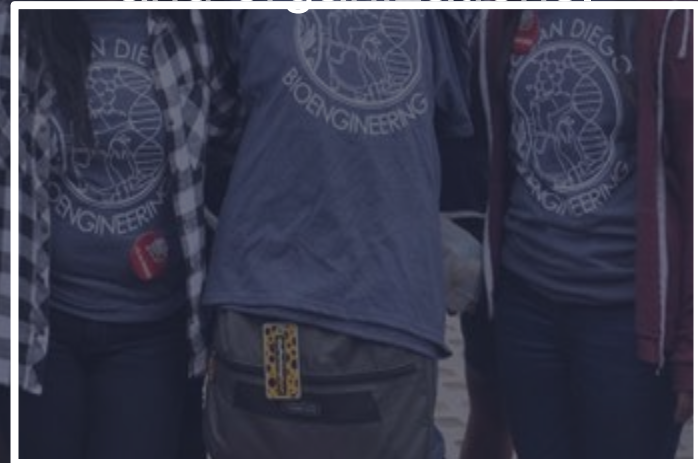
Katherine Lowe
Outreach Chair

Light the Night

A fundraising campaign benefiting the Leukemia & Lymphoma Society and their funding of research to cure blood cancer.

San Diego Festival of Science and Engineering

An educational experience, engaging the public in all that encompasses STEM by showcasing work by businesses and organizations.



Project EngINe

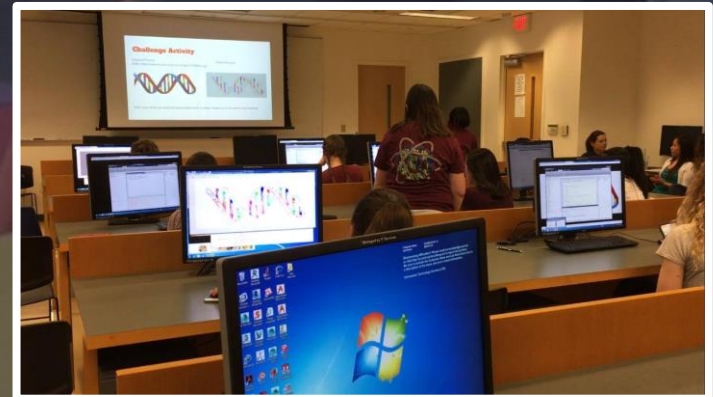
Engineers Inspiring New Engineers aims to inspire students to pursue STEM by bringing STEM education to their schools. The program was expanded from high schools to elementary schools also this year.



BE WiSE

Matlab Workshop

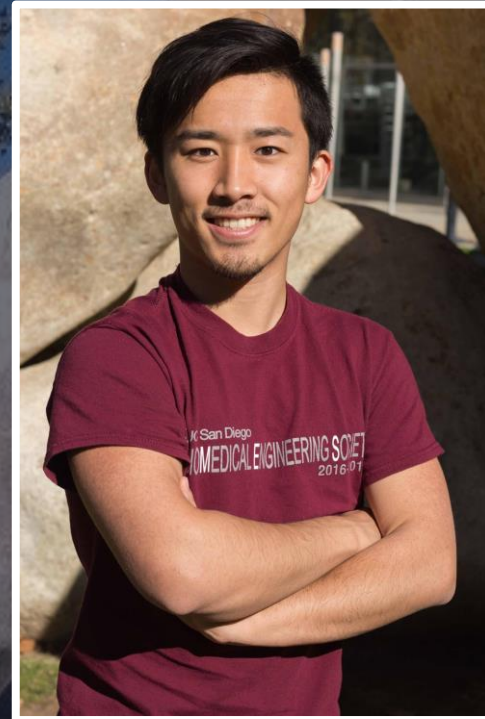
Better Education for Women in Science and Engineering engages young women in STEM learning experiences. We collaborated on a Matlab workshop for high school girls.



Project Team



Benjamin Yang
Project Team
Chair



Shoun Matsuka
Project Team
Chair

Research Division

- **76** applicants
- **7** projects
- **22** members



Fluocell Live Image Analysis

Microfluidics for Cellular Behavior Studies

Recombinant Protein Characterization

Compressive Coded SPECT Camera
Prototyping

Compressive Sensing **Image Reconstruction**

Jupyter Notebook Extension

~Reproducible Scientific Analysis~

Improving **ASTRAL Runtime Efficiency** for Species Tree

Estimation from Genome-Scale Data

BMES x SEED

SEED: Students for Entrepreneurship and Engineering

**Design
11 Workshops**

**170 Total
Attendance**



What are a lot of Professors focused on?

**Intro to Biomedical
Entrepreneurship
Bioengineering
Innovations**

**Crash Course in
Product
Prototyping
Value Propositions
& Customer
Validation**

**Team Formation
Project
Management
CAD & 3D
Printing
Public Speaking
Pitch Workshop
Pitch
Competition**

Social



Nikki Chan
Social Chair



Kathryn Kang
Social Chair

Mentorship Program

- 2 Mentor-Mentee Speed Dating Events
- 2 Mentor-Mentee Cycles
- 33 mentors
- 80 mentees

Family System

- 3 Families
- 116 Family Members
- Friendly competition between the families
- End of the year BMES Family Olympics



Socials

- Freshman ice cream social
- Study socials
- Joint socials with other student organizations
- Fundraiser socials
- Post-GBM Socials



Lab Expo



Katherine Nguyen
Lab Expo Chair



Arya Kaul
Lab Expo Chair

Lab Expo

Goals:

- Research exposition that showcases local research
- Develop scientific literacy and promote research experience
- Promote interdisciplinary collaboration

The Event:

- 500+ undergraduate attendees
- 30+ researchers
- Keynote address
- Live research demonstrations

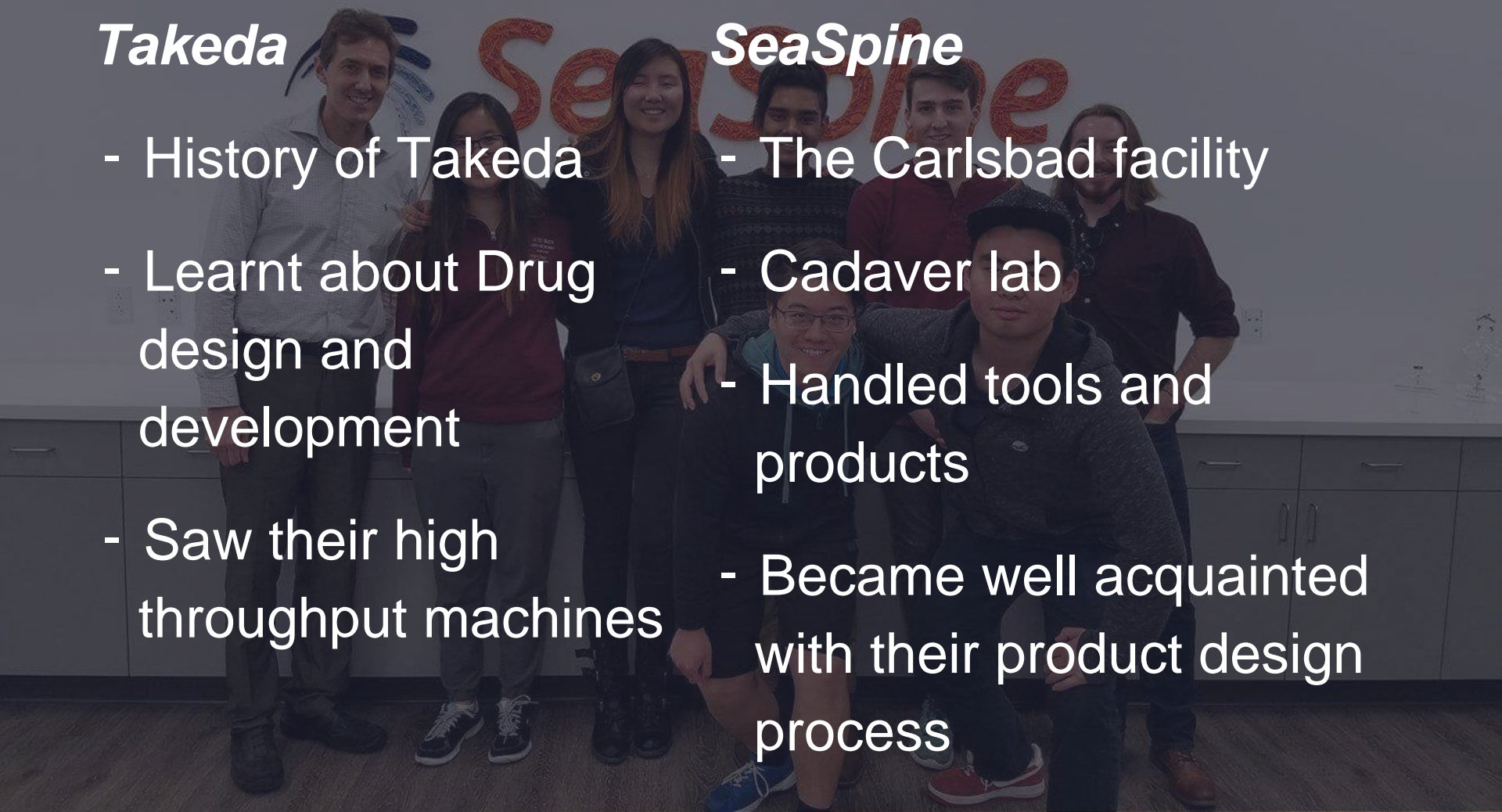
Industry Research Tours

Takeda

- History of Takeda
- Learnt about Drug design and development
- Saw their high throughput machines

SeaSpine

- The Carlsbad facility
- Cadaver lab
- Handled tools and products
- Became well acquainted with their product design process



Translational Medicine Day



Yajur Maker
Translational
Medicine Day Chair



Reysha Patel
Translational
Medicine Day Chair

Translational Medicine Day

Goals:

- Inspire attendees to explore **translational medicine**, the recent movement to expedite the conversion of benchtop discoveries into clinical treatments and devices

The Event:

- 200+ attendees
- 6 speakers from industry and academia
- 2 Industry Demos
- Center for the Future of Surgery Tours
- MD/PhD panel
- Networking reception

Bioengineering Day



Alexandra Kasper
Bioengineering
Day Chair



Irmak Ipekci
Bioengineering
Day Chair

Bioengineering Day

Goals:

- Celebrate the accomplishments of the Bioengineering department
- Showcase senior design projects
- Strengthen connections with industry
- “Building a more diverse future”

The Event:

- 466 Attendees
- 9 hours
- 3 Industry Demos
- 2 Keynote Speakers
- 2 Research Seminars
- 2 Poster Sessions
- 2 Rounds of Quiz Bowl

Freshman Committee



Tong Jin
Freshman Representative

Freshman Socials

- Classmate Matching
- Ice Cream Social
- Study Socials
- Study Group Reveal Social
- Brunch Date + Picture Taking
- Freshman Bonfire Social
- BMES x ISPE Underclassman Enrollment Advising Social



Bioengineering Experience

Goals:

- Educate freshman about the 4 Bioengineering Tracks
- Offer academic advising for underclassmen
- Showcase future career options for bioengineering majors

The Event:

- 100+ Attendees
- Alumni Panel
- Alumni Round Table
- Q&A sessions
- Networking Session
- Four-year plan Advising

Advertising



Lucas Patel
Webmaster

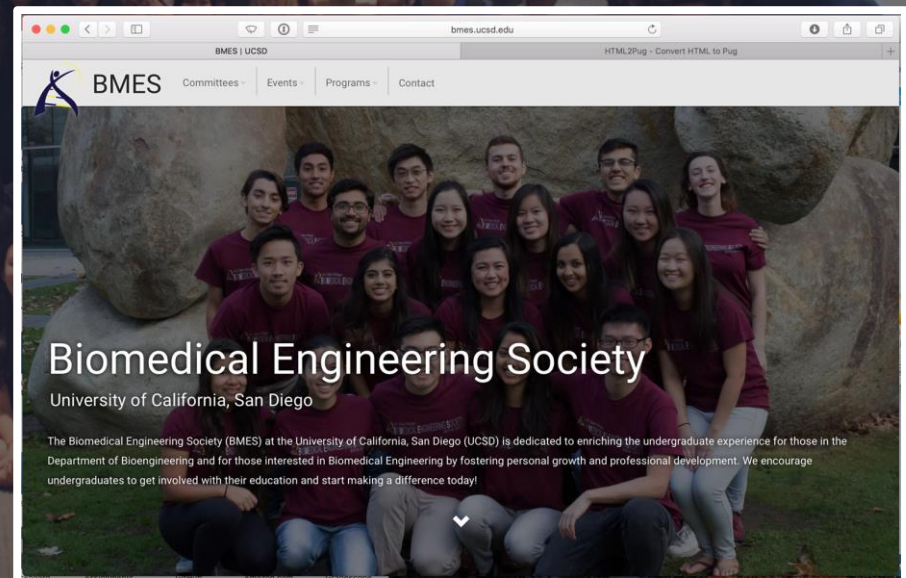
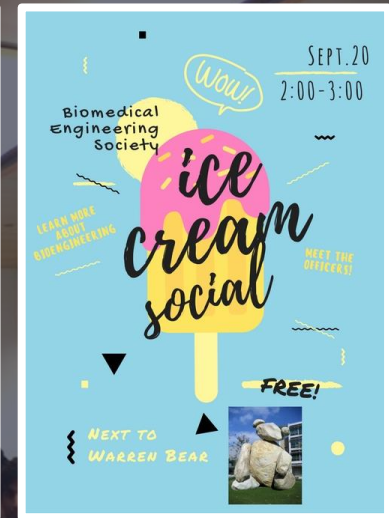


John Vincent
Laxa
Publicity/Historian

Advertising Best Practices

Advertising techniques:

- Chalking
- Department Emails
- Weekly Newsletters
- Facebook
- Flyering



UCSD BMES Transition Process

Executive Board

- Election Process at the end of the year (mid Spring Quarter)
 - Public applications
 - Speeches
 - In person and away ballots

Officer Board

- Selection process at end of the year (end of Spring Quarter)
 - Selected by newly elected executive board
 - Private applications
 - Interviews
 - Committee and lead system involvement is weighed heavily for selection

Tips for Student Involvement

- Engage students early on
 - Freshman orientation
- Give members active, leadership roles
 - Lead system
- Foster a community
 - Mentorship Program--Family System
 - Socials
 - Volunteer Opportunities
- Encourage feedback and new ideas



Future Directions

- Bioengineering Gala
 - End-of-the-year celebration for the department highlighting the graduating seniors and the bioengineering organizations
- Stronger Professional Mentorship
 - 1 mentorship event a quarter teaching an important skill to underclassmen
- Professional Development Workshops
 - More applicable workshops including--elevator pitches, resume critiques, etc

Thank you to the department admin,
faculty, and our sponsors for their
support!

Dr. John Watson

Helder Balelo

Dr. Geert Schmid-
Schoenbein

Omar Vasquez

Dr. Peter Chen

Gabriela Moreira

Isgard Hueck

Elizabeth Soos

Jeff Brittan

Kelly Thorpe

Justina Houston

Industrial Advisory Board

Vanessa Hollingsworth

Genentech Inc

Irene Jacobo

SeaSpine Inc

UCSD BMES
Sunday, May 21st, 2017

Thank you for listening!

Questions?

