

# BIOMOD

October 29<sup>th</sup> 7:00am–5:00pm  
October 30<sup>th</sup> 8:00am–12:00pm  
University of California, San Francisco  
Mission Bay Campus  
Genentech Hall, Byers Auditorium  
1700 4<sup>th</sup> Street, San Francisco CA

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## Friday, October 28' 2016

3:30PM to 7:30 PM

Team Registration at the Sir Francis Drake Hotel  
450 Powell Street, San Francisco, CA – Mezzanine Level.  
Pick up your ID badge and t-shirt!

## Saturday, October 29, 2016

07:00–07:20 AM	Make your way to UCSF Mission Bay — Genentech Hall.
07:00–08:00	<b>Breakfast will be available to all registered teams.</b>
08:00–08:15	Welcome – Opening Remarks
08:15–08:30	UTokyo-Komaba
08:30–08:45	Team UBERCoolecular
08:45–09:00	YOKABIO
09:00–09:15	Team Tube Tech
09:15–09:30	TJU
09:30–09:45	Team SKKU
09:45–10:00	Team Tiny Trap
10:00–10:30	<b>Coffee Break</b>
10:30–10:45	Nano-JLU
10:45–11:00	Season
11:00–11:15	Team Rutgers
11:15–11:30	OhioMOD
11:30–11:45	NTU-Taiwan
11:45–12:00	Team Sendai
12:00–12:15 PM	<b>Group Photo</b>
12:15–13:30	<b>Lunch</b>
13:30–13:45	Team Kansai
13:45–14:00	DaNA
14:00–14:15	I, Nanobot
14:15–14:30	HK-BUddy
14:30–14:45	Team Handai
14:45–15:00	Archis
15:00–15:30	<b>Refreshment Break</b>
15:30–15:45	Berlin16
15:45–16:00	Team CFCFIM
16:00–16:15	BioDesigners ITESM Qro
16:15–16:30	CGU-Union
16:30–16:45	HUST-China

## Sunday, October 30, 2016

08:00–08:20 AM	Make your way to UCSF, Genentech Hall.
08:00–09:00	<b>Breakfast will be available to all registered teams.</b>
09:00–10:00	Sponsor Workshop: Autodesk
10:00–11:30 AM	<b>Awards &amp; Closing Ceremony</b>
12:00 PM	Check out of hotel
13:00–14:00	Board of Directors Annual Meeting (Tolikas, Shokat, Rothmund, Murata, Douglas)

## Presentation Details

All team presentations will take place in Byers Auditorium in the Genentech Hall building on the University of California, San Francisco Mission Bay Campus.

The **TOTAL** time allotted to each team is 15 minutes. This includes laptop setup (**1 min**), present slides (**10 min**), audience questions (~**3 min**), and exiting the stage + buffer time (**1 min**). The time limits will be strictly enforced, so rehearsing in advance is strongly recommended to avoid being cut off. The room is equipped with a projector and screen. *Please remember to bring converters, adapters, cables, etc., as these will **not** be provided by BIOMOD.*

## Registration/Check-in

**All teams are required** to check-in for BIOMOD on Friday, October 28th from 15:30–19:30. Registration will be located on the Mezzanine level of the Sir Francis Drake hotel, 450 Powell Street, San Francisco, CA 94102.

At registration each team member will receive a ID/Security badge (which must be worn at all times during BIOMOD), 4 vouchers for discounted Uber trips, a participation certificate and a BIOMOD t-shirt.

## Hotel

The official hotel of BIOMOD 2016 is the Sir Francis Drake in downtown San Francisco.

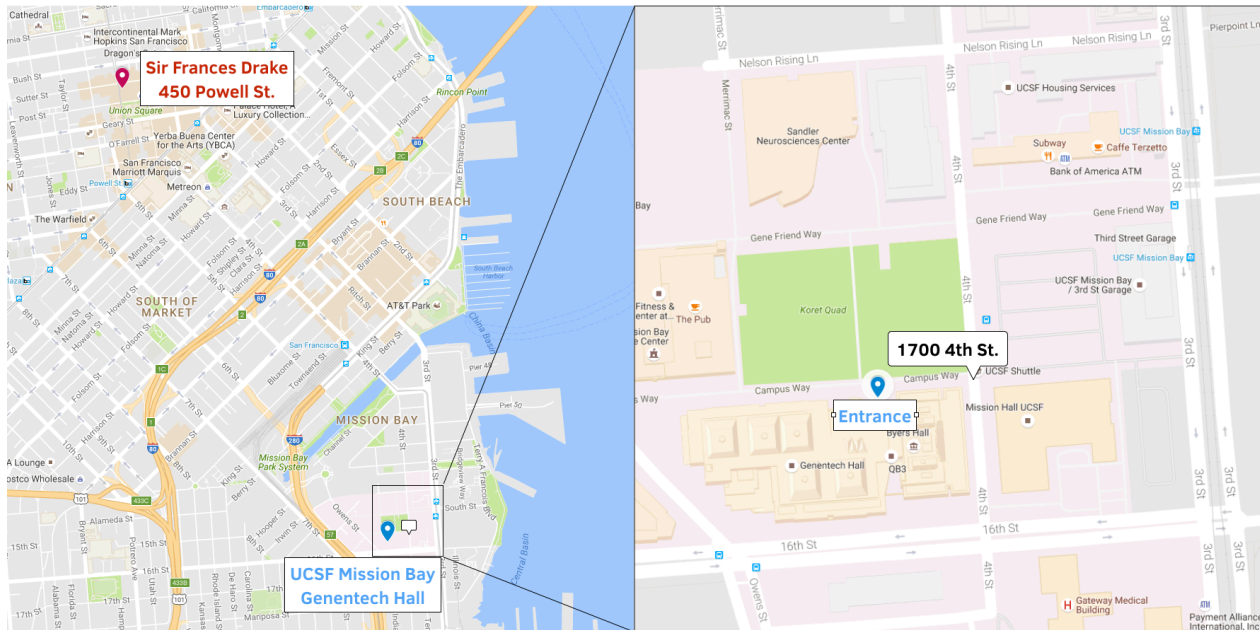
Address: 450 Powell Street  
San Francisco, CA 94102  
Telephone: (415) 392-7755

Check-in time is at 3:00 PM  
Check-Out time is at 12:00 PM

## Room Credits

Participants staying at the official BIOMOD hotel are eligible for a \$500 per team room credit. To take advantage of this credit, you **MUST** have 1) booked your room through the link provided on the registration system **and** 2) provided your hotel confirmation number(s) on the appropriate section of the registration system. The credit will be split equally among teams depending on how many rooms you booked and will be applied to your final bill at check-out.

**Map:** <https://goo.gl/maps/GG4ksWFd8dx>



## Getting to BIOMOD

**Location:** University of California, San Francisco  
Mission Bay Campus  
Genentech Hall, Byers Auditorium



**Address:** Near 1700 4<sup>th</sup> Street, San Francisco CA 94158.  
(Direct taxi to this address, and then walk west past Byers Hall to Genentech Hall)

## Transportation Options

From: Sir Francis Drake (450 Powell St)

To: the UCSF Mission Bay Campus (1700 4<sup>th</sup> Street, San Francisco, CA 94158)

### **Uber** \$8–\$11 (15 min)

From anywhere in San Francisco and surrounding areas. Download the Uber app on your smart phone and set up an account. Use your phone to arrange quick car service.

This app uses your smart phone's GPS to detect your location and connect you with the closest available driver. You will receive a text message with a photograph of your background-checked driver and their car, you'll be able to track their approach, and get a text message when they arrive. Payment can be split among passengers and will be securely charged to the credit card on file. No cash will change hands.

Use the street address of 1700 4<sup>th</sup> Street, San Francisco for easiest access to Genentech Hall.

### **Uber Vouchers**

In an effort to further help offset costs for attending BIOMOD, we are pleased to offer each team 4 discount vouchers for Uber trips. Each voucher is worth up to \$10. The primary contact of each team will be provided with the voucher numbers upon registration/check-in and will share them amongst the team. To use these vouchers you must download the Uber app on your smart phone and set up an account. Note: if you are **new** Uber user, you may also be eligible for a \$22 promotional credit upon setting up a new account. Visit <https://www.uber.com/promo/> for details.

### **Taxi**: \$14–16 (15 min)

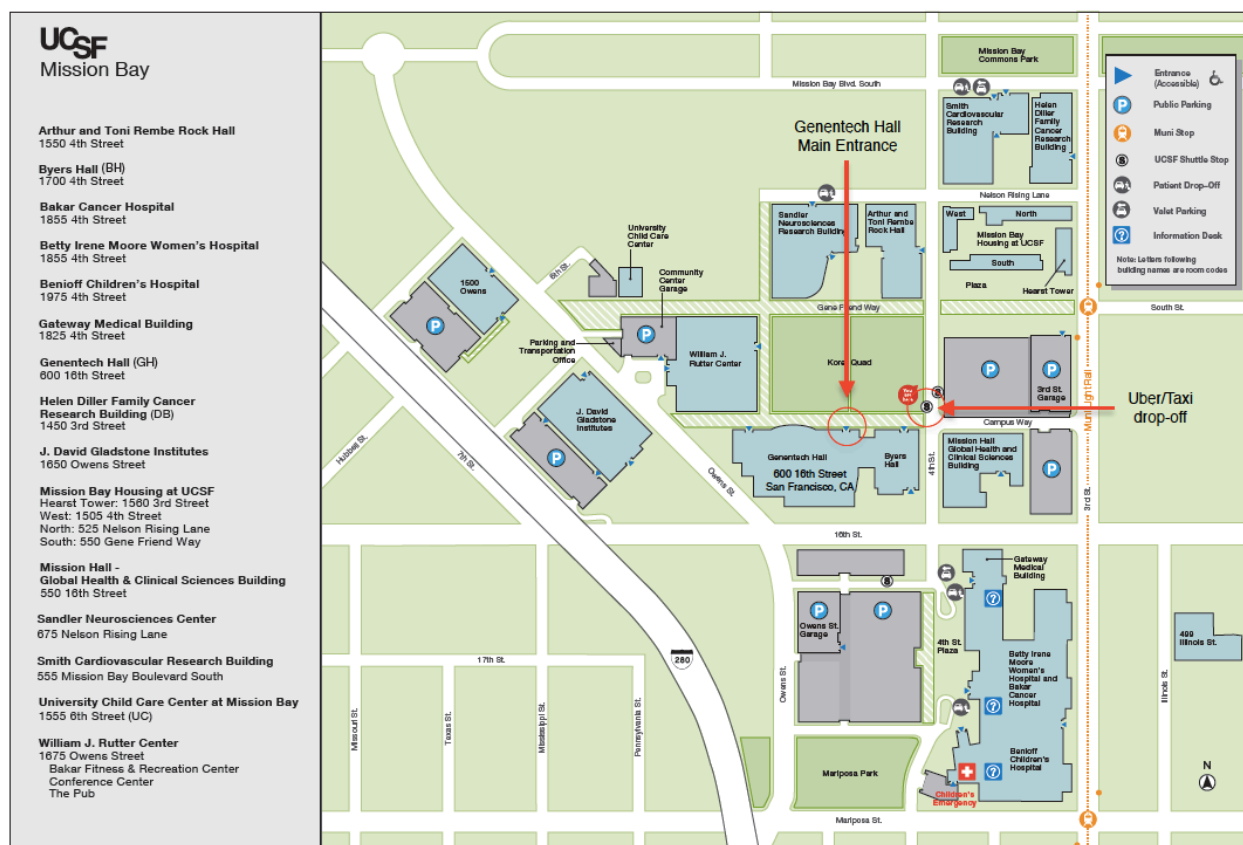
Use the taxi stand at the Sir Francis Drake and take a taxi to UCSF. Use the street address of 1700 4<sup>th</sup> Street, San Francisco for easiest access to Genentech Hall.

## Once at UCSF Campus – Getting to Genentech Hall

Once you arrive on Campus from the taxi drop off area on 4<sup>th</sup> street, walk west along Campus Way, past Byers Hall, to the entrance of Genentech Hall indicated on the map. Note that Campus Way is a sidewalk path that is just north of Genentech Hall and south of "Koret Quad" (trees and grass).

Enter the building at main Genentech Hall entrance between the circular stone steps and the Byers Hall entrance. Here is a Map of UCSF Mission Bay Campus:

[https://www.dropbox.com/s/4cdg559q4gsyz22/UCSF\\_Mission\\_Bay\\_Map.pdf?dl=0](https://www.dropbox.com/s/4cdg559q4gsyz22/UCSF_Mission_Bay_Map.pdf?dl=0)



## Building Security

The Genentech Hall building at UCSF will only be accessible through the main Genentech Hall entrance. You must bring ID for security check-in.

## Meals

Saturday: Breakfast, morning coffee, lunch, and afternoon refreshments will be provided.

Sunday: Breakfast and a **box lunch** will be available for all attendees.

## Judging and Awards

Our aim is to maintain an open and fair process for evaluating each team's performance. Teams will be scored by judges using a point system. The judging process will have two stages: online content (worth up to **75 points**) and live presentation (worth up to **25 points**).

## Online content scoring

- Maximum combined score for online content is **75 points** (= 50 points for wiki + 25 points for internet video)
- Scores will be determined by a range-voting system.
- Five (5) judges will be randomly assigned to each team.

- Judges will evaluate each project according to a rubric (see below) and assign a point value in each category.
- Highest and lowest judges' total scores are excluded to remove outliers.
- Three remaining judges' scores will each weighted by 1/3 and combined to determine the total scores for each category.

## **Wiki (up to 50 points)**

### **Project Idea (20 points)**

- Relevance: Has the team made a strong case that their project idea is scientifically and/or technologically interesting? **(5 points)**
- Specification: Are the project goals well-defined? (i.e. Does the team explicitly state what criteria need to be met in order to consider the project a success?) **(5 points)**
- Feasibility: Was the proposed solution feasible? (i.e. Was it reasonable to expect that the solution could be implemented by a BIOMOD team in one summer?) **(5 points)**
- Merit: Is the proposed solution a good one? Is it particularly elegant or innovative? **(5 points)**

### **Project Documentation (20 points)**

- Clarity: Is the project description well-written and easy to understand? Does it include the background and motivation of the project, methods, results, and discussion? Are the figures easy to understand? **(10 points)**
- Transparency: Are all of the raw experimental data and source files easily accessible? Would it be straightforward to attempt to reproduce the team's results? **(5 points)**
- Layout: Is the team's project page arranged in a clear and logical fashion? **(5 points)**

### **Project Execution (10 points)**

- Execution: Did the team accomplish what they set out to do? **(10 points)**

### **YouTube video (up to 25 points)**

- Overall impact: Was the video interesting? Did you want to watch more than once? **(10 points)**
- Clarity: Was the project described in a simple and clear manner that could be easily understood by a wide audience? **(10 points)**
- Production: Was the sound and video high quality? Were the images focused and scaled properly? **(5 points)**

### **Presentation scoring (up to 25 points)**

- Content: Were the slides clear and easy to understand? Did the project narrative have a logical flow, with clearly stated goals and results? **(10 points)**
- Delivery: Did the speaker(s) give a well-rehearsed, well-paced presentation? Did the speaker(s) engage with the audience and maintain good eye contact? **(10 points)**
- Impact: Was the presentation interesting? fun? clever? memorable? **(5 points)**

## Judges

- Judges were selected from a pool of BIOMOD faculty mentors and outside experts.
- Mentors will not evaluate their own team.
- The 2016 BIOMOD Jamboree Judges are:

Satoshi Murata  
Takashi Nakakuki  
Saba Nojourni  
Shin-ichiro Nomura  
Kishio Ono  
Dave Parker  
Francesco Ricci  
Yannick Rondelez  
Paul Rothmund  
Joseph Schaeffer  
Ashu Sharma  
Hisashi TADAKUMA  
Masahiro Takinoue  
Philip Tinnefeld  
Mary Tolikas  
Shizhen Wang  
Robert Wang  
Liu Xiaobo  
Dayong Yang  
Yaoyu Yang  
Patrick Yue

Tural Aksel  
Ebbe Andersen  
Hans-Georg Braun  
Carlos Castro  
Pablo Damasceno  
Rhiju Das  
Kei Fujiwara  
Shuwen Guan  
Masami Hagiya  
Shogo Hamada  
Rizal Hariadi  
Henry Hess  
Ralf Jungmann  
Ibuki Kawamata  
Yonggang Ke  
Jorgen Kjems invited  
Ken Komiya  
Akinori Kuzuya  
Chenxiang Lin  
Phil Lukeman  
Kalaumari Mayoral Peña



## Awards

The following prizes will be awarded:

### Top Prizes

- Grand prize = 1st highest total combined points from wiki + video + presentation
- 1st runner up = 2nd highest total combined points from wiki + video + presentation
- 2nd runner up = 3rd highest total combined points from wiki + video + presentation

### Category awards

- Best Wiki = 1st place, 2nd place, 3rd place
- Best YouTube Video = 1st place, 2nd place, 3rd place
- Best Presentation = 1st place, 2nd place, 3rd place
- Audience Favorite = 1st place, 2nd place, 3rd place

### Project awards

- Bronze: Team satisfied all minimum requirements for judging (i.e. Submitted a complete Project wiki and uploaded a YouTube video)
- Silver: Satisfied criteria for Bronze, plus at least one device (part of the system) in the team's design is worked as expected.
- Gold: Satisfied criteria for Silver, and overall point score from Wiki + YouTube + Jamboree presentation are in top 50% of all teams.

### Special Awards

- The 6th Annual Molecular Robotics Award (by [MOLBOT](#), Japan)
- Audience Choice Award – Best Project
- Best Team T-shirt Award
- Best use of Game Engine

## San Francisco - Places to Eat

### Potrero Hill (10–15 min walk from UCSF)

[Sunflower](#) (288 Connecticut Street at 18th) — Excellent Vietnamese food \$8–12.

[Pera](#) (1457 18th St) — Mediterranean tapas, good food. \$15–25.

[Live Sushi](#) (2001 17th Street at Kansas) — Sushi \$11–30.

### Dogpatch (10–15 min walk from UCSF)

[Serpentine](#) (2495 3rd Street) — New American. Good burgers. \$12–30.

[Moshi Moshi](#) (2092 3rd Street, near the corner of 18th) — Sushi/Japanese. Standard American Japanese restaurant fare. \$15–20.

### Mission (10 min taxi or Uber from UCSF, or BART from downtown @ 16<sup>th</sup> and 24th Street)

[Taqueria Vallarta](#) (3033 24th Street, near Harrison) — Excellent street tacos. \$5–10.

[Taquerias El Farolito](#) (2779 Mission Street @ 24th) — Great burritos. \$8–12.

[Limón Rotisserie](#) (1001 South Van Ness or 524 Valencia) — Amazing Peruvian food. \$12–20.

[Yamo](#) (3406 18th Street @ Mission) — Burmese food. Hole in the wall, usually a line. \$8–10.

[Namu Gaji](#) (499 Dolores Street @ 18th) — Korean fusion. Next to Bi-Rite Ice Cream! \$14–20.

[La Taqueria](#) (2889 Mission Street, near 25th) — “[Best Burrito in America](#)” Great tacos; often crowded. \$10–15.

...MANY other great options on Mission Street, Valencia Street, and 24th Street.

### Downtown/Union Square (near the Sir Francis Drake)

[Boba Guys](#) (429 Stockton Street @ Bush) — Popular Asian Milk Tea bar.

[Golden Gate Tap Room](#) (449 Powell Street @ Sutter) — serving over 100 beers and pub grub, this bar and grill also features game hall classics like shuffleboard, SkeeBall, arcade games, and pool tables.

[Sears Fine Food](#) (439 Powell Street @ Sutter) — Local favorite serving Swedish pancakes and classic diner standards amid a nostalgic surroundings.

[Ferry Building Marketplace](#) — A variety of restaurants, including [The Slanted Door](#) (Vietnamese) and [Market Bar](#). Check restaurants for hours; most other shops close at 6pm.

[Embarcadero Center](#) — A variety of restaurant options, including Osha Thai Restaurant (4 Embarcadero Center) and Eclipse (Inside Hyatt).

## Organizer Contact Info

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2016 BIOMOD Sponsors



## BIOMOD History

The BIOMOD competition was begun at Harvard University by the Wyss Institute for Biologically Inspired Engineering, which conducted the competition during the years 2011 to 2015. The mission of the competition was to inspire a generation of students to learn to engineer biomolecules at the nanometer scale. In 2016, BIOMOD Foundation assumed management of the competition.

From 2011–2015, the lead events coordinator at the Wyss Institute was Jermaine Reid, who was instrumental in making BIOMOD a success. Jermaine worked closely with Mary Tolikas (Director of Operations), along with Alison Reggio, Mary Wozniak, and Caitlin Wells.

The BIOMOD website and Competition Management Software were originally developed by Kristian St.Gabriel and Byron Hinebaugh.

The BIOMOD Foundation is currently run by its board of directors: Shawn Douglas (UCSF), Paul Rothmund (Caltech), Kevan Shokat (UCSF), Mary Tolikas (Wyss Insitute), and Satoshi Murata (Tohoku University), and supported by Rebecca Wheeler (lead organizer), Robert Pierce (legal), and Rachel Dulay (accounting).

Below are group photos from previous competitions.

Over 1000 students, mentors, and judges have participated since 2011.

## **BIOMOD** nanoscale design competition for college students



This year, 2016, marks the first time that BIOMOD will be hosted in California.