



2021-22 Annual Report

Prepared in June 2022

Introduction

As the world responds to the difficulties and opportunities of a global pandemic, the Fung Institute worked hard to satisfy the needs of our students, staff, and faculty through innovative teaching strategies, increased staffing for optimal performance, and expansion of the Institute's service capacity with additional classrooms and office space at Mudd Hall. As a result, we maintained a high-quality student experience, and we are thrilled to share some of the highlights from this academic year with you. Our mission remained clear throughout the year from virtual visit days and orientations with the largest class we have ever had in MEng and the Fung Fellowship programs. In the end, we joyfully celebrated more than 100 capstone teams participating in our showcase and graduating 670 MEng students. As you peruse the pages ahead, what will be undeniable is that as the world was sheltered in place, the Fung Institute was boldly and steadfastly setting new records and raising its standard of excellence!

Following this academic year's successes, the institute is stronger and more driven than ever to make an impact in leadership education as it bounces back from two years of unexpected pivots with a new strategic direction beginning July 2022.

As leadership partners within the Fung Institute, we now turn the page to the next phase of the Fung Institute, focusing on five main pillars that will guide the Strategic Fung Institute 2.0 Vision:

1. Improve Team Culture
2. Stronger Department Partnerships
3. Enhance Fundraising and Program Revenue Generation
4. Scalable Hybrid Programs
5. Increase Diversity, Equity, Inclusion, Belonging

Directed by these pillars, we will expand the institute's mission and meet the needs of all stakeholders as we continue to build on the Institute's solid reputation and foundation set over eleven years ago. From on-the-ground to virtual and hybrid experiential learning, the opportunities prove endless, and we are excited about what is ahead.

Stephany D. Baker
Fung Institute Executive Director

Anthony D. Joseph
Fung Institute Faculty Director

Facilities and Space Planning

The institute's goal is to provide spaces that meet the needs of students, faculty, and staff considering the growing programs and pandemic safety. This past year, we met our goals to:

1. Move, fully occupy, and utilize the classrooms, breakout rooms, and staff offices in Mudd Hall.
2. Upgrade the security and access systems for Mudd and Shires Halls for compatibility.
3. Maintain open and transparent communication with staff, instructors, and students to ensure their needs are being addressed.

Next year, our main focus will be on refreshing Shires Hall with new paint, re-envisioning student spaces, and replacing broken and outdated furniture.



Marketing and Communications

The 2021-22 was the year of hybrid marketing & communications. The digital communications space was active and noisy, filled with messages from bCourses, Slack, email, social media, and more. Students were excited to be on campus and there was a demand for in-person events, even under the continued COVID-19 health crisis. We asked ourselves: How might we support our staff in developing a strong cohort/community with these communication challenges and event restrictions?

TEAM STRUCTURE

The marketing team benefited from the addition of a new full-time team member: James Wang. As our full-time marketing & recruitment specialist, James focused on photography, videography, and social media as well as important initiatives including the MEng diversity recruitment fair, Fung Fellowship recruitment, Big Give, and end of year showcase.

We also said farewell to three long-term marketing interns: Alison Huh (3 years), Ella-Rochelle Lawton (3 years), and Nick Yang (1 year). In preparation for the next academic year, we have hired and onboarded four new marketing interns, including two new illustration interns to meet the demand of visualizing our most innovative projects across programs.

MARKETING SUPPORT FOR COE'S PROFESSIONAL MASTER'S PROGRAMS

This was the first full year of providing marketing support for the professional master's programs in the College of Engineering. Ashley met with each program on a bimonthly or monthly basis to consult on marketing/recruitment efforts. Some highlights include:

- Launched first group advertising campaign as the College of Engineering professional master's programs with Diversity in Action
- Collaborated with the College of Engineering MarComm team to promote programs and share deadlines on social media and within newsletters
- Developed MarComm Dashboard to collect and share data and efforts across programs
- Plans for 2022-23 academic year - Increased collaboration at the top of the funnel with College of Engineering and Graduate Division
 - Graduate Division opportunities:
 - Continued support with Slate communications instance
 - More support in building queries and templates (all programs seem to need major assistance with assessing effectiveness of our marketing efforts)
 - Explore how Grad Div can better support in DEIB/URM recruitment
 - Start promoting professional masters degrees as distinct from other graduate programs, especially at diversity events
 - College of Engineering opportunities:
 - More lead generation and advertising from the College of Engineering level vs. individual programs
 - Explore bringing advertising in-house with a dedicated staff support
 - Financial support for recruitment fairs and trainings
 - How can we complement Director of Graduate Student Services & Outreach Meltem Erol's work?

SUPPORTED BY FI MARKETING IN 2021-22

1. Master of Analytics
2. MBA/MEng
3. Master of Design (MDes)
4. Master of Engineering (MEng)
5. Master of Development Engineering (MDevEng)
6. Master of Molecular Science and Software Engineering (MSSE)
7. Master of Translational Medicine (MTM)

Marketing and Communications

MARKETING IMPACT, BY THE NUMBERS

- Master of Engineering: 3,631 applications
 - Applications from University of California grads: 511 (increase from 14% to 16%)
 - Narrowed online advertising to focus on domestic US, CA residents, and Cal grads
- Fung Fellowship: 202 applications
 - Began posting student-generated content on @fungfellows TikTok
 - Transfer recruitment cycle currently underway
- Big Give: Raised \$28,975 for the Fung Fellowship, a new record!
- Emails: Successfully moved our CRM from Hubspot to Slate
 - Benefits: Free to use; able to tap into support from UC Berkeley Graduate Division; data is directly linked to the applicant data
- Social Media: The growth of our social media accounts reflect the current trends of a slowing usage for Facebook and an increasing popularity for Instagram. The real standout, however, is our LinkedIn network, which boasted both the fastest growth rates as well as a 400% increase in engagement over the academic year for both MEng and Fung Fellowship accounts. This reflects the growing strength of the professional community that forms such a unique aspect of the Fung Institute. Additionally, our focus on student-generated content paid dividends, as our best performing Instagram Story posts were our FAQs and student takeovers for the MEng and FF recruitment cycles. Data below is August 2021-May 2022.
 - Facebook:
 - MEng: 5,016 likes (+61)
 - FF: 354 likes (+31)
 - Twitter:
 - MEng: 1,660 followers (+100)
 - FF: 548 followers (+52)
 - Instagram:
 - MEng: 1,814 followers (+295)
 - FF: 1,063 followers (+140)
 - LinkedIn:
 - MEng: 1,778 followers (+308)
 - FF: 784 followers (+202)
 - Medium:
 - MEng: 32,833 views, 14,980 reads
 - FF: 8,470 views, 4,326 reads
 - YouTube: 32,896 views, 97+ subscribers

THE FUTURE OF MARKETING & COMMUNICATIONS AT THE FUNG INSTITUTE

- Plan ahead for the known events of the academic year by using the summer to revisit branding, and templates
- Develop more video content to meet the industry trends and highlight UC Berkeley campus and student experience
- Explore separating MEng content from Fung Institute website to allow for an improved user experience

CLASS OF 2022

May 2022 marked the return to in-person graduation for the largest ever MEng graduating class. We congratulate 670 MEng extraordinary graduates!

MEng students, staff and faculty made the most of this hybrid year through innovation in curriculum, advising, events, and recruitment. Students were offered choices of in-person and online classes, events, advising and capstone projects during fall and spring. Seven students without visas were able to complete the program fully remotely.

One highlight was the first year offering the MEng Tech+PLUS certificates, recognizing 43 students who take additional technical courses, many with cross-department options. This year, certificates were limited to participating BioE, MSE, NE, and ME departments.



43 MEng Students Awarded New TEch+PLUS Certificates:

- 4 - Materials for Biological and Medical Applications (BioE/MSE)
- 7 - Nuclear Security (NE)
- 8 - Intellectual Property and Entrepreneurship Strategy (IEOR)
- 17 - Engineering Data Science (ME)
- 4 - Control of Robotic and Autonomous Systems (ME)
- 4 - Modeling and Simulation of Advanced Manufacturing Processes (ME)

RETURN TO IN-PERSON AND FLEXIBLE OPTIONS FOR ACADEMICS, EVENTS AND ADVISING

Advising Support

Student affairs advisors and student ambassadors offered both virtual and in-person advising throughout the 2021-22 academic year for over 700 students. Many of our students were fully remote in Fall 2021, and less than 10 were still officially fully remote in Spring 2022.

Academics

Orientation and Fall Boot Camp will be offering a choice of both in-person and fully remote sections to accommodate students with housing or visa issues, as well as to accommodate student preference.

New Leadership Comprehensive Exam

The exam was updated and improved this year, moving from a written essay to an oral exam format modeled after the job interview experience.

Events

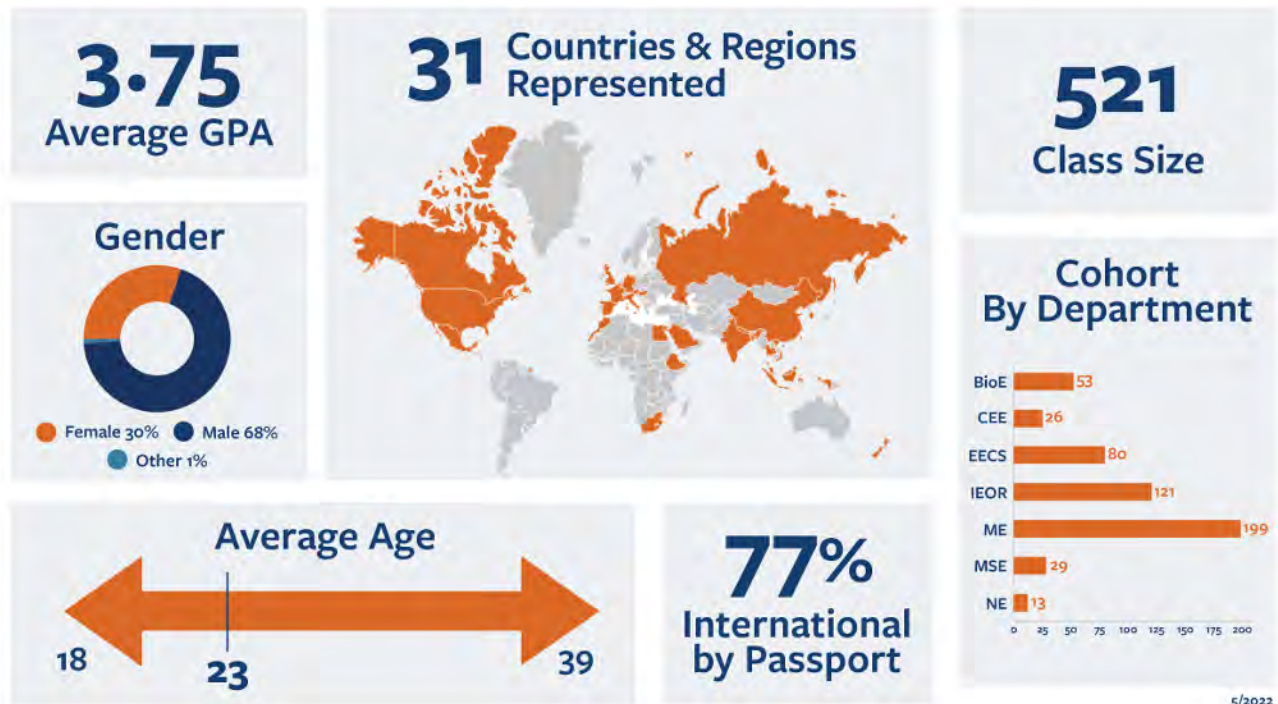
MEng offered a variety of events both virtually and in-person throughout the academic year aimed at building community, fostering networking skills, and garnering professional opportunities. Our in-person events included our Coffee & Connections, Capstone Showcase, and Graduation Reception which brought a total of 2,007 students, faculty, staff, industry leaders, and community members together safely in the outdoor space of our newly acquired building, Mudd Hall.

VIRTUAL RECRUITMENT & ADMISSIONS

Accomplishments this year included:

- Applications for fall 2022 **fell by 14%** to 3,583, in part due to the new MAnalytics degree in IEOR
- Staff, students and alumni admissions ambassadors recruited applicants at **20 virtual recruitment events**, including fairs focused on increasing student diversity; resulting in **971 new leads** in our marketing campaign
- New Fung Institute Diversity Event with both in-person and online components was a success with close to a **100 attendees**
- New (virtual) office hours with Student Ambassadors resulted in **81 new leads**
- 23 MEng students and alumni completed over **197 applicant interviews**
- Admits were invited to Virtual Visit Week, again replacing an in-person visit day, allowing for higher participation rates and offerings including student and alumni panels, department breakouts, and social events in virtual College of Engineering spaces. Admits exchanged **2,381 messages** on the event app and we facilitated individual in person visits with student ambassadors.
- Staff called or texted to reach out to congratulate over **167 admits**
- Current **50% yield is down 5% from last year** (does not include deferrals)

2022-23 MENG CLASS PROFILE



HIGHLIGHTS: BERKELEY MENG CLASS OF 2023

- 14% CA Residents (up 4% from 2021)
- 77% International (down 2% from 2021)
- 28% Admit Rate (up 2% from 2021)
- 30% Female (down 5% from 2021)
- 20% UC undergraduates (up 4% from 2021)

Additional Students Expected 2022-23

- 20 part-time MEng students (10 new, 10 continuing)
- 94 continuing third semester students (pandemic exception)
- 40 MTM students
- 37 MBA/MEng students (17 new)
- **Supporting a TOTAL of ~690 graduate students**

Top 5 Competitor Programs:

1. Stanford University (by far!)
2. Columbia University
3. MIT
4. Carnegie Mellon University
5. University of Pennsylvania

6 of top 10 Undergraduate Schools are UCs

This is the first year the top 10 UG schools are all within the US.

1. University of California Irvine - 24
2. University of California San Diego - 20
3. University of California Berkeley - 19
4. University of California Davis - 17
5. University of Illinois at Urbana - Champaign - 15
6. Rensselaer Polytechnic Institute - 14
7. University of California Los Angeles - 12
8. University of Washington - 11
9. Georgia Institute of Technology - 10
10. University of California Santa Barbara - 10

31 Countries of Citizenship Represented in the Incoming Class:

1. China (51%)
2. United States (23%)
3. France (6%)
4. India (5%)
5. Taiwan (3%)

We continued to maintain a high proportion of partner-advised projects, and expanded our partner base to include industry leaders such as Ripple Labs, Texas Instruments, and Microsoft. We were also proud to leverage the success of our alumni by partnering with several MEng-affiliated organizations.

This was the largest full-time cohort to date with over 150 capstone projects.

2021-22 capstone cohort breakdown:

- 671 full-time students
- 172 teams
- 63 industry-led projects (37%)
- 109 faculty-led projects (63%)

We were able to accommodate the large cohort with enough capstone projects, however there were some challenges due to the hybrid teaching model. Most leadership courses were held online and synchronous all year, even though students were on-campus. Our entire cohort were not on campus in the fall semester and some remained remote the entire academic year.

Among this cohort, capstone projects ranged from enhancements in healthcare to mitigating the impacts of natural disasters. Examples include: quantifying and predicting bone implant fracture in amputees; using machine learning for data privacy; supporting emergency personnel in many areas such as wildfire surveillance and earthquake detection; and exploring wave energy for desalination.

CAPSTONE EXPERIENCE

This year, we pivoted to a hybrid experience that culminated in our first in-person showcase since the pandemic. Working with the largest cohort of students to date provided us with an opportunity to identify opportunities for streamlining and improving the overall student experience. This was done through an internal audit of the capstone program, receiving feedback from program stakeholders, and providing new opportunities to receive student feedback and co-design the program with them.

We have identified areas of improvement:

- Strengthening the connection between leadership curriculum and capstone experience
- Ensuring students have the necessary support and resources to be successful
- Bringing the teaming experience to the next level
- Expanding industry partners and how best to grow and nurture those networks
- Streamlining the capstone experience for all stakeholders, which includes process improvements and development of new software tools.



2022: Together Again End of Year Showcase

This year's Fung Institute End of Year Showcase was in-person to focus on community, connection, and celebrating your achievements during this past year.

- We had a total of 897 RSVPs!
- 77 capstone teams signed up to present across the following tracks:
 - AI, Machine Learning, & Data Science
 - Health & Well-Being
 - Energy & the Environment
 - Advanced Manufacturing & New Materials
 - Robotics & Automotive Advancements



CAPSTONE AWARDS

Fung Institute MEng Capstone Technical Leadership Award - For most effectively demonstrating MEng leadership principles: (1) how the team scoped their problem/opportunity, (2) generated a technical solution, and/or (3) demonstrated ability to include and convince stakeholders of a solution.

- *Team: 3D Printing of Steel Alloys for Cheap and Fast Manufacturing*

Fung Institute MEng Capstone Mission Award - For best exemplifying the mission of the institute: "Shaping generations of technical leaders to innovate across boundaries."

- *Partner: Jupiter*
- *Team: Predict and Prevent Flood Damages with Machine Learning Models*

Fung Institute MEng Alumni Capstone Award for Most Innovative Project - For most effectively demonstrating the relevance of the problem they were trying to solve, the originality of their proposed solution, and the potential of their project's impact.

- *Partner: Werfen*
- *Team: Microfluidic Edge Detection - Machine Learning Module for Next Generation Diagnostic Devices*

Fung Institute MEng Capstone Peer Award for Intellectual Contribution Awards - Two awards for positive contributions to the cohort's learning experience

- *Leadership Intellectual Contribution Award: Kanak Kapoor*
- *Technical Intellectual Contribution Award: Ruian Ge*

Fung Institute MEng Capstone Mentorship Awards - Two awards for fostering intellectual independence, providing project support, and furthering professional development

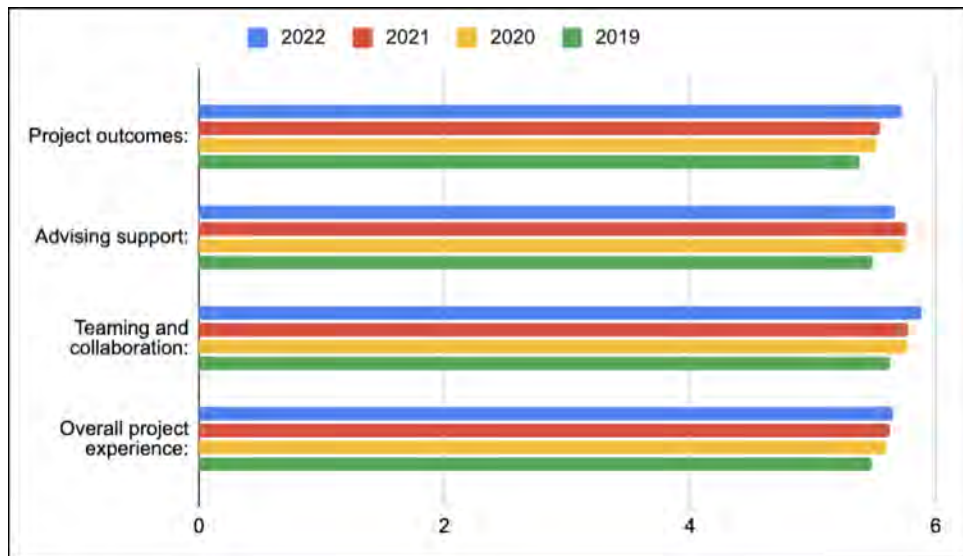
- *Industry Mentor Award: Harsh Tomar, Asurion*
- *Faculty Mentor Award: Yunkai Zhang, Industrial Engineering and Operations Research*

END OF YEAR CAPSTONE SURVEY - STUDENT ENGAGEMENT IS ROBUST!

For our capstone survey, we had over an 80% response rate (547 responses out of 676 survey invitations). The survey provided insight in several areas including advisory engagement, team dynamics, and challenges faced during the program. We measured 14 unique categories on a Likert scale (1-7). There were strong ratings across the board with averages ranging from 5.3 to 6 points. There were minimal negative open-field comments and when received they focused on uneven workload between team members, organization of the program, and support from project partners. Additionally, 184 (27%) indicated they would speak MORE to us about their experience. Summer focus groups are in the works – which is the first time ever for capstone.

Historical Context for 2022 End of Year Capstone Survey Results

Experience indicators (project outcomes, advising, teaming, and overall project experience) have grown stronger over time – all ratings averaged in the range of 5.4-5.9 range on a 1-7 Likert scale, increasing year over year. The only slight dip has been in 2022 advising, which is not surprising due to unusually large cohort and same staff size. The other three 2022 indicators went up slightly despite the increased headcount.



The capstone project provided opportunity for creativity, plus good team and learning experiences. There may be program improvement possibilities in reviewing linkage between leadership curriculum and capstone structure which scored lowest:

How strongly would you agree or disagree with the following statements about the CAPSTONE PROJECT? Scale: 1/strongly disagree - 5/strongly agree	Weighted Average
Our advisor provided enough freedom to be creative	4.38
I enjoyed working with my team	4.14
I learned a lot through this project	4.04
I was satisfied with our team's project outcome	3.86
We had access to the information and resources needed to successfully complete our project objectives	3.80
I was satisfied with the types of offered projects	3.69
Our advisor provided enough guidance	3.60
I applied what I learned in my concentration electives to my Capstone Project	3.54
Our project outcome would have been improved if we had access to fabrication facilities	3.49
I applied what I learned in the leadership curriculum (E295, E270 Series) to my capstone project	3.40

PROGRAM IMPROVEMENTS - CO-DESIGNING THE STUDENT EXPERIENCE

Over the summer, we are organizing several focus groups of recently graduated MEng alumni to help the capstone team further enhance the student experience for the next cohort. Insights from these will help us redesign the program for next year and to improve the capstone experience.

EFFECTIVE TEAMING

In the spring, capstone teams have their final teaming deliverables due in May, and it was crucial to support our students by having an in-person workshop that focused on taking teaming skills and communication to the next level. On March 31, 2022, we organized an in-person interactive workshop led by Professor Dan Himelstein on how to uplevel teaming skills, improve communication and collaboration, and learn how to make the most impact on your project. These skills are valuable now and also in your career as you navigate the same dynamics in the workplace and your next role.

“Fung designed a curriculum that allowed my team to analyze our own teaming behaviors and boost our technical project success.”

- Adam Curtis, MEng ‘22 (EECS)

“The Fung capstone project provided me the opportunity to manage team members from different backgrounds and experiences to align the team toward the same goal for project velocity and success. I am fortunate to gain these management skills and experiences through the capstone project which will truly benefit my career further up.”

- Adrian Neoh, MEng ‘22 (ME)

“The capstone project provided the opportunity for my team to apply what we were learning academically to unsolved, real-world problems. Instead of being “just an assignment,” the project involved the types of challenges one finds in the workplace, such as proper goal setting, effective communication between multiple parties, and creative problem solving.”

- Ian “GQ” Gardocki, MEng ‘22 (BioE)

INNOVATION AND ENTREPRENEURSHIP

We want to continue to promote innovation and entrepreneurship and expand opportunities for our students. We revamped our FastTracking Founders program and opportunities for students to propose their own projects.

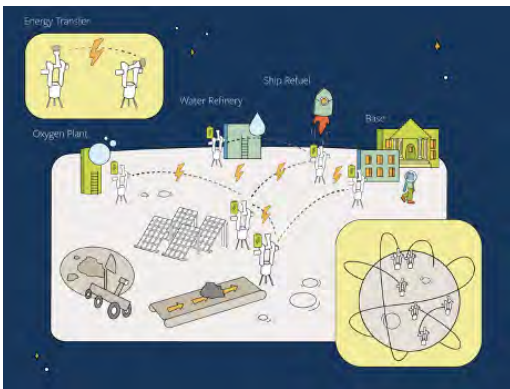
FAST-TRACKING FOUNDERS COMPETITION

The Berkeley Office of Innovation and Entrepreneurship and College of Engineering (CoE) are happy to announce the FastTracking Founders Competition. The winners of the competition will receive financial and organizational support to file a provisional patent. We continue to improve on this program, our marketing team created a [landing page](#), we extended the opportunity and marketing outreach to all CoE professional masters students and programs, and hosted two workshops. The website provided a more inviting process for students to learn and apply and includes the [online application form](#). The site streamlines news features and information about last year’s content winners.

We hosted two workshops and recorded the session to help promote and improve accessibility of the opportunity, led by Laleh Shayesteh, Berkeley IPIRA's Director of Administration and Associate Director of the Office of Technology Licensing. The workshops informed students about IP in general and also the steps required for filing a provisional patent. We believe this is a one-of-a-kind offering to our students, and next steps include securing funding to continue to support this student-centered initiative moving forward.

STUDENT-INITIATED PROJECTS

In a more recent effort we are working with incoming students to propose their own projects to be part of the capstone marketplace. This year we had three outstanding student-led projects.



Scott Ziegler, MEng, ME '22 - Lunar Kinetic Energy Transmission - Advised by Professor Van P. Carey



Celeste Castillo, MEng, ME '22 - THERMPACK: A contrast therapy device that augments the body's ability to heal - Advised by Professor Van P. Carey

2022 EATON-HACHIGIAN FELLOWSHIP RECIPIENTS

The College of Engineering and the Fung Institute for Engineering Leadership are pleased to announce the recipients of the 2021–22 Eaton-Hachigian Fellowships, awarded this year to two students pursuing Master of Engineering degrees at UC Berkeley. Selected by the Dean of the College of Engineering, the Eaton-Hachigian Fellows are engineering graduate students, pursuing studies in energy-efficient electrical and power hardware or software solutions, wireless communications and sensing devices, or specialty materials.

- Scott Ziegler, MEng '22 (ME)
- Celeste Castillo, MEng 22 (ME)

CAREER DEVELOPMENT PROGRAMMING

Our services and programming merge the concepts of Career Design and the Changemaker philosophy to empower students to move towards a meaningful and impactful future upon graduation and throughout their careers.

For the 2021-22 academic year we focused our programming in three main areas: Professional Skill Development, Career Exploration, and Networking. Within this framework we focused on mentorship, experiential learning, and professional storytelling.

- New programming included the launch of 14 student-led Affinity Groups with 38 student leaders, an Industry Mentorship Initiative, and iHackHealth Appathon 2.0
- Career Specialist Alicia Mandac was hired in Fall 2021 to help support the 40% increase in our full-time student population, increase in 3rd semester students, and additional industry engagement
- FI Career Coaches engaged 1:1 with 73% of MEng students
- 9 pre-orientation professional development webinars were conducted June - August and supplemented with weekly office hours and Flash 1:1 virtual appointments
- 63+ career and professional development opportunities and events offered August-May
- Targeted communications include a weekly MEng Jobs & Events Digest and a Monthly CareerMail. We also host resources on the MEng Student Portal and FI Connect.
- Continued administering MBTI assessments and group feedback sessions for FI students
- Leadership Lecture Series continued in Spring 2022 with 9 industry speakers



AI Affinity Group Career Talk

"I wanted to say thanks so much for your help in the couple career coaching sessions we've had together. They really helped boost my confidence going into interviews and negotiations. I'm excited to provide you with an update that I received offers from both of the companies I was interviewing with and was also able to successfully negotiate with my first-choice company towards a total compensation package that I am happy to accept! I just gave the hiring manager at Penumbra my official acceptance of the Manufacturing Engineer 1 position this morning and have already sent the written acceptance back to HR. From prepping my resume all the way through to handling competing offers. The entire Career Development team has been a HUGE help in my job search - thanks again for all that you do!"

- MEng Class of 2022 graduate



Inclusive Technology Affinity Group Meet-up with Alumni Mentors



Affinity Group Leaders Class of 2022

"In my E295 communications class last semester, one of my assignments was to write a "living my dream" letter in which I envisioned where I'd be in a year. I wrote that living my dream would be working as a design engineer for Apple, but after applying for numerous positions there, I had heard nothing back. I met multiple times with the career team, who helped me workshop my resume to better frame my skills and experience, and gave me great interview preparation advice.

A few days after uploading my workshopped resume to the Apple portal, I got an email from an Apple recruiter looking to set up an interview. Many rounds of interviews later, with the persistent support from Career Services the whole way, I signed my offer from Apple as a Design for Manufacturability Engineer, and am truly living my dream."

- MEng Class of 2022 graduate

SCALING CAREER SUPPORT & ACCOMMODATING GROWTH

- Created customized Career Labs which is an adaptable and hybrid group career programming series that we hosted weekly each semester and covered job search fundamentals.
- Updated our annual surveys to include a Summer Career Goal Survey, Fall Check in, Affinity Group Lead Survey, Recruiting Partner survey, and the Spring Career Destination Survey
- Conducted an individualized outreach campaign that resulted in more personalization and an increase in 1:1 appointments.
- Introduced the online tool, JobScan, to support resume reviews and knowledge with Applicant Tracking Systems
- Refreshed leadership, mentorship, and experiential programming which resulted in more leadership opportunities, connections, increased industry connections and career growth opportunities.
 - 38 student leaders led 14 Affinity Groups
 - 50+ students participated in iHackHealth Appathon event
 - 159 students received mentorship from our alumni network



Automotive Affinity Group Team Outing

"Each Career Lab had clear, experience-based advice about each topic so I knew exactly what I needed to do next. The closeness of each session enabled me to receive personalized guidance while also learning from other students' experiences. Throughout all the sessions, the Career Development team was always so understanding and supportive, helping me feel confident while figuring out my career path."

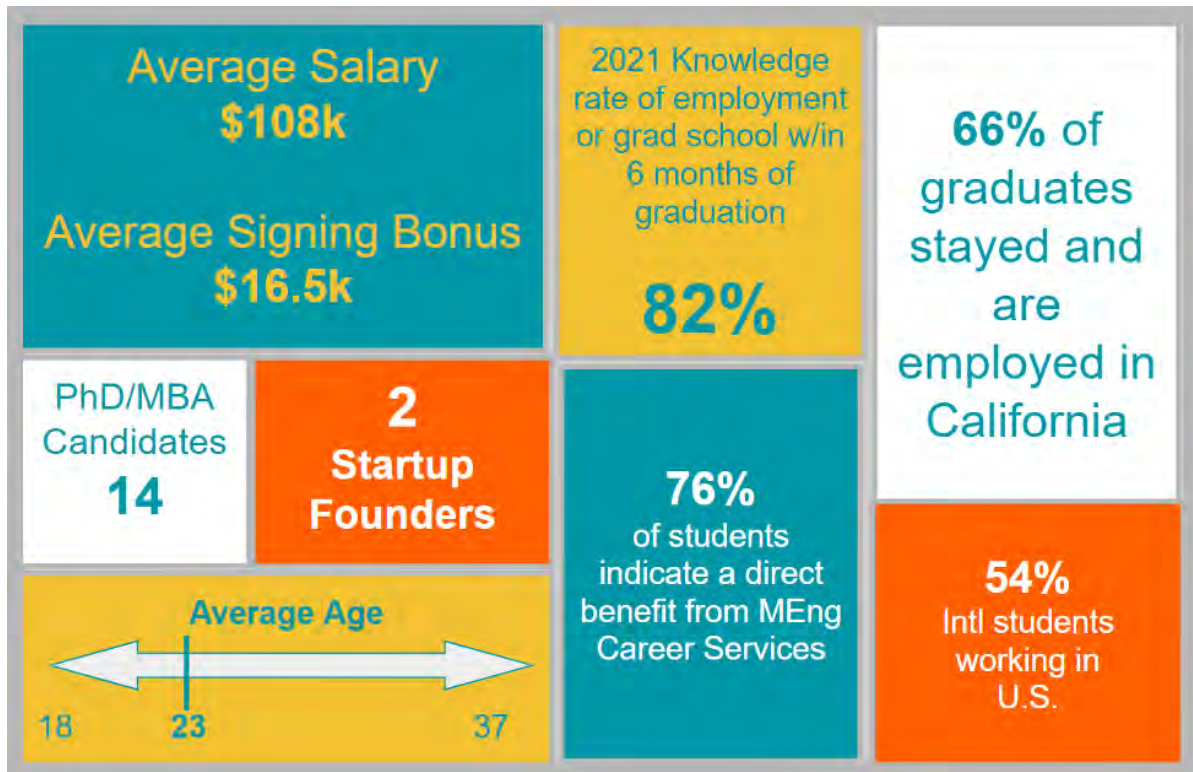
- MTM Class of 2022 graduate

"You all are amazing and clearly passionate about helping us, students. I've loved the events so far, especially the 1:1 sessions and the creative Gathertown virtual event!"

- MEng Class of 2022 graduate

TRACKING OUR STUDENTS' SUCCESS

Our current report for May 2021 graduates is published on our website.



MENG ALUMNI RELATIONS

- Virtual alumni events were hosted on Gather.town (over 100 alumni registered for the fall event and 90 alumni registered for the spring virtual event)
- Launched in 2019, FI Connect continues to engage alumni in professional development, networking, and recruitment through events and jobs posted on the platform
 - From January 2019 to May 2022: 391 jobs/opportunities posted to FI Connect
 - 81 posts by alumni on FI Connect
- 143+ alumni volunteered across various MEng hosted career programs
- Alumni/recruiting partners posted over 171 unique jobs and opportunities from August 2021 to May 2022
 - 39 alumni shared 1 or more positions included in the Jobs Digest
 - Jobs posted from 67 different companies
 - Engaged with 99 recruiting partner contacts (includes alumni, Fung Faculty, and CoE Faculty)
 - Sent 19 Jobs Digest from August 2021 to May 2022
 - Average 5 new jobs per digest

PARTNERSHIPS

- Continued the Fung Institute Industry Partnership Program (FIIPP) to help structure our partner engagements and highlight the value we can provide. We continued this effort with 5 key partners: Asurion, Starkey Hearing Technologies, MSCI, and Ripple
- Engaged capstone partners in a variety of career-related programming and events
- New programming and recruiting opportunities with SkyDeck companies
- UC San Francisco (UCSF) and UC Berkeley's Fung Institute teamed up again to create the second iHackHealth Appathon. The Appathon paired a select group of chosen app proposals from the medical community at UCSF with UC Berkeley engineering students to develop a prototype of the mobile app for iOS. In addition, we collaborated with Apple to utilize their open-source tool kits and to aid in the development process. The development phase lasted two weeks and culminated with a final event where judges from Apple, UC Berkeley, UCSF, and Kaiser Permanente Digital determined the winning project and spot in SkyDeck's incubator program.



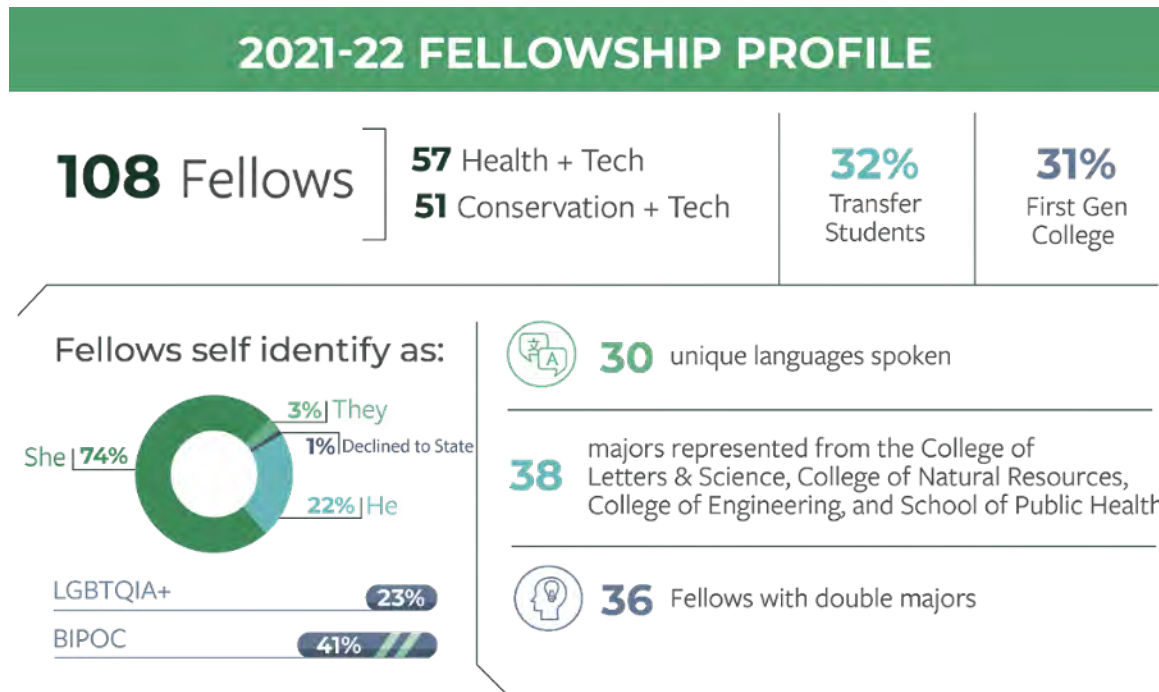
iHackHealth winning team: DermaScan

BUILDING RELATIONSHIPS WITH RECRUITING PARTNERS:

- New for 2021-22: The expansion of the Career Development Team allowed for the development of partnerships with industry and alumni who choose to recruit from the MEng student community. A few quotes from our recruiting partners regarding their choice to recruit from the Fung Institute:
 - “Great engineers come out of Berkeley!”
 - “Students/graduates from Berkeley’s Fung Institute demonstrate high levels of skill and understanding in regards to the type of programming, use of AI, and digital media analysis we need to help further our objective.”
 - “We believe that the Fung Institute is one of the highest caliber schools that draws students with the right mix of ideals and aptitude that we need.”

The end of this 2021-22 academic year marks the sixth year of the fellowship that came with many updates and changes to the program as we transitioned back to campus, serving our largest student population. For the first time, we had three in-person tracks: Conservation + Tech, Health + Tech, and Honors.

AY 2021-22 COHORT OVERVIEW



RECRUITMENT UPDATES

For our 2021-22 application cycle we received 341 applications with some of our metrics including: 44 different majors, 22% identifying as first-generation, 58% as a person of color, and 74% with she/her pronouns. We are currently wrapping up our recruitment cycle for the incoming cohort of Fung Fellows for the 2022-23 academic year. In addition to working closely with our campus partners, our recruitment cycles are being driven by our student recruitment board. We continue efforts to recruit diverse students who are underserved in the tech and innovation community. We define diversity broadly to include identity gender, race, ethnicity, age and expand to include discipline, life experience, skills, perspectives, and cognitive diversity. We believe diverse teams develop better solutions, especially as those solutions will be used by diverse stakeholders.

PROGRAM UPDATES

Ethics in Tech Curriculum Development and Pilot

This year we wrapped up our work supported by the Public Interest Tech Grant. We developed an open-source curriculum to train students in the ethics of technology and innovation that can be used in project-based courses for technical and non-technical students. Our broader impact is the development and preparation of students who through a sustained interdisciplinary, experiential experience, understand the ethical, societal, and policy impacts of technology and have the skills and confidence to engage with technology and excel in chosen career paths, regardless of background and across both technical and non-technical fields of study.

NSF Intergenerational Design Challenge

Due to COVID, we extended our NSF grant to the end of 2022 and have been able to resume activities related to this work. We hosted two intergenerational design challenges with OLLI at Berkeley and the Fung Fellowship students, alums, and incoming cohorts. Through this work we have developed two instruments to measure STEM engagement and advocacy in older adults. We are currently working on publications and dissemination of the work at national conferences.

Together Again: End of Year Showcase

This year we were together again and co-hosted the final showcase with the MEng program. The focus was on community, celebration, and connection as it was our first time back in person since the pandemic. Our fellows showcased table top demonstrations of their tech innovations.

The All Around Stand Out Award is granted to the team in each track whose innovation is well conceptualized and designed including features that are intentional, based on user feedback and feasible for the organization. This team demonstrated exceptional customer engagement and opportunity for social impact.

- **Honors: Team Compisist**
 - Partner: New Alchemy Institute and the Coleman Fung Institute for Engineering Leadership
 - Innovation: The Loom: The semi-permanent backyard structure which will collect and transform your urine into nutrient rich fertilizer
- **Health: ExoGlove Team**
 - Partner: The Embodied Dexterity Group and the CITRIS Invention Lab
 - Innovation: Soft Robotic ExoGlove for At-Home Paralysis Rehabilitation
- **Conservation: Team PMPD [(P)rototyping (M)echanical (D)evices to (P)reserve marine environments**
 - Partner: Papahānaumokuākea Marine Debris Project
 - Innovation: Improving the efficiency of the marine debris cleanup through net tension

MENTORSHIP

Our program continues to develop mentorship opportunities in a variety of capacities, including peer-to-peer, near peer, and professional mentorship.

Industry Mentors

Our Honors student teams receive professional mentors to support them as coaches throughout the academic year. This year we had both in-person and remote coaches to be able to access support across the country. The impact has been mutually beneficial to both the coaches and the students.

MEng Mentorship

This year we offered an opportunity for MEng students to mentor our Year 1 Fung Fellows based on their interest and technical expertise. They were able to leverage their skills and experience to support the technical needs of our student teams. We will continue this program into this next academic year.

“By joining this incredible innovation effort, as a physician-entrepreneur, I am empowered to help people directly and indirectly. Our year-long collaboration allows for a sustained and deeper type of mentoring relationship. In fact, my aim is to create a lifelong relationship with my students.”

- Lida Kourita, UC Berkeley Haas Alumna



STUDENT SUCCESS

“My experience in the Conservation and Technology Track of the Fellowship my junior year became a turning point in my career goals. Before the fellowship, I was unsure of the direction I wanted to take to pursue my interests in environmental health. But as my exposure to technology grew in the Fellowship, so did my interest in it. Now I am inspired to pursue further studies in environmental engineering in order to address water quality and treatment.”

- Priyanka Venkatesh, Environmental Science and minoring Civil Engineering, Class of 2023

“Throughout the Fellowship I developed the confidence needed to pitch my own dream project to our talented group of Health and Tech Fellows and get a team to work in a field I’d dreamed about working in for years. Founding and leading the ExoGlove project made me a better leader, engineer, and problem solver.

- Holly Pilling, Psychology, Class of 2023

“[The Fung Fellowship] has definitely been one of the most rewarding experiences at Berkeley. Coming from last year being fully remote to this year has definitely changed my life course. I mean that!”

- Sienna Marley, Public Health, Class of 2022

COMMUNITY ENGAGEMENT

This year we focused on building more partnerships with community based organizations to be able to serve both our local and global communities. The student projects ranged from developing education programs to connecting communities of color with access to healthy and local food systems in the Bay Area to co-producing podcasts with Native Americans to educate on living with the impacts of climate change.

- **Health + Tech:** University Health Services at UC Berkeley, Healthcare and Social Innovation Hub at UC Berkeley, HopeLab, UCSF Innovations, Berkeley Center for New Media
- **Conservation + Tech:** Civic Design Studio, Oakland Public Library, Papahānaumokuākea Marine Debris Project, WildFutures, Project Coyote, Blue Endeavors, Shark Stewards, Plastic Pollution Coalition, Save Our Soil, Earth Island Institute, Friends of Sausal Creek, The Green Center
- **Honors:** UCSF Innovations, EFCWest, Hoopa Valley Tribe, The Green Center

CAMPUS IMPACT

We continued our partnership with the EDGE in Tech UC-wide initiative and supported the annual symposium and Athena Awards committed to addressing the challenges faced by women and other under-included identities in engineering and computer science fields.

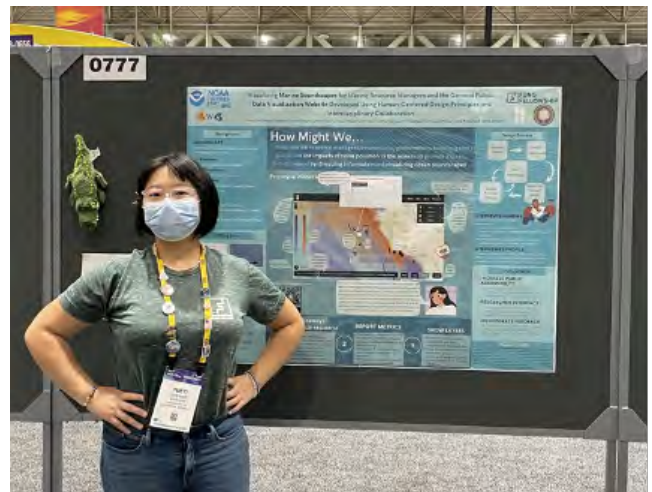
Fung Fellowship Director, Jennifer Mangold, hosted the fifth annual sustainability curriculum workshop for faculty. She was awarded the Chancellor’s Advisory Committee on Sustainability (CACS) 2022 Sustainability Team Award. Members of the campus community nominated her in recognition of your contributions to advancing sustainability and being a dedicated changemaker and environmental leader.

IN THE MEDIA

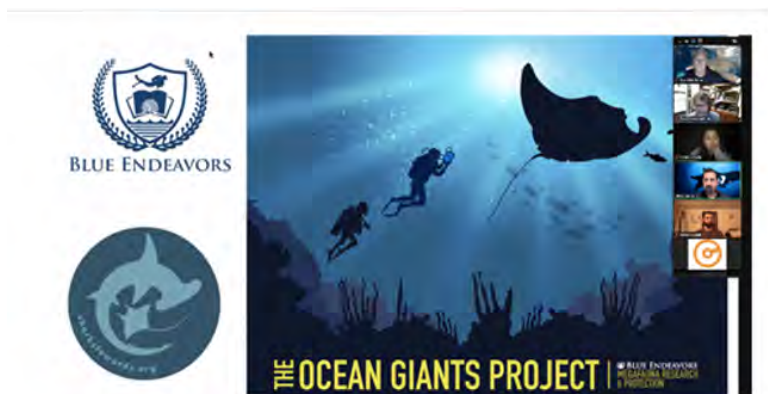
NOAA Science Blogs - [Sound Bytes: Visualizing Marine Soundscapes Through CalSound](#) (December 16, 2021, guest feature from Fung Fellow Audrey Kuptz)

Fung Fellowship Honors students worked with members of the [Hoopa Valley Tribe](#) to co-create a podcast series consisting of four episodes related to living with climate change and other topics addressing the public and environmental health concerns of the Tribe. The podcasts are being released over the [Tribe's local radio station](#). Plans to continue the series are also in the works!

Community partner [Shark Stewards](#) implemented their previous fellows' collaboration on "[Shark Watch](#)" from 2020-21, and then featured their 2021-22 Fellows' design challenge in their May 2022 e-newsletter:



Berkeley Discovery highlights Fung Fellowship alum Yueyi Che in their "[Student Discovery Stories](#)" series. Yueyi's story was highlighted in the video [here](#).



With our dive partners [Blue Endeavors](#), we are working with a multidisciplinary team at the [Fung Institute for Engineering Leadership](#) at UC Berkeley. This technological challenge team is helping design new submersible tools to help collect data on sharks and rays as part of the Ocean Giants AI program. Watch our shark lectures on [YouTube](#) and check our web site for future adventures applying technology and engagement towards shark and marine conservation. Thank you Fung team!

The UC Berkeley Engineering Student Shark Team



Earth Island Institute Article - [Embarking on Green Careers: Earth Island projects give UC Berkeley undergraduates a head start in real-world environmental work](#) (Earth Island Journal, Autumn 2021)

Fung Fellowship featured in [Gentelligence](#), a book about the intergenerational workforce

Honors Team, Bright Mobile was accepted to be part of the [National NSF I-Corps Program](#)

Pixar veteran Bill Wise spoke to our Fung Fellows about his career journey and how storytelling, outside of making movies, serves as an important skill whenever he's pitching new concepts or tech he wants the studio to invest in. <https://twitter.com/fungfellows/status/1457375813167353860>

ALUMNI

Throughout the year, alumni remained engaged in the fellowship through participating as workshop leads (Nseke Ngilbus - How to Make Your Pitch) MCs for our final event showcase (Lorraine Pereira) , being panelists for our current fellows to share early career tips, donating through Big Give and working closely with our student Alumni Lead to drive the alumni engagement during the academic year.

Fung Fellow alum Matthew Nelson was the student speaker for the 2022 baccalaureate College of Engineering graduation ceremony.

Fung Fellow alum Nick Brathwaite was on the team who was one of the winners of UCB Big Ideas Contest for Blackbook.

Fung Medium Article: Alumni Feature: Alan Munoz, Honors Fellow '20 (Political Economy)

Fung Medium Article: Alumni team “CalSound” continues to work on their design challenge with NOAA

James Tayali (1H): been awarded the Schwarzman Scholarship. First Malawian to join this prestigious leadership program. <https://www.schwarzmanscholars.org/scholars/?c=Malawi>

“The fellowship gave me a space to grow and try new things in a totally safe environment. The fellowship was the first academic environment where failure wasn’t a negative thing. I think that the fellowship made me braver? It certainly helped me especially as a transfer student because it got me involved in spaces I’m interested in but would’ve not found on such a big campus alone.”

- Erin Kraemer, Class of 2020

“First, I wanted to express my gratitude for always being supportive of my development both academically and professionally. Since joining the first cohort of FF in 2016, I have been pushed to step out of my comfort zone and explore these other career paths in healthcare. I am excited to report that I have officially been accepted into the Translational Biomedical Informatics Master’s Program for Fall 202, I sincerely appreciate your guidance throughout all my transitional stages since my undergrad at Cal.”

- Crystal Rubalcava, Class of 2018

Leadership Teams

The Fung Institute is committed to Diversity, Equity, Inclusion, and Belonging (DEIB). As part of this commitment, we understand that successfully leveraging the organization's workforce includes being intentional in developing and growing people for future leadership promotions and cultivating a continuous culture of learning and stretching one's ability. Therefore, it is essential to create and support opportunities that give all staff members space to lead in areas that further the organization's missions while developing leaders within.



This incentivizes innovation and promotes diverse working teams, improves interpersonal relationships, optimizes individual performance, and sustains a positive organizational culture. Over the past two years, the Fung Leadership Teams have been led by staff members who carry a passion for and excellence in areas that may or may not be a part of their day-to-day work responsibilities. As a result, these leadership teams are unique in that people can think outside the box without fear of failure. In addition, it raises the meaning of diversity as individual contributions incorporate life experience, cultural experience, unique talents, and undeniable passions and values into ideas that continue to give our institute a competitive edge in this new age of hybrid education and virtual workforces.

2021-22 LEADERSHIP TEAM ACCOMPLISHMENTS

Data & Tech (formerly Remote Pedagogies & Technologies)

To integrate remote pedagogy, guidelines, tutorials, resources, and support across FI programs, functions, and coursework; to successfully deliver instruction and learning remotely. Leads: Yvette Vranik, Walter Campbell

1. Successfully rebranded and pivoted from COVID-mandated remote pedagogy to focus on proactive forms of data analytics
2. Continued evaluating and streamlining tools and processes within the institute, including for surveys, project management, and videoconferencing
3. Actively promoted Smartsheet project management tool with students on capstone teams and staff by providing two recorded tutorials and live working groups
4. Offered monthly “tip of the day” feature created and led by Yvette, with focus on increasing effective use of Google Suite tools, also demonstrated at team meetings
5. Supported Facilities Team in troubleshooting and navigating recurring onsite Zoom Room and Wi-Fi issues at Mudd Hall

Leadership Teams

People Engagement Team (PET) (formerly Talent Development)

To organize around employee welfare and satisfaction and how we can help each other, as staff, thrive at the Fung Institute. Leads: Dione Rivera, Hazel Palaski

1. Delivered monthly Mental Health Digests promoting health and wellness resources and activities
2. Improved workflows to make sure resources are updated and responsive to staff needs
3. Refined the Employment Handbook to be a one-stop resource for staff to learn more about benefits and policies unique to the institute, as well as stories and blurbs about the Fung Institute's mission, vision, and branding
4. Engaged staff members with a variety of Fun@Fung activities so as to build community and wellness practices
5. Supported succession planning activities to align professional and career development opportunities for staff

Program Development (Think Tank for MEng 2.0)

To align institute-wide efforts effectively and efficiently; to evaluate and execute on new requests for institute involvement in creating new programs and activities; interpret and execute on the mission and vision; playground for new ideas. Lead: Adrienne Greer

1. Conducted landscape analysis of our Fung Institute programs including areas of strength and opportunities, current program evaluation, and decision workflow.
2. Explored other campus programs and centers to better identify the Fung Institute's unique value to campus and the College of Engineering
3. Reviewed and reflected on the current process for student growth and new program decision tree for Fung Institute impact, including: staffing, lecturer/GSI hiring, space, quality of program, congruence with values and strengths, and vision & mission
4. Re-evaluated the role of this team to align within the Faculty Director's Five Pillars for Fung Institute 2.0
5. Created next steps for working across the Fung Institute units to align program development within each of their annual goals.

WORKING GROUPS

Partnerships

To develop a strategy for industry relations and to increase participation in our Industry Partnership Program (FIIPP) and industry capstone/FF projects. Lead: Julie McShane

Academics

To coordinate academic opportunities; to discuss particular situations as they come up; to research pedagogy; to plan innovations and their execution. Lead: Beth Leven