# Intro to Grad School Peer Advice BMEGG PhD Program

September 30, 2019

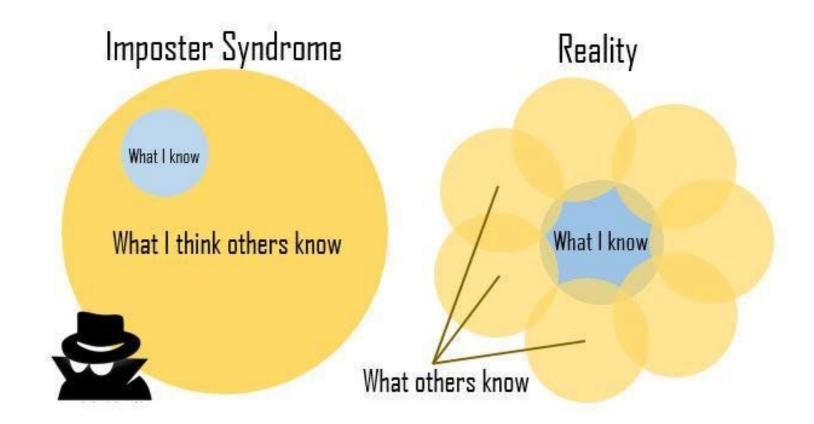
Amy Becker

Program Advising Chair

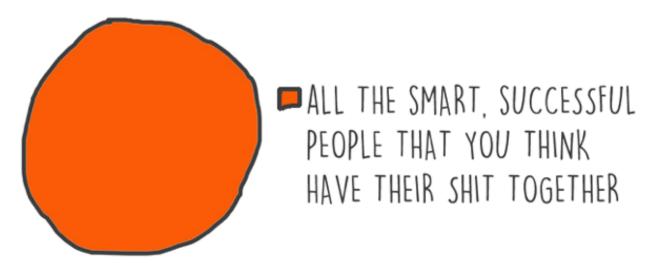
Biomedical Engineering Student Association (BESA)

## Today's plan

- Eat some snacks
- Overview of program logistics and your requirements
- How to... find a lab, get funding, conference + vacation, plan your PhD?
- List of some professors seeking graduate students
- Ask current grad students questions



## TYPES OF PEOPLE WHO CAN HAVE IMPOSTOR SYNDROME:



Essay 1771

#### The importance of stupidity in scientific research

#### Martin A. Schwartz

Department of Microbiology, UVA Health System, University of Virginia, Charlottesville, VA 22908, USA e-mail: maschwartz@virginia.edu

## Student Health Center/UC SHIP



- Download "Student Health" app to access insurance cards
- Schedule an appointment online <u>here</u> (health e-messaging)
  - Online appointments same-day only
  - Or call (530) 752-2349 to schedule
- Includes mental health services, short term available on campus
  - Long term (unlimited) copays now reduced from \$15 to \$5 per visit
- Includes dental (Provider: Delta Dental)
- Includes vision (Provider: Anthem Blue View Vision)
- UC SHIP benefits info
- Visit Insurance Services Office at the Student Health Center to ask specific insurance questions in person, no appointment needed

### Free online visits for all UC Davis students

## **Online Visits**

Quick and easy access to care





Sign up here: https://shcs.ucdavis.edu/online-visits

COUNSELING

Coupon Code: UCDCOUNSELING

Select the counselor and appointment time that works with your busy schedule. Your session is provided via video on the electronic device you choose, in the location of your choice. It's easy, convenient, and with the provided coupon code, **UCDCOUNSELING**, offered at no cost to you, just like our on-campus service.

**MEDICAL** 

Coupon Code: UCDMEDICAL

Use the coupon code **<u>UCDMEDICAL</u>** when scheduling non-emergency care with a primary care provider via Live Health Online to receive this service for no charge.

**PSYCHIATRY** 

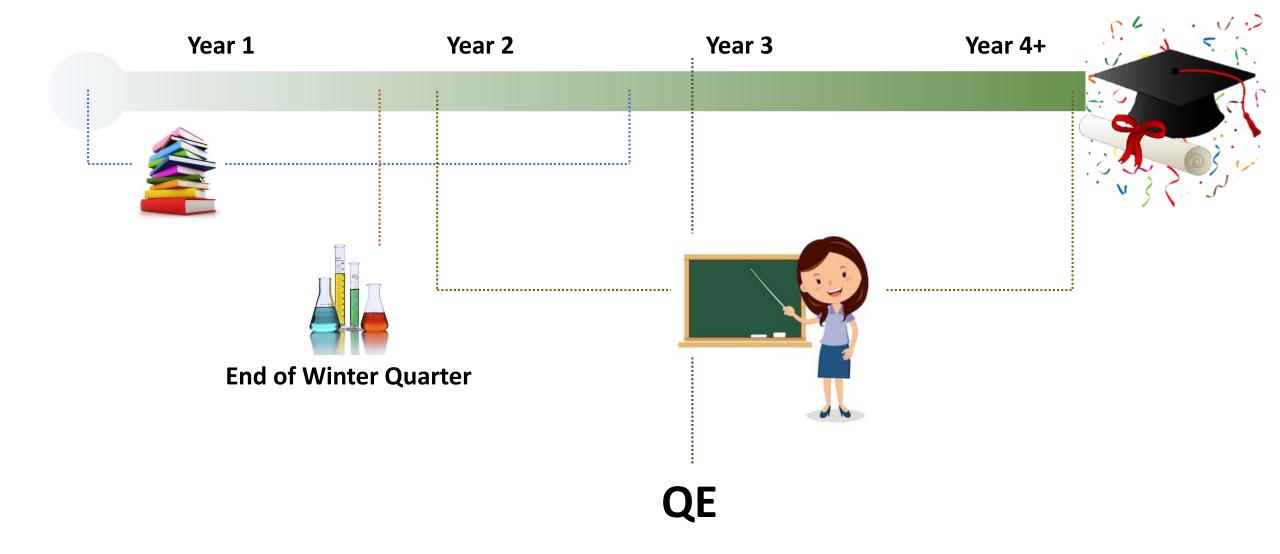
Coupon Code: UCDPSYCHIATRY

Use the coupon code <u>UCDPSYCHIATRY</u> when scheduling a visit with a psychiatrist via Live Health Online to receive this service at no charge.

### Mental Health in Grad School

- Are you interested in a BESA program about mental health topics?
- Currently surveying interest and collecting ideas
- Survey here to express interest

## PhD: Sequence of events



## California Residency for Tuition (U.S. citizens)

- Are you a U.S. citizen from out of state? If yes, action is required Fall Quarter to establish CA residency for tuition costs <a href="https://registrar.ucdavis.edu/tuition/residence">https://registrar.ucdavis.edu/tuition/residence</a> Contact <a href="mailto:residencedeputy@ucdavis.edu">residencedeputy@ucdavis.edu</a> for specific questions
- October/November 2019
  - Schedule an appointment at the DMV to reduce wait time
  - Still account to be gone for half a day
  - Can schedule appointments about 1 month in advance (minimum)
  - Study for written driver exam
  - Update driver license (& take written driving exam)
  - If you have a car and the title is in your name, change registration to CA. If in your parents name, don't change it.
- While at the DMV
  - Bring two forms that confirm you live in CA (phone bill, internet bill, lease, renter's insurance, etc. It just needs to have your name and your CA address on it)
  - Bring ID (and car registration and insurance card if you need to update your car)
  - Register to vote (done when you get a new license, but if not vote.org)
- More tips/heads up
  - Consider opening a bank account in CA (and use it for direct deposit) unless you have a nationwide bank
  - File your taxes as an independent if you are going to turn 22 (or older) in 2020
- Spring 2020
  - Petition for CA residency (upload documentation required and wait until September)

### How to... find a lab?

- Lab rotations are optional (not a program requirement) & vary across BMEGG labs
  - Fall & Winter quarter, time to try out different labs
  - Ask professor if they have a lab rotation requirement
  - If they do not, then you set the expectations
  - Be honest about interests in multiple labs
  - Come up with a general plan for Fall & Winter quarter
- Typical lab rotation options
  - 1 or 2 quarter long rotations
  - Join a lab right away
  - Attend a few lab meetings
- Typical quarter long lab rotation
  - Attend lab meetings & journal clubs
  - Help labmate with a project
  - Meet with professor several times
- Talk to everyone in the lab about their experience

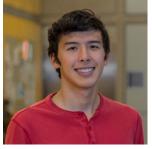


### Finances

- Where is your money coming from?
  - https://gradstudies.ucdavis.edu/current-students/employment
  - TA position (tuition partially covered)
  - GSR position (tuition fully covered)
  - Fellowship (tuition usually included)
- Direct deposit
  - http://afs.ucdavis.edu/our services/student-accounting/index.html
  - https://accounting.ucdavis.edu/DirectDeposit/
- Financial support
  - Apply for FAFSA, \$600/year extra and other tuition breaks through work-study
  - https://gradstudies.ucdavis.edu/current-students/financial-support
- Retirement plan

Ask these current BMEGG students for advice on applying

- National Institute of Health T32 Training Grants (2 years) look for emails from Christal
  - Pharmacology T32, Noah Pacifici: <a href="mailto:njpacifici@ucdavis.edu">njpacifici@ucdavis.edu</a>
  - Cardiovascular Medicine T32, Hark Sodhi <u>hssodhi@ucdavis.edu</u>, Charlotte Vorwald <u>cevorwald@ucdavis.edu</u>,
     Jennifer Price <u>ilprice@ucdavis.edu</u>, Kevin Campbell <u>ktcampbe@ucdavis.edu</u>, Srinu Tapa <u>stapa@ucdavis.edu</u>
  - Clinical & Translational T32, Marcus Deloney: <a href="madeloney@ucdavis.edu">madeloney@ucdavis.edu</a>
  - Animal Models of Infectious Diseases T32, Riley Allen: <a href="mailto:rpaallen@ucdavis.edu">rpaallen@ucdavis.edu</a>
  - Learning, Memory, and Plasticity (LaMP) T32















Noah Hark Charlotte JP

Kevin Srinu

Marcus

Riley

Ask these current BMEGG students for advice on applying

- National Science Foundation Graduate Research Fellowship (3 years)
  - Amy Becker: <u>aebecker@ucdavis.edu</u>
  - Emmet Francis: eafrancis@ucdavis.edu
  - Noah Pacifici: njpacifici@ucdavis.edu
  - Marissa Gionet-Gonzales: mgionetgonzales@ucdavis.edu
  - Jackie Whitehead: <a href="mailto:jwhitehead@ucdavis.edu">jwhitehead@ucdavis.edu</a>
  - Pete Sariano: pasariano@ucdavis.edu







**Emmet** 



Noah



Marissa



rissa



Jackie

Pete

Ask these current BMEGG students for advice on applying

- American Heart Association Predoctoral Fellowship (2 years)
  - Srinu Tapa: <a href="mailto:stapa@ucdavis.edu">stapa@ucdavis.edu</a>
- National Institute of Health F31 Grant: Individual fellowship from the NIH to support research training (2 years)
  - Caitlin Banks: <u>clbanks@ucdavis.edu</u>
- Tobacco-Related Disease Research Program Predoctoral Grant (3 years)
  - Tima Dehghani: tdehghani@ucdavis.edu



Srinu



Caitlin



Tima

- Internal funding at UC Davis
  - Applications due in mid-January each year
  - https://grad.ucdavis.edu/financial-support/internalfellowships/internal-fellowship-competition-currentgraduate-students
- Get good at skimming your emails for funding relevant to you
  - Graduate Student Association (GSA) newsletters
  - Graduate Studies newsletters
  - Christal shares

### Finances

#### • Summer:

- Take home pay about \$200 less per month (GSR) due to Retirement withholding.
- Can change retirement contribution if not on fellowship
- Have to pay for ARC membership

#### Taxes

- Tax day is April 15, 2020
- You can begin filing taxes January 1, 2020
- DIY: H&R Block, TurboTax, by hand, etc.
- "Students in VITA" can file federal and CA state taxes

### How to... conference & vacation?

- Travel funding from UC Davis groups
  - Graduate Student Association Travel Award: \$500
  - Graduate Studies Travel Award: \$500-1500
  - T32 Grant Travel Allowance
- Travel funding provided by your PI
- Travel funding provided by external sources
  - Specific conferences & professional organizations offer student travel funding
- Book your flight with extra days after the conference
  - Ask/tell your PI and do not feel guilty!
  - Use travel funding for designated conference days
  - Use your own money on vacation days after the conference



**ADMISSION** 

FACULTY

RESEARCH

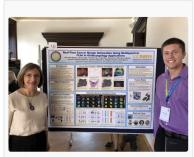
STUDENT INFORMATION

**GRADUATE NEWS** 

CONTACT

#### BMEGG Students attend Summer School on Clinical Biophotonics in Germany.

UC Davis BMEGG Ph.D. Students Brent Weyers, Amy Becker, Oybek Kholiqov, Justin Migacz, and Xiangnan Zhou journeyed with UC Davis colleagues to Jena, Germany to participate in a Summer School on Clinical Biophotonics. The trip was funded under a grant that Dr. Laura Marcu and Dr. Juergen Popp (Leibniz Institute of Photonic Technology) co-wrote to promote collaboration in clinical biophotonics between UC Davis and the Leibniz Institute of Photonic Technology.



Ph.D. Student Brent Weyers poses with Professor Laura Marcu before his poster presentation at the IeDis Summer School.

Brent Weyers reports, "I loved the opportunity to explore how research is being conducted at a foreign institution. This program provided me



new perspectives and insight on the latest clinical research being conducted in the biophotonics field, and provided me with a rich network of students, scholars and faculty for brainstorming and discussing concepts with pertaining to my own research."

Additional details about the trip are available from the <u>Leibiniz Institute</u> of Photonic Technology.

Ask these current BMEGG students about their experiences with DE

#### **DE Biotechnology**

- Experiences with biotech industry & alumni
- Marcus Deloney, <u>madeloney@ucdavis.edu</u>
- Many people in BMEGG

#### **DE Biophotonics**

• Brent Weyers, <u>bwweyers@ucdavis.edu</u>

#### **DE Translational Research**

- Clinical experiences, UC Davis medical center
- Caitlin Banks, <u>clbanks@ucdavis.edu</u>

#### **Designated Emphasis (DE) Programs**

- Apply before your qualifying exam through Graduate Studies
- A few extra classes outside of BME requirements







**Brent** 



Caitlin

#### **Business skills for grad students**

#### **Business Development Fellowship**

- Srinu Tapa: <a href="mailto:stapa@ucdavis.edu">stapa@ucdavis.edu</a>
- Amir Bolandparvaz: <u>aboland@ucdavis.edu</u>

#### **Keller Pathway Fellowship**

- Anita Rajamani: anirajamani@ucdavis.edu
- Ali Tafazzol: <u>atafazzol@ucdavis.edu</u>

#### **Leaders for the Future**

- Srinu Tapa: <a href="mailto:stapa@ucdavis.edu">stapa@ucdavis.edu</a>
- Amy Becker: <u>aebecker@ucdavis.edu</u>

#### **UC Entrepreneurship Academy**

- 3 Day Event, normally \$1000
- Free entrance from these progams

Ask these current BMEGG students about their experiences with business skills programs







Amir



Anita







Amy

You

Ask these current BMEGG students about their experiences

#### **Professors for the Future**

- Complete teaching workshops and complete a project for graduate students / post docs
- Award: \$3000 to spend yourself
- Divya Kernik: <u>dckernik@ucdavis.edu</u>
- Dovin Kiernan: dkiernan@ucdavis.edu
- Charlotte Vorwald: cevorwald@ucdavis.edu

Divya



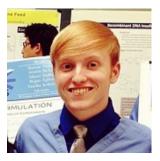
Dovin



Charlotte

#### **FUTURE Career Exploration Program**

- One quarter workshop series
- Learn about career path options
- \$500 toward professional development
- Amy Becker: <u>aebecker@ucdavis.edu</u>
- Marcus Deloney: <u>madeloney@ucdavis.edu</u>



Marcus



Amy



Tima

Ask these current BMEGG students about their experiences

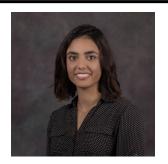
#### **Graduate Writing Fellowship**

- Writing Across the Curriculum (WAC) for the University Writing Program
- Complete WAC workshops and offer consultations
- Complete project related to graduate student writing
- 1-year commitment minimum
- Stipend of \$1000 per quarter
- Caitlin Banks: <a href="mailto:clbanks@ucdavis.edu">clbanks@ucdavis.edu</a>

#### **Grad Slam Science Pitch Competition**

- 3-minute science talk competition
- UC-wide, several rounds of competition
- \$5000 top prize for final UC winner
- UC Davis semi-finalist from BMEGG!
- Divya Kernik: <a href="mailto:dckernik@ucdavis.edu">dckernik@ucdavis.edu</a>





Ask these current BMEGG students about their experiences with SciComm



Jackie Whitehead: <a href="mailto:jwhitehead@ucdavis.edu">jwhitehead@ucdavis.edu</a>
Charlotte Vorwald: <a href="mailto:cevorwald@ucdavis.edu">cevorwald@ucdavis.edu</a>







Charlotte

https://health.ucdavis.edu/ctsc/area/engagement/sciComFellowship.html

Ask these current BMEGG students about their experiences with public policy

#### **2019 CCST SCIENCE FELLOWS**





Sam Tucci: samanthatucci17@gmail.com



Website



Tima Dehghani: tdehghani@ucdavis.edu

## How to... contribute to your grad group and develop leadership skills?

- Biomedical Engineering Student Association! (BESA)
- First year: participate in activities, make new friends ©
- Second, Third, Fourth year: volunteer for a leadership position
  - Secretary, Treasurer, VP, President, Outreach, Social, Intramurals...etc
  - Qualifications include...enthusiasm!
- Fifth, Sixth year: participate in activities, write your thesis ©

\*this list does not include all the professors recruiting and there may be different projects than the ones included\*

Professor: Angelique Louie aylouie@ucdavis.edu

Research: The Louie lab focuses on the development of novel imaging agents for in vivo visualization of biomarkers. Current efforts include anti-coagulant nanoparticle agents targeted to macrophages, click chemistry reagents for fluorine MRI, and small molecule activatable probes.



Professor: Gerald Quon gquon@ucdavis.edu

Research: The QUON-titative biology lab is looking for PhD students to work on characterizing the genetic architecture of complex mental disorders. Students will apply methods from deep learning and statistics to link changes at the DNA and molecular levels, to changes in neuron cellular phenotypes and disease status.



\*this list does not include all the professors recruiting and there may be different projects than the ones included\*

Professor: Sanjeevi Sivasankar <u>ssivasankar@ucdavis.edu</u>

Research: The goal Prof. Sivasankar's research is to resolve the physical and engineering principles by which cells sense and respond to mechanical stimuli. We use state of the art bioengineering tools to study mechanical tension sensing in cells. We also develop new types of ultra-sensitive, single molecule, biophysical techniques.



Professor: Erkin Seker eseker@ucdavis.edu

Research: I am considering hiring one BME PhD student or one selffunded MS student. The project is on developing organ-on-a-chip platforms to study neural regulation of brain cancers. It involves microfabrication techniques, neural cell culture, and working with collaborators in the School of Medicine and Schools of Veterinary Medicine. Interested students should feel free to contact me.



\*this list does not include all the professors recruiting and there may be different projects than the ones included\*

Professor: Anthony Passerini agpasserini@ucdavis.edu

Research: The Passerini Lab applies artery-on-a-chip microfluidic tools to study the signaling mechanisms by which mechanical cues imparted by blood flow converge with other factors driven by diet and metabolism to sensitize the arteries to pathological change. The lab's studies provide insight into the links between unhealthy diets, lipid metabolism and endothelial inflammatory responses that mark among the earliest changes in atherosclerosis.



Professor: Crystal Ripplinger cripplinger@ucdavis.edu

Our lab uses high-speed optical imaging and neuromodulatory approaches to study the role of the autonomic nervous system in contributing to cardiac arrhythmias. Key projects for BME students may include design and testing of a novel whole-heart optical imaging system.



\*this list does not include all the professors recruiting and there may be different projects than the ones included\*

Professor: Blaine Christiansen bchristiansen@ucdavis.edu

Research: Our lab investigates musculoskeletal adaptation to the mechanical environment, injury, and aging, and how these adaptive responses contribute to diseases such as osteoporosis and osteoarthritis. Current projects in our lab investigate systemic bone loss following fracture or other injuries, and biomechanical mechanisms of post-traumatic osteoarthritis following a joint injury.



Professor: David Hawkins dahawkins@ucdavis.edu

Accepting MS students. My research objectives are to understand the basic mechanisms that influence the integrity of musculoskeletal structures and the performance of gross human movement, and based on this information, develop personalized exercise prescriptions and movement mechanics that will allow a person to increase their health, quality of life, and physical performance capabilities while minimizing their risk of injury.



\*this list does not include all the professors recruiting and there may be different projects than the ones included\*

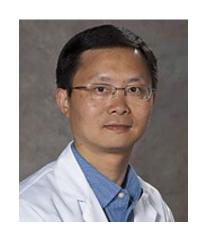
Professor: Lucas Smith <u>lucsmith@ucdavis.edu</u>

Research: The Myomatrix Lab is focused on elucidating interactions between muscle and its extracellular matrix, particularly in neuromuscular diseases with excessive fibrosis and muscle stiffness. We employ the advanced biophotonics modalities to measure the architectural structure of the extracellular matrix and how it relates to biomechanical muscle function as well as to muscle stem cell based regeneration. These relationships are explored using engineered in vitro constructs, animal models, and human biopsies along with strategies to therapeutically manipulate the extracellular matrix to enhance muscle function.

Professor: Guobao Wang gbwang@ucdavis.edu

The Wang Lab in the Department of Radiology at the UC Davis Medical Center researches computational molecular imaging methods and clinical translation with emphasis on dynamic positron emission tomography (PET). By developing advanced algorithms to exploit the value of multidimensional data we collect, we can make PET molecular imaging better, cheaper, safer and more informative in reducing the burden of disease.





\*this list does not include all the professors recruiting and there may be different projects than the ones included\*

Professor: Carolynn Patten <a href="mailto:cpatten@ucdavis.edu">cpatten@ucdavis.edu</a>

Research: The Biomechanics, Rehabilitation, and Integrative Neuroscience (BRaIN) Lab focuses on the neural mechanisms and biomechanical consequences of central nervous system pathologies that cause motor dysfunction. We use non-invasive stimulation techniques coupled with human movement analysis to gain a greater understanding of how pathology influences function. Current projects in our lab assess walking and upper extremity function in individuals with stroke, and investigation of novel neuromodulatory techniques to meaningfully modulate the motor system.



### Free Statistics Resources at Davis

- Sign up for data science list serves. They send out workshops to help people learn R and other data science software. <a href="http://dsi.ucdavis.edu/signup.html">http://dsi.ucdavis.edu/signup.html</a>
- Link to Davis R-Users' group- <a href="https://d-rug.github.io/">https://d-rug.github.io/</a> You can join the mailing list serve and ask questions about R
- Meet & Analyze (biological) Data. A location where people meet up to analyze data together and help each other out with stats. <a href="http://ds.lib.ucdavis.edu/meet-analyze-biological-data/">http://ds.lib.ucdavis.edu/meet-analyze-biological-data/</a>
- Its organized by Data Science Initiative <a href="http://datascience.ucdavis.edu/">http://datascience.ucdavis.edu/</a>
- Pamela Reynolds is the go to person for DSI- <u>plreynolds@ucdavis.edu</u>

## Help is Available

- CTSC Biostatistics Office Hours
  - Every Tuesday from 12 1:30 in Sacramento
  - Sign-up through the CTSC Biostatistics Website
- EHS Biostatistics Office Hours
  - Every Monday from 2-4 in Davis
- Request Biostatistics Consultations
  - CTSC www.ucdmc.ucdavis.edu/ctsc/
  - MIND IDDRC www.ucdmc.ucdavis.edu/mindinstitute/centers /iddrc/cores/bbrd.html
    - Cancer Center and EHS Center

#### Sandra Taylor, Ph.D.

Program Manager,
Principal Biostatistician
916-703-9171
sltaylor@ucdavis.edu

## WiFi on Campus



Network name: "eduroam"

• Username: Kerberos ID@ucdavis.edu

• Email address: atcasella@ucdavis.edu

Kerberos ID: atcasell

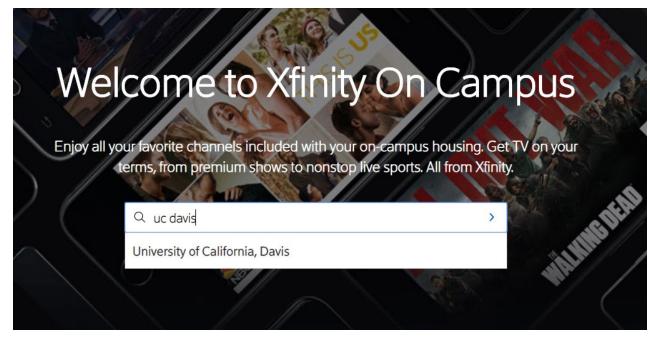
• Username: atcasell@ucdavis.edu

Password is the same as your Kerberos password

## Free Xfinity access



- "xfinityoncampus.com"
- Enter UC Davis into search bar
- Use your Kerberos ID and password to log in
- https://housing.ucdavis.edu/xfinity-on-campus/



## Places to Study

- Study space is limited while you're rotating in labs, West Campus options include:
  - GBSF 3<sup>rd</sup> floor lounge
  - Scrubs Cafe
  - Vet med 3B 1<sup>st</sup> floor lounge
  - Carlson Health Sciences Library (MedSci campus)
  - West Village

### Resources

- Machines, equipment, and core facilities (i.e. mass spec or confocal)
  - Key Card and lab key request: bme-keys@ucdavis.edu
  - Office of research core facilities and services
  - Genome center core facilities
  - UC Davis school of medicine core facilities
  - UC Davis Vet school core facilities
  - Advanced materials characterization and testing
  - Department of Molecular and Cellular Biology imaging facility
  - Center for nano and micromanufacturing
- On campus resources
  - Grad studies
  - Internship and career center
  - General resources
  - Student Health and Counseling Services

### IT Resources

- <a href="UCD Software">UCD Software</a> (academic pricing, hosted by campus)
- <u>COE Software</u> (provided by or hosted by the college)
- Microsoft Office (FREE using your UCD e-mail address and password)
- Box Unlimited Online Storage (dedicated bandwidth and single files up 5GB)
- <u>COE VPN service</u> for library or secure network access
- How to find a person or dept info: <a href="http://directory.ucdavis.edu/">http://directory.ucdavis.edu/</a>
- How to purchase lab items: <a href="http://ops.engineering.ucdavis.edu/home.aspx">http://ops.engineering.ucdavis.edu/home.aspx</a>

Who to contact for physical/digital access or other questions about these services?

## BME-support@ucdavis.edu

## **Zipcar**





Apply online.
When you're approved, we'll send you
a Zipcard in the mail.



Drive
Book by the hour or day. To unlock, tap
your Zipcard to the card reader on the
windshield.



Return

Park it back in its dedicated parking spot, then lock up with your card.

#### Limited time FREE membership

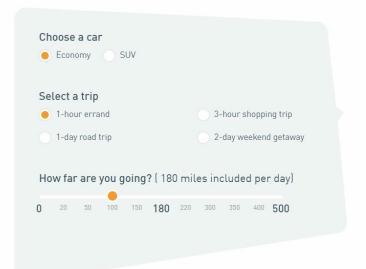
Sign up by October 31 for a 30-day free trial and save a bundle over car ownership. Take charge of your errands and escapes with a FREE Zipcar membership!

See more details.

#### Estimate your trip cost

How much does a Zipcar cost in UC, Davis? Estimate the cost of your next trip below.

Select your trip type to get started.

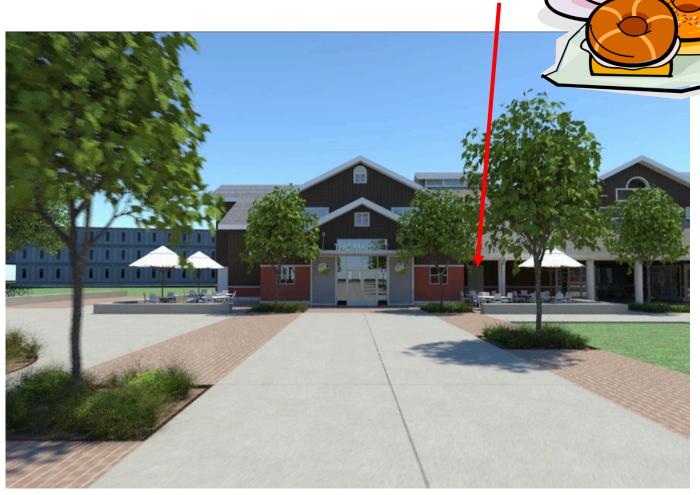


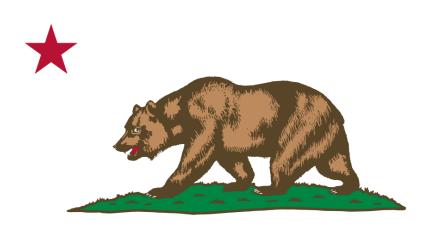
\$9
View plans

Gas and insurance included.

Free Breakfast on Friday: CBDD









## Have fun!



## Ask a grad student!



- ► How to approach a professor to ask for a rotation position?
- ▶ Is your professor hands off or hands on?
- Do you know anything about your professor's funding history?
- ▶ What are other fellowships BME students have applied for/received?
- ▶ How often do you travel for conferences?
  Are there travel awards?
- ▶ How are your lab dynamics?

- When do you typically finish classwork?
- What classes did you take as electives?
- ► How many classes have you TA'd? How much work was required?
- ▶ Do you get to choose the class you want to TA or are you just assigned one?
- ▶ How do you balance lab work with coursework?
- ▶ Who to contact for academic concerns?
- ▶ Who to talk to about PhD/academic concerns?