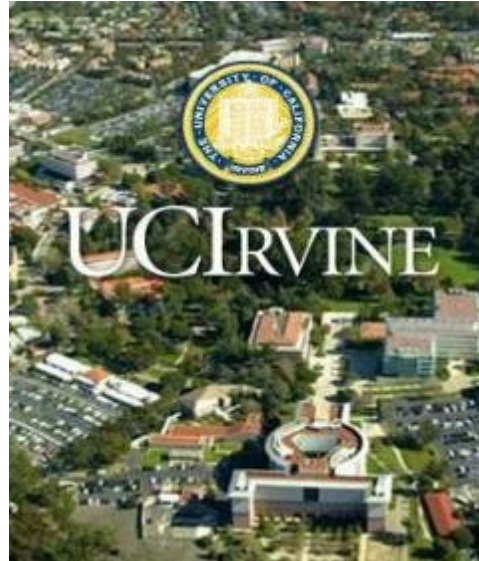


**California-Catalonia Program**  
**Balsells Fellowship**  
**Mobility and Graduate School in California**



**Presenters**

**Professors: Roger Rangel and Sergio Gago**

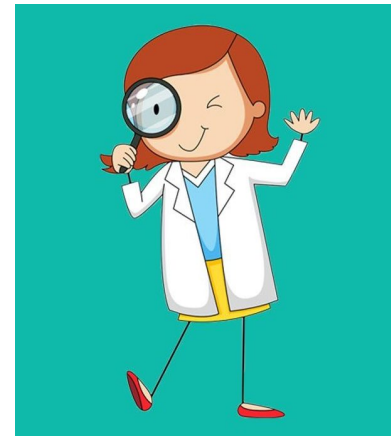
**October 2021**

# What to do after graduation?

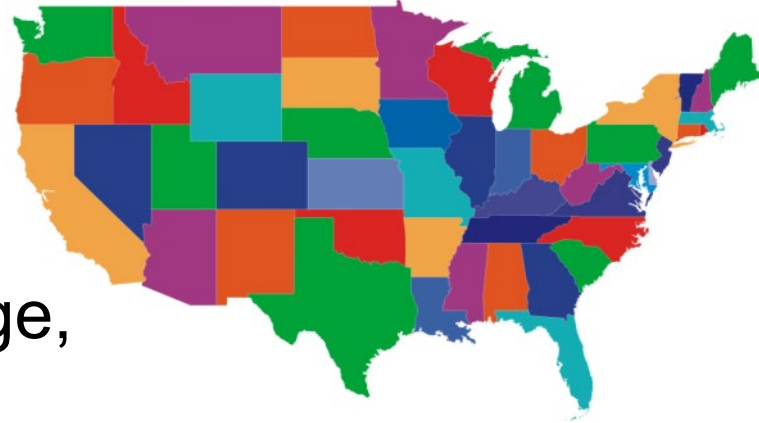
- Get a job



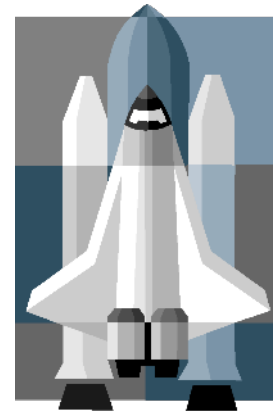
- Learn more, become an expert and **leader** in your field



# Why Graduate School in the USA?



- Deepen your knowledge, improve yourself, and benefit society
- Live in California
- Expand your career options
- Achieve better positions and salaries



# Peter J. Balsells

- Born in Barcelona in 1928
- Moved to United States at age 18
- Graduated from CU Boulder in 1952
  - B.S. degree in Mechanical Engineering
- Started **Bal Seal Engineering Company** in California in 1958 with his wife, Joan
- Started the Balsells Fellowship Program at UCI in 1996
- Started the Balsells Graduate Fellowship Program at CU Boulder in 2010; at UCCS in 2013; and at UCD in 2015
- Francesc Macia Medal in 2003
- Premi Nacional de Recerca, Categoria Mecenatge in 2012
- Creu de Sant Jordi in 2013
- Honorary doctorates from CU Boulder (2014) and UdG (2016)



# Student Opportunities

## Where?

**Samueli School of Engineering**

**Bren School of Information and Computer Science**

## Mobility Program

Short-term visits of 6 months to carry out final thesis for Bachelor's or Master's degree and to explore possibility of returning to the U.S. graduate school (M.S. and PhD)

## Graduate Studies

Long-term visits to obtain Master's degree and/or PhD degree



# Balsells Fellowships 1996-2021



**UC Irvine**

**150 MS and PhD fellows  
15 post-doctoral fellows  
82 mobility fellows**

**Catalan Universities:**

**UAB, UB, UdG, UdL, UPC, UPF, URL, URV**



# Irvine - California



# Irvine - Orange County - Southern California

- Pop: 267,000 (Irvine)  
3.2 Million (Orange Co.)
- 60 km south of Los Angeles
- A hub of high tech companies
- Surrounded by beach, mountains, arts, and entertainment

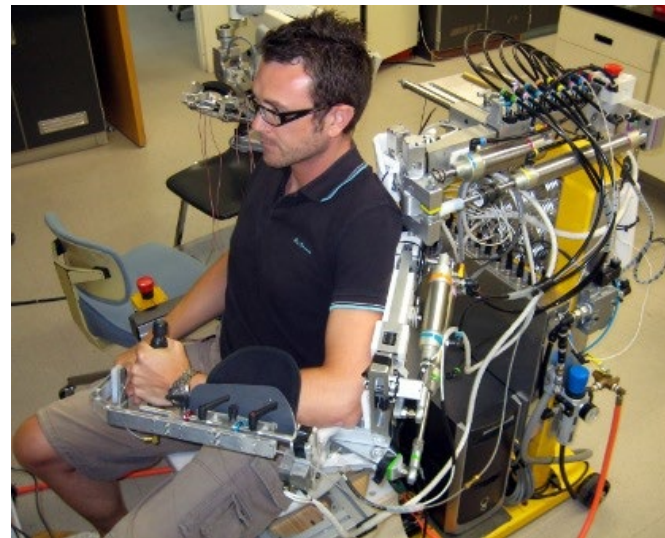




# University of California, Irvine Snapshot



- [www.uci.edu](http://www.uci.edu)
- 37,000 students
- 15 schools and programs
- 3,500 teaching faculty members
- 9<sup>th</sup> among all U.S. public universities (USNews&WR 2021)





UCI

FREDERICK REINES HALL

3

Nobel Laureates



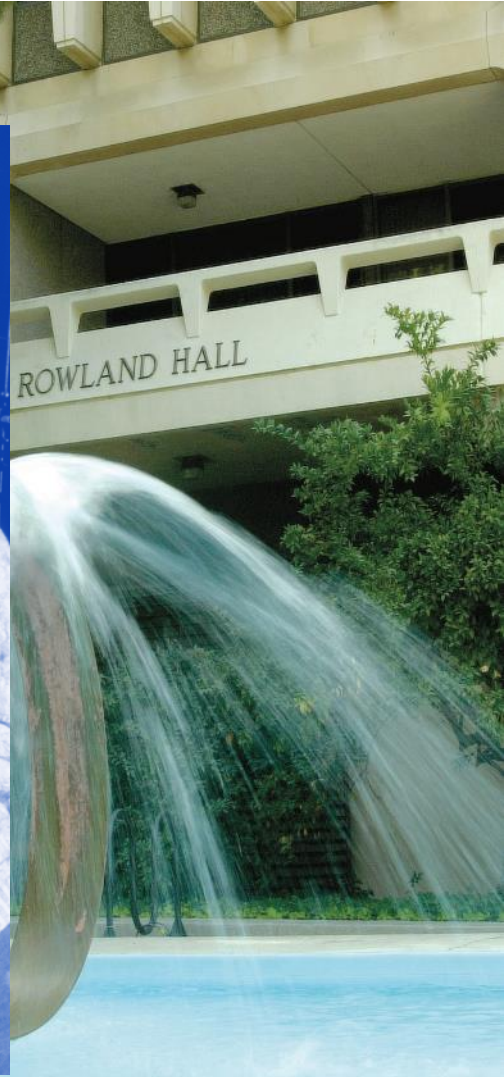
Rose



Reines



Rowland





The UCI logo is positioned in the top left corner of the image. It consists of the letters 'UCI' in a bold, blue, sans-serif font, set against a white circular background with a subtle geometric pattern. The background of the entire image is an aerial photograph of a university campus, showing various buildings, green spaces, and trees.

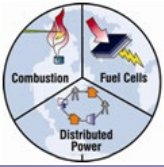
**UCI**

## Interdisciplinary Science and Engineering Building

**113,000+ SQ ft.**  
includes laboratory support  
space, conference and  
collaboration centers



# Research Centers and Institutes



Advanced Power and Energy Program



Beckman Laser Institute and Medical Clinic



Center for Advanced Design & Manufacturing of Integrated Microfluidics



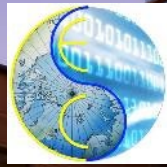
Integrated Nanosystems Research Facility



The Edwards Lifesciences Center for Advanced Cardiovascular Technology



California Institute for Telecommunications and Information Technology



Center for Embedded Systems and Cyber-Physical Systems



Irvine Materials Research Institute



Center for Pervasive Communications and Computing



Center for Hydrometeorology and Remote Sensing



Institute for Design and Manufacturing Innovation



National Fuel Cell Research Center



UCI Combustion Laboratory



Water-Energy Nexus Center



Institute of Transportation Studies



## National Recognition

### ENERGY AND SUSTAINABILITY

Scott Samuelson &  
Jack Brouwer

The  
New York  
Times



POPULAR  
MECHANICS

PBS  
NEWS  
HOUR

NGT  
News  
Next-Gen Transportation

ORANGE COUNTY  
REGISTER

### HUMAN COMPUTER INTERFACE

Zoran Nenadic &  
Payam Heydari



TIME

EE|Times

ORANGE COUNTY  
BUSINESS JOURNAL



Buzz  
Feed

### CYBER SECURITY

Mohammad Al Faruque

Newsweek

Los Angeles  
Times



gizmag Futurism

GIZMODO

# Donald Bren School of Information & Computer Sciences

[www.ics.uci.edu](http://www.ics.uci.edu)

## Figures:

- 3,300 Undergraduates
- 830 Graduate students
- 100 Faculty Members



## Departments:

- Computer Science
- Informatics
- Statistics



# Donald Bren School of Information & Computer Sciences

## GRADUATE PROGRAMS

**Computer Science**

**Software Engineering**

**Informatics**

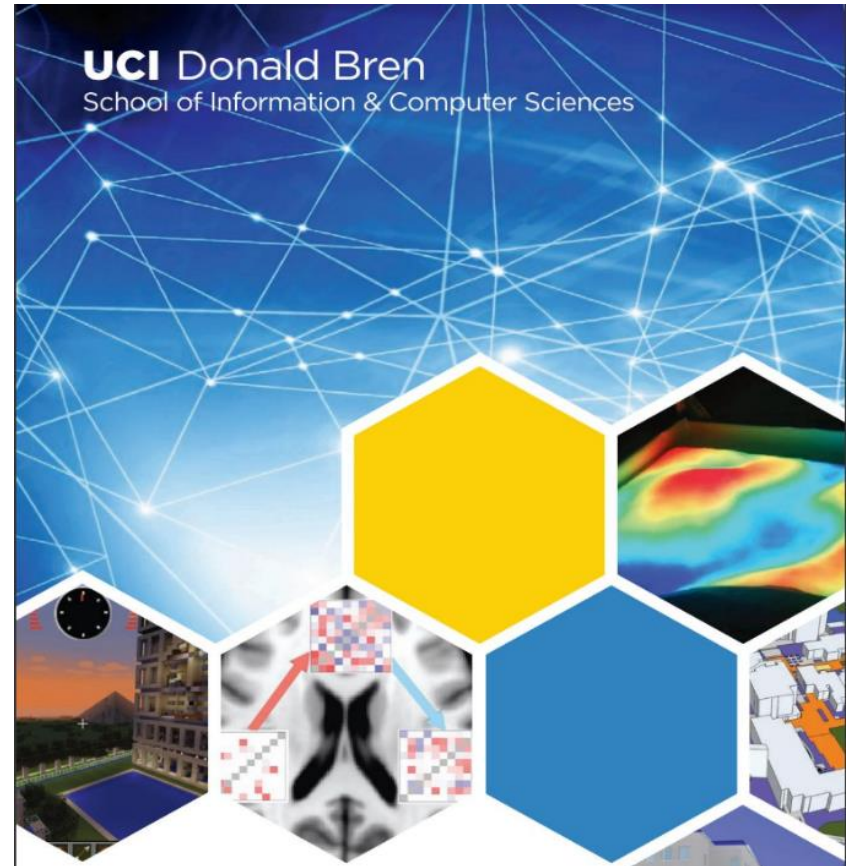
**Networked Systems**

**Statistics**

**Data Science**

**Embedded and Cyber-Physical Systems**

**Human-Computer Interaction and Design**



## HIGHLIGHTS

Computer Science is UCI's 2nd-largest undergraduate major.

Top 15 Computer Science Graduate Program among public universities, as ranked by U.S. News & World Report.

Software engineering research is ranked #2 and HCI research is ranked #8 by CSRankings.org.

Game design program is ranked 3rd among public institutions by Animation Career Review.

Statistics received 2 of the 13 NSF Graduate Research Fellowships awarded to statistics students nationwide in 2019

# Donald Bren School of Information & Computer Sciences

## ICS RESEARCH AREAS

- Medical Informatics
- Mobile and Ubiquitous Computing
- Multimedia Computing
- Networks and Distributed Systems
- Operating Systems
- Organization Studies
- Privacy and Personalization
- Programming Languages and Software Engineering
- Science and Technology Studies
- Scientific and Numerical Computing
- Security, Privacy, Cryptography
- Social Informatics
- Software Engineering
- Software Systems
- Statistics and Statistical Theory
- Sustainability and Green IT
- Ubiquitous Computing
- Algorithms and Complexity Theory
- Artificial Intelligence and Machine Learning
- Biomedical Informatics And Computational Biology
- Computational-Social Relationships
- Computer Architecture
- Computer Games and Virtual Worlds
- Computer Graphics and Visualization
- Computer-Supported Cooperative Work
- Computer Vision
- Database Systems
- Design
- Educational Technology
- Embedded Systems
- Environmental Informatics
- Health Informatics
- Human-Computer Interaction
- Information Retrieval and Visualization
- Interactive and Collaborative Technologies





# UCI Samueli

School of Engineering

## DEPARTMENTS

HENRY SAMUELI SCHOOL OF ENGINEERING

MCDONNELL  
DOUGLAS  
ENGINEERING  
AUDITORIUM

- Biomedical Engineering
- Chemical & Biomolecular Engineering
- Civil and Environmental Engineering
- Electrical Engineering and Computer Science
- Materials Science & Engineering
- Mechanical and Aerospace Engineering



# Some of Our Graduate Programs

GRADUATE PROGRAM  
**Biomedical Engineering**

<http://engineering.uci.edu/dept/bme/graduate>



GRADUATE PROGRAM  
**Chemical and Biochemical Engineering**

<http://engineering.uci.edu/dept/chems/graduate>



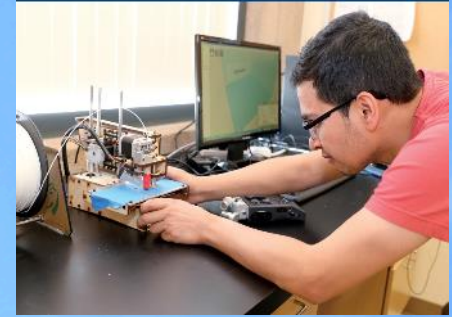
GRADUATE PROGRAM  
**Civil Engineering**

<http://engineering.uci.edu/dept/cee/graduate>



GRADUATE PROGRAM  
**Electrical and Computer Engineering**

<http://engineering.uci.edu/dept/eecs/graduate>



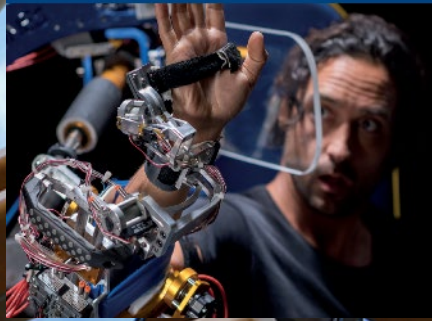
GRADUATE PROGRAM  
**Engineering with a Concentration in Environmental Engineering**

<http://engineering.uci.edu/dept/cee/graduate/programs/environmental>



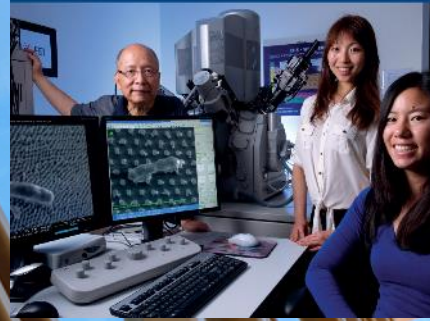
GRADUATE PROGRAM  
**Mechanical and Aerospace Engineering**

<http://engineering.uci.edu/dept/mae/graduate>



GRADUATE PROGRAM  
**Materials Science and Engineering**

<http://engineering.uci.edu/dept/chems/graduate>



GRADUATE PROGRAM  
**Embedded and Cyber-Physical Systems**

<http://mecps.uci.edu>





MESSAGE FROM CHAIR >>

ABOUT >>

FACTS & FIGURES >>

UNDERGRADUATE >>

GRADUATE >>

RESEARCH >>

DYNAMICS AND  
CONTROLS >>

FLUID DYNAMICS AND  
PROPULSION >>

THERMAL AND TRANSPORT  
SCIENCES >>

MECHANICS OF MATERIALS  
AND STRUCTURES >>

SYSTEMS AND DESIGN >>

FACULTY & STAFF >>

ACADEMIC  
EMPLOYMENT >>

E-NEWSLETTER >>

MAE SEMINARS >>

INTRANET >>

CONTACT US >>

## Research

### RESEARCH THRUSTS

#### Dynamics and Controls

- Control Theory and Algorithms
- Autonomous and Distributed systems
- Navigation and Flight Systems
- Machine Learning

#### Fluid Dynamics and Propulsion

- Aeroacoustics
- Aeroelasticity
- Biomedical Flows
- Combustion Theory
- Computational Fluid Dynamics
- Electrosprays
- Jet & Rocket Propulsion
- Multiphase Flow
- Turbomachinery

#### Thermal and Transport Sciences

- Combustion and Emissions
- Fuel Cell Technologies
- Advanced Energy Systems
- Renewable Energy
- Heat Transfer
- Atomization and Sprays
- Reaction Kinetics
- Nanomaterials

#### Mechanics of Materials and Structures

- Active Materials
- Advanced Manufacturing
- Composites
- Defect Formation/Propagation
- Deformation and Failure
- Machine Learning
- Morphing Structures
- Nanoscale Mechanics
- Uncertainty Quantification

#### Systems and Design

- Design and Control of MEMS
- Machine Information Systems Integration
- Computer Aided Design
- Robotics including Microrobotics
- Biomechanics
- Carbon and Magnetic MEMS
- CD-Based Fluidics
- Rehabilitation, Prosthetics and Exoskeletons
- Kinematics of Spatial Motion
- Design of Mechanical Systems
- Modeling of Global Air Pollution
- Aerospace Systems

### AFFILIATED CENTERS

- Advanced Power and Energy Program (APEP)
- [Center for Advanced Design and Manufacturing of Integrated Microfluidics \(CADMIM\)](#)
- Institute for Design and Manufacturing Innovation (IDMI)
- Integrated Nanosystems Research Facility (INRF)
- National Fuel Cell Research Center (NFCRC)
- UCI Combustion Laboratory

# Mobility Program

- Undergraduates or master's students
- Undertake final project or master's thesis typically for one term (6 months) at UC Irvine
- UC Irvine: [Balsells Mobility](#)
- Partial funding provided \$7,000
- Approximately 5-6 positions per year
- Spring semester preferred
- **Significant preference given to those students who want to continue as graduate students at UCI after the mobility visit.**





# How to Apply for the Mobility Program

## Students interested in the Mobility Program should:

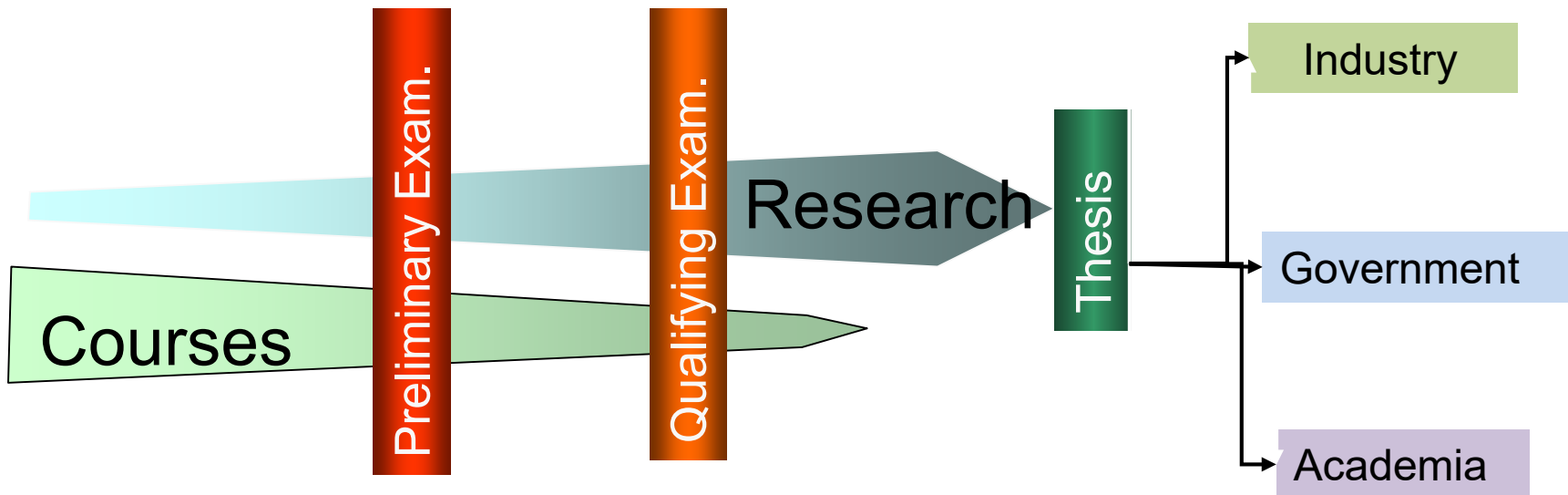
- Be strongly interested in applying for the graduate program
- Have a strong academic record and at least intermediate English proficiency
- Provide letter of interest, curriculum vita, and academic transcript (all in English) to:
  - **UC Irvine:** Balsells Fellowship Program at [balsells@uci.edu](mailto:balsells@uci.edu)
  - <https://balsells.eng.uci.edu/balsells-mobility-program/> for more information.

# Graduate Programs

## Master's: 1.5 years with thesis



## Ph.D.: 3-4 additional years





# Graduate Program (MS/PhD)

## The support includes:

- Monthly stipend: **\$2,400 per month (\$28,800 per year)**
- Tuition, Fees & Insurance: **\$33,000 per year**
- Travel stipend: **\$1,000 first year**
- Total value: **\$63,000 per year**
- Balsells Fellowship available for MS and PhD for up to 2 years
- Research & teaching assistantships available for the PhD
- 6-7 new fellowships each year
- Priority to students who apply for the PhD



# Balsells Eligibility

## Who can apply?

Spanish citizens who are residents of Catalonia; speak English, Catalan and Spanish; and are graduates from Catalan or other European universities majoring in engineering or related fields.





# Graduate Admissions—How To Apply

## Requirements for admission to any of the graduate programs:

- Undergraduate transcripts (original and English translation)
- GRE scores (**some programs waiving GRE**)
- TOEFL/IELTS scores
- 3 Letters of recommendation
  - Highlighting your potential for performing independent, thoughtful research, and ability to think beyond formal course assignments
- Candidate statement (Statement of Purpose)
  - How you prepared for the graduate degree (courses, experiences)
  - Interests and career goals (why you want to pursue this degree)
  - Fit (why you are a good match for the program)
  - Your personal history that helped you decide to pursue this degree

# Timeline for Graduate (MS/PhD) Application

For undergraduate students currently in their 4<sup>th</sup> year or M.S. students in their final year

<b>What</b>	<b>When</b>
This presentation .....	Oct 2021
Take GRE and TOEFL or IELTS exams .....	Dec 2021
<b>Complete graduate application.....</b>	<b>Dec 2021 / Jan 2022</b>
Admissions decision by the university.....	Mar 2022
Decisions on funding announced.....	May 2022
Fall term of graduate school starts.....	Sep 2022

# Timeline for Mobility and Graduate Application

For undergraduate students currently in their 3<sup>rd</sup> year or MS students in their first year

What	When
This presentation .....	Oct 2021
Apply for Mobility .....	Feb 2022
Start Mobility.....	Fall 2022 or Spring 2023
Take GRE and TOEFL or IELTS exams .....	Dec 2022
Complete graduate application.....	Dec 2022
Admissions decision by the university.....	Mar 2023
Decisions on financial support announced.....	Apr 2023
Fall term of graduate school starts.....	Sep 2023



# Application and Exam Websites

Information on GRE, TOEFL & IELTS exams:

[www.gre.org](http://www.gre.org), [www.toefl.org](http://www.toefl.org), [www.ielts.org](http://www.ielts.org)

Information on applying to UC Irvine:

<http://www.grad.uci.edu/admissions/applying-to-uci/>

# Thank you! Any questions?

***For additional information please contact:***

**University of California, Irvine**

[balsells@uci.edu](mailto:balsells@uci.edu)

<https://balsells.eng.uci.edu/>

