California-Catalonia Program
Balsells Fellowship
Mobility and PhD Studies in California

Presenter
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ESEIAAT

November 2023
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
The Balsells Fellowship began in 1996

Established by Pete Balsells (1928-2022)
Peter (Pere) 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
- Francesc Macia Medal in 2003
- Premi Nacional de Recerca, Categoría Mecenatge in 2012
- Creu de Sant Jordi in 2013
- Honorary doctorates from CU Boulder (2014) and UdG (2016)
- Died in Orange County, California in 2022
The Balsells Effect

Recommended video to watch now or later:
A history of Bal Seal Engineering and the Balsells Fellowship

https://www.youtube.com/watch?v=9v65Udt8r2c
Student Opportunities

Where? University of California, Irvine

1) Mobility Program
Short-term stays 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)

2) PhD Studies
Long-term stays to obtain a PhD degree (and an M.S. degree along the way)
Balsells Fellowships 1996-2023

UC Irvine
169 MS and PhD fellows
15 post-doctoral fellows
90 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
- 37,000 students
- 15 schools and programs
- 2,800 teaching faculty members
- 8th among all U.S. public universities (USNews&WR 2022)
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
Henry Samueli School of Engineering

4,000 Undergraduates
1,000 Graduate students
150 Faculty Members

www.eng.uci.edu
DEPARTMENTS

- 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

- Biomedical Engineering
  [Link](http://engineering.uci.edu/dept/eecs/graduate)

- Chemical and Biochemical Engineering
  [Link](http://engineering.uci.edu/dept/eecs/graduate)

- Civil Engineering
  [Link](http://engineering.uci.edu/dept/eecs/graduate)

- Electrical and Computer Engineering
  [Link](http://engineering.uci.edu/dept/eecs/graduate)

- Engineering with a Concentration in Environmental Engineering
  [Link](http://engineering.uci.edu/dept/eecs/graduate)

- Mechanical and Aerospace Engineering
  [Link](http://engineering.uci.edu/dept/eecs/graduate)

- Materials Science and Engineering
  [Link](http://engineering.uci.edu/dept/eecs/graduate)

- Embedded and Cyber-Physical Systems
  [Link](http://meecs.uci.edu)
Department of Mechanical and Aerospace Engineering

Research

RESEARCH THRUSTS

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

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

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

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 (CADMM)
- Institute for Design and Manufacturing Innovation (IDMI)
- Integrated Nanosystems Research Facility (INRF)
- National Fuel Cell Research Center (NFCRC)
- UCI Combustion Laboratory

https://engineering.uci.edu/dept/mae/research
Balsells Mobility Program

• Carry out B.S. or M.S. project or thesis
• 6 months at UC Irvine
• Partial funding provided $7,800
• Approximately 3-4 positions per year
• **Significant preference given to those students who want to continue as graduate students at UCI after the mobility visit.**
Students interested in the Mobility Program should:

- Be strongly interested in applying for the PhD 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
Graduate Programs

Master’s: 1.5 years with thesis

Ph.D.: 3-4 additional years

Courses → Research → Thesis

Industry → Government

Preliminary Exam. → Qualifying Exam. → Research → Thesis

Industry → Government → Academia
Graduate Program (MS/PhD)

The support includes:

• Monthly stipend: ~$2,700 per month (~$32,000 per year)
• Tuition, Fees & Insurance: $35,000 per year
• Travel stipend: $1,000 first year
• Total value: Admitted PhD students have 5 years of support (all sources)
• Balsells Fellowship available for first year
• Research & teaching assistantships available for subsequent years
• 2-3 new fellowships each year
• Students may apply for the M.S. only but receive no financial support
Who can apply?

Spanish citizens who are residents of Catalonia; who speak English, Catalan and Spanish; and are graduates from Catalan university majoring in engineering or related fields.
Requirements for admission to any of the graduate programs:

- Undergraduate transcripts (original and English translation)
- GRE scores (many programs have waived the 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\textsuperscript{th} year or M.S. students in their final year (finishing this year)

<table>
<thead>
<tr>
<th>What</th>
<th>When</th>
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</thead>
<tbody>
<tr>
<td>This presentation</td>
<td>Nov 2023</td>
</tr>
<tr>
<td>Take GRE and TOEFL or IELTS exams</td>
<td>Dec 2023</td>
</tr>
<tr>
<td>Complete graduate application</td>
<td>Dec 2023 / Jan 2024</td>
</tr>
<tr>
<td>Admissions decision by the university</td>
<td>Mar 2024</td>
</tr>
<tr>
<td>Decisions on funding announced</td>
<td>May 2024</td>
</tr>
<tr>
<td>Fall term of graduate school starts</td>
<td>Sep 2024</td>
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</tbody>
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### Timeline for Mobility and Graduate Application

For undergraduate students currently in their 3\textsuperscript{rd} year or MS students in their first year (finishing next year)

<table>
<thead>
<tr>
<th>What</th>
<th>When</th>
</tr>
</thead>
<tbody>
<tr>
<td>This presentation</td>
<td>Nov 2023</td>
</tr>
<tr>
<td>Apply for Mobility</td>
<td>Feb 2024</td>
</tr>
<tr>
<td>Start Mobility</td>
<td>Fall 2024 or Spring 2025</td>
</tr>
<tr>
<td>Take GRE and TOEFL or IELTS exams</td>
<td>Dec 2024</td>
</tr>
<tr>
<td>Complete graduate application</td>
<td>Dec 2024</td>
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<tr>
<td>Admissions decision by the university</td>
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<tr>
<td>Decisions on financial support announced</td>
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Application and Exam Websites

Information on GRE, TOEFL & IELTS exams:

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