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

Presentation for ESEIAAT

Presenters

Professors: Roger Rangel and Sergio Gago

21 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
- 9th among all U.S. public universities (USNews&WR 2021)
Nobel Laureates

Rose

Reines

Rowland
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
Calit2
California Institute for Telecommunications and Information Technology
Center for Embedded Systems and Cyber-Physical Systems
Irvine Materials Research Institute
Integrated Nanosystems Research Facility
Center for Advanced Design & Manufacturing of Integrated Microfluidics
Center for Pervasive Communications and Computing
Center for Hydrometeorology and Remote Sensing
The Edwards Lifesciences Center for Advanced Cardiovascular Technology
Irvine Institute for Design and Manufacturing Innovation
National Fuel Cell Research Center
UCI Combustion Laboratory
Water-Energy Nexus Center
Institute of Transportation Studies
Donald Bren School of Information & Computer Sciences

www.ics.uci.edu

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

Departments:
- Computer Science
- Informatics
- Statistics
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
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
- 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
DEPARTMENTS

- Biomedical Engineering
- Chemical & Biomolecular Engineering
- Civil and Environmental Engineering
- Electrical Engineering and Computer Science
- Materials Science & Engineering
- Mechanical and Aerospace Engineering
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
- Aerocoustics
- Aerelasticity
- Biomedical Flows
- Combustion Theory
- Computational Fluid Dynamics
- Electrosprays
- Jet & Rocket Propulsion
- Multiphase Flow
- Turbomachinery

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

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

Affiliated Centers
- Advanced Power and Energy Program (AEEP)
- Center for Advanced Design and Manufacturing of Integrated Microfluidics (CADIM)
- 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
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
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 or the MS/PhD
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.
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 4th year or M.S. students in their final year

<table>
<thead>
<tr>
<th>What</th>
<th>When</th>
</tr>
</thead>
<tbody>
<tr>
<td>This presentation</td>
<td>Oct 2021</td>
</tr>
<tr>
<td>Take GRE and TOEFL or IELTS exams</td>
<td>Dec 2021</td>
</tr>
<tr>
<td>Complete graduate application</td>
<td>Dec 2021 / Jan 2022</td>
</tr>
<tr>
<td>Admissions decision by the university</td>
<td>Mar 2022</td>
</tr>
<tr>
<td>Decisions on funding announced</td>
<td>May 2022</td>
</tr>
<tr>
<td>Fall term of graduate school starts</td>
<td>Sep 2022</td>
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# Timeline for Mobility and Graduate Application

For undergraduate students currently in their 3rd year or MS students in their first year

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