University of California, Riverside
Reynal Guillen, PhD
FIELDS program manager
University of California, Riverside

- Located 60 miles east of downtown Los Angeles
- One of the handful of “R1: Doctoral Universities – Highest Research Activity” and Hispanic Serving Institutions (HSIs) in the country
  - 21,005 students (2012): 18,583 undergrad, 2,422 grad
  - 51.9% female, 48.1% male
  - Student demographics: 38.5% Asian-Am., 34.1% Hispanic, 14.9 White, 7.1% African-Am., 2.3% International, 0.4 Native-Am.
- UCR is the most diverse campus in the prestigious 10 campus UC system and it is the eighth most diverse university in the nation.
Academic Degrees & Engr. Research

COLLEGE OF NATURAL AND AGRICULTURAL SCIENCES
Physical Sciences & Mathematics:
- Chemistry: BS, MS, PhD
- Earth Sciences: BS, MS, PhD
- Mathematics: BS, MS, PhD
- Physics & Astronomy: BS, MS, PhD
- Statistics: BS, MS, PhD

Life Sciences:
- Biochemistry: BS, MS, PhD
- Biology: BS, MS, PhD
- Cell Biology & Neuroscience: BS, MS, PhD

BOURNE COLLEGE OF ENGINEERING
- Bioengineering: BS, MS, PhD
- Chemical & Environmental Engineering: BS, MS, PhD
- Computer Science: BS, MS, PhD
- Computer Engineering: BS, MS
- Electrical Engineering: BS, MS, PhD
- Mechanical Engineering: BS, MS, PhD
- Materials Science and Engineering: BS, MS, PhD
- Data Science: MS (online)

Many others

ENGINEERING Research Area Clusters

CHEMICAL AND ENVIRONMENTAL ENGINEERING
- Biotechnology
- Advanced Materials and Nanotechnology
- Air and Water Quality Systems Engineering
- Energy Systems
- Theory and Molecular Modeling

COMPUTER SCIENCE AND ENGINEERING
- Algorithms, Bioinformatics Theory, and Logic
- Architecture, Embedded Systems
- Databases, Data Mining Software
- Systems and Networks
- Vision and Artificial Intelligence

ELECTRICAL ENGINEERING
- Nano Materials, Circuits and Devices
- Controls and Robotics
- Intelligent Systems
- Communications and Signal Processing

MECHANICAL ENGINEERING
- Energy Processing
- Nano- and Micro-Devices
- Information & Design Engineering
- Materials Properties & Processing
- Multiphase Flow and Combustion
- Air Quality and Fire Engineering
Past Performance

- UCR Office of Technology Partnerships
  - Awarded nearly $140M in contracts and grants in FY2016. $101M from federal agencies and $12.3M from industry.
  - 90 SBIR-STTR applications, 17 funded
- FIELDS (Fellowships and Internships in Extremely Large Data Sets)
  - Over $6M in funding
  - NASA MIRO grant, $4.6M (2015-2020)
    - Partnership programs with JPL
  - UCR matching funds $2.2M (2015-2020)
  - JPL Center for Academic Programs grant (2017)
  - http://bigdata.ucr.edu
FIELDS
(Fellowships and Internships in Extremely Large Data Sets)

– High School to Postdoc education paths to JPL in Data Science and Visualization
– Established Masters program in data science. Classes in systems engineering, machine learning, computer vision, statistical computing, data mining, information retrieval and web search, data visualization and big data tools.
– Developing student curriculum in data science and visualization
– Summer internships at JPL
– Year-long engagement with JPL to develop capacities to support data science projects.
– Faculty and postdocs in astronomy, statistics, computer science and engineering, electrical engineering and bioinformatics.
University Points of Contact

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  - FIELDS program manager