

Miguel Bonmati Conner

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EDUCATION

REED COLLEGE

BA IN PHYSICS

May 2015 | Portland, OR

Thesis on HQAs

AWTY INTERNATIONAL

Grad. May 2011 | Houston, TX

LINKS

LinkedIn:// [miguelconner](#)

Github:// [Miguel](#)

COURSEWORK

UNDERGRADUATE

Case Studies: Stat. Analysis (Math 241)

Statistics (Math 141)

Computation (Math 121)

Scientific Computation (Physics 367)

Advanced Lab (Physics 331 and 332)

Nonlinear Dynamics (Physics 411)

Solid State Physics (Physics 362)

Quantum Mechanics (Physics 342)

Classical Mechanics (Physics 311)

Electrodynamics (Physics 321)

Multivariable Calc (Math 211 and 212)

SKILLS

PROGRAMMING

Working Knowledge:

python • R • Mathematica •

HTML5 • CSS3 • \LaTeX

Familiar:

Matlab • Java • Haskell

Learning:

SQL • JavaScript

OPERATING SYSTEMS

Mac OS X • Windows 7 • UNIX

OTHER SOFTWARE

MS Office • Adobe Photoshop •

RStudio • IPython • Git

LANGUAGES

English (Native)

Spanish (Native)

French (Elementary)

Esperanto (Elementary)

RESEARCH

THESIS: HQA TUNNELING | REED COLLEGE

2014-2015 | Portland, OR

Planned and built an experimental apparatus to test a "quantum" property in a macroscopic Hydrodynamic Quantum Analog (HQA). Collected and analyzed data from multiple trials. Wrote thesis detailing results and defended in a 2 hour oral board. Thesis supervised by **Daniel Borrero**. (Using R and Mathematica.)

MARS ATMOSPHERE | UARK SPACE & PLANETARY SCIENCE CENTER

Summer 2014 | Fayetteville, AR

Using atmospheric data from Mars landers (Phoenix and MSL), carried out a regression analysis of the data to fit the theoretical model of atmospheric adsorption. Under **Dr. Vincent Chevrier** and **Holly Farris**, wrote abstract and presented findings to faculty and at the 2015 LPSC conference. (Used Mathematica and MS Excel.)

MEDICAL PHYSICS | SEATTLE CANCER CARE ALLIANCE

Summer 2013 | Seattle, WA

Lead a statistical analysis of proton therapy couch position for prostate cancer patients, under **Dr. Charles Bloch**. The analyzed data allowed for new procedural adjustments which streamlined treatment times and improved workload for beam technicians and medical physicists. (Used MS Excel.)

WORK EXPERIENCE

REED RESEARCH REACTOR | SENIOR REACTOR OPERATOR

Jun 2013 – Present | Portland, OR

As an NRC licensed Senior Reactor Operator:

- operated and supervised Reed's nuclear reactor for the purposes of research, training, and tours;
- inspected samples using neutron activation analysis;
- organized and presented lectures to trainees;
- supervised emergency drills;
- completed checklists and performed maintenance and calibrations of instruments and systems.

REED PHYSICS DEPT. | PAPER GRADER

Aug 2013 – Present | Portland, OR

Graded problem sets weekly for physics classes taught at Reed. Graded for upper-division and introductory level classes (PHY 342, 311, 102, and 101).

AWARDS

- 2015 LPSC Undergraduate Travel Stipend
- 2015 Reed College Academic Commendation (On Track)
- 2014 Reed College Academic Commendation
- 2014 NSF/NASA REU Fellowship
- 2013 AAPM MUSE Fellowship

PUBLICATIONS

M. B. Conner, H. N. Farris, V. F. Chevrier. *Regolith-Atmosphere Water Vapor Transfer on Mars: Comparison Between Phoenix and MSL Data.*

H. N. Farris, **M. B. Conner**, E. G. Riviera-Valentin, V. F. Chevrier. *Regolith Control of Atmospheric Water Vapor on Mars: Analysis of Phoenix TECP Data.*

GRADES AT REED

Since its founding Reed College has adhered to a distinctive educational philosophy, a critical component of which is the evaluation and grading of student academic work.

ACADEMIC RIGOR

The average GPA for all students in 2013–14 was 3.15 on a 4.00 scale. This figure has increased by less than 0.2 of a grade point in the past 30 years. During that period, only eleven students have graduated from Reed with perfect 4.00 grade averages.

2013–14 GRADUATING CLASS

10% graduated with a GPA of 3.71 or higher
25% graduated with a GPA of 3.49 or higher
Average GPA—3.20

The absence of grade inflation at Reed reflects the rigor of the academic program and the high standards set by the faculty, rather than any deficiency in the quality of the student body.

GRADING POLICY

Students are encouraged to focus on learning, not on grades. Students are evaluated rigorously, and semester grades are filed with the registrar, but by tradition, students do not receive standard grade reports. Papers and exams are generally returned to students with lengthy comments but without grades affixed. There is no dean's list or honor roll, and Reed does not award Latin honors at graduation.

THE ENTERING CLASS 2014–15

Reed's average SAT scores are among the top dozen or so of all liberal arts colleges in the nation.

Average SAT (critical reading, mathematics, and writing)—2,072

Average high school GPA—3.93

SCHOLARSHIP AND FELLOWSHIP AWARDS

Over the years, Reed students and alumni have won:

- 31 Rhodes Scholarships (the second highest from a liberal arts college)
- 93 Fulbright Scholarships
- 64 Watson Fellowships
- 25 Mellon Fellowships since 1983
- 156 National Science Foundation fellowships

Eighteen Reed alumni have been elected to the National Academy of Sciences. Over ten percent of Reed alumni are CEOs, presidents, or owners of private companies.

RANKINGS OF GRADUATES

Reed ranks fourth in the nation among all institutions of higher learning in the per capita production of future Ph.D.s in all disciplines. It ranks third in science and mathematics, third in social sciences, and sixth in humanities and art. Among more specific fields, it ranks second in life sciences, second in humanities, second in social sciences (not including psychology, education, and communications), third in physical sciences, fourth in psychology, and tenth in mathematics and computer science. (Source: National Science Foundation and Integrated Postsecondary Education Data System data, based on doctoral degrees awarded 2002-2011).

*For further information, please call the Reed College registrar's office, 503/777-7793.
You can also reach us by fax at 503/777-7795 or email at registrar@reed.edu.*