**Jeff Jaureguy**

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**Education**

2018-Present California State University San Marcos (CSUSM)

B.S. Biological Sciences & Mathematics Minor

CSUSM GPA: 3.78

2015-2018 MiraCosta College (MCC)

A.A. Math and Sciences

MCC College GPA: 3.52

**Awards/Scholarships**

2019 California State University Trustees Award for Outstanding Achievement

2019 CSUSM Office of Graduate Studies and Research Travel Award

2019  Leonard and Jean Evers Scholarship

2018-Present Hispanic Scholarship Foundation (HSF) Scholar

2018-Present Louis Stokes Alliance for Minority Participation (LSAMP) Scholar

2018-Present CSUSM Deans List

2018-Present CSUSM Thomas Wahlund Scholarship

2018-Present Maximizing Access Research Careers Scholar (NIH)(MARC)

2018 Emerging Research National (ERN) Conference Travel Grant Award

2018 Phi Theta Kappa All-USA Academic Team (National Scholarship)

2018 University of California Irvine Honors Transfer Council California (HTCC) 2nd Place Poster Award

2016 University of Illinois Urbana-Champaign Ave Alvarado Excellence Award Summer Research Opportunities Program 2016

2016 Annual Biomedical Research Conference for Minority Students (ABRCMS) Travel Grant Award

2017-2018 MiraCosta College Honors Student

2015-2018 MiraCosta College Winski Scholar

2015-2018 MiraCosta College Osher Scholarship

2015-2018 MiraCosta College Annual Scholarship

2015-2018 MiraCosta College Permanent Honor Roll

2015-2017 MiraCosta College (NIH)Bridges to the Future

**Research Experience**

Summer 2019 Student Research Assistant, University California San Diego, Summer Training Academy for Success

PI: Vineet Bafna Ph.D

This lab’s research focused on genomics, population genetics, and proteomic research with mass spectrometry and focused on developing solutions to bioinformatics problems with algorithms.

* Developed and implemented a web framework database for convolutional neural networks software ecSeg which quantifies extra chromosomal DNA
* Django

2019-Present Student Research Assistant, California State University San Marcos

PI: Amber Puha Ph.D

This lab’s research focused on probability theory, stochastics processes and their applications. The research has revolved around proving approximation theorem for a variety of modern networks.

* Game analysis of the Basque Card Game Mus
* Solved and analyzed the probabilities and win rates in a two-player card game.
* Developed interactive software to simulate a card game.

2019-Present Student Research Assistant, California State University San Marcos

PI: Arun Sethuraman Ph.D

This lab’s research focused on population genomics, evolution, and bioinformatics. Another component of research the lab is currently developing a unified bioinformatics platform for end- to-end population genomics analyses using large-scale sequencing data and the lab also develops and maintain methods collaboratively for population genetic/genomic analyses

* Conducted research related to population genomics and bioinformatics.
* Developed Lokta-Volterra models in python
* Literature review and comparison to data
* Developed and implemented software for user to generate effective population values based of population census.

2016-2019 Student Research Assistant, California State University San Marcos

PI: George Vourlitis Ph.D

This lab’s research focused on quantifying the rates of mass (CO2, H2O vapor, and other trace-gases) and energy exchange of terrestrial ecosystems, and how these surface-atmosphere exchanges are affected by, and feed-back on, global change.

* Conducted climate change research related to ecology by measuring through-fall nitrogen and ammonium deposition.
* Completed enzyme assays for soil microbes
* Processed soil biomass
* Data entry and statistical analysis
* Utilized combustion analysis device
* Assisted in Organic chemistry techniques such as NMR and LC mass spectrometry related to leaf chemistry
* Trained undergraduate students in various lab methodologies such as nitrate and ammonium extractions, soil biomass processing, and data entry and analysis

Summer 2016 Student Research Assistant, Natural History Survey, University of Illinois Urbana Champaign Summer Research Opportunities Program

This lab’s research focused on the comparison of pre-European settlement and climate influence of future distributions of stoneflies. It also focused on the stonefly taxonomy and systematics as well as biodiversity patterns of stoneflies in North America.

PI: Edward DeWalt Ph. D

* Conducted aquatic ecology related field research in order to determine species abundance, species richness, and taxonomy of aquatic insects.
* Utilized microscopes in the laboratory in order to identify different species
* Field Research
* Photo Identification and Database

**Industry Experience**

Summer 2014 Biological Resource Services, LLC, Central Valley, CA

Field Biologist/ Conservation Ecologist

* + - Protocol surveys for Blunt Nose Leopard Lizard-*Gambelia Sila*. Detailed data collection and analysis including recording environmental conditions and counting lizard populations
    - GPS mapping program utilized in data retrieval.

**Conference Presentations**

**Jaureguy J**, Vourlitis G. Annual Below Ground Net Primary Production in Southern California Chaparral,

* + Oral presentation at California State University San Marcos Research Symposium. San Marcos, Ca. March 2019

**Jaureguy J**, Vourlitis G. Second Year of Spatial variations in N deposition: Differences in NH4+ and NO3- deposition between sites and vegetation types in southern California Chaparral.

* + Poster presentation at Emerging Researchers National Conference. Washington DC. February 2019.
  + Poster presentation at Pasadena City College, SCCUR. Pasadena City College. Pasadena, Ca. November 2018.

**Jaureguy J**, Margolle T, Hernandez A, Firouzian S, Applications of Multivariate Calculus.

* Poster presentation at Chapman University Research Conference. Chapman College. Orange, Ca. April 2018.
* Poster presentation at University of California Irvine HTCC. University of California Irvine. Irvine, Ca. April 2018

**Jaureguy J**, Vourlitis G. Spatial variations in N deposition: Differences in NH4+ and NO3- deposition between sites and vegetation types in southern California Chaparral.

* Poster presentation at Pasadena City College, SCCUR. Pasadena City College. Pasadena, Ca. November 2017.

**Jaureguy J**, Vourlitis G. Differences in Nitrogen Deposition Between Vegetation Types.

* Poster presentation at SACNAS conference Salt Lake City UT. October 2017.

**Jaureguy J**, DeWalt Edward. Is Stream Size a Determining Factor of Species Richness and Total Abundance of Caddisflies (Trichoptera).

* Poster presentation at ABRCMS Tampa, Fl. November 2016.
* Oral presentation at University of California San Diego STARS Summer Research Conference. University of California San Diego. San Diego, Ca. August 2016.
* Poster presentation at University of Illinois Urbana Champaign Summer University of Illinois Urbana Champaign Research Symposium. Urbana Champaign, Il. July 2016.

**Publications**

Vourlits G., **Jaureguy J.**, Santanna F., Zanella de Arruda P. (submitted)” Large variations in through-fall nitrogen deposition over sub-kilometer spatial scales in a semi-arid suburban watershed ”. Journal of Environmental Quality.

(Submitted)

**Leadership**

2018-Present Phi Theta Kappa Alumni President

2015-Present (Bridges to the Future) mentor for undergraduate students in underrepresented populations

2015-2017 President of STEM Research Club, MiraCosta College

2017-2018 Vice President of Scholarships Phi Theta Kappa, MiraCosta College

**Honor Societies**

2018-Present Association for Computing Machinery (ACM) member

2018-Present American Statistical Association (ASA) member

2018-Present American Society for Biochemistry and Molecular Biology (ASBMB) member

2018-Present American Association for the Advancement of Science (AAAS) member

2018-Present Phi Theta Kappa Alumni

**Professional Development**

2019 AMSTAT Conference (multi linear regression analysis seminar)

2018-2019 Coursera Stanford Machine Learning Certificate (in progress)

2018-2019 Coursera UCSD-Biology Meets Programming: Bioinformatics for beginners Certificate

**Volunteer**

2015-Present Bishwa-Seva Foundation (Nepal non-profit for children)

2017 Girl Tech (Encouraging young women to join STEM)

2014 Veterinarian clinic (India)

2014 Lha charity (Taught English to Tibetan monks)

**Computer Skills**

Proficient in C++, Python, R, Git, MiniTab

**GitHub Profile**