

CRYSTAL M. REYNAGA, PH.D.
Assistant Professor of Biomechanics
University of California, Riverside

Department of Evolution, Ecology, and Organismal Biology (EEOB)
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RESEARCH FOCI

Whole Animal Movement Kinetics and kinematics of novel locomotor modes from quadrupedal walking to jumping.
Neuromuscular Control Motor control function in complex environments using simulated engineered substrates.
Muscle-Tendon Biophysics Dynamic *in vitro* tissue mechanical testing and 3D imaging.

ACADEMIC APPOINTMENTS

UNIVERSITY OF CALIFORNIA, RIVERSIDE | Riverside, CA 2024 – Present
Assistant Professor of Biomechanics | Department of Evolution, Ecology, and Organismal Biology

DICKINSON COLLEGE | Carlisle, PA 2022 – 2024
Assistant Professor of Biology & Neuroscience | Department of Biology

BRYN MAWR COLLEGE | Bryn Mawr, PA 2020 – 2022
Assistant Professor of Biology & Neuroscience | Department of Biology

EDUCATION

UNIVERSITY OF CALIFORNIA, IRVINE 2013 - 2018
Ph.D. in Biological Sciences | Advisor: Dr. *Manny Azizi*
Dissertation: "*Functional implications for novel gaits and substrates in anurans*"
Collaborators: Drs. *Henry Astley* (University of Akron) & *Caitrin Eaton*

UNIVERSITY OF CALIFORNIA, SANTA CRUZ 2010 - 2012
B.S. in Marine Biology | Advisor: Dr. *Rita S. Mehta*
Honors Thesis: "*A comparative study of body shape and swimming kinematics in pholid and stichaeid fishes*"
Collaborators: Drs. *Andrea Ward* (Adelphi University) & *David Collar* (Christopher Newport University)

UNIVERSITY OF CHICAGO 2008 - 2010
Anticipated Major(s): Biological Sciences and Romance Languages & Literatures (Spanish)
Completed 1st and 2nd year core curriculum and introductory requirements.

ADDITIONAL RESEARCH EXPERIENCE

DUKE UNIVERSITY, Postdoctoral Research Associate 2018 – 2020
Department of Biology | Advisor(s): Drs. *Sheila N. Patek* (Duke University) and *Gregory Sutton* (University of Lincoln, UK)

CALIFORNIA STATE UNIVERSITY, LONG BEACH, Volunteer Research Assistant 2012 - 2013
Department of Biological Sciences | Advisors: Drs. *Kimberly Dolphin* & *Ashley Carter*

UNIVERSITY OF WASHINGTON, Undergraduate Fellow Summer 2012
Functional Morphology & Ecology of Marine Fishes at Friday Harbor Laboratories
Advisors: Drs. *Lara Ferry* (University State Arizona) & *Andrew Clark* (College of Charleston)

GRANTS, AWARDS, FELLOWSHIPS, & HONORS

12 research grants total \$654,837

- 2024 **IDEAL Innovation Grant**, Dickinson College, "Fostering Inclusivity and Advancement in STEM: A professional development series to empower underrepresented scholars." (PIs: Crystal Reynaga, Allyssa Decker, and Wande Benka-Coker) \$1,000.
- 2024 **Honorary Wheel & Chain Leadership Honor Society**, Dickinson College. Recognizes outstanding campus leadership and positive impact on the biology department community and with students of color.
- 2023 **National Science Foundation (NSF BRC-BIO 2233366)**, "Trade-offs in locomotor performance: comparing hoppers and jumpers in variable environments." (PI: Crystal Reynaga, Dickinson College), \$456,522.
- 2023 **Colorwave Tech & Innovation Fellow**, selected to be a part of the competitive fellowship program designed to provide professionals of color with the training needed to navigate and thrive in the innovation economy. Dedicated to making the innovation economy a more equitable and inclusive community providing leaders of color access to VC-based start-ups.
- 2019-2024 **Biomechanics Early Career (BEC) Fellowship Program**, Three-year NSF funded mentoring and fellowship program (PIs: Drs. Stacey Combes & Andrew Mountcastle), awarded to five early career women scientists who specialize in biomechanics.
- 2019 **Department of Defense, Army Education Outreach Program (AEOP) Fellowship**, Awarded undergraduate and high school Summer Research Fellowships, total \$7,500.
- 2018 **Chancellor's Club Fund for Excellence Fellowship**, UC Irvine, Fellowship recognizes doctoral students who exhibit outstanding promise as scholars, researchers, and public leaders, \$6,000.
- 2018 **Grad Slam Campus-wide Finalist**, UC Irvine, Campus-wide competition that showcases and awards the top ten three-minute research pitches by graduate scholars.
- 2017 **Best Oral Research Presentation**, NSF GRFP Research Symposium, UC Irvine, \$100.
- 2016 **Graduate Assistance in Areas of National Need (GAANN) Research Fellowship**, US Dept. of Education, \$1,000.
- 2016 **GAANN Fellowship**, US Dept. of Education, \$10,486.
- 2015 **Summer Program Research Participant Fellowship**, UC Irvine, Graduate Division, \$15,000
- 2015 **Diverse Educational Community and Doctoral Experience (DECADE) Research Award**, UC Irvine, Graduate Division, \$1,800.
- 2013-2018 **National Science Foundation Graduate Research Fellowship Award (NSF-GRFP)**, \$136,000.
- 2013-2017 **Graduate Opportunities Fellowship**, UC Irvine, Graduate Division, \$17,000.
- 2011-2012 **Initiative for Maximizing Student Diversity Fellowship (IMSD)**, UC Santa Cruz, National Institutes of Health, \$3,500.
- 2011-2012 **California Alliance for Minority Participation Fellowship (CAMP)**, UC Santa Cruz, National Science Foundation, \$4,800.
- 2012 **Friday Harbor Marine Lab Scholarship**, University of Washington, \$1,800.
- 2011 **National Science Foundation Research Experiences for Undergraduates (NSF-REU 0819009)**, UC Santa Cruz, \$3,915.
- 2009-2010 **Sam and Roslyn Berkman Scholarship**, University of Chicago.

PUBLICATIONS

*denotes undergraduate researcher

4. Divi, S., **Reynaga, C.M.**, Azizi, E., and Bergbreiter, S. 2023. Adapting small jumping robots to compliant

environments. *Journal of the Royal Society Interface* 20: 20220778. [DOI](#)

Media Coverage

Leaping robots take physics lessons from grasshoppers. *Popular Science*, [URL](#)

3. **Reynaga, C.M.**, Eaton, C., *Strong, G.A. and Azizi, E. 2019. Compliant substrates disrupt elastic energy storage in jumping tree frogs. *Integrative & Comparative Biology* 59:1535-1535. [DOI](#)
2. **Reynaga, C.M.**, Astley, H.C., and Azizi, E. 2018. Morphological and kinematic specializations of walking frogs. *Journal of Experimental Zoology A: Ecological and Integrative Physiology* 329:87-98. [DOI](#)

Awarded *Journal of Experimental Zoology* top 20 most downloaded paper in 2018

Media Coverage

These frogs walk instead of hop. *Science Magazine*, [URL](#)

These walking frogs are a must-see wonder. *Treehugger*, [URL](#)

Did you know there are four species of frogs that prefer walking over hopping? *India Today*, [URL](#)

These frogs get around by walking instead of hopping. *Seeker*, [URL](#)

1. Collar, D. C., **Reynaga, C.M.**, Ward, A.B., and Mehta, R.S. 2013. A revised metric for quantifying body shape in vertebrates. *Zoology* 116:246-257. [DOI](#)

MANUSCRIPTS IN PREPARATION

Available upon request

2. **Reynaga, C.M.** and Azizi, E. Mechanical control: Parallel pathways for modulating locomotor output. Invited Review, *Journal of Experimental Biology*. Invited Review. *In revision, submitted July 2025*.
1. **Reynaga, C.M.** and Azizi, E. Trade-offs in muscle-tendon dynamics with added compliance in-series. *Journal of Experimental Biology*. Invited Review. *Under review, submitted September 2025*.

INVITED TALKS

10. **California State University, Long Beach**, Department of Biological Sciences Seminar Series, Spring 2025.
9. **California State University, San Bernardino**, Department of Biology Seminar Series, Spring 2025.
8. **Franklin & Marshall College**, Department of Biology Seminar Series, Spring 2023.
7. **Widener University**, Department of Biology Seminar Series, Fall 2022.
6. **Center to Advance Mentored, Inquiry-based Opportunities (CAMINO)**, University of California, Santa Cruz (UCSC) Spring 2022.
5. **University of California, Riverside (UCR)**, Department of Evolution, Ecology, and Organismal Biology, Fall 2021.
4. **Center for Engineering and MechanoBiology (CEMB)**, University of Pennsylvania, Fall 2021.
3. **California State University, Dominguez Hills (CSUDH)**, Department of Biology Senior Seminar Series, Fall 2020.
2. **The Royal Veterinary College (RVC), University of London**, Structure and Motion Laboratory. *Functional implications for novel gaits and substrates in anurans*, Hatfield UK, Spring 2019.
1. **Society of Integrative & Comparative Biology (SICB) Annual Meeting**, "Symposia: Playing with Power: Mechanisms of Energy Flow in Organismal Movement". *Trade-offs of power amplification on compliant substrates*, Tampa FL, 2019. [Published Abstract DOI](#). *Integrative and Comparative Biology* 59, E192-E192

TEACHING EXPERIENCE

Instructor, Adventures in Science: Issues, Career, Research, Ethics, and More (NASC 094), University of California, Riverside, Spring 2025

Instructor, Comparative Animal Physiology (BIOL 175), University of California, Riverside, Spring 2025

Instructor, Biomechanics (BIOL 301), Dickinson College, Spring 2023-24.

Instructor, Contemporary Problems in Muscle Physiology Seminar (BIOL 412), Dickinson College, Fall 2023.

Instructor, Physiology with Lab (BIOL 333), Dickinson College, Fall 2022-23.

Instructor, Introduction to Organisms, Populations, and Ecosystems Lab (BIOL 131), Dickinson College, Spring 2023.

Instructor, Senior Research Seminar (BIOL B400), Bryn Mawr College, Bryn Mawr PA, 2021-22.

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October 27, 2025

Co-instructor, *Biological Exploration II: Organismal and Ecological Intro Bio Series* (BIOL B111), Bryn Mawr College, Spring 2022.

Instructor, *Biomechanics* (BIOL B217), Bryn Mawr College, Spring 2021-2022.

Instructor, *Human Physiology Lecture w/Lab* (BIOL B303), Bryn Mawr College, Fall 2020.

Guest Instructor, *Exercise Science Seminar*, UC Irvine, Irvine CA, 2016.

Teaching Assistant, *Biology of Birds with Laboratory*, UC Irvine, Irvine CA, 2016.

Teaching Assistant, *Physiology Laboratory*, UC Irvine, Irvine CA, 2013-2015.

Teaching Assistant, *Marine Biology*, UC Irvine, Irvine CA, 2014.

DIVERSITY, EQUITY, INCLUSION* & PROFESSIONAL SERVICE

Secretary for SICB's Division of Vertebrate Morphology (DVM), Term 2023-Present.

***UCR SACNAS Chapter Faculty Advisor**, UC Riverside, 2024-Present. Faculty advisor for the undergrad and grad student lead Society for Advancing Chicanos and Native Americans in the Sciences UCR Chapter. The group has established officers, organized several successful events and outreach, as well as nominate a representative to attending the COLOR conference.

Dinner Con Doctoras Panel, UC Riverside Chicano Student Programing, 2025. Participated in a panel featuring graduate students and faculty.

Science and Math Day—Alumni Career Panel, UC Santa Cruz, 2025. Participate in a panel feature three alumni scientists, sharing our undergraduate experiences and ultimate transition into a STEM-based career.

Las Profes Panel, UC Riverside Chicano Student Programing, 2025. Participated in a panel during *Seminar de la Mujer* geared toward undergraduate and graduate students.

Interview Skills & Job Negotiation Panelist, UC Riverside, 2025. Shared insights and guidance with UCR graduate students, hosted by Career Mentoring of Underrepresented Students for the Professorate (CUSP).

HerpFest Presentation Judge, California State University Northridge, 2025.

SICB DVM-DCB Mentor Program, Mentoring participant in SICB Annual Meeting Mentor Program, 2025.

Southwest Regional Organismal Biology (SWOB) Meeting Presentation Judge, California State University Fullerton, 2024.

***First-generation Student Lunch & Learn**, UC Riverside, 2025. Developed and lead workshop on "Finding Research Opportunities at UCR and Beyond".

CNAS Faculty/Staff Luncheon, UC Riverside Residential Education, 2024. Welcomed first year CNAS undergraduate students by participating in luncheon.

Fulbright Program Advisor (FPA), Dickinson College, 2024, provide guidance and support throughout the Fulbright application process, assisting applicants in crafting competitive proposals, offer feedback on essays and project statements, conduct mock interviews, and facilitate the institutional endorsement process.

Division of Vertebrate Morphology (DVM) Presentation Judge, 2024. Judge for best student oral presentation at the SICB Annual Conference, Seattle WA.

***SACNAS NDiSTEM Mentor Judge**, 2023. Abstract and presentation mentor judge for the Portland OR conference.

Nominated Committee Member, *Broadening Participation Committee*, Society of Integrative & Comparative Biology, 2020-2023.

***Bryn Mawr Committee for Diversity, Equity, Inclusion, and Anti-Racism Curricular Requirement**, Working Group Committee Member, Fall 2021. Collaborative group of faculty & students responsible for developing possible models for a college-wide curricular DEIA innovation requirement.

Bryn Mawr Biology Seminar Series, Seminar Organizer, 2021-2022.

***STEM Posse Immersion**, *Biology Workshop Facilitator*, Summer 2021. Summer bridge program for in-coming first year Posse Scholars. Co-developed interactive lesson plans on motion across scales: from motor proteins to whole body movement.

Bryn Mawr College Institutional Animal Care and Use Committee (IACUC) Member, 2020-2022.

- *Evaluation Advisory Committee Member**, *Society of Integrative & Comparative Biology (SICB)*, 2020. Consultant for SICB President on the development of diversity, equity, and inclusion surveys to promote retention of underrepresented sciences at SICB.
- *Graduate Representative**, *Graduate Dean's Advisory Council on Diversity*, UC Irvine, 2015-2018. Contributed to the enhancement of Graduate Division's diversity initiatives by offering ideas and expertise. Key achievements include spearheading the creation of the 'Learning Community for Future Faculty at UC Irvine,' a proposal aimed at preparing underrepresented graduate students for successful careers in research-intensive university faculty positions. The pilot program, inspired by this proposal, was implemented in Fall 2019.
- *Undergraduate Symposium Judge**, for the Annual University of California Leadership Excellence through Advanced Degrees (UC LEADS) program 2018, *Santa Barbara CA*; and the Annual Biomedical Research Conference for Minority Students (ABRCMS) 2017 in *Phoenix AZ*.
- *UC Irvine Graduate Division Student Representative**, for the Annual Biomedical Research Conference for Minority Students (ABRCMS): 2014, *San Antonio TX*; 2016, *Tampa FL*; 2017, *Phoenix AZ*.
- NSF-GRFP Graduate Student Panelist**, *UC Irvine School of Biological Sciences*, 2014-2017. Shared insights and guidance with first- and second-year UCI graduate students, drawing from my successful experience in preparing a successful NSF-GRFP proposal.
- *McNair Graduate Student Panelist**, *UC Irvine Graduate Division*, 2016-2017. Offered guidance to third to fourth year undergraduates from UC Davis and University of Central Florida, sharing personal experiences on applying to graduate school and transitioning from undergraduate to graduate life.
- UCI Campus wide Graduate Orientation Panelist**, *UCI Graduate Division*, 2016. Spoke as a panelist on "Embracing Your New Graduate Life", sharing experiences, resources, and advice for thriving academically and personally while in graduate school.
- *Ecology & Evolutionary Biology Brown-Bag Lunch**, *UCI Dept. of Ecology & Evolutionary Biology*, Spring 2016. Founded and curated a brown-bag dialogue series for graduate students, fostering a supportive community and providing tailored resources and professional development opportunities through invited speakers. Collaborated with Dr. Ann Sakai, DECADE Faculty Mentor, in coordinating the initiative.
- *UC Irvine Graduate Division Student Representative**, for the Northern California Forum for Diversity in Graduate Education, 2016, San Jose State University, *San Jose CA*.
- *DECADE Student Council STEM Co-Chair**, for the UCI Diverse Educational Community and Doctoral Experience (DECADE), *UC Irvine*, 2015-2016. Co-lead Led council meetings, discussions, Community Meetings, and Townhalls for graduate students on diversity and inclusion. Served as a liaison between Equity Advisors, Graduate Dean, and the graduate student body. Notable achievements include spearheading the development of the 'DECADE Student Council Strategic Plan,' a document outlining university-wide strategies to enhance academic inclusivity for all UCI graduate students.
- Ecology & Evolutionary Biology Organizational Committee Member**, for the Graduate Student Invited Speaker (GSIS) (UC Irvine, Fall 2015); and Winter Dept. of Ecology & Evolutionary Biology Graduate Student Symposium (WEEBGSS) (UC Irvine, Winter 2015).
- NSF-GRFP Writing Mentor**, *UC Irvine School of Biological Sciences*, 2014. Conducted personalized one-on-one writing workshops, offering constructive feedback on NSF-GRFP personal and research statement proposals.

PROFESSIONAL DEVELOPMENT

- Advancement & Retention in Academe (ARA) Faculty Mentoring Program**, Mentee, 2025.
- Phylogenetic comparative methods for early career biomechanists workshop**, Participant, Summer 2025. NSF funded workshop hosted by Moen Lab (UC Riverside).
- Disability Ally Workshop**, UC Riverside Student Disability Resource Center, Winter 2025. Workshop to increase awareness and competency in disability and foster an inclusive environment.
- First-Year Faculty Teaching Excellence Seminar Series Participant**, *UC Riverside*, Fall 2024. Engaged in programming focusing on teaching and learning theory, instructional strategies and assessment to help develop inclusive teaching practices in the classroom.

Teaching and Learning Institute (TLI), Bryn Mawr College, Fall 2020. Worked with undergraduate student, Bilikisu Hanidu, and collaborative group of professors to improve pedagogy in our course instruction.

Activate to Captivate Public Speaking, UC Irvine, Fall 2018. Completed an eight-week certification program on effective research communication instructed by communications specialist Bri McWhorter, MFA.

Safe Zone Training, UC Irvine, Spring 2016. Program empowers individuals as Allies to remain informed, supportive, and affirming of the LGBTQQIA+ Community at UCI.

Science Communication, UC Irvine, Spring 2015. Explored the art and science of effective writing, performance, and audience interaction in a program instructed by Sandra Tsing Loh, host of the syndicated radio show 'The Loh Down on Science'.

Certified Undergraduate Research Mentor in the Laboratory, UC Irvine, Fall 2014. Completed a training and development workshop series on mentoring undergraduate research in the laboratory. The curriculum was developed by the Wisconsin Program for Scientific Teaching with support from the Howard Hughes Medical Institute.

Mentor Excellence Program, UC Irvine, Summer 2013. Completed a training workshop series on fostering effective mentoring relationships, enhancing communication and interpersonal connections, understanding ethics in academics, research, and personal decisions, and cultivating resilience in balancing academics and wellness mentorship. Program offered by the Graduate Division.

Teaching Assistant Professional Development Workshops, UC Irvine, Summer 2013. Completed a training workshop series on instructional design, responsibilities, pedagogical theory and practice, and university policies and resources. Program offered by the Teaching, Learning & Technology Center.

UCI Graduate Division Competitive Edge Summer Research Program, UC Irvine, Summer 2013. A summer pre-entry program for incoming female and underrepresented PhD students to conduct research under the direct supervision and guidance of a faculty member, Dr. *Manny Azizi*. Program included workshops on campus resources, professional development, peer support networks, and academic strategies to enhance the graduate education experience.

COMMUNITY OUTREACH

Adelante Reynaga Lab Tour, Bryn Mawr PA. 2022. Lab tour and demonstration for Latine middle school students from ACLAMO Family Center in Norristown PA.

American Physiological Society (APS) Physiology Understanding (PhUn) Week, Long Beach CA. 2018. Collaborated with Dr. *Nancy Aguilar-Roca* (UCI faculty), Ms. *Aida Gonzalez*, (2nd grade teacher), and APS in a nation-wide outreach program to develop discovery-based, hands-on learning activities on 'Muscles, Movement, and Our Skeleton', through small group 'laboratory' sessions using Backyard Brains.

Second Grade Outreach, Naples Elementary School, Long Beach CA. 2014-2018. Collaborated with Ms. *Aida Gonzalez* to create interactive presentations, curriculum, and laboratory activities aligning with my research focus. Topics covered the natural history of the Senegal running frog, muscle and vertebrate anatomy, anatomical measurements, and the construction of simple physical models.

7th and 8th Grade Outreach, Washington Middle School, Long Beach CA. 2016-2018. Developed an interactive presentation on my research, "How Our Muscles Move and Activate". With a post-discussion on STEM diversity in the sciences proposing questions like "What does a scientist look like?"

STUDENT MENTORING

‡ Undergraduate co-author *Independent research project ‡Career in STEM ◊Research Thesis Advisee ◊Master's student

University of California, Riverside, Riverside CA

Alejandra Diaz, Undergraduate Researcher (2025-Present)
 Jasroop Klair, Undergraduate Researcher (2025-Present)
 Emersyn Hidalgo, Undergraduate Researcher (2025-Present)
 Natalie Flores, Visiting undergraduate researcher from CSU San Bernardino (Summer 2025)

Dickinson College, Carlisle PA

Bridget Acheson, Undergraduate Researcher (2024)

Shubhashree Bhatt*, Undergraduate Researcher (2024)
Seblewongle Enyew*, Undergraduate Researcher (2023-2024)
Annika Haagensen, Undergraduate Researcher (2023-2024)
Cooper Kocon*^o[‡], Undergraduate Researcher (2023-2024)
Melissa Patino-Martinez*, Undergraduate Researcher (2023-2024)
Sara Penula*[‡], Undergraduate Researcher (2023-2024)
Anna Purvis*, Undergraduate Researcher (2024)

Bryn Mawr College, Bryn Mawr PA

Aha Anderson*^o, Biology Major, Undergraduate Researcher (2022-2023)
Houda Bouchourari*^o[‡], Biology Major, Undergraduate Researcher (2020-2022)
Maya Diffrischia*[‡], Physics Major & Biology Minor, Undergraduate Researcher (2022)
Jenifer Fabian Dubon*, Biology Major & Computer Science Minor, Undergraduate Researcher (2022)
Khushi Jaising*[‡], Biology Major, Undergraduate Researcher (2022)
Madison Kearns*^o, Biology Major, Undergraduate Researcher (2021-2022)
Elizabeth Kiely*^o[‡], Biology Major, Undergraduate Researcher (2021-2022)
Nuan Zhang*^o[‡], Biology Major, Undergraduate Researcher (2021-2022)
Isabelle Kuszyk*, Psychology Major, Undergraduate Researcher (2021)
Calumina McCondochie^o[‡], Thesis Advisee, Undergraduate Researcher at PennVet van Eps Lab (2020-2021)

Duke University, Durham NC

Julia Choi*, Undergraduate Researcher (2019-2020)
Cassie Shriver*[‡], Undergraduate Researcher (2019-2020)
Misha Mubashar Khan*, Swarthmore College Undergraduate Researcher (Summer 2019)
Vennila Thillaivanan*, Panther Creek High School Student Researcher (Summer 2019)
Aiden Lamar*, Riverside High School Student Researcher (Summer 2019)

University of California, Irvine, Irvine, CA

Galatea Strong ^r *[‡], Undergraduate Researcher (2016-2018)
Ashley Hughes*, Undergraduate Researcher (2013-2015)
Yasmin Gutierrez*[‡], Undergraduate Researcher (2014-2015)

Summer Undergraduate & Master's Research Program Mentees, UC Irvine, Irvine CA

2016: Elizabeth Mendoza^o[‡] (U. of Oklahoma), Alica Corrales[‡] (CSU Long Beach), Luc D'Hauthuille (UC Santa Cruz), Kenny Huynh[‡] (UC Irvine), Kirolos Kelada[‡] (UC Irvine), Lupita Lopez (CSU Long Beach), Aylin Mojica (UC Irvine), Nuria Perez Varela (UC Irvine), Jordyn Rodwell (UC Irvine)

2015: Dany Atallah (CSU Long Beach), Alexander Beechko[‡] (CSU San Bernardino), Thomas Carpino[‡] (U. of Central Florida), Noah Ghossein[‡] (CSU San Bernardino), Jourdan Mason (UC Merced), Jasmin Melara[‡] (U. of Georgia), Courtney Powell[‡] (U. of Central Florida), Joli Quiceno (Florida International U.)

2014: Andrew DiMauro[‡] (UC Berkeley), Melvin Lorenzo[‡] (UC Davis), David Novo (Barry University), Ivory Paulk[‡] (U. of Central Florida), Flora Wang (Smith College), Nicholas White[‡] (UC Merced)

DECADE PLUS First-gen Undergraduate Mentorship Program, UC Irvine, Irvine CA 2014-2015: Bianka Dominguez (UC Irvine), Judith Granados (UC Irvine), Leidy Cruz (UC Irvine)

SACNAS UCI Chapter Undergraduate Mentee

Sarah Valles[‡], UC Irvine (2013-2014)

PRESENTATIONS

*Award winning presentation; ^r Undergraduate researcher

30. **Crystal M. Reynaga** (2024). Locomotion across scales. Southwest Regional Meeting for the Society of Integrative & Comparative Biology, Fullerton CA. Oral Presentation.

29. †Sara Penuela, †Annika Haagensen, Rebecca G. Wells, and **Crystal M. Reynaga** (2024). Tendon fibril ultrastructure variation across frog species and locomotor mode. *Society for Experimental Biology Annual Conference*, Prague, Czech Republic. Poster Presentation.
28. **Crystal M. Reynaga**, Rebecca G. Wells, †Sara Penuela, and †Annika Haagensen (2023). Tendon fibril ultrastructure variation across frog species and locomotor mode. *Center for Engineering and Mechanobiology (CEMB) Symposium & Retreat*, Philadelphia PA. Poster Presentation.
27. **Crystal M. Reynaga**, †Jennifer Fabian Dubon, †Madison Kearns, and †Isabelle Kuszyk (2023). Limb form and function in anuran quadrupedal walking. *Society of Integrative & Comparative Biology*, Austin TX. Poster Presentation.
26. **Crystal M. Reynaga**, Sathvik Divi, Mark Ilton, Sarah Bergbreiter, and Emanuel Azizi (2018). Tuning latch mediated systems to their environment. Southeast Regional Meeting for the *Society of Integrative & Comparative Biology*, Clemson University, Clemson SC. Oral Presentation.
25. ***Crystal M. Reynaga** (2018). Frog Olympics: Jumping off unsteady diving boards. *UC Irvine Campus-wide Finals*, Irvine CA. Oral Presentation.
24. ***Crystal M. Reynaga** (2018). Frog Olympics: Jumping off unsteady diving boards. *UC Irvine Campus-wide Grad Slam Semi-finals*, Irvine CA. Oral Presentation.
23. **Crystal M. Reynaga**, †Galatea Strong, Caitrin Eaton & Emanuel Azizi (2018). Hindlimb mechanics and motor pattern response to varying compliant substrates in Cuban tree frogs. *Society of Integrative & Comparative Biology*, San Francisco CA. Oral Presentation. [Published Abstract DOI](#). *Integrative and Comparative Biology* 58, E186-E186.
22. **Crystal M. Reynaga** & Emanuel Azizi (2017). Effects of compliance on elastic energy recovery in the bullfrog plantaris muscle. Southwest Regional Meeting for the *Society for Integrative and Comparative Biology*, Harvey Mudd College, Claremont CA. Oral Presentation.
21. **Crystal M. Reynaga**, Caitrin Eaton & Emanuel Azizi (2017). Hindlimb mechanics and response of jumping from compliant substrates in tree frogs. *Society for Experimental Biology Annual Meeting*, Gothenburg, Sweden. Oral Presentation.
20. ***Crystal M. Reynaga**, Caitrin Eaton & Emanuel Azizi (2017). Effects of compliant substrates on jumping. *NSF-GRFP Research Symposium*, UC Irvine, Irvine CA. Oral Presentation.
19. **Crystal M. Reynaga**, Caitrin Eaton & Emanuel Azizi (2017). Frog Olympics: Jumping off unsteady diving boards. *Associated Graduate Students (AGS) Symposium*, UC Irvine, Irvine CA. Oral Presentation.
18. **Crystal M. Reynaga**, Caitrin Eaton & Emanuel Azizi (2017). Effects of substrate compliance during jumping in the Cuban tree frog. *Winter Ecology and Evolutionary Biology Graduate Student Symposium (WEEBGSS)*, UC Irvine, Irvine CA. Oral Presentation.
17. **Crystal M. Reynaga**, Caitrin Eaton & Emanuel Azizi (2017). Effects of substrate compliance on hindlimb kinematics of jumping in Cuban tree frogs, *Osteopilus septentrionalis*. *Society for Integrative and Comparative Biology Annual Meeting*, New Orleans LA. Poster Presentation. [Published Abstract DOI](#). *Integrative and Comparative Biology* 57, E138-E138.
16. **Crystal M. Reynaga**, Caitrin Eaton & Emanuel Azizi (2016). Investigating the effects of substrate compliance on jumping in Cuban tree frogs. Southwest Regional Meeting for the *Society for Integrative and Comparative Biology*, California State University Fullerton, Fullerton CA. Oral Presentation.
15. **Crystal M. Reynaga**, Caitrin Eaton & Emanuel Azizi (2016). Effects of substrate compliance during Jumping in the Cuban tree frog, *Osteopilus septentrionalis*. *Society of Advancing Chicanos/Hispanics and Native Americans (SACNAS) in Science: The National Diversity in STEM Conference*, Long Beach CA. Poster Presentation.
14. **Crystal M. Reynaga**, Henry Astley & Emanuel Azizi (2016). Morphological and kinematic constraints of quadrupedal walking in frogs. *Society for Integrative and Comparative Biology Annual Meeting*, Portland OR. Oral Presentation. [Published Abstract DOI](#). *Integrative and Comparative Biology* 56, E182-E182.
13. **Crystal M. Reynaga**, Henry Astley & Emanuel Azizi (2015). Morphological and kinematic constraints of quadrupedal walking in frogs. Southwest Regional Meeting of the *Society for Integrative and Comparative Biology*, Cal Poly Pomona, Pomona CA. Oral Presentation.
12. **Crystal M. Reynaga** & Emanuel Azizi (2015). Force transmission pathways in axial muscles of the common carp,

- Cyprinus carpio*. Winter Ecology and Evolutionary Biology Graduate Student Symposium, UC Irvine, Irvine CA. Oral Presentation.
11. **Crystal M. Reynaga** & Emanuel Azizi (2015). Force transmission pathways in axial muscles of the common carp, *Cyprinus carpio*. Society for Integrative and Comparative Biology Annual Meeting, West Palm Beach FL. Poster Presentation. [Published Abstract DOI](#). *Integrative and Comparative Biology* 55, E320-E320.
 10. **Crystal M. Reynaga**, Nicole Danos, Emanuel Azizi (2014). Conflicts between locomotor modes: running and jumping locomotion in the Senegal running frog, *Kassina senegalensis*. Society for Integrative and Comparative Biology Annual Meeting, Austin TX. Poster Presentation. [Published Abstract DOI](#). *Integrative and Comparative Biology* 54, E337-E337.
 9. **Crystal M. Reynaga**, Nicole Danos, Emanuel Azizi (2013). Conflicts between locomotor modes: terrestrial and aquatic locomotion in the Senegal running frog, *Kassina senegalensis*. Southwest Regional Meeting of the Society for Integrative and Comparative Biology, UC Riverside, Riverside CA. Oral Presentation.
 8. **Crystal M. Reynaga**, Nicole Danos, Emanuel Azizi (2013). Limb kinematics during terrestrial and aquatic locomotion in the Senegal running frog, *Kassina senegalensis*. Competitive Edge Summer Symposium, UC Irvine, Irvine CA. Oral Presentation.
 7. **Crystal M. Reynaga**, Lara Ferry, Andrew Clark (2013). A comparative study of body shape and swimming kinematics in pholid and stichaeid fishes. Society for Integrative and Comparative Biology Annual Meeting, San Francisco CA. Poster Presentation. [Published Abstract DOI](#). *Integrative and Comparative Biology* 53, E3337-E337.
 6. **Crystal M. Reynaga**, Lara Ferry, Andrew Clark (2012). A comparative study of body shape and swimming kinematics in pholid and stichaeid fishes. Southwest Regional Meeting of the Society for Integrative and Comparative Biology, CSU San Bernardino, San Bernardino CA. Poster Presentation.
 5. **Crystal M. Reynaga**, David Collar, Andrea Ward, Rita Mehta (2012). A revised metric to quantify body shape diversity in vertebrates. CAMP Statewide Research Symposium, UC Irvine, Irvine CA. Poster Presentation.
 4. **Crystal M. Reynaga**, David Collar, Andrea Ward, Rita Mehta (2012). A revised metric to quantify body shape diversity in vertebrates. Society for Integrative and Comparative Biology Annual Meeting, Charleston SC. Oral Presentation. [Published Abstract DOI](#). *Integrative and Comparative Biology* 52, E145-E145
 3. **Crystal M. Reynaga**, David Collar, Andrea Ward, Rita Mehta (2011). A revised metric to quantify body shape diversity in vertebrates. Wainwright Functional Morphology Meeting, Carmel Valley CA. Oral Presentation.
 2. **Crystal M. Reynaga**, David Collar, Andrea Ward, Rita Mehta (2011). A revised metric to quantify body shape diversity in vertebrates. SACNAS National Conference, San Jose CA. Poster Presentation.
 1. **Crystal M. Reynaga**, David Collar, Andrea Ward, Rita Mehta (2011). A revised metric to quantify body shape diversity in vertebrates. Undergraduate Summer Research Symposium, UC Santa Cruz, Santa Cruz CA. Poster Presentation.

JOURNALS SERVED AS MANUSCRIPT REVIEWER

Anatomia, Histologia, Embryologia
Comparative Biochemistry and Physiology, Part A
Ecological and Evolutionary Physiology
Frontiers in Bioengineering and Biotechnology
Integrative and Comparative Biology
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