



2024 RESEARCH PUBLICATIONS BY STUDENTS AND FACULTY

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| Cal Poly Bailey College of Science and Mathematics Faculty Authors/Co-Authors | Cal Poly Bailey College of Science and Mathematics Faculty Authors/Co-Authors | Publication Title; Faculty Author(s); Citation; DOI – NOTE: Student and faculty author and co-author names can be viewed in the publication and its DOI. |
|---|---|---|
| Biological Sciences / Computer Sciences | Davidson, Jean; Anderson, Paul | refMLST: reference-based multilocus sequence typing enables universal bacterial typing; Khdirhi, M., Thomas, E., de Smet, C., Chandar, P., Chandrakumar, I., Davidson, J.M., Anderson, P., Chorlton, S.D; BMC Bioinformatics 2024; https://doi.org/10.1186/s12859-024-05913-4 |
| Biological Sciences / Computer Sciences | Davidson, Jean; Anderson, Paul | Bridging Domains in Chronic Low Back Pain: Large Language Models and Ontology-driven Strategies for Knowledge Graph Construction; Anderson, P., Lin, D., Davidson, J.M., Migler, T., Ho, I., Koenig, C., Bittner, M., Kaplan, S., Paratso, M., Buhn, N., Stokes, E., Hunt, T., Ropella, G., Lotz, J. Bioinformatics and Biomedical Engineering, 2024; https://doi.org/10.1007/978-3-031-64636-7_2 |
| Biological Sciences | Davidson, Jean; White, Crow | Genetic adaptation despite high gene flow in a range-expanding population; Lee, A., Daniels, B.N., Hemstrom, W., López, C., Kagaya, Y., Kihara D; Davidson, J.M., Toonen, R.J., White, C., Christie, M.R. 2024. <i>Molecular Ecology</i> ; https://doi.org/10.1111/mec.17511 |
| Biological Sciences | Davidson, Jean; White, Crow | Genomic DNA extraction optimization and validation for genome sequencing using the marine gastropod Kelle's whelk; Daniels, B.N., Nurge, J., Sleeper, O., Lee, A., López, C., Christie M.R., Toonen, R.J., White, C., Davidson, J.M. 2024; PeerJ, https://peerj.com/articles/16510/ |
| Biological Sciences | Davidson, Jean; White, Crow, Fidopiastis, Pat | Microbiome composition and function within the Kelle's whelk perivitelline fluid; Daniels, B.N., Nurge, J., de Smet, C., Sleeper, O., White, C., Davidson, J.M., Fidopiastis, P; 2024. <i>Microbiology Spectrum</i> ; https://europemc.org/articles/PMC10913743 |
| Biological Sciences | Emily Taylor | McIntyre, M. G., M. van Merlo, M. R. Parker, S. M. Goetz, E. N. Taylor, S. M. Boback. 2024. Rain-harvesting behavior in free-ranging prairie rattlesnakes (<i>Crotalus viridis</i>). <i>Curent Zoology</i> . zcae069. |
| Biological Sciences | Emily Taylor, Haley Moniz (Frost Postdoc) | Buchmiller, N. E., S. J. Weaver, R. E. Bedard, E. N. Taylor, H. A. Moniz. 2024. Storage time and temperature affect plasma osmolality values in field-collected blood samples. <i>Comparative Biochemistry and Physiology Part A: Molecular & Integrative Physiology</i> 295:11665. |
| Biological Sciences | Emily Taylor | Weaver, S. J., I. J. Axsom, L. Peira, T. McIntyre, J. Chung, R. S. Telemeo, M. F. Westphal, E. N. Taylor. 2024. Hydric physiology and ecology of a federally endangered desert lizard. <i>Conservation Physiology</i> 12: coae019. |
| Biological Sciences | Emily Taylor | Allison, E.B., E. N. Taylor, Z. A. Graham, M. Amarello, J. J. Smith, Z. J. Loughman. 2024. Effects of relational and instrumental messaging on human perception of rattlesnakes. <i>PLoS ONE</i> 19:e0298737. |
| Biological Sciences | Emily Taylor | Davis, C.G., S. J. Weaver, E. N. Taylor. 2024. Cutaneous evaporative water loss in lizards changes immediately with temperature. <i>Ecological and Evolutionary Physiology</i> 97:118-128. |
| Biological Sciences / Statistics | Emily Taylor, Trevor Ruiz, Haley Moniz (Frost Postdoc) | Moniz, H.A., J. H. Buck, H. L. Crowell, S. M. Goetz, T. D. Ruiz, E. N. Taylor, and S. M. Boback. 2024. High thermal quality rokeries facilitate high thermoregulatory accuracy in pregnant female rattlesnakes. <i>Journal of Thermal Biology</i> 124:103948. |
| Biological Sciences | Francis, Clinton | Divergent effects of short-term and continuous anthropogenic noise exposure on Western Bluebird parental care behavior; Ozkan K, Langley JM, Tabott JW, Kleist NJ, Francis CD. 2024. Divergent effects of short-term and continuous anthropogenic noise exposure on Western Bluebird parental care behavior. <i>PeerJ</i> 12:e18558 DOI:10.7717/peerj.18558 |
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| Biological Sciences | Francis, Clinton; White, C | Understanding park visitors' soundscape perception using subjective and objective measurement; Fetguson LA, Tafi BD, Blanford JI, Mennitt DJ, Mowen AJ, Levenhagen M, White C, Monz CA, Francis CD, Bar-bar JR, Newman P. 2024. Understanding park visitors' soundscape perception using subjective and objective measurement. <i>PeerJ</i> 12:e16592 http://doi.org/10.7717/peerj.16592 |
| Biological Sciences | Greenlee-Wacker, Mallary | In response to bacteria, neutrophils release extracellular vesicles capable of initiating thrombin generation through DNA-dependent and independent pathways; Kaitlyn M Whitefoot-Kelin, Chase C Benaske, Edwina R Allen, Mariana T Guerrero, Justin W Grapentine, Benjamin D Schiff, Andrew R Mahon, Mallary C Greenlee-Wacker; <i>J Leukoc Biol</i> . 2024 Nov 27;116(6):1223-1236. doi: 10.1093/leukoc/laae125. |
| Biological Sciences | Jennifer Yost | Humans in the Loop: Ocean science and machine learning synergies for overcoming herbarium digitization bottlenecks. R. Guzinick, R. LaFrance, M. Denslow, S. Bickhan, M. Bouslog, S. Miller; J. Yost, J. Best, D. Paul, E. Ellwood, E. Gilbert, J. Allen. 2024. <i>Applications in Plant Sciences</i> . http://dx.doi.org/10.1002/aps3.11560 |
| Biological Sciences / Computer Sciences / Economics / Social Sciences | Jennifer Yost, Matt Ritter, Jonathan Ventura, Jackie Doremus, Andrew Fricker | Individual tree detection in large-scale urban environments using high-resolution multispectral imagery; J.Ventura, C. Pawlak, M. Honsberger, C. Gonsalves, J. Rice, N. Love, S. Han, V. Nguyen, K. Sugano, J. Doremus, A. Fricker, J.Yost, M. Ritter; <i>International Journal of Applied Earth Observation and Geoinformation</i> . 2024. 130: 103848. https://doi.org/10.1016/j.jag.2024.103848 |
| Biological Sciences | Kolluru, Gita | Female preference counteracts negative frequency dependent selection for a livebearing polymorphism in a livebearing fish; S.M. West*, M. Beymer, C. Favro, G.R. Kolluru. 2024. <i>Behavioural Processes</i> 222, 105096 |
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| Biological Sciences | Lema, Sean | Food deprivation reduces sensitivity of liver Igf1 synthesis pathways to growth hormone in juvenile gopher rockfish (<i>Sebastes carnatus</i>); Bersin, T.V., Cordova, K.L., Journey, M.L., Beckman, B.R., Lema, S.C., 2024. <i>General and Comparative Endocrinology</i> 346, 114404. https://doi.org/10.1016/j.ygcen.2023.114404 |
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| Biological Sciences | Lwanag, Heather | Riordan, K*, A.E. Dean***, S.J. Kerr, N.M. Thometz, F.J. Batac, and H.E.M. Lwanag (2024) A novel companion of southern sea otter (<i>Enhydra lutris nereis</i>) fur buoyancy across ontogeny. <i>The Journal of Experimental Biology</i> 227(17); http://jeb.247134 |
| Biological Sciences / Animal Sciences / Statistics | Maj, Magdalena; Manjarin, Rodrigo; Walker, John | Effect of Fusion to the LTB Camier Protein on Coronavirus Spike Protein Vaccine Candidates Produced in Maize; Egelkrou, Maj, Manjarin, Fake, Watanabe, Williams, Blanchard, Walker, Hayden, Howard; <i>Viruses</i> December 2024; doi: 10.3390/v17010007 |
| Biological Sciences | Ruttenberg, Benjamin | Ecological drivers of parrotfish coral predation vary across spatial scales. <i>Marine Ecology Progress Series</i> 740:145-160. https://doi.org/10.3354/meps740145 |
| Biological Sciences / Physics | Ruttenberg, Benjamin; Walter, Ryan; White, Crow | High resolution assessment of commercial fisheries activity along the US West Coast using Vessel Monitoring System data with a case study using California groundfish fisheries. <i>PLoS ONE</i> 19(6): e0298868. https://doi.org/10.1371/journal.pone.0298868 |
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| Biological Sciences | Wendt, Dean; Ruttenberg, Benjamin | Reserve size and age determine efficacy across a network of marine protected areas: collaborative fisheries research supports management and conservation. <i>Conservation Letters</i> . https://doi.org/10.1111/conl.13000 |
| Biological Sciences / Physics | White, Crow; Walter, Ryan; Ruttenberg, Benjamin | Spatial planning offshore wind energy farms in California for mediating fisheries and wildlife conservation impacts. <i>Environmental Development</i> 51:101005. https://doi.org/10.1016/j.envdev.2024.101005 |
| Biological Sciences | Nishi Rajakaruna | Soil type and precipitation level have a greater influence on fungal than bacterial diversity in serpentine and non-serpentine biological soil crusts; Botha, D., Barnard, S., Claassens, S., Rajakaruna, N., Venter, A., Ismail, A., Allam, M., and S. J. Siebert. <i>Ecological Research</i> 39(6): 862-878; https://doi.org/10.1111/1440-1703.12500 |
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| Biological Sciences | Nishi Rajakaruna | The Edaphic Factor in Ecology; Rajakaruna, N., S. J. Siebert, and R. S. Boyd; In: Fath, B. D. (ed.) <i>Encyclopedia of Ecology</i> , 3rd Edition. Elsevier, Oxford, United Kingdom; https://doi.org/10.1016/B978-0-443-21964-1.00019-7 (online publication Dec 10 2024) |
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| Biological Sciences | Bean, Tim | A new search behavior: porcupines scout for winter habitat during summer; <i>Animal Behaviour</i> 212:137-148; https://doi.org/10.1016/j.anbehav.2024.03.007 |
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| Chemistry and Biochemistry | McDonald, Ashley | An interdisciplinary effort to integrate coding into science courses. Christina L. Vizcarra; Ryan F. Trainor; Ashley Ringer McDonald; Chris T. Richardson; David Potoyan; Jessica A. Nash; Britt Lundgren; Tyler Luchko; Glen M. Hocky; Jonathan J. Foley. <i>IV et al. Nature Computational Science</i> . 10.1038/s43588-024-00708-2 |
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| Kinesiology and Public Health / Liberal Studies | Joni Roberts, Amanda Frye. | Frye, A., & Roberts, J. (2024). Thriving and surviving as women of color in the academy: a duoethnographic journey of resilience and resistance." <i>International Journal of Qualitative Studies in Education</i> , 1–15. https://doi.org/10.1080/09518398.2024.2402815 |
| Kinesiology and Public Health | Manlyng Tseng | Tseng M, Walton E, Eggleston B, Fang CY. Pandemic effects of social capital in residents and non-residents of Chinese immigrant enclaves in Philadelphia. <i>Wellbeing, Space and Society</i> 2024.6:100185. doi:10.1016/j.wss.2024.100185 |
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