



Carrie Diaz Eaton

Interdisciplinary
Mathematician

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About me

Diaz Eaton's research in STEM education is grounded in the same complex adaptive systems approaches of her mathematical biology research (mathematical modeling, statistics, network theory and computation), but is supplemented by broader disciplinary foundations and digital and qualitative methodologies. Dr. Diaz Eaton is also a proud first generation Latinx - their father is from Peru. She is also a mother. Dr. Diaz Eaton values the complex interplay at the intersection of their identities, professional activism in STEM education, and research.

Skills

Systems Modeling

Mixed methods education research

Willingness to learn and grow

Social justice advocacy in STEM

Science communication

Collaboration

Matlab*5 R*4 Spanish*4 Python*2
NetLogo*2 HTML*2 Fortran*2 C++*2

Professional Appointments

since 2018	Associate Professor Digital and Computational Studies Program	Bates College
2013 - 2018	Associate Professor of Mathematics Environmental Literacy Program	Unity College
2016	Visiting Research Professor Department of Mathematics and Statistics	University of Maine
2010 - 2013	Assistant Professor of Mathematics Center for Biodiversity	Unity College
2010	Visiting Professor of Mathematics	College of the Atlantic

Selected Professional Recognition

2021 - 2023	National Science Foundation SIARM Fellow
2019 - 2020	MAA Leader, mathvalues.org blogger SMB John Jungck Prize for Excellence in Education
2018	Linton-Poodry SACNAS Leadership Institute Fellow
2012 - 2103	MAA Project NExT Fellow
2008	Graduate Student Teaching Chancellor's Award, Univ. of Tennessee
1998	First Place, ARML International Competition, Massachusetts A Team

Education

2013	Ph.D. in Mathematics Concentration: Mathematical Biology and Evolutionary Theory	University of Tennessee, Knoxville
2004	M.A. in Interdisciplinary Mathematics	University of Maine, Orono
2002	B.A. in Mathematics Minor in Zoology	University of Maine, Orono

Selected Grant Awards

2021 - 2022	Hewlett Foundation, US \$605,852 "Bates College: Launching the Institute for Racially Just, Inclusive, and Open STEM Education"	PI
2021 - 2022	NSF IUSE, DUE #2135830, US \$99,909 "Identifying Assets and Collaborative Activities to Support Student Success in Environmental Data Science at Minority Serving Institutions"	Senior Personnel
2020 - 2021	Hewlett Foundation, US \$380,210 "Bates College/QUBES/SCORE: Supporting a more equitable and sustainable open education in undergraduate biology"	PI
2014 - 2021	NSF IUSE Bio, DUE Award #1446258, US \$3.8 million collab "IUSE Collaborative Grant: QUBES: Quantitative Undergraduate Biology Education and Synthesis" Collab. awards #1446269, 1446284	Co-PI
2019 - 2021	NSF RCN, DBI #1346584, US \$74,290 "RCN-UBE Incubator Network: Open and Accessible Biology Education: The promise of equity and the challenge of sustainability"	Co-PI
2018 - 2021	NSF INCLUDES Conference, OIA #1812997, US \$232,110 s. Personnel "Bringing Conversations on Diversity and Inclusion in Data Science to the Ecological and Environmental Sciences"	Personnel
2016 - 2018	NSF IUSE Math, DUE #1625771 US \$2.65 Million collab "IUSE Math Collaborative Research: SUMMIT-P, A National Consortium for Synergistic Undergraduate Mathematics via Multi-institutional Interdisciplinary Teaching Partnerships." Collaborative Awards #1625771, 1625244, 1625166, 1625199,1625519, 1625222, 1625557, 1625142, 1625321.	Subaward PI

Selected Professional Leadership

2019 -	Director of Strategy and Advancement Virtual institute supporting a national network of postsecondary STEM education leaders to make changes for social justice.	RIOS Institute
2019 - 2024	Chair of the Committee on Minority Participation Also ex-officio member of the Council on the Profession	MAA
2022 - 2023	Lead Organizer "Summer research program: Social Justice and Data Science: Networks, Policy and Education"	ICERMBrown
2021 - 2022	Co-organizing committee 2022 SIAM Ed Conference	SIAM
2020 - 2023	Co-chair (2023) and Vice co-chair (2021) Gordon Research Conference on Undergraduate Biology Education and Research Conference	GRC
2014 - 2021	Director of Partnerships and Communication Co-founded QUBES as a virtual Center to support instructor development for teaching quantitative biology.	QUBES
2016 - 2020	Education Subgroup Chair, co-Chair, and Past chair	SMB

Editorial Boards

2019 -	<i>CourseSource</i>
2017 -	<i>Problems, Resources, and Issues in Mathematical Undergraduate Studies (PRIMUS)</i> , Taylor and Francis
2013 - 2017	<i>Letters in Biomathematics</i>

Selected Publications

Submitted	Alexander N, Diaz Eaton C, Shrout AH, Tsinnijinnie B, Tsosie K. Beyond Ethics: Considerations for Centering Equity-Minded Data Science.
Submitted	Diaz Eaton C, Bonner K, Cangialosi K, Dewsbury B, Diamond-Stanic M, Douma J, Smith MK, Taylor R, Wilfong K, Wojdak J. Sustainability Challenges for Open Resources to promote an Equitable Undergraduate Biology Education.
2021	Diaz Eaton C. Teaching Machine Learning in the Context of Critical Quantitative Information Literacy", European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases, <i>Proc. of Machine Learning Research</i>
2021	Aikens M, Highlander HC, and Diaz Eaton C. The Case for Biocalculus: Improving Student Understanding of the Utility Value of Mathematics to Biology and Affect toward Mathematics. <i>CBE-Life Sci. Ed.</i> 20(1).
2021	Emery NC, Bledsoe EK, Hasley AO, and Diaz Eaton C. 2021. Cultivating inclusive instructional and research environments in ecology and evolutionary science. <i>Ecology and Evolution.</i> 11: 1480-1491.
2020 Book	Highlander HC, Capaldi A, Diaz Eaton C (Eds.) <i>An Introduction to Undergraduate Research in Computational and Mathematical Biology: From Birdsongs to Viscosities</i> , Foundations in Undergraduate Research in Mathematics Series, Birkhauser/Springer
2020	(Invited Paper) Akman O, Diaz Eaton C, Horenzick D, Jenkins K, and Thompson KV. Building community-based approaches to systemic reform in mathematical biology education. <i>B. of Math. Bio.</i> 82(8), 1-21.
2020	Topaz CM, Cart J, Diaz Eaton C, Shrout AH, Higdon JA, Ince K, Katz B, Lewis D, Libertini J, and Smith CM.. Comparing demographics of signatories to public letters on diversity in the mathematical sciences. <i>PLoS ONE.</i> April 28, 2020.
2020	Diaz Eaton C, LaMar MD, and McCarthy M. 21st Century Reform Efforts in Undergraduate Quantitative Biology Education: Conversations, Initiatives, and Curriculum Change in the United States of America. <i>Letters in Biomathematics.</i> 7(1), 55-66.
2019	Diaz Eaton C, Dahlquist K, Highlander H, LaMar MD, Ledder G, and Schugart RA. "Rule of Five" Framework for Models and Modeling to Unify Mathematicians and Biologists and Improve Student Learning. <i>PRIMUS.</i>
2018	Diaz Eaton C and Bailey LM. Finding Luz: Illuminating our identities through duoethnography. <i>J. of Hum. Math.</i> 8(2):60-89.