

CATHLYN D. STYLINSKI
UNIVERSITY OF MARYLAND CENTER FOR ENVIRONMENTAL SCIENCE - APPALACHIAN LABORATORY
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Professional Preparation

San Diego State University	San Diego CA	Radio-Television	B.S., 1987
San Diego State University	San Diego CA	Biology	M.S., 1994
University of California Davis & San Diego State University	Davis CA & San Diego CA	Ecology	Ph.D., 2000

Appointments

2008-present	Senior Agent (tenured), University of Maryland Center for Environmental Science, Appalachian Laboratory, Frostburg, MD
2001-2008	Assistant Professor/Agent, University of Maryland Center for Environmental Science, Appalachian Laboratory, Frostburg, MD.
2000-2001	Director of Science Content, Cal. Institute for Biodiversity, Walnut Creek, CA.
1995-1999	NASA Graduate Fellow, University of California Davis/San Diego State University, Davis/San Diego, CA.
1985-1991	Video production (technical and creative aspects of production) KPBS (Public), KGTV (ABC), ESPN and others, San Diego, CA.

Areas of professional expertise and interest

- Public engagement in science
- Citizen science design and assessment
- Educator professional development and professional learning communities
- Scientist engagement with broader audiences
- Innovative integration of science practices in K-12 and informal learning settings

Journal articles and book chapters

- Peterman K., Becker-Klein R., Stylinski C. & Grack Nelson A. (2017) *Exploring Embedded Assessment to Document Scientific Inquiry Skills within Citizen Science*. In Pages 63-82. C. Herodotou, M. Sharples, & E. Scanlon (Eds.), *Citizen Inquiry: A Fusion of Citizen Science and Inquiry Learning*.
- Stylinski C., Heimlich J., Palmquist S., Wasserman D., & Youngs R. (2017) *Alignment between informal educator perceptions and audience expectations of climate change education*. *Applied Environmental Education and Communication*, <http://dx.doi.org/10.1080/1533015X.2017.1333052>
- Becker-Klein R., Peterman K. & Stylinski C. (2016) *Embedded assessment as an essential method for understanding public engagement in citizen science*. *Citizen Science: Theory and Practice*: 1(1):8. DOI: <http://doi.org/10.5334/cstp.15>.
- Elmore A.J., Stylinski C. & Pradhan K. (2016) *Synergistic use of citizen science and remote sensing for continental-scale measurements of forest tree phenology*. *Remote Sensing* 8(6), 502; doi:10.3390/rs8060502
- Parker C., Stylinski C., Bonney C., Schillaci R. & McAuliffe C. (2015) *Examining the quality of technology implementation in STEM classrooms: Demonstration of an evaluative framework*. *Journal of Research on Technology in Education* 47(2):105-121.
- Stylinski C.D. & C. Doty (2013) *The Inquiring with GIS (iGIS) Project: Helping teachers create and lead local GIS-based investigations*. In: Pages 161-190. MaKinster J.G., Trautman N.M. & Barnett M. (Eds.) *Teaching Science and Investigating Environmental Issues with Geospatial Technology: Designing Effective Professional Development for Teachers*, Springer Publishing Co

- Groffman P., Stylinski C., Nisbet M.C., Durate C.M., Jordan T., Burgin A., Previtali M.A. & Coloso J. (2010) *Restarting the conversation: Challenges at the interface between ecology and society*. *Frontiers in Ecology and the Environment* 6(8):284-291.
- Parker C., C.D. Stylinski, M. Darrah, P. Gupta, B. Akbayin & C. McAuliffe (2010) *Integrating innovative technology applications into the classroom: A preliminary review of ITEST Teacher Education*. *Journal of Technology and Teacher Education* 18(2):203-230.
- Storksdieck M. & C.D. Stylinski (2010) *The role and influence of news media on public understanding of environmental issues*. In: Pages 131-146 R. Stevens and J. Dillon (Eds.) *Environmental Education: Learning, Culture and Agency*, SensePublishers, Rotterdam, The Netherlands (UMCES #4491).

Select education reports

- Storksdieck M., Stylinski C. & Canzoneri, N. (2017). *The Impact of Portal to the Public: Creating an Infrastructure for Engaging Scientists in ISL. Summative Evaluation.*
<http://www.informalscience.org/impact-portal-public-creating-infrastructure-engaging-scientists-informal-science-education>
- Storksdieck M, Stylinski C., & Bailey, D. (2016). *Typology for Public Engagement with Science: A Conceptual Framework for Public Engagement Involving Scientists.*
<http://www.informalscience.org/typology-public-engagement-science-conceptual-framework>

Select education materials

- Stylinski C.D. & N. Stylinski (2015) *STAR Partners Introduction video*
<https://www.youtube.com/watch?v=DNCYo9m1i9Q>
- Stylinski C.D., C. Doty, D. Nelson & A. Elmore (2015) *Student, Teacher, And Researcher (STAR) Partners Nitrate Investigation* high school curricular materials
- Stylinski C.D. & C. Doty (2014) *PIERS Survival Schoolyard Investigation* elementary school curricular unit (survival, soil habitat, plant-animal interaction, raindrop-to-runoff-to-ocean)
- Stylinski C.D. & C. Doty (2014) *MBSS & Mapping Our Streams FieldScope Investigations* middle/high school curricular materials
- Stylinski C.D., C. Doty, E. Friebele, B. Merrick, J. Holmes, E. Russell, T. Sill, E. Takaki, & C. Weilminster (2014) *Delaware Bay Sea Level Rise and Chesapeake Bay Sea Level Rise* middle/high school curricular materials
- Stylinski C.D., N.A. Stylinski & P. Townsend (2007) *Flood of Mud* museum and broadcast video. 2008 Videographer Awards of Distinction and Excellence, 2008 Communicator Silver Awards, 2008 Telly Silver and Bronze Awards, 2007 Ava Platinum Award, 2007 Davey Award
- Stylinski C.D., N.A. Stylinski & P. Townsend (2002) *Forest for the Trees* Appalachian Lab video 2003 Telly Bronze

Invited and Chaired Presentations

- Stylinski C. (2017) *Embedded assessment: An innovative method to support citizen science design* National Academies Committee on Designing Citizen Science to Support Science Learning, Washington, D.C. (invited presenter)
- Stylinski C. (2015) *Caring and feeding of a healthy community of practice* Stanford University Seminar (Ardoin Lab Group), Palo Alto, CA (invited seminar)
- 2016, 2015, 2014 North American Association for Environmental Education Research Symposium *Opening and Closing Plenary*. Madison, WI, San Diego, CA, Ottawa, ON (invited, chaired/co-chaired)
- 2012 American Geophysical Union Conference. *Climate literacy: Reaching diverse audiences through informal education experiences, public outreach, and community programs*, San Francisco, CA (chaired)

2012 Sesync Workshop. *Socio-Environmental Synthesis Education: Goals, Resources and Tools*, Annapolis, MD (co-organized)
2008 National Conference on Geospatial Technologies in K-12 Education (invited keynote)

Contributed Talks with Referred and Published Proceedings

Stylinski C., R. Youngs, J. Heimlich, & S. Palmquist (2014) Identifying opportunities to align informal educator perceptions with audience expectations in climate change education National Association for Research in Science Teaching Conference. Pittsburgh, PA (available on CD-ROM and online until April 9 2014 to conference attendees).

Stylinski C.D., Parker C.E. & C. McAuliffe (2013) Effective strategies of teacher professional focused on geospatial technologies ESRI GIS Education Conference. San Diego, CA
<http://proceedings.esri.com/library/userconf/educ13/index.html>

Parker C.E., C.R. Bonney, M. Schamberg, C.D. Stylinski & C.M. McAuliffe (2013) Authenticity in STEM learning: A framework for technology integration in the classroom American Education Research Association Conference. San Francisco, CA (online paper only available to more than 25,000 AERA members)

Stylinski C.D., C. Parker & C. McAuliffe (2012) Integrating informal education experiences in K-12 technology-intense teacher professional development American Education Research Association Conference. Vancouver, BC (online paper only available to more than 25,000 AERA members)

Stylinski C.D., C. Parker & C. McAuliffe (2012) Strategies of Teacher Professional Development Focused on Real-World Technology Applications International Society for Technology in Education Conference. San Diego, CA
http://www.isteconference.org/2012/uploads/KEY_70198899/ISTE2012_paper_RP.pdf

Contributed Talks with Referred and Published Abstracts

Stylinski C., Doty C., Nelson D., Elmore A. & Bostic J. (2017) Fostering meaningful dialogue in student-teacher-scientist research partnerships. Citizen Science Association Conference, St. Paul MN.

Stylinski C & Storksdieck M. (2017) Supporting public engagement of science within broader impact efforts (workshop). National Association of Broader Impacts Conference, Stevenson WA.

Storksdieck M. & Stylinski C. (2017) The role of partnerships in empowering high-quality outreach by scientists: recent and ongoing research. National Association of Broader Impacts Conference, Stevenson WA.

Heimlich J., Stylinski C., Palmquist S., & Wasserman D. (2016) Using communities-of-practice to support informal educators' professional development. National Association for Research in Science Teaching Conference. Baltimore, MD.

Stylinski C, Palmquist S., Heimlich J., and Wasserman D (2016) Examining the impact of an informal climate change education community of practice. American Educational Research Association. Washington, D.C.

Stylinski C., Bowen S., Pease A., Greoski L., & Weilminster C.E. (2016) Building capacity for regional climate change education through a community-of-practice. North American Association for Environmental Education Research Symposium, Madison, WI.

Stylinski C., Heimlich J.E., Wasserman D. & Palmquist S. (2015) *Using social network analysis to explore the building of a community* North American Association for Environmental Education Research Symposium, San Diego, CA.

Stylinski C., Kermish-Allen R., & Kerlin S. (2015) *Current trends of EE research and applications for EE practice* North American Association for Environmental Education, San Diego, CA.

Stylinski C., Pradhan K. & Elmore A. (2015) *Linking ground-based volunteer observations with moderate resolution satellite observations of phenology* Citizen Science Association Conference, San Jose, CA.

- Wasserman, D., Durland M., Styliniski C., Heimlich J., & Palmquist S. (2015) *Social network analysis as a tool for stakeholder engagement and utilization-focused evaluation: Addressing the needs of a community of practice* American Evaluation Association, Chicago, IL.
- Styliniski. C.D. & J.E. Heimlich (2014) *Supporting Informal Educator Professional Development Focused on Complex Environmental Issues* North American Association for Environmental Education Research Symposium, Ottawa, ON.
- Styliniski C.D. & E. Takaki (2014) *Building capacity for environment education using geospatial technology* North American Association for Environmental Education Conference, Ottawa, ON.
- Wasserman D., J. Heimlich J., & C. Styliniski (2014) *Evaluation Feedback for Enhancing Communities of Practice: A case-study lesson in mixed messages* American Evaluation Association. Denver, CO.
- Becker-Klein R., C. Styliniski, K. Peterman, & T. Peterman (2014) *Using Embedded Assessment to Measure Science Skills Within STEM Education* American Evaluation Association. Denver, CO.
- Styliniski C.D., S. Keller, A. Elmore, M. Fitzpatrick plus K. Pradhan (2014) *Scientists and volunteers partner to explore poplar phenology and vulnerability to climate change* Ecological Society of America. Sacramento, CA.
- Styliniski C.D., S. Palmquist, R. Youngs & J. Heimlich (2013) *Using reflective practice to foster a climate change education community-of-practice* North American Association for Environmental Education Research Symposium. Baltimore, MD.
- Styliniski C.D., C. Doty, B. Merritt, J. Holmes & E. Takaki (2013) *Modeling and mapping sea-level-rise in the Delaware and Chesapeake Bays* North American Association for Environmental Education Conference. Baltimore, MD.
- Styliniski C.D. (2013) *Engaging rural volunteers in American chestnut research* North American Association for Environmental Education Conference. Baltimore, MD.
- Crimmins T.M., A.J. Elmore, A. Huete, S.R. Keller, E. Levetin, J. Luvall, O. Myers, C. Styliniski, P.K. Van de Water, & A. Vokovic (2013) *Research-driven campaigns engage Nature's Notebook participants in scientific data collection* Ecological Society of America, Austin, TX.
- McAuliffe, C.M., C. Parker & C. Styliniski (2013) *Designing technology-intensive science, technology, math, and engineering professional development: Insights from NSF's ITEST Projects* National Association for Research on Science Teaching Conference. Rio Grande, Puerto Rico.
- Styliniski C.D., J. Heimlich, S. Palmquist, R. Youngs & M. Griswold (2012) *Promoting regionally-based climate change in formal and informal education institutions* American Geophysical Union, San Francisco, CA.
- Styliniski C.D., S. Palmquist & J. Heimlich (2012) *Climate change education in free-choice-learning settings: approaches and beliefs of education staff and audiences* Ecological Society of America Annual Meeting. Portland, OR.
- Heimlich J., C.D. Styliniski & S. Palmquist (2012) *Exploring climate change audience segmentation in science centers and beyond* Association of Science and Technology Centers Annual Conference, Columbus, OH.
- Styliniski C.D., J. Heimlich, S. Palmquist & R. Youngs (2012) *Understanding climate change approaches and attitudes across informal education organizations* National Association for Interpretation International Conference. Kailua-Kona, HI.
- Styliniski C.D., C. Parker & C. McAuliffe (2011) *Examining real-world IT-immersion teacher education experiences through the lens of two teacher roles* National Association for Research in Science Teaching Conference. Orlando, FL. (paper prepared and distributed)
- Switzer, A. E. Takaki, & C.D. Styliniski (2011) *FieldScope: Supporting geographic investigations and engaging students as citizen scientists*. North American Association for Environmental Education Research Symposium. Raleigh, N.C.

Lead and Co-Lead of Education Research and Evaluation:

Developing rural girls' STEM competency and motivation through communicating scientific topics with advanced technology (NSF1657317)

Streamlining Embedded Assessment to Understand Citizen Scientists' Skill Gains (NSF1713424)

Citizen Science Embedded Assessment (NSF1422099)

Validating an Innovative Technology Classroom Observation Protocol in High School Classrooms (NSF1438368)

MADE-CLEAR Researching an Informal Climate Change Education Community of Practice (part of NSF1239758, NSF1043262)

Summative Evaluation of Portal to the Public: Expanding the National Network (part of NSF1224129)

Promoting STEM Career Interest in the Classroom: An Exploratory Study Linking Teacher Professional Development with Changes in Teaching Practices (NSF0833524),

Lead of Public and K-12 Education Outreach Projects:

Student-Teacher-And-Scientist (STAR) Partners (NOAA NA14NMF4570247)

Combining Genomics, Remote Sensing, and Geospatial Modeling to Understanding Adaptation to Growing Season Length in Balsam Poplar - PopClock Citizen Science (part of NSF1238885 & NSF1461868),

Inquiring with GIS (NSF0422545)

Chesapeake FieldScope ((NOAA NA10NMF4570053)

Mapping and Monitoring Maryland Streams (NOAA NA06NMF4570173)

Chesapeake Teacher Research Fellowship (all NOAA NA03NMF4570228; NA08NMF4570637);

Citizens Restoring American Chestnuts (Chesapeake Bay Trust)

Partners in Ecology and Restoration of Schoolyards (Chesapeake Bay Trust)

Flood of Mud: The Roanoke River – Past and Future (NSF0527540)

Office and committee memberships in professional organizations

Present-2016: Citizen Science Association Board Member and Research-Evaluation Working Group Co-Chair

2015-2013: North American Association for Environmental Education Research Symposium Co-Chair (2014-2013), Chair (Present-2014)

2014: Baltimore Ecosystem Study Education Committee

2013-2010: Maryland Association for Environmental and Outdoor Education Board

2013-2011: National Socio-Environmental Synthesis Center (Sesync) Education Committee

2013-2009: National Ecological Observatory Network (NEON) Mid-Atlantic Domain Science and Education Coordination Committee

2011-2006: American Institute of Biological Sciences Education Committee

2012 *American Geophysical Union Conference* (session chair); 2012 *Sesync Socio-Environmental Synthesis Education: Goals, Resources and Tools workshop* (co-organizer); 2008 *NSF-ITEST PI Summit Workshop* (co-chair)

Reviewer/Advisor:

Manuscript reviews for *Cornell University Press, Citizen Science: Theory and Practice, Environmental Education Research, Agriculture and Human Value, Journal of Environmental Education, Oecologia; Conservation Biology, Ecology and Society, Frontiers in Ecology and the Environment;*

Panel review for *NSF Division of Research on Learning in Formal and Informal Settings NOAA Environmental Literacy;*

Project advisor and/or consultant for *Transforming Rural Communities: Virtual Instructional Coaching in Afterschool and Library Programs* (NSF AISL project); *Grounding Institutional Partnerships in Structures for Broader Impacts Design* (NSF AISL project); *Undergraduate Field Experiences Research Network* (NSF RCN project); *Embedded Assessment and Innovative Adoption of SciStarter 2.0* (NSF AISL project); *Next Generation WeatherBlur: Expanding Non-Hierarchical Online Learning Community Models for Citizen Science* (NSF Cyberlearning project), *Learning to See, Seeing to Learn: A Sociotechnical System Supporting Taxonomic Identification Activities in Volunteer-Based Water Quality Biomonitoring* (NSF AISL project)

Conference proposal reviews for *North America Association of Environmental Education Research Symposium*

Document/program review of NOAA *Mid-Atlantic K-12 Environmental Literacy Strategy*, *Maryland State Leadership Team for the Development of Next Generation of Science Standards*

Committee membership for *National Socio-Environmental Synthesis Center Education Committee*, *Maryland Association for Environmental and Outdoor Education Board*, *National Ecological Observatory Network Mid-Atlantic Domain Science and Education Coordination Committee*, *American Institute of Biological Sciences Education Committee*, *Ecological Society of America Education Section secretary/treasurer*.

Project advisor for various NSF-funded education outreach/research projects

Invited Conference/Workshop Participant

2017 AAAS *Live Trellis Discussion: Evaluating the Portal to the Public Training Program* (co-led with Martin Storksdieck). Online.

2015 AAAS *Live Trellis Discussion: A Typology of Public Engagement* (co-led with Martin Storksdieck). Online.

2015 AAAS *Convening on Evaluation of Public Engagement with Science*. Washington, D.C.

2015 CAISE *Convening on Broader Impacts + Informal Science Education*. Washington, D.C.

2015 NSF *Communicating Research to Public Audiences: Looking Back and Ahead Webinar* (interviews and focus groups). Online.

2014 NSF *DCL New Science and Engineering Indicators for K-12 STEM Education* Arlington VA.

2014 NSF *Broader Impacts Infrastructure Summit* Arlington, VA.

2013 *Mid-Atlantic Environmental Literacy Summit and WorkGroup Session*, Annapolis, MD

2013 *National Socio-Environmental Synthesis Center, Fisher Learning Exchange Workshop*. Annapolis, MD.

2012 *NASA-NOAA-NSF Climate Change Education PI Meeting*. Arlington, VA.

2012 *Maryland State Department of Education Higher Education Environmental Literacy Forum*. Rockville, MD.

2012, 2011, 2010, 2009, 2008, 2007. *Information Technology Experiences for Students and Teachers Summit*. Education Development Center and NSF. Arlington, VA and Washington, D.C.