

Curriculum Vitae — Cathlyn Davis Stylinski

Appalachian Laboratory
University of Maryland Center for Environmental Science
301 Braddock Road
Frostburg, MD 21532

Education

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

Professional Experience

- 2008 - present Senior Agent (tenured faculty), Appalachian Laboratory, University of Maryland Center for Environmental Science, Frostburg, MD
2001 – 2008 Agent (tenure-track faculty), Appalachian Laboratory, University of Maryland Center for Environmental Science, Frostburg, MD
2000 – 2001 Director of Science Content, California 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) for KPBS (Public), KGTW (ABC), ESPN and others, San Diego, CA

Select Education/Research Projects

- 2014-2011 (*in review*) *Collaborative Research/ITEST Research: The role of extended informal science experiences on youth STEM career aspiration* **C. Stylinski** (overall PI) with J. Heimlich (collaborative PI) and S. Palmquist (collaborative PI) National Science Foundation, (Stylinski collaborative proposal) \$446,707
2013-2010 (*in review*) *FieldScope – Investigating Streams* **C. Stylinski** (PI) with K. Schwille and E. Takaki (co-PIs) National Oceanic and Atmospheric Administration, \$220,199
2011-2008 *ITEST Study: Promoting STEM Career Interest in the Classroom: An Exploratory Study Linking Teacher Professional Development with Changes in Teaching Practices* **C. Stylinski** (co-PI) with C. Parker (PI) and C. McAuliffe (co-PI) National Science Foundation, \$1,129,730
2010-2009 *Expanding National Geographic FieldScope to local watershed investigations in upstream communities* **C. Stylinski** (PI) National Geographic Society, \$24,834
2010-2004 *Mapping and Monitoring Maryland Streams* **C. Stylinski** (PI) with E. Takaki (co-PI) National Oceanic and Atmospheric Administration, \$395,647
2010-2004 *Chesapeake Research Fellowship* **C. Stylinski** (co-PI) with J. Kramer (PI), J.A. Frederick, L. Murray and J. Takacs (co-PIs) National Oceanic and Atmospheric Administration, \$529,795
2010-2003 *Partners in Ecology and Restoration of Schoolyards* **C. Stylinski** (PI) Chesapeake Bay Trust, \$131,851
2010-2002 *Teacher Research Fellowship and Mapping Our Parks* **C. Stylinski** (PI) National Park Service, \$115,000
2009-2004 *Inquiring with GIS: A Partnership Between Scientists and Educators* **C. Stylinski** (PI) with P. Townsend (co-PI) and D. Edelson (subaward PI) National Science Foundation, \$1,272,985

2008-2005 *Flood of Mud* **C. Stylinski** (PI) with P. Townsend (co-PI) National Science Foundation, \$74,938 and The Nature Conservancy, \$10,000

Peer-Reviewed Publications

- Stylinski C.D.** & C. Doty (in review) *The Inquiring with GIS (iGIS) Project: Helping teachers create and lead local GIS-based investigations*. In: 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.
- Parker C., **Stylinski C.D.**, M. Darrah, C. McAuliffe, P. Gupta, & B. Akbayin (accepted) *Integrating innovative IT applications into STEM classrooms: A preliminary review of ITEST teacher professional development*. Journal of Technology and Teacher Education.
- Groffman P., **C. Stylinski**, M.C. Nisbet, C.M. Durate, R. Jordan, A. Burgin, M.A. Previtali & J. Coloso (accepted) *Restarting the conversation: Challenges at the interface between ecology and society*. Frontiers in Ecology and the Environment.
- Storksdieck M. & **C. Stylinski** (in press) *The role and influence of news media on public understanding of environmental issues*. In: Stevenson R. & J. Dillon (eds) Engaging Environmental Education: Learning, Culture and Agency, Sense publications.
- Stylinski C.D.**, J.A. Gamon & W.C. Oechel (2002) Seasonal patterns of reflectance indices, carotenoid pigments and photosynthesis of evergreen chaparral species. *Oecologia* 131:366-374.
- Stylinski C.D.**, W.C. Oechel, J.A. Gamon, D.T. Tissue, F. Miglietta & A. Raschi (2000). Effects of long-term [CO₂] enrichment on carboxylation and light utilization of *Quercus pubescens* Willd. examined with gas exchange, biochemistry and optical techniques. *Plant, Cell and Environment* 23:1353-1362.
- Stylinski C.D.** & E.B. Allen (1998) Lack of native species recovery following exotic disturbance in southern California shrublands. *Journal of Applied Ecology* 36, 544-554.

Non-Peer-Reviewed Publications

- Stylinski C.D.** & D. Smith (2006) *Connecting classrooms to real-world GIS-based watershed investigations*. ESRI Educators Users Conference, San Diego CA.
http://gis.esri.com/library/userconf/educ06/papers/educ_2275.pdf
- Stylinski C.D.** (2004) *Examining Dyke Marsh restoration options: A teacher-scientists partnership in the National Capital Region*. Page 23. IN: National Park Service Year in Review-2003. National Resource Information Division, Denver, Colorado.

Invited Conference Presentations

- Stylinski C.D.**, C. Parker and C. McAuliffe (2009) *Challenges and benefits of integrating teachers into OST-STEM experiences* NSF-sponsored Out-of-School-Time (OST) STEM: Building Experiences, Building Bridges Conference. Arlington, VA.
- Stylinski C.D.** and M. Storksdieck (2009) *What does the public learn from the media about sustainable agriculture?* American Institute of Biological Sciences Annual Meeting. Arlington, VA.
- Stylinski C.** and M. Storksdieck (2009) *News media and informal learning about environmental issues* Institute for Ecosystem Studies Cary Conference: Effective Communication of Science in Environmental Controversies. Millbrook, NY.

- Stylinski C.D.** (2008) *Where to from here? Reflections on geospatial technologies in the classroom and beyond* (keynote speaker) National Conference on Geospatial Technologies in K-12 Education. Harrisonburg, VA.
- Stylinski C.D.** (2008) *Environmental Education Research Priorities Plenary* (plenary leader) North American Association of Environmental Education Research Symposium, Virginia Beach, VA.
- Stylinski C.D.**, E. Takaki, and C. Doty (2007) *Using GIS to enhance meaningful watershed experiences* Chesapeake Bay Education Summit, Williamsburg, VA.
- Stylinski C.D.**, J.A. Frederick, L. Murray and J. Takacs (2005) *Advanced Teacher Training Opportunities*. Chesapeake Bay Education Summit, Lancaster, PA.

Peer-Reviewed Conference Presentations

- MaKinster J.G., **C.D. Stylinski**, C. McAuliffe, M. Barnett, N.M. Trautmann, A.M. Bodzin, L. Yarnall and S. Conover (2010) *Research on teaching and learning science with geospatial technologies symposium* National Association of Research on Science Teaching. Philadelphia, PA.
- Zimmerman H.T., L.U. Tran, **C.D. Stylinski**, K. Fadigan, L.B. Diaz, L.D. Dierking and H. King (2010) *Facilitating informal science learning: People, places and technology* National Association of Research on Science Teaching. Philadelphia, PA.
- Stylinski C.D.**, C. Parker and C. McAuliffe (2010) *Linking teacher professional development focused on real-world technology applications with changes in teaching practices* Society of Information Technology and Teacher Education. San Diego, CA.
- Parker C. and J Marlyn-Smith (**C.D. Stylinski**, panelist) (2010) *STEM teacher professional development—Lesson learned from NSF’s ITEST program* Society of Information Technology and Teacher Education. San Diego, CA.
- Heimlich J., **C.D. Stylinski** and M. Storksdieck (2009) *Children and Nature: What works and how do we know?* North American Association for Environmental Education Research Symposium. Portland, OR.
- Stylinski C.D.** and C. Doty (2009) *Visualizing the watershed: How geospatial technology enhances local streams investigations* North American Association for Environmental Education Conference. Portland, OR.
- Stylinski C.D.** and C. Doty (2009) *Using GIS for environmental investigations in your local neighborhood* ISTE National Education Computing Conference. Washington, D.C.
- Stylinski C.D.**, M. Storksdieck, J. Fraser and J. Falk (2009) *News media impacts on public understanding of science* National Association of Research on Science Teaching. Garden Grove, CA.
- Stylinski C.D.** (2008) *News media impacts on public understanding and attitudes about environmental issues*. Ecological Society of America Conference, Milwaukee, WI.
- Stylinski C.D.**, C. Parker, M. Darrah, P. Gupta and C. McAuliffe (2008) *Information technology experiences for students and teachers: Professional development models, evaluation and teacher change*. Part of *Emerging technology as a vehicle for teacher changes: Frameworks and assessment strategies* panel. American Education Research Association, New York, NY.
- Storksdieck M., **C. Stylinski**, J. Heimlich and K. Bronnenkant (2007) *Using news media for environmental learning and behavior change*. North American Association of Environmental Education Research Symposium and Conference, Virginia Beach, VA.
- Frederick J.A., J. Takacs, **C. Stylinski**, and L. Murray (2007) *Pathways to Marine and Aquatic Literacy through Teacher Research Experiences*. North American Association of Environmental Education Conference, Virginia Beach, VA.

- Stylinski C.D.**, S. McGee, D. Smith and C. Doty (2007) *Using scientific tools and data to enhance middle/high school student understanding of watershed ecology*. Ecological Society of America Conference, San Jose, CA.
- Stylinski C.D.**, S. McGee, D. Edelson, and P. Townsend (2006) *Inquiring with GIS*, part of *Using Cutting-Edge Technology to Further Student and Teacher Science Education-Programs and Evaluations that Respond to a National Need* Joint Session. American Educational Research Association Conference, San Francisco, CA.
- Stylinski C.D.**, C. Doty and D. Smith (2006) *Connecting classrooms to real-world using GIS technology*. National Science Teachers Association National Conference, Anaheim, CA.
- Stylinski C.**, J.A. Frederick, J. Takacs and L. Murray (2006) *Connecting classrooms to science research on the Chesapeake Bay and its watershed*. National Science Teacher Association Regional Conference, Baltimore, MD.
- Stylinski C.D.**, E. Raesly, and D. Gates (2005) *Creating and investigating native meadows at rural elementary schools*. Ecological Society of America Conference, Montreal, QE.

Invited Conference/Workshop Participant

- 2010, 2009, 2008, 2007, 2006, 2005 Innovative Technology Experiences for Students and Teachers Summit. Education Development Center and National Science Foundation. Arlington, VA, Washington, D.C.
- 2009 Out-of-School -Time(OST) STEM: Building Experiences, Building Bridges Conference. Center for Informal Learning and Schools and National Science Foundation. Arlington, VA.
- 2009 Building Capacity and Collaboration at the Intersection of the Learning Sciences and Informal Science Education Workshop. University of Wisconsin Milwaukee, University of Washington, Pennsylvania State University, and National Science Foundation. Milwaukee, WI.
- 2008 Informal Science Education Summit. Center for the Advancement of Informal Science Education and National Science Foundation. Washington, D.C.
- 2006 and 2004 Developers Workshop on the Design of GIS Tools for Education. Northwestern University GEODE Institute, Evanston, IL.
- 2005 Free-Choice Learning and the Environment: A Learning Innovation Conference. Institute for Learning Innovation Workshop. Shepherdstown, WV.

Education/Outreach Products

- Stylinski C.D.** and C. Doty (2009) *Inquiring with GIS* Curricular Unit (5 lessons, 7 class periods). University of Maryland Center for Environmental Science, Frostburg, MD.
- Stylinski C.D.** and C. Doty (2009) *Mapping and Monitoring Maryland Streams* Curricular Unit (5 lessons, 8 class periods). University of Maryland Center Environmental Science, Frostburg, MD.
- Stylinski C.D.**, C. Doty and A. Burk (2009) *PIERS Raindrop to Runoff to Ocean* Curricular Unit (3 lessons, 4.5 class periods) and *PIERS Healthy Streams* Curricular Unit (7 Lesson, 6 class periods). University of Maryland Center Environmental Science, Frostburg, MD.
- Stylinski C.D.** and C. Doty (2009) *Mapping Our Parks* (3 lessons, 3 class periods) University of Maryland Center for Environmental Science, Frostburg, MD.
- Stylinski C.D.**, N.A. Stylinski and P. Townsend (2007) *Flood of Mud*. 18.5-minute video (aired on North Carolina Public Television and regularly shown at the North Carolina Aquarium Roanoke Island). University of Maryland Center for Environmental Science, Frostburg, MD.
- Stylinski C.D.** and N. Stylinski (2003) UMCES *Appalachian Laboratory Environmental Science Education Program Website* (<http://alese.al.umces.edu>).

Stylinski C.D. and N.A. Stylinski (2001) *Introducing Cal Alive!* 12-minute video. California Institute for Biodiversity, Oakland, CA.

Stylinski C.D. (1999-2001, contributing producer) *Cal Alive! Exploring Biodiversity* Multi-media CD set.

Teacher Professional Development

Present-2009 *Mapping Our Parks* Teacher Professional Development (To date, 30 teachers have learned to apply a geospatial approach to their National Park Service *Bridging the Watershed* unit)

Present-2004 *Mapping and Monitoring Maryland Streams* Teacher Professional Development (To date, 73 Maryland teachers have learned to lead local field-based stream investigations using GIS to enhance understanding scientific understanding and interest and provide meaningful watershed experiences. Offered as a University of Maryland College Park graduate course, MEES698L)

Present-2003 Partners in Ecology and Restoration of Schoolyards (To date, most Garrett County (MD) 4th and 5th teachers (~30) have learned and co-led (with project staff) schoolyard and landscape investigations with their ~600 students)

2009-2004 *Inquiring with GIS* Teacher Professional Development (106 Central Appalachian teachers have learned to lead local GIS-based watershed investigations to provide authentic inquiries and promote interest in science and technology. Professional development include summer youth institute where teachers practiced new skills with 158 youth participants. Offered as a University of Maryland College Park graduate course, MEES698K)

Organized Conference Sessions/Workshops

2008 Ecological Society of America Conference Special Session. *Ecological literacy in public audiences: Building upon successful strategies and defining the research agenda*. Co-organizer with H. Ballard (organizer), R. Jordan and J. Reynolds (co-organizers).

2008 Ecological Society of America Conference Workshop. *Promoting ecological literacy in public audiences: building upon successful strategies using a citizen science approach*. Co-organizer with H. Ballard (organizer), R. Jordan, J. Shirk, and J. Reynolds (co-organizers).

2008. NSF ITEST PI Summit Workshop. *Teacher Change*. Co-organized with Parker C. (organizer), M. Darrah, P. Gupta, B. Akbayin and C. McAuliffe (co-organizers).

Peer Reviews

2010-2005 National Science Foundation Division of Research on Learning in Formal and Informal Settings (formally Division of Elementary, Secondary and Informal Education) Proposal Review Panels (7x) and Ad Hoc Reviewer (4x)

2007 North America Association of Environmental Education Research Symposium Reviewer

2007 *Oecologia* Journal Reviewer (2x)

2006-2004 National Oceanic and Atmospheric Administration Proposal Reviewer (3x)

2005 *Conservation Biology* Journal Reviewer

2005 *Ecology and Society* Journal Reviewer

2005 *Frontiers in Ecology and the Environment* Journal Reviewer

Committee membership

Present - 2010 Maryland Association for Environmental and Outdoor Education Board
Present - 2009 National Ecological Observatory Network (NEON) Mid-Atlantic Domain Science and Education Coordination Committee
Present - 2008 American Forest Foundation *GreenSchools* Program, National Advisory Committee
Present - 2008 Baltimore Ecosystem Study Education Committee
Present - 2006 American Institute of Biological Sciences Education Committee
2008 – 2005 Ecological Society of America Education Section (Secretary/Treasurer)
2007 Maryland Association of Environmental and Outdoor Education Conference Committee
2005 - 2003 University of Maryland Center for Environmental Science Faculty Senate

Awards

2008 Telly Silver and Bronze Awards, 2008 Videographer Awards of Distinction and Excellence, 2008 Communicator Silver Awards, 2007 Ava Platinum Award, 2007 Davey Award. *Flood of Mud* video
2006 National Civic Star Award state winner. Awarded to Garrett County Public Schools for the Partners in Ecology and Restoration in Schoolyards (PIERS) project
2004 MarCom Creative Award Gold Recipient. UMCES Appalachian Laboratory Environmental Education website
2003 Telly Bronze Award and Videographer Award of Distinction. *The Forest for the Trees* video
2003 Telly Bronze Award. *Introducing Cal Alive!* video

Graduate Fellowships, Scholarships and Grants

1996 National Science Foundation International Dissertation Enhancement Award (3 year, \$10,000)
1995 National Aeronautics and Space Administration Graduate Fellowship (3 years, \$66,000)
1995 Environmental Protection Agency Graduate Fellowship (3 years, \$66,000, *declined*)
1994 Achievement Rewards for College Scientists Fellowship and Scholarships (4 years, \$40,000)