

# JULIE CONTINO

American Museum of Natural History  
Central Park West At 79<sup>th</sup> Street • New York, NY 10024  
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## Education:

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- **Doctor of Education in Science Education**, Teachers College, Columbia University, New York, NY, May 2011  
Dissertation Title: *An Analysis of the New York State Earth Science Curriculum with Respect to Standards, Classroom Practices, and the Regents Examination*  
Advisor: Dr. O. Roger Anderson
- **Master of Arts in Teaching Science**, Cornell University, Ithaca, NY, May 2002  
Advisor: Dr. Don Haas
- **Bachelor of Science in Natural Resources**, Cornell University, Ithaca, NY, May 2001

## Awards and Recognitions:

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- Association for Science Teacher Education (ASTE) Award I: Outstanding Science Teacher Educator of the Year (Level 1: Ten or Fewer Years in Science Education), 2022
- New York State Association of Teacher Educators (NYSATE) R. Neal Appleby Outstanding Teacher Educator Award, 2020
- ASTE/NSTA recognition for publication of one of ten most worthy published science education articles in 2010: A study of teacher-mediated enhancement of students' organization of earth science knowledge using web diagrams as a teaching device. By O. Roger Anderson and Julie Contino, *Journal of Science Teacher Education*, 21, 683 – 701. (Current research: 2011 summer reading suggestions. (2011, Summer). *Science Scope* 34(9), 62-4.)
- Sparberg Braun Alexiou Scholarship, Teachers College, Columbia University, 2008
- E. Laurence Palmer Award for Excellence in Environmental Science Education, Cornell University, 2001

## Grants Received:

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- Vassar College – Subaward from Carnegie Corporation of New York, “Adaptation and Expansion of the STEM Teaching Experience for Undergraduates (TEU) Program,” February 2020-August 2024, \$220,392

## Related Experience:

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*Director of Science Education, Teaching Experiences for Undergraduates in New York City (TEU)*

**American Museum of Natural History** New York, NY

Feb 2020 - present

- Co-developed 6-week TEU experience for twelve undergraduate science and math majors with Barnard College.
- Developed science pedagogy course for six undergraduate science majors.
- Collaborated with Brooklyn College to offer undergraduate college credits.
- Collaborated with James Baldwin High School (NYCDOE) administrators to develop a 3-week practicum experience for six undergraduate science majors.
- Provided workshops on teaching pathways, informal science, graduate school, college visits, attending conferences, developing leadership projects, and Research Experiences for Undergraduates (REUs).
- Supervised program coordinator, course instructor, and science mentor teachers.
- Developed and implemented mentor training for two science mentor teachers.
- Created and maintained a 4-year budget.

*Senior Specialist in Science and Teacher Education*

*Faculty, Master of Arts in Teaching Program*

**Richard Gilder Graduate School**

**American Museum of Natural History** New York, NY

Aug 2011 – present

- Collaborated with a team of educators and scientists to create an innovative residency-based teacher preparation program which included constructing a comprehensive curriculum; developing core science and pedagogy courses; designing museum, science practicum, and school-based residencies for approximately 15-20 residents per year.
- Co-developed and co-taught graduate level courses:
  - EDU/SCI 660 Earth Science Literacy Journal Seminar: Spring 2012 – present
  - SCI 670 Earth Evolution and the Earth System: Fall 2014 – present
  - SCI 652 The Solar System: Earth and Space Science: Summer 2017 – 2018
  - EDU 620 Curriculum and Instruction for Teaching Earth Science in Secondary Schools: Fall 2012 – 2013
- Co-developed mentoring program that includes mentoring at the schools, museum, and online and supports all professional and academic dimensions of the teaching profession including teacher assessments, licensing, portfolio development, and certification.
- Led development of workshops to support residents in successfully completing the edTPA.
- Developed workshops for science teacher educators to support teacher candidates in successfully completing the edTPA.
- Supervised and advised approximately 8 residents in two residency schools per semester.
- Met regularly with residency school administration and mentor teachers.
- Supported a residency school with middle school science curriculum development.
- Co-developed program's e-portfolio (comprehensive collection of residents' work samples throughout the program) guidelines and rubric.
- Served on the Technology Committee and Admissions Committee.
- Consulted CAEP Committee.
- Conducted research on residents' understanding of nature of science and scientific inquiry; the role of the senior specialist as a supervisor/mentor, advisor, and co-instructor; co-constructing research-based science curricular materials.
- Participated in policy discussions focused on residency programs, teacher certification, teacher preparation requirements, graduation requirements, etc. with NYSED, Prepared to Teach (Bankstreet College), The Commission on Independent Colleges & Universities in New York, etc.
- Participated in professional development workshops and webinars on a variety of topics such as Diversity, Equity, and Inclusion; NGSS; Culturally-Relevant Pedagogy; LGBTQIA+; Remote Teaching and Learning.

*Thesis Consultant*

**Teachers College, Columbia University** New York, NY

Dec 2013 – Dec 2014

- Examined multiple lesson plans for alignment between standards, objectives, and activities and provided feedback.
- Examined an online learning module and associated instruments that were intended to improve teachers' understanding of the nature of science and provided feedback.

*Program Coordinator/Professional Development Specialist, Seminars on Science*

**American Museum of Natural History** New York, NY

Oct 2008 – Aug 2011

- Created professional development in science, project-based learning, and technology for middle and high school teachers in high needs New York City schools.

- Contributed to alignment analysis of Museum's halls with city, state, and national science education standards.
- Collaborated with a team of scientists and museum educators to create a new online course, Climate Change which included developing assignments and discussion questions; editing course essays; and identifying useful websites for teachers.
- Provided operational support including administrative support, course operations, program inquiries, learner registration and support, event coordination, university partnership support and dissemination.
- Managed database of over 4000 science teachers.
- Served as registrar and bursar for graduate-level, online, science teacher education courses.
- Contributed to new programs in education for students and teachers at the Museum and online.

*Instructor, Seminars on Science*

**American Museum of Natural History** New York, NY May 2011 – June 2011

- Taught Earth: Inside and Out, an online teacher professional development course that served approximately 20 learners.
- Led weekly discussions.
- Evaluated learners' weekly participation, assignments, and final projects.

*Teaching Assistant, Seminars on Science*

**American Museum of Natural History** New York, NY July 2009 – Oct 2009

- Assisted in teaching online teacher professional development courses including The Solar System and Water: Environmental Science that served approximately 25 learners per course.
- Participated in weekly discussions.
- Evaluated learners' weekly participation, assignments, and final projects.

*Graduate Student Researcher*

**Teachers College, Columbia University** New York, NY Jan 2008 – Aug 2010

Supervisor: O. Roger Anderson

- Incorporated web diagrams into a 9<sup>th</sup> grade Earth science course to enhance students' organization of science knowledge and flow map analyses for students' recall narrative.
- Examined returned Peace Corps volunteer educators' opinions on transitions into Teachers College Peace Corps Training Programs.

*Upper School Science Teacher/Lower School Science Coach*

**New Explorations into Science, Technology, and Math; New York City Department of Education** New York, NY Sept 2007 – Aug 2008

- Developed and implemented lesson plans and assessments for Regents Earth Science, Regents Earth Science Lab, Regents Living Environment, and Regents Living Environment Lab at the high school level.
- Supported elementary school teachers with classroom science curricula weekly.
- Integrated technology into curriculum using Schoolrack.com to post grades, announcements, notes, and assignments.
- Established and maintained positive relationships with students, parents, and colleagues.

*Science Teacher*

**Broadalbin-Perth High School; Broadalbin-Perth CSD** Broadalbin, NY Sept 2003 – Aug 2007

- Developed and implemented lesson plans and assessments for Regents Earth Science, Earth One, Regents Earth Science Lab, Regents Living Environment, Regents Living Environment Lab, and Academic Intervention Services at the high school level.

- Integrated technology into curriculum using Blackboard.com to post grades, announcements, notes, assignments, and discussions.
- Established and maintained positive relationships with students, parents, and colleagues.
- Co-coordinated district's Odyssey of the Mind program, focused on creative problem-solving.

#### *Long-term Substitute Teacher*

**Hamilton Elementary School, Boston Public Schools** Brighton, MA Oct 2002 – June 2003

- Supervised and taught courses to elementary students in general education and special education for one hundred and thirty days during the school year.
- Elementary Science Specialist for forty days during the school year.

#### *Naturalist/Lead Instructor*

**Massachusetts Audubon Society** Milton, MA June 2002 – Sept 2003

- Developed curricula for 5-8 –year-olds with a focus on natural history and ecology.
- Taught environmental science to groups of 5-10 students, ages 4-14.
- Assisted with overnight sessions.

#### *Student Teacher*

**Boynton Middle School, Ithaca City School District** Ithaca, NY Sept 2001 – Dec 2001

- Developed and implemented lesson plans for Eighth Grade Physical Science.
- Supervised 12-30 students during lessons and labs for 5 periods a day.
- Assisted with special needs class of 8 Eighth Grade students one period a day.
- Created a student teacher portfolio with written analysis of school and community and examples of lessons.

#### *Student Researcher/Laboratory Assistant*

**Cornell University, Natural Resources Department** Ithaca, NY July 2001 – May 2002

- Created a database of over 300 lesson plans for the Environmental Conservation course.
- Developed lesson plans for college-aged student discussion groups.

#### *Teaching Assistant*

**Cornell University, Natural Resources Department** Ithaca, NY Aug 2000 – May 2001

- Assisted professor with a Field Biology class of 35 college students, six hours a week, focusing on methods of inventorying, identifying, and studying plants and animals.
- Developed and taught environmental issues section to 18 college students, two hours a week, that complimented the Environmental Conservation course.

#### **Publications:**

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- Davies, R., Wolk-Stanley, J., Yuan, V., & Contino, J. (Winter 2021). Engaging New York City students in climate change science using a place-based 5E mini-unit on glacial evidence. *The Earth Scientist*, 38(4), 12-18.
  - Anderson, O. R. & Contino, J. (2013). The role of visualization in conceptual learning and conceptual change. In K. D. Finson and J. E. Pederson (Eds.), *Visual data and their use in science education*. Charlotte, NC: Information Age Publishing.
  - Contino, J. & Anderson, O.R. (2013). From prescribed curriculum to classroom practice: An examination of the implementation of the New York State Earth Science standards. *Journal of Geoscience Education*, 61(1), 129-144.
  - Contino, J. (2013). A case study of the alignment between curriculum and assessment in the New York State Earth Science standards-based system. *Journal of Science Education and Technology*, 22(1), 62-72.

- Contino, J. (2011). An analysis of the New York State Earth Science curriculum with respect to standards, classroom practices, and the Regents examination. *Dissertation Abstracts International*.
- Anderson, O.R. & Contino, J. (2010). A study of teacher-mediated enhancement of students' organization of Earth science knowledge using web diagrams as a teaching device. *Journal of Science Teacher Education*, 21(6), 683 – 701.

### **Invited Talks:**

- Contino, J., Backman, E., & Baez-Alicea, A. (July 28, 2020) *Teaching science in NYC: From pandemics to protests*. Webinar for the Teaching Experiences for Undergraduates (NSF), Vassar College, Poughkeepsie, NY.
- Contino, J. (June 12, 2017) *Who are we recruiting into STEM Teaching? A discussion about undergraduates, second-career teachers, and the certification of out-of-field teachers*. Panel at the Stimulating Research and Innovation for Preservice Education of STEM Teachers in High-Need Schools (NSF NOYCE Regional Dialogue with AAAS ARISE), Montclair State University, Montclair, NJ.
- Contino, J., Calderon, C., Weckel, M., & Hekkala, E. (March 4, 2014). *Leadership links: Mentoring in science*. Panel at the American Museum of Natural History - Women in Natural Science Meeting (Association for Women in Science), American Museum of Natural History, New York, NY.

### **Workshops:**

- Contino, J., Arias, A. M., Benedict-Chambers, A., Davis, J., Enderle, P., Fick, S., Hanuscin, D., Presley, M., Sherwood, C., & Vo, T. (January 2022). *Engaging elementary and secondary preservice and inservice science teachers in crosscutting concepts: Strategies across multiple institutions*. Exploratory Session at the 2022 Association for Science Teacher Education (ASTE) International Meeting, Greenville, SC.
- Contino, J., Cooke-Nieves, N., & Howes, E. (January 2018). *Preparing secondary science teacher candidates for the edTPA: Supporting students in understanding and using feedback*. Workshop at the 2018 Association for Science Teacher Education (ASTE) International Meeting, Baltimore, MD.
- Contino, J., Howes, E., & Cooke-Nieves, N. (January 2017). *Preparing secondary science teacher candidates for the edTPA: Digging deeper into assessing student learning*. Workshop at the 2017 Association for Science Teacher Education (ASTE) International Meeting, Des Moines, IA.
- Contino, J., Howes, E., & Cooke-Nieves, N. (January 2016). *Preparing secondary science teacher candidates for the edTPA: Providing scaffolding for the edTPA commentaries*. Workshop at the 2016 Association for Science Teacher Education (ASTE) International Meeting, Reno, NV.
- Contino, J., Short, J. & Howes, E. (January 2015). *Preparing secondary science teacher candidates for the edTPA: Implementing parallel edTPA assignments in an existing curriculum and instruction course within a residency program*. Workshop at the 2015 Association for Science Teacher Education (ASTE) International Meeting, Portland, OR.

### **Presentations:**

- Davies, R., Wolk-Stanley, J., Yuan, V., & Contino, J. (July 2021). *Building science knowledge, identity, and interest using place-based learning about climate change to engage diverse urban undergraduate and high school students*. Poster at the Earth Educators' Rendezvous 2021, Online.
- Davies, R., Contino, J., Wolk-Stanley, J., & Yuan, V. (April 2021) *Engaging diverse urban undergraduate and high school students in climate change science using a place-based unit on glacier landforms*. Presented at the City University of New York (CUNY) Conference on Climate Change, Online.

- Contino, J., Davies, R., Wolk-Stanley, J., & Yuan, V. (January 2021). *Using museum exhibits to engage preservice Earth science teachers and their future students*. Poster at the 2021 Association for Science Teacher Education (ASTE) International Meeting, Salt Lake City, UT (online).
- Davies, R., Wolk-Stanley, J., Yuan, V., & Contino, J. (July 2020). *Earth science place-based education at the American Museum of Natural History*. Poster at the Earth Educators' Rendezvous 2020, Online.
- Contino, J., Howes, E. V., & Cooke-Nieves, N. (January 2020). *Evaluating preservice science teachers using a faculty-developed observation rubric*. Exploratory Session at the 2020 Association for Science Teacher Education (ASTE) International Meeting, San Antonio, TX.
- Gupta, P., Hammerness, K., MacPherson, A., Chavez Reilly, M., Chaffee, R., Cooke-Nieves, N., Contino, J., Howes, E., Ingber, J., Horgan, J., & Vasudevan, V. (July 2019). *Research at the American Museum of Natural History: Partnering across multiple institutions for equitable science teaching and learning*. Presented at the NYCDOE Forum on Connecting Research, Policy & Practice, New York, NY.
- Contino, J., Cooke-Nieves, N., Fichman, M., Goodman, S., Hammerness, K., Howes, E., Kinzler, R., Kornaker, J., Rivera, Y., Trowbridge, C., & Wolff, D. (2019). *Nurturing clinical partnerships and documenting ongoing collaboration (CAEP standard 2)*. Presented at the 2019 American Association of Colleges for Teacher Education (AACTE) Annual Meeting, Louisville, KY.
- Contino, J. & Randle, D. (January 2019). *Supporting preservice teachers in designing NGSS-aligned unit plans using the five tools and processes*. Exploratory Session at the 2019 Association for Science Teacher Education (ASTE) International Meeting, Savannah, GA.
- Hammerness, K., Howes, E., Contino, J., Cooke-Nieves, N., Kinzler, R., Macdonald, M., & Trowbridge, C. (April 2017). *Supporting mentor teachers in the assessment of and inquiry into high-leverage science teacher practices*. Presented at the 2017 American Educational Research Association (AERA) Annual Meeting, San Antonio, TX.
- Kinzler, R. & Contino, J. (September 2016). *Looking ahead to NGSS: Preparing Earth science teachers for urban schools using A Framework for K-12 Science Education (NRC, 2012)*. Presented at the 2016 The Geological Society of America (GSA) Annual Meeting, Denver, CO.
- Wolff, D., Beck, R., Contino, J., Hinton, R., Howes, E., Kinzler, R., Morgan, M., Rasmussen, J. K., & Steiner, R. (September 2016). *Preparing pre-service teachers to use technology to effectively teach Earth science: A program perspective*. Presented at the 2016 The Geological Society of America (GSA) Annual Meeting, Denver, CO.
- Contino, J. & Kinzler, R. (April 2016). *Influence of the NGSS framework on pre-service teachers' understanding of science and science inquiry*. Presented at the 2016 National Association for Research in Science Teaching (NARST) Annual International Conference, Baltimore, MD.
- Kinzler, R. & Contino, J. (November 2015). *Developing pre-service teachers' understanding of science and science inquiry with the NGSS framework*. Presented at the 2015 The Geological Society of America (GSA) Annual Meeting, Baltimore, MD.
- Silvernail, D., Macdonald, M., Gupta, P., Trowbridge, C., Contino, J., Mac-Low, M., Cooke-Nieves, N., Kelly, A., Fayne, H., Rivera, M., Sessa, J., Howes, E., & Shumer, M. (April 2015). *When the informal becomes formal in the higher education preparation of science teachers*. Presented at the 2015 National Association for Research in Science Teaching (NARST) Annual International Conference, Chicago, IL.
- Howes, E., Contino, J., & Cooke-Nieves, N. (February 2015). *Developing supports for the secondary science edTPA in an urban teacher education residency program*. Presented at the 2015 American Association of Colleges for Teacher Education (AACTE) Annual Meeting, Atlanta, GA.
- Contino, J., Howes, E., & Cooke-Nieves, N. (February 2015). *Mentoring the mentors: Urban science teachers in high-needs schools*. Presented at the 2015 American Association of Colleges for Teacher Education (AACTE) Annual Meeting, Atlanta, GA.
- Grcevich, J., Pagnotta, A., Mac Low, M., Shara, M., Flores, K., Nadeau, P., Sessa, J., Ustunisik, G., Zirakparvar, N., Ebel, D., Harlow, G., Webster, J., Kinzler, R., Macdonald, M., Contino, J., Cooke-Nieves, N., Howes, E., & Zachowski, M. (January 2015). *Preparing new Earth science teachers via a*

- collaborative program between research scientists and educators.* Presented at the 2015 American Astronomical Society (AAS) Meeting, Seattle, WA.
- Kinzler, R., Short, J., Contino, J., Cooke-Nieves, N., Howes, E., Kravitz, D., Randle, D., & Trowbridge, C. (December 2014). *Using innovative resources and programs to prepare pre- and in-service teachers for new science standards.* Presented at the 2014 American Geophysical Union (AGU) Fall Meeting, San Francisco, CA.
  - Kinzler, R. & Contino, J. (October 2013). *Preparing new Earth science teachers in the American Museum of Natural History's MAT pilot program using the framework for the Next Generation Science Standards.* Presented at 2013 The Geological Society of America (GSA) Annual Meeting, Denver, CO.
  - Contino, J. & Cooke-Nieves, N. (January 2013). *The missing ingredient in science teacher preparation: The role of the senior specialist.* Presented at 2013 The Association for Science Teacher Education (ASTE) International Conference, Charleston, SC.
  - Pagnotta, A., Grcevich, J., Shara, M., Mac Low, M., Lepine, S., Nadeau, P., Flores, K., Zirakparvar, N., Ustunisik, G., Sessa, J., Kinzler, R., Macdonald, M., Contino, J., Cooke-Nieves, N., & Zachowski, M. (January 2013). *Collaboration between research scientists and educators to prepare new Earth science teachers.* Presented at 2013 American Astronomical Society Meeting, Long Beach, CA.
  - Steiner, R., Kinzler, R., Contino, J., Mathez, E., Randle, D., Schmidt, G., & Shindell, D. (November 2012). *Online and blended climate change courses for secondary school educators from the American Museum of Natural History.* Presented at 2012 The Geological Society of America (GSA) Annual Meeting, Charlotte, NC.
  - Macdonald, M., Kinzler, R., Contino, J., Abder, P., Hogan, T., & Schwinge, D. (October 2011). *Is there anything new in science teacher preparation in NY State?* Presented at 2011 Northeast Association for Science Teacher Education (NE-ASTE) Regional Conference, Cornwall, NY.
  - Randle, D., Kinzler, R. & Contino, J. (March 2010). *As the world turns: Revolutions in Earth science.* Presented at 2010 National Science Teaching Association (NSTA) National Conference, Philadelphia, PA.
  - Anderson, O.R. & Contino, J. (January 2009). *A study of teacher-mediated enhancement of students' organization of science knowledge using web diagrams as a teaching device and flow map analyses of students' recall narrative.* Presented at 2009 Association for Science Teacher Education (ASTE) International Conference, Hartford, CT.

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#### **Doctoral Dissertation Committee Work:**

- Committee Member: Cole Entress (PhD Science Education, Spring 2022), Science methods: Cataloging the course. Teachers College, Columbia University, NY.

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#### **Peer Review:**

- Editorial Review Board Member – *Journal of Science Education and Technology (JOST)* 2017 – present
- Editorial Review Board Member – *Journal of Science Teacher Education (JSTE)* 2016 – present
- Conference Proposal Reviewer – *Association for Science Teacher Education (ASTE)* 2015 – present
- Ad Hoc Reviewer – *International Journal of STEM Education* 2020
- Advisory Board Member – *New Visions for Public Schools NYSSLS/NGSS-aligned Earth and Space Science Units* 2019
- Professional Development Workshop Proposal Reviewer – *Association for Science Teacher Education (ASTE)* 2016 – 2019
- Ad Hoc Reviewer – *Journal of Science Education and Technology (JOST)* 2013 – 2016
- Ad Hoc Reviewer – *International Journal of Science and Mathematics Education (IJSME)* 2013

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#### **Professional Certifications:**

- Google Certified Educator – Level 1 2021-2024
- New Teacher Center (NTC) Mentor Academy Series: Inquiry into Practice 2014; 2015
- New York State Earth Science 7-12 Permanent Certificate 2007
- New York State General Science 7-12 Extension Permanent Certificate 2007

### **Professional Organizations:**

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- New York Earth Science Teachers Association (NYESTA) Member 2022 – present
- The American Association of Colleges for Teacher Education (AACTE) Member 2014 – present
- New York State Association of Teacher Educators (NYASTE) Member 2013; 2020 – present
- Northeast Association for Science Teacher Education (NE-ASTE) Member 2011 – present
  - Proposal Reviewer 2016
  - Conference support 2016
- American Educational Research Association (AERA) Member 2011 – 2013
- AMNH Association for Women in Science (AWIS) Member 2010 – present
- National Association for Research in Science Teaching (NARST) Member 2010 – 2018
- National Earth Science Teachers Association (NESTA) Member 2009 – present
- National Science Teaching Association (NSTA) Member 2009 – 2011
- Association for Science Teacher Education (ASTE) Member 2008 – present
  - Forum Chair 2022 – present
  - Conference Presider 2021 – present
  - Elections Committee 2019 – 2022
  - Graduate Student 3MT Competition Judge 2019
  - Professional Development Committee 2016 – 2019
  - Women in Science Education (WISE) Forum 2016 – present
  - Proposal Reviewer 2015 – present
  - Publications Committee Volunteer 2015
- Science Teachers Association of New York State (STANYS) Member 2001 – 2007
- New York State Association of Agricultural Education (NYSAAE) Member 2001