

Regina E. Toolin, Ph.D.

University of Vermont
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EDUCATION

University of Wisconsin-Madison	Ph.D.	Curriculum and Instruction Science Education
City University of New York Lehman College	M.A.	Science Education Biology Concentration
State University of New York SUNY Oneonta	B.A.	Physical Anthropology Biology Minor

ACADEMIC APPOINTMENTS

University of Vermont	Associate Professor	8/12 - Present
College of Education and Social Services	Assistant Professor	8/06 – 8/12
Teach graduate courses in curriculum and instruction in science education. Principal Investigator: NSF Robert Noyce Scholarship Program and DOE GEAR-UP Champlain Research Experience for Secondary Teachers Program. Co-PI NSF Collaborative Research: Network Cluster: Using Big Data approaches to assess ecohydrological resilience across scales. Co-developed the Computer Science Education Minor/Major Concentration and Placed-based Education Certificate Programs.		
Fordham University		
Graduate School of Education	Assistant Professor	9/04 – 8/06
Taught graduate courses in elementary and secondary science education. Program Coordinator - Graduate Curriculum and Teaching Program. Co-Chair - University School Partnerships.		
St. John's University - School of Education	Assistant Professor	9/00 – 8/04
Taught undergraduate and graduate courses in science education. Program Coordinator - Childhood Education Program. Co-Director Summer Science and Math Experience.		
Pace University - School of Education	Assistant Professor	9/98 - 8/00
Taught graduate and undergraduate courses in elementary and secondary science education.		
University of Wisconsin - Madison	Lecturer	9/93-12/94
School of Education		
Taught undergraduate courses in elementary science education.		
Cardinal Spellman High School	Biology Teacher	9/86 - 6/90
Bronx, New York		
Taught ninth and tenth grade Regents Biology and General Science.		

OTHER PROFESSIONAL EXPERIENCE

Milton High School, Milton, VT **Science Consultant** **9/08-6/11**
Conducted school-wide in-service workshops on teaching, learning and assessment in science. Emphasized a project-based approach and literacy and math integration strategies. Co-developed new 9th & 10th Integrated Science Curriculum.

Yonkers Public Schools, NY **Science Consultant** **1/05 – 8/06**
Conducted school-wide and district-wide in-service workshops on teaching, learning and assessment in science. Emphasized a project-based approach and literacy and math integration strategies. Planned and conducted school-wide focus groups on curriculum development and mission statement development.

New York City Board of Education **Science & Math Consultant** **9/97- 6/06**
Conducted school and district-wide professional development and workshops on teaching, learning, and assessment in math, science, and technology. Emphasized a project-based approach and literacy and math integration strategies.

Wappingers Falls School District **Science Consultant** **7/96 - 12/98**
Conducted district-wide in-service workshops on NYS Learning standards and assessments for math and science.

Board of Cooperative Education Services **Regional Science Coordinator** **8/95 - 6/96**
Administered science curriculum and professional development programs science for elementary and middle school teachers and administrators in Westchester and Putnam counties in New York. Coordinated Science 21 Elementary Curriculum and PD Program, Title II Programs, and the Science Mentor Network.

Health and Sciences Research, Inc. **Clinical Research Associate** **8/90 - 8/91**
Monitored Nicoderm® and Pravastatin® clinical trials ensuring the accuracy and authenticity of data and overall proper conduct of clinical trials. Involved in protocol development, data analysis, and report writing.

LEADERSHIP EXPERIENCE

Program Coordinator - Master of Arts in Teaching Secondary Education – 8/12 to 8/20
Director – UVM’s NSF Robert Noyce Scholarship Program – 9/09 to Present
Director – GEAR-UP Champlain Research Experience for Secondary Teachers – 9/12 to Present
Director – Northeast Association for Science Teacher Education – 10/16 -1/20
Chair – Faculty Senate Educational Research Technologies Committee – 1/17 to 5/20
Chair – CESS Faculty Standards Committee – 9/17 to 12/19
Chair – Secondary Education Search Committee – 9/19-2/20
Senate Executive Committee Member – 1/17 to 5/20
Senate Executive President and Provost Advisory Committee – 1/17 to 5/20

TEACHING EXPERIENCE

Undergraduate and Graduate Courses

EDTE 061 – Foundations of Place-based Education
EDSC 209 - Internship Practicum
EDSC 216 - Curriculum, Instruction, and Assessment
EDSC 226 - Student Teaching Supervision/Seminar
EDSC 227 - Teaching Science in Secondary School
EDSC 230 - Teaching for Results Internship Seminar
EDCI 200 – Champlain Research Experience for Secondary Teachers

PUBLICATIONS

- Toolin, R., Jorgenson, S., & Ratmeyer, S. (Revise and Resubmit). STEM touchstones for Teacher professional learning: Meeting the challenge of teacher professional learning in high need schools. *Electronic Journal for Research in Science and Mathematics Education*.
- Toolin, R., Dion, L., & Erickson, R. (2021). The Computer Science Education Collaborative: Promoting Computer Science Teacher Education Programs for Preservice and In-Service Teachers. *Journal of Computational Science Education*. 12(1): 2-7.
- Toolin, R. & Meyers, H. (2020). An Analysis of Noyce Scholar Personal and Professional Self Efficacy. *International Journal of Social Policy and Education*. 2 (9): 17-24.
- Toolin, R. & Blouin, M. (2020). Teachers Conceptions of Place-based Education: Place as Context and Object of Investigation. American Educational Research Association Interactive Presentation Gallery.
- Toolin, R., Jorgenson, S., & Ratmeyer, S. (2020). STEM Touchstones as Unifying Principles for Teacher Professional Learning and Change. American Educational Research Association Interactive Presentation Gallery.
- Toolin, R. (2020). Assessment for instruction: Noyce scholar use of student performance data. *F1000Research* 2020, 9:1322 (doi: [10.7490/f1000research.1118369.1](https://doi.org/10.7490/f1000research.1118369.1)).
- Eisenhardt, S. M., Berlin L, Toolin, R., & Pintauro, S. J. (2015). Online college energy balance course improves determinants of behavior and student knowledge. *Enliven: Journal Dietetics Research and Nutrition*, 1(1), 1-9.
- Downes, J. & Toolin, R. (2014). Partnering with students in middle grades teacher professional development. Middle Grades Collaborative Online Publication. <https://middlegradescollaborative.org/publications-by-faculty/2009/04/13/partnering-with-students-in-middle-grades-teacher-professional-development/>.
- Toolin, R. & White, B. (2014). How loud is too loud? Project-based Inquiry as a Model for Teaching, Learning, and Assessing Science. In *Preparing Excellent STEM Teachers for*

Urban and Rural High-Need Schools. Proceedings from the Midwest Noyce Regional Conferences. Indianapolis, IN

- L.-A. Dupigny-Giroux, Toolin, R., Morrissey, L., Fortney, M., Hogan, S., Pontius, J., Berryman, B. Shafer, J. Atkins, N., Shepherd, N., Mote, TL, & Raphael, MN. (2012). Enhancing climate change literacy by melding the atmospheric and geospatial sciences. *American Geophysical Union*. Abstract id. ED12B-05.
- Toolin, R. & Watson, A. (2012). Students for sustainable energy: Inspiring students to tackle energy projects in their school and community. In S. Metz (Ed.), *Fuel for thought: Building energy awareness in grades 9-12*. Arlington, VA: NSTA Press.
- L.-A. Dupigny-Giroux, Toolin, R., Hogan, S. & Fortney, M. (2012). The satellites, weather and climate (SWAC) teacher professional development program: Making the case for climate and geospatial literacy. *The Journal of Geoscience Education*, 60, 133–146.
- Toolin, R. & Watson, A. (2010). Students for sustainable energy: Inspiring students to tackle energy projects in their school and community. *The Science Teacher*, 77(4): 27-31.
- Miller, F., Toolin, R., & Biral, R. (2010). Women of color and the formation of a science identity. In R. Johnson, & G. Harris (Eds.), *Women of color in leadership: Taking their rightful place*. San Diego, CA: Birkdale.
- Toolin, R. & Watson, A. (2010). Conducting sustainable energy projects in secondary science classrooms. *Science Activities*, 47(2), 47-53.
- Toolin, R. (2008). Infusing technology into project-based inquiry: A study of the Urban Academy for Math, Science and Technology. In P. Fraser-Abder, & R. J. Wallace (Eds.). *Pedagogical issues in science, mathematics and technology education* (Volume 3). Schenectady, NY: The New York Consortium for Professional Development.
- Toolin, R. (2006). Pride in our place: Project-based learning at the Public Urban Academy for Math, Science and Technology. *Conference Proceedings of the National Association for Research in Science Teaching Conference*.
- Toolin, R. (2004). Learning what it takes to teach science: Reaching and recruiting under-represented secondary students in science and science education. *Conference Proceedings of the 12th World Congress of Comparative Education Studies*. Havana, Cuba.
- Toolin, R. (2004). Striking a balance between innovation and standards: A study of teachers implementing project-based approaches to teaching science. *Journal of Science Education and Technology*, 13(2), 179-87.
- Toolin, R. (2003). Learning what it takes to teach science: High school students as teachers for middle school students. *Journal of Science Education and Technology*, 12(4), 457-469.
- Rosso, R.J., Megehee, E.G., Toolin, R., Cantelmo, F. (2003). Summer Science Experience 2002:

US Department of Education. Math Science Partnership Program - VSTEM Program
PI: R. Toolin Co-PIs: D. Rizzo and S. Jorgenson
Award Period: July 2015 – July 2017 Award: \$324,000.00

National Science Foundation. Vermont Physics Initiative (VPI)
PI: K. Chu Co-PI: R. Toolin
Award Period: Sept. 2010 – Sept. 2013 Award: \$200,000.00

National Science Foundation. Satellites, Weather and Climate Program (SWAC)
PI: L-A Dupigny-Giroux Co-PI: R. Toolin
Award Period: Sept. 2010 – Sept. 2013 Award: \$489,381.00
Award Period: June 2008 – June 2010 Award: \$149,000.00

US Department of Education. Math and Science Partnership Program - Vermont Secondary Science Partnership (VSSP)
PI: R. Toolin Co-PIs: L-A Dupigny-Giroux and R. Waterman
Award Period: July 2010 – June 2011 Award: \$74,943.00
Award Date: July 1 2009 – June 2010 Award: \$75,000.00

National Science Foundation. University of Vermont Robert Noyce Scholarship Program
PI: R. Toolin Co-PIs: L-A Dupigny Giroux and R. Waterman
Award Period: Sept. 2009 – Aug. 2015 Award: \$899, 940.00

2. University Grants

University of Vermont STEM Education Research Grant. Computer Science Education Collaborative (CSEC)
PIs: R. Toolin and R. Erickson Co-PIs: A. Tinkler and L. Dion
Award Period: Jan. 2019 – Dec. 2019 Award: \$30,000.00

University of Vermont CESS Research Grant. The Vermont STEM Education Initiative
PI: R. Toolin
Award Period: Feb. 2013 – Dec. 2013 Award: \$4,000.00
Award Date: Feb. 2014 – Dec. 2014 Award: \$8,000.00

Fordham University Faculty Research Grants. Investigating Project-based Inquiry at the Bronx Academy for Math, Science, and Technology
PI: R. Toolin
Award Date: January, 2006 Award: \$5,400.00

3. Other Funded Grant Collaborations

NASA - Assessing Citizen Science Labeling for Improving Training Data Quality for GLOBE Observer Land Cover Protocols within the GLOBE Observer Community
PI: B. Lee; Co-PI: G., Galford Collaborator: R. Toolin
Submitted: February 1, 2021 Award: \$100,000.00

National Science Foundation. EPSCoR RII Track 2 FEC: Leveraging Intelligent Informatics and Smart Data for Improved Understanding of Northern Forest Ecosystem Resiliency (INSPIRES)
PIs: Anthony D'Amato (UVM), Weiskittel (UM), Ollinger (UNH)
Senior Personnel (Theme 4 Education and Outreach) – R. Toolin
Award Period: August 2019-July 2023 Award: \$6,000,000.00

National Science Foundation. IRES Track I: US-Japan (UVM-Yamagata University)
Collaboration on Organic Electronics Research and Education
PI: Madalina Furis Co-PI: Matthew White
Project Evaluator: R. Toolin
Award Period: Aug. 2018 – Aug. 2021

REFEREED CONFERENCE PRESENTATIONS

Toolin, R., Dion, L., & Erickson, R. The Computer Science Education Collaborative: Promoting Computer Science Teacher Education Programs for Preservice and In-service Teachers. Paper presented at the Virtual RISE Conference at the University of Maine. June 28, 2021.

Brown, R., Dion, L., Drescher, P., Erickson, R., & Toolin, R. Broadening Educator Expertise through UVM's Computer Science Certificate Program. Presented at the Dynamic Landscapes Virtual Conference. May 10, 2021.

Toolin, R., Perdrial, J., Walls, L., & Blouin, M. Co-creating Collaborative and Transformative Educational Partnerships in Critical Zone Science. Presented at the Engaged Scholarship & Learning at UTRGV Conference. February 2021.

Toolin, R. Secondary teachers' conceptions and practices of place-based education. Paper presented at the Northeast Association for Science Teacher Education Virtual Conference. October 2020.

Toolin, R. UVM's Robert Noyce Scholarship Program: Improving STEM recruitment and retention efforts in high need schools. NSF Robert Noyce Scholarship Program Virtual Summit. August 2020.

Toolin, R., Jorgenson, S., & Ratmeyer, S. STEM Touchstones as Unifying Principles for Teacher Professional Learning and Change. Paper accepted for presentation at the American Educational Research Association Conference. San Francisco, CA. April 2020.

Toolin, R. & Blouin, M. Teachers Conceptions of Place-based Education: Place as Context and Object of Investigation. Paper accepted for presentation at the American Educational Research Association Conference. San Francisco, CA. April 2020.

Millay, L., McKay, S., Peterson, F., Lindsay, S., Nickerson, L., Toolin, R. Connecting middle and high school teachers with big data and quantitative reasoning in the context of New England forests. Presented at the Maine Education Association Conference. March 2020.

Toolin, R. Creating a computer science education collaborative in Vermont. Paper presented at the Hawaii International Conference in Education. Honolulu, HI. January 2020.

Toolin, R. Noyce scholar use of student performance data to inform instruction. Paper presented at the Hawaii International Conference in Education. Honolulu, HI. January 2020.

Toolin, R. Secondary teachers conceptions of place-based education. Paper presented at the Curriculum and Pedagogy Annual Conference. McAllen, TX. October 2019.

Toolin, R. Preservice teachers use of student performance data: A multiple case study of Noyce scholar assessment practices. Paper presented at the American Educational Research Association. Toronto, Canada. April 2019.

Toolin, R. Promoting project and place-based professional learning in high need schools. Paper presented at the University of Texas Rio Gran Valley STEM Education Conference. McAllen, TX. February 2019.

Toolin, R., Jorgenson, S., and Ratmeyer, S. STEM touchstones for professional learning: Meeting the challenge of STEM professional development in high need schools. Paper presented at the Association for Science Teacher Education International Conference. Savannah, GA. January 2019.

Toolin, R. Touchstones for teacher professional learning: Promoting place-based STEM education in rural schools. Paper presented at the Curriculum and Pedagogy Annual Conference. New Orleans, LA. October 2018.

Toolin, R. The University of Vermont Robert Noyce Scholarship Program: Program challenges and successes. National Science Foundation Robert Noyce Scholarship Program Annual Summit. Washington, DC. July 2018.

Toolin, R & Blouin, M. The standard comes first: Place-based teaching and the Next Generation Science Standards. Paper presented at the Association for Science Teacher Education Annual Conference. Baltimore, MD. January 2018.

Toolin, R. Recruitment and efficacy of the Robert Noyce Scholarship Program. Robert Noyce Scholarship Program Annual Summit. Washington, DC. July 2017.

Toolin, R., Jorgenson, S., Rizzo, D., Blouin, M., Ratmeyer, S., & Meyers, H. The VSTEM leadership Institute: Meeting the challenge of STEM professional development in high need schools. American Educational Research Association Annual Meeting. San Antonio, TX. April 2017.

Toolin, R. VSTEM Leads: Promoting place, projects and leadership in high need schools. Northeast Association for Science Teacher Education Annual Conference. Columbia University, NY, NY. October 2016.

Toolin, R. Recruitment and efficacy of the Robert Noyce Scholarship Program. Robert Noyce Scholarship Program Annual Summit. Washington, DC. July 2016.

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Toolin, R. Updates on the Vermont STEM Collaborative. Association for Public Landgrant Universities SMTI Conference, San Antonio, TX. June 2016.

Toolin, R. Tinkler, A, Demarest, A. CREST touchstones for teacher professional learning. American Educational Research Association Annual Meeting. Washington, DC. April 2016.

Toolin, R., Tinkler, A. & Demarest. A. Touchstones for STEM professional learning: Promoting project based, place-based and proficiency-based education. American Association for Teaching and Curriculum Annual Meeting. Portland, OR. October 2015.

Toolin, R. The Vermont STEM Collaborative. Northeast Association for Science Teacher Education Regional Meeting. Columbia University, NY, NY. October 2015.

Toolin, R. The Vermont STEM Collaborative. Association for Public Landgrant Universities SMTI Conference, New Orleans, LA. June 2015.

Toolin, R. Recruitment and retention efficacy of UVM's Robert Noyce Scholarship Program. NSF Robert Noyce Scholarship Regional Conference. Boston, MA. March 2015.

Toolin, R. The Champlain Research Experience for Secondary Teachers - CREST. Association for Science Teacher Education Annual Meeting. Portland, OR. January 2015.

Toolin, R. The Champlain Research Experience for Secondary Teachers - CREST. Paper presented at the Northeast Association for Science Teacher Education Annual Conference. Columbia University, NY, NY. October 2014.

Toolin, R., White, B. & Flank, S. Educate to innovate in science teacher professional development: The University of Vermont Robert Noyce Scholarship Program. Association for Science Teacher Education Annual Meeting. San Antonio, TX. January 2014.

Toolin, R. And Dupigny-Giroux, L.A. Satellites, Weather and Climate (SWAC) Teacher Professional Development Program: Advocating for climate and geospatial literacy. American Educational Research Association. San Francisco, CA. April 2013.

Toolin, R. The University of Vermont Robert Noyce Scholarship Program: Recruitment and program efficacy. Association for Science Teacher Education Annual Meeting. Charleston, SC. January 2013.

Dupigny-Giroux, L.A. and Toolin, R. The Satellites, Weather and Climate (SWAC) Teacher Professional Development program: Making the case for climate and geospatial literacy. Association for Science Teacher Education Annual Conference. Clearwater, FL. January 2012.

Toolin, R. and Sithole, D. Using student consultations to develop a middle school-based project for post-secondary success. American Educational Research Association. New Orleans, LA. April 2011.

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Toolin, R. The University of Vermont Robert Noyce Scholarship Program: The challenge of recruitment and retention in science education. Association for Science Teacher Education. Minneapolis, MN. January 2011.

Toolin, R. Vermont Secondary Science Partnership (VSSP): Developing effective and authentic partnerships in science education. Association for Science Teacher Education. Minneapolis, MN. January 2011.

Shane, J., Toolin, R. & Peterson, J. and Pederson, J. The state of science teacher education: Updates and opportunities for political advocacy with NSTA and ASTE. National Science Teachers Association. Philadelphia, PA. March 2010.

Shane, J., and Toolin, R. Political advocacy in science teacher education. Association for Science Teacher Education. Sacramento, CA. January 2010.

Toolin, R. , Dupigny-Giroux, L. and Waterman, R. Teamwork and collaboration within the Vermont Secondary Science Partnership Program. Association for Science Teacher Education. Sacramento, CA. January 2010.

Downes, J. & Toolin, R. Partnering with students in middle grades teacher professional development. American Educational Research Association. San Diego, CA. April 2009.

Toolin, R. and Watson, A. Community-based energy projects at Mountain High School. Association for Science Teacher Education. Hartford, CT. January 2009.

Toolin, R. Smaller is smarter: Technology enriched project-based inquiry at a small, public urban academy. National Association for Research in Science Teaching. April 2008.

Toolin, R and Flank, S. A tale of two city schools: Supporting project-based inquiry in secondary science education. Association For Science Teacher Education. St. Louis, MO. January 2008.

Toolin, R. Infusing technology into project-based inquiry: A study of the urban academy for math, science and technology. American Educational Research Association. Chicago, IL. April 2007.

Toolin, R. The role of technology in the project-based inquiry classroom: A study of the Urban Academy for the Future. Association for Science Teacher Education. Clearwater Beach, FL. January 2007.

Toolin, R. Pride in our place: Project-based learning at a public Urban Academy for Math, Science and Technology. American Educational Research Association. San Francisco, CA. April 2006.

Toolin, R. Creating collaborative project-based curriculum at an urban public academy for math, science and technology. National Association for Research in Science Teaching. San Francisco, CA. April 2006.

Toolin, R. Closing the diversity gap in science and math teaching: A study of the summer science and math experience for African American and Latino High School Students. National Association for Research in Science Teaching. Dallas, TX. April 2005.

Toolin, R. Learning what it takes to teach science: Reaching and recruiting under-represented secondary students in science and science education. The 12th World Congress of Comparative Education Studies. Havana, Cuba. October 2004.

Toolin, R. Learning what it takes to teach science: High school students as science teachers for middle school students. American Educational Research Association, San Diego, CA. April 2004.

Toolin, R. Breathing life into a new school: Creating science curriculum and pedagogy in a small urban high school. American Educational Research Association. Chicago, IL. April 2003.

Rosso, R. J, Megehee, E.J., Toolin, R. and Cantelmo, F.: Summer Science Experience 2002: Encouraging minority students to pursue careers in science and education. Paper Presented at the 226th American Chemical Society National Meeting, New York, NY, September 7-11, 2003.

Toolin, R. Forming a Community of Science Educators (COSE). American Educational Research Association. New Orleans, LA. 2002.

Toolin, R. Designing science professional development for urban middle schools and high schools: A study of teachers implementing project-based approaches to teaching science. American Educational Research Association. Seattle, WA. April 2001.

Toolin, R. Doing service in science: A study of urban, middle school students engaged in a service learning recycling project. American Educational Research Association. New Orleans, LA. April, 2000.

Toolin, R. Service and expeditionary learning in the science classroom. National Association for Research in Science Teaching. New Orleans, LA. April 2000.

Toolin, R. and Sims, C. Fostering applied and service learning in an urban, middle-school inquiry-based science classroom. National Association for Research in Science Teaching. Boston, MA. March 1999.

Toolin, R. and Sims, C. Within normal limits: Applied and service learning principles in an urban, middle-school inquiry-based science classroom. American Educational Research Association. Montreal, Canada. April 1999.

Toolin, R. Tensions, complexities, and influences on pre-service teachers' knowledge of science and teaching science. American Educational Research Association. San Diego, CA. April 1998.

Toolin, R. The influence of prior knowledge, a science methods course, and student teaching on pre-service teachers' developing philosophy and practice of teaching science in elementary school: A case study of Beth. National Association for Research in Science Teaching. San Diego, CA. April 1998.

Toolin, R. Teaching science in elementary school: A narrative of a pre-service teachers' perspectives about science and science teaching. National Association for Research in Science Teaching. San Francisco, CA. April 1995.

Toolin, R., J. Lemberger & P.W. Hewson. Conceptions of biology brought to teacher education by prospective secondary teachers. National Association for Research in Science Teaching. Atlanta, GA. April 1993.

Hewson, P.W., Zeichner, K.M., Tabachnick, B.R., Blomker, K. & Toolin, R. A conceptual change approach to science teacher education at the University of Wisconsin-Madison. American Educational Research Association. San Francisco, CA. April 1992.

INVITED PRESENTATIONS

Toolin, R. and White, B. Project-based Inquiry as a Model for Teaching, Learning and Assessing Science in Grade 7-12 Classrooms. Invited workshop presented at the Robert Noyce Regional Conferences. Indianapolis and Boston, October 2012

Meyers, B., Bishop, P., and Toolin, R. Resources for project based partnerships and professional development. Paper presented at the Vermont School Boards Association/Vermont Superintendents Association. Fairlee, VT. October 2009.

Fordham University - Graduate School of Education. Improving mathematics, science and technology Education for girls and women k-12: Next steps for policy and action. Righting the Angle Conference at Marymount College of Fordham University. Tarrytown, NY. December 2004.

Fordham University - Graduate School of Education. Doctoral Research Seminar. Project-based learning on The Great South Bay: A study of the summer science and math experience for African American and Latino High School Students. NY, NY. November 2004.

Annual Women in Science Meeting. Reaching and teaching tomorrow's science teachers today. St. John's University. NY, NY. May 2003.

Bilingual Education Conference. Doing investigative science in the bilingual classroom. St. John's University. NY, NY. June 2002.

Archdiocese of New York Teacher In-service. The New Regents in the Living Environment Curriculum. NY, NY. March 12th and 19th, 2001.

Pace University - Teacher Opportunity Corps. "New Standards in Practice". New York. February 2000. Superintendent's Conference Day. Greenburgh Central School District. Instructional models to promote critical thinking and problem-solving in middle school students. Greenburgh, NY. October 1999.

The National Middle School Conference. Active Learning in the middle school classroom - Instructional models to promote problem-solving in middle school students. Purchase, NY. August 1999.

Pace University - Teacher Opportunity Corps. Developing a Critical Perspective of Standards-based Teaching. NY, NY. February 1999.

The New York Times. Education Department. Standards in practice: Case studies of urban high school teachers implementing standards in their teaching practice. NY, NY. November 1998.

Pace University - Teacher Opportunity Corps. Developing a critical perspective of standards-based teaching. NY, NY February 1998.

Superintendent's Conference Day. Greenburgh School District. Inquiry-based and standards-based teaching in K-3 science classrooms. Greenburgh, NY. September 1997.

Chappaqua School District. Understanding and implementing the New York State Math, Science and Technology Learning Standards. Chappaqua, NY. October 1995.

WORKSHOPS, SYMPOSIUMS, & INSTITUTES

Toolin, R. and Rimal, G. Noyce scholar use of student performance data to inform instruction. Workshop presented at the NSF Robert Noyce Scholarship Annual Summit, Washington, D.C. July 2019.

Champlain Research Experience for Secondary Teachers. Annual week-long teacher institute conducted at UVM's Rubenstein Ecosystem Laboratory. June, 2014 – 2020. (PI and Program Director).

Integrating the EPSCoR *Streams Project* into the secondary curriculum. Workshop presented at the EPSCoR BREE Summer Teacher Institute. St. Michael's College, Winooski, VT. June 2018.

Toolin, R., Galasso, N., Lynch, B., and Waring, A. Inquiry-based summative assessments in the high school math and science classroom. Paper presented at the Northeast Robert Noyce Scholarship Regional Conference. Brooklyn, NY. April 2018.

Toolin, R., Fortin, A., Gay, J., Palermo, M., Sarriera, G., & Varga, B. The Next Generation Science Standards and Project-Based Learning. Workshop presented at the NSF Northeast Robert Noyce Regional Conference. Boston, MA. March 2015.

Math Science Partnership Grant. VSTEM Leadership Institute. July 2015 & 2016 (monthly workshops during academic years 2015-16, 2016-17). Burlington, VT.

Vermont Fest 2013 - I Teach Conference. Vermont Science Technology, Engineering and Mathematics Initiative (VSTEM). Killington, VT, November 2014 and 2013.

Toolin, R. and Hall, G. The Next Generation Science Standards. Workshop presented at the SWAC monthly workshop. Burlington, VT. October 2013.

Integrating Project-based learning and Understanding by Design. Workshop presented at the SWAC Summer Institute, Burlington, VT. July 2013.

Toolin, R. and Sithole, D. Post-secondary access and success. Strand presented at the Middle Grades Institute. June 2010 - 2013.

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Toolin, R. and White, B. Science and Social Justice: Promoting Authentic Projects in Secondary Classrooms. Robert Noyce Scholarship Annual Conference, Washington, D.C. May 2013.

Computational Thinking and the Inquiry-based Science Classroom. Robert Noyce Scholarship Program and the European Union Pathways Program. Dublin, Ireland, March 9-14th, 2013.

Toolin, R and White, B. Promoting Project-based Inquiry in Secondary Science Classrooms. Workshop presented at the NSF Robert Noyce Scholarship Annual Conference, Washington, D.C. May 2012. Indianapolis and Boston, October 2012.

University of Vermont Delegation to China. Hohhot University, Inner Mongolia, Chufu, Beijing. May 2012.

Toolin, R. and White, B. The University of Vermont Robert Noyce Scholarship Program: Recruitment and program efficacy. College of Education and Social Services Research Symposium. Burlington, VT. May 2012

Toolin, R. GEAR-Up and Close the Gap: Middle school for Post-Secondary success. College of Education and Social Services Research Symposium. Burlington, VT. May 2012

Toolin, R. and Sithole, D. Using student consultations to develop a middle school-based project for post-Secondary success. College of Education and Social Services Research Symposium. Burlington, VT. May 2011.

Toolin, R., Fosher, L. and Fortney, M. Project-based learning and the Vermont Secondary Science Partnership. College of Education and Social Services Research Symposium. Burlington, VT. May 2010.

Miller, F., Flores, Y., Heading Grant, W., Toolin, R. and Aiken, J. Panel Presentation: Women of color in leadership. College of Education and Social Services Research Symposium. Burlington, VT. May 2010.

Vermont Secondary Science Partnership Program. Professional development institute for Vermont's science teachers. Burlington, VT. July 2009 and 2010.

Downes, J. & Toolin, R. Partnering with students in middle grades teacher professional development. College of Education and Social Services Research Symposium. Burlington, VT. May 2009.

Toolin, R. & Downes, J. University of Vermont GEAR UP Program: Learning about post-secondary access in the middle grades. Association for Science Teacher Education Northeast Regional Meeting. Dingmans Ferry, PA. October 2008.

Toolin, R and Dupigny-Giroux, L. Community-based learning and project-based learning in the first-year college experience. Association for Science Teacher Education Regional Meeting. University of Massachusetts, Amherst, MA. October 2007.

Small schools of the future: merging project-based inquiry and technology at the Public Urban Academy for Math, Science and Technology. College of Education and Social Services Research Symposium. Burlington, VT. May 2007.

An analysis of teacher's pedagogical practices in project-based science classrooms. Sharing Our Success in Urban Math and Science Teaching Conference. New York University. NY, NY. May 2006.

Project-based learning on the Great South Bay: A study of the summer science and math experience for African-American and Latino high school students. Sharing Our Success in Urban Science and Math Teaching Conference. New York University. NY, NY. May 2005.

NYC Public Schools - Region 1 – Math Coaches and Assistant Principal Professional Development. Academic rigor and the principles of learning. NY, NY. January 2004.

NYC Public Schools - MS 232 Professional Development Day. Understanding and Implementing the Math Workshop Model. NY, NY. November 2003.

Reaching and teaching tomorrow's science teachers today. Association for the Education of Teachers of Science Regional Meeting. Syracuse, NY. October 2002.

Community School District 2 - Professional Development Day. Baruch College Campus High School. Balancing innovation with the Regents Curriculum. NY, NY. April 2002.

Science is Elementary Conference - SUNY-Purchase. Bottle Biology and the NYS Math, Science and Technology Learning Standards. Purchase, NY. March 2002.

Science is Elementary Conference - SUNY-Purchase. Demystifying the NYS Intermediate Level Science Test (ILST). Purchase, NY. March 2001.

Community School District 2 - Teacher In-service. Nurturing a Community of Science Educators (COSE): Tips and tools of the trade for new science teachers. NY, NY. October 2000.

Toolin, R. A Case Study of H.S. Science teachers implementing project-based approaches to teaching science. Association for the Education of Teachers of Science Regional Meeting. Syracuse, NY. October 2000.

Science is Elementary Conference - Doing project-based science in the middle school classroom. SUNY- Purchase. NY. March 2000.

Science Leadership Institute - Science professional development workshops for elementary school teachers. SUNY-Purchase. NY. July 1998, 1999, and 2000.

Community School District 1. Middle School Teachers Retreat. Instructional models to promote critical thinking and problem-solving in middle school students. Atlantic City, NJ. June 1999.

Regina E. Toolin, Ph.D.

Dwight D. Eisenhower Science and Technology Teacher Workshop. Columbus Avenue School. Strategies to integrate science and technology into 3rd and 4th grade unit on immigration. Mt. Vernon, NY. May 1999.

Science is Elementary Conference. The Hudson River: Integrating math, science and social studies in the elementary curriculum. SUNY-Purchase. NY. March 1999.

St. Denis Elementary School - Investigating Bottle Biology: Strategies for using recycled bottles for conducting controlled experiments in middle school science. Yonkers, NY. February 1999.

Wappingers Falls School District - Developed district-wide Elementary Science Standards (K-6) aligned with Putnam-Northern Westchester BOCES Science 21 Curriculum. Yorktown Heights, NY. Summer & Fall 1998.

Elementary Family Science and Math Night. - Greenburgh School District. Coordinated and assisted teachers during community-wide family science and math night. NY. March 1997.

Board of Cooperative Education Services. Science 21 Designer's In-service. Developed, coordinated and facilitated elementary science curriculum development with 50 teachers from Westchester, Putnam and Dutchess Counties. Yorktown Heights, NY. September - October, 1995 to May, 1996.

Girls and Women in Science Conference. Beloit College. "Gender and Culture in Science." Beloit, WI. April 1993, April 1994 and November 1995.

University of Wisconsin-Madison Arboretum McKay Center. Kids for Biodiversity Teacher In-Service. Facilitated a workshop for teachers to implement the "Kids for Biodiversity" curriculum. Madison, WI. August 1992.

Bruce Guadalupe Community School. Kids for Biodiversity Teacher In-Service. Facilitated a workshop for teachers to implement the "Kids for Biodiversity" curriculum. Milwaukee, WI. September 1992.

PROFESSIONAL SERVICE

National Service

Association for Science Teacher Education, Oversight Committee Member, 2021- 2024

Director, Northeast Association for Science Teacher Education, 2016-2020

National Science Foundation Research Proposal Review Panel, 2015-18

AAAS Einstein Fellows Review Panel – 2018-2019

President's Award for Excellence in Mathematics and Science Teaching Review Panel, 2018

Editorial Board Member, *Journal of Science Education and Technology*, 2004-2021

Treasurer, Northeast Association for Science Teacher Education. 2005-12

Co-Chair, Government & Policy Committee, Association for Science Teacher Education. 2007-13

Reviewer, *School Science and Mathematics Journal*, 2003-2010

Reviewer, *Journal of Science Education and Technology*, 2004-21

Reviewer, *Electronic Journal of Science and Mathematics Education*, 2020-21

Invited Research Proposal Reviewer, National Science Foundation, August 2009

Conference Proposal Reviewer:

- Association for Science Teacher Education, 2010-19
- Northeast Association for Science Teacher Education, 2016-2019
- American Educational Research Association, 1998-2001, 2006-08
- National Association for Research in Science Teaching, 1998-2000, 2002-08

Conference Session Chair or Discussant

- Association for Science Teacher Education, 2019
- American Educational Research Association, 2006, 2018, 2019
- American Educational Research Association, 2000, 2006
- National Association for Research in Science Teaching, 2000, 2008

Vermont State Service

Vermont Agency of Education Next Generation Science Standards Committee 2015-17

Vermont Agency of Education Statewide Committee on Science Licensure, 2015-16

Teach all Secondary Students (TASS) Steering and Curriculum Committee, 2006-07

University of Vermont Service

Information Technology Executive Committee, 2019-20

Faculty Senate Executive Committee, 2017-20

President/Provost Senate Advisory Council, 2017-2020

Faculty Senate Educational Research & Technologies Committee, 2015-2022. Chair - 2017-2020

Chief Information Officer Search Committee, 2017-18

Faculty Mentoring Program, 2017-19

NEASC Accreditation Committee, 2017-19

Sustainability Curriculum Assessment Committee, 2016-17

Sustainability Fellows Program, 2015-16

Institute for the Environment Committee, 2014-15

Envisioning Environment Committee, 2012-13

ALANA Recruitment Days, 2006-08

Diversity Curriculum Review Committee, 2011-2013

University Committee on Teacher Education, 2011-2018

College of Education and Social Services

Chair, Secondary Education Search Committee – 2019-20

Faculty Standards Committee, 2015-19. Chair, 2017-19, 2021-22

Open House and New Student Visits, 2007-19

Doctoral Advisory Committee, 2007-21

Doctoral Steering Committee, 2020-22

CESS Research Symposium Planning Committee, 2010-12

Carnegie Doctoral Planning Committee, 2007-08

Department of Education

CAEP (NCATE) Committee, Coordinate Science SPA Reports, 2008-10, 2013-14, 2018-21

Research Initiatives Committee, 2013-17

Common Core State Standards Committee, 2012-13

Elementary Education Search Committee, 2008-09

Secondary Education Search Committee, 2007-08, 2011-12

Secondary Education Program

Masters of Arts in Teaching (MAT) Program Coordinator, 2012-20

MAT Steering Committee, 2006-08

MAT Comprehensive School Partnership Committee, 2007-09

Doctoral Advisement – Major Advisor

Jennifer Parent, Ed.D., December 2014

Title: Students' Understanding of Quadratic Functions: Learning From Students' Voices

College of Education and Social Services

Educational Leadership and Policy Studies

Dissertation Committee Member

Alexandria M Alveshere, Ph.D. Candidate in Chemistry

College of Arts and Sciences

Department of Chemistry

Committee Chair

Simonne Eisenhardt, Ph.D., May 2014

Title: The Effectiveness Of An Online, Interactive, College Course In Energy Balance, Designed From A Framework Of Behavioral Theories

College of Arts and Sciences - Department of Nutrition

Committee Chair

Marion Anastasia, Ed.D., January 22, 2009

Title: Assessment for Learning: Transformation of Teachers' Practices Enacted in Classrooms and Teacher Learning Communities

Educational Leadership and Policy Studies

Kristy Gallup-Ellis, Ed.D., May 21, 2009

Title: Developing a Commitment to Change through Collaborative Inquiry: What Teachers Need to Know About Reading Comprehension to Engage in Formative Assessment

Educational Leadership and Policy Studies

Masters Thesis Advisement

Rachael Monosson - Rubenstein School of Environment and Natural Resources – Thesis

Committee Member – 2021-22

Amanda Garland – Rubenstein School of Environment and Natural Resources – Thesis Committee Member – 2010-11

TEACHING AND SERVICE FORMER UNIVERSITIES

Teaching

Observation and Analysis of Teaching

Assessment in the Classroom

Standards and Assessment in Schools Today

Student Teaching Supervision/Seminar

Teaching Science in Secondary School

Science Curriculum and Instruction
Teaching Math, Science and Technology in Secondary School
Teaching Science in Elementary School
Teaching Math and Science in Elementary School
Teaching Science and Technology in Elementary School

Service

Fordham University - 2004-06

Coordinator – Science Education Program
Coordinator – Curriculum and Teaching Masters Program
Co-Coordinator – University and School Partnerships Committee
Member – Professional Development Committee
Member – University Senate Faculty Life Committee
Member – ACEI/NCATE – Re-accreditation Committees

Fordham University - Doctoral Research Advisement

Christina Hundzyski – Advisor - 2005-06
Carol Manocchi - Advisor – 2005-06
Geraldine Mongillo – Committee Member – 2005-06

St. John's University - 2000-04

Coordinator – Childhood Education Program
Member – University Faculty Senate
Member – Undergraduate Curriculum Committee
Member – School of Education Faculty Research Forum
Member – TEAC/NYS Accreditation Committees
Advisory Board Member – Women in Science Society

COMMUNITY AND OTHER SERVICE

Stockbridge, VT Town Planning Commission. 2020-2024
Lewisboro Land Trust, Lewisboro, NY, Advisory Board 2013-21
Burlington, VT – YWCA, Board Member. 2008-2009
Westchester Teacher Center, Greenburgh, NY, Policy Board. 1997-2006
Science Leadership Institute, SUNY Purchase College, Advisory Board. 1998 - 2002
Science is Elementary Conference, SUNY Purchase College, Advisory Board. 1998-2000