

## **Kenneth Rath**

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### **Brief Biography**

I have performed many evaluative and research activities for a number of federally-funded projects, starting with my work with the Center for Computer-Based Instructional Technology at the University of Massachusetts/Amherst and then with Peterfreund Associates and SageFox Consulting Group. Finally, in 2019, I became an independent consultant through my own firm, Rath Educational Evaluation and Research (REER). As an evaluator and researcher, I manage projects, design and implementing evaluation and research plans, collect and analyze data using statistical and non-statistical methods, and interface with and preparing reports for clients. I also assist clients in proposal creation.

I also have several years training in reading and math development as part of my graduate work, especially regarding learning disabilities. I have taught educational psychology at the college level as well as having acted as a teaching assistant for statistics and research methods classes. In addition, I volunteer at my church as a teacher and child protection advocate. I currently live in Amherst, Massachusetts with my wife and two children.

### **Education**

Ph.D. 2002 University of Massachusetts Amherst (Educational Psychology, Minor in Statistics)  
M.S. 1998 University of Massachusetts Amherst (Educational Psychology)  
B.S. 1995 Rensselaer Polytechnic Institute (Chemistry)

### **Professional Experience**

2019-present Director, Rath Educational Evaluation and Research, Amherst, Mass.  
2003-2019 Evaluator, Peterfreund Associates/SageFox Consulting Group, Amherst, Mass.  
2004 University Instructor, Educational Psychology, Psychology Department, University of Massachusetts Amherst  
1998-2004 Project Evaluator, Center for Computer-based Instructional Technology, University of Massachusetts Amherst  
1997-2001 Laboratory Coordinator, Laboratory for the Assessment and Training of Academic Skills, University of Massachusetts Amherst  
1999-2000 University Instructor, Educational Psychology, Department of Continuing Education, University of Massachusetts Amherst  
1995-1997 Teaching Assistant, Research Methods and Design, Statistics in Psychology, Psychology Department, University of Massachusetts Amherst

### **Professional Affiliations**

2006-2019 American Evaluation Association

### **Project Evaluation Experience**

#### ***New Jersey Alliance Schools:***

Rutgers-Newark Bridges to the Doctorate. Principal Investigator: Dr. Alexander Gates; NSF

PCCC Takes Flight. Principal Investigator: Dr. Ali Saleh, Passaic Community College; NASA

Northern New Jersey Bridge to the Baccalaureate. Principal Investigator: Dr. Thomas van Aken, Passaic Community College; NSF

Garden State Louis Stokes Alliance for Minority Participation. Principal Investigator: Dr. Alexander Gates, Rutgers University-Newark; NSF.

IMSD Minority Biomedical Research Support Program (MBRS). Principal Investigator: Dr. Barry Komisaruk, Rutgers University-Newark; NIH, General Medical Sciences  
Sustainable Pathways from Community College to Bachelor's Degree for Urban Youth in STEM, Northern New Jersey. Principal Investigator: Dr. Alexander Gates, Rutgers University-Newark; NSF.

***Northeastern University:***

Engineering PLUS INCLUDES. Principal Investigator: Dr. Karl Reid; NSF.

Northeastern / Boston Public Schools Graduate K-12 Fellows Project. Principal Investigator: Dr. Thomas Gilbert; NSF.

Northeastern University RET – PLUS (Partners Linking Urban Schools). Principal Investigator: Dr. Michael Silevitch; NSF.

Northeastern University STEP-UP. Principal Investigator: Dr. Christos Zahopolous; NSF.

TRANSFORM: TRANSFORMing Liberal arts careers to meet demand for advanced manufacturing workforce. Principal Investigator: Dr. Ibrahim Zeid; NSF.

***San Francisco State University:***

Administrative Supplements for Curriculum or Training Modules to Promote Safe and Inclusive Biomedical Research Training Environments: Mental Health Workshops. Principal Investigator: Dr. Raymond Esquerra; NIH, General Medical Sciences.

Genentech Foundation Scholars. Principal Investigator: Dr. Frank Bayliss; Genentech Foundation.  
NIH City College of San Francisco/Skyline College/San Francisco State University Bridges to Baccalaureate Program. Principal Investigator: Dr. Steve Weinstein; NIH, General Medical Sciences.

Bridges to Doctorate Project at San Francisco State University. Principal Investigator: Dr. Frank Bayliss, Dr. Megumi Fuse; NIH, General Medical Sciences.

Louis Stokes Alliance for Minority Participation. Principal Investigator: Dr. Frank Bayliss; NSF

MARC U Star Project at San Francisco State University. Principal Investigator: Dr. Frank Bayliss, Dr. Raymond Esquerra; NIH, General Medical Sciences

MBRS RISE Project at San Francisco State University. Principal Investigator: Dr. Frank Bayliss, Dr. Megumi Fuse; NIH, General Medical Sciences.

PREP Project at San Francisco State University. Principal Investigator: Dr. Frank Bayliss; NIH, General Medical Sciences

GK-12: Creating Momentum by Communicating Mathematics (CM-2). Principal Investigator: Dr. Matthias Beck; NSF.

San Francisco State University / San Francisco Unified School District Graduate K-12 Fellows Project. Principal Investigator: Dr. John Stubbs; NSF.

Increasing Access Opportunity: A New Approach to General Chemistry. Principal Investigator: Dr. Ray Trautman; Dept of Ed., FIPSE.

***University of Massachusetts, Amherst:***

BPC-A: Commonwealth Alliance for Information Technology Education. Principal Investigator: Dr. Rick Adrion; NSF.

BPC-A: Expanding Computing Education Pathways (ECEP) Alliance. Principal Investigator: Dr. Rick Adrion; NSF.

The Western Massachusetts Mathematics Partnership (WMMP). Principal Investigator: Dr. George Avrunin; NSF.

Building a Curriculum in Innovation, Entrepreneurship and Technology Management at UMass Amherst. Principal Investigator: Dr. Soren Bisgaard; NCIIA

Louis Stokes Alliances for Minority Participation (LSAMP): Northeast Louis Stokes Alliance for Minority Participation. Principal Investigator: Dr. John Cunningham; NSF.

Seeing the Forest and the Trees. Principal Investigator: Dr. Elizabeth Dumont; NSF.  
Commonwealth Information Technology Initiative: Higher Education. Principal Investigators: Dr. Andrew Effrat, Dr. Rick Adrian; Anonymous private funding.  
Commonwealth Information Technology Initiative: K-12. Principal Investigators: Dr. Andrew Effrat, Dr. Lynn Griesemer; Mass. Dept. of Ed.  
Calculus Tutor Project. Principal Investigator: Dr. George Knightly; NSF.  
A History of Art for the 21<sup>st</sup> Century. Principal Investigator: Dr. Laetitia La Follette; Dept of Ed., FIPSE.  
Interactive Organic Chemistry Learning on the World Wide Web. Principal Investigators: Dr. Peter Lillya, Dr. Stephen Hixson; NSF.  
Building a Java Instructor Community: An Online Plan for Improving Introductory Computer Science Teaching and Learning. Principal Investigator: Dr. Robert N. Moll; Dept of Ed., FIPSE  
On-Line Support for Modern Programming Language Instruction. Principal Investigator: Dr. Robert N. Moll; NSF.  
Franklin County STEM Research Academies for Young Scientists. Principal Investigator: Dr. Morton Sternheim; NSF  
IPY STEM Polar Connections. Principal Investigator: Dr. Morton Sternheim; NSF  
STEM Alternative Certification for Teachers Conference (STEM ACT). Principal Investigator: Dr. Morton Sternheim; NSF  
An Internet-based Intelligent Tutor for General Chemistry. Principal Investigator: Dr. William Vining; Dept of Ed., FIPSE  
Center for Hierarchical Manufacturing – Educational Outreach Component. Principal Investigator: Dr. James Watkins; NSF.  
IGERT: Research and Innovation in Nanoscale Device Development. Principal Investigator: Dr. James Watkins; NSF  
Expanding a General Framework for Inquiry Learning. Principal Investigator: Dr. Beverly Woolf; Dept of Ed., FIPSE.  
A Powerful Model for Controlling Costs in Large-Enrollment Courses. Principal Investigator: Dr. Beverly Woolf; Dept of Ed., FIPSE.  
Reading the Forest Floor: Online Case-Based Inquiry Learning in Forestry. Principal Investigator: Dr. Beverly Woolf; NSF.

***University of Massachusetts Boston:***

Urban Massachusetts Louis Stokes Alliance for Minority Participation. Principal Investigator: Drs. Paul Fonteyn and Winston Langley; NSF  
NIH IMSD Project at the University of Massachusetts Boston. Principal Investigator: Dr. Rachel Skversky; NIH, General Medical Sciences.  
NIH Bridge to Baccalaureate. Principal Investigator: Dr. Michael Shiaris; NIH, General Medical Sciences.  
Boston Science Partnership Supplemental. Principal Investigator: Dr. Hannah Sevia; NSF.  
Synergy 2008. Principal Investigator: Dr. Deborah Boisvert; NSF.  
Synergy 2006. Principal Investigator: Dr. Deborah Boisvert; NSF.

***University of Massachusetts Lowell:***

GP:IMPACT: Interactive Simulations and Systems Thinking to Broaden Pathways into the Geosciences. Principal Investigator: Dr. Juliette Rooney-Varga, University of Massachusetts Lowell; NSF.  
Transforming Mental Models of Climate Change through Simulations, Games, and Systems Thinking. Principal Investigator: Dr. Juliette Rooney-Varga, University of Massachusetts Lowell; NSF.  
Climate Change Education: Science, Solutions, and Education in an Age of Media. Principal Investigator: Dr. Juliette Rooney-Varga, University of Massachusetts Lowell; NASA.  
GK-12: Vibes and Waves in Action. Principal Investigator: Dr. Kavitha Chandra, University of Massachusetts Lowell; NSF.

***Yale University:***

Evolutions After School Program. Principal Investigator: Dr. Jane Pickering, David Heiser, Andrea Motto; NSF & IMLS.

Peabody Fellows Earth Science Program. Principal Investigator: Dr. Jay Ague; NSF.

Solar Cycle Investigations: NASA Science Exploration for Middle School Students and Teachers.  
Principal Investigator: Dr. Sarbani Basu; NASA.

Geo.CORPS: Pipeline for Success in the Geosciences. Principal Investigator: Dr. Derek Briggs; NSF.

GEOPATH: Geoscience Educational Opportunities Promoting Advancement to Higher Education.  
Principal Investigator: Dr. Derek Briggs; NSF.

Museums for America - Engaging Communities. Principal Investigator: Dr. Derek Briggs; IMLS.

Peabody Fellows Biodiversity and Human Health Program. Principal Investigator: Dr. Michael Donoghue; NIH & IMLS

American Histories: Indigenous & Europeans in the Americas. Principal Investigator: David Heiser; Arthur Vining Davis Foundation.

Climate and Patterns of Vector-borne Disease: Development of Translational Science Curricula.  
Principal Investigator: Dr. Leonard Munstermann; NIH/SEPA.

Curricula Modeled on Biodiversity & Vector-Borne Disease. Principal Investigator: Dr. Leonard Munstermann; NIH/SEPA.

IMLS National Leadership Grant. Principal Investigator: Dr. Jane Pickering, David Heiser; IMLS.

Peabody Teachers Collaborative on Global Change. Principal Investigator: Jane Pickering, David Heiser; IMLS.

Yale / New Haven Public Schools Graduate K-12 Fellows Project. Principal Investigator: Dr. Michael Donoghue; NSF.

***Other:***

Program Analysis of the S-STEM Program. Principal Investigator: Dr. Alina Martinez, Abt Associates, Inc.; NSF.

Howard Hughes Medical Institute Summer Teachers' Workshop. Principal Investigator: Dr. Steven George, Amherst College; HHMI.

New Internet Exhibits to Bridge Science, Art, and Increase Cultural Literacy. Principal Investigator: Dr. Michael Henchman, Brandeis University; Dept. of Ed., FIPSE

Summer Research Program in Genomics. Principal Investigator: Dr. Bruce Birren, Broad Institute. NIH/NHGRI.

The Broad Summer Research Program. Principal Investigator: Dr. Bruce Birren, Broad Institute.

Broad Cancer Genomics Scholars. Principal Investigator: Dr. Bruce Birren, Broad Institute.

GK-12: Physical Processes in the Environment. Principal Investigator: Dr. Timothy Herbert, Brown University; NSF.

Foundations of Model Driven Discovery from Massive Data. Principal Investigator: Dr. Jeffrey Brock, Dr. Bjorn Sandstede, Brown University; NSF.

NIH MORE Research and Evaluation of Students Using Long-Term Studies. Principal Investigator: Dr. Simeon Slovacek, California State Univ. – L.A.; NIH.

Cengage Learning OWL Study. Principal Investigator: Lisa Lockwood; Cengage Learning.

iStrong: Inclusive Strong and Green. Principal Investigator: Margaret Callahan, Council for Opportunity in Education; NSF.

DukeMed Activated. Principal Investigator: Dr. Brenda Armstrong, Duke University; NIH SEPA.

Connecticut Pathways to Innovation & Design 21. Principal Investigator: Matt Mervis, Education Connection; NSF.

Engaging Undergraduates in On-line Inquiry Learning: A Case-Based CyberLibrary in Human Biology.  
Principal Investigator: Dr. Merle Bruno, Hampshire College; NSF.

Harvard / Cambridge Public Schools Graduate K-12 Fellows Project. Principal Investigator: Dr. John Hutchinson, Harvard University; NSF.

CER: Import PCK: What 10K Novice Teachers Can Learn from Teachers with 10K Hours of Experience. Principal Investigator: Dr. Colleen Lewis, Harvey Mudd University; NSF.

Collaborative Research: Electronic Delivery and Criterion Referencing of Assessment Materials for Chemistry. Principal Investigator: Dr. Thomas Holme, Iowa State University; NSF.

Integrating Nanotechnology and Technician Education into the Curriculum. Principal Investigator: Neil Sheer, Middlesex Community College; NSF.

MolySym. Principal Investigator: Keith Donaldson, MolySym Corporation; U.S. DOE.

Queensborough Community College Bridges to the Baccalaureate Program. Dr. Patricia Schneider, Queensborough Community College; NIH, General Medical Sciences.

Collaborative Research: Establishing and Propagating a Model for Evaluating the Long Term Impact of Pre-College Computing Activities. Principal Investigator: Dr. Adrienne Decker, Rochester Institute of Technology; NSF.

National Leadership Consortium for Sensory Disabilities. Principal Investigator: Brooke Kruemmling, Salus University; U.S. DOE, OSEP.

MARC U Star Project at San Jose State University. Principal Investigator: Dr. Herbert Silber, San Jose State University; NIH, General Medical Sciences

MBRS RISE Project at San Jose State University. Principal Investigator: Dr. Karen Singmaste, San Jose State University; NIH, General Medical Sciences.

TD Chestnut Creatives. Principal Investigators: Heather Cahill, Alicia Bono, Springfield Museums; TD Foundation.

Springfield Museums MassMutual Grant. Principal Investigators: Heather Cahill, Alicia Bono, Springfield Museums; TD Foundation.

Springfield Teaching American History Program. Principal Investigator: Rosemary Kalloch, Springfield Public Schools; U.S. DOE, TAH.

Project VIABLE (Visual Impairment and Applied Behavioral Learning Experiences). Principal Investigator: Dr. Derrick Smith, University of Alabama Huntsville; U.S. DOE, OSEP.

MARC U Star Project at University of Hawaii Manoa. Principal Investigator: Dr. Healani Chang, University of Hawaii Manoa; NIH, General Medical Sciences

Developing, Implementing and Evaluating a Post-Transfer Pathway Program for Computing and Engineering Majors. Principal Investigator: Dr. Susan Martin, University of Maryland Baltimore county; NSF.

Michigan LSAMP (Louis Stokes Alliance for Minority Participation). Principal Investigator: Dr. Susan Collins, University of Michigan; NSF.

Pathways to Careers in Sciences: Academic Roadmaps. Principal Investigator: Dr. Deborah Grossman-Garber, University of Rhode Island; NSF.

On-line Inquiry Learning in Geology: Prototype Development of a Case-Based Cyber Library. Principal Investigator: Dr. Daniel Murray, University of Rhode Island; NSF.

I-CORP L EAGER: Study of Longitudinal Results and the I-CORP L Ecosystem. Principal Investigators: Dr. Phil Wellerstein, VentureWell, Dr. Alan Peterfreund, SageFox Consulting Group; NSF.

Discovering the Art of Mathematics: Inquiry Based Learning in Mathematics for Liberal Arts. Principal Investigator: Dr. Julian Fleron, Westfield State University; NSF.

Integrated Bioengineering Research, Education, and Outreach Opportunities for Females and Underrepresented Minorities. Principal Investigator: Dr. David DiBiasio, Worcester Polytechnic Institute; NSF.

### **Articles & Other Published Works**

Rooney-Varga, J. N., Hensel, M., McCarthy, C., McNeal, K., Norflaes, N., Rath, K., Schnell, A., & Sherman, J. D. (2021). Building Consensus for Ambitious Climate Change through the *World Climate Simulation*. *Earth's Future*, 9(12).

- Rooney-Varga, J. N., Fracassi, E., Franck, T., Kapmeier, F., McCarthy, C., McNeal, K., Norfles, N., Rath, K., & Sterman, H. D. (2021). A Simulation Game that Motivates People to Act on Climate. In J. W. Dash (Ed.), World Scientific Encyclopedia of Climate Change: Case Studies of Climate Risk, Action, and Opportunity Volume 3: Climate Change: Policy, Impacts, Risk Management, Renewable Energy, Electricity, Transportation. World Scientific Publishing.
- Rooney-Varga, J., Kapmeier, F., Sterman, J. D., Jones, A. P., Putko, M., & Rath, K. (2019). The Climate Action Simulation. Simulation & Gaming, 51(2), 114-140.
- Eroy-Reveles, A. A., Hsu, E., Rath, K. A., Peterfreund, A. R., & Bayliss, F. (2019). History and Evolution of STEM Supplemental Instruction at San Francisco State University, a Large, Urban, Minority-Serving Institution. In Z. Wilson-Kennedy (ed.), Diversity in Higher Education. Emerald Publishing.
- Rath, K. A., Peterfreund, A. R., & Bayliss, F. (2018). Programmatic Mentoring: Providing Mentoring as a Community, Going Beyond Mentor/Protégé Pairs. Understanding Interventions Journal, 9(2).
- Bayliss, F., Peterfreund, A., & Rath, K. (2018). STEM Mentoring Programs to Prepare Career Scientists at San Francisco State University. In J. McClinton, D. S. Mitchell, T. Carr, M. A. Melton, & G. B. Hughes (Eds.), Mentoring at Minority Serving Institutions (MSIs): Theory, Design, Practice, and Impact. Information Age Publishing: Charlotte, NC.
- Rooney-Varga, J. N., Sterman, J. D., Fracassi, E., Franck, T., Kapmeier, F., Kurker, V., Johnston, E., Jones, A. P., & Rath, K. (2018). Combining Role-Play with Interactive Simulation to Motivate Informed Climate Action: Evidence from the *World Climate* Simulation. PLoS ONE 13(8).
- Rooney-Varga, J., Allende Brisk, A., Shuldman, M. & Rath, K. (2015). The CAM project: Tools for bringing student media production into climate change education. In the Trenches, 5(1), 4-7.
- Rooney-Varga, J. N., Brisk, A. A., Adams, E., Shuldman, M., & Rath, K. (2014). Student media production to meet challenges in climate change science education. Journal of Geoscience Education, 62(4), 598-608.
- Pickering, J., Ague, J. J., Rath, K. A., Heiser, D. M., & Sirch, J. N. (2012). Museum-based teacher professional development: Peabody Fellows in earth science. Journal of Geoscience Education, 60(4), 337-349.
- Rath, K. A., Peterfreund, A. R., Bayliss, F., Runquist, E., and Simonis, U. (2012). Impact of supplemental instruction in entry-level chemistry courses at a midsized public university. Journal of Chemical Education, 89(4), 449-455.
- Slovacek, S. P., Whittinghill, J. C., Tucker, S., Peterfreund, A. R., Rath, K. A., Kuehn, G. D., and Reinke, Y. G. (2011). Minority students severely underrepresented in Science, Technology, Engineering and Math. Journal of STEM Education: Innovations and Research, 12(1), 5-16.
- Bayliss, F. T., Peterfreund, A. R., and Rath, K. A. (2009). Institutional transformation: Establishing a commitment to research and student services. In Broadening Participation in Undergraduate Research: Fostering Excellence and Enhancing the Impact, M. K. Boyd, J. L. Wesemann, Eds., pp. 281-294. Council on Undergraduate Research: Washington, D. C.
- Peterfreund, A. R., Rath, K. A., Xenos, S. P., & Bayliss, F. (2008). The impact of supplemental instruction on students in STEM courses: Results from San Francisco State University. Journal of College Student Retention, 9(4), 487-503.
- Botch, B., Day, R., Vining, W., Rath, K., Stewart, B., Hart, D., & Peterfreund, A. (2007). *ChemPrep*: A self-paced, online preparatory course for general chemistry. Journal of Chemical Education, 84(3), 547-553.
- Rath, K. A., Peterfreund, A. R., Xenos, S. P., Bayliss, F., & Carnal, N. (2007). Supplemental instruction in Introductory Biology I: Enhancing the performance and retention of underrepresented minority students. Cell Biology Education-Life Sciences Education, 6(3), 203-216.
- Mestre, J. P., Hart, D. M., & Rath, K. A., & Dufresne, R. J. (2002). The effect of web-based homework on test performance in large enrollment introductory physics courses. Journal of Computers in Mathematics and Science Teaching, 21(3), 229-251.

- Rath, K. A., & Royer, J. M. (2002). The nature and effectiveness of learning disability services for college students. *Educational Psychology Review*, 14, 353-382.
- Rath, K. A. (2002). *Using children's errors in single-word reading to explore a theory of dyslexia within the reading process*. Doctoral Dissertation, University of Massachusetts, Amherst, MA.
- Royer, J. M., Rath, K. A., & Tronsky, L. N. (2001). Automaticity training as a reading intervention for adolescents with attentional disorders. In T. E. Scruggs & M. A. Mastropieri (Eds.) *Advances in learning and behavioral disabilities volume 15: Technological applications*. Amsterdam: JAI (Elsevier Science).

### **Presentations & Posters**

- Rath, K., Peterfreund, A., Xavier, J., Menier, A., Gates, A., San Miguel, C., & van Aken, T. (2021). Telling the LSAMP Story: When the Whole is Much More than the Sum of Its Parts. *Presentation at the 2021 LSMRCE Annual Conference*, Online.
- Menier, A., Rath, K. A., Xavier, J., Peterfreund, A., Tuttle, T., & Zarch, R. (2021). Resilient STEM College Student Support Programs: Lessons of COVID-19 in Northern New Jersey. *Paper presented at the Virtual American Educational Research Association Annual Meeting*, Online.
- Hensel, M., Bryan, J., McCarthy, C., McNeal, K., Norfles, N., Rath, K., Sterman, J., & Rooney-Varga, J. (2020). How the Simulation-Based Learning Game, World Climate, Shapes Climate Change Perspectives Among High School and College Students, Traditionally Under-represented in STEM Fields. *Poster presented at the Geological Society of America Annual Scientific Meeting*, Online.
- Hensel, M., Bryan, J., McCarthy, C., McNeal, K., Norfles, N., Rath, K., Sterman, J., & Rooney-Varga, J. (2020). How the Simulation-Based Learning Game, World Climate, Shapes Climate Change Perspectives Among High School and College Students, Traditionally Under-represented in STEM Fields. *Presentation at the 2020 American Geological Union Meeting*, Online.
- Rooney-Varga, J., Rath, K., McCarthy, C., McNeal, K., Norfles, N., Hensel, M., & Sterman, J. (2020). Depolarizing Climate Change Communication: A Simulation-Based Experience Shifts Climate Change Beliefs and Worldview Among People Who Value Individualism and Social Hierarchy. *Presentation at the 2020 American Geological Union Meeting*, Online.
- Bayliss, F., Hsu, E., Rath, K., & Peterfreund, A. (2019). STEM Supplemental Instruction at San Francisco State University, a Large, Urban, Hispanic-Serving Institution. *Poster presented at the 12th annual International Conference of Education, Research, and Innovation*, Seville, Spain.
- Bayliss, F., Rath, K. A., & Peterfreund, A. R. (2019). STEM Supplemental Instruction at San Francisco State University, a Large, Urban, Hispanic-Serving Institution. *Poster presented at the Hawaii International Conference on Education*, Honolulu, HI.
- Armstrong, B., Cullins, M., Coleman, D., Valladares, A., Coward, S., Peterfreund, A., DeHaro-Otero, E., & Rath, K. (2018). Duke BOOST Scholars: Watching the Ripple Effect Changing Lives Through Robust Relationships. *Poster presented at NIH SciEd 2018*, Washington, DC.
- Peterfreund, A. R., Rath, K. A., & Bayliss, F. (2018). Programmatic Mentoring: Providing Mentoring as a Community, Going Beyond Mentor/Protégé Pairs. *Presentation at the 10<sup>th</sup> Annual Understanding Interventions That Broaden Participation in Research Careers*, Baltimore, MD.
- Rooney-Varga, J. N., Norfles, N., Rath, K., McNeal, K., Cahalan, M., Stillwell, B., Cloran, S., & Stemmler, K. (2018). Using the World Climate Simulation to Broaden Pathways into Climate Change and Sustainability. *Poster presented at the 2018 American Geological Union Meeting*, Washington, DC.
- Kapmeier, F., Rooney-Varga, J., Sterman, J., Fracassi, E., Franck, T., Kurker, V., Johnston, E., Jones, A., & Rath, K. (2017). Die World Climate Simulation: Kann Ein Interaktives Rollenspiel zu Mehr Wissensdurst, Impulsiven Emotionen und Handlungsdrang zum Schutz des Llimas Führen? *Presentation at the Deutschen Gesellschaft für System Dynamics e.V.* Dessau-Roßlau, Germany.
- Sterman, J., Rooney-Varga, J., Fracassi, E., Franck, T., Kapmeier, F., Kurker, V., Johnston, E., Jones, A., & Rath, K. (2017). Learning for Ourselves about Climate Change: The *World Climate Simulation*:

- Can Role-Play with Interactive Models Enhance Knowledge, Affect and Intent to Act? Presentation at the 9<sup>th</sup> Annual Alliance for Research on Corporate Sustainability Conference, Rotterdam, Netherlands.
- Bayliss, F., Gutierrez, C., Rath, K., & Peterfreund, A. (2016). The Master's Degree as a Path to the PhD: Are Master's Degree Programs a Good Investment? Presentation at the 8<sup>th</sup> Annual Understanding Interventions That Broaden Participation in Research Careers, Philadelphia, PA.
- Rooney-Varga, J. N., Rath, K., Jones, A., Johnston, E., & Sterman, J. (2015). The World Climate project: Bringing the UN climate negotiations to classrooms, boardrooms, and living rooms near you. Poster presented at the 2015 American Geological Union Meeting, San Francisco, CA.
- Rooney-Varga, J. N., Rath, K., Jones, A., Johnston, E., & Sterman, J. (2015). The World Climate exercise: Is (simulated) experience our best teacher? Presentation at the 2015 American Geological Union Meeting, San Francisco, CA.
- Rooney-Varga, J. N., Sterman, J., Jones, A., Johnston, E., Rath, K., & Nease, J. (2014). Let the games begin: New opportunities to address climate change communication, education, and decision support. Presentation at the 2014 AGU Meeting, San Francisco, CA.
- Rooney-Varga, J. N., Allende Brisk, A., Rath, K., & Shuldman, M. (2013). Student media production to meet challenges in climate change science education. Poster presented at the 2013 NASA/NOAA/NSF Climate Change Education PI Meeting, Washington, DC.
- Fall, R., Mahadev, A., Rath, K., Xavier, J., Risinger, E., & Wilkins, D. (2013). Supplementary Instruction to increase success in computing/STEM. Presentation at the STEP to Success Conference, Wellesley Hills, MA.
- Hindo, S., Botch, B., Whelan, T., Hart, D., Peterfreund, A., & Rath, K. (2013). iExams – Electronic delivery of chemistry exams using OWL. Paper presented at the 245<sup>th</sup> ACS National Meeting & Exposition, New Orleans, LA.
- Bayliss, F., Peterfreund, A., & Rath, K. (2013). Partnering for success: Creating & maintaining STEM student enrichment programs at San Francisco State University. Poster presented at the 2013 Hawaii International Conference for Education, Honolulu, HI.
- Xavier, J., & Rath, K. (2012). Undergraduate research programs can overcome environmental barriers to success. Paper presented at the 5<sup>th</sup> Annual Conference on Understanding Interventions That Broaden Participation in Research Careers, Baltimore, MD.
- Rath, K., Peterfreund, A., & Bell, D. (2011). Lessons learned from a TAH evaluation at the Springfield Public Schools, Springfield MA. Presentation at the 2011 Teaching American History Project Director's Conference, Washington, DC.
- Pickering, J., Ague, J., Heiser, D., Rath, K., & Sirch, J. (2010). Peabody Fellows in earth science: A museum-based professional development program for middle and high school teachers. Paper presented at the 2010 Geological Society of America Denver Annual Meeting, Denver, CO.
- Bayliss, F., Gutierrez, C., Rath, K., & Peterfreund, A. (2009). Study of the efficacy of obtaining a research master's degree as a step to a STEM PhD. Paper presented at the 3<sup>rd</sup> Annual Conference on Understanding Interventions That Broaden Participation in Research Careers, Bethesda, MD.
- Rath, K. A., Peterfreund, A. R., & Matos, M. D. (2009). Investigation of Facilitated Study Groups, past and future. Paper presented at the 3<sup>rd</sup> Annual Conference on Understanding Interventions That Broaden Participation in Research Careers, Bethesda, MD.
- Adrion, W. R., Biskup, S., Boisvert, D., Clarke, L., Fountain, J., Grocer, P., Mackler, S., Peterfreund, A., Rath, K., Smith, A., Snyder, D., & Wiens, A. (2008). Broadening Participating in Computing: K12-Community-College-University-Graduate Pathways. Paper presented at the 38<sup>th</sup> ASEE/IEEE Frontiers in Education Conference, Saratoga Springs, NY.
- Rath, K., Peterfreund, A., & Hart, D. (2008). OWL: A decade of formative and summative evaluation. Paper presented at the 20<sup>th</sup> Biennial Conference on Chemical Education, Bloomington, IN.
- Botch, B., Day, R., Hart, D., Hixson, S., Lillya, C. P., Peterfreund, A., Rath, K., Samal, P., Stein, C., Stewart, B., & Vining, W. (2008). Evolution of OWL: Harnessing the revolutionary potential of a web-



- delivered learning environment. Paper presented at the 20<sup>th</sup> Biennial Conference on Chemical Education, Bloomington, IN.
- Peterfreund, A., Rath, K., & Bayliss, F. (2008). With support structures in place, buying student time for research yields significant outcomes. Paper presented at the 2<sup>nd</sup> Annual Conference on Understanding Interventions That Encourage Minorities to Pursue Research Careers, Atlanta, GA.
- Peterfreund, A., Rath, K., & Bayliss, F. (2007). The role of research in enhancing students' academic and career success. Paper presented at the AAAS Annual Meeting, San Francisco, CA.
- Rath, K., Peterfreund, A., Bayliss, F., Javaher, N., & Kuehn, G. (2007). The impact of supplementary instruction on underrepresented minority students. Paper presented at the AAAS Annual Meeting, San Francisco, CA.
- Rath, K. A., Peterfreund, A. R., Xenos, S. P., & Bayliss, F. (2006). Large-scale evaluation of the effects of supplemental instruction at San Francisco State University: Paper presented at Evaluation 2006, 20<sup>th</sup> Annual Conference, American Evaluation Association, Portland, OR.
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## **Advising**

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