Ross H. Nehm
Stony Brook University (SUNY),
Life Sciences Building, Stony Brook, NY 11794-5233
Phone: 631-632-7247; *E-mail*: ross.nehm@stonybrook.edu

Professional Preparation

University of California, Berkeley	1991-1998	Ph.D. Integrative Biology
Columbia University	2000-2002	Ed.M. Science Education
University of Wisconsin, Madison	1987-1991	B.S. Geology & Geophysics
NMB, Basel, Switzerland	1999-2000	National Science Foundation Postdoctoral Fellow

Professional Appointments

SUNY-Stony Brook University	2019-present	Professor, Ecology & Evolution (tenured)
SUNY-Stony Brook University	2013-2019	Associate Professor, Ecology & Evolution (tenured)
SUNY-Stony Brook University	2014-2018	Assoc. Director, Ph.D. Program in Science Education
The Ohio State University	2007-2013	Associate Professor, Science Education (tenured)
City University of New York	2002-2007	Assist/Associate Prof., Science Education (tenured)
Columbia Univ., Teachers College	2000-2002	Adjunct Assistant Professor
Columbia Univ., Barnard College	2001-2002	Director of Biology Laboratories
University of California, Berkeley	1991-1998	Graduate Student Instructor

Professional Licenses

New York State Teaching	2003-8, Secondary Biology, Earth Science, General Science

Editorial Positions

Editor-in-Chief	*Evolution: Education & Outreach* (2022-present)
Editor-in-Chief (co-)	*Evolution: Education & Outreach* (2018-2022)
Associate Editor	*Journal of Research in Science Teaching* (2018-2020)
Associate Editor	*Science & Education* (2015-2020)
Associate Editor	*Evolution Education & Outreach* (2014-2018)
Editor	*CBE-Life Sciences Education* (2015-present)
Book Review Consultant	*Quarterly Review of Biology* (2017-2021)
Editorial Board, Book Series	*Science: Philosophy, History, Education*; Springer (2013-present)
Editorial Boards	*Journal of Science Education & Technology* (2013-present); *Journal of Science Teacher Education*, (2012-2019); *Journal of Research in Science Teaching* (2012-5); *International Journal of Science Education* (2015-present), *BioScience* (2013-

Awards and Honorary Service

International Journal of Science Education	*Reviewer of Excellence* (2020)
Sandra Abell Institute	*Doctoral Student Mentor* (2019)
Committee of Visitors	National Science Foundation (2015, 2019)
National Academy of Sciences	*Education Mentor in the Life Sciences* (2013-2014)
NSF Panel Chair	TUES I; DR-K-12; & ITEST programs (multiple years)
NARST	Outstanding Dissertation Committee (2011-2014)
Faculty Mentoring Award	City College of New York (College-wide) (2007)
National Academy of Sciences	*Education Fellow in the Life Sciences* (2006-7)
CAREER Award	National Science Foundation (2003)
Outstanding Instructor	Department of Integrative Biology, UC-Berkeley (1997)
George D. Louderback Award	University of California-Berkeley (1996)

Scholarship Summary

Journal articles (*refereed*):	75
Books and chapters (*refereed*):	17
Book reviews (*invited*):	11
Invited talks, plenary, keynote:	58
Conference talks/papers:	154

Research Advisory Boards for Federally Funded Projects (13)
(**13**) Advisory Board, NSF IUSE, Gordon, PI (2021-2023)
(**12**) Steering Committee: WUSTL. *RCN-UBE:* Establishing the Genomics Education Alliance: Steps Toward Sustainability. National Science Foundation. Chalker, PI. (2018-2020).
(**11**) Advisory Board: Arizona State University; Culturally Competent Evolution Instruction; National Science Foundation. Brownell, PI. (2018-2021).
(**10**) BSCS/Stanford/MSU: Collaborative Research: ArguLex. NSF (2016-8).
(**9**) ETS: Learning Progression-based and NGSS-aligned Formative Assessment for Using Mathematical Thinking in Science—Institute for Educational Sciences (IES); Jin, PI (2016-18)
(**8**) Exploring Potential Learning Trajectories for the Energy Concept—NSF CORE; Krajik, PI (2015-8)
(**7**) Genetic Science Learning Center—NSF DRK-12; Stark, PI (2014-present)
(**6**) BSCS/MSU—PCK*Lex NSF PRIME; Wilson, PI (2014-present)
(**5**) BEACON--NSF Science and Technology Center--MSU, Goodman, PI (2013-present)
(**4**) MSU (NSF IUSE "Active LENS"); Pennock, PI (2014-2018)
(**3**) MIT/SimBio (NSF 1227245 Cyberlearing); Meir, PI (2013-2015)
(**2**) OSU Dept. of Geography (NSF Cyberlearning "GeoGames"); Ahlqvist, PI (2013-2014)
(**1**) USC Information Sciences Institute (NSF REESE "PedEval"); Kim, PI (2011-2012)

Peer-Reviewed Journal Articles (75)

**Student/post-doc author*

(**75**) Accepted.

(**74**) RG Duncan, R Krishnamoorthy, U Harms, M Haskel-Ittah, K Kampourakis, N Gericke, M Hammann, M Jimenez-Aleixandre, **RH Nehm**, MJ Reiss, A Yarden **(2024).** The sociopolitical in human genetics education. *Science*. February.

(**73**) Sbeglia, G. **Nehm, R.H. (2024).** Building conceptual and methodological bridges between SSE's Diversity, Equity, and Inclusion statement and educational actions in evolutionary biology. *Evolution*. In press.

(**72**) **Nehm, R.H. (2024).** Considering Explanatory Diversity and Holistic Understanding of Biological Phenomena. The *American Biology Teacher.* February. DOI: https://doi.org/10.1525/abt.2024.86.2.55

(**71**) Bertolini R, Finch SJ and **Nehm RH (2023)** An application of Bayesian inference to examine student retention and attrition in the STEM classroom. *Front. Educ.* 8:1073829. doi: 10.3389/feduc.2023.1073829

(**70**) **Nehm, R.H., ***Sbeglia, G.C., Finch, S. (**2022**). Is active learning enough? The contributions of misconception-focused instruction and active learning dosage on student learning of evolution. *BioScience*. Volume 72, Issue 11, November 2022, Pages 1105–1117.

(**69**) *Sbeglia, G.C., **Nehm, R.H.** (**2022**). Measuring Evolution Learning: Impacts of student participation incentives and test timing. *Evolution: Education and Outreach* (15:9).

(**68**) *Bertolini, R., Finch, S.J., & **Nehm, R.H.** (**2022**). Quantifying Variability in Predictions of Student Performance: Examining the Impact of Bootstrap Resampling in Data Pipelines. *Computers & Education: Artificial Intelligence* (in press)

(**67**) *Sbeglia, J., *Goodridge, J., *Gordon, L., **Nehm, R.H.** (**2021**) Are Faculty Changing? How Reform Frameworks, Sampling Intensities, and Instrument Measures Impact Inferences about Student-Centered Teaching Practices. *CBE—Life Sciences Education*, Vol. 20, No. 3 (Feature Article)

(**66**) *Bertolini, R., Finch, S.J., & **Nehm, R.H.** (**2021**). Enhancing Data Pipelines for Forecasting Student Performance: Integrating Feature Selection with Cross-Validation. *International Journal of Educational Technology in Higher Education, 18*(44), 1-23. https://doi.org/10.1186/s41239-021-00279-6.

(**65**) *Bertolini, R., Finch, S.J. & **Nehm, R.H.** (**2021**) Testing the Impact of Novel Assessment Sources and Machine Learning Methods on Predictive Outcome Modeling in Undergraduate Biology. *J Sci Educ Technol* https://doi.org/10.1007/s10956-020-09888-8

(**64**) *Sbeglia, G.C., **Nehm, R.H.** (**2020**). Illuminating The Complexities of Conflict with Evolution: Validation of the Scales of Evolutionary Conflict Measure (SECM). *Evolution: Education and Outreach* (in press). 13(3)

(**63**) Donovan, B., **Nehm, R.H.** (**2020**) Genetics and Identity. *Science & Education.* https://doi.org/10.1007/s11191-020-00180-0

(**62**) Zhai, X., Shi, L. **& Nehm, R.H** (**2020**) A Meta-Analysis of Machine Learning-Based Science Assessments: Factors Impacting Machine-Human Score Agreements. *J Sci Educ Technol* (2020). https://doi.org/10.1007/s10956-020-09875-z

(**61**) *Kinlock, N., *Foley, C. Sbeglia, G. and **Nehm, R.H. (2020)** A lesson on matter and energy at the organismal scale: Linking patterns and processes across diverse taxa" *CourseSource* https://doi.org/10.24918/cs.2020.42

(**60**) ***Tornabene, R.E. Sbeglia, G. S. **Nehm, R.H. (2020).** Measuring Belief in Genetic Determinism: A psychometric evaluation of the PUGGS instrument. *Science & Education*. DOI: 10.1007/s11191-020-00146-2

(**59**) Hammann, M., **Nehm, R.H.** (**2020**). Teleology and Evolution Education: Introduction to the Special Issue. *Evolution Education & Outreach Evo Edu Outreach 13, 16 DOI: https://doi.org/10.1186/s12052-020-00130-y*

(**58**) Zhai, X., Haudek, K., Urban-Lurain, M., **Nehm, R.H. (2020).** From Substitution to Redefinition: A Framework of Machine Learning-based Science Assessment. *Journal of Research in Science Teaching. In press.*

(**57**) Zagallo, P., McCourt, J., Idsardi, R., Haudek, K., Knight, J., Merrill, J., **Nehm, R.H.,** Prevost, L., Smith, M., Urban-Lurain, M. and Lemons, P.P. (**2019**). Through the eyes of faculty: using personas as a tool for learner-centered professional development. *CBE-Life Sciences Education*.

(**56**) **Nehm, R.H. (2019).** Biology Education Research: Building Integrative Frameworks for Teaching and Learning About Living Systems. *Disciplinary and Interdisciplinary Science Education Research.*

(**55**) **Nehm, R.H.,** Mead, L. (**2019**). Evolution Assessment. Introduction to the Special Issue. *Evolution Education & Outreach.* DOI: 10.1186/s12052-019-0098-x

(**54**) *Fiedler, D., *Sbeglia, G., **Nehm, R.H.,** Harms, U**. (2019).** How strongly does statistical reasoning influence knowledge and acceptance of evolution? *Journal of Research in Science Teaching.* Volume 56(9): 1183-1206. DOI: 10.1002/tea.21547

(**53**) Ha, M. **Nehm, R.H.** et al. (**2019**). Chinese pre-service biology teachers' evolutionary knowledge, reasoning patterns, and acceptance levels. *International Journal of Science Education.* 41(5): 628-651. DOI: 10.1080/09500693.2019.1572936

(**52**) ***Sbeglia, G., **Nehm, R.H. (2019).** Do you see what I-SEA? A Rasch analysis of the psychometric properties of the Inventory of Student Evolution Acceptance. *Science Education.* DOI: 10.1002/sce.21494

(**51**) ***Sbeglia, G., **Nehm, R.H. (2018).** Measuring evolution acceptance using the GAENE: influences of gender, race, degree-plan, and instruction**.** *Evolution Education & Outreach.* DOI*:* 10.1186/s12052-018-0091-9

(**50**) *****Tornabene, R.E. Lavington, E., **Nehm, R.H. (2018).** Testing Validity Inferences for Genetic Drift Inventory Scores Using Rasch Modeling and Item Order Analyses. *Evolution Education & Outreach.* 11(6) DOI: 10.1186/s12052-018-0082-x

(**49**) Pelletreau, K. Knight, J.K. Lemons, P. McCourt, J. Merrill, J. **Nehm, R.H.,** Prevost, L., Urban-Lurain, M., and Smith, M. K. **(2018).** A Faculty Professional Development Model That Improves Student Learning, Encourages Active-Learning Instructional Practices, and Works for Faculty at Multiple Institutions. *CBE – Life Sciences Education*. 17:es5, 1–11, Summer.

(**48**) Schmiemann, P. **Nehm, R.H.**, *Tornabene, R. (**2017**). Assessment of Genetics Understanding: Under What Conditions Do Situational Features Have an Impact on Measures? *Science & Education.* DOI: 10.1007/s11191-017-9925-z

(**47**) McCourt, J., T.C. Andrews, J.K. Knight, J.E. Merrill **Nehm, R.H.**, K.N. Pelletreau, L.B. Prevost, M.K. Smith, M. Urban-Lurain, P.P. Lemons (**2017**).What Motivates Biology Instructors to Engage and Persist in Teaching Professional Development? *CBE – Life Sciences Education* DOI: 10.1187/cbe.16-08-0241

(**46**) Pelletreau , Andrews , Armstrong, Bedell , Dastoor , Dean , Erster , Fata-Hartley , Guild , Greig, Hall , Knight , Koslowsky , Lemons , Martin , McCourt , Merrill , Moscarella , **Nehm, R.H.,** Northington , Olsen , Prevost , Stoltzfus, Urban-Lurain , Smith (**2016**). A clicker-based case study that untangles student thinking about the processes in the central dogma*. CourseSource.* http://www.coursesource.org/.

(**45**) *****Ha, M., **Nehm, R.H. (2016).** The Impact of Misspelled Words on Automated Computer Scoring: A Case Study of Scientific Explanations. *Journal of Science Education and Technology*. DOI 10.1007/s10956-015-9598-9

(**44**) *****Federer, M.R., **Nehm, R.H.,** & Pearl, D. (**2016**). Examining gender differences in written assessment tasks in biology: A case study of evolutionary explanations. *CBE – Life Sciences Education*. 10.1187/cbe.14-01-0018

(**43**) *****Ha, M. Baldwin, B.**, Nehm, R.H. (2015).** The long-term impacts of short-term professional development: science teachers and evolution. *Evolution Education and Outreach*, 8, 23: doi:10.1186/s12052-015-0040-9.

(**42**) *****Lee, U., *Sbeglia, G. C., *Ha, M., Finch, S. **Nehm, R.H. (2015).** Clicker Score Trajectories and Concept Inventory Scores as Predictors for Early Warning Systems for Large STEM Classes**.** *Journal of Science Education and Technology*. Doi: 10.1007/s10956-015-9568-2

(**41**) Urban-Lurain, M., Cooper, M. M., Haudek, K. C., Kaplan, J. J., Knight, J. K., Lemons, P. P., **Nehm, R.H** et al. **(2015).** Expanding a National Network for Automated Analysis of Constructed Response Assessments to Reveal Student Thinking in STEM. *Computers in Education Journal*, 6, 65-81.

(**40**) ***** Federer, M.R., **Nehm, R.H.,** Opfer, J. Pearl, D. **(2014).** Using a constructed-response instrument to explore the effects of item position and item features on the assessment of students' written scientific explanations. *Research in Science Education*: doi:10.1007/s11165-014-9435-9

(**39**) *****Moharreri, K. *Ha, M., **Nehm, R. H.** (**2014**). EvoGrader: An Online Formative Assessment Tool for Automatically Evaluating Written Evolutionary Explanations. *Evolution: Education and Outreach.* 7(1), 15: doi:10.1186/s12052-014-0015-2

(**38**) *****Ha, M., & **Nehm, R.H.** (**2014**). Darwin's difficulties and students' struggles with trait loss: Cognitive-historical parallelisms in evolutionary explanation. *Science & Education*. DOI 10.1007/s11191-013-9626-1.

(**37**) *Beggrow, E. P., *Ha, M., **Nehm, R.H.**, Pearl, D., & Boone, W. J. (**2014**). Assessing scientific practices using machine-learning methods: How closely do they match clinical interview performance? *Journal of Science Education and Technology*. 23, 1, pp 160-182; DOI: 10.1007/s10956-013-9461-9 (*Science* "Editor's Choice"; feature article *New Republic*).

(**36**) *****Campbell, C., **Nehm, R.H. (2013).** Evaluating Assessment Quality in Genomics and Bioinformatics Education Research. *CBE-Life Sciences Education,* 12(3): 530-541. DOI:10.1187/cbe.12-06-0073

(**35**) Opfer, J., **Nehm, R.H., ***Ha, M. **(2012).** Cognitive Foundations for Science Assessment Design: Knowing What Students Know about Evolution. *Journal of Research in Science Teaching.* 49(6): 744–777

(**34**) *****Beggrow, E., **Nehm, R.H. (2012).** Students' Mental Models of Evolutionary Causation: Natural Selection and Genetic Drift. *Evolution Education and Outreach.* DOI: 10.1007/s12052-012-0432-z

(**33**) Banta, L., Crespi, E., **Nehm, R.H.,** et al. **(2012).** Integrating Genomics Research throughout the Undergraduate Curriculum: A Collection of Inquiry-Based Genomics Lab Modules. *CBE-Life Sciences Education.* (Cover article for the Autumn issue).

(**32**) *****Rector, M., **Nehm, R.H**., Pearl, D. (**2012**). Learning the Language of Evolution: Lexical Ambiguity and Word Meaning in Student Explanations. *Research in Science Education*. DOI: 10.1007/s11165-012-9296-z

(**31**) *****Ha, M., Haury, D., **Nehm, R.H.** (**2012**). Feeling of certainty: uncovering a missing link between knowledge and acceptance of evolution. *Journal of Research in Science Teaching,* 49, 1, 95–121.

(**30**) **Nehm, R.H., ***Beggrow, E., Opfer, J., and *Ha, M. (**2012**). Reasoning About Natural Selection: Diagnosing Contextual Competency Using the ACORNS Instrument. *The American Biology Teacher.* 74(2):

(**29**) **Nehm, R.H.**, *Ha, M., Mayfield, E. (**2012**). Transforming Biology Assessment with Machine Learning: Automated Scoring of Written Evolutionary Explanations. *Journal of Science Education and Technology*. 21(1): 183-196 (*Science* "Editor's Choice" Article).

(**28**) **Nehm, R.H., ***Haertig, H. (**2012**). Human vs. Computer Diagnosis of Students' Natural Selection Knowledge: Testing the Efficacy of Text Analytic Software. *Journal of Science Education and Technology.* 21(1): 56-73.

(**27**) *****Ha, M., **Nehm, R.,** Urban-Lurain, M., Merrill, J. (**2011**). Applying Computerized Scoring Models of Written Biological Explanations across Courses and Colleges: Prospects and Limitations. *CBE-Life Sciences Education,* 10(4):379-393

(**26**) Haudek, K., Kaplan, J. Knight, J., Long, T., Merrill, J., Munn, A., **Nehm, R.H.,** Smith, M. Urban-Lurain, M. (**2011**). Harnessing Technology to Improve Formative Assessment of Student Conceptions in STEM: Forging a National Network. *CBE-Life Sciences Education. Vol. 10, 149–155.*

(**25**) **Nehm, R.H.,** Ridgway, J. (**2011**). What do experts and novices "see" in evolutionary problems? *Evolution Education and Outreach.* Volume 4, 4, 666-679

(**24**) **Nehm, R.H., ***Ha, M. (**2011**). Item feature effects in evolution assessment. *Journal of Research in Science Teaching*. 48(3):237–256.

(**23**) Neumann, I., Neumann, K., **Nehm, R.H.** (**2011**). Evaluating instrument quality in science education: Rasch-based analyses of a Nature of Science Test. *International Journal of Science Education. Volume 33, Issue 10, pp. 1373-1405.*

(**22**) *****Kim, S. and **Nehm, R.H. (2011).** A Cross-Cultural Comparison of Korean and American Science Teachers' Views of Evolution and the Nature of Science. *International Journal of Science Education.* Volume 33, Issue 2, pp. 197-227

(**21**) **Nehm, R.H. (2010).** Understanding Undergraduates' Problem Solving Processes. *Journal of Biology and Microbiology Education*, 1(2): 119-121.

(**20**) **Nehm, R.H., ***Rector, M., and *Ha, M. (**2010**). "Force Talk" in Evolutionary Explanation: Metaphors and Misconceptions. *Evolution Education and Outreach* (3): 605-613.

(**19**) **Nehm, R. H.** and Schonfeld, I. **(2010).** The future of natural selection knowledge measurement. *Journal of Research in Science Teaching*. 47(3), 358-362

(**18**) **Nehm, R.H., ***Kim, S., and Sheppard, K. **(2009).** Academic Preparation in Biology and Advocacy for Teaching Evolution: Biology versus Non-Biology Teachers. *Science Education* 93(6), pp. 1122 - 1146.

(**17**) **Nehm, R.H.** (and 6 others) **(2009).** Does the Segregation of Evolution in Biology Textbooks and Introductory Courses Reinforce Students' Faulty Mental Models of Biology and Evolution? *Evolution Education and Outreach* 2:527–532.

(**16**) **Nehm, R.H.** and Schonfeld, I. (**2008**). Measuring knowledge of natural selection: A comparison of the CINS, and open-response instrument, and oral interview. *Journal of Research in Science Teaching*, 1131-1160.

(**15**) **Nehm, R.H.** and Young, R. (**2008**). "Sex hormones" in secondary school biology textbooks. *Science & Education*, 17:1175–1190. (Most downloaded article in *Science & Education* 2011, 2012).

(**14**) **Nehm, R. H.** and *Reilly, L. (**2007**). Biology majors' knowledge and misconceptions of natural selection. *Bioscience*, 57(3):263-272.

(**13**) **Nehm, R. H.** and Schonfeld, I. (**2007**). Does increasing biology teacher knowledge about evolution and the nature of science lead to greater advocacy for teaching evolution in schools? *Journal of Science Teacher Education*, 18(5) 699-723

(**12**) **Nehm, R.H**. (**2007**). Teaching evolution and the nature of science. *Focus on Microbiology Education*, 13(3):5-9.

(**11**) Hoskins, S.G., Stevens, L., **Nehm, R.H.** (**2007**). Selective Use of the Primary Literature Transforms the Classroom Into a Virtual Laboratory. *Genetics*, 176: 1381-1389

(**10**) **Nehm, R. H.** and A. F. Budd. (**2006**). Missing 'links' in bioinformatics education: Expanding students' conceptions of bioinformation and evolution using paleobiological databases. *The American Biology Teacher* 7(91) pp. 1-9.

(**9**) **Nehm, R. H.** (**2006**). Faith-based evolution education? *Bioscience*, Volume 56, Number 8, pp. 638-639.

(**8**) **Nehm, R. H.** (**2005**). Patterns and processes of evolutionary stasis and change in Eratoidea (Gastropoda: Marginellidae) from the Dominican Republic Neogene. *Caribbean Journal of Science*, Vol. 41, No. 2, 189-214.

(**7**) Govind, S. and **R. H. Nehm**. (**2004**). Innate immunity in the fruit fly: A textbook example of genomic recycling. *PLoS Biology,* Vol. 2(8):19-22.

(**6**) **Nehm, R.H.** (**2001**). Neogene Paleontology in the northern Dominican Republic 21: The Genus Prunum. *Bulletins of American Paleontology.* No. 359. pp.1-46.

(5) Nehm, R.H. (**2001**). Calibrating Spatial And Temporal Species Richness Patterns Intropical American Marginellid Gastropods. *Journal of Paleontology* (special issue on Tropical America), 75(3), 680–696.

(4) Costa, F. **Nehm, R. H.,** and Hickman, C. (**2001**). Neogene Paleontology in the northern Dominican Republic 22: The Family Neritidae. *Bulletins of American Paleontology*. 359: 47-71.

(3) Nehm, R. H. and B. Bemis. (**2002**). Common Paleozoic Fossils of Wisconsin. *Educational Series 45*, pp. 1-28. Wisconsin Natural History Survey, State of Wisconsin.

(2) Nehm, R. H. and Geary, D. (**1994**). A gradual morphologic transition during a rapid speciation event in marginellid gastropods (Neogene; Dominican Republic). *Journal of Paleontology.* 68(4): 787-795.

(1) Anderson-L.C., Geary-D. H ; **Nehm, R.H.,** Allmon-W. D. (**1991**). A comparative study of naticid gastropod predation on Varicorbula caloosae and Chione cancellata, Plio-Pleistocene of Florida, U.S.A. *Palaeogeography, Palaeoclimatology, Palaeoecology.* 85; 1-2, pp. 29-46.

Edited Books

(1) Nehm, R. H. and A. F. Budd. (Eds.) (**2008**) *Evolutionary Stasis and Change in the Dominican Republic Neogene.* Springer. 315 p.

Chapters in Edited Books (17)

(17) Nehm, R.H. (2024). AI in Biology Education Assessment: How Automation Can Drive Educational Transformation. In: Zhai, X. et al. (Eds.) *Uses of Artificial Intelligence in STEM Education.* Oxford University Press.

(16) Nehm, RH, Kampourakis, K. **(2023).** Important Things to Know about How to Teach About Evolution. Pp. 87-105 In: *Learning Evolution Through Socioscientific Issues.* Sá-Pinto, X., Beniermann, A., Børsen, T., Georgiou, M., Jeffries, A., Pessoa, P., Sousa, B., & Zeidler, D.L. (Eds.). Aveiro: UA Editora

(15) Ha, M. **Nehm, R.H. (2023).** Measuring Scientific Understanding Across International Samples: The Promise of Machine Translation and NLP-based Machine Learning Technologies. In: Yaneva & VonDavier (Eds.). *Advancing National Language Processing in Educational Assessment.* NCME (*National Council on Measurement in Education*). Routledge.

(14) Gericke, N. El-Hani, C. Sbeglia, G.C., **Nehm, R.H.,** Menezes Evangelista, N. (**2021**). Is Belief in Genetic Determinism Similar Across Countries and Traits? Chapter 7 In: M. Haskel-Ittah, A. Yarden (Eds.), Genetics Education: Current Challenges and Possible Solutions Contributions. Springer Nature (Switzerland). DOI: 10.1007/978-3-030-86051-6;

(13) Nehm, R.H. (2018). Chapter 14: Evolution. *Teaching Biology in Schools***.** (Eds.) Reiss, M., Kampourakis, K. Routledge.

(12) Rachmatullah, A., **Nehm, R.H.,** Ha, M. Roshayanti, F. **(2018).** Evolution Education in Indonesia: Pre-service Biology Teachers' Evolutionary Knowledge Levels, Reasoning Models, and Acceptance Patterns. *Evolution Education around the Globe.* (Eds.). Deniz, H. Borgerding, L. Springer**.**

(11) Nehm, R.H. and Kampourakis, K. **(2016**). Conceptual change in science and in science education. *Encyclopedia of Educational Philosophy and Theory. pp 1-5.* Springer.

(**10**) **Nehm, R.H.** and Kampourakis, K. and **(2014**). History and philosophy of science and the teaching of macroevolution. Chapter 14 (pp. 401-422) In: Matthews, M. (Ed.) *Handbook of the History and Philosophy of Science in Science and Mathematics Teaching. Volume I.* Springer.

(**9**) Kampourakis, K. and **Nehm, R.H. (2014**). History and philosophy of science and student explanations and conceptions. Chapter 13 (pp. 377-400) In: Matthews, M. (Ed.) *Handbook of the History and Philosophy of Science in Science and Mathematics Teaching. Volume I.* Springer.

(**8**) Haury, D. and **Nehm, R.H.** (**2012**). The global challenge of genomics education: A path to the future. In: Nelson (Ed.). Pp. 311-333, *Genomics Applications for the Developing World.* Springer.

(**7**) **Nehm, R.H.** (**2008**). The Dynamics of Evolutionary Stasis in Dominican *Prunum*. In: *Evolutionary Stasis and Change in the Dominican Republic Neogene.* Springer. Pp. 171-192.

(**6**) **Nehm, R.H.,** Luna, J. and Budd, A.F. (**2008**). Science education and the Dominican Republic Project. Pp. In: *Evolutionary Stasis and Change in the Dominican Republic Neogene.* Springer. Pp. 281-300.

(**5**) **Nehm, R.H.** and C.S. Hickman (**2008**). Assessing the Effects of Taphonomic Processes on Paleobiological Patterns using Turbinid Gastropod Shells and Opercula. In: *Evolutionary Stasis and Change in the Dominican Republic Neogene.* Springer. Pp. 63-84.

(**4**) Rivera, R., Lawson, G., Harvey, M. and **Nehm, R.H.** (**2008**). Faunal Change in Mollusc-Rich Assemblages from the Río Gurabo (Dominican Republic Neogene). In: *Evolutionary Stasis and Change in the Dominican Republic Neogene.* Springer. Pp. 225-252.

(**3**) **Nehm, R.H.** and A.F. Budd (**2008**). Palaeobiological research in the Dominican Republic Neogene. In: *Evolutionary Stasis and Change in the Dominican Republic Neogene.* Springer. Pp. 1-20.

(**2**) **Nehm, R. H.** (**2001a**). Linking macroevolutionary pattern and developmental process in marginellid gastropods. In J. B. C. Jackson, S. Lidgard, and F. K. McKinney. (eds). Evolutionary Patterns. University of Chicago Press.

(**1**) **Nehm, R.H.** (**2001b**). The developmental basis of morphological disarmament in Prunum (Neogastropoda; Marginellidae). In: M.L. Zelditch, Ed. Beyond Heterochrony. John Wiley and Sons, New York.

Book Reviews (12)

(**12**) **Nehm, R.H. (2022)** The Chicago Guide to College Science Teaching *By Terry McGlynn. University of Chicago Press.* $18.00. xii + 198 p.; index. ISBN: 13:978-0-226-54236-2. 2020.

(**11**) **Nehm, R.H. (2018).** Discovery-Based Learning in the Life Sciences. *Quarterly Review of Biology In press.*

(**10**) **Nehm, R.H. (2016).** Tools for Critical Thinking in Biology. *Quarterly Review of Biology. In press.*

(**9**) **Nehm, R.H. (2014).** Successful Science Communication: Telling it Like it is. *Quarterly Review of Biology.* 89(4):411. DOI: 10.1086/678669

(**8**) **Nehm, R.H. (2014).** Evolution Challenges: Integrating Research and Practice in Teaching and Learning about Evolution. *Science & Education*, 24, 481-485. doi:10.1007/s11191-014-9705-y

(**7**) **Nehm, R.H. (2014).** Discipline-Based Education Research. *Science Education.* 98 (3): 543–546

(**6**) **Nehm, R. H. (2012).** The Evidence for Evolution*: Bioscience.* 62(9): 845-846

(**5**) **Nehm, R. H. (2013).** Evolution That Anyone Can Understand. *Science & Education.* 22 (5): 1291-1294

(4) Nehm, R. H. (2011). Genetics of Original Sin. *Science Education.* 95, Issue 4, 766–768

(3) Nehm, R. H. (date). The Plausibility of Life. *The American Biology Teacher,* (check on this).

(2) Nehm, R. H. (**2006**). Scientists Debate Gaia. *The American Biology Teacher*, 68(3):170

(1) Nehm, R. H. (**2005**). Bumblebee Economics. *The American Biology Teacher*, 67(7): 438-439.

Technical reports

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(2) Mollohan, K., Baronda, S. **Nehm, R.** (**2011**). User's Guide for the Assessment Cascade System (ACS). Technical Report of the the National Science Foundation REESE Project 090999. 13p.

(1) Nehm, R.H., Ha, M., Rector, M., Opfer, J., Perrin, L., Ridgway, J., Mollohan, K. (**2010**). Scoring Guide for the Open Response Instrument (ORI) and Evolutionary Gain and Loss Test (EGALT). Technical Report of National Science Foundation REESE Project 0909999. 40 p.

Invited Presentations/Keynotes/Plenary talks (58)

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(58) Nehm, R.H. (2023) Invited talk. *The Importance of Education in the Digital Age: Artificial Intelligence*. Third International Congress on Excellence in Education. (December)

(57) Nehm, R.H. (2022) Invited talk. "Predictive Learning Analytics in University Settings: Promise and Pitfalls" at the University of Hannover (Germany). (November)

(56) Nehm, R.H. (2022) Invited talk. Evolution education through the lens of three-dimensional learning. *Third International Workshop on Evolution and Genetics Education.* University of Keil, Germany. June

(55) Nehm, R.H. (2022) Plenary talk. AI in Biology Education: Automation and Transformation. *AI in STEM Education Conference.* University of Georgia. May

(54) Nehm, R.H. (2021) Invited talk. Biology Education Research: Opportunities and Challenges Facing Life Science Education. *Kennesaw State University DBER series*, Georgia October 13. Also panel discussion Nov. 3.

(53) Nehm, R.H. GC Sbeglia E Abreu **(2021).** Invited talk. Learning evolution through epistemic reframing: exploring the associations among explanation types, key concepts, and misconceptions pre- and post-instruction. "*Future Directions in Evolution Education*" Invited talk IPN, Keil, Germany. *June* 15-17.

(52) Nehm, R.H. (2021). Invited Panelist at the *National Academies of Sciences, Engineering, and Medicine* round table on role of data and assessments in undergraduate life sciences education reform. *September.*

(51) Cooper, M, **Nehm, R.H. (2020).** Invited talk. *Chemistry Education Research (CER) Committee of the Division of Chemical Education of the American Chemical Society.*

(50) Nehm, R. H. (2019). Plenary Talk. Biology Education Research: Building Integrative Frameworks for Teaching and Learning About Living Systems. *Frontiers and Challenges of Disciplinary and Interdisciplinary Science Education Research.* Beijing, China.

(49) Nehm, R. H. (2019). Plenary Talk. In what ways is the development of conceptual understanding and situational abstraction in genetics and evolution linked? *Future Directions in Genetics Education*, *Weizmann Institute of Science*, *Israel.* September.

(48) Nehm, R. H. (2019). Plenary Talk. Thinking About Evolutionary Change: Concepts, Contexts, and Cognitive Coherence. EVOKE conference. Porto, Portugal.

(47). Nehm, R.H (2018). Invited Talk. Longitudinal Learning Dynamics and The Growth of Conceptual Abstraction. *Leibniz Institute for Science and Mathematics Education (IPN)*, Germany. June 27.

(46) Nehm, R.H. (2018). Keynote Address. School of Biological Sciences, Phi Sigma Research Symposium. Thinking About Evolutionary Change: Concepts, Contexts, and Cognitive Coherence. *Illinois State University.* April 13.

(45) Nehm, R. H. (2017). Invited Talk. Thinking about Evolution: Concepts, Coherence, Competence. *Department of Integrative Biology, University of South Florida.* October 5.

(44). Nehm, R. H. (2017). Plenary Talk. *New Horizons in Biochemistry & Molecular Biology Education*, *Weizmann Institute of Science*, *Israel*. September.

(43) Nehm, R. H. (2016). Keynote Address. ERIDOB *European Researchers in the Didactics of Biology Conference,* Karlstad Sweden, September 4-9.

(42) Nehm, R. H. (2016). Invited Talk. Contrasting the roles of scale and context in the assessment of genetic and evolutionary understanding. *International Workshop on the Future of Genetics and Genomics Education. University of Geneva-Switzerland*, June 1-4.

(41) Nehm, R. H. (2016). Invited Talk. Building Next-Generation STEM Assessments Using Machine-Learning Methodologies. *Envisioning the Future of Undergraduate STEM Education: Research and Practice, Washington, DC.* April 27-29

(40) Nehm, R.H. (2016). Invited Talk. Reflective Practice and Action Research. *New York Master Teacher Program. April, Stony Brook, NY.*

(39) Nehm, R. H. (2016). Invited Talk. Reforming Undergraduate Science Education in the United States: An Overview of Challenges and Research Opportunities. *ALSTER Research Group, University of Duisburg-Essen, Germany.* March 17th.

(38) Nehm, R. H. (2016). Invited Talk. Thinking about Evolution: Concepts, Coherence, Competence. *Crow Institute for the Study of Evolution. University of Wisconsin, Madison,* March 10th.

(37) Nehm, R. H. (2016). Invited Talk. Teaching Evolution. *Department of Genetics, University of Wisconsin, Madison,* March 9th.

(36) Nehm, R. H. (2015). Invited Talk. Darwin's difficulties and students' struggles with trait loss: cognitive-historical parallelisms in evolutionary explanation. *European Science Education Research Association international conference, Helsinki, Finland, September.*

(35) Nehm, R. H. (2015). Gordon Conference Invited Speaker: Undergraduate Biology Education Research "Cognitive and conceptual foundation of biology assessment*." Bates College, Maine.*

(34) Nehm, R.H. (2015). Undergraduates' problem solving processes across science subjects: crosscutting cognitive challenges and instructional solutions. *17th annual Chicago Symposium on Excellence in Mathematics and Science Teaching. Chicago, IL, Jan 30th.*

(33) Nehm, R.H. (2014). The Contextual Nature of Evolutionary Reasoning: Implications For Biology Teaching, Learning, and Assessment. Plenary Talk. *BEACON Congress, Michigan State University. East Lansing, August 19th.*

(32) Nehm, R.H. (2014). SSE Education Symposium: Assessing Undergraduate Student Understanding of Evolutionary Biology: "Assessing students' mental models of evolutionary change across the tree of life using

the ACORNS instrument." *Evolution 2014: Joint annual meeting of the Society for the Study of Evolution (SSE), the Society of Systematic Biologists (SSB), and the American Society of Naturalists (ASN), June 22.*

(31) Nehm, R.H. (2014). Biology Education Essentials. *Cold Spring Harbor DNA Learning Center, NY, June 17.*

(30) Nehm, R.H. (2014). Gordon Conference Invited Speaker: Physics Research and Education, "The challenge of developing context-dependent schemas for the application of physical principles to biological systems." The Intersection of Biology and Physics. *Mount Holyoke College in South Hadley, Massachusetts, June 8-13.*

(29) Nehm, R.H. (2014). Machine-learning methods for science assessment: prospects and limitations. *Learning Analytics Seminar Series, Teachers College, Columbia University, NY, April 29.*

(28) Nehm, R.H. (2014). "The situated nature of evolutionary reasoning: implications for science learning and assessment." *Graduate School of Education Learning Sciences Seminar Series. Rutgers University, New Jersey. February 4.*

(27) Nehm, R.H. (2014). John A. Moore Plenary Lecture "The Contextual Nature of Evolutionary Reasoning: Implications For Biology Teaching, Learning, and Assessment" *Society for Integrative and Comparative Biology, Austin, Texas, January 3-7.*

(26) Nehm, R.H. (2013). Teaching and Learning Natural Selection. *Ministry of Education, Santiago, Chile. July 11.*

(25) Nehm, R.H. (2012). Thinking about biology: Context, coherence, competence**.** *Department of Biology, Bowling Green State University, Bowling Green, OH. November.*

(24) Nehm, R.H. (2012). Biology Teachers and Evolution: Research-based Strategies for Achieving Meaningful Learning. *Stony Brook University*, *Stony Brook, New York. July 23*

(23) Nehm, R.H. (2011). Thinking evolutionarily: the evidence base. *Invited convocation speaker, National Academy of Science/National Research Council Convocation: "Thinking Evolutionarily: Evolution Across the Life Sciences."* Carnegie Institution of Science, Washington, D.C. October 25-26.

(22) Nehm, R.H. (2011). Automated analysis of authentic scientific practices. Invited panelist**:** *Innovative Approaches to Assessment in STEM Education, Arlington, VA, National Science Foundation/ARC,* October 20**.**

(21) Nehm, R.H. (2011). Exposing evolutionary reasoning: Context, coherence, and competence. *Iowa State University, Ames, IA, Biology Graduate Student association invited speaker.* March 31.

(20) Nehm, R.H. (2011). Using Technology to Enhance Assessment Quality in Biology Education. Dept. of EEO, *Iowa State University, Ames, IA, April 1.*

(19) Nehm, R.H. (2010). Thinking about biology. Invited talk at the IPN (*Leibniz Institute for Science and Mathematics Education, University of Kiel, Germany*). November 5.

(18) Nehm, R.H. (2010). Paleoevodevo: Macroevolution and development in marginellid gastropods. *Earth System History seminar series, Dept. of Earth Sciences, OSU*, Nov. 16.

(17) Nehm, R.H. (2010). Thinking about biology: cognition, learning, and assessment. *National Science Foundation NOYCE scholars program, Chicago State University*, Chicago, IL, October 19.

(16) Nehm, R.H. (2010). Cognition and Learning in Science Education: The Case of Evolution. Panelist and presenter at the *Cognition and Learning in Science Education: The Case of Evolution session at the ARC-REESE Principal Investigator conference, Arlington, VA, March 11-12.*

(15) Nehm, R.H. (2009). Evolution and education: a forum for teachers (Keynote speaker). *New Jersey*

Center for Science, Technology & Mathematics Education, Kean University, New Jersey. October 30.

(14) Nehm, R.H. (**2009**). Human vs. Computer Diagnosis of Mental Models of Natural Selection: Testing the Efficacy of Lexical Analyses of Open Response Text. *Transforming Undergraduate Biology Education: Mobilizing the Community for Change*, July 15–17, Washington, D.C.

(13) Nehm, R.H. (**2009**). (Inaugural keynote). Thinking about evolution: Misconceptions and measurement. *Stony Brook University, Stony Brook, New York. March 19.*

(12) Nehm, R.H. (**2009**)**.** Thinking about evolution: Misconceptions and measurement. *Wright State University, Dayton, Ohio. February 23.*

(11) Nehm, R. H. (**2008**). Science Education Research. *NWU, Universität Duisburg-Essen, Essen, Germany.*

(10) Nehm, R. H. (**2008**). Evidence-based evolution education: Finding out what works. *New Jersey Center for Science, Technology & Mathematics Education, Kean University, New Jersey.*

(9) Nehm, R. H. (**2008**). Measuring knowledge of evolution and natural selection. *Center For Research On College Science Teaching And Learning, Michigan State University.*

(8) Nehm, R.H. (2007). Teaching Evolution and the Nature of Science: Pitfalls and Opportunities. "Learn Something New," *ASM Conference for Undergraduate Educators* (AMSCUE), Buffalo, NY.

(7) Nehm, R. H. (**2007**). Teaching evolution and the nature of science. *School of Teaching and Learning, The Ohio State University.*

(6) Nehm, R. H. (**2007**). "Exploring the interrelationships among cognitive models of evolution, understanding of evolution, and belief in evolution" *Department of EEOB, Iowa State University.*

(5) Nehm, R. H. (**2005**). Exploring the interrelationships among cognitive models of evolution, understanding of evolution, and belief in evolution in New York City biology undergraduates and science teachers. *Center for Environmental Research Center (CERC), Columbia University, November 29.*

(4) Nehm, R. H. (2005). Teaching Evolution and the Nature of Science: Pitfalls and Opportunities IDEAS Institute of the School of Education and Allied Human Services at *Hofstra University, Day-long workshop, Saturday, December 3.*

(3) Nehm, R. H. (**2005**). Does increasing science teacher knowledge about evolution and the nature of science translate into greater advocacy for teaching evolution in schools? *National Academy of Sciences, Summer Institute on Biology Education. Madison, WI.*

(2) Nehm, R. H. (**2005**). Evolution misconceptions and what to do about them. *American Museum of Natural History (AMNH) Professional Development Workshop for science teachers, November 8.*

(1) Nehm, R. H. (**2004**). The Dominican Republic Project: Integrating science research and science education. *National Science Foundation Mentoring Workshop, Arlington, VA.*

Conferences and Proceedings papers/talks (154)

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(154) Nehm, RH, Abreu, E, Sbeglia, G. (**2023**). Epistemic aims, explanation types, and evolution learning. Paper presented at the *National Association of Research in Science Teaching. (Chicago, April)*
(**153**) GC Sbeglia, RH Nehm **(2022)**. Does evolution coursework mitigate, maintain, or exacerbate educational debt? Equity implications in the evolutionary sciences. Paper presented at the *National Association of Research in Science Teaching. (Chicago, April)*

(**152**) Kubsch, M….Nehm, RH….(**2023**) Distributing Epistemic Functions and Tasks–Towards a Methodological Approach for Using ML in Science Education. *National Association of Research in Science Teaching. (Chicago, April)*

(**151**) GC Sbeglia, RH Nehm **(2022)**. A mixed-methods study of the importance of family-level variables to evolution-related perspectives and careers in Black undergraduates. *National Association of Research in Science Teaching. (April)*

(**150**) *GC Sbeglia, RH Nehm **(2021).** Linking cognitive and measurement frameworks in studies of evolution acceptance. Symposium on Measuring Evolution Acceptance – Testing Validity Inferences and Understanding Response Patterns. *European Science Education Research Association. September*

(**149**) *RH Nehm, GC Sbeglia **(2021)**. Shifts in students' explanation types after evolution instruction: implications for addressing teleology. Symposium. Teleology in biology education: key challenges ahead. *European Science Education Research Association. September*

(**148**) RH Nehm, *GC Sbeglia, Finch, S., *Colton, J. **(2021).** The importance of explicit attention to evolution misconceptions: A large-scale, quasi-experimental, multi-instrument study of learning outcomes. Evolution 2021: Society for the Study of Evolution (SSE), the Society of Systematic Biologists (SSB), and the American Society of Naturalists (ASN) (*June*)

(**147**) *GC Sbeglia, RH Nehm **(2021).** Identifying and dismantling barriers to evolutionary biology interests and outcomes in minoritized students: Examples from gateway biology. Evolution 2021: Society for the Study of Evolution (SSE), the Society of Systematic Biologists (SSB), and the American Society of Naturalists (ASN) (*June*)

(**146**) *Sbeglia, G. C., *Goodridge, J., *Gordon, L. Nehm, R. H. (**2021**). Measuring Faculty Enactment of Evidence-Based Teaching in Undergraduate STEM: The Role of Observation Sampling Intensity" at the national meeting of the *American Educational Research Association (April).*

(**145**) *GC Sbeglia, RH Nehm **(2021).** "The Impact of Biology Instruction on Evolution Acceptance and Conflict in Underrepresented Minority Undergraduates" at the national meeting of the *National Association of Research in Science Teaching. (April)*

(**144**) Goodrich, J., L. Gordon, Ross Nehm, Gena C Sbeglia (**2020**). Faculty Adoption of Evidence-based Teaching Practices: The Role of Observation Sampling Intensity on Measures of Change. 2020 *SABER (Society for the Advancement of Biology Education Research) National Meeting. Minneapolis, Minnesota.*

(**143**) Gena C Sbeglia*, Ross Nehm (**2020**) Using Latent Variable Path Modeling to reveal the causal links of evolution acceptance in biology undergraduates. *SABER (Society for the Advancement of Biology Education Research) National Meeting. Minneapolis, Minnesota.*

(**142**). Sbeglia, G.C., Nehm, R.H. (**2020**). Valdiation of the SECM (Scales of Evolutionary Conflict Measure). *Australian Science Education Research Association.*

(**141**) Feilder, D., Sbeglia, G.C., Harms, U., Nehm, R.H. (**2020**). Threshold Concepts in Novices'and Experts' Evolutionary Explanations. Paper accepted for presentation at the international meetingof the National Association for Research in Science Teaching (NARST) Annual InternationalConference, Portland, OR.2

(**140**) Goodridge, J.*, Gordon, L.* Nehm, R. H., Sbeglia, G. C. (**2020**). Are Faculty Changing?Sampling effects on measures of instructor adoption of evidence-based teaching practices. Paper accepted for presentation at the international meeting of the National Association for Research in Science Teaching (NARST) Annual International Conference, Portland, OR

(**139**) Paula P. Lemons, Jill McCourt, Patricia Zagallo, Michelle K. Smith, Jennifer K. Knight, Tessa C. Andrews, Kevin Haudek, Robert Idsardi, Claire Meaders, John Merrill, Ross Nehm, Karen Pelletreau, Luanna B. Prevost, and Mark Urban-Lurain (**2019**) Teaching Professional Development: A Trajectory Toward Effectively Fostering a Focus on Student Thinking. Talk presented at SABER, Minneapolis, MN.

(**138**) Lemons, P.P., Haudek, K., Hoskinson, A-M., Jescovitch, L., Knight, J.K., Merrill, J., Nehm, R., Prevost, L., Smith, M.K., Sripathi, K., Urban-Lurain, M., and Wilson, C. (**2018**) Seeking Synergy: K-12 Professional Development as a Model for College Science Faculty. Talk presented at the Association of American Colleges and Universities Transforming STEM Higher Education Conference, Atlanta, GA.

(137) Zagallo, P., McCourt, J. Idsardi, B., Haudek, K., Knight, J., Merrill, J., **Nehm, R.H.,** Prevost, L., Smith, M., Urban-Lurain, M., Lemons, P. (**2018**). Through the eyes of faculty: using personas as a tool for user-centered professional development. *SABER (Society for the Advancement of Biology Education Research) National Meeting. Minneapolis, Minnesota. July.*

(136) Sbeglia*, G., *Xue, Y., Finch, S., **Nehm, R.H. (2018).** Using data mining methods to quantify the contributions of institutional and course-specific data to student success predictions , Stony Brook University. *SABER (Society for the Advancement of Biology Education Research) National Meeting. Minneapolis, Minnesota.* July.

(135) Sripathi, K. Moscarella, R., **Nehm, R.H.,** Yoho, R. You, S. Urban-Lurain, M., Haudek, K., Merrill, J. **(2018).** Mixed Students Ideas about Tracing Matter across Biological Scales in the Context of Human Weight Loss. *SABER (Society for the Advancement of Biology Education Research) National Meeting. Minneapolis, Minnesota.*

(134) ***Sbeglia, G., **Nehm, R.H. (2018). Disparities in URM evolution acceptance: implications for diversifying the biological sciences. *SABER (Society for the Advancement of Biology Education Research) National Meeting. Minneapolis, Minnesota. July.*

(133) Nehm, R.H., Fiedler, D., *Sbeglia, G.C., U. Harms (**2018**) Knowledge of Randomness and Probability as Predictor for Understanding and Acceptance of Evolution. Symposium presentation at the *European Researchers in the Didactics of Biology (ERIDOB)* conference. University of Zaragoza, Spain, July 3.

(132) Nehm, R.H. (2018). Inclusive Excellence at Stony Brook University. *Howard Hughes Medical Institute Peer Implementation Cluster (PIC) meeting*, Northeastern University, Boston, June 22nd.

(131) ***Sbeglia, G., **Nehm, R.H. (2018). Disparities in Underrepresented Minority Evolution Acceptance: Implications for Diversifying the Biological Sciences. Paper presented at the *SUNY-Industry Conference and Showcase: Science and Engineering for Social Good* conference. June 5th.

(130) Fiedler, D., **Nehm, R.H., ***Sbeglia, G., Harms, U. (**2018**). The Role of Statistical Thinking in Learning, Understanding, and Accepting Evolution. *Paper presented at the international meeting of the National Association for Research in Science Teaching (NARST) conference, Atlanta.*

(129) ***Colton, J. *Sbeglia, G., Finch, S., **Nehm, R.H. (2018). A Quasi-experimental Study of Short- and Long-term Learning of Evolution in Misconception-Focused Classes. Paper presented at the *American Educational Research Association International conference (AERA).* New York, NY.

(128) ***Sbeglia, G. **Nehm, R.H. (**2017**). Does evolution acceptance differ across biological scales? A Rasch analysis of the Inventory of Student Evolution Acceptance (I-SEA). *SABER (Society for the Advancement of Biology Education Research) National Meeting. Minneapolis, Minnesota.*

(127). Multiple Editors, **Nehm, R.H.** (**2017**). Publications Advisory Committee Sponsored Symposium How to Get Your Research Published in Science Education Journals. *National Association for Research in Science Education (NARST) 2017 Annual International Conference, San Antonio.*

(126). *Tornabene, R. **Nehm, R.H.** Schmiemann, P. (**2017**). Testing the Impact of Situational Features on Measures of Biology Students' Genetics Understanding . *In National Association for Research in Science Education (NARST) 2017 Annual International Conference, San Antonio.*

(125). *Wang, X., *Colton, J., *Sbeglia, J., Finch, S., **Nehm, R.H.** (**2017**). Longitudinal Learning Dynamics and the Conceptual Restructuring of Evolutionary Understanding . *In National Association for Research in Science Education (NARST) 2017 Annual International Conference, San Antonio.*

(124). *Sbeglia, G. **Nehm, R.H.** (**2017**). Does Evolution Acceptance Differ across Biological Scales? A Rasch Analysis of the I- SEA . *In National Association for Research in Science Education (NARST) 2017 Annual International Conference, San Antonio.*

(123) Gough, C. **Nehm, R.H. (2016).** NARST-Sponsored Sessions at NSTA Conferences. *The Efficacy of Multi-Level Professional Development for Elementary, Middle School, and High School Teachers*. NSTA, Portland, OR, November.

(122). Cotner, S. Ricciardi, L. **Nehm, R.H.** Grisham, W. Mack, P. Kelter, P. Porzecanski, A. Johnson, E. Klymkowsky, M. (2016). Discussion Panel: Evaluation and Assessment. *Envisioning the Future of Undergraduate STEM Education: Research and Practice* on April 27-29, Washington, DC.

(**121**) Multiple authors. (**2016**). Expanding a National Network for Automated Analysis of Constructed Response Assessments to Reveal Student Thinking in STEM. *Envisioning the Future of Undergraduate STEM Education: Research and Practice* on April 27-29, Washington, DC.

(**120**) Multiple authors. (**2016**). A Community of Enhanced Assessment Facilitates Reformed Teaching. *Envisioning the Future of Undergraduate STEM Education: Research and Practice* on April 27-29, Washington, DC.

(**119**) Tornabee, R., Lavington, E., **Nehm, R.H.** (**2016**). Testing Validity Inferences for Genetic Drift Concept Inventory Scores Using Rasch and Item Order Analyses *In National Association for Research in Science Education (NARST) 2016 Annual International Conference, Baltimore.*

(**118**) Ha, M., & **Nehm, R.H.** (**2016**). Predicting the Accuracy of Computer Scoring of Text: Probabilistic, Multi-Model, and Semantic Similarity Approaches. *In National Association for Research in Science Education (NARST) 2016 Annual International Conference, Baltimore.*

(**117**) Gough, C., **Nehm, R.H.** (**2016**). High School, Community College, And University Faculty Perspectives On The Efficacy Of Multi-Level Professional Development. *In National Association for Research in Science Education (NARST) 2016 Annual International Conference, Baltimore*.

(**116**) **Nehm, R.H.** (**2016**). Strand 13: History, Philosophy, and Sociology of Science Symposium: Nature of Science in the Next Generation Science Standards: Translating Recommendations into Practice. *In National Association for Research in Science Education (NARST) 2016 Annual International Conference, Baltimore.*

(**115**) Shaprio, Donna, **Nehm, R.H.** (**2016**). Validation of the Science Motivation Questionnaire II with 9th Grade Science Students. *In National Association for Research in Science Education (NARST) 2016 Annual International Conference, Baltimore.*

(**114**) Chen, J., Ha, M., & Nehm, R. H. (**2015**). Measuring semantic similarity in written text: Applications to learning and assessment. *In National Association for Research in Science Education (NARST) 2015 Annual International Conference, Chicago.*

(**113**) Ha, M., & Nehm, R. H. (**2015**). Assessment item "Cover Stories", semantic similarity and successful computerized scoring of open-ended text. *In National Association for Research in Science Education (NARST) 2015 Annual International Conference, Chicago*.

(**112**) Ha, M., & Nehm, R. H. (**2015**). Exploring students' evolutionary explanations across natural, sexual, and artificial selection scenarios. *In National Association for Research in Science Education (NARST) 2015 Annual International Conference, Chicago.*

(**111**) Gough, C., Nisselle, A., Ha., M., Nehm, R.H. (**2015**). The Impact of a Multi-level Genomics PD Program on HS, Community College, and University Faculty. *In National Association for Research in Science Education (NARST) 2015 Annual International Conference, Chicago.*

(**110**) Lee, U., Sbeglia, G., Ha, M., Finch, S., Nehm, R.H. (**2015**). Clicker Score Trajectories and Concept Inventory Scores as Predictors of Student Success in Science Courses. *In National Association for Research in Science Education (NARST) 2015 Annual International Conference, Chicago.*

(**109**) Sbeglia, G., Ha, M., Nehm, R.H. (**2015**). Student Learning about Evolution in a Misconception-Focused vs. Traditional Undergraduate Biology Class. *In National Association for Research in Science Education (NARST) 2015 Annual International Conference, Chicago.*

(**108**) Ha, M., & Nehm, R. H. (**2015**). Exploring the use of machine translation and machine grading of open-ended assessments in international comparison studies. *European Science Education Research Association meeting, Helsinki, Finland, September.*

(**107**) Pelletreau, K. N., Knight, J. K., Lemons, P. P., McCourt, J. S., Merrill, S. J., Moscarella, R. A., Nehm, R.H., et al.. (**2015**). Using student constructed responses to guide the development of instructional activities by cross- institutional faculty learning communities. *In Gordon Research Conference on Undergraduate Biology Education Research.*

(**106**) McCourt, J., Andrews, T. C., Crumbs, T. 'cherie, Knight, J. K., Merrill, J., Merrill, S., Nehm, R.H. et al. (**2015**). Using faculty learning communities to promote the development of student-centered biology instructors. *SABER (Society for the Advancement of Biology Education Research) National Meeting. Minneapolis, Minnesota.*

(**105**) Urban-Lurain, M., Merrill, J., Haudek, K., Nehm, R., Moscarella, R., Steele, M., & Park, M.. (**2015**). Automated analysis of constructed responses: What are we modeling? *SABER (Society for the Advancement of Biology Education Research) National Meeting. Minneapolis, Minnesota.*

(104) Ha, M., Ponnuraj, G. T., & Nehm, R. H. (**2014**). EvoGrader: An online formative assessment tool for automatically analyzing students' ideas in written evolutionary explanations. *SABER (Society for the Advancement of Biology Education Research) National Meeting. Minneapolis, Minnesota. July 17-20.*

(**103**) Lee, U. J., Finch, S., Ha, M., Nehm, R. H., Sbeglia, G., & Zhang, Q. (**2014**). Concept inventory and clicker score trajectories as predictors of student success in Large introductory biology courses. *SABER (Society for the Advancement of Biology Education Research) National Meeting. Minneapolis, Minnesota.* July 17-20.

(**102**) Voreis, J., Andrews, T., Federer, M., Knight, J., Merrill, J., Nehm, R. H., Prevost, L., Smith, M., Urban-Lurain, M., & Lemons, P. (**2014**). Investigating the impact of faculty learning communities on biology instructors. *SABER (Society for the Advancement of Biology Education Research) National Meeting. Minneapolis, Minnesota. July 17-20.*

(101) Nehm, R.H. (**2014**). "Science Assessment." Summer Institute on STEM education, *Stony Brook University, July 8.*

(100) Nehm, R.H. (**2014**). Biology 201: What are they learning? What are WE learning? *Ecology & Evolution departmental colloquium, March.*

(99) Ha, M., Zhang, R., Lee, U. J., Nehm, R. H., Finch, S. J. (**2013**). Why do students leave STEM majors? A large scale, quantitative study of degree switching at Stony Brook University. *NE-ASTE Regional Conference, Cornwall, New York, October 16-18.*

(98) Ha, M., Moharreri, K., & Nehm, R.H. (**2014**). Development of an online formative assessment tool for automatically evaluating written explanations: EvoGrader case. 2014 *Korean Association for Science Education International Conference, Gyeongbuk, Korea, February 13-15.*

(97) Ha, M., & Nehm, R.H. (**2014**). Training automated computer scoring models for written evolutionary explanations using machine learning methods and human-scored corpus. *2014 Korean Association for Science Education International Conference, Gyeongbuk, Korea, February 13-15.*

(96) Ha, M., Moharreri, K., & Nehm, R. H. (**2014**). EvoGrader: An automated online formative assessment tool for evaluating written evolutionary explanations. *Paper in proceedings of the National Association for Research in Science Teaching, Pittsburgh, PA. March 30 - April 2.*

(95) Wei, X., Nehm, R. H., Ha, M., Wang, J., & Hou, D. (**2014**). Evolutionary reasoning patterns and acceptance levels in Chinese pre-service biology teachers: A global comparison. *Paper in proceedings of the National Association for Research in Science Teaching, Pittsburgh, PA. March 30 - April 2.*

(94) Beggrow, E. P., Federer, M. R., Nehm, R. H., & Ha, M. (**2014**). Students' reasoning processes on a multiple-true-false concept inventory: Exploring the importance of substantive validity evidence in test validation. *Paper in proceedings of the National Association for Research in Science Teaching, Pittsburgh, PA. March 30 - April 2.*

(93) Campbell, C., Nehm, R. H., & Morton, B. (**2014**). Validation of a genomics and bioinformatics assessment: Analysis of student responses to a criterion referenced multiple-choice measurement tool. *Paper in proceedings of the National Association for Research in Science Teaching, Pittsburgh, PA. March 30 - April 2.*

(92) Federer, M. R., Nehm, R. H., & Pearl, D. K. (**2014**). Exploring the relationship between gender and constructed-response explanation performance. *Paper in proceedings of the National Association for Research in Science Teaching, Pittsburgh, PA. March 30 - April 2.*

(91) Ha, M., & Nehm, R. H. (**2014**). The growth of evolutionary thought: A cross-sectional study of elementary to college students' evolutionary reasoning. *Paper in proceedings of the National Association for Research in Science Teaching, Pittsburgh, PA. March 30 - April 2.*

(**90**) Campbell, C., Nehm, R.H., Morton, B. (**2013**). Using Rasch Analysis to Evaluate Item and Instrument Quality: Examples from a Genomics and Bioinformatics Assessment. *Society for the Advancement of Biology Education Research (SABER). Minneapolis, MN, July 11-14.*

(**89**) Federer, M., and Nehm, R.H. (**2013**). Using Rasch analysis to explore gender bias in written scientific explanations. *Society for the Advancement of Biology Education Research (SABER). Minneapolis, MN, July 11-14.*

(**88**) Ha, M., Moharreri, K., & Nehm, R.H. (**2013**). EvoGrader: A free, online assessment tool for evaluating undergraduates' written evolutionary explanations. *Joint annual meeting of the Society for the Study of Evolution (SSE), the Society of Systematic Biologists (SSB), and the American Society of Naturalists (ASN), Snowbird, UT, June 21-25.*

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(**84**) Ha, M., & Nehm, R. H. (**2013**). Exploring the efficacy of machine learning and translation software in international comparison studies. Paper in proceedings of the National Association for Research in Science Teaching, Rio Grande, Puerto Rico. April 6 - April 9.

(**83**) Ha, M., Dennis, S., & Nehm, R. H. (**2013**). Optimizing machine-learning models for automated computer scoring of natural selection concepts. Paper in proceedings of the National Association for Research in Science Teaching, Rio Grande, Puerto Rico. April 6 - April 9.

(**82**) Nehm, R. H., Ha, M., Großschedl, J., Harms, U., & Roshayanti, F. (**2013**). American, German, Korean, and Indonesian pre-service teachers' evolutionary acceptance, knowledge, and reasoning patterns. Paper in proceedings of the National Association for Research in Science Teaching, Rio Grande, Puerto Rico. April 6 - April 9.

(81) Campbell, C., Nehm, R.H., Morton, B. (**2013**). Gathering Multiple Sources of Content Validity Evidence to Guide Development of a Genomics-Bioinformatics Assessment. Paper in proceedings of the National Association for Research in Science Teaching, Rio Grande, Puerto Rico. April 6 - April 9.

(80) Moharari, K., Ha, M., Nehm, R.H. **(2013).** A Web-based Automated Computer Scoring System. INNOVATE 2013. March 26-27, Columbus, Ohio.

(79) Nehm, R.H.**,** Ha, M., Baldwin, B. **(2013).** The Long-Term Impacts of Short-term Teacher Professional Development: The Case of Evolution. *Association of Science Teacher Education*, Charleston, January 9-12.

(78) Campbell, C. Nehm, R.H. (**2013**). Building Assessments for Genomics and Bioinformatics Education. AAAS/National Science Foundation TUES conference. Washington, D.C.

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(76) Ha, M., Nehm, R.H. **(2012).** Darwin's difficulty with 'degeneration' and students' struggles with 'loss': Cognitive-historical parallelisms in evolutionary explanation. *International History, Philosophy of Science Teaching Conference, Seoul National University, Seoul, Korea.*

(75) Nehm, R.H., Beggrow, E., Ha, M., Rector, M.A., Opfer, J. **(2012).** Development and Evaluation of a New Multiple-True-False Concept Inventory for Diagnosing Students' Mental Models of Natural Selection. *SABER (Society for the Advancement of Biology Education Research) National Meeting*. Minneapolis, Minnesota. July 12-15.

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(53) Opfer, J. **Nehm, R.,** Ridgway, J., Mollohan, K., Perrin, L., Ha, M. **(2011).** Applying Cognitive Science to Assessment of Evolution Education. P-738-812. *National Association for Research in Science Teaching annual conference* Orlando, Florida, April 3 – 6.

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(48) Rector, M. Ha, M., **Nehm, R.H., (2010).** Evolutionary 'pressures': Biologists' conceptions and students' misconceptions. *Joint annual meeting of the Society for the Study of Evolution (SSE), the Society of Systematic Biologists (SSB), and the American Society of Naturalists (ASN)*, Portland, OR, June 25-29.

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(46) Duann ,J. and **Nehm, R.H.** (2010) Assessing the educational efficacy of genomics modules, labs, and curricula: Finding out what works. *OCCBIO*, Columbus, OH.

(45) Schwarz, Banta, Crespi, Manduca, **Nehm, R.H**., Singer **(2010)** Bringing Big Science to Small Colleges: A Genomics Collaboration. *First RECOMB Satellite Conference on Bioinformatics Education*, San Diego, CA.

(44) Nehm, R.H., Ridgway, J., Gee, M., Baronda, S. **(2010).** Revolutionizing science assessment at OSU: Development and evaluation of an online assessment cascade system. Presentation at: *Innovate! eLearning in Action* conference. Columbus, Ohio, May 20.

(43) Nehm, R.H., Ridgway, J. Haertig, H., Gee, M., Baronda, S., Opfer, J. Pearl, D. (**2010**). Transforming STEM assessment methodologies: Research on cyber-enabled measurement of cognitive models of natural selection. *National Science Foundation REESE Conference.* Arlington, VA, USA, March 10-12.

(42) Nehm, R.H., Haertig, H. & Ridgway, J. (**2010**). Human vs. Computer Diagnosis of Mental Models of Natural Selection: Testing the Efficacy of Lexical Analyses of Open Response Text. Paper presented at the *National Association of Research in Science Teaching*, Philadelphia, PA.

(41). R.H. Nehm and Sheppard, K. **(2009).** A century of evolution education: What works in the classroom? *Darwin's Reach: A Celebration of Darwin's Legacy Across Academic Disciplines.* Hofstra University, NY, March 12-14.

(40). Sheppard, K., and **R.H. Nehm (2009).** Darwin—Denied, Distorted, Disregarded. Panel 1B: The Impact of Creationism. *Darwin's Reach: A Celebration of Darwin's Legacy Across Academic Disciplines.* Hofstra University, NY, March 12-14.

(39) Nehm, R.H. et al. (**2009**). Exploring Differential Item Functioning (DIF) in the Measurement of Student Knowledge and Misconceptions of Natural Selection
Paper presented at the *National Association of Research in Science Teaching*,

(38) Nehm, R., Shirley, M., Carassco, A., & Driscoll, M. (**2008**). Development, implementation, and evaluation of a new assessment instrument for measuring student knowledge of genetics and natural selection. A paper presented at the *National Association for Research in Science Teaching annual conference*, Baltimore, MD.

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(**35**) Baldwin, B. and **R. H. Nehm. (2006)** Teacher use of virtual and physical field trips to local environments: Exploring the role of 'sense of place.' Proceedings of *The Association for Science Teacher Education (ASTE)* International meeting, Portland Oregon, January 14th.

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(**33**) Rivera, R. Harvey, M. Lawson, J. Disla, A. and **R. H. Nehm, (2006).** Benthic marine mollusk biodiversity in the Dominican Republic: Constructing an 8 million year history of ecological and evolutionary change. *AIBS 2006 Annual Meeting, 24 to 25 May, Washington DC: Biodiversity: The Interplay of Science, Valuation, and Policy.*

(**32**) Hanuscin, D., Friedrichsen, P., Dass, P., Gess-Newsome, J., Ohana, C., **Nehm, R.,** Schwartz, R., & Weld, J. (**2006**, January). Working in two worlds: Perspectives on joint appointments. A panel discussion at the *Association for Science Teacher Education Conference*, Portland, OR.

(**31**) Hoskins, S. L. Stevens, and **R. H. Nehm. (2005).** CREATE: A new method for teaching undergraduates how to read the primary research literature and understand the nature and methods of science. Paper presented at the *National Association of Biology Teachers*, Annual Convention, Milwaukee, WI, October 6, 10-10:30, 202C.

(**30**) Hoskins, S. and **R. H. Nehm. (2005)**. Teaching the nature of science through case studies of paradigm shifts: an example from developmental biology. Paper presented at the *National Association of Biology Teachers*, Annual Convention, Milwaukee, WI, October 7, 11:30-12, 202E.

(**29**) **R. H. Nehm** and A. F. Budd. (**2005**). Missing 'links' in bioinformatics education: Expanding students' conceptions of bioinformatics using a biodiversity database of living and fossil reef corals. Paper presented at the *National Association of Biology Teachers*, Annual Convention, Milwaukee, WI, October 6, 10-10:30, 103C.

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(26) Nehm, R. H. (2005). Does increasing biology teacher knowledge about evolution and the nature of science translate into greater advocacy for teaching evolution in schools? Pp.1-13. Proceedings of the Association of the Educators of the Teachers of Science (AETS) international conference.

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(24) Nehm, R.H. (2005). Does Increasing Science Teachers' Knowledge Of Evolution And The Nature Of Science Translate Into Greater Advocacy For Teaching Evolution In Public Schools? *Geological Society of America Abstracts with Programs*, Vol. 37, No. 7, p. 84

(**23**) Burton, T., L. Reilly, and **R. H. Nehm. (2005)**. A constructional-morphological model of skeletal ontogenesis in *Prunum apicinum*: implications for the interpretation of macroevolutionary change in extinct *Prunum. C.C.A.P.P. Annual Conference, Abstracts and Program*, pp. 3-4.

(**22**) Harvey, M., A. Disla, and **R. H. Nehm. (2005).** Holocene to Recent benthic marine mollusk biodiversity patterns in the Dominican Republic: Field data comparisons of Bahia Honda and Lago Enriquillo. *C.C.A.P.P. Annual Conference, Abstracts and Program*, p. 5.

(**21**) Lawson, J., R. Rivera, and **R. H. Nehm. (2005)**. Benthic marine mollusk trophic stability and change in the Gurabo Formation (Neogene: Dominican Republic): community response to pronounced environmental change. *C.C.A.P.P. Annual Conference, Abstracts and Program*, p. 7.

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(**19**) Susnjar, M. and **R. H. Nehm. (2005).** Mathematically modeling ontogenetic and phylogenetic change in *Prunum* (Marginellidae; Gastropoda) using Cerioshell. *C.C.A.P.P. Annual Conference, Abstracts and Program*, p. 10.

(**18**) Ramos, J. M. Mendia, Larancuent, F. and **R. H. Nehm. (2005).** Establishing ontogenetic and taxonomic boundaries of extinct and extant Olividae (Mollusca: Gastropoda) from the Dominican Republic using multivariate morphometrics and UV analysis. *C.C.A.P.P. Annual Conference, Abstracts and Program*, p. 24.

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(12) Gay, A., and **Nehm, R. H. (2003).** Investigating barriers and opposition to college laboratory pedagogical and curriculum reform. In: Proceedings of the *National Association for Research in Science Teaching* (NARST).

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Educational videos

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Awarded Grants (19)

(**19**) NY STATE EDUCATION DEPARTMENT RFP #GC 19-010 Smart Start (**$1,220,000.00**). *Brentwood School District. R.* Grella (PI), Padilla, D., Nehm, R (co-PI), others. (2021-2026).

(**18**) HOWARD HUGHES MEDICAL INSTITUTE. (**$1,050,000.00**). *Inclusive Excellence at Stony Brook University***.** PRINCIPAL INVESTIGATOR & PROJECT DIRECTOR. (2017-2022).

(**17**) NATIONAL SCIENCE FOUNDATION. (**$74,000.00**) *RCN-UBE Incubator: Bringing Together Diverse Expertise to Understand How to Best Measure Student Acceptance of Evolution*. Brownell PI, Nehm, Jensen, Wiles, Barnes co-PIs (2020-2021).

(**16**) NY STATE EDUCATION DEPARTMENT Title II, Part B of the Elementary, and secondary Education Act (ESEA) for The Mathematics and Science Partnerships (MSP). *Brentwood collaborative. Bridging the Gap: STEPD-UP! A New Professional Development (PD) opportunity for Brentwood Union Free School District Teachers and Building Leaders*. (**$225,000.00**). Co-PI, Grella (PI). (2018-2019).

(**15**). NATIONAL SCIENCE FOUNDATION. (**$5,000,000.00**; $437,885.00 for SBU). *Collaborative Research*: *Expanding a National Network for Automated Analysis of Constructed Response Concept Inventories to Reveal Student Thinking in STEM*. PRINCIPAL INVESTIGATOR at SBU. (2013-2018).

(**14**) NATIONAL SCIENCE FOUNDATION (**$204,022.00**). Transforming STEM assessment methodologies: Research on cyber-enabled measurement of cognitive models of natural selection. PRINCIPAL INVESTIGATOR at SBU (2013-2014)

(**13**) NATIONAL SCIENCE FOUNDATION. (**$65,000.00**). *Collaborative Research*: Automated Analysis of Constructed Response Concept Inventories to Reveal Student Thinking: Forging a National Network for Innovative Assessment Methods. PRINCIPAL INVESTIGATOR at SBU. (2013-2014).

(**12**) NATIONAL SCIENCE FOUNDATION. ($400,000 total; **$85,000** for PI). *Collaborative Research*: Automated Analysis of Constructed Response Concept Inventories to Reveal Student Thinking: Forging a National Network for Innovative Assessment Methods. PRINCIPAL INVESTIGATOR at OSU. (2009-2013).

(**11**) NATIONAL SCIENCE FOUNDATION (**$1,020,112.00**). Transforming STEM assessment methodologies: Research on cyber-enabled measurement of cognitive models of natural selection. PRINCIPAL INVESTIGATOR at OSU (2009-2013)

(**10**) NATIONAL SCIENCE FOUNDATION (**$140,202**). *Collaborative Research*: Educational assessment tools for genomics and bioinformatics education. PRINCIPAL INVESTIGATOR at OSU. (2009-2013).

(**9**) TECHNOLOGY ENHANCED LEARNING AND RESEARCH (TELR) (**$10,000**). Transforming assessment at OSU. PRINCIPAL INVESTIGATOR. (2009-2010).

(**8**) NATIONAL SCIENCE FOUNDATION (**$457,000**). CAREER. R. Nehm, PI. "Integrating science research on the Neogene of the Dominican Republic with the science education of Dominican American teachers and students in New York City." PRINCIPAL INVESTIGATOR. (2003-2011).

(**7**) NATIONAL SCIENCE FOUNDATION (**$488,888**). Implementing C.R.E.A.T.E. Through Faculty Development at Multiple Institutions in order to Assess Its Efficacy on Diverse Learners. Hoskins, PI and Co-PI Nehm. (2006-2009) (ended as co-PI at move to OSU).

(**6**) NATIONAL SCIENCE FOUNDATION (**$72,000**) National Science Foundation Postdoctoral Fellowship. PRINCIPAL INVESTIGATOR. (2001-2003).

(**5**) NATIONAL SCIENCE FOUNDATION (**$42,000**) National Science Foundation International Postdoctoral Fellowship, International Division. Naturhistorisches Museum Basel, Switzerland. PRINCIPAL INVESTIGATOR. (1999-2000).

(**4**) NATIONAL SCIENCE FOUNDATION (**$6,500**) National Science Foundation Dissertation Improvement Grant, Division of Systematic Biology. Department of Integrative Biology, Univ. of California-Berkeley. Project: "The Neogene mass extinction in the western Atlantic: Determining the influence of methodology on patterns of extinction and faunal turnover." (1995-1998).

(**3**) CUNY PROFESSIONAL DEVELOPMENT GRANT. (**$14,000**) R. Nehm, PI. "Engaging students in the sciences through connections with the social sciences and humanities." PRINCIPAL INVESTIGATOR. (2003-2004 and renewal).

(**2**) CCNY MSE HS and CUNY (**$10,000**) R. Nehm, PI. "Marine biodiversity Project at Pelham Bay Park, Bronx." PRINCIPAL INVESTIGATOR. (2004).

(**1**) CCHSMST. (**$6500**). R. Nehm, PI. "Teaching and learning of biological systematics using web-based molecular and morphological databases and computational technology: A module for 9th grade biology students. PRINCIPAL INVESTIGATOR. (2002-2003).

Recent review panels, editorial reviews, journals and presses

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Invited reviewer overview

Prentice-Hall Biology (textbook) (2016); Campbell Biology (textbook) (2015); Freeman Biology (textbook) (2015); *PLOS One (2016-present)*; *Physical Review Special Topics (2015-present)*; *Quarterly Review of Biology (2015-present)*; *BioScience (2014-present)*; *Cognitive Science (2012-present)*; *Science Education Review Letters (2012-present)*; *Nature (Education) (2010-present)*; *Journal of Research in Science Teaching* (2007-present); *Science Education (2009-present)*; *Science & Education (2008-present)*; *International Journal of Science Education (2009-present)*; *Journal of Science Education and Technology (2010-present)*; *Evolution Education and Outreach (2008-present)*; *School Science and Mathematics (2007)*; *The American Biology Teacher (2006-present)*; *Molluscan Research*; *Journal of Paleontology (2007-present)*; *Evolution*; *Paleobiology*
Zoology NSF panelist (Cyberlearning, CCLI, TUES, DRK-12, TSL, CAREER, etc.). US Research and Development Foundation, PSC-CUNY Education panel, Estonian Research Council

Teaching

Graduate courses taught (masters and doctorate) (*new course)

Nature and practice of science (SBU)
*Introduction to educational measurement and assessment (SBU)
*Biology education research: teaching, learning, and assessment (SBU)
Diverse approaches to educational research (Ohio State University)
Introduction to STEM education I (Ohio State University)
*Problem Solving in Science (Ohio State University)
Nature of Scientific Knowledge (Ohio State University)
Field Biology (CUNY)
Modern Concepts in Biology I (CUNY)
Modern Concepts in Biology II (CUNY)
M.Ed. Thesis (CUNY)

Undergraduate courses taught:

Biology 201: Organisms to Ecosystems (SBU)
Human Anatomy (University of California-Berkeley)
Introductory Biology Laboratory (University of California-Berkeley, Columbia University, CUNY)
Introductory Biology Lecture (CUNY)
Biology of the Invertebrates Lecture and Laboratory (CUNY)
Biology 201: Organisms to Ecosystems (SBU).

High School Classes taught:

Bioinformatics (High School for Math, Science, and Engineering, NYC)

Student awards (High School, Undergraduate, Graduate)

Evan Abreu 2022 (Turner Fellowship)
Robyn Tornabene, 2017 (NARST travel scholarship).
Caren Gough, 2016 (NARST research committee sponsored presentation at NSTA)
Minsu Ha, 2014 (KASE science education researcher of the year)
Minsu Ha, 2013 (Young Scholar Award, IHPST)
Minsu Ha, 2012 (Educational and Human Ecology Graduate Research Fellowship)

Chad Campbell (2012, NARST outstanding paper nominee)
Meghan Rector (2011, Educational and Human Ecology Graduate Research Fellowship)
Meghan Rector (2011, Hayes Graduate Research Forum, 2nd Place)
Minsu Ha (2010, Social-Behavioral Sciences Fellow)
Sarah Rodriguez (2007 Discover Channel Young Scientist national semi-finalist)
Scarlett Jimenez (2007 Discover Channel Young Scientist national semi-finalist)
Adiba Anan (2006 Seimens-Westinghouse national semi-finalist)
Zack Mattler (2006 Seimens-Westinghouse national semi-finalist)
Maria Harvey (2006 AIBS Team Research Award)
Rysanek Rivera (2006 AIBS Team Research Award)
Jermaine Lawson (2006 AIBS Team Research Award)
Aurin Disla (2006 AIBS Team Research Award)
Moizah Arshad (2005 Environmental Science Award, CCNY)

Visiting scholars

Daniela Fiedler, Visiting Scholar, 2017
Xin Wei, Visiting Scholar, 2012-2013
Fenny Roshayanti, Visiting Scholar, 2011
Irene Zilker (Neumann), Visiting Scholar, 2009
Hendrik Notarp (Haertig), Visiting Scholar, 2008

Graduate Students/Postdocs

Former Ph.D./Postdoc students (* advisor, otherwise committee member)

Sun Young Kim, (Postdoc)* Faculty, Kouwan Women's University, South Korea
Lynda Titterington, (Ph.D.) Faculty, Capital University, Ohio
Mellisa Shirley, (Ph.D.) Faculty, University of Louisville, KY
Chad Campbell (Ph.D.) * Faculty, Wright State University
Minsu Ha (Ph.D. and Postdoc)* Faculty, Korea
Meghan Rector (Ph.D.) * CLSE, Ohio State University
Elizabeth Beggrow (Ph.D).* Capital University
Un Jung Lee (Ph.D) (Applied Math, Bloomberg)
Mica McCarty-Glenn (Chair)
Donna Shapiro* (Ph.D.) Mount Sinai High School
Robyn Tornabene* (Ph.D.) Long Beach High School
Roberto Bertolini (Ph.D.). Industry
David Charifson (Chair)
Rachel Ndembera* (Ph.D.) (co-advisor)
Gena Sbeglia* (Postdoctoral Scholar)

Ph.D. students and post-docs current

Evan Abreu (PhD)
Jesse Colton (Ph.D.)

Master's students

Evan Abreu* (MA 2021-2022)
Iadamarie Pennolino* (MA 2018-2020) (co-advisor)
Christian Rodriguez (MA) 2017-2018) (committee member)
Campbell, Chad (MA)* add years
Clawson, Megan (MA)* add years
Rector, Meghan, (MA)* add years

Former M.A.S.T. students (since 2007) (* advisor)

Krohn Luke (MSTEDU) *
Lewandowski Dennis (MSTEDU) *

Wan Priscilla (MSTEDU) *
Wasemann Jennifer (MSTEDU) *
Wharton Taylor (MSTEDU) *
Zacharias Erin (MSTEDU) *
Bettineschi Nathan (MSTEDU) *
Adams, Robert (MSTEDU) *
Ayaz, Hibah (MSTEDU) *
Beck, Daniel (MSTEDU) *
Bodey, Michelle (MSTEDU) *
Bowden, Thomas (MSTEDU) *
Butcher, Joshua (MSTEDU) *
Carlstrom, Carolyn (MSTEDU) *
Clegg, Shannon (MSTEDU) *
Dematteo, Matthew (MSTEDU) *
Duann, Jennifer (MSTEDU) *
Garner , Nicholas (MSTEDU) *
Hanigan, Kathryn (MSTEDU) *
Hansen, Julianne (MSTEDU) *
Hitchcock, Lauren (MSTEDU) *
Hobbins, Robert (MSTEDU) *
Hoy, Julia (MSTEDU) *
Jevas, Lauren (MSTEDU)*
Kademian, Sylvie (MSTEDU)*
Keller, Chelsea (MSTEDU)*
Lewandowski, Dennis (MSTEDU)*
Meyer, Jonathan (MSTEDU)*
Monnett, Patrick (MSTEDU)*
Nguyen, Sable (MSTEDU)*
Peterson, Kevin (MSTEDU)*
Pettigrew, Amanda (MSTEDU)*
Roston, Kathryne (MSTEDU)*
Russell, Robert (MSTEDU)*
Schwab, Ian (MSTEDU)*
Street, Justin (MSTEDU)*
Sylak, Benjamen (MSTEDU)*
Thorndyke, Coleen (MSTEDU)*
Wells, Anesia (MSTEDU)*
Wright, Jessica (MSTEDU)*
Zimmerman, Mark (MSTEDU)*

(+40* at CUNY--*not* listed)

Service

University

SBU Arts and Sciences Curriculum committee (2022-present)
SBU OVPR Seed Grant Program - Review Panel (2021, 2019, 2022, 2023)
SBU Dean's Committee on Machine Learning (2021)
SBU Rotating Chair, Personnel and Tenure Committee (PTC-Senior) (2017-2018)
SBU SUNY Committee on Institutional Ethics and Accountability (2017-)
SBU Stony Brook Curriculum STEM Assessment Committee (2017-2018)
SBU Online Course Development and Delivery Panel (2/15 and 3/22)
SBU Applied Learning Experts for the Corps of SUNY Applied Learning Experts (2016-)
SBU Senator, College of Arts and Sciences, (2015-2019)
SBU Senator, University Senate, (2015-2019)
SBU S-BOLD grant reviewer (2015 competition)

SBU Summer Institute for High School Students, Assessment development and analysis (2015, 2016)
SBU "Graduate in Four" Committee member (2014)
SBU "Summer Institute in STEM Education" Planning Committee and Presenter (2014)
SBU STEM Education Committee Member (2013-2015)
SBU Friends of Ashley Schiff Preserve (2013-2014)

OSU Darwin Committee Member (2009-2010)
CUNY City College Representative, Quality Education for Minorities Workshop, National Science Foundation, May 2005, Washington, D.C.
CUNY-wide Faculty Development Seminar organizer and co-PI (Fall 2003-spring 2004)
CUNY-wide Faculty Development Seminar organizer and co-PI (Fall 2004)
PSC-CUNY-wide Education grant panel (Spring 2004-5)
CUNY Division of Science Academic Advisor (2004)
CCNY-Memorial Sloan Kettering Cancer Center Partnership Site Visit representative for the School of Education. Presentation in session "Emerging training opportunities and plans: CCNY High School" (November 19, 2002).

CESAME/School of Education/College of Education and Human Ecology

CESAME Associate Program Director (2014-18)
CESAME Ph.D. Program Website Development coordinator (2014)
CESAME Annual Board Meeting presenter (2013, 2014)
CUNY Library and Technology committee, SOE, 2003-2005
CUNY Department of Biology Curriculum Committee, 2004-2007
CUNY NY Academy of Sciences "Laureates of Tomorrow" Regional Coordinator, 2004
CUNY SOE "Workshop Center" Planning Committee, 2004
CUNY NCATE technology committee member (fall 2003-spring 2004)
CUNY Mock and actual NCATE site visit poster session presenter (spring 2004)
CUNY Student Apprenticeship in Science (STARS) mentor Mott Hall School. 2003-2005
CUNY Teacher, "Bioinformatics course" CCNY Campus High School 2003, 2004
CUNY Mentor, CCNY Campus High School, summer 2004.
CUNY RISE/MARC Program mentor, CCNY, 2002-2007
CUNY CCAPP mentor, CCNY, 2003-2007
CUNY Writing Across the Curriculum participant, Spring 2005 (through Fall 06)

Department

SBU Search Chair, Lecturer, Dept. of Ecology and Evolution (2021)
SBU Biology representative SUNY Excels (2016-2020)
SBU Undergraduate Bio Labs reform committee (2015-2018)
SBU Graduate Teaching Assistant training course committee (2014-present)
SBU Search Chair, Lecturer, Introductory Biology (2013-2014)
SBU Search Committee Member, Assistant Professor of Chemistry Education (2013-2014)
SBU Undergraduate Biology Executive Committee (2013-present).

OSU T&L Graduate Studies Committee (Elected position) (2011-present)
OSU T&L Personnel Committee (Elected position) (Tenure and Promotion), (2010-2012)
OSU T&L Search Chair, Science Education Assistant Prof. Faculty Position (2010-2011)
OSU T&L Search Committee Member, Science Education open-rank position (2009-2010)
OSU T&L Workload Policy Committee (2011).
OSU STEM AOS website redesign (2010).
OSU Science, Technology, Engineering and Mathematics Area of Study member (2007-present)
CUNY Executive Committee member (Elected position) (2004-2007)
CUNY Secondary Science search committee member (2005)
CUNY Middle School Science search committee member (2004)
CUNY Curriculum consultant, Biology education, CCHSMST (City College Campus High School). (2002-2003, Fall and Spring semesters).
CUNY NCATE rejoinder co-author.

CUNY 2004-2005. Designed three new courses for secondary candidates approved by the college: (1) Nature of Scientific Knowledge; (2) Life Sciences for Middle School Teachers I; (3) Life Science for Middle School Teachers II. Approved by Division of Science P&B Spring 2005.
CUNY Oversee curriculum and instruction in 4 biology courses taught by adjuncts (summer 2004, summer 2005).
CUNY Designed and taught the following course for secondary teachers: BIO 1500e: Field Biology; BIO 0100e: Modern Concepts in Biology I; BIO 0200e: Modern Concepts in Biology II, EDUC 3100e: Teaching secondary science.

Community

Professional development talk, Bronx AP Science Teachers, May 2004.
Board of Education Gifted and Talented conference, presentation with Susan Herzog, Mott Hall School, Fall 2005.
STARS mentor to the Mott Hall School, Harlem, New York City (2002-2007).

Membership in professional societies (last five years)

Society for the Advancement of Biology Education Research (SABER)
American Association of Biological Sciences (AIBS)
National Association for Research in Science Teaching (NARST)
National Association of Biology Teachers (NABT)
American Association for the Advancement of Science (AAAS)
National Center for Science Education