

# Seth D. Baum

Curriculum Vitae, December 2016

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## PERSONAL INFORMATION

Date of Birth: 17 October 1980

Citizenship: USA

Residence: New York City

## EDUCATION

2012: Ph.D., Geography, Pennsylvania State University  
Dissertation Title: *Discounting Across Space and Time in Climate Change Assessment*  
Advisor: William E. Easterling

2006: M.S., Electrical Engineering, Northeastern University  
Concentration in Electromagnetics  
Thesis Title: *User and Developer Interface Improvements to a Finite Difference Time Domain Code*  
Advisor: Carey Rappaport

2003: B.S., Optics; B.S., Applied Mathematics; Minor, French, University of Rochester

## CURRENT POSITIONS

### Primary Position

2011-present: Co-Founder and Executive Director, Global Catastrophic Risk Institute

### Other Affiliations

2012-present: Affiliate Scholar, Institute for Ethics and Emerging Technologies

2012-present: Affiliate Researcher, Center for Research on Environmental Decisions, Columbia University

2011-present: Research Scientist, Blue Marble Space Institute of Science

## **PRIOR POSITIONS – RESEARCH**

- 2010-2012: Graduate Research Assistant & Post-Doctoral Scholar, Center for Research on Environmental Decisions, Pennsylvania State University & Columbia University
- 2008-2009: Research Assistant, Rock Ethics Institute, Pennsylvania State University
- 2008-2009: Research Assistant, Climate Risk Management Initiative, Penn. State University
- 2003: Research Assistant, Lawrence Livermore National Laboratory
- 2001: Research Assistant, University of Rochester

## **PRIOR POSITIONS – TEACHING**

### **Course Instructor**

- 2009-2011: Geography 030: Geographic Perspectives on Sustainability and Human-Environment Systems, Pennsylvania State University. Four semesters.
- 2004: Introduction to MatLab. Research Experience for Teachers Program (for high school teachers), Northeastern University. Designed and taught course.

### **Course Developer**

- 2009-2011: Geography 030 (Web): Geographic Perspectives on Sustainability and Human-Environment Systems, Pennsylvania State University.

### **University Teaching Assistantships**

- 2004: Electrical Engineering Technology U201: Circuit Analysis 1, Spring Semester, Northeastern University.
- 2003: Electrical & Computer Engineering U210: Electrical Engineering, Fall Semester, Northeastern University.

### **K-12 Teaching/Outreach**

- 2004-2007: National Science Foundation GK-12 Fellow, Northeastern University
- 2004: Substitute Teacher, Boston Public Schools
- 2002: Rochester Urban Fellow, University of Rochester

## GRANTS & AWARDS

- 2016: Finalist for the Bernard Brodie Prize for the best article in *Contemporary Security Policy* over the previous year, for the article “Winter-safe deterrence: The risk of nuclear winter and its challenge to deterrence”.
- 2015-2016: Investigator on Global Catastrophic Risk Institute grant “Analysis of Cyber Infrastructure Authentication Failure Vulnerabilities to Inform Security Decisions”. With Anthony Barrett and Roman Yampolskiy. Source: U.S. Department of Homeland Security. \$50,000.
- 2015-2016: Investigator on Global Catastrophic Risk Institute grant “Transitioning Analysis of Current and Future Catastrophic Risks from Emerging-Threat Technologies”. With Anthony Barrett and Jun Zhuang. Source: U.S. Department of Homeland Security. \$50,000.
- 2015: Co-Principal Investigator on Global Catastrophic Risk Institute grant “Evaluation of Safe Development Pathways for Artificial Superintelligence”. With Anthony Barrett. Source: Future of Life Institute/Elon Musk/Open Philanthropies Project. \$100,000.
- 2015: Principal Investigator on Global Catastrophic Risk Institute grant “Initial Nuclear Probability and Impact Assessment”. Source: Global Challenges Foundation. \$30,000.
- 2015: Principal Investigator on Global Catastrophic Risk Institute grant “Quarterly Global Risk and Opportunity Report”. Source: Global Challenges Foundation. \$25,000.
- 2015: Fellow, Emerging Leaders in Biosecurity Initiative, Center for Health Security, University of Pittsburgh Medical Center.
- 2014-2015: Investigator on Global Catastrophic Risk Institute grant “Extending Analysis of Current and Future Catastrophic Risks from Emerging-Threat Technologies”. With Anthony Barrett and Jun Zhuang. Source: U.S. Department of Homeland Security. \$35,000.
- 2014: Travel subsidy to deliver keynote address at conference *Global Existential Risks & Radical Futures*. Source: Institute for Ethics and Emerging Technologies. \$500.
- 2014: Principal Investigator on Global Catastrophic Risk Institute grant “Global Challenges Report”. Source: Global Challenges Foundation. \$3,000.
- 2013-2014: Investigator on Global Catastrophic Risk Institute grant “Analyzing Current and Future Catastrophic Risks from Emerging-Threat Technologies”. With Anthony Barrett and Jun Zhuang. Source: U.S. Department of Homeland Security. \$50,000.

- 2012: Principal Investigator on Global Catastrophic Risk Institute project “Survey of Climate Change Social Science Research Services”. With Kaitlin Butler and Grant Wilson. Source: Skoll Global Threats Fund. \$8,658.
- 2011-2012: Co-Principal Investigator on Global Catastrophic Risk Institute donation. With Anthony Barrett. Source: Saving Humanity from Homo Sapiens. \$8,400.
- 2010-2012: Sub-contract on Columbia Univ. Center for Research on Environmental Decisions grant. With William Easterling. Source: National Science Foundation. \$121,000.
- 2011: Co-Investigator on Blue Marble Space Consulting Group grant. With Principal Investigator Jacob Haqq-Misra and others. Source: Lone Signal. \$7,700.
- 2010-2011: Won position on the Geography Bowl team of the Middle States Division of the Association of American Geographers. Source: MSDAAG & AAG. \$383.33.
- 2010: Best Presentation Award (one of two awardees among Ph.D. students). Technology, Management and Policy Graduate Consortium 2010 Meeting.
- 2010: Student Merit Award. Source: Society for Risk Analysis Economics and Benefits Analysis Specialty Group. \$500 + Conference Registration Fee.
- 2009-2010: Chosen as a Public Scholarship Fellow, Pennsylvania State University.
- 2008: Student Travel Award. Source: Society for Risk Analysis. \$350 + Conference Registration Fee.
- 2008: Dissertation Proposal Development Fellowship. Source: Social Science Research Council. \$4700.
- 2008: Focus the Nation Survey research grant. With Jennifer Domagal-Goldman, Peter Howe, and Laura Wray-Lake. Source: Penn State Laboratory for Public Scholarship and Democracy. \$150.
- 2007: Winning essay in the Ethics of Climate Change essay contest, Economics/Business section. Source: *Ethics in Science and Environmental Politics*. \$1000.

## PEER REVIEWS

Notation: *Journal Name* (year of reviews: number of reviews in that year)

To the reader: I include the number of reviews to promote more professional credit being given for performing peer reviews. I encourage others to do the same on their curriculum vitae.

*AI & Society* (2016:1)

*Ambio* (2014:1)

*Applied Geography* (2011:1)

*Bioethics* (2012:1)

*Climate Policy* (2011:1; 2015:1)  
*Contemporary Security Policy* (2016:1)  
*Ecological Economics* (2009:2; 2010:2; 2011:1; 2012:2; 2013:2; 2014:3; 2015:1; 2016:1)  
*Environmental Research Letters* (2009:1)  
*Environment, Systems and Decisions* (2012:1; 2014:1; 2015:1)  
*Futures* (2013:2; 2015:4; 2016:4)  
*Global Policy* (2015:2)  
*IAFOR Journal of Sustainability, Energy and the Environment* (2013:1)  
*Journal of Geography* (2014:1)  
*Mitigation and Adaptation Strategies for Global Change* (2013:1)  
*Philosophy & Technology* (2016:1)  
*Physica Scripta* (2015:1)  
*Quaternary Research* (2016:1)  
*Risk Analysis* (2011:1; 2012:1)  
*Science and Engineering Ethics* (2014:1; 2016:1)  
*Scottish Journal of Political Economy* (2012:1)  
*Social Theory and Practice* (2013:1)  
*Solutions* (2016:1)  
*Space Policy* (2014:1)  
*Technological Forecasting & Social Change* (2014:2; 2015:5)  
*WIREs Climate Change* (2014:1)

## **PUBLICATIONS – ACADEMIC**

\* Denotes co-authors whose work was conducted as an advisee, assistant, or intern of mine.  
# Denotes articles that were not peer reviewed.

### **Edited Collections**

Baum, Seth D. and Bruce E. Tonn (Editors), 2015. “Confronting future catastrophic threats to humanity”. *Futures* (special issue), vol. 72 (September), pages 1-96.

### **Journal Articles**

Baum, Seth D. “On the promotion of safe and socially beneficial artificial intelligence”. *AI & Society*, forthcoming, doi: 10.1007/s00146-016-0677-0.

Barrett, Anthony M. and Seth D. Baum. “A model of pathways to artificial superintelligence catastrophe for risk and decision analysis”. *Journal of Experimental & Theoretical Artificial Intelligence*, forthcoming, doi: 10.1080/0952813X.2016.1186228.

Baum, Seth D., David C. Denkenberger, and Joshua M. Pearce, 2016. Alternative foods as a solution to global food supply catastrophes. *Solutions*, vol. 7, no. 4, pages 31-35.

Baum, Seth D., 2015. “The far future argument for confronting catastrophic threats to humanity: Practical significance and alternatives”. *Futures*, vol. 72 (September), pages 86-96.

Baum, Seth D., 2015. “Confronting the threat of nuclear winter”. *Futures*, vol. 72 (September), pages 69-79.

Baum, Seth D., David C. Denkenberger, Jacob Haqq-Misra, 2015. “Isolated refuges for surviving global catastrophes”. *Futures*, vol. 72 (September), pages 45-56.

Baum, Seth D., 2015. “Risk and resilience for unknown, unquantifiable, systemic, and unlikely/catastrophic threats”. *Environment, Systems, and Decisions*, vol. 35, no. 2 (June), pages 229-236.

Baum, Seth D., David C. Denkenberger, Joshua M. Pearce, Alan Robock, and Richelle Winkler. “Resilience to global food supply catastrophes”. *Environment, Systems, and Decisions*, vol. 35, no. 2 (June), pages 301-313.

Baum, Seth D., 2015. “Winter-safe deterrence: The risk of nuclear winter and its challenge to deterrence”. *Contemporary Security Policy*, vol. 36, no. 1 (April), pages 123-148.

Baum, Seth D., 2014. “The great downside dilemma for risky emerging technologies”. *Physica Scripta*, vol. 89, no. 12 (December), article 128004, doi:10.1088/0031-8949/89/12/128004.

Baum, Seth D. and Itsuki C. Handoh, 2014. “Integrating the planetary boundaries and global catastrophic risk paradigms”. *Ecological Economics*, vol. 107 (November), pages 13-21.

# Baum, Seth D. and Grant S. Wilson, 2013. “The ethics of global catastrophic risk from dual-use bioengineering”. *Ethics in Biology, Engineering and Medicine*, vol. 4, no. 1, pages 59-72.

Barrett, Anthony M., Seth D. Baum, and Kelly R. Hostetler\*, 2013. “Analyzing and reducing the risks of inadvertent nuclear war between the United States and Russia”. *Science and Global Security*, vol. 21, no. 2, pages 106-133.

Maher, Timothy M., Jr.\* and Seth D. Baum, 2013. “Adaptation to and recovery from global catastrophe”. *Sustainability*, vol. 5, no. 4 (April), pages 1461-1479.

Baum, Seth D., Timothy M. Maher Jr.\*, and Jacob Haqq-Misra, 2013. “Double catastrophe: Intermittent stratospheric geoengineering induced by societal collapse”. *Environment, Systems, and Decisions*, vol. 33, no. 1 (March), pages 168-180.

Haqq-Misra, Jacob, Michael W. Busch, Sanjoy M. Som, and Seth D. Baum, 2013. “The benefits and harm of transmitting into space”. *Space Policy*, vol. 29, no. 1 (February), pages 40-48.

Baum, Seth D., 2013. “Teaching astrobiology in a sustainability course”. *Journal of Sustainability Education*, February (online): [http://www.jsedimensions.org/wordpress/content/teaching-astrobiology-in-a-sustainability-course\\_2013\\_02](http://www.jsedimensions.org/wordpress/content/teaching-astrobiology-in-a-sustainability-course_2013_02).

Baum, Seth D., 2012. “Value typology in cost-benefit analysis”. *Environmental Values*, vol. 21, no. 4 (November), pages 499-524.

Baum, Seth D., Destiny D. Aman, and Andrei L. Israel, 2012. "Public scholarship student projects for introductory environmental courses". *Journal of Geography in Higher Education*, vol. 36, no. 3 (August), pages 403-419.

Schienze, Erich W., Seth D. Baum, Nancy Tuana, Kenneth J. Davis, and Klaus Keller, 2011. "Intrinsic ethics regarding integrated assessment models for climate management". *Science and Engineering Ethics*, vol. 17, no. 3 (September), pages 503-523.

Baum, Seth D., Jacob D. Haqq-Misra, and Shawn D. Domagal-Goldman, 2011. "Would contact with extraterrestrials benefit or harm humanity? A scenario analysis". *Acta Astronautica*, vol. 68, no. 11-12 (June-July), pages 2114-2129.

Baum, Seth D., Ben Goertzel, and Ted G. Goertzel, 2011. "How long until human-level AI? Results from an expert assessment". *Technological Forecasting and Social Change*, vol. 78, no. 1 (January), pages 185-195.

Baum, Seth D. and William E. Easterling, 2010. "Space-time discounting in climate change adaptation". *Mitigation and Adaptation Strategies for Global Change*, vol. 15, no. 6 (August), pages 591-609.

Baum, Seth D., 2010. "Is humanity doomed? Insights from astrobiology". *Sustainability*, vol. 2, no. 2 (February), pages 591-603.

Baum, Seth D., 2010. "Universalist ethics in extraterrestrial encounter". *Acta Astronautica*, vol. 66, no. 3-4 (February-March), pages 617-623.

Schienze, Erich W., Nancy Tuana, Donald A. Brown, Kenneth J. Davis, Klaus Keller, James S. Shortle, Michelle Stickler, and Seth D. Baum, 2009. "The role of the NSF Broader Impacts Criterion in enhancing research ethics pedagogy". *Social Epistemology*, vol. 23, no. 3-4 (July-December), pages 317-336.

Baum, Seth D., 2009. "Description, prescription and the choice of discount rates". *Ecological Economics*, vol. 69, no. 1 (15 November), pages 197-205.

Baum, Seth D., 2009. "Cost-benefit analysis of space exploration: Some ethical considerations". *Space Policy*, vol. 25, no. 2 (May), pages 75-80.

Haqq-Misra, Jacob D. and Seth D. Baum, 2009. "The 'Sustainability Solution' to the Fermi Paradox". *Journal of the British Interplanetary Society*, vol. 62, no. 2 (February), pages 47-51.

Hunt, Colin and Seth Baum, 2009. "The 'hidden' social costs of forestry offsets". *Mitigation and Adaptation Strategies for Global Change*, vol. 14, no. 2 (February), pages 107-120.

Baum, Seth, 2007. "Beyond the Ramsey model for climate change assessments". *Ethics in Science and Environmental Politics*, vol. 2007, pages 15-21.

## Book Chapters

# Baum, Seth D., 2016. “The ethics of outer space: A consequentialist perspective”. In James S.J. Schwartz and Tony Milligan (Eds.), *The Ethics of Space Exploration*, Berlin: Springer, pages 109-123.

# Barrett, Anthony M. and Seth D. Baum. “Risk analysis and risk management for the artificial super intelligence research and development process”. In James Miller, Vic Callaghan, Roman Yampolskiy, and Stuart Armstrong (Eds.), *The Technological Singularity: A Pragmatic Perspective*. Berlin: Springer, forthcoming.

# Baum, Seth D. and Anthony M. Barrett. “The most extreme risks: Global catastrophes”. In Vicki Bier (Editor), *The Gower Handbook of Extreme Risk*. Farnham, UK: Gower, forthcoming.

## Introductions

# Baum, Seth D. and Bruce E. Tonn, 2015. Introduction: Confronting future catastrophic threats to humanity. *Futures*, forthcoming, vol. 72 (September), pages 1-3.

## Response Articles

# Baum, Seth D., 2015. “Winter-safe deterrence as a practical contribution to reducing nuclear winter risk: A reply”. *Contemporary Security Policy*, vol. 36, no. 2 (August), pages 387-397.

Baum, Seth D., Jacob D. Haqq-Misra, and Chris Karmosky, 2012. “Climate change: Evidence of human causes and arguments for emissions reduction”. *Science and Engineering Ethics*, vol. 18, no. 2 (June), pages 393-410.

Baum, Seth D., 2008. “Better to exist: A reply to Benatar”. *Journal of Medical Ethics*, vol. 34, no. 12 (December), pages 875-876.

# Baum, Seth, 2006. “Response to Quality science teachers: Essential to America’s future”. *The Science Teacher*, December, pages 8-9. Reprinted in *Journal of College Science Teaching*, vol. 36, no. 4 (January/February), 2007, pages 6-7.

## Book & Film Reviews

# Baum, Seth D. “Film Review: *Snowpiercer*”. *Journal of Sustainability Education*, vol. 7, December issue (online).

Baum, Seth D., 2014. “Book review: *Only One Chance: How Environmental Pollution Impairs Brain Development – and How to Protect the Brains of the Next Generation*”. *Environmental Science & Policy*, vol. 42 (October), pages 197-199.

# Baum, Seth D., 2014. “Film review: *Transcendence*”. *Journal of Evolution and Technology*, vol. 24, no. 2 (September), pages 79-84.



# Baum, Seth D. and James E. Thatcher, 2010. “Film review: *Inception*”. *Journal of Evolution and Technology*, vol. 21, no. 1 (July), pages 62-66.

# Baum, Seth D., 2009. “Film review: *District 9*”. *Journal of Evolution and Technology*, vol. 20, no. 2 (December), pages 86-89.

# Baum, Seth D., 2009. “Book review: *Global Catastrophic Risks*”. *Risk Analysis*, vol. 29, no. 1 (January), pages 155-156.

## **PUBLICATIONS – POPULAR**

Baum, Seth, 2016. “What Trump means for global catastrophic risk”. *Bulletin of the Atomic Scientists*, 9 December.

Baum, Seth, 2016. “Should we let uploaded brains take over the world?”. *Scientific American Blogs*, 18 October.

Baum, Seth, 2016. “Tackling near and far AI threats at once”. *Bulletin of the Atomic Scientists*, 6 October.

Baum, Seth, 2015. “Japan should restart more nuclear power plants”. *Bulletin of the Atomic Scientists*, 20 October.

Baum, Seth, 2015. “Antinuclear Austria should lead the way on nuclear power” *Scientific American Blogs*, 29 September.

Baum, Seth, 2015. “Breaking down the risk of nuclear deterrence failure”. *Bulletin of the Atomic Scientists*, 27 July.

Baum, Seth and Trevor White, 2015. “When robots kill”. *The Guardian Political Science blog*, 23 June.

Baum, Seth, 2015. “Should nuclear devices be used to stop asteroids?”. *Bulletin of the Atomic Scientists*, 17 June.

Baum, Seth, 2015. “Is stratospheric geoengineering worth the risk?”. *Bulletin of the Atomic Scientists*, 5 June.

Baum, Seth, 2015. “The risk of nuclear winter”. *Public Interest Reports*, vol. 68, no. 2.

Baum, Seth, 2015. “On winter-safe deterrence and interdisciplinary research”. *Bulletin of the Atomic Scientists*, roundtable discussion “The winter-safe deterrence debate”, 2 April.

Baum, Seth, 2015. “On winter-safe deterrence and biological weapons”. *Bulletin of the Atomic Scientists*, roundtable discussion “The winter-safe deterrence debate”, 20 March.

Baum, Seth, 2015. “Getting smart about global catastrophes”. *Medium*, special section “7 Days of Genius”, 16 March.

Baum, Seth, 2015. “Deterrence, without nuclear winter”. *Bulletin of the Atomic Scientists*, 9 March.

Baum, Seth, 2015. “What are the best ways to prevent global catastrophe?”. *Institute for Ethics and Emerging Technologies*, 26 February.

Baum, Seth, 2015. “Stopping killer robots and other future threats”. *Bulletin of the Atomic Scientists*, 22 February.

Baum, Seth, 2015. “Support the Austria Pledge”. *Bulletin of the Atomic Scientists*, 27 January.

Baum, Seth, 2014. “Nuclear war, the black swan we can never see”. *Bulletin of the Atomic Scientists*, 21 November.

Baum, Seth, 2014. “The lesson of Lake Toba”. *Bulletin of the Atomic Scientists*, 21 October.

Baum, Seth, 2014. “Planetary boundaries and global catastrophic risk”. *Institute for Ethics and Emerging Technologies*, 21 October.

Baum, Seth, 2014. “Best and worst case scenarios for Ukraine crisis: World peace and nuclear war”. *The Huffington Post*, 7 March.

Baum, Seth, 2013. “Our Final Invention: Is AI the defining issue for humanity?”. *Scientific American Blogs*, 11 October. Reprinted in *Yahoo News*, *The Huffington Post*, and *Medium*.

Baum, Seth, 2013. “Taming the gigaton gorilla: Using Syria diplomacy to help avoid U.S.-Russia nuclear war”. *The Huffington Post*, 15 September. Reprinted in *Medium*.

Baum, Seth, 2013. “Making the universe a better place”. *Current Exchange/Technophilic Magazine*, Spring, pages 22-23.

Baum, Seth and Grant Wilson, 2013. “How to create an international treaty for emerging technologies”. *Institute for Ethics and Emerging Technologies*, 21 February.

Baum, Seth, 2013. “When global catastrophes collide: The climate engineering double catastrophe.” *Scientific American Blogs*, 6 February 2013. Reprinted in *Yahoo News* and *The Huffington Post*.

Baum, Seth, 2013. “Seven reasons for integrated emerging technologies governance”. *Institute for Ethics and Emerging Technologies*, 23 January.

Baum, Seth, 2012. “Hurricane Sandy hints at the perils of global catastrophe”. *Scientific American Blogs*, 6 November 2012. Reprinted in *Yahoo News* and *The Huffington Post*.

Baum, Seth, 2012. “Dedicated bus corridors could help get New York moving again”. *The Huffington Post*, 31 October.

Baum, Seth, 2012. “Earth day, conspiracy and world government”. *The Huffington Post*, 22 April.

Goertzel, Ben, Seth Baum, and Ted Goertzel, 2010. “How long till human-level AI? What do the experts say?”. *h+ Magazine*, February 5.

Haqq-Misra, Jacob D. and Seth D. Baum, 2010. “Where have all the aliens gone? Sustainability may explain the absence of extraterrestrials”. *Sky & Telescope*, vol. 119, no. 3 (March), page 86.

Baum, Seth, 2009. “Collaboration is key to sustainability”. *Centre Daily Times*, December 1, page A6.

Baum, Seth, 2009. “Senate should pass the American Clean Energy and Security Act”. *Odessa American*, July 7; *Asheville Citizen-Times*, July 13. Different version published as “Senate should pass Clean Energy and Security act”. *Centre Daily Times*, July 18, page A6.

Baum, Seth, 2008. “Reducing catastrophic risk through integrative assessment”. *Hawaii Reporter*, August 25; *Daily Camera* (Boulder, CO), September 2.

Baum, Seth, 2002. “Form more partnerships between our city students and professionals”. *Rochester Democrat and Chronicle*, September 23, page 7A.

12 publications in *FutureChallenges.org*, 2010-2012.

11 publications in *University of Rochester Campus Times*, 1999-2009.

18 publications in *Whats Up Magazine* (Boston, MA), 2004-2007.

## **PUBLICATIONS – STUDENT**

*The following are articles published by students of mine as part of courses I taught.*

### **Geography 30, Summer 2009**

Ferry, Christina. “Cut meat consumption”. *Centre Daily Times*, June 24, 2009.

Roseman, Alexis. “Help the environment and yourself - don't drive”. *Bucks County Courier Times*, July 3, 2009.

### **Geography 30, Fall 2009**

46 students published 49 op-ed articles and letters to the editor of publications including *Bucks County Courier Times*, *Butler Eagle*, *Centre Daily Times*, *Clarion News*, *Erie Times News*,

*Hunterdon County Democrat, Pittsburgh Post Gazette, Pottstown Mercury, Voices of Central PA, Wellsboro Gazette, and Williamsport Guardian.*

## **Geography 30-Web, Spring 2011**

16 students published letters to the editor of publications including *Allentown Morning Call, Atlantic City Press, Centre Daily Times, New Castle News, Pittsburgh Post Gazette, Pocono Record, Wilkes-Barre Times Leader, and Williamsport Sun-Gazette.*

## **PROFESSIONAL PRESENTATIONS**

### **Invited Presentations**

Baum, Seth, 2015. "How bad could it get? Risk analysis of nuclear winter". *2015 Nuclear Non-Proliferation Treaty Review Conference*. United Nations Office for Disarmament Affairs. Part of a session "Catastrophic global risks, nuclear weapons, and human survival" hosted by People for Nuclear Disarmament. 6 May, New York City.

Baum, Seth, 2014. "What is the risk of nuclear war?". *Vienna Conference on the Humanitarian Impact of Nuclear Weapons*. Conference hosted by the Austrian Federal Ministry for Europe, Integration and Foreign Affairs. 8-9 December, Vienna.

Baum, Seth, 2014. "Deterrence theory and global catastrophic risk reduction". *Future of Humanity Institute Seminars*. Oxford University. 13 October, Oxford.

Baum, Seth, 2014. "Nuclear war risk: Prior estimations and methodology". *Risk Estimates for Global Challenges: Nuclear War*. Workshop sponsored by Global Challenges Foundation and hosted by Future of Humanity Institute, Oxford University. 9 October, Oxford.

Baum, Seth, 2014. "The risk of inadvertent nuclear war between the United States and Russia". *Third Session of the Preparatory Committee for the 2015 Nuclear Non-Proliferation Treaty Review Conference*. United Nations Office for Disarmament Affairs. Part of a session "Accidental apocalypse: Probabilistic approaches to accidental nuclear war and human survival" hosted by People for Nuclear Disarmament. 1 May, New York City.

Baum, Seth, 2014. "Nuclear winter and the search for safer deterrence". *United Nations Security Council "P5" Permanent Members, experts meeting* hosted by the United States. 15 April, New York City.

Baum, Seth, 2014. "The convergence of anthropocentric and ecocentric values towards global catastrophic risk reduction". *The Futurability Initiatives International Symposium 2014: Humanity in nature: What ought it be?* Symposium hosted by Research Institute for Humanity and Nature. 24 March, Tokyo.

Baum, Seth, 2014. "The great downside dilemma for risky emerging technologies". *Emerging Technologies and the Future of Humanity*. Event hosted by Kungliga Vetenskapsakademien (Royal Swedish Academy of Sciences). 17 March, Stockholm.

Baum, Seth, and Inés García, 2013. “Small World premier: Art-science collaboration for fictional narrative outreach videos”. *Center for Research on Environmental Decisions Weekly Meeting*. Columbia University. 1 October, New York City.

Baum, Seth, 2012. “Global catastrophic risk reduction as a civilization priority”. *Futurability Seminar Series*. Research Institute for Humanity and Nature. 27 June, Kyoto.

Baum, Seth, 2010. “Space-time discounting for climate change policy”. *Center for Research on Environmental Decisions Weekly Meeting*. Columbia University. 23 September, New York City.

Baum, Seth, 2010. “Climate economics since the Stern Review”. *Earth System Science Center Brown Bag Seminar Series*. Pennsylvania State University. 17 March, State College, PA.

### **Conference Session Chairships**

Baum, Seth and Anthony Barrett, 2015. “Global catastrophic risks”. *Society for Risk Analysis 2015 Annual Meeting*, 6-10 December, Arlington, VA.

Baum, Seth, 2013. “Global risk governance”. *Society for Risk Analysis 2013 Annual Meeting*, 8-11 December, Baltimore.

Baum, Seth, 2013 (invited). “Potential for megadisasters”. *American Geophysical Union Science Policy Conference*, 24-26 June, Washington, DC.

Baum, Seth, 2012. “Technocracy and democracy in risk governance”. *Society for Risk Analysis 2012 Annual Meeting*, 9-12 December, San Francisco.

Baum, Seth, 2012. “Global catastrophic risk”. *World Congress on Risk 2012*, 18-20 July, Sydney.

Baum, Seth, 2011. “Catastrophic climate change”. *Society for Risk Analysis 2011 Annual Meeting*, December, 4-7 Charleston, SC.

Baum, Seth, 2011. “Happenings at the Center for Research on Environmental Decisions”. *Nature, Ecology, and Society Colloquium*, 10-11 March, New York City.

Baum, Seth, 2010. “Methodologies for global catastrophic risk assessment”. *Society for Risk Analysis 2010 Annual Meeting*, 5-8 December, Salt Lake City.

Baum, Seth, 2010. “Incorporating public scholarship into an academic career”. *no)Boundaries 2010 Graduate Student Conference*, 20-21 March, State College, PA.

Baum, Seth, 2009. “Using integrated assessment modeling in climate change mitigation policy”. *United States Society for Ecological Economics Fifth Biennial Conference*, 31 May-3 June, Washington, DC.

Baum, Seth, 2009. “Young scholar perspectives on human dimensions of global change research: Advancing the role of research in environmental decision making”. *Association of American Geographers 2009 Annual Meeting*, 22-27 April, Las Vegas.

### **Conference Oral Presentations**

Anthony Barrett and Seth Baum, 2016. “Technology forecasting for analyzing future global catastrophic risks”. *Society for Risk Analysis 2016 Annual Meeting*, 11-15 December, San Diego.

Baum, Seth and Anthony Barrett, 2015. “Risk and policy analysis of nuclear war”. *Society for Risk Analysis 2015 Annual Meeting*, 6-10 December, Arlington, VA.

Anthony Barrett and Seth Baum, 2015. “Analyzing long term risks of artificial intelligence catastrophe”. *Society for Risk Analysis 2015 Annual Meeting*, 6-10 December, Arlington, VA.

Baum, Seth, 2015. “Transdisciplinary synthesis in global catastrophic risk research”. *Poles Apart, Melting Together: Science & the Humanities Confront the Anthropocene* (hosted by Boston University Center for Interdisciplinary Teaching & Learning), 27 June, Boston.

Baum, Seth, 2013. “The resilience of human civilization in the face of global catastrophes”. *Society for Risk Analysis 2013 Annual Meeting*, 8-11 December, Baltimore.

Baum, Seth, 2013. “Building an international think tank with remote collaboration”. *Climate-Friendly Climate Research Conference*, 11-15 November, online (hosted by Klimaforschungsnetzwerk Österreich/Climate Change Centre Austria).

Baum, Seth, and Grant Wilson, 2013. “The ethics of global catastrophic risk from dual-use bioengineering”. *7<sup>th</sup> Annual International Conference on Ethical Issues In Biomedical Engineering*, 20-21 April, Brooklyn.

Baum, Seth, 2012. “Voice and democraticity in electoral and technocratic environmental decision procedures”. *Society for Risk Analysis 2012 Annual Meeting*, 9-12 December, San Francisco.

Baum, Seth, 2012. “Transdisciplinarity and transprofessionalism for global catastrophic risk”. *World Congress on Risk 2012*, 18-20 July, Sydney.

García, Inés and Seth Baum, 2012. “Arts-academia collaborations for inspirational environmental comedy”. *Nature, Ecology, and Society Colloquium*, 2 March, New York City.

Baum, Seth, Kaitlin Butler, and Peter Howe, 2012. “Perceptions of mitigation behaviors: Is food choice overlooked?”. *Association of American Geographers 2012 Annual Meeting*, 24-28 February, New York City.

Baum, Seth, 2011. “Communicating the importance of global catastrophic risk”. *Society for Risk Analysis 2011 Annual Meeting*, 4-7 December, Charleston, SC.

Baum, Seth, 2011. "Democracy, technocracy and climate change mitigation policy". *Association of American Geographers 2011 Annual Meeting*, 12-16 April, Seattle.

Baum, Seth, 2011. "A new cultural outlook on climate change". *Nature, Ecology, and Society Colloquium*, 10-11 March, New York City.

Baum, Seth, 2010. "The moral psychology of environmental conflict". *Middle States Division of the Association of American Geographers 2010 Annual Meeting*, 22-23 October, West Point, NY.

Baum, Seth, 2010. "Space-time discounting, global catastrophic risk, and climate change economics". *Society for Risk Analysis 2010 Annual Meeting*, 5-8 December, Salt Lake City.

Baum, Seth, 2010. "Space-time discounting for climate change policy". *Technology Management and Policy Graduate Consortium 2010 Meeting*, 27-29 June, Cambridge, UK.

Baum, Seth, Destiny Aman, and Andrei Israel, 2010. "Promoting civic engagement through student projects in introductory environmental geography courses". *Association of American Geographers 2010 Annual Meeting*, 14-18 April, Washington, DC.

Baum, Seth, 2009. "Artificial intelligence and risk: What should we believe?". *Society for Risk Analysis 2009 Annual Meeting*, 6-9 December, Baltimore.

Baum, Seth, 2009. "Discounting and beyond: Interpreting the ethics in climate change economics". *United States Society for Ecological Economics Fifth Biennial Conference*, 31 May-3 June, Washington, DC.

Baum, Seth, 2009. "Integrating ethics into human dimensions of global change research". *Association of American Geographers 2009 Annual Meeting*, 22-27 April, Las Vegas.

Baum, Seth, 2009. "An expert elicitation survey on artificial general intelligence". *Second Conference on Artificial General Intelligence*, 6-9 March, Arlington, VA.

Baum, Seth, 2009. "Ethics, geopolitics, and catastrophic climate change". *no)Boundaries 2009 Graduate Student Conference*, 28 February-1 March, State College, PA.

Baum, Seth, 2008. "Catastrophic climate change scenarios". *Society for Risk Analysis 2008 Annual Meeting*, 7-10 December, Boston.

Baum, Seth, 2008. "An expanded approach to discounting: Theory and psychology". *Climate Decision Making Center Annual Meeting and Student Workshop*, 19-22 May, Pittsburgh.

Baum, Seth and Vanessa Schweizer, 2008. "Efforts at general public education: Where does the science end and advocacy start?". *Climate Decision Making Center Annual Meeting and Student Workshop*, 19-22 May, Pittsburgh.

Baum, Seth, 2008. "Discounting explained and refined". *Association of American Geographers 2008 Annual Meeting*, 15-19 April, Boston.

Baum, Seth and Steve Fernandez, 2008. “Exploring connections between science and society through nuclear physics”. *National Science Teachers Association 2008 National Conference*, 27-30 March, Boston.

Baum, Seth, Angélica Torres, Charity Cochran-Murphy, and David Romeo, 2008. “Meaningful K12-university partnerships: Insights from GK12 programs”. *National Science Teachers Association 2008 National Conference*, March, Boston.

Baum, Seth, 2007. “Putting Ramsey model-based climate change assessments in perspective”. *United Nations Framework Convention on Climate Change 13th Conference of Parties*, 3-15 December, Bali, Indonesia. *Note: I was unable to attend; the paper was presented on my behalf by the Rock Ethics Institute.*

### **Conference Panel Discussions**

Hughes, James, 2015. “The World in 2025, 2035, and 2045”. *2015 World Technology Summit and Awards*. With panelists Seth Baum, Melanie Swan and David Biello. 20 November, New York City.

Phillips, Lisa and Dana Whitco, 2013. “Better than barter: Artists and scientists redefine collaboration, mentorship and community”. *NoPassport 2013 Conference*. With panelists Steve Cosson, Erin Sherman, Seth Baum, Inés García, Nicole Davi, and Jeremy Pickard. 1 March, New York City.

Bedford, Dan, Lesley-Ann Dupigny-Giroux, and John Harrington, 2012. “Climate change literacy”. *Association of American Geographers 2012 Annual Meeting*. With panelists Anthony Leiserowitz, Seth Baum, Gavin Schmidt, Bruce Moravchik, and Lesley-Ann Dupigny-Giroux. 24-28 February, New York City.

### **Conference Poster Presentations**

Haqq-Misra, Jacob, Michael Busch, Sanjoy Som, and Seth Baum, 2012. “The benefits and harms of transmitting into space”. *Astrobiology Science Conference*, 16-20 April, Atlanta. *Note: I was unable to attend; the poster was presented on my behalf by Jacob Haqq-Misra.*

Butler, Kaitlin, Seth Baum, and Peter Howe, 2011. “Perceptions of mitigation behaviors: Is food choice overlooked?”. *Behavior, Energy and Climate Change 2011 Conference*, 30 November-2 December, Washington, DC.

Baum, Seth, 2010. “Space-time discounting in climate change adaptation”. *Worldwide Universities Network Adapting to Climate Change Poster Session*, 22-25 May, State College, PA.

Baum, Seth, 2008. “Welfare discounting: Ethics and implications”. *Climate Decision Making Center Annual Meeting and Student Workshop*, 19-22 May, Pittsburgh.

Baum, Seth, 2007. “Utilitarianism: A transdisciplinary approach”. *United States Society for Ecological Economics Fourth Biennial Conference*, 23-27 June, New York City.



Baum, Seth and Claire Duggan, 2007. “Reflections on education outreach”. *Center for Subsurface Sensing and Imaging Systems Year 7 National Science Foundation Site Visit*, 19-20 April, Boston.

Silevitch, Michael, Claire Duggan, Seth Baum, Ann McDonald, and Jay Laird, 2007. “ROVERS: Remote Operated Volatile Explosives Retrieval Systems: An educational game collaboration between the Bernard M. Gordon Center for SubSurface Imaging Systems, the Northeastern University Multimedia Studies Program, and Metaversal Studios, Inc.”. *Center for Subsurface Sensing and Imaging Systems Year 7 National Science Foundation Site Visit*, 19-20 April, Boston.

Baum, Seth, Michael Byrne, Emily Hart, Jason Kessel, Marielle Postavia-Davignon, Nicholas Yang, Claire Duggan and Thomas Gilbert, 2007. “Northeastern University: Experience, believe, achieve”. *National Science Foundation GK-12 Program Annual Conference*, 9-11 March, Washington, DC. *Note: I designed the poster but was unable to attend.*

Baum, Seth and Carey Rappaport, 2006. “Introducing the NUFDTD software package”. *Center for Subsurface Sensing and Imaging Systems 2006 Research and Industrial Collaboration Conference*, 4 October, Boston.

Baum, Seth, 2006. “Modeling ground penetrating radar while teaching high school science”. *Center for Subsurface Sensing and Imaging Systems Year 6 National Science Foundation Site Visit*, 4-6 April, Boston.

Baum, Seth, Lara Jabr, Anna Myers, Marielle Postavia-Davignon, Jay Rushford, Claire Duggan and Thomas Gilbert, 2006. “Northeastern University: Experience, believe, achieve”. *National Science Foundation GK-12 Program Annual Conference*, March, Washington, DC.

Baum, Seth, Stephen Wong, Dan Mahr, Carey Rappaport, Claire Duggan, and Grady McClinton, 2005. “Developing FDTD code while teaching high school science”. *Center for Subsurface Sensing and Imaging Systems 2005 Research and Industrial Collaboration Conference*, 6-7 October, Boston.

- Awarded Best Poster, Education and Outreach Program Category

Baum, Seth, Jay Laird, Sam Christy, Michael Silevitch, Claire Duggan, and Ann McDonald, 2005. “Subsurface imaging-themed computer games and machine activities”. *Center for Subsurface Sensing and Imaging Systems 2005 Research and Industrial Collaboration Conference*, 6-7 October, Boston.

Baum, Seth, Robin Canale, Ryda Chea, Jiaan Hyland-Babaie, Carey Rappaport, Claire Duggan, and Paul Muller, 2005. “Modeling ground penetrating radar while teaching high school science”. *Center for Subsurface Sensing and Imaging Systems Year 5 National Science Foundation Site Visit*, 7-8 April, Boston.

## PUBLIC SPEAKING

Baum, Seth, 2016. “Future technology extreme risks and benefits”. *Envision Conference*. 3 December, Princeton.

Baum, Seth, 2016. “Killer waves: Where to surf during nuclear war”. *Nerd Nite NYC*. 19 November, Brooklyn.

Baum, Seth, 2016. “Global catastrophe and the future of consciousness”. *YHouse YCafé Consciousness Club*. 9 November, New York City.

Baum, Seth, 2016. “Scary weapons”. *Story Collider*. 18 October, Brooklyn.

Baum, Seth and Konstantinos Karachalios, 2016. “What’s the Big Idea?”. Panel discussion at the Soho House. 14 March, New York City.

Baum, Seth, 2015. “Please hold your farts until after the nuclear war”. *Nerd Nite NYC*. 10 April, Brooklyn.

Baum, Seth, 2015. “Ask me anything”. Online discussion at the Effective Altruism Forum website. 3 March 2015, online.

Sachs, Jeffrey, Seth Baum, and Max Tegmark, 2015. “The Future of Life on Earth”. Panel discussion at the 92nd Street Young Men’s and Young Women’s Hebrew Association as part of their 7 Days of Genius festival. 1 March 2015, New York City.

Baum, Seth, 2015. “The catastrophic risk of nuclear war”. *The Dynamics of Possible Nuclear Extinction*. Symposium hosted by the Helen Caldicott Foundation. 28 February-1 March, New York City.

Baum, Seth, 2014. “Navigating the high-stakes turbulence to our future” (keynote address). *Global Existential Risks & Radical Futures*. Conference hosted by Transhuman Visions. 14 June, Piedmont, CA.

Baum, Seth, and others, 2013. Career Panels and Networking Reception, University of Rochester Meliora Weekend, 10-13 October, Rochester, NY.

Baum, Seth, 2013. (No talk title). *University of Rochester Career Center Food for Thought Series*, 3 April, Rochester, NY (delivered via Skype).

Baum, Seth, 2011. “Aliens could take over the world, but robots are more likely to”. *Nerd Nite NYC*. 14 January, Brooklyn.

Baum, Seth, 2006. “Explorations in the use of graph theory for the optimization of transit systems”. *Nerd Nite Boston*. 14 January, Jamaica Plain.