

KELLY KLIMA

Research Engineer, RAND Corporation
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RESEARCH INTERESTS

Hazard mitigation and climate adaptation planning and implementation; climate, energy, and environmental decision-making; decision analysis of methods to reduce damage from natural hazards; advancing innovative policy solutions; promoting STEM education.

DEGREES

Carnegie Mellon University, Pittsburgh, PA

Ph.D. Engineering and Public Policy, 2011.

Thesis committee: Granger Morgan (CMU, Engineering and Public Policy); Iris Grossmann (CMU, Engineering and Public Policy); Wändi Bruin de Bruine (University of Southern California, Behavioural Decision-Making); Kerry Emanuel (MIT, Earth, Atmosphere, & Planetary Science).

Massachusetts Institute of Technology, Cambridge, MA

M.S. Earth, Atmosphere, and Planetary Science, 2008.

M.S. Aeronautics and Astronautics, 2005.

California Institute of Technology, Pasadena, CA

B.S. Mechanical Engineering, 2003.

Cambridge University, Cambridge, England

Cambridge Scholars Program

CERTIFICATIONS

Certified Floodplain Manager, Association of State Floodplain Managers, 2014

Certified Cost Estimator/Analyst, International Cost Estimating & Analysis Association, 2019

PROFESSIONAL EXPERIENCE

RAND Corporation, Pittsburgh, PA & Santa Monica, CA

Research Engineer, 2017 – present

Carnegie Mellon University, Pittsburgh, PA

Research Scientist, Engineering and Public Policy, 2013 – 2017

Klima Consulting, Pittsburgh, PA

Subject matter expertise on climate, adaptation, resilience, hazard mitigation, & risk. 2013 – present

Center for Clean Air Policy, Washington, D.C.

Researched private sector adaptation efforts and economics of best practices for adaptation; assisted New York City and Washington D.C. in climate adaptation planning, 2012-2013.

Carnegie Mellon University, Pittsburgh, PA

Post-doc, Engineering and Public Policy, 2011-2012.

RESEARCH EXPERIENCE

- **Homeland Security Operational Analysis Center (HSOAC)**, 2017-present
Subject matter expertise to DHS components, program managers, and operating elements in addressing national homeland security issues, e.g. natural hazard risk, emergency response.
- **Project Air Force (PAF)**, 2017-present
Conduct objective analysis on issues of enduring concern to Air Force leaders.
- **RAND Arroyo Center (Arroyo)**, 2017-present
Conduct objective analytic research on the Army's major policy concerns, including mid- to long-term policy issues, effectiveness & efficiency, and short-term aid on urgent problems.
- **Surface Heat Assessment for Developed Environments (SHADE)**, 2015-present
Conduct work on heat hazard, vulnerability, risk, and mitigation at the local level.
- **Center for Engineering and Resilience for Climate Adaptation (CERCA)**, 2015-2018
Develop novel methods, tools, and analyses needed to incorporate climate change impacts into engineering infrastructure designs and decision-making. Carnegie Mellon University.
- **Water and Electricity Infrastructure in the Southeast (WEIS) Group**, 2014-2018
Improve information on risks and opportunities to the Southeastern United States power sector as a result of climate and weather extremes. Carnegie Mellon University.
- **Solar Energy Research Institute for India and United States (SERIUS)**, 2013-2018
Assessment of the technology policy issues associated with large-scale integration of solar with the grid for India. Carnegie Mellon University.
- **Climate & Energy Decision Making Center (and previous iterations)**; 2008-2018
Research on climate, extreme weather events, hazard mitigation, climate adaptation, decision analysis of hurricane modification techniques, and STEM. Carnegie Mellon University.
- **Carnegie Mellon University Electricity Industry Center**, 2013-2017
US switch from coal to gas, current and future ice storms. Carnegie Mellon University.
- **Behavior, Decision and Policy Working Group**, 2014-2017
Conduct social science research on topics related to engineering, science, and technology.
- **Program in Atmospheres, Oceans, and Climate**, 2005- 2008
Sensitivity of ocean heat uptake to transient wind stress, effects of interactive gyre transport on ocean box models. Massachusetts Institute of Technology.
- **System for Assessing Aviation's Global Emissions**, 2003-2005
Assessment of a global contrail modeling method, assessment of operational strategies for contrail mitigation. Massachusetts Institute of Technology.

CONSULTING EXPERIENCE

- **Klima Consulting**, 2013-present
Subject matter expert on climate, adaptation, resilience, hazard mitigation, & risk.
Audiences (listed alphabetically) include Nebraska; New York City, NY; Pennsylvania; Pittsburgh, PA; Saint Paul, MN; Washington DC
- **Survey of Geohazards for Colorado Department of Transportation**, 2016-present
Conducted expert/ public interviews informing a survey of social impacts of geohazards
- **Strategic Framework for Community Resiliency for St. Paul, Minnesota**, 2014-2016
Organized workshops, interpreted results, & wrote framework with All Hands Consulting.
- **Mitigation Plans for Four New Jersey Counties**, 2014-2016
Assisted New Jersey & Stuart Wallace Consulting in climate adaptation planning.
- **Subject Matter Expertise on Solar Flares**, 2016

Information prepared for Booz Allen Hamilton

- **Austrian Climate Research Programme, 2012-2014**
Reviewed proposals on climate and adaptation for RFP: Austria Climate and Energy Fund
- **Center for Clean Air Policy, 2012-2013**
Researched private sector adaptation efforts and economics of best practices for adaptation; assisted New York City and Washington D.C. in climate adaptation planning.

INTERNSHIP EXPERIENCE

- **Darpa Grand Challenge Team, Caltech, 2003**
Built a fully autonomous off-road ground vehicle entered in a 250-mile, <10 hour race.
- **Multi-Vehicle Wireless Testbed, Caltech, 2001-2002**
Constructed and aided in design production and optimization of self-guided vehicles.
- **Acoustics Research, Engines and Systems, Honeywell, 2001**
Maximized liner noise attenuation, researched modal decomposition of AS907 fan.
- **Global Boreal Forest Mapping Project, Jet Propulsion Laboratory, 2000**
Analyzed datatapes, constructed database, designed web page.
- **Genetic Trends of Virally Induced Cancers, Villanova Summer Research Institute, 1998**
Modeled diseases.

PUBLICATIONS

Journal Articles

- Prosdocimi, D.; **Klima, K.** (2020). Health Effects of Heat Vulnerability in Rio de Janeiro: A Validation Model for Policy Applications. *SN Applied Sciences*. 2, Article number: 1948.
- Loew, A.; Jaramillo, P.; Zhai, H.; Ali, R.; Nijssen, B.; Cheng, Y.; **Klima, K.** (2020). Fossil fuel-fired power plant operations under a changing climate. *Climatic Change*, 1-14.
- Allen, T.; Wells, E.; **Klima, K.** (2019). Culture and Cognition: Understanding Public Perceptions of Risk and (In)Action. *IBM Journal of Research and Development*. 64.1/2 (2019): 11-1.
- **Klima, K.**; El Gammal, E.; Kong, D.; Prosdocimi, D. (2019). Creating a Water Risk Index to Improve Community Resilience. *IBM Journal of Research and Development*. 64 (1/2), 16:1 - 16:11.
- **Klima, K.**; Apt, J.; Bandi, M.; Happy, P.; Loutan, C.; Young, R. (2018). Geographic smoothing of solar photovoltaic electric power production. *Journal of Renewable and Sustainable Energy*. 10, 053504.
- Malings, C.; Pozzi, M.; **Klima, K.**; Bou-Zeid, E.; Ramamurthy, P.; Berges, M. (2018). Surface Heat Assessment for Developed Environments: Optimizing Urban Temperature Monitoring. *Building and Environment*. 141, pp. 143-154.
- Wong-Parodi, G.; **Klima, K.** (2017). Preparing for local adaptation: A study of community understanding and support. *Climatic Change*. 145(3-4), pp.413-429.
- Craig, M.; Zhai, H.; Jaramillo, P.; **Klima, K.** (2017). Trade-offs in Cost and Emission Reductions between Flexible and Normal Carbon Capture and Sequestration under Carbon Dioxide Emission Reduction Targets. *International Journal of Greenhouse Gas Control*. 66(1), p.25-34.

- Malings, C.; Pozzi, M.; **Klima, K.**; Bou-Zeid, E.; Ramamurthy, P.; Berges, M. (2017). Surface Heat Assessment for Developed Environments: Probabilistic Urban Temperature Modelling. *Computers, Environment and Urban Systems*. 66(1), p.53-64.
- Pozzi, M.; Memerzadeh, M.; **Klima, K.** (2017). Hidden-model processes for adaptive management under uncertain climate change. *Journal of Infrastructure Systems*. 23(4). doi.org/10.1061/(ASCE)IS.1943-555X.0000376
- Craig, M.; Jaramillo, P.; Zhai, H.; **Klima, K.** (2017) The Economic Merits of Flexible Carbon Capture and Sequestration as a Compliance Strategy with the Clean Power Plan. *Environmental Science & Technology*. 51(3), pp 1102-1109. Doi: 10.1021/acs.est.6b03652
- Doherty, M.; **Klima, K.**; Hellmann, J. (2016). Climate Change in the Urban Environment: Advancing, Measuring, and Achieving Resiliency. *Environmental Science & Policy*. doi:/10.1016/j.envsci.2016.09.001
- Farquharson, D.; Jaramillo, P.; Schivley, G.; **Klima, K.**; Carlson, D.; Samaras, C. (2016). Beyond Global Warming Potential: A comparative application of climate impact metrics for the life cycle assessment of coal and natural gas-based electricity. *Journal of Industrial Ecology*. doi:10.1111/jiec.12475
- Lueken, R.; **Klima, K.**; Griffin, W.M.; Apt, J. (2016). The Climate and Health Effects of a USA Switch from Coal to Gas Electricity Generation. *Energy*. 109(15), 1160-1166.
- Markolf, S.; **Klima, K.**; Wong, T. (2015). Adaptation Frameworks Used by United States Decision-Makers: A Literature Review. *Environment Systems and Decisions*. 35(4), 427-436. doi:10.1007/s10669-015-9572-3.
- Bradford, K.; Abrahams, L.; Hegglin, M.; **Klima, K.** (2015). A Heat Vulnerability Index and Adaptation Solutions for Pittsburgh, Pennsylvania. *Environmental Science & Technology*. 49(19), 11303–11311. PMID: 26333158
- **Klima, K.**; Apt, J. (2015). Geographic smoothing of solar PV: Results from Gujarat. *Environmental Research Letters*. 10(10).
- Faria, F.; **Klima, K.**; Posen, I.D., Azevedo, I. (2015). A New Approach of Science, Technology, Engineering, and Mathematics Outreach in Climate Change, Energy and Environmental Decision Making. *Sustainability: The Journal of Record*. 8(5), 261-271.
- **Klima, K.**; Morgan, M.G. Ice Storm Frequencies in a Warmer Climate. (2015). *Climatic Change*. 133(2), pp. 209-222.
- Canfield, C.; **Klima, K.**, Dawson, J.T. (2015). Using Deliberative Democracy to Identify Energy Policy Priorities in the United States. *Energy Research and Social Science*. 8, 184-189.
- Hoss, F.; **Klima, K.**; Fischbeck, P. (2014). Ten Strategies to Systematically Exploit All Options to Cope with Anthropogenic Climate Change. *Environment, Systems and Decisions*. 34(4), 578-590.
- **Klima, K.**; Jerolleman, A. (2014). Bridging the Gap: Hazard Mitigation in the Global Context. *Journal of Homeland Security and Emergency Management*/ 11(2), 209-216.
- **Klima, K.**; Morgan, M.G. (2012). Thoughts on whether government should steer a tropical cyclone if it could. *Journal of Risk Research*. 15(8), 1013-1020.
- **Klima, K.**; Lin, N.; Morgan, G.; Emanuel, K. (2012). Hurricane modification and adaptation in Miami-Dade County, Florida. *Environmental Science & Technology*. 45(2), 636-642.
- **Klima, K.**, Bruine de Bruin, W.; Morgan, M.G.; Grossmann, I. (2011). Public Perceptions of Hurricane Modification Techniques. *Risk Analysis*. 32(7), 1194-1206.

- **Klima, K.**, Morgan, M.G.; Grossmann, I.; Emanuel, K. (2011). Does it Make Sense to Modify Tropical Cyclones? A Decision Analytic Assessment. *Environmental Science & Technology*. 45(10), 4242-4248.
- Kim, B.Y.; Fleming, G.G.; Lee, J.J.; Waitz, I.A.; Clarke, J-P.; Balasubramanian, S.; Malwitz, A.; **Klima, K.**; Locke, M.; Holsclaw, C.A.; Maurice, L.Q.; Gupta, M.L. (2007). System for assessing Aviation's Global Emissions (SAGE), Part 1: Model description and inventory results. *Transportation Research*. 12D (5).

Conference Papers

- Tetali, S.; Baird, N.; **Klima, K.** Daytime Summer Urban Heat Island Magnitudes across Cities in India and United States: A Remote Sensing Approach. *IC2UHI2019*.
- Tetali, S.; Baird, N.; **Klima, K.** Mapping and Quantifying Urban Heat Islands in India's Most Dense Cities. *IIT PhD Student Symposium on Buildings, Cities and Performance*. November 16-18, 2018, Chicago, IL.
- Posen, D.; **Klima, K.**; Azevedo, I.; Gradeck, S.; Larkin, S. (2017). SUCCEED: Summer Center for Climate, Energy, and Environmental Decision Making. *Proceedings of the Canadian Engineering Education Association (CEEAA)*. June 4-7, 2017, University of Toronto.
- Matthews, D.; **Klima, K.** (2015). FOCUS in Climate: Flights of Courses Unified for Students. *2015 ASEE Annual Conference*.
- Malings, C.; Pozzi, M.; **Klima, K.**; Bou-Zeid, E.; Ramamurthy, P.; Berges, M. (2016). Optimal Sensor Placement for Urban Heat Risk Response. *13th International Conference on Probabilistic Safety Assessment and Management (PSAM 13)*.

Theses

- **Klima, K.** Does Tropical Cyclone Modification Make Sense? A Decision-Analytic Perspective. CMU, 2011.
- **Klima, K.** Effects of Variable Wind Stress on Ocean Heat Content. MIT, 2008.
- **Klima, K.** Assessment of a Global Contrail Modeling Method and Operational Strategies for Contrail Mitigation. MIT, 2005.

Special Issues

- Guest Editors: Hellmann, J.J.; **Klima, K.**; Doherty, M. (2016). Climate Change in the Urban Environment: Advancing, Measuring and Achieving Resiliency. *Environmental Science & Policy*.

Publicly Available Reports

- Mendelsohn, J.; Johnson, G.; **Klima, K.**; Steratore, R.; Cohen, S.; Kirkwood, G.; Dixon, L.; Hastings, J.; Steinberg, P. Developing Metrics and Scoring Procedures to Support Mitigation Grant Program Decisionmaking. Santa Monica, CA: RAND Corporation, anticipated January 2021, RRA377-1-DHS.
- Price, C.; **Klima, K.**; Propp, A.; Colbert-Kelly, S. A Model of the Spread of the COVID-19 Pandemic During a Hurricane in Virginia. Santa Monica, CA: RAND Corporation, December 2020, RR-A323-2.
- Yeung, D.; Nowak, S. A.; Amiri, S.; Davenport, A. C.; Hoch, E.; **Klima, K.**; McCullough, C. M. (2020). US Coast Guard Emergency Response and Disaster Operations: Using Social

Media for Situational Awareness. Santa Monica, CA: RAND Corporation, 2020, RR-4296-DHS.

- Yeung, D.; Nowak, S. A.; Amiri, S.; Davenport, A. C.; Hoch, E.; **Klima, K.**; McCullough, C. M. (2020). How the US Coast Guard Can Leverage Social Media and Enhanced Cell Phone Data to Improve Emergency Response. Santa Monica, CA: RAND Corporation, 2020, RB-10102-DHS.
- Morgan, F. E.; Boudreaux, B.; Lohn, A. J.; Ashby, M.; Curriden, C.; **Klima, K.**, Grossman, D. Military Applications of Artificial Intelligence: Ethical Concerns in an Uncertain World. Santa Monica, CA: RAND Corporation, 2020, RR-3139-AF.
- Morgan, F. E.; Boudreaux, B.; Lohn, A. J.; Ashby, M.; Curriden, C.; **Klima, K.**, Grossman, D. Military Applications of Artificial Intelligence: Ethical Concerns in an Uncertain World. Santa Monica, CA: RAND Corporation, 2020, RR-3139-1-AF.
- Williams, H. J.; Van Abel, K.; Metz, D.; Marrone, J.V.; Chan, E.W.; Costello, K.; Bauer, R. M.; **et al.** The Risk-Mitigation Value of the Transportation Worker Identification Credential: A Comprehensive Security Assessment of the TWIC Program. Santa Monica, CA: RAND Corporation, 2020, RR-3096-DHS.
- **Klima, K.**; Sridhar, H.; Dash, V.; Bharadwaj, M.D.; Kumar, P.; Apt, J. Performance Comparison of Solar Photovoltaic Models for Plant Siting in India. India: CSTEP, 2018. CSTEP-WS-2018-04.
- Dreyer, P.; Jones, T.; **Klima, K.**; Oberholtzer, J.; Strong, A.; Welburn, J.; Winkelman, Z. Estimating the Global Cost of Cyber Risk: Methodology and Examples. Santa Monica, CA: RAND Corporation, 2018, RR-2299-WFHF.

Book Chapters & Reviews

- Hunt, P., **Klima, K.** The measurement of disaster recovery efficiency using data envelopment analysis: An application to electric power restoration. In Lee & Chesler, (Eds.). *Research in Mathematics and Public Policy*. December 2020.
- **Klima, K.** Decision Making Under Deep Uncertainty: Climate Change and Infrastructure Management. In Pfeffer et al., (Eds.). *The Oxford Handbook of Planning for Climate Change Hazards*. November 2019.
- **Klima, K.** Public Perceptions of Global Warming: Understanding differences between different surveys. In Drake, J.L., Kontar, Y.Y., Eichelberger, J.C., Rupp, S.T., Taylor, K.M. (Eds.). *Communicating Climate Change and Natural Hazard Risk and Cultivating Resilience*. Springer 2015.
- **Klima, K.** Review of Clive Hamilton's Earthmasters: The Dawn of the Age of Climate Engineering. Bulletin of the American Meteorological Society, November 2013.

Non-Refereed Publications

- **All Hands Consulting.** (2016). Strategic Framework for Community Resilience. Prepared for: City of Saint Paul, MN.
- **Klima, K.**; Jerolleman, A. (2014). A Rose by Any Other Name – Communicating Between Hazard Mitigation, Climate Adaptation, Disaster Risk Reduction, and Sustainability

Professionals. Commentary & Opinion in: Journal of Environmental Studies and Sciences. DOI 10.1007/s13412-014-0210-z

- Kim, B.; Fleming, G.; Balasubramanian, S.; Malwitz, A.; Lee, J.J.; Waitz, I.; **Klima, K.**; Locke, M.; Holsclaw, C.; Morales, A.; McQueen, E.; Gillette, W. (2005). SAGE Version 1.5: Global Aviation Emissions for 2000 through 2004. FAA-EE-2005-02.
- Malwitz, A.; Kim, B.; Fleming, G.; Lee, J.J.; Balasubramanian, S.; Waitz, I.; **Klima, K.**; Locke, M.; Holsclaw, C.; Morales, A.; McQueen, E.; Gillette, W. (2005). SAGE Version 1.5: Validation, Assessment, Model Assumptions, and Uncertainties. FAA-EE-2005-03
- Kim, B.; Fleming, G.; Balasubramanian, S.; Malwitz, A.; Lee, J.J.; Ruggiero, J.; Waitz, I.; **Klima, K.**; Locke, M.; Holsclaw, C.; Morales, A.; McQueen, E.; Gillette, W. (2005). SAGE Version 1.5: System Revision History. FAA-EE-2005-04.
- Atherton, M.; **Klima, K.**; Plas, A. (2004). DC-9: A Case Study. MIT Course 16.885.

Journal Articles, in review or preparation

- Prosdocimi, D.; **Klima, K.** Can Heat Vulnerability Indices Measure Heat Vulnerability? A Monte Carlo Simulation to Assess the Sensitivity of Heat Vulnerability Indices to Measurement Error and Misspecification in Los Angeles, Pittsburgh and NYC. In review, *Mitigation and Adaptation Strategies for Global Change*, 2020.
- Tetali, S.; **Klima, K.**; Baird, N. A multicity analysis of Surface Urban Heat Island in India and the US and discussion of current quantification methods and spectral indices. In review, *Sustainable Cities and Society*, 2020.
- Shi, J.; **Klima, K.**; Donahue, N.; et al. Multi-attribute GHG Marginal Abatement Cost Curve for City-level Transportation Projects using Capital Costs and Public Health Benefits from Enhanced Air Quality.
- Sears, K.; Samaras, C.; Lowry, G.; **Klima, K.** Climate Change Impacts on Electricity Grid Capacity and Demand at the Load Serving Entity-Scale.

PRESENTATIONS

Invited Oral Presenter

- **Klima, K.**; El Gammal, L.; Kong, W.; Prosdocimi, D. Palestrante para O Futuro da Mobilidade – Desafios e Perspectivas: Creating a Water Risk Index to improve community resilience. BHTRANS Project Management Office, February 4, 2021.
- **Klima, K.** How to Use Expert Elicitation for Cost Estimation. International Cost Estimating & Analysis Association’s Southern California Annual Meeting, Online Part 1. April 15, 2020.
- **Klima, K.** Climate Science for PA Floodplain Management. Pennsylvania Governor’s Emergency Preparedness Summit. September 30, 2017.
- **Klima, K.** Climate Science for PA Floodplain Management. West Region: PAFPM Annual Meeting. October 19, 2016.
- **Klima, K.** Today’s Pollution Kills Tomorrow: Using Decision-Analysis to Inform Air Pollution Policy. Western Pennsylvania Regional Data Center/ National Academy of Sciences and National Academy of Engineering. The Air We Breathe: The State of Air Pollution in Pittsburgh. June 2, 2016.

- **Klima, K.;** Bradford, K.; Hegglin, M.; Abrahams, L. A Heat Vulnerability Index and Adaptation Solutions for Pittsburgh, Pennsylvania. Urban Sustainability Directors Network, May 19, 2016.
- **Klima, K.** Urban adaptation to reduce extreme weather risks. Louisiana State University, April 18, 2016.
- **Klima, K.** Adaptation to reduce extreme weather risks - Hurricane modification and adaptation. University of Maryland College Park, March 25, 2016.
- **Klima, K.** Socio-economics of Geohazards and Climate Change. Federal Highway Administration, March 22, 2016.
- **Klima, K.** Adaptation to reduce extreme weather risks - Hurricane modification and adaptation. Tufts University, March 18, 2016.
- **Klima, K.** Adaptation to reduce extreme weather risks - Ice storm frequencies in a future climate. University of California San Diego, March 14, 2016.
- **Klima, K.;** Bradford, K.; Hegglin, M.; Abrahams, L. Using heat vulnerability indices to optimize hazard mitigation decisions in Pittsburgh, PA. Arizona State University, February 22, 2016.
- **Klima, K.** Urban adaptation to reduce climate change and extreme weather risks to electric sector. Colorado State University, February 4, 2016.
- **Klima, K.;** Bradford, K.; Hegglin, M.; Abrahams, L. Using heat vulnerability indices to optimize hazard mitigation decisions in Pittsburgh, PA. Clark University, February 1, 2016.
- **Klima, K.;** Bradford, K.; Hegglin, M.; Abrahams, L. Using heat vulnerability indices to optimize hazard mitigation decisions in Pittsburgh, PA. Oregon State University, January 25, 2016.
- **Klima, K.** Urban adaptation to reduce climate change and extreme weather risks. Leeds University, January 19, 2016.
- **Klima, K.** Policy Considerations for Reducing Urban Warming. Urban Climate Institute, July 6, 2015.
- **Klima, K.;** Bradford, K.; Hegglin, M.; Abrahams, L. A Heat Vulnerability Index and Adaptation Solutions for Pittsburgh, Pennsylvania. National Adaptation Forum, May 13, 2015.
- **Klima, K.** Climate Mitigation, Adaptation, and Resilience in Nebraska. JEO Consulting. May 5, 2015.
- **Klima, K.** Ten Strategies to Reduce Anthropogenic Climate Change. UT Austin's Energy Symposium. February 26, 2015.
- **Klima, K.** Risk at Two Temperature Extremes: Ice Storms & Heat Vulnerability Index. MIT. February 6, 2015.
- **Klima, K.** Urban Adaptation to Reduce Natural Hazard Risks: A System of Systems Approach. Purdue University, January 29, 2015.
- **Klima, K.** Panelist. Building a Resilient Pittsburgh: A Community Forum on Climate Challenges and Opportunities. Steinbrenner Institute for Environmental Education and Outreach, October 14, 2014.
- **Klima, K.** Panelist. 2014 Student Energy Summit. Carnegie Science Center, October 10, 2014.
- **Klima, K.** Climate Mitigation, Adaptation, and Resilience in Pittsburgh. Pittsburgh Resilient Cities Planning Team Meeting, City Channel Pittsburgh, August 20, 2014. Klima begins around 22:30.

- **Klima, K.** What should we research next for climate adaptation? American Society of Adaptation Professionals, Jan 21, 2014.
- **Klima, K.** Vulnerability studies and integrated assessments for hazard risk reduction in Pittsburgh, PA. AGU Fall Meeting, 2013.
- **Klima, K.** Panelist, Exploring Careers in Natural Hazards. AGU Fall Meeting, 2013.
- **Klima, K.;** Jerolleman, A. Integrating adaptation in hazard mitigation planning efforts. US Environmental Protection Agency Webinar: Attracting Funding for Adaptation, May 1, 2013.
- **Klima, K.;** Thomas, E. Climate Adaptation and Emergency Management. International Disaster Conference and Expo, 2013.
- **Klima, K.;** Winkelman, S. Weathering Climate Risks: Advancing Corporate and Community Resilience. The Mediterranean City: A Conference on Climate Change Adaptation, 2012.
- **Klima, K.** Does Tropical Cyclone Modification Make Sense? A Decision-Analytic Perspective. Natural Hazards Annual Workshop, July 2011.

Oral Presenter

- Klima, K.; **Lempert, R.;** Bond, C.; Marlier, M.; Green, M.; Crouse, M.; Topham, J.; Barr, P. Ensuring a Resilient Road Network in the Western Balkans with Deeply Uncertain Natural Hazard. Decision Making under Deep Uncertainty Annual Meeting 2019, November 6, 2019.
- **Prosdocimi, D.;** Klima, K. Health Effects of Heat Vulnerability in Rio de Janeiro: A Validation Model for Policy Applications. 2018 American Geophysical Union Fall Meeting, December 2018.
- **Prosdocimi, D.;** Klima, K. Can Heat Vulnerability Indices Measure Heat Vulnerability? A Monte Carlo Simulation to Assess the Sensitivity of Heat Vulnerability Indices to Measurement Error and Misspecification in Los Angeles, Pittsburgh and NYC. 2018 American Geophysical Union Fall Meeting, December 2018.
- Pozzi, M.; Memarzadeh, M.; **Klima, K.** Hidden-model processes for adaptive management under uncertain climate change. Decision Making under Deep Uncertainty Annual Meeting 2018, November 2018.
- Gammal, L.E.; **Klima, K.** Creating a Water Risk Index to Improve Community Resilience in the Pittsburgh region. 2017 American Geophysical Union Fall Meeting, December 2017.
- **Gammal, L.E.;** Klima, K. Creating a Water Risk Index to Improve Community Resilience in the Pittsburgh region. Association of State Floodplain Managers, June 4, 2017.
- **Gammal, L.E.;** Klima, K. Creating a Water Risk Index to Improve Community Resilience in the Pittsburgh region. Engineering Sustainability 2017, April 2017.
- **Klima, K.;** Bruine de Bruin, W.; Dessai, S.; Lefevre, C.; Taylor, A. Climate change concerns, weather expectations, and willingness to adapt. American Geophysical Union Fall Meeting, December 14, 2016.
- **Klima, K.;** Bruine de Bruin, W.; Dessai, S.; Lefevre, C.; Taylor, A. Climate change concerns, weather expectations, and willingness to adapt. Society for Risk Analysis, December 13, 2016.
- **Klima, K.;** Apt, J. Geographic Smoothing of Solar PV: Results from Gujarat. American Meteorological Society, January 11, 2016.
- **Klima, K.;** Bradford, K.; Hegglin, M.; Abrahams, L. A Heat Vulnerability Index and Adaptation Solutions for Pittsburgh, Pennsylvania. Society for Risk Analysis, December 9, 2015.

- Klima, K.; **Apt, J.** Geographic Smoothing of Solar PV: Results from Gujarat. United States Association for Energy Economics, October 27, 2015.
- **Dzombak, D.;** Adams, P.; Grossman, I.; Karamalidis, A.; Klima, K.; Lowry, G.; Samaras, C.; Matthews, S.; Small, M.; VanBriesen, J. Grand Challenge: Climate Change Adaptation for Infrastructure. American Society for Engineering Education, June 13, 2015.
- Farquharson, D.; Jaramillo, P.; **Carlson, D.;** Klima, K.; Schiveley, G. Beyond global warming potential: A comparative application of climate impact metrics for the life cycle assessment of coal and natural gas-based electricity. ISSST, May 18, 2015.
- Hoss, F.; **Klima, K.** Ten Strategies to Reduce Anthropogenic Climate Change. Global Forum on Urban and Regional Resilience, October 14, 2014.
- **Klima, K.;** M.G. Morgan. Historic and Future Ice Storms. Oak Ridge National Laboratory NEED Workshop, July 30, 2014.
- **Klima, K.;** Argo, N. Takeaways from Adaptation in Pittsburgh. City of Pittsburgh, July 15, 2014.
- **Klima, K.;** M.G. Morgan. Historic and Future Ice Storms. McGill University, March 21, 2014.
- **Klima, K.;** M.G. Morgan. Historic and Future Ice Storms. Penn State, March 21, 2014.
- **English, E.;** Klima, K. Breaking Down Silos: Adaptation Resources Relevant to Flood Professionals. Association of State Flood Plan Managers, 2013.
- **Klima, K.** Extreme Weather Trends, Climate Science, and Public Opinion. Rochester Institute of Technology, April 8, 2013.
- **Klima, K.** What is Hazard Mitigation? National Adaptation Forum, 2013.
- **Klima, K.;** Winkelman, S. Weathering Climate Risks: Advancing Corporate and Community Resilience. AGU Fall Meeting, 2012.
- **Klima, K.;** Lin, N.; Emanuel, K.; Morgan, G.; Grossman, I. Hurricane modification and adaptation in Miami-Dade County, Florida. AGU Fall Meeting, December 2012.
- **Klima, K.;** Lin, N.; Emanuel, K.; Morgan, G.; Grossman, I. Hurricane modification and adaptation in Miami-Dade County, Florida. AGU Science Policy Conference, June 2012.
- **Klima, K.** Weathering Climate Risks: Advancing Corporate and Community Resilience. Environmental Protection Agency, June 12, 2012.
- **Klima, K.** Does Tropical Cyclone Modification Make Sense? A Decision-Analytic Perspective. AIR Worldwide, March 12, 2012.
- **Klima, K.,** I. Grossman, M.G. Morgan. D Tropical Cyclone Modification: Decision-Analysis and Public Perceptions. Scientists and Engineers for America, 2011.
- **Klima, K.** Does Tropical Cyclone Modification Make Sense? A Decision-Analytic Perspective. SwissRe, October 5, 2011.
- **Klima, K.** Does Tropical Cyclone Modification Make Sense? A Decision-Analytic Perspective. Chevron, June, 15 2011.
- **Klima, K.,** I. Grossman, M.G. Morgan. Does Tropical Cyclone Modification Make Sense? A Decision Analytic Perspective. AGU Fall Meeting, 2010.
- **Klima, K.,** I. Grossman, M.G. Morgan. Does Tropical Cyclone Modification Make Sense? A Decision Analytic Perspective. Technology, Management and Policy Consortium, 2010.
- **Klima, K.,** I. Waitz. Assessment of a Global Contrail Modeling Method. TAC Conference Proceedings 2006.

Poster Presenter

- **Prosdocimi, D.;** Klima, K. Health Effects of Heat Vulnerability in Rio de Janeiro: A Validation Model for Policy Applications. 2019 American Geophysical Union Fall Meeting, December 2019.
- **Klima, K.;** Lempert, R.; Bond, C.; Marlier, M.; Green, M.; Crouse, M.; Topham, J.; Barr, P. Ensuring a Resilient Road Network in the Western Balkans with Deeply Uncertain Natural Hazards. 2019 American Geophysical Union Fall Meeting, December 2019.
- **Prosdocimi, D.;** Klima, K. Health Effects of Heat Vulnerability in Rio de Janeiro: A Validation Model for Policy Applications. National Council for Science and the Environment 2019 Annual Conference, January 2019.
- **Dolan, A.M.;** Tamalavage, A.; Crumsey, J.; Klima, K.; Lechner, H.N.; Llera, K.; Oaida, C. AGU Student and Early Career Leadership. 2017 American Geophysical Union Fall Meeting, December 2017.
- **Wong-Parodi, G.;** Klima, K. Preparing for local adaptation: Understanding flood risk perceptions in Pittsburgh. American Geophysical Union Fall Meeting, December 14, 2016.
- **Shi, J.;** Klima, K.; Donahue, N. Creating a Methodology for Coordinating High-resolution Air Quality Improvement Map and Greenhouse Gas Mitigation Strategies in Pittsburgh City. AGU Fall Meeting, December 14, 2016.
- Canfield, C.; **Klima, K.;** Dawson, T. Using Deliberative Democracy to Identify Climate Change Policy Priorities. Steinbrenner Institute for Environmental Education and Research Earth Day Environmental Colloquium, 2016.
- **Tetali, S.;** Mann, N.; Klima, K. Re-Evaluating Urban Heat Islands in Hot, Densely Developed Cities. Steinbrenner Institute for Environmental Education and Research Earth Day Environmental Colloquium, 2016.
- *Invited:* **Klima, K.;** Wong-Parodi, G. Preparing for Local Adaptation: Understanding Flood Risk Perceptions in Pittsburgh. American Geophysical Union Fall Meeting, 2015.
- *Invited:* **Klima, K.;** Bradford, K.; Hegglin, M.; Abrahams, L. A Heat Vulnerability Index and Adaptation Solutions for Pittsburgh, Pennsylvania. American Geophysical Union Fall Meeting, 2015.
- Klima, K.; **Matthews, D.** FOCUS: Flights of Courses Unified for Students. 2015 ASEE Annual Conference, 2015.
- Faria, F.; **Posen, I.D.;** **Markolf, S.;** Klima, K. Summer Center for Climate, Energy, and Environmental Decision Making. Association of Environmental Engineering & Science Professors (AEESP), 2015.
- **Canfield, C.;** Klima, K.; Dawson, T. Using Deliberative Democracy to Identify Climate Change Policy Priorities. Engineering Sustainability Conference, 2015.
- **Klima, K.;** M.G. Morgan. Historic and Future Ice Storms. AGU Fall Meeting, 2014.
- **Bradford, K.;** **Hegglin, M.;** Abrahams, L.; Klima, K. A Heat Vulnerability Index and Adaptation Solutions for Pittsburgh, Pennsylvania. Advancing & Redefining Communities (ARC) for Emergency Management Conference, 2014.
- **Klima, K.;** Hoss, F.; Welle, P. Summer Center for Climate, Energy, and Environmental Decision Making (SUCCEED). AGU Fall Meeting, 2013.
- **Klima, K.;** Winkelman, S. Weathering Climate Risks: Advancing Corporate and Community Resilience. Disasters & Environment: Science, Preparedness, & Resilience 2013.
- **Klima, K.;** Winkelman, S. Weathering Climate Risks: Advancing Corporate and Community Resilience. Natural Hazards Annual Meeting 2012.

- **Klima, K.**, I. Grossman, M.G. Morgan. Does Tropical Cyclone Modification Make Sense? A Decision Analytic Perspective. AGU Fall Meeting, 2009.

Panel Convening/ Moderating

- Marasco, L.; Lundquist, C; **Klima, K.**; Riker, J. Moderator & Convener. Student Engagement to Enhance Development: Outstanding Student Presentation Award Winners from Fall Meeting 2019. December 2020.
- Marasco, L.; **Klima, K.**; Riker, J. Moderator & Convener. Student Engagement to Enhance Development: Outstanding Student Presentation Award Winners from Fall Meeting 2018. December 2019.
- **Marasco, L.**; Klima, K.; Riker, J. Convener. Student Engagement to Enhance Development: Outstanding Student Presentation Award Winners from Fall Meeting 2017. December 2018.
- Marasco, L.; **Klima, K.** Moderator & Convener. Student Engagement to Enhance Development: Outstanding Student Presentation Award Winners from Fall Meeting 2016. December 2017.
- **Klima, K.** Moderator & Convener. Energy interactions between Urban Built Environment and Micro-Climate: Impacts, Assessment Methods, and Existing Gaps. January 24, 2017.
- **Klima, K.** Moderator. Transportation Subgroup. City of Pittsburgh Climate Action Plan Workshop on Energy. October 3, 2016.
- **Klima, K.** Moderator. W3-H: Multi-Disciplinary - Catastrophes: Vulnerabilities and Responses. Society for Risk Analysis, December 2015.
- Klima, K.; **Craig, M.** Moderator & Convener. SERIUS session. United States Association for Energy Economics, October, 2015.
- **Klima, K.**; Lindquist, E.; Ludwig, K.; Hankin, E. Moderator & Convener. Exploring the Roles of Science, Communication, and Education throughout the Disaster Lifecycle. AGU Fall Meeting, December, 2014.
- **Klima, K.** Moderator & Convener. Integrating Climate Adaptation into Planning. 39th Annual Natural Hazards Research and Applications Workshop, June 23, 2014.
- **Klima, K.** Moderator. Disaster Preparedness: Communicating Risk. Moderator. AGU Science Policy Conference, June 16, 2014.
- **Klima, K.**; St. John, C. Moderator & Convener. Integrated Approach to the Extreme Natural Hazard Events and Global Environmental Change Assessment. AGU Fall Meeting, December 12, 2013.
- **Klima, K.** Moderator & Convener. Incorporating Hazard Mitigation and Adaptation into Local Planning. Natural Hazard Mitigation Association Stakeholder Workshop, July 17, 2013.
- **Klima, K.** Moderator & Convener. The Overlap Between Hazard Mitigation and Climate Adaptation. Natural Hazard Mitigation Association Stakeholder Workshop, July 16, 2013.
- **Klima, K.** Moderator. The Science of Recent Severe Weather Events. AGU Science Policy Conference, June 25, 2013.
- **Klima, K.** Moderator & Convener. Tapping Other Resources: Linking Adaptation and Hazard Mitigation Communities. European Climate Change Adaptation Conference, March 18, 2013.
- **Klima, K.** Moderator & Convener. Incorporating Hazard Mitigation and Adaptation into Local Planning. National Adaptation Forum, April 3, 2013.

- **Klima, K.** Moderator & Convener. The Overlap Between Hazard Mitigation and Climate Adaptation. National Adaptation Forum, April 2, 2013.
- Kontar, Y.A.; Santiago-Fandi, V.; Koshimura, S.; **Klima, K.** Convener. Interdisciplinary Approaches to Recent Natural Hazards: Ecological and Societal Significance. AGU Fall Meeting, December, 2012.
- **Klima, K.**; Azevedo, I. Moderator. Interdisciplinary Strategies for Hazard Mitigation and Disaster Management. AGU Fall Meeting, December, 2011.

Briefings

- Prosdocimi, D.; **Klima, K.** Two Heat Vulnerability Studies @ RAND. County of Los Angeles, November 7, 2018.
- Prosdocimi, D.; **Klima, K.** Heat Vulnerability: Constructing an Index for policy applications in Los Angeles. City of Los Angeles, June 4, 2018.
- **Blackhurst, M.**; Klima, K. Implementation Strategies and Approaches. Briefing at City of Pittsburgh Climate Action Plan Workshop on Energy. October 3, 2016.
- **Klima, K.**; Fischhoff, B. U.S. Energy Policy: Energy Security and Climate Change Resilience. Briefing to government officials from Czech Republic, Hungary, Poland, Slovak Republic, and Slovenia. June 10, 2016.
- Adams, P.; **Klima, K.** Accountable Governance- Green Technologies and Innovation. Briefing to government officials from Kazakhstan. June 10, 2015.

Other

- Steratore, R.; **Klima, K.**; Mayer, L. When and How to Use Expert Elicitation on Your Project. Project Air Force Brown Bag. August 4, 2020.
- Hoch, E.; **Klima, K.**; Huttinger, A.; Pfrommer, K.; Ruder, T.; Stelzner, C. Heat Vulnerability Index. Homeland Security Operational Analysis Center (HSOAC) Big Data Brown Bag. January 16, 2019.
- **Klima, K.** Energy Bite discussion on Pittsburgh's NPR News Station, WESA. "Episode 186: A lot of cities have goals to reduce greenhouse gases; What are they doing in Pittsburgh?" February 7, 2017.
- **Klima, K.** "Episode 185: What exactly does the metric *global warming potential* entail?" Energy Bite discussion on Pittsburgh's NPR News Station, WESA, January 27, 2017.
- **Klima, K.** "Episode 184: As our population changes, how will energy use change?" Energy Bite discussion on Pittsburgh's NPR News Station, WESA, January 20, 2017.
- **Klima, K.** "Episode 183: What exactly is the *food-energy-water nexus*?" Energy Bite discussion on Pittsburgh's NPR News Station, WESA, January 11, 2017.
- **Klima, K.** "Kelly Klima: Natural Hazards and Urban Adaptation" Carnegie Mellon official video, Carnegie Mellon University, May 7, 2015.
- **Klima, K.** Radio appearance in Climate Change Theatre Action. November 8, 2015.

GRANTS, CONTRACTS, AND GIFTS

Awarded

- National Academies, 10/2019: \$154,548. The New First Line of Defense: Building Community Resilience through Residential Risk Disclosure. PI: M. Miro. Co-PI: **K. Klima.**

- HSOAC Innovation Award, 5/2018: \$50,000. Electromagnetic Pulse (EMP) and Extreme Space Weather Events in the Continental United States. PI: **K. Klima**
- Inter-American Development Bank, 9/2018: \$75,000. Response to IADB ToR "Resilient Road Transport Cutting Edge. PI: R. Lempert. Co-PI: **K. Klima**
- World Bank, 3/2018: \$700,000. DIVERSION: DIagnosing Vulnerability and Economic Resilience of transport Systems, Infrastructure and Operations in the Western BalkaNs. PI: M. Green. Co-PI: **K. Klima**, et al. Joint with AMEC Foster Wheeler.
- NIJ, 10/2017: \$914,757. Improved Officer Decision-Making and Stress Management with Virtual Environments. To develop a framework for implementing low-cost, game-based, virtual reality (VR) technology for training police officers. PI: T. Marler. Lead Investigator: **K. Klima**, et al.
- NSF PREEVENTS, 9/2017: \$820,764. SHADE – Surface Heat Assessment for Developed Environments. To develop physical and probabilistic models for urban temperature hazards, vulnerabilities, and risks. PI: M. Pozzi. Co-PIs: **K. Klima**, et al. Joint with Carnegie Mellon University and Princeton University.
- NSF IMEE, 9/2017: \$550,000. From Future Learning to Current Action: Long-term Sequential Infrastructure Planning under Uncertain Climate Change. PI: M. Pozzi. Co-PIs: **Kelly Klima**, Peter Adams. Joint with Carnegie Mellon University.
- NSF: RIPS Type 2 Collaborative Research, 2015: \$1.4M. Water and Electricity Infrastructure in the Southeast (WEIS) - Approaches to Resilient Interdependent Systems under Climate Change. To study power plant behavior and overall adaptation system dynamics in the Tennessee Valley region. PI: P. Jaramillo. **Senior Investigator: K.Klima.**
- NSF: DMUU, 9/2015: Climate and Energy Decision Making Cities: \$4.5M. To study methods required to achieve deep decarbonization of the energy system. PI: I. Azevedo, M.G. Morgan. **Senior Investigator: K. Klima,**
- CMU Scott Institute for Energy Innovation, 2014: \$40,000. C40+: Creating a Methodology for Greenhouse Gas Abatement Curves in Urban Centers. To create a method to tradeoff greenhouse gas abatement, air pollution abatement, and costs. PI: N. Donahue. **Co-PIs: K. Klima.**
- CMU Metro21, 11/2014: \$50,255. Preparing for Local Adaptation: Understanding Flood Risk Perceptions in Pittsburgh. To survey Pittsburgh residents on their understanding of storm water and willingness to pay for green and grey infrastructure solutions. **PI: K. Klima;** Co-PIs: G. Wong-Parodi, N. Argo.
- CMU Metro21, 11/2014: \$37,500. Integrated risk assessment for the extreme heat events. To link temperature hazards and heat vulnerability to understand overall risk. PI: M. Pozzi; **Co-PIs: K. Klima**, M. Berges, E. Bou-Zeid.
- Rockefeller Foundation, 2014: Pittsburgh 100 Resilient Cities Challenge. PI: G. Ervin; **Partner Organization (CMU): K. Klima.**
- City of St. Paul, Minnesota, 2014: \$40,000. Adaptation/ Resilience Plans for St. Paul. To write the City of Saint Paul's Strategic Framework for Community Resilience. PI: S. Davis; **Subject Matter Expert: K. Klima.**
- NOAA SARP, 2014: \$290,000 Climate change and water availability: Evaluating and mitigating risks in the electric power sector. To study power plant behavior and overall adaptation system dynamics in the Tennessee Valley region. PIs: P. Jaramillo, B. Nijssen; **Co-PIs: K. Klima**, H. Zhai.
- Building a Resilient Pittsburgh: Climate Challenges and Opportunities: \$3,500. To survey participants in this event and provide a written report. **PI: K. Klima**

- Innovation in Engineering Education program in CIT: \$19,878. To test student reception to FOCUS (Flights of Courses Unified for Students). **Co-PIs: K. Klima, D. Matthews**
- The Grable Foundation: \$5,000. To partially fund the Summer Center for Climate, Energy, and Environmental Decision Making, SUCCEED (2014). **PI: K. Klima.**
- Westinghouse Electric Company Charitable Giving Program: \$1,500. To partially fund the Summer Center for Climate, Energy, and Environmental Decision Making, SUCCEED (2014). **PI: K. Klima.**
- Leonard Gelfand Center for Service Learning and Outreach: \$7,000. Create new method for measuring long-term impacts of STEM programs (2014). **PI: K. Klima; Co-PI: A. Davis.**
- Gloucester County Purchasing Department: \$600,000. Mitigation Plans for Four New Jersey Counties (2014). **PI: S. Wallace; Subject Matter Expert: K. Klima.**

Pending/ Planned

- Multiple projects within HSOAC (supporting Program Director Emma Westerman)

AWARDS AND HONORS

RAND Spotlight Award (2019); Highest Faculty Course Evaluations (CMU wide) for 19.648/12.765 since 2008 (4.6/5.0), 2014; Outstanding Student Paper Award, AGU Fall meeting, 2010; Best Presentation Award, Technology, Management and Policy Consortium, 2010; Residential Life Programs Outstanding Graduate Coordinator Award, 2006; Jule Charney Fellowship, 2005; MIT Departmental Fellowship, 2003; Cambridge Volleyball Blues, BUSA Runner-Up (2nd place in England), 2003; Cambridge Scholars Program, 2002; Hayman Scholarship Fund, 2002; Los Angeles Philanthropic Foundation, 2002; Caltech Women's Volleyball Leadership Award, 2002; Caltech Volleyball NCAA DivIII, Team Captain (played 1999-2002), 2002; McLean Brothers Scholarship, 2001; Henry L. Guenther Scholarship, 2000; James and Velma Emmi Foundation Scholarship, 2000; Bonnie Cashin Most Creative Application Essay Award, 1999

PROFESSIONAL SOCIETIES

American Association for the Advancement of Science (2009-2017); American Chemical Society (2009-2017); American Geophysical Union (2006-present); American Mensa (2009-2014); American Meteorological Society (2006-2018); American Society of Adaptation Professionals (2013-2018); Association of State Floodplain Managers (2014-present); European Association of Environmental and Resource Economists (2011-2014); International Cost Estimating and Analysis Association (2018-present); Natural Hazard Mitigation Association (2012-2016); Scientists and Engineers for America (2009-2011); Sigma Xi (2005-2014); Society for Risk Analysis (2015-2018); Society of Women Engineers (2000-2018); Triple Nine Society (2009-present); United States Association for Energy Economics (2015-2017)

LEADERSHIP

National Academy of Sciences' Science & Engineering Ambassador 2015-2017
 University Corporation for Atmospheric Research (UCAR)'s ClimateVoices 2015-2018
 American Geophysical Union (AGU) Board of Directors, 2015-2018. Includes: Honors and

Recognition Committee, Natural Hazards Position Statement Task Force, Science Policy Conference Task Force, and Science Trends Task Force
 Kresge/ND-GAIN Adaptation Assessment Advisor, 2015-present
 International Opportunities in Environmental Projects & Sustainability, Advisor, 2015-present
 Pittsburgh's Climate Action Plan & Resilience Plan Advisory Team, 2014-present
 National Academy of Sciences' Science & Engineering Ambassador Program Strategic Planning Task Force, 2014-2015
 American Geophysical Union (AGU) Executive Council Early Career Scientist, 2013-2014.
 CMU Summer Center for Climate, Energy, and Environmental Decision Making (SUCCEED), Staff Advisor, 2013-present
 The Energy Collective, Advisory Board, 2013-2015
 Resolve/ NRDC Climate Resilience Organizing Committee, 2013-2015
 Natural Hazard Mitigation Association (NHMA), Board of Directors, 2012-2015
 NHMA, Hazard Mitigation and Adaptation Committee Chair, 2012- 2015
 AGU Natural Hazard Executive Committee, 2010-2012
 CMU Summer Center for Climate, Energy, and Environmental Decision Making (SUCCEED), PhD Director, 2011
 CMU Chapter of Scientists and Engineers for America, Executive board, founding member, 2009-2011
 Human Services Volleyball League, North Side YMCA, and others, Captain, 2009
 CMU Graduate Student Assembly, Vice President of Campus Affairs, 2009 - 2010
 MIT Residential Life Programs, Graduate Coordinator, 2005 - 2008
 Caltech Residential Life Programs, Upper Class Counselor, 2002 - 2003
 Caltech, Health Advocate, 2001 – 2003

ACADEMIC SERVICE

Journal Editor (1): Climate Change in the Urban Environment: Advancing, Measuring and Achieving Resiliency for *Environmental Science and Policy* (Guest Editor)
Journal Article Reviewer (22): *Atmospheric Chemistry and Physics; BAMS; Climatic Change; Journal of Contingencies and Crisis Management; Climate Risk Management; Ecological Economics; Energy for Sustainable Development; Environmental Science and Technology; Environmental Studies and Sciences; Environment, Systems, and Decisions; GRL; Global Environmental Change; Integrated Environmental Assessment and Management (IEAM); Michigan Academician; Natural Hazards and Earth System Sciences ((NHESS); Progress in Photovoltaics: Research and Applications; PLOS ONE; Renewable & Sustainable Energy; Risk Analysis; Risk, Hazards and Crisis in Public Policy; Sustainability; Tropical Cyclone Research and Review*
Report Reviewer (2): Department of Ecology, State of Washington's *Adaptation Strategies for Resilient Cleanup Remedies* (2017). National Academy of Sciences's *Attribution of Extreme Weather Events in the Context of Climate Change* (2016).
Proposal Reviewer (4): NSF Computer and Information Science and Engineering Division in (x1 in 2020), NOAA (x1 in 2016), Austrian Climate Research Programme (ACRP, x3)
Conference Organizer (6): National Adaptation Forum Steering Committee 2016; 2015 International Hazard Mitigation Practitioners' Symposium; 2014 International Hazard Mitigation Practitioners' Symposium; 2014 AGU Science Policy Conference; 2013 International Hazard Mitigation Practitioners' Symposium; 2013 AGU Science Policy Conference

Conference Session Organizer (14): AGU Fall Meeting 2019; AGU Fall Meeting 2018; AGU Fall Meeting 2017; National Conference on and Global Forum on Science, Policy and the Environment 2017: Integrating Environment and Health; USAEE Annual Meeting 2015; AGU Fall Meeting 2014; Annual Natural Hazards Research and Applications Workshop; 14th National Conference on and Global Forum on Science, Policy and the Environment: Building Climate Solutions; AGU Fall Meeting 2013; 2013 International Hazard Mitigation Practitioners' Symposium; National Adaptation Forum, 2013; European Climate Change Adaptation Conference, 2013; AGU Fall Meeting 2012; AGU Fall Meeting 2011

Departmental Service: Write qualifier questions, grade qualifiers, service on award committee, host lecturers, meet with prospective students, conduct Quality Assurance reviews.

SUPERVISED STUDENTS

PhD Committee Member

Kathleen Loa (Policy, Pardee RAND Graduate School), expected 2022; Jalal Awan (Policy, Pardee RAND Graduate School), expected 2022; Sara Turner (Policy, Pardee RAND Graduate School), expected 2020; Surekha Telati (Architecture, CMU), expected 2021; Rachel Dryden Steratore (EPP, CMU): Public Understanding of Climate Science, Extreme Weather and Climate Attribution, 2019; Aviva Loews (EPP, CMU), Tradeoffs in Energy, Water Use, and Cost at Thermoelectric Power Plants, 2018; Michael Craig (EPP, CMU): Economic and Environmental Costs, Benefits, and Trade-offs of Low-Carbon Technologies in the Electric Power Sector, 2017; Carl Malings (Civil & Environmental Engineering, CMU): Optimal Sensor Placement for Infrastructure System Monitoring using Probabilistic Graphical Models and Value of Information, 2017; Frauke Hoss (EPP, CMU): Uncertainty of River Forecasts: Quantification and Implications for Decision-Making in Emergency Management, 2014.

PhD Work

Diogo Prosdocimi (Policy, Pardee RAND Graduate School); Jonathan Lamb (Policy, PRGS); Max Izenberg (Policy, PRGS); Nima Shahidinia (Policy, PRGS); Shawn Smith (Policy, PRGS); Jarrett Catlin (Policy, PRGS); Stephanie Tanverakul (Policy, PRGS); Meghan Franco (Policy, PRGS); Michael Gaines (Policy, PRGS); Terry Allen (Policy, UCLA); Alexandra Huttinger (Policy, PRGS); Lindsey Polley (Policy, PRGS); Sara Turner (Policy, PRGS); Kurt Klein (Policy, PRGS); Jalal Awan (Policy, PRGS); Rushil Zutshi (Policy, PRGS); Jiqiao Shi (EPP, CMU, with Neil Donahue) Roger Lueken (EPP, CMU, with Jay Apt, W. Michael Griffin); Leslie Abrahams (EPP, CMU); Andrew Hix (EPP, CMU); Samuel Markolf (EPP, CMU)

MS Work

Lobna El Gammal (Energy Science, Technology & Policy, CMU); Saakshi Gupta (Civil & Environmental Engineering, CMU)

Undergraduate Students

Emily Wells, 2015-2016; Cheyenne Shankle, 2015; Kathryn Bradford, 2014-2015; Miriam Hegglin, 2014-2015; Xiyu Wang (with Alex Davis), 2014; Sabrina Larken (with Judith Hallinen), 2013; Asha Nurse (with Ian Waitz), 2004.

TEACHING EXPERIENCE

University Classes: 19.648/ 12.765 International Climate Adaptation and Innovation for Critical

Infrastructure, 2014 (Faculty Course Evaluations: 4.13/5.0); 19451/88451 Adaptation in Pittsburgh, Lecturer, 2014, Highest FCEs for this class (CMU wide) 2009-2014 (4.6/5.0).

University Substitute Lecturer: 12704/24704: Probability and Estimation Methods for Engineering Systems; 19.626: Climate Science and Policy; 19705: Workshop Applied Policy Analysis; 12.651/12.751/19.751: Air Quality Engineering; 70376: Energy Systems; 19683: Special Topics: Science, Technology and Innovation Policy

K-12 Outreach: ASSET Training (with Ines Azevedo). ASSET, 2014; Renewable Energy and Wind Turbine Lab. SEE, 2014; Sources of reliable information. SUCCEED, 2014; Sources of reliable information. SUCCEED, 2014; Extreme Weather. SUCCEED, 2014; Extreme Weather, Climate Science, and Public Opinion. C-Mites, 2013; Sources of reliable information. SUCCEED, 2013.

Project Manager: Undergraduate Historical Footprint of Pittsburgh Projects Course. 2010.

INVITED CLASSROOM LECTURES

- **Klima, K.** Hurricanes and Mitigation. Carnegie Mellon University, 19.626: October 24, 2016.
- **Klima, K.** International Aspects to Decision Making for Risk Reduction. Oregon State University, January 26, 2016.
- **Klima, K.** Climate Change Problems and Solutions. Carnegie Mellon University, 39.610: Energy Conversion and Supply, September 24, 2015.
- **Klima, K.** The Health Effects of a USA Switch from Coal to Gas Electricity Generation. Tulane University, June 18, 2015.
- **Klima, K.** Climate Change Problems and Solutions. University of Pittsburgh, June 15, 2015.
- **Klima, K.** Climate Mitigation, Adaptation, and Resilience in Pittsburgh. Carnegie Mellon University, 48.738: Special Topics: Ecological Footprints, October 6, 2014.
- **Klima, K.** Climate Change Problems and Solutions. University of Pittsburgh, October 1, 2014.
- **Klima, K.** Climate Change Problems and Solutions. Carnegie Mellon University, 39.610: Energy Conversion and Supply, September 18, 2014.
- **Klima, K.** Climate Change Problems and Solutions. University of Pittsburgh, June 2, 2014.
- **Klima, K.** What is climate adaptation? Millersville University, March 4, 2014.
- **Klima, K.** Climate Change Problems and Solutions. Carnegie Mellon University, 19.443/19.655: Sustainable Energy for the Developing World, February 14, 2014.
- **Klima, K.** Climate Models. Carnegie Mellon University, 19.443: Climate, change, impacts and adaptation, February 27, 2011.
- **Klima, K.** How can we best reduce damage from Natural Hazards? Pittsburgh Science and Technology Academy, March 9, 2010.