



PUBLICATIONS, REPORTS, and PRESENTATIONS

January 2010

**New York University's Wagner Graduate School of Public Service
Institute for Civil Infrastructure Systems (ICIS)
for the Center for Risk and Economic Analysis of Terrorism Events (CREATE)
at the University of Southern California**

Journal Articles and Published Proceedings Papers

- R. Zimmerman (2010) "Transportation Protection and Recovery in an Age of Disasters," Papers of the Transportation Research Board 89th Annual Meeting, Washington, DC.
- J. S. Simonoff, C. E. Restrepo, and R. Zimmerman (forthcoming 2009) "Risk Management of Cost Consequences in Natural Gas Transmission and Distribution Infrastructures," *Journal of Loss Prevention in the Process Industries*, accepted for publication.
- M.R. Greenberg, W. Irving, and R. Zimmerman (2009) "Allocating U.S. Department of Homeland Security Funds to States with Explicit Equity, Population and Energy Facility Security Criteria," *Socioeconomic Planning Sciences*, Vol. 43 (4), pp. 229-239.
- C. E. Restrepo, J. S. Simonoff and R. Zimmerman (forthcoming 2009) "Causes, Cost Consequences, and Risk Implications of Accidents in U.S. Hazardous Liquid Pipeline Infrastructure," *International Journal of Critical Infrastructure Protection*, Vols. 1-2, pp. 38-50. doi:10.1016/j.ijcip.2008.09.001.
- R. Zimmerman, C. E. Restrepo, and J. S. Simonoff (2009) "Infrastructure Age, Security and Natural Hazards," *The CIP Report*, Vol. 8 (4), pp. 18, 28, 29.
- R. Zimmerman, C. E. Restrepo, and J. S. Simonoff (forthcoming 2009) "The Age of Infrastructure in a Time of Security and Natural Hazards," *Proceedings of the DHS Aging Infrastructures Workshop*.
- R. Zimmerman and C. E. Restrepo (2009) "Analyzing Cascading Effects within Infrastructure Sectors for Consequence Reduction," *Proceedings of the IEEE International Conference on Technologies for Homeland Security*.
- R. Zimmerman and J.S. Simonoff (2009) "Transportation Density and Opportunities for Expediting Recovery to Promote Security," *Journal of Applied Security Research*, Vol. 4 (1), pp. 48-59.
- V. Bier, N. Haphuriwat, J. Menoyo, R. Zimmerman and A. Culpén (2008) "Optimal resource allocation for defense of targets based on differing measures of attractiveness," *Risk Analysis*, Vol. 28 (3), pp. 763-770.
- R. Zimmerman, C.E. Restrepo, and J. S. Simonoff (2008) "Infrastructure Disruptions and Recovery Rates in Disasters," *ASCE Metropolitan Section Infrastructure Group Technical Seminar "New York City Infrastructure Critical Needs,"* Brooklyn, NY: Polytechnic University of New York, March 24-25, pp. 28-35.
- J.S. Simonoff, C.E. Restrepo, and R. Zimmerman (2007) "Risk Management and Risk Analysis-Based Decision Tools for Attacks on Electric Power," *Risk Analysis*, Vol. 27 (3), pp. 547-570.

- R. Zimmerman, C.E. Restrepo, B. Nagorsky, and A.M. Culpen (2007) "Vulnerability of the Elderly During Natural Hazard Events," *Proceedings of the Hazards and Disasters Research Meeting*, July 11-12, 2007. Boulder, CO: Natural Hazards Center, pp. 38-40.
http://www.colorado.edu/hazards/workshop/hdrm_proceedings.pdf
- M. Greenberg, N. Mantell, M. Lahr, F. Felder, and R. Zimmerman (2007) "Short and Intermediate Economic Impacts of a Terrorist-Initiated Loss of Electric Power: Case Study of New Jersey," *Energy Policy*, Vol. 35 (1), pp. 722-733.
- R. Zimmerman and C.E. Restrepo (2006) "The Next Step: Quantifying Infrastructure Interdependencies to Improve Security," *International Journal of Critical Infrastructures*, Vol. 2 (2/3), pp. 215-230.
- C.E. Restrepo, J.S. Simonoff, and R. Zimmerman (2006) "Unraveling Geographic Interdependencies in Electric Power Infrastructure," *Proceedings of the Hawai'i International Conference on System Sciences*, IEEE Computer Society.
- R. Zimmerman (2005) "Mass Transit Infrastructure and Urban Health," *Journal of Urban Health*, Vol. 82 (1), pp. 21-32.
- R. Zimmerman, C.E. Restrepo, N. Dooskin, J. Fraissinet, R. Hartwell, J. Miller and W. Remington (2005) "Diagnostic Tools to Estimate Consequences of Terrorism Attacks Against Critical Infrastructure," Proceedings, U.S. Department of Homeland Security conference, *Working Together: Research and Development Partnerships in Homeland Security*, Boston, MA.
- R. Zimmerman (2004) "Decision-making and the Vulnerability of Critical Infrastructure," *Proceedings of IEEE International Conference on Systems, Man and Cybernetics*, W. Thissen, P. Wieringa, M. Pantic, and M. Ludema, eds. The Hague, The Netherlands: Delft University of Technology.

Book Chapters (including those supported in previous years by NYU for CREATE)

- R. Zimmerman (2009) "Making Infrastructure Competitive in a Changing World Through Investment," *The ANNALS of the American Academy of Political and Social Science*, Vol. 626 Issue 1, edited by S. Wachter and E. L. Birch. Philadelphia, PA: AAPSS, pp. 226-241.
 DOI: 10.1177/0002716209344842.
- R. Zimmerman and C. E. Restrepo (forthcoming 2010) "Urban Transportation," in *Urban Health: A Global Perspective*, edited Vlahov, D., Boufford, J., Pearson, C., New York: Jossey-Bass, John Wiley and Sons.
- R. Zimmerman (forthcoming 2009) "Understanding the Implications of Critical Infrastructure Interdependencies for Water," *Wiley Handbook of Science and Technology for Homeland Security*, edited by J. Voeller, accepted for publication.
- R. Zimmerman (2008) "Managing Infrastructure Resiliency, Safety and Security," *Encyclopedia of Quantitative Risk Assessment and Analysis*, edited by E. Melnick and B. Everitt. Chichester, UK: John Wiley & Sons, Ltd, pp. 1033-1040.
- J.S. Simonoff, C.E. Restrepo, R. Zimmerman, and Z.S. Naphtali (2007) "Analysis of Electrical Power and Oil and Gas Pipeline Failures," Chapter 27 in *Critical Infrastructure Protection*, edited by E. Goetz and S. Sheno. New York, NY: Springer, pp. 381-394
- M. R. Greenberg and R. Zimmerman (2008) "Distribution of Federal Anti-Terrorism Funds to States in the United States: A Comparison of Population, Income, and Simple Vulnerability Indicators with Infrastructure Applications," in *Global Terrorism: Issues and Developments*, edited by R. A. Larche. Hauppauge, NY: Nova Science Publishers, Inc., pp. 101-120.

- R. Zimmerman, C.E. Restrepo, J.S. Simonoff, and L. Lave (2007) “Risk and Economic Cost of a Terrorist Attack on the Electric System,” Chapter 14 in *The Economic Costs and Consequences of Terrorism*, edited by H.W. Richardson, P. Gordon and J.E. Moore II. Cheltenham, UK: Edward Elgar Publishers, pp. 273-290.
- R.E. Schuler (2007) “Two-Sided Electricity Markets: Self-Healing Systems,” Chapter 16 in *The Economic Costs and Consequences of Terrorism*, edited by H.W. Richardson, P. Gordon and J.E. Moore II. Cheltenham, UK: Edward Elgar Publishers, pp. 317-333.
- R. Zimmerman (2006) “Critical Infrastructure and Interdependency,” Chapter 34 in *The McGraw-Hill Homeland Security Handbook*, edited by D.G. Kamien. New York, NY: The McGraw-Hill Companies, Inc., pp. 523-545. Reviewed in the *Journal of Homeland Security and Emergency Response* (2006) Vol. 3 (1), pp. 1-3, by W.R. Cumming.
- L.B. Lave, J. Apt, A. Farrell, and M.G. Morgan (2005) “Increasing the Security & Reliability of the U.S. Electricity System,” Chapter 4 in *The Economic Impacts of Terrorist Attacks*, edited by H.W. Richardson, P. Gordon and J.E. Moore II. Cheltenham, UK: Edward Elgar Publishers, pp. 57-69.
- R.E. Schuler (2005) “Float Together/ Sink Together? The Effect of Connectivity on Power Systems,” Chapter 6 in *The Economic Impacts of Terrorist Attacks*, edited by H.W. Richardson, P. Gordon and J.E. Moore II. Cheltenham, UK: Edward Elgar Publishers, pp. 91-118.
- R. Zimmerman (2005) “Social Implications of Infrastructure Network Interactions,” Chapter 4 in *Sustaining Urban Networks: The Social Diffusion of Large Technical Systems*, edited by O. Coutard, R. Hanley, and R. Zimmerman. London, UK: Routledge, pp. 67-85.

Reports

1. R. Zimmerman, C.E. Restrepo, N.J. Dooskin, R.V. Hartwell, J.I. Miller, W.E. Remington, J.S. Simonoff, L.B. Lave, and R.E. Schuler, *Electricity Case: Main Report – Risk, Consequences, and Economic Accounting*, June 2005.
2. R. Zimmerman, L.B. Lave, C.E. Restrepo, N.J. Dooskin, R.V. Hartwell, J.I. Miller, W.E. Remington, J.S. Simonoff, and R.E. Schuler, *Electricity Case: Economic Cost Estimation Factors for Economic Assessment of Terrorist Attacks*, May 2005.
3. J.S. Simonoff, R. Zimmerman, C.E. Restrepo, N.J. Dooskin, R.V. Hartwell, J.I. Miller, W.E. Remington, L.B. Lave, and R.E. Schuler, *Electricity Case: Statistical Analysis of Electric Power Outages*, July 2005.
 - a. J.S. Simonoff, U.S. Event Analysis, 1990-2004
 - b. J.S. Simonoff, Statistical Analysis of Electric Power Outages in Canada, 1990-2003
 - c. J.S. Simonoff, Statistical Analyses Comparing Single State Outages to Multiple State Outages, U.S., 1990-2004
4. Å.J. Holmgren, *Electricity Case: Risk Analysis of Infrastructure Systems – Different Approaches for Risk Analysis of Electric Power Systems*, May 2005.
5. M. Greenberg, N. Mantell, M. Lahr, and F. Felder. *Electricity Case: Impact to New Jersey’s Economy of the Loss of Electric Power in New Jersey’s Urban Industrial Corridor*, August 2006.

Presentations

2009:

- R. Zimmerman “Transportation Protection and Recovery in an Age of Disasters,” Transportation Research Board 89th Annual Meeting, Washington, DC, January 12, 2010.
- R. Zimmerman, “Mobility in 2050,” Envisioning a Low-Carbon Clean Energy Economy in New York, New York, NY, New York Academy of Sciences, January 5, 2010.
- R. Zimmerman, C.E. Restrepo and J.S. Simonoff “Solving multiple risks is better than solving one: Risk-based co-benefit assessment for infrastructure investments,” Society for Risk Analysis annual meeting, Baltimore, MD, December 9, 2009
- J.S. Simonoff, C.E. Restrepo and R. Zimmerman “Cost consequence estimates for natural gas transmission and distribution incidents as a risk management tool,” Society for Risk Analysis annual meeting, Baltimore, MD, December 9, 2009
- R. Zimmerman, “Infrastructure Dependencies, Interdependencies, and Security: Measuring Anecdotes,” Infrastructure Security Workshop, Rutgers University, New Brunswick, NJ, October 14, 2009
- R. Zimmerman, “Evacuation and Transportation Planning,” Infrastructure Security Workshop, Rutgers University, New Brunswick, NJ, October 13, 2009
- R. Zimmerman, “The New Sustainability: Co-benefits of Secure and Green Infrastructures for Cities and Their Regions,” Association of Collegiate Schools of Planning, Washington, DC, October 2, 2009
- J.S. Simonoff, Restrepo, C., R. Zimmerman, Naphtali, Z, Willis, H., “Resource Allocation and Infrastructure Density Around Vulnerable Sites,” 2009 Joint Statistical Meetings, section on Statisticians in Defense and National Security, August 2-6, 2009
- R. Zimmerman, Restrepo, C., Simonoff, J., “The Age of Infrastructure in a Time of Security and Natural Hazards,” Aging Infrastructures Workshop, sponsored by the DHS S&T Directorate and Columbia University, New York, NY, July 21, 2009
- R. Zimmerman Restrepo, C., “Analyzing Cascading Effects within Infrastructure Sectors for Consequence Reduction,” 2009 IEEE International Conference on Technologies for Homeland Security, Waltham, MA, May 11, 2009
- R. Zimmerman, “Transportation and Climate Change.” Panel on Climate Change: Integrating Transportation, Energy, the Environment, and Health, Transportation & Infrastructure Issues for the Next Decade. Policy Research Institute, Princeton, NJ, March 6, 2009.
- C.E. Restrepo, R. Zimmerman, J.S. Simonoff, and Z.S. Naphtali, “Data Needs and Availability for Infrastructure Incident Analysis Vulnerability Assessment of Critical Infrastructure, With Case Studies on Power Transmission Networks and Dams,” Presentation and discussion paper, University of Wisconsin-Madison (UW-Madison), Workshop on Vulnerability Assessment of Critical Infrastructure, With Case Studies on Power Transmission Networks and Dams, January 13-14, 2009.

2008:

- R. Zimmerman, J.S. Simonoff, Z.S. Naphtali, C.E. Restrepo, and H. Willis, “Measures of Critical Infrastructure Density around Vulnerable Facilities,” Society for Risk Analysis, Boston, MA. December 9, 2008.

- R. Zimmerman, "Securing Infrastructure Services in the Digital Age," Panel on Hooked on Technology: The Benefits and Dangers of the Digital Age, The NYU Alumni Association, November 6, 2008.
- R. Zimmerman, presentation for "U.S. Department of Homeland Security," DHS Modeling & Simulation Workshop," Suffolk, VA , October 28-30, <http://cimic.rutgers.edu/WS-CFP/DHS-Workshop.pdf>
- R. Zimmerman. Invited presentation (and subsequent paper) on "Public Investment in American Cities: Infrastructure, Services and Delivery," Shape of the American City, a conference co-sponsored by the Penn Institute for Urban Research and the American Academy of Political Science and Social Science, October 24-25, 2008.
- C. Rosenzweig and R. Zimmerman, "Integrating Transportation, Population and Hazards Data for Risk Avoidance During Emergencies," NYC Dept. of Health and Mental Hygiene/Office of Emergency Management, New York, NY, July 15, 2008.
- R. Zimmerman, C.E. Restrepo, J.S. Simonoff, Z.S. Naphtali, A. M. Culpen, "Hazards, Infrastructure Incidents and Social Equity in Urban Areas," Association of Collegiate Schools of Planning (ACSP)/Association of European Schools of Planning (AESOP) World Planning Congress, Chicago, IL, July 8, 2008.
- R. Zimmerman, C.E. Restrepo and J.S. Simonoff, Paper presentation for "Security: Advancing a Framework for Enquiries (SAFE)," Istanbul, Turkey. Sponsored by the European Science Foundation and NATO. Workshop 4: Management of Security: Successes and Failures, May 21-23, 2008.
- C. E. Restrepo, Z. S. Naphtali and R. Zimmerman, "Using GIS to evaluate the distribution, concentration and level of risk posed by dams in the United States," the Association of American Geographers' (AAG) Annual Meeting, Boston, MA, April 15-19, 2008.
- R. Zimmerman, C. E. Restrepo, and J. S. Simonoff, Infrastructure Disruptions and Recovery Rates in Disasters, ASCE Metropolitan Section Infrastructure Group Technical Seminar "New York City Infrastructure Critical Needs," Brooklyn, NY: Polytechnic University, March 24, 2008.
- R. Zimmerman, C. E. Restrepo, and J. S. Simonoff, Regression modeling and prediction of causes and consequences of oil & gas pipeline accidents and electric power outages, Second Annual Homeland Defense and Security Education Summit, University of Maryland University College, March 19, 2008.
- R. Zimmerman, An Educational Initiative Combining Security and Global Climate Change (GCC) Needs for Critical Infrastructure Protection, Second Annual Homeland Defense and Security Education Summit, University of Maryland University College, March 18, 2008.
- A. Culpen, Graduate Research Assistant (with others), Student Poster and Presentation. Infrastructure Needs of Vulnerable Populations in Catastrophes, New York University, Wagner School, U.S. Department of Homeland Security, University Network Summit and Student Day, Washington, DC, March 18, 2008.
- C. E. Restrepo, R. Zimmerman, and J. S. Simonoff, "Risk Communication in Support of Energy, Transportation and Water Services," 2008 Risk Symposium, Santa Fe, NM, March 11, 2008.
- R. Zimmerman, "New Paradigms to Simultaneously Achieve Environmental Sustainability and Security for Infrastructure," Public Entity Risk Institute (PERI) Web Symposium, "Infrastructure Risk and Renewal: The Clash of Blue and Green, January 14-18, 2008. www.riskinstitute.org/PERI/SYMPOSIUM.
- R. Zimmerman and C.E. Restrepo, "Research Directions for Analytical Tools to Portray and Monitor Infrastructure Vulnerability for Resource Allocation," Panel on Securing Critical Infrastructures in New York State: Directions for Research and Application, Conference on

Protecting New York from Terrorism and Disaster: Taking Stock, Setting Directions, Looking Forward, Protect New York Society, Levin Institute of SUNY, New York, NY, January 11, 2008. <http://protectnewyork.org/images/PNY-DraftProgram-1-4-08.pdf>

- R. Zimmerman and J.S. Simonoff, "Transportation Density and Opportunities for Expediting Recovery to Promote Security," Panel on Transportation Security in New York, Conference on Protecting New York from Terrorism and Disaster: Taking Stock, Setting Directions, Looking Forward, Protect New York Society, Levin Institute of SUNY, New York, NY, January 10, 2008. <http://protectnewyork.org/images/PNY-DraftProgram-1-4-08.pdf>

2007:

- C.E. Restrepo, J.S. Simonoff and R. Zimmerman "Risk and Vulnerability Measures for Infrastructure Asset Protection: Bridges and Dams," Society for Risk Analysis Annual Meeting, San Antonio, TX, December 20, 2007.
- R. Zimmerman with C.E. Restrepo and J.S. Simonoff, "Infrastructure Impacts of Global Climate Change," Global Climate Change and Greenhouse Gases. Market Incentives, Risks, and Lessons. Interactive Seminar. Sponsored by the Society for Risk Analysis (SRA) NY Metro Chapter and Columbia Students for Environmental Action; co-Sponsored by The Louis Berger Group Inc., New York, NY, November 15, 2007.
- R. Zimmerman, "Status of Recovery in New York Since the World Trade Center Attacks," Invited presentation at the Disasters Roundtable Workshop, Recovering from Disaster, National Academies, Washington, DC, October 17, 2007.
- R. Zimmerman (with colleagues C.E. Restrepo, Z.S. Naphtali and J.S. Simonoff), "Impact of Infrastructure Trends & Issues on Public Transportation for a Sustainable Future," Invited presentation for the session on APTA's Visioning Initiative: Public Transportation's Role in a Sustainable, Physical & Natural Environment, American Public Transportation Association Annual Meeting, Charlotte, NC, October 9, 2007.
- R. Zimmerman, C.E. Restrepo, Z.S. Naphtali, J.S. Simonoff, "Analyzing Infrastructure Vulnerabilities to Multiple Hazards" Symposium on Emerging Developments in Multi-Hazard Engineering, Co-sponsored by the Architectural Engineering Institute of ASCE (AEI) and the Multidisciplinary Center for Earthquake Engineering Research (MCEER, U. of Buffalo) and sponsored by the Steel Institute of New York. McGraw Hill Conference Center, New York, NY, September 18, 2007.
- R. Zimmerman, C.E. Restrepo, B. Nagorsky, and A.M. Culpén "Vulnerability of the Elderly During Natural Hazard Events," University of Colorado (Boulder), Hazards and Disasters Researchers Meeting; Vulnerable Populations in Disaster: Preparedness, Response, and Recovery Session, Boulder, CO, July 12, 2007.
<http://www.colorado.edu/hazards/workshop/list%20of%20presenters.pdf>
- C.E. Restrepo and R. Zimmerman, "Spatial and Temporal Distribution of Heat Related Incidents in the United States, Consequence Measures, Vulnerable Populations and Risk Management, 1980-2005," University of Colorado (Boulder), Natural Hazards Center 32nd Annual Natural Hazards Research and Applications Workshop, Informational Research Abstract R07-30. Boulder, CO, July 9-11, 2007. <http://www.colorado.edu/hazards/workshop/R07.pdf>
- B. Nagorsky and A. Culpén, "Special Vulnerabilities of Elderly in Disasters from Infrastructure Failures," Poster presentation, U.S. DHS 2007 Homeland Security S&T Stakeholders Conference, Washington, DC, May 23, 2007.

- S. Clark and A. Culpen, "Security Resource Allocation Using Infrastructure Condition as Potential Terrorist Targets," Poster presentation, U.S. DHS 2007 Homeland Security S&T Stakeholders Conference, Washington, DC, May 23, 2007.
- A. Culpen, N. Haphuriwat, and J. Menoyo, "Resource Allocation Based on Valuations of Infrastructure Targets," Poster presentation, U.S. DHS 2007 Homeland Security S&T Stakeholders Conference, Washington, DC, May 23, 2007.
- R. Zimmerman, Z.S. Naphtali, and C.E. Restrepo, "Spatial concentration of critical infrastructure systems and resource allocation for national security grants," Association of American Geographers Annual Meeting, San Francisco, CA, April 19, 2007.
- C.E. Restrepo, J.S. Simonoff, R. Zimmerman, and Z.S. Naphtali, "Spatial Distribution of Electricity and Oil and Gas Pipeline Failures," First Annual International Federation for Information Processing (IFIP) Working Group (WG) 11.10 International Conference on Critical Infrastructure Protection, Dartmouth College, Hanover, NH, March 21, 2007.
- C.E. Restrepo, J.S. Simonoff, and R. Zimmerman, "Vulnerabilities in the Oil and Gas Industry," First Annual International Federation for Information Processing (IFIP) Working Group (WG) 11.10 International Conference on Critical Infrastructure Protection, Dartmouth College, Hanover, NH, March 20, 2007.
- R. Zimmerman, "University Research in Transportation Security Planning," Presentation for the panel, Adapting Transportation Planning to Homeland Security, Transportation Research Board Annual Conference, Washington, DC, January 22, 2007.

2006:

- Symposium for CREATE organized and chaired by R. Zimmerman with four paper presentations, "Decision Analysis for Risk Management of Catastrophic Events," Society for Risk Analysis (SRA) Annual Meeting, Baltimore, MD, December 4-6, 2006.
- L.B. Lave, A.Z. Rose, C.E. Restrepo, J.S. Simonoff, R. Zimmerman, and M.R. Greenberg, "Approaches to Integrated Risk and Economic Analysis for Electric Power Disruption," SRA Annual Meeting, Baltimore, MD, December 4-6, 2006.
- J.S. Simonoff, C.E. Restrepo, and R. Zimmerman, "Measures of Risks of Failure of Oil and Gas Facilities for Energy Risk Management," SRA Annual Meeting, Baltimore, MD, December 4-6, 2006.
- R. Zimmerman, "Connectivity and Consistency of Environmental Decision Tools for Community Planning," Association of Collegiate Schools of Planning (ACSP) 2006 Annual Conference, Fort Worth, TX, November 9-12, 2006.
- R. Zimmerman, Invited Panelist for Panel on "The New York City Region and the University," Terrorism and the University Conference, John Jay College, New York, NY, November 10-11, 2006.
- R. Zimmerman, C.E. Restrepo, J.S. Simonoff, and Z.S. Naphtali, "Modeling Spatial Concentration of Transportation Systems to Assess Vulnerability to Natural Hazard and Terrorist Threats," INFORMS, Pittsburgh, PA, November 5-8, 2006.
- C.E. Restrepo, Invited Presenter, "Infrastructure: How Firm is the Foundation," Symposium 300 Million Americans, National Press Club, Population Resource Center, Washington DC, October 5, 2006. <http://www.300millionusa.org>
- A. Culpen, B. Nagorsky, W.E. Remington, and R. Zimmerman, ICIS poster and handouts "Evacuation of the Elderly in Disasters," Rudin Center for Transportation Policy and Management (and ICIS participation) Good to Go: Transit Options for Older Adults, New York, NY, September 26, 2006.

- R. Zimmerman, "World Trade Center Evacuation and Communication and Transportation," World Trade Center Evacuation Study Scientific Meeting, Translating Research into Practice, Columbia University Mailman School of Public Health, New York, NY, September 15, 2006. [Focused on a statistical analysis of the role that infrastructure systems played in enabling survivors to reach interim and final destinations after the attacks.]
- R. Zimmerman and C.E. Restrepo, "Planning Tools to Protect Border Area Infrastructure," 2006 World Planning Schools Congress, Mexico City, Mexico, July 11-16, 2006.
- R. Zimmerman and C.E. Restrepo, "Information Technology (IT) and Critical Infrastructure Interdependencies for Emergency Response," Third International Conference on Information Systems for Crisis Response and Management (ISCRAM) 2006, New Jersey Institute of Technology, Newark, NJ, May 16, 2006.
- R. Zimmerman, "Sustainability and Security," American Planning Association 2006 National Planning Conference, Local Strategies to Achieve Sustainability, San Antonio, TX, April 23, 2006.
- R. Zimmerman, "Hurricane Katrina: Societal Impacts of Civil & Environmental Infrastructure in New Orleans," New York University-Wagner Graduate School of Public Service, New York, NY, April 18, 2006.
- C.E. Restrepo, J.S. Simonoff and R. Zimmerman, "Analyzing Vulnerabilities in the Oil and Gas Sector from Incident Data," Los Alamos National Laboratories Risk Symposium 2006 - Risk Analysis for Homeland Security and Defense: Theory and Application, Santa Fe, NM, March 21, 2006.
- R. Zimmerman, "NYC Electricity: Achieving Security and Sustainability," panel presentation for Energy System Research & Innovation: New York City Electricity-Past, Present, Future, Co-sponsored by the NY Academy of Sciences Environmental Sciences Section, Metropolitan Engineering Society's Council (MESOC), and the Association of Energy Engineers NY Chapter (NY-AEE), New York, NY, February 21, 2006.
- C.E. Restrepo, J.S. Simonoff, and R. Zimmerman, "Unraveling Geographic Interdependencies in Electric Power Infrastructure," Hawaii International Conference on System Sciences, Kauai, HI, January 4, 2006.

2005:

- R. Zimmerman, C.E. Restrepo, J.S. Simonoff and L.B. Lave, "Estimating Risks and Consequences of Catastrophic Energy and Electricity Outages," Society for Risk Analysis Annual Meeting, Orlando, FL, December 7, 2005.
- R. Zimmerman, "Global Climate Change Impacts on Coastal Infrastructure Services," U.S. Climate Change Science Program Workshop: Climate Science in Support of Decisionmaking, Washington, DC, November 14, 2005.
- Å.J. Holmgren "A European perspective on protecting critical infrastructure from catastrophe: Planning for the Protection of Critical Infrastructures Against Attacks: Policy and Risk Assessment," NYU-Wagner, New York, NY, September 28, 2005.
- R. Zimmerman, C.E. Restrepo, J.S. Simonoff and L.B. Lave, "Risk and Economic Costs of a Terrorist Attack on the Electric System," Second CREATE Economics Symposium: Economic Costs & Consequences of a Terrorist Attack, University of Southern California, Los Angeles, CA, August 19, 2005.
- R. Zimmerman, "Robust Transportation and Future Threats: from Terrorism to Climate Change," U.S. DOT, FHWA Advanced Research Forum, Boston, MA, July 13, 2005.

- R. Zimmerman, C.E. Restrepo, R.E. Schuler, L.B. Lave, J.S. Simonoff; N.J. Dooskin, J. Fraissinet, R.V. Hartwell, J.I. Miller and W.E. Remington “Estimating Consequences of Terrorism Attacks Against Critical Infrastructure: Electric Power Case,” Institute for Information Infrastructure Protection (I3P), Dartmouth College Consortium Meeting, NYU, New York, NY, June 16, 2005.
- R. Zimmerman, C.E. Restrepo, N.J. Dooskin, J. Fraissinet, R.V. Hartwell, J.I. Miller and W.E. Remington “Diagnostic Tools to Estimate Consequences of Terrorism Attacks Against Critical Infrastructure,” Proceedings, U.S. Department of Homeland Security conference, Working Together: Research and Development Partnerships in Homeland Security, Boston, MA, April 27, 2005.
- R. Zimmerman, “Security Planning: Protecting Infrastructure and the Public Realm,” American Planning Association, Metropolitan Chapter Annual Conference, New National Challenges – New York Solutions – A Survival Guide for Planners. New York, NY, April 22, 2005.
- R. Zimmerman, “Outside of the Box: Indicator-based Assessments for Terrorist Attacks” CREATE Research Symposium: Terrorism Risk Analysis, Los Angeles, CA, January 14-15, 2005.
http://www.usc.edu/dept/create/events/2005_02_03/Indicator_Based_Assessments_for_Terrorist_Attacks_Against_Critical_Infrastructure.pdf

2004:

- R. Zimmerman, L.B. Lave and R.E. Schuler, “Consequence Assessment Methods for Terrorist Acts Against Critical Infrastructure” for Risk Analysis in the Age of Terrorism and Homeland Security panel, Society for Risk Analysis Annual Meeting, Palm Springs, CA. Moderator: R. Hall; Discussant: D. von Winterfeldt; Papers: B. Zycher; R. Zimmerman; V. Bier and A.S. Nagaraj; H.H. Willis, A.R. Morral, J.J. Medby, and T.K. Kelly, December 5-8, 2004.
www.sra.org
- R. Zimmerman, “Protecting Critical Infrastructure from Terrorism: A Risk-Based Multi-Hazard Approach to Vulnerability Assessment,” CREATE conference: Reducing the Costs and Consequences of Terrorism, Los Angeles, CA, November 18, 2004.
<http://www.usc.edu/dept/create/news.php?id=11>
- R. Zimmerman, Critical infrastructure protection presentation at the U.S. DHS Critical Infrastructure Protection Modeling & Simulation Workshop, Arlington, VA, November, 8-9, 2004.
- R. Zimmerman, “Planning for Urban Security with Green Technologies,” ACSP 2004 Annual Conference, Portland, OR, October 21-23, 2004. www.acsp.org
- R. Zimmerman, Presentation on the role of the first homeland security center of excellence, the Center for Risk and Economic Analysis of Terrorism Events, and its critical infrastructure mission, National Academy of Sciences Committee on Disaster Research in the Social Sciences workshop, Washington, DC, August 23-24, 2004.
<http://dels.nas.edu/dr/DRSSWorkshopAgenda.html>
- R. Zimmerman, “The Epidemiology of Extreme Events: Health and Safety Impacts of Cascading Infrastructure Failures,” International Society of Environmental Epidemiology (ISEE) at New York University, New York, NY, August 2-4, 2004.
- R. Zimmerman, “Infrastructure and Health,” Disasters Roundtable workshop, Public Health Risks of Disasters: Building Capacity to Respond, National Academy of Sciences, Washington, DC, June 22, 2004. <http://dels.nas.edu/dr/f11.html>

- R. Zimmerman, Discussant, workshop entitled Optimizing Resource Allocation for Transportation Infrastructure Protection, University of Wisconsin (Madison) Center for Human Performance and Risk Analysis, Madison, WI, May 20, 2004.
- R. Zimmerman, Post-9/11 projects related to Lower Manhattan. Association of the Bar of the City of New York – committee on Lower Manhattan issues, New York, NY, May 12, 2004.
- R. Zimmerman, “Promoting Flexibility in Transportation to Reduce Vulnerability in the Aftermath of Terrorism,” at Balancing Security and Mobility: A Symposium on Innovative Approaches to Transportation Security, U.S. Department of Transportation’s Volpe Center, Cambridge, MA, May 6, 2004.
<http://www.volpe.dot.gov/ourwork/dimensions/workshops.html>
- R. Zimmerman, “Development Patterns, Infrastructure Interdependencies, and the Security of Rail and Road-based Transportation Systems,” IEEE Conference on Technologies for Homeland Security, Cambridge, MA, April 22, 2004.
<http://www.ieeeboston.org/homeland.htm>
- R. Zimmerman, Department of Homeland Security (DHS) Industry Forum, panel on University Programs. Washington, DC, March 9, 2004. <http://www.ctc.org/DHSIF/DHS.html>

Media Coverage of ICIS Research Associated with CREATE (2005-2007)

NOTE: An ICIS Web page for quick links to recent media coverage is located at:

<http://www.icisnyu.org/ICISintheNews.php>

NYC Subway Flooding, August 8, 2007

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