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PUBLICATIONS & PRESENTATIONS

Summary of Publications:

- 2 book chapters published in edited volumes
- 9 Peer Reviewed Journal Papers
- 14 Conference Proceedings, Abstracts, and Presentations as author (2010-2012)

Book Chapters

- Copeland, J.H., T.N. Chase, J. Baron, T.G.F. Kittel, R.A. Pielke, 1996: Impacts of vegetation change on regional climate and downscaling of GCM output to the regional scale. Regional impacts of global climate change: assessing change and response at the scales that matter, S.J. Ghan et al., Eds., Battelle Press, 199-212.
- Pielke, R.A., J. Baron, T.N. Chase, J.H. Copeland, T.G.F. Kittel, T.J. Lee, R.L. Walko, X. Zeng, 1996: Use of mesoscale models for simulation of seasonal weather and climate change for the Rocky Mountain states. GIS and Environmental Modeling: Progress and Research Issues, M.F. Goodchild et al., Eds., GIS World Books, 99-103.

Refereed Journal and Magazine Publications

- Copeland, J.H., S.E. Haupt, C. Amman, W. Cheng, P. Sullivan, Y. Zhang, 2015: Quantifying the Wind and Solar Power Resource and its Inter-Annual Variability over the United States under Current and Projected Future Climate. *Journal of Applied Meteorology and Climatology*, (submitted).
- Fast, J.D., R.K. Newsom, K.J. Allwine, Q. Xu, P. Zhang, J.H. Copeland, J. Sun, 2008: An Evaluation of Two NEXRAD Wind Retrieval Methodologies and Their Use in Atmospheric Dispersion Models. *Journal of Applied Meteorology and Climatology*, 47(9), 2351-2371.
- Warner, T., P. Benda, S. Swerdlin, J. Knievel, E. Argenta, B. Aronian, B. Balsley, J. Bowers, R. Carter, P. Clark, K. Clawson, J. Copeland, A. Crook, R. Frehlich, M. Jensen, Y. Liu, S. Mayor, Y. Meillier, B. Morley, R. Sharman, S. Spuler, D. Storwold, J. Sun, J. Weil, M. Xu, A. Yates, Y. Zhang, 2007: The Pentagon Shield Field Program: Toward Critical Infrastructure Protection. *Bulletin of the American Meteorological Society*, 88(2), 167-176.
- Revell, M.J., J.H. Copeland, H.R. Larsen, D.S. Wratt, 2002: Barrier jets around the Southern Alps of New Zealand and their potential to enhance alpine rainfall. *Atmospheric Research*, 61(4), 277-298.
- Ibbitt, R.P., R.D. Henderson, J.H. Copeland, D.S. Wratt, 2000: Simulating mountain runoff with meso-scale weather model rainfall estimates: a New Zealand experience. *Journal of Hydrology*, 239(1-4), 19-32.
- Reid, S., M. Bell, J.H. Copeland, 1998: Modeling the spatial variation of wind. *Weather and Climate*, 18(1), 21-36.
- Pielke, R.A., T.J. Lee, J.H. Copeland, J.L. Eastman, C.L. Ziegler, C.A. Finley, 1997: Use of USGS-provided data to improve weather and climate simulations. *Ecological Applications*, 7(1), 3-21.
- Copeland, J.H., 1996: Validation and sensitivity of a convective precipitation model for mountainous areas. *Water, Air, & Soil Pollution*, 90(1-2), 313-320.
- Copeland, J.H., R.A. Pielke, T.G.F. Kittel, 1996: Potential climatic impacts of vegetation change: A regional modeling study. *Journal of Geophysical Research*, 101(D3), 7409.
- Pielke, R.A., W.R. Cotton, R.L. Walko, C.J. Tremback, W.A. Lyons, L.D. Grasso, M.E. Nicholls, M.D. Moran, D.A. Wesley, T.J. Lee, J.H. Copeland, 1992: A comprehensive meteorological

modeling system – RAMS. *Meteorology and Atmospheric Physics*, 49(1-4), 69-91.

Recent Conference/Workshop Presentations (2010-2012):

- Copeland, J.H., C. Amman, W. Cheng, Y. Zhang, S.E. Haupt, P. Sullivan, 2012: Self-Organizing Maps as a Method to Identify Patterns and Pattern Change in Regional Climate Models: with Application to Renewable Energy Resource Assessment, Conference on Intelligent Data Understanding, Boulder, CO, October 24-26, 2012.
- Copeland, J.H., F. Vandenberghe, R. Babarsky, 2012: Update on NCAR support of NGIC atmospheric transport and dispersion consequence assessment activities, Chemical and Biological Warfare Delivery Methods and Consequence Assessment Modeling Conference, Charlottesville, VA, May 7-11, 2012. (Invited)
- Copeland, J.H., F. Vandenberghe, R. Babarsky, 2012: Optimizing Weather Pattern Identification Via Unsupervised Neural Network Techniques, 10th Conference on Artificial Intelligence and its Applications to the Environmental Sciences, New Orleans, LA, January 23-26, 2012.
- Copeland, J.H., F. Vandenberghe, R. Babarsky, 2011: Self-Organizing Map Based Method for Identifying a Typical Day for Atmospheric Dispersion and Reducing Uncertainty in Planning-based JEM Simulations, Annual meeting of Technical Panel 9 (TP-9) of The Technical Cooperation Program (TTCP) Chemical, Biological and Radiological Defense (CBD) Group, Quebec City, PQ, Canada, September 12-15, 2011. (Invited)
- Copeland, J.H., F. Vandenberghe, J. Knievel, R. Babarsky, 2011: Development of Typical Day Scenarios for Transport and Dispersion Consequence Assessment, 15th George Mason University Transport and Dispersion Modelling Workshop, Fairfax, VA, July 12-14, 2011.
- Copeland, J.H., F. Vandenberghe, J. Knievel, R. Babarsky, 2011: Unsupervised Machine Learning as a Method to Identify Patterns in Regional Climate Downscaling Re-analyses, 9th Conference on Artificial Intelligence and its Applications to the Environmental Sciences, Seattle, WA, January 24-28, 2011. (Invited)
- Copeland, J.H., 2010: Use of Unsupervised Machine Learning to Develop Smart Scenarios for CBRN Consequence Assessment Studies, Chemical and Biological Defense Science and Technology Conference, Orlando, FL, November 15-19, 2010.
- Copeland, J.H., 2010: Use of Unsupervised Machine Learning to Develop Smart Scenarios for CBRN Consequence Assessment Studies, Chemical and Biological Warfare Delivery Methods and Consequence Assessment Modeling Conference, Chantilly, VA, October 18-22, 2010. (Invited)
- Copeland, J.H., 2010: Shield – A System for Urban Emergency Response Modeling, 13th Conference on Harmonisation within Atmospheric Dispersion for Regulatory Purposes, Paris, France, June 1-4, 2010.
- Copeland, J.H., Smart Climatologies for Preparation and Planning of Hazardous Release Scenarios, 13th Conference on Harmonisation within Atmospheric Dispersion for Regulatory Purposes, Paris, France, June 1-4, 2010.
- Copeland, J.H., 2010: Urban Shield – An operational building aware emergency response system, 5th International Symposium on Computational Wind Engineering, Chapel Hill, NC, May 23-27, 2010. (Invited)
- Copeland, J.H., 2010: Operational generation of urban wind fields to support transport and dispersion modeling, 5th International Symposium on Computational Wind Engineering, Chapel Hill, NC, May 23-27, 2010.
- Copeland, J.H., 2010: Operational meteorological-measurement, data-assimilation, and fusion systems for building and city protection, DHS S&T Workshop, Santa Fe, NM, March 2-4, 2010. (Invited)
- Copeland, J.H., and P. Bieringer, 2010: Virtual Threat Response Emulation and Analysis Testbed, DHS S&T Workshop, Santa Fe, NM, March 2-4, 2010. (Invited)