

ICEWS Publications

DARPA / Dr. Sean O'Brien "Crisis Early Warning and Decision Support: Contemporary Approaches and Thoughts on Future Research." Sean O'Brien. *International Studies Review*. 12:1 (March 2010), pp. 87-104.

- Presents overview of the DARPA ICEWS work and results in Phases 1-2.
- <http://onlinelibrary.wiley.com/doi/10.1111/j.1468-2486.2009.00914.x/abstract>
- File: OBrien2010 ICEWS ISR paper.pdf

Duke Univ. and Univ. of Washington / Prof. Michael Ward

"Anti-Government Networks in Civil Conflicts: How Network Structures Affect Conflictual Behavior." Nils W. Metternich, Cassy Dorff, Max Gallop, Simon Weschle, and Michael D. Ward. Workshop on "Theory and Methods in the Study of Civil War", Centre for the Study of Civil War, PRIO, Oslo 9-10 June 2011

- *Examines how social networks among anti-government actors affect the decision of ruling authorities to challenge its opposition using conflict data from Thailand.*
- <http://www.duke.edu/web/methods/pdfs/thailandv2.pdf>
- File: Ward-etal2011a Anti-Govt Nets Thailand v2.pdf

"Dynamic Conflict Forecasts: Improving Conflict Predictions Using Ensemble Bayesian Model Averaging." Montgomery, Jacob., Ward, Michael. and Hollenbach, Florian. Annual meeting of the International Studies Association Annual Conference. March 16, 2011.

- *Describes recent work on model aggregation.*
- Original version:
http://citation.allacademic.com/meta/p_mla_apa_research_citation/4/9/9/6/2/p499628_in dex.html
- Updated version (June 2011):
- <http://www.duke.edu/web/methods/pdfs/EBMASingleSpaced.pdf>
- File: Ward-etal2011 Ensemble BMA.pdf

Ward, M.D., Metternich, N.W., Carrington, C., Dorff C., Gallop, M., Hollenbach, F., Schultz, A. and Weschle, S. **Geographical Models of Crises: Evidence from ICEWS**. 2nd International Conference on Cross-Cultural Decision Making: Focus 2012, 2012.

- overview of Duke ICEWS statistical modeling work

"Predicting Conflict in Space and Time." Nils B. Weidman and Michael D. Ward. *Journal of Conflict Resolution* 2010, 54(6) 883-901.

- *Spatially and temporally autoregressive discrete regression model for conflict prediction with examples from Bosnia*
- <http://jcr.sagepub.com/content/54/6/883.short?rss=1&ssource=mfr>

Innovative Decisions, Inc. (IDI) "Aggregating Forecasts Using a Learned Bayesian Network." Suzanne Mahoney, Ethan Comstock, Bradley deBlois, and Steven Darcy. Proceedings of the Twenty-Fourth Florida Artificial Intelligence Research Society Conference, May 18–20, 2011.

- *Describes Learned Bayesian Network-based aggregation model.*
- <http://aaai.org/ocs/index.php/FLAIRS/FLAIRS11/paper/viewFile/2585/3121>
- File: Mahoney-et al2011 FLAIRS Aggregation.pdf

Lockheed Martin Advanced Technology Laboratories (LM ATL)

- Kettler, B. and Hoffman, H. [Lessons Learned in Instability Modeling, Forecasting, and Mitigation from the DARPA Integrated Crisis Early Warning System \(ICEWS\) Program.](#) 2nd International Conference on Cross-Cultural Decision Making: Focus 2012.
 - ICEWS overview and lessons learned (with an emphasis on iCAST)
- Shilliday, A., and Lautenschlager, J. [Data for a Global ICEWS and Ongoing Research.](#) 2nd International Conference on Cross-Cultural Decision Making: Focus 2012.
 - ICEWS data management and quality improvement (event data) work
- Starz, J., Hoffman, M., Roberts, J., Losco, J., Spivey, K., and Lautenschlager, J. 2012. [Supporting situation understanding \(past, present, and implications on the future\) in the STRATCOM ISPAN program of record.](#) 2nd International Conference on Cross-Cultural Decision Making: Focus 2012, 2012.
 - ICEWS transition (iTRACE) to ISPAN work
- Van Brackle, D. [Improvements in the Jabari event coder.](#) 2nd International Conference on Cross-Cultural Decision Making: Focus 2012, 2012.
 - JabariNLP coder work (ICEWS) and improvements (LM ATL IRAD)

- Wedgwood, J., Ruvinsky, A., and Siedlecki, T. [What lies beneath: Forecast transparency to foster understanding and trust in forecast models.](#) 2nd International Conference on Cross-Cultural Decision Making: Focus 2012, 2012.
 - Model transparency framework (ICEWS) and theory (LM ATL IRAD)

Lustick Consulting / Dr. Ian Lustick

Alcorn, B., Garces, M., and Lustick, I.S. Granular ABM Simulations for Operational Use: Forecasting and What-if Experiments with Models of Kandahar and Kunduz, 2nd International Conference on Cross-Cultural Decision Making: Focus 2012, 2012.

- ICEWS Afghan Study agent-based modeling work.

"From Theory to Simulation: The Dynamic Political Hierarchy in Country Virtualization Models." Ian Lustick, Brandon Alcorn, Miguel Garces, and Alicia Ruvinsky. American Political Science Association Annual Meeting, Sept. 2010.

- Focuses on "Dynamic Political Hierarchy" for agent-based modeling that integrates theories of cross-cutting cleavages, nested institutions, and dynamic loyalties using forecasts for significant political events. Uses data from Thailand investigations.
- http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1642003
- File: Lustick-etal2010 APSA DPH.pdf

"VirThai: A PS-I Implemented Agent-Based Model of Thailand as a Predictive and Analytic Tool." Brandon Alcorn, Miguel Garces, and Allen Hicken. International Studies Association, March 16-19, 2011.

- Agent-based model of Thailand.
- <http://lustickconsulting.com/data/VirThai%20as%20a%20Predictive%20and%20Analytic%20Tool%20-%20ISA%202011-3-16%20-%20Final.pdf>
- File: Alcorn-etal2011 ISA VirThai

Pennsylvania State Univ. & Univ. of Kansas / Prof. Phil Schrodt

"Automated Production of High-Volume, Real-Time Political Event Data." Philip A. Schrodt. American Political Science Association 2010 Annual Meeting Paper, 2010.

- Original version:
- http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1643761
- File: Schrodt2010 APSA Event Data Paper.pdf
- Updated version ("New Methodologies and Their Applications in Comparative Politics and International Relations" workshop at Princeton Univ., Feb. 2011)
- <http://www.princeton.edu/~pcglobal/conferences/methods/papers/schrodt.pdf>
- File: Schrodt2011 Event Data Paper.pdf

"The Effects of Domestic Conflict on Interstate Conflict: An Event Data Analysis of Monthly Level Onset and Intensity. James E. Yonamine. Unpublished M.A. Thesis, 2011

- File: Yonamine2011.pdf
- Forecasting Civil Conflict with Zero Inflated Negative Binomial Count Models. Benjamin E. Bagozzi. unpublished research paper [2011]
- File: Bagozzi2011.pdf

"Predicting intra-state conflict onset: An event data approach using Euclidean and Levenshtein distance measures." Vito D'Orazio, James E. Yonamine, and Philip A. Schrodt. Presented at the Midwest Political Science Association meeting, Chicago, April 2011.

- Sequence modeling techniques experiments
- File: Schrodt-etal2011 MPSA.pdf

"War Games and Korea." Vito D'Orazio. Paper presented at the International Studies Association, Montreal (March 2011); revised version to be presented American Political Science Association, Seattle, September, 2011

- File: DOrazio2011 APSA.pdf

Strategic Analysis Enterprises (SAE) / Dr. Steve Shellman

"Countering the Adversary: Effective Policies or a DIME a Dozen?." Stephen M. Shellman, Brian Levey and Hans Leonard. American Political Science Association Meetings. Also presented at the HSCB FOCUS 2011 Conference in Chantilly, VA February 8-10.

- *Describes ICEWS Phase 2 experiments on matched case counterfactual analysis of DIME actions.*
- <http://www.strategicanalysisenterprises.com/papers/countering.adversary.hscb.apsa.pdf>
- File: Shellman-etal2010 APSA DIME.pdf

Bentley, P., Shellman, S. and Levey, B. Improving ICEWS models: Forecasting SOUTHCOM events of interest using ensemble methods. 2nd International Conference on Cross-Cultural Decision Making: Focus 2012, 2012.

- ICEWS ensemble statistical models (grouped polity, mixed effect, etc.)