

# MATTHEW TURNER

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## Education

2012 / MS Physics / Rice University

2008 / BS Mathematics, BS Physics / Syracuse University

## Research & Work Experience

*Graduate Student Researcher / University of California, Merced / August 2016 – Present*

- Working to quantify dynamics of linguistic metaphor use on TV news
- Agent-based modeling of opinion dynamics under the influence of different kinds of discourse

*Research Software Developer II / University of Idaho / October 2014 – July 2016*

- Designed, prototyped, and built inter-model data pipelines and web interfaces for hydrological model coupling and interoperability

*Data Engineer / Economic Modeling Specialists, Int'l / September 2012 – October 2014*

- Developed novel demographic forecasting methods and software
- Translated large portions of existing codebase from PHP to D

*Graduate Student Researcher / Rice University / August 2008 – May 2012*

- Performed computational experiments of the performance of randomized circulant sensing matrices for compressive sensing
- Built and operated microscopes for optical, fluorescent, and Raman microscopy

## Publications

Turner, M. A., & Smaldino, P. E. (2018). Paths to Polarization: How Extreme Views, Miscommunication, and Random Chance Drive Opinion Dynamics. *Complexity* (In press).

Turner, M. A., Maglio, P. P., & Matlock, T. (2018, August 28). Metaphorical Violence in Political Discourse. <https://doi.org/10.31235/osf.io/t8yg9>

Volk, J., & **Turner, M. A.** (2018) PRMS-Python: A Python framework for programmatic PRMS modeling and access to its data structures. (Under review).

Gregory, A., Chen, C., Wu, R., Miller, S., Ahmad, S., Benedict, K., Cadol, D., Erickson, J., Fenstermaker, L., Godsey, S., Harris, F., Hudspeth, W., McNamara, J., Savickas, J., Sheneman, L., Stone, M., **Turner, M. A.** (2018) WC-WAVE: A Virtual Watershed Platform

for Enhancing Accessibility, Applicability, and Visibility of Environmental Models. (Under review).

Xu, L., Davenport, M. A., **Turner, M. A.**, Sun, T., Kelly, K. (2011) Compressive Echelle Spectroscopy. *Proceedings of the SPIE – The International Society for Optical Engineering*.

Kanbur, S. M., Marconi, M., Ngeow, C., Musella, I., **Turner, M. A.**, et al. (2011) Period–colour and amplitude–colour relations in classical Cepheid variables – VI. New challenges for pulsation models. *Monthly Notices of the Royal Astronomical Society*, 408 (2), 695-700.

## Conference Presentations

Turner, M. A., Maglio, P. P., Matlock, T. (2017, July) *A corpus analysis of the dynamics of violence metaphors in cable news programming on US politics*. Talk presented at the 14<sup>th</sup> International Cognitive Linguistics Conference in Tartu, Estonia.

Turner, M. A., Bernacchi, L., Maglio, P. P., Matlock, T. (2017, June) *Breaking news: the EPA is strangling the economy! An analysis of metaphorical violence and US environmental regulators*. Talk presented at the 2017 Conference on Communication and the Environment.

Turner, M. A., Miller, S. J., Gregory, A. E., Cadol, D. D., Stone, M. C., Sheneman, L. (2016, December). *Coupled RipCAS-DFLOW (CoRD) Software and Data Management System for Reproducible Floodplain Vegetation Succession Modeling*. Poster presented at the American Geophysical Society meeting in San Francisco, CA.

Turner, M. A., Koskela, R., Vardigan, M., Dubin, D., Sheneman, L. (2015, September). *Linked Interdisciplinary Data Discovery*. Poster presented at the 6<sup>th</sup> RDA Plenary in Paris, France.

## Patent

Kelly, K. F., Baraniuk, R. G., Woods, G., Sun, T., **Turner, M.** U.S. Patent No. 9,124,755. (2015). Washington, DC: U.S. Patent and Trademark Office.

## Awards and Acknowledgements

- Research Data Alliance Young Researcher Fellow / May 2015
- NSF-IGERT Fellow / August 2010 – May 2012

## Skills

**Programming languages:** Python, R, bash/shell scripting, HTML/CSS/JavaScript, Java, Clojure, D, MATLAB, Mathematica, C/C++

**Other technical skills:** Linux, OS X, and Windows. Nginx and Apache web servers. LaTeX. Inkscape. MongoDB and SQL.

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