Daniel J. Short Gianotti

Department of Earth & Environment Boston University 685 Commonwealth Avenue Boston, MA 02215 U.S.A.

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URL: http://people.bu.edu/gianotti/

Current position

2016-Present Postdoctoral Associate, Massachusetts Institute of Technology

Areas of specialization

 $Hydroclimatology \cdot Ecohydrology \cdot Preciptation \ Predictability \\ Stochastic \ Modeling \cdot Statistical \ Representations \ of \ Variability \\$

Education

PHD in Geography and Environment, Boston University

Defense Date: March 31, 2016

1999-2003 BS in Mathematics, Harvey Mudd College

Publications & talks

JOURNAL ARTICLES

2015e

2015C

2015b

2015a

Short Gianotti, DJ, BT Anderson, & GD Salvucci (2015), "Precipitation climate signals in global climate models and observations," (in preparation).

Short Gianotti, DJ, BT Anderson, & GD Salvucci (2015), "A spatially-scalable precipitation weather generator model for climate nulls," (*in preparation*).

Anderson, BT, **DJ Short Gianotti**, J Furtado, & E Di Lorenzo (2015), "A decadal precession of atmospheric pressures over the North Pacific," (in submission).

Anderson, BT, **DJ Short Gianotti**, & GD Salvucci (2015), "Detectability of historical trends in station-based precipitation characteristics over the continental United States," Journal of Geophysical Research (*in press*).

Gill, AL, AS Gallinat, R Sanders-DeMott, AJ Rigden, **DJ Short Gianotti**, JA Mantooth, & PH Templer (2015), "Changes in Autumn Senescence in Northern Hemisphere Deciduous Trees: a Meta-Analysis of Autumn Phenology Studies," Annals of Botany, (Special Issue on Plants and Climate Change) 116, 875–888.

Anderson, BT, **D** Gianotti, & G Salvucci (2015), "Characterizing the potential predictability of seasonal, station-based heavy precipitation accumulations and extreme dry-spell durations," Journal of Hydrometeorology 16 (2) 843-856.

- Short Gianotti, DJ, BT Anderson, & GD Salvucci (2014), "The Potential Predictability of Precipitation Occurrence, Intensity, and Seasonal Totals over the Continental United States," Journal of Climate 27 (18), 6904–6918.
- Pal, I, BT Anderson, GD Salvucci, & **DJ Gianotti** (2013), "Shifting seasonality and increasing frequency of precipitation in wet and dry seasons across the US," Geophysical Research Letters 40 (15), 4030–4035.
- Gianotti, D, BT Anderson, & GD Salvucci (2013), "What Do Rain Gauges Tell Us about the Limits of Precipitation Predictability?" Journal of Climate 26 (15), 5682–5688.

CONFERENCE PRESENTATIONS

- Short Gianotti, DJ*, GD Salvucci, & BT Anderson (2015) "California Drought, Weather Variability, and Climate Variability," AGU Chapman Conference on California Drought: Causes, Impacts, and Policy, Irvine CA.
- Short Gianotti, DJ*, BT Anderson, & GD Salvucci (2014) "Characterizing weather and climate variability for precipitation: A data-based stochastic modeling framework," American Geophysical Union Fall Meeting, San Francisco CA.
- Short Gianotti, DJ*, BT Anderson, & GD Salvucci (2014) "Stochastic analysis of California's recent precipitation drought in the context of the last one hundred years," American Geophysical Union Fall Meeting, San Francisco CA.
- Dietze, M*, HE Emery, D Gergel, **D Gianotti**, JA Mantooth, AJ Rigden (2014), "Integrating satellite and tower phenology: a case-study in real-time ecological forecasting" American Geophysical Union Fall Meeting, San Francisco CA.
- Dietze, M*, HE Emery, D Gergel, **D Gianotti**, JA Mantooth, AJ Rigden (2014), "Predicting phenology: A case-study in real-time ecological forecasting," Ecological Society of America Annual Meeting, Sacramento CA.
- Gianotti, DJ*, BT Anderson, & GD Salvucci (2013), "Potential Predictability of Precipitation: Occurrence or Intensity?" 38th Climate Diagnostic and Prediction Workshop, College Park MD.
- Gianotti, DJ*, BT Anderson, & GD Salvucci (2012), "Establishing Potential Predictability of U.S. Precipitation Using Rain Gauge Data," 37th Climate Diagnostic and Prediction Workshop, Fort Collins CO.
- Pal, I*, BT Anderson, G Salvucci, & **D Gianotti** (2012), "Magnitude and significance of observed trends in precipitation frequency over the U.S.," 37th Climate Diagnostic and Prediction Workshop, Fort Collins CO.
- Anderson, BT*, **D** Gianotti, & GD Salvucci (2012), "Historical expansion of the summertime monsoon over the southwestern United States: What can regional models tell us about its causes?" Regional Spectral Modeling Workshop, Scripps Institution of Oceanography, San Diego CA.
- Pal, I*, BT Anderson, G Salvucci, & **D Gianotti** (2012), "Magnitude and significance of observed trends in precipitation frequency over the US," American Geophysical Union Fall Meeting, San Francisco CA.
- Gianotti, D*, BT Anderson, & G Salvucci (2011), "Stochastic and deterministic aspects of observed seasonal-mean precipitation variations and extreme event occurrences over the United States," American Geophysical Union Fall Meeting, San Francisco CA.
- Anderson, BT*, **D** Gianotti, & GD Salvucci (2011), "Detection of historical summertime monsoon precipitation variations and trends over the southwestern United States," WCRP Open Science Conference, Denver CO.
- Anderson, BT*, D Gianotti, & GD Salvucci (2011), "Detection of historical precipitation variations and trends over the continental United States," Department of Energy Principal Investigators Meeting, Washington DC.
- Schubert, DH*, **DJ Gianotti**, & K Sauers (2007), "Upgrades to a wastewater lagoon treatment system in a rural sub-Arctic community in Alaska," International Symposium on Cold Region Devel-

opment, Tampere Finland.

2005

2007

2007

2005

2003

2002

2014

2012

Schubert, DH*, **DJ Gianotti**, & G Jones (2007), "Application of a Thermal-hydraulic Model to Analyze and Design a Circulating Water System in Alaska," International Symposium on Cold Region Development, Tampere Finland.

Gianotti, DJ*, C Woolard, ♂ D White (2005), "Wastewater treatment lagoon design in rural Alaska," 45th Alaska Water and Wastewater Management Association Annual Statewide Conference, Juneau AK.

Non-refereed research documents

Schubert, DH, **DJ Gianotti**, & K Sauers (2007), "Upgrades to a wastewater lagoon treatment system in a rural sub-Arctic community in Alaska," Proceedings of the 8th International Symposium on Cold Region Development.

Schubert, DH, **DJ Gianotti**, & G Jones (2007), "Application of a Thermal-hydraulic Model to Analyze and Design a Circulating Water System in Alaska," Proceedings of the 8th International Symposium on Cold Region Development.

Woolard, C, **D** Gianotti, K Hardie, D White, & A Pinto (2005), "Waste Stabilization Pond Design and Performance Study," Prepared for the Alaska Department of Environmental Conservation.

Gianotti, DJ (2003), "Fluid drop coalescence in a Hele-Shaw cell," Undergraduate Mathematics Thesis, Advised by A Nadim, *Harvey Mudd College*.

Lampe, K, K Hultman, K Hedstrom, **D Gianotti**, E Deyo, & R Seat (2002), "Internal metrology for the Space Interferometry Mission," Undergraduate Physics Clinic Report, Advised by R Haskell, D MacDonald, & B Nemati, *Harvey Mudd College & NASA-IPL*.

Non-conference presentations

Gianotti, DJ, (2015) "Weather models for climate variability," Dept. of Earth & Env. Graduate Student Presentations, Boston University.

Gianotti, DJ, (2014) "Real weather, fake weather, and the California Drought," Dept. of Earth & Env. Graduate Student Presentations, Boston University.

Gianotti, DJ, (2012) "How predictable is rain?" Dept. of Geography & Env. Graduate Student Presentations, Boston University.

Gianotti, D, BT Anderson, & G Salvucci (2012), "Stochastic and deterministic aspects of observed seasonal-mean precipitation variations and extreme event occurrences over the United States," Science and Engineering Research Symposium, Boston University.

Published software packages

Short Gianotti, DJ (2016) "Occurrence Markov Chain daily precipitation model," http://github.com/dgianotti/OMC-precip, DOI:10.5281/zenodo.45435.

Appointments held

2011-2015 Research Assistant, Boston University
2011 Math Teacher, Boston Public Schools
2004-2010 Private Tutor, Anchorage & Los Angeles
2007-2008 Lab Technician, California Institute of Technology

2005-2006 Environmental Engineering Associate, GV Jones & Associates

^{*} denotes presenting author

2004-2005 Research Assistant, University of Alaska, Anchorage 2003-2005 Substitute Teacher, Anchorage School District

Staff, National Youth Science Camp
 Writing Consultant, Harvey Mudd College

Research Assistant, Lawrence Berkeley National Lab

Professional development

2015 ComSciCon 2015 Communicating Science Workshop, Harvard University.

Professional service

JOURNAL REVIEWS

Hydrology and Earth System Sciences Journal of Hydrometeorology International Journal of Climatology

Memberships

American Geophysical Union Boston Water Group