Daniel J. Short Gianotti

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

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

Current position

PhD Student, Boston University

Areas of specialization

Hydroclimatology · Ecohydrology · Precipitation Predictability
Stochastic Modeling · Statistical Representations of Variability

Education

2011-Present   PhD Candidate in Geography and Environment, Boston University

1999-2003   BS in Mathematics, Harvey Mudd College

Publications & talks

Journal articles

2016d   **Short Gianotti, DJ**, BT Anderson, & GD Salvucci (2015), "Weather noise correctly dominates climate signals in global climate model precipitation," (*in preparation*).

2016c   **Short Gianotti, DJ**, BT Anderson, & GD Salvucci (2015), "A kernel-auto-regressive weather generator for improved subseasonal-to-seasonal precipitation statistics," (*in preparation*).

2016b   Anderson, BT, **DJ Short Gianotti**, GD Salvucci, & J Furtado (2016), "Dominant timescales of potentially predictable precipitation variations across the continental United States," Journal of Climate (*in early release*).

2016a   Anderson, BT, **DJ Short Gianotti**, J Furtado, & E Di Lorenzo (2016), "A decadal precession of atmospheric pressures over the North Pacific," Geophysical Research Letters 43 (8) 3921–3927.

2015c   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 120 (10) 4842–4859.

2015b   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.

2015a   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.

2014   **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.

2013b   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.

2013a   **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

2015   **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.

2014   **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.

2014   **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.

2014   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.

2014   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.

2013   **Gianotti, DJ***, BT Anderson, & GD Salvucci (2013), "Potential Predictability of Precipitation: Occurrence or Intensity?" 38th Climate Diagnostic and Prediction Workshop, College Park MD.

2012   **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.

2012   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.

2012   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.

2012   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.

2011   **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.

2011   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.

2011   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.

2007   Schubert, DH*, **DJ Gianotti**, & K Sauers (2007), "Upgrades to a wastewater lagoon treatment sys-

tem in a rural sub-Arctic community in Alaska," International Symposium on Cold Region Development, Tampere Finland.

2007 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.

2005 **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.

* denotes presenting author

Non-refereed research documents

2007 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.

2007 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.

2005 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.

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

2002 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-JPL.*

Non-conference presentations

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

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

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

2012 **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

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

Appointments held

2016-Present Research Programmer, Massachusetts Institute of Technology
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
2004-2005	Research Assistant, University of Alaska, Anchorage
2003-2005	Substitute Teacher, Anchorage School District
2004	Staff, National Youth Science Camp
2001-2003	Writing Consultant, Harvey Mudd College
2002	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