

Daniel J. Short Gianotti

Department of Earth & Environment
Boston University
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Current position

PhD Student, Boston University

Areas of specialization

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

Education

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| 2011-Present | PhD in Geography and Environment, Boston University
Expected Defense Date: March 29, 2016 |
| 1999-2003 | BS in Mathematics, Harvey Mudd College |

Publications & talks

JOURNAL ARTICLES

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| 2016c | Short Gianotti, DJ , BT Anderson, & GD Salvucci (2015), "Precipitation climate signals in global climate models and observations," (<i>in preparation</i>). |
| 2016b | Short Gianotti, DJ , BT Anderson, & GD Salvucci (2015), "A spatially-scalable precipitation weather generator model for climate nulls," (<i>in preparation</i>). |
| 2016a | Anderson, BT, DJ Short Gianotti , J Furtado, & E Di Lorenzo (2015), "A decadal precession of atmospheric pressures over the North Pacific," (<i>in revision</i>). |
| 2015c | Anderson, BT, DJ Short Gianotti , & GD Salvucci (2015), "Detectability of historical trends in station-based precipitation characteristics over the continental United States," <i>Journal of Geophysical Research</i> 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," <i>Annals of Botany</i> , (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," <i>Journal of Hydrometeorology</i> 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 system in a rural sub-Arctic community in Alaska," International Symposium on Cold Region Development

opment, 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

- 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	<i>ComSciCon 2015</i> Communicating Science Workshop, Harvard University.
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Professional service

JOURNAL REVIEWS

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

MEMBERSHIPS

American Geophysical Union
 Boston Water Group