

**Eduardo Alvarez Santos**  
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**EDUCATION**

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**2006-2011            Ph.D. in Science, Land Resource Science**

**Thesis title:** Evaluation of Lagrangian dispersion analysis and stable isotopes for partitioning scalar exchange in ecosystems.

University of Guelph, Guelph, ON, Canada

**Adviser:** Dr. Claudia Wagner-Riddle

*See synopsis of Ph.D. research below*

**2005-2006            Masters of Science in Agronomy**

**Thesis title:** Leaf wetness duration: measurements with electronic sensors, spatial variability in crops and estimate with empirical models.

University of São Paulo, Piracicaba, Sao Paulo, Brazil

**Adviser:** Dr. Paulo C. Sentelhas

*See synopsis of Masters research below*

**2000-2004            Bachelor of Science in Agronomy**

Federal University of Espírito Santo, Espirito Santo, Brazil

**TEACHING AND RESEARCH EXPERIENCE**

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**October 2012 –present            Assistant professor**

Kansas State University, Manhattan, Kansas

**May 2012 – Sept 2012      Adjunct Professor**

Federal University of Vicosa, Vicosa, Minas Gerais, Brazil

**October 2011 – April 2012    Research Assistant**

Brazilian Agricultural Research Corporation, Sao Carlos, Sao Paulo,  
Brazil

**April 2011- July 2011      Research Assistant**

University of Guelph, Guelph, ON, Canada.

**2007-2009                    Teaching Assistant**

(semester based) University of Guelph, Guelph, ON, Canada.

**2001-2004                    Research Intern**

Federal University of Espírito Santo, Alegre, Espírito Santo, Brazil

## **GRANTS AND AWARDS**

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2011 – Brazilian National Research Council (CNPq) pos-doc scholarship, Brazil.

2008 - The Bert Tanner Student Award, Campbell Sci. (Canada). Student presentation contest. Joint Conference of CSSS/CSA/CSAFM., 2008.

2008 - The George Thurtell Scholarship. University of Guelph.

2006 – CNPq Ph.D. scholarship, Brazil.

2004 - Honorable mention (highest grade average among classmates), Federal University of Espírito Santo.

## **PROFESSIONAL MEMBERSHIPS:**

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- American Society Agronomy (ASA), Soil Science Society of America (SSSA), and Crop Science Society of America (CSSA)
- American Geophysical Union (AGU)

## PUBLICATIONS

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### Scientific journal papers

1. Grossi, M. C., Justino, F., Andrade C. L. T, Santos, E. A., Rodrigues, R. A, Costa, L. C. Modelling the impact of global warming on the sorghum sowing window in distinct climates in Brazil. *European Journal of Agronomy*, 51, p. 53-64, 2013.
2. Brown, S. E., Warland, J. S., Santos, E. A. Wagner-Riddle, C., Staebler, R., Wilton, M. Estimating a Lagrangian length scale using measurements of CO<sub>2</sub> in a plant canopy. *Boundary-Layer Meteorology*, 147, p. 83-102, 2013.
3. Santos, E., Wagner-Riddle, C., Lee, X., Warland, J., Brown, S., Staebler, R., Bartlett, P., Kim, K.. Use of the isotope flux ratio approach to investigate the C<sup>18</sup>O<sup>16</sup>O and <sup>13</sup>CO<sub>2</sub> exchange near the floor of a temperate deciduous forest. *Biogeosciences*, 9, 2385-2399, 2012.
4. Santos, E. A., Wagner-Riddle, C., Warland, J. S., Brown, S. Applying a Lagrangian dispersion analysis to infer carbon dioxide and latent heat fluxes in a corn canopy. *Agricultural and Forest Meteorology*, v.151, p.620 - 632, 2011.
5. Sentelhas, P. C., Gillespie, T. J., Santos, E. A. Evaluation of FAO Penman-Monteith and alternative methods for estimating reference evapotranspiration with missing data in Southern Ontario, Canada. *Agricultural Water Management*, v.97, p.635 - 644, 2010.
6. Santos, E. A., Sentelhas, P. C., Gillespie, T. J., Lulu, J.. Performance of cylindrical leaf wetness duration sensors in a tropical climate condition. *Scientia Agrícola*, v.65, p.1 - 9, 2008.
7. Martin, Thomas Newton, Dourado Neto, Durval, Storck, Lindolfo, Burauel, Peter, Santos, Eduardo Alvarez. Homogeneous regions and sample size for attributes of the climate in São Paulo State, Brazil. *Ciência Rural*, v.38, p.690 - 697, 2008. (*paper in Portuguese*)
8. Santos, E. A., Sentelhas, P. C., Pezzopane, J. E. M., Angelocci, L. R., Monteiro, J. E. B. A. Spatial variability of leaf wetness duration in cotton, coffee and banana crop canopies. *Scientia Agrícola*, v.65, p.18 - 25, 2008.

9. Sentelhas, Paulo C., Gillespie, Terry J., Santos, Eduardo A. Leaf wetness duration measurement: comparison of cylindrical and flat plate sensors under different field conditions. *International Journal of Biometeorology*, v.51, p.265 - 273, 2007.
10. Sentelhas, P, Dallamarta, A, Orlandini, S, Santos, E, Gillespie, T, Gleason, M. Suitability of relative humidity as an estimator of leaf wetness duration. *Agricultural and Forest Meteorology*, p.392 - 400, 2007.
11. Pezzopane, J. E. M., Santos, E. A., Santos, A. R., Silva, G. F., REIS, E. F. Delimitation of agroclimatic clusters in the State of Espírito Santo. *Revista Brasileira de Agrometeorologia*, v.14, p.149 - 156, 2006. (*paper in Portuguese*)
12. Pezzopane, J. E. M., Santos, E. A., Eleutério, M. M., Reis, E. F., Santos, A. R. Spacialization of air temperature in the State of Espírito Santo. *Revista Brasileira de Agrometeorologia*, v.12, p.151 - 158, 2004. (*paper in Portuguese*).

#### **Selected abstracts in conference proceedings**

1. Brown, S., Warland, J., Staebler, R., Santos, E., Wagner-Riddle, Wagner-Riddle, C., Bartlett, P. Estimating a Lagrangian length scale using CO<sub>2</sub> measurements in two plant canopies. In: European Geophysical Union general assembly, 2011, Vienna, European Geophysical Union, 2011.
2. Santos, E., Wagner-Riddle, C., Lee, X., Warland, J., Brown, S., Staebler, R., Bartlett, P, Kim, K. <sup>13</sup>CO<sub>2</sub> and C<sup>18</sup>O<sup>16</sup>O temporal variation near the ground and above a temperate deciduous forest In: American Geophysical Union Fall Meeting, 2010, San Francisco. American Geophysical Union Fall Meeting. , 2010.
3. Santos, E., Wagner-Riddle, C., Warland, J. Applying a Lagrangian dispersion analysis to infer carbon dioxide and latent heat fluxes in a corn canopy In: American Geophysical Union Spring Meeting, 2009, Toronto. American Geophysical Union Spring Meeting., 2009.
4. Santos, E., Wagner-Riddle, C., Lee, X., Warland, J., Brown, S., Staebler, R., Bartlett, P, Kim, K. Temporal dynamics of C<sup>18</sup>O<sup>16</sup>O composition of the net CO<sub>2</sub> flux in the understory of a temperate deciduous forest in Canada. In: American Geophysical

Union Fall Meeting, 2009, San Francisco. American Geophysical Union Fall Meeting, 2009.

5. Santos, Eduardo Alvarez, Wagner-Riddle, Claudia, Warland, Jon S. Applying a Lagrangian dispersion analysis to infer carbon dioxide and latent heat fluxes in a corn canopy In: Joint Conference of CSSS/CSA/CSAFM, 2008, Guelph. Joint Conference of CSSS/CSA/CSAFM, 2008.