

# Marc-André Giasson

16 Lakehill Avenue  
Arlington, Massachusetts, 02474  
(617) 835-8658  
marc.giasson.1@gmail.com

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## SKILLS AND QUALIFICATIONS

- Nine years of professional experience in environmental and climate change science
- Expertise in carbon cycle science, biometeorology, ecosystem ecology, plant ecophysiology, soil science, silviculture, forestry
- Strong skills in problem solving, information compiling, data processing, analyzing, writing, and editing
- Proven skills in computer programming: MATLAB and Campbell Scientific programming languages
- Work well individually and in teams; ability to supervise and train assistants and interns
- Expert troubleshooter
- Native French, fluent English
- Efficiency, reliability, flexibility, and resourcefulness

## PROFESSIONAL EXPERIENCE

### Senior research technician, Boston University, July 2010–present

#### Finzi Lab

##### *Carbon and nitrogen cycling in forest soils*

- Coordinate day-to-day activities in soil-science-focused lab, supporting up to 10 researchers with competing needs
- Author or co-author peer-reviewed scientific articles
- Supervise and train about 6 assistants per semester in the field and the lab (more than 50 different assistants to date)
- Use and maintain various analytical instruments
- Perform computer programming (Matlab), data processing, and analysis
- Collaborate with researchers from various universities and research centers

#### Hutyra Lab

##### *CO<sub>2</sub> exchange between ecosystems and the atmosphere*

- Test an atmospheric CO<sub>2</sub> measurement system in Singapore
- Test and deploy an atmospheric CO<sub>2</sub> measurement system in Massachusetts
- Program dataloggers for the above systems

**Research professional, Fluxnet-Canada Research Network / Canadian Carbon Program, 2005–2010**

*CO<sub>2</sub> exchange between forests and the atmosphere - impacts of climate and forestry*

- Supervised day-to-day operations at Fluxnet-Canada's 3 Québec Flux Station eddy covariance research sites in Chibougamau, Québec, Canada (site visits, maintenance, data management and processing, etc.)
- Authored or co-authored 7 peer-reviewed scientific articles
- Set up a new eddy covariance research site (site selection, authorization and permit requests, evaluation of infrastructure, electrical system (solar panels) and equipment needs, purchases, installation)
- Purchased, installed, calibrated, maintained and upgraded equipment
- Performed computer programming, data processing, and analysis
- Collaborated with AmeriFlux, CarboEurope, Meteorological Service of Canada, Fluxnet-Canada scientists and others
- Supervised and trained a graduate student and about 10 interns in the field and the lab

**Summer intern in forestry, Société d'Exploitation Sylvicole de Rousseau Inc., and Produits forestiers Donohue Inc., 2000–2002**

I was a planting and harvesting foreman, monitored planting quality, produced silviculture prescriptions and execution reports, and executed various forest inventories.

**EDUCATION**

Master's degree in forest science (M.Sc.)

Université Laval, Québec City, Québec, Canada, 2005

Thesis title: Ecosystem-level CO<sub>2</sub> fluxes from a boreal cutover in eastern Canada before and after scarification

Baccalaureate in forestry (B.Sc.A.)

Université Laval, 2003

Excellence scholarship from Kruger, Inc., 2003

**INTERESTS**

- Rock climbing, mountaineering, hiking, and snorkeling
- Travel, both solo and with family, to 17 countries on 6 continents.

## PEER-REVIEWED PUBLICATIONS

- Giasson, M.-A.**, Averill, C., Finzi, A.C., 2014. Correction factors for dissolved organic carbon extracted from soil, measured using the Mn(III)-pyrophosphate colorimetric method adapted for a microplate reader. *Soil Biology & Biochemistry* 78, 284–287.
- Finzi, A.C., Raymer, P.C.L., **Giasson, M.-A.**, Orwig, D.A., 2014. Net primary production and soil respiration in New England hemlock forests affected by the hemlock woolly adelgid. *Ecosphere* 5(8):98. <http://dx.doi.org/10.1890/ES14-00102.1>
- Giasson, M.-A.**, Ellison, A.M., Bowden, R.D., Crill, P.M., Davidson, E.A., Drake, J.E., Frey, S.D., Hadley, J.L., Lavine, M., Melillo, J.M., Munger, J.W., Nadelhoffer, K.J., Nicoll, L., Ollinger, S.V., Savage, K.E., Steudler, P.A., Tang, J., Varner, R.K., Wofsy, S.C., Foster, D.R., Finzi, A.C. 2013. Soil respiration in a northeastern US temperate forest: a 22-year synthesis. *Ecosphere* 4(11):140. <http://dx.doi.org/10.1890/ES13.00183.1>
- Drake, J.E., Darby, B.A., **Giasson, M.-A.**, Kramer, M.A., Phillips, R.P., Finzi, A.C., 2013. Stoichiometry constrains microbial response to root exudation – insights from a model and a field experiment in a temperate forest. *Biogeosciences* 10, 821–838.
- Drake, J.E., **Giasson, M.-A.**, Spiller, K.J., Finzi, A.C., 2013. Seasonal plasticity in the temperature sensitivity of microbial activity in three temperate forest soils. *Ecosphere* 4(6):77. <http://dx.doi.org/10.1890/ES13-00020.1>
- Coursolle, C., **Giasson, M.-A.**, Margolis, H.A., Bernier, P.-Y., 2012. Moving towards carbon neutrality: CO<sub>2</sub> exchange of a black spruce forest ecosystem during the first 10 years of recovery after harvest. *Can. J. For. Res.* 42, 1908–1918.
- Coursolle, C., Margolis, H.A., **Giasson, M.-A.**, Bernier, P.-Y., Amiro, B.D., Arain, M.A., Barr, A.G., Black, T.A., Goulden, M.L., McCaughey, J.H., Chen, J.M., Dunn, A.L., Grant, R.F., Lafleur, P.M., 2012. Influence of stand age on the magnitude and seasonality of carbon fluxes in Canadian forests. *Agric. For. Meteorol.* 165, 136–148.
- Drake, J.E., Oishi, A.C., **Giasson, M.-A.**, Oren, R., Johnsen, K.H., Finzi, A.C., 2012. Trenching reduces soil heterotrophic activity in a loblolly pine (*Pinus taeda*) forest exposed to elevated atmospheric [CO<sub>2</sub>] and N fertilization. *Agric. For. Meteorol.* 165, 43–52.
- Payeur-Poirier, J.-L., Coursolle, C., Margolis, H.A., **Giasson, M.-A.**, 2012. CO<sub>2</sub> fluxes of a boreal black spruce chronosequence in eastern North America. *Agric. For. Meteorol.* 153, 94–105.
- Govind, A., Chen, J.M., Margolis, H.A., **Giasson, M.-A.**, Ju, W., Sonnentag, O., 2009. A spatially explicit hydro-ecological modeling framework (BEPS-TerrainLab V2.0): model description and test in a boreal ecosystem in Eastern North America. *J. Hydrol.* 367, 200–216.
- Bergeron, O., Margolis, H.A., Coursolle, C., **Giasson, M.-A.**, 2008. How does forest harvest influence carbon dioxide fluxes of black spruce ecosystems in eastern North America? *Agric. For. Meteorol.* 148, 537–548.
- Giasson, M.-A.**, 2007. Plantations et séquestration du carbone in Carles, S., (2007). *Sylviculture FOR-20157 : notes de cours. Université Laval*, pp. 209–225.

- Giasson, M.-A.**, Coursolle, C., Margolis, H.A., 2006. Ecosystem-level CO<sub>2</sub> fluxes from a boreal cutover in eastern Canada before and after scarification. *Agric. For. Meteorol.* 140, 23–40.
- Schwalm, C.R., Black, T.A., Amiro, B.D., Arain, M.A., Barr, A.G., Bourque, C.P.-A., Dunn, A.L., Flanagan, L.B., **Giasson, M.-A.**, Lafleur, P.M., Margolis, H.A., McCaughey, J.H., Orchansky, A.L., Wofsy, S.C., 2006. Photosynthetic light use efficiency of three biomes across an east-west continental-scale transect in Canada. *Agric. For. Meteorol.* 140, 269–286.