

Ph.D. Student, University of Saskatchewan
School of Environment and Sustainability
11 Innovation Boulevard
Saskatoon SK, Canada S7N 3H5

Email: magali.nehemy@usask.ca
Phone: +1 639-317-6821

FURLAN NEHEMY, MAGALI

EDUCATION

- [09 2017- present] **PhD in Environment and Sustainability - Candidate**
Dissertation: *"The role of plant hydrodynamics and phenology in plant water source apportionment"*
Supervisors: Dr. Jeffrey McDonnell & Dr. Colin Laroque
Global Institute for Water Security
School of Environment and Sustainability (SENS),
University of Saskatchewan, Saskatoon, SK
- [09 2015-08 2017] **MSc in Environment and Sustainability**
Thesis: *"Tree stories about a peatland: Tree ring reconstructions of water table and larch sawfly outbreaks in Saskatchewan"*
Supervisor: Dr. Colin Laroque
School of Environment and Sustainability (SENS),
University of Saskatchewan, Saskatoon, SK
- [03 2009- 07 2015] **B.Sc. in Forest Engineering** (5 year program)
Class rank: 1st of 37 students
Undergraduate thesis: *"Edge influence on forest composition and diversity in fragmented landscapes in Atlantic Brazilian forest"*.
Supervisor: Dr. Vera Lex Engel
São Paulo State University (UNESP), Botucatu, SP -Brazil
- [07 2013-12 2014] **Science Without Borders – International Exchange Student**
Department of Natural Resources Management
National Council for Scientific and Technological Development (CNPq)
Lakehead University, Thunder Bay, ON, Canada

SCHOLARSHIPS

- [2017-] NSERC CREATE – For Water Security – CDN \$ 50,000
- [2016-2017] Saskatchewan Innovation & Opportunity Scholarship - CDN \$16,000
- [2016 -2017] School of Environment and Sustainability Excellence Scholarship - CDN \$ 6,000
- [2015 -2016] NSERC CREATE – For Water Security – CDN \$ 16,000
- [2013 -2014] Science Without Borders - National Counsel of Technological and Scientific Development (CNPq) - Brazil – CDN \$ 25,000 (Competitive Undergrad Scholarship)
- [2010 -2013] Tutorial Program of Education (PET) Scholarship - Ministry of Science and Technology - Government of Brazil- R\$ 15,000
- [2009-2010] PIBIC-CNPq –Scientific initiation Program – R\$ 3,600
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AWARDS

- [2019] **American Geophysical Union – Horton Research Grant (\$10,000)**
- [2019] **1st Place, Research Presentation** “Human and Ecosystem Health”
“Tracing plant water source: Insights from a controlled lysimeter experiment”
SENS Symposium, University of Saskatchewan
- [2018] **3rd Place, Poster Presentation**
“*Larix laricina* and *Picea mariana* radial growth response to water table variability in a Saskatchewan peatland”
World Water Day, University of Saskatchewan
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PUBLICATIONS

- Nehemy, M. F.**, Millar, C., Janzen, K., Gaj, M., Pratt, D. L., Laroque, C. P. and McDonnell, J.J. ¹⁷O- excess as a detector for co-extracted organics in vapor analyses of plant isotope signatures. *Rapid Communications in Mass Spectrometry*. 2019. doi: 10.1002/rcm.8470.
- Sampaio, R.C.M., Engel, V.L., **Nehemy, M. F.**, and Martins, L. A. The use of biotic and abiotic variables to determine depth of edge effect in the Brazilian Atlantic Forest. 2019. Submitted to *Natureza & Conservação (Brazilian Journal of Nature Conservation)*.
- Millar, C., Janzen, K., **Nehemy, M. F.** and McDonnell, J.J. The Effects of Organic Contamination on Off Axis Integrated Cavity Output Spectroscopy in Liquid and Vapor Mode. To be submitted to *Rapid Communications in Mass Spectrometry* in July 2019.
- Nehemy, M. F.** and Laroque, C. P. Eastern larch and black spruce radial growth response to water-table thresholds: Tree-ring reconstruction of peatland water-table level. To be submitted to *Hydrological Processes* in July 2019.
- Nehemy, M. F.** and Laroque, C. P. Tree-ring analysis of larch sawfly (*Pristiphora erichsonii* (Hartig)) defoliation events and hydrological growth suppression in a peatland. *Dendrochronologia*. 2018. doi:10.1016/j.dendro.2018.06.006.

CONFERENCE PROCEEDINGS

- American Geophysical Union Fall Meeting, Washington, D.C., USA, 2018*
Nehemy, M.F., Millar, C., Janzen, K., Pratt, D. L., Pappas, C., Benettin, P., Laroque, C. P. and McDonnell, J.J. The Interactions Between Plant Hydrodynamics and Soil Water Sources at Controlled and Natural Environments. Poster presentation.
- Savannah River Site Summer Meeting, Oregon State University, Corvallis, USA, 2018*
Nehemy, M. F., Millar, C., Janzen, K., Gaj, M., Pratt, D. L., Laroque, C. P. and McDonnell, J.J. Assessment of isotopic composition of tree water using three different extraction methods. Oral Presentation.
- Canadian Geophysical Union & Canadian Society For Agriculture and Forest Meteorology National Meeting, Vancouver, Canada, 2017*
Coles, A., Chad, S., **Nehemy, M.F.**, Al Masum, Niazi, A.A., Ross, C.A., Vogel, T., Janzen, K. and J.J. McDonnell. Improving prairie snowmelt process understanding with high resolution stable isotope tracing. Poster presentation.
- Canadian Geophysical Union & Canadian Society For Agriculture and Forest Meteorology National Meeting, Vancouver, Canada, 2017*
Nehemy, M.F. and Laroque, C. P. Tree-rings: a proxy for peatland water-table variability. Oral presentation.

Canadian Association of Geographers Annual Meeting, Halifax, Canada, 2016

Nehemy, M.F. and Laroque, C. P. Is larch parched? A dendrohydrological perspective of Northern peatlands in boreal Saskatchewan. Oral presentation.

Canadian Association of Geographers Annual Meeting, Halifax, Canada, 2016

Laroque, C.P., Cook, A., Elliott, A., Fluney, A., **Nehemy, M.F.**, Magnus, A., Maillet, J., Patton, C., Walz, K., Woodward, J., Blyth, R., Muir, D., Walker, T. and Wentzel, E. Seeing the light: A dendrochemical investigation of the "Crooked Bush" at the Canadian Light Source. Oral presentation.

IV Congreso Iberoamericano y del Caribe de Restauración Ecológica, Buenos Aires, Argentina, 2015

Martins, L. A., Guimaraes, J. H., Engel, V.L., Sampaio, R.C.M. and **Nehemy, M.F.** A restauração passiva na formação de corredores ecológicos. [Passive restoration in the creation of ecological corridors].

XXIV International Union of Forest Research Organizations - IUFRO World Congress, Salt Lake City, USA, 2014

Nehemy, M.F., Sampaio, R.C.M, Engel, V.L. and Martins, L.A. Edge influence on forest composition and diversity in fragmented landscapes in Atlantic Brazilian forest. Poster presentation.

XXIV Congresso de Iniciação Científica da UNESP [XXIV UNESP Undergraduate Research Experience Conference], Botucatu, Brazil, 2012

Nehemy, M.F., Machado, I.S., Garcia, C. W. and Nepomuceno, P.C. Cultivo in Vitro do Figue (*Agave fourcroydes* Lem.) [In vitro cultivation of Figue (*Agave fourcroydes* Lem.)]. Oral Presentation.

63° Congresso Nacional de Botânica [National Botanic Conference], Joinville, Brazil, 2012

Nehemy, M.F., Sampaio, R.C.N.; Engel, V.L., Martins, L.A., and Albuquerque, C.P. Estudo da regeneração natural no gradiente borda-interior em um fragmento florestal. [Study of natural regeneration in the edge-interior gradient in a forest fragment]. Poster presentation.

63° Congresso Nacional de Botânica [National Botanic Conference], Joinville, Brazil, 2012

Albuquerque, C.P., Engel, V.L., **Nehemy, M.F.**, and Sato, L. M. Banco de sementes do solo em sistema agroflorestal e em plantio misto com espécies arbóreas nativas voltadas à restauração da floresta Estacional Semidecidual. [Seed bank of agroforestry system and mixed native species targeting Semidecidual Seasonal Rainforest restoration]. Poster presentation.

63° Congresso Nacional de Botânica [63° National Botanic Conference], Joinville, Brazil, 2012

Sampaio, R.C.N., Martins, L.A., Engel, V.L. and **Nehemy, M.F.** Relação solo e estrutura vegetal no gradiente borda-interior em um fragmento de mata atlântica. [Soil and stand structure relationship in the edge environment of an Atlantic forest fragment]. Poster presentation.

II Congresso Paulista de Extensão Universitária [II Sao Paulo State Community Engagement and Outreach Conference], São Paulo, Brazil, 2012.

Prosdocini, H.M., Ribas, L. C., Carmo, M. S., Oliveira, R.M., **Nehemy, M.F.**, Prosdocini, R. M. and Biral, V.C.N. A Extensão Universitária e a Transmissão de Conhecimento para a Revitalização da Sustentabilidade de um Assentamento Rural: O Caso da Fazenda Monte Alegre, em Motuca/SP. [Research outreach and knowledge transmission for the revitalization in agriculture sustainability in a rural settlement: Mont Alegre Farm Study Case]. Poster presentation.

II Congresso Paulista de Extensão Universitária [II Sao Paulo State Community Engagement and Outreach Conference], São Paulo, Brazil, 2012

Biral, V.C.N., Ribas, L.C., Carmo, M.S., **Nehemy, M. F.**, Oliveira, R.M. and Prosdocini, H.M. Pagamento por Serviços Ambientais para Realização de Práticas Agrícolas Sustentáveis. [A Model for payment for ecosystem services in view of agricultural sustainable practices]. Poster presentation.

II Congresso Paulista de Extensão Universitária [II Sao Paulo State Community Engagement and Outreach Conference], São Paulo, Brazil, 2012

Nehemy, M. F., Ribas, L.C., Carmo, M.S., Oliveira, R.M., Prosdocini, H.M., Prosdocini, R.M., and Biral, V. C. N. Reserva Legal e Área de Preservação Permanente sob a Ótica do Pagamento por Serviço Ambiental em um Assentamento Rural. [Legal Reserve and Area of Permanent Preservation and payment for ecosystem services]. Poster presentation.

II Congresso Paulista de Extensão Universitária [II Sao Paulo State Community Engagement and Outreach Conference], São Paulo, Brazil, 2012

Oliveira, R.M., Ribas, L.C., Carmo, M.S., **Nehemy, M.F.**, Prosdocini, R.M., Prosdocini, H.M. and Biral, V.C.N. Viabilidade de Pagamento por Serviços Ambientais (PSA) para a Promoção da Transição Agroecológica [The feasibility of payment for ecosystem services to promote agroecology transition]. Poster presentation.

XVII Encontro Nacional dos Grupos PET [XVII Tutorial Education Program (PET) National Meeting], Goiânia, Brazil, 2011

Andrade, F.R., Soler, R.R., Gabira, M.M., Oliveira, R.M., Keller, A., Paganini, E.A. L., Silva, R.B.G., **Nehemy, M. F.**, Toledo, J.R., Santos, F.N., Silva, R.P., Fernandes, G.C., Silva, M.R. and Fonseca, R.C.B. Metodologia para estudo de egressos e comparação entre petianos e não petianos na graduação. [Study of methodology to evaluate Forest Engineer alumni and compare “petianos” and “non-petianos”]. Oral Presentation.

XI Sudeste PET - Encontro dos Grupos PET da Região Sudeste [XI Tutorial Education Program (PET) Southeast Groups Meeting], Alfenas, Brazil, 2011

Andrade, F.R., Paganini, E.A.L., Fernandes, G.C., Toledo, J.R., **Nehemy, M.F.**, Gabira, M.M., Silva, R.B.G., Oliveira, R.M., Silva, R.P., Fonseca, R.C., Keller, A. and Soler, R. R. Desenvolvimento de Metodologia para os estudos de egressos do curso de engenharia floresta. [Development of new methodology to evaluate alumni students from Forest Engineering program]. Poster presentation.

X Sudeste PET - Encontro dos Grupos PET da Região Sudeste [X Tutorial Education Program (PET) Southeast Groups Meeting], Rio de Janeiro, Brazil, 2010

Silva, R.B.G., Paganini, E.A.L., Paganelli, K.B., Moraes, C.C.R.N., Gelschin, R.V.C., Rebello, H.P., Luvizutto, P.R., Soler, R.R., Andrade, F.R., Keller, A. and **NEHEMY, M.F.** Indissociabilidade Ensino-Pesquisa-Extensão: Contribuições do projeto Pomares Urbanos na promoção do desenvolvimento local. [Contribution of the Urban Orchard Project to promote local development]. Poster presentation.

5 Congresso de Extensão Universitária da Unesp, [5 Conference of Community Engagement and Outreach from UNESP] Aguas de Lindoia, Brazil, 2009

Freitas, T.C.M., Ferreira, M. J., **Nehemy, M.F.**, Gardon, F.R., Bacchim, G.T. Interpretação da Natureza na Trilha Ecológica do Lageado. [Interpretation of nature at lageado Ecological Trail]. Poster presentation.

LOCAL EVENTS

School of Environment and Sustainability Symposium, Saskatoon, Canada, 2019

Nehemy, M.F., Benettin, P., McDonnell, J.J., Rinaldo, A. and Laroque, C.P. Tracing plant water source: Insights from a controlled lysimeter experiment. Oral Presentation.

World Water Day, Global Institute for Water Security, Saskatoon, Canada, 2019

Nehemy, M. F., Millar, C., Janzen, K., Gaj, M., Pratt, D. L., Laroque, C. P. and McDonnell, J.J. Triple Isotopes Analysis able to detect co-extracted organics in vapor analysis of plant isotope signatures. Poster Presentation.

World Water Day, Global Institute for Water Security, Saskatoon, Canada, 2018

Nehemy, M.F and Laroque, C.P. *Larix laricina* and *Picea mariana* radial growth response to water table variability in a Saskatchewan peatland. Poster Presentation.

World Water Day, Global Institute for Water Security, Saskatoon, Canada, 2017

Nehemy, M.F and Laroque, C.P. What did the water table say to the drowning tree? Peatland water table reconstruction. Oral Presentation. (Invited MSc Speaker)

School of Environment and Sustainability Symposium, Saskatoon, Canada, 2017

Nehemy, M.F and Laroque, C.P. What did the water-table say to the drowning tree? – Tree-ring as a proxy for water-table fluctuation. Oral Presentation.

World Water Day, Global Institute for Water Security, Saskatoon, Canada, 2016

Nehemy, M.F and Laroque, C.P. Is larch parched? The dendrohydrology of eastern larch in northern Saskatchewan peatlands.

XVII Reunião Científica em Ciências Agrárias do Lageado, [XVII Agricultural Science Scientific Meeting of Lageado], Botucatu, Brazil, 2010

Nehemy, M.F., Paganini, E.A.L., Silva, R.B.G. ; Moraes, C.C.R.N., Gelschin, R.V.C., Rebello, H.P., Santos, F.N., Oliveira, R.M., Soler, R.R., Keller, A., Andrade, F.R., Silva, M.R., Paganelli, K.B. Estudo dos egressos de Engenharia Florestal da UNESP em relação ao mercado de trabalho. [Assessment of graduate students from Forest Engineering program at São Paulo State University success to enter job market].

RESEARCH MENTOR

(Undergraduate and High School Students)

Beach, A., Gelineau, J., Jezowski, J., Longworth, J., Simonot, C., Stark, B., **Nehemy, M. F.**, Walker, T.; Laroque, C. P. Spruce it Up! Analysis of the Long Term Effects of Mining on Black Spruce Trees. *University of Saskatchewan Student's Union Undergraduate Project Symposium*. Saskatoon, Canada, 2018.

Beach, A., Gelineau, J., Jezowski, J., Longworth, J., Simonot, C., Stark, B., **Nehemy, M. F.**, Walker, T.; Laroque, C. P. Spruce it Up! Analysis of the Long Term Effects of Mining on Black Spruce Trees. *FYRE on the Beamlines Presentation Series at the Canadian Light Source*. Saskatoon, Canada, 2017.

Bellinger, A, Clay, K., Harris, K., Magnus, A., McLeod, C., Wheler, J., **Nehemy, M. F.**, Laroque, C. P., Walker, T. and Muir, D. Spilling the Arsenic Tea on Giant Mine. Spilling The Arsenic Tea On Giant Mine. *University of Saskatchewan Student's Union Undergraduate Project Symposium*. Saskatoon, Canada, 2018.

Bellinger, A, Clay, K., Harris, K., Magnus, A., McLeod, C., Wheler, J., **Nehemy, M. F.**, Laroque, C. P., Walker, T. and Muir, D. Spilling the Arsenic Tea on Giant Mine. *FYRE on the Beamlines Presentation Series at the Canadian Light Source*. Saskatoon, Canada, 2017.

Robb, J., Kennedy, K., Hardy, M., Utama, E., Gerein, J., Hermanson, N., Gareau, B., Nemetz, R., Regier, A., Boechler, A. M., **Nehemy, M. F.** and Maillet, J. A Berry Special Experiment: Analysis of Environmental Contaminants In: Saskatoon Berry Bushes Using XANES & XRF Analysis. *Students on the Beamlines Poster Competition - Canadian Light Source*, Saskatoon, Canada, 2017.

Cascanette, M., Winkelhorst, P., Diep, B., Kohli, E., Hushaam, T., Farooq, M., Pranayyit, S., Agnew, J. and **Nehemy, M.F.** SCRUBA-DUB-DUB – The Speciation of Calcium in a Terrified Solid Biofuel. *Students on the Beamlines Poster Competition - Canadian Light Source*, Saskatoon, Canada, 2017.

Adams, S., Berg, R., Griffeth, J., Person, P., Siemes, T., Thicke-Rattray, V., **Nehemy, M. F.** and Laroque, C. P. Spruce it up! Effects of the oil sands on trembling aspen and white spruce. *FYRE on the Beamlines Presentation Series - Canadian Light Source*, Saskatoon, Canada, 2016.

Steeg, R., Nykiforuk, B., Wu, Q., Xuan, O., Yang, Z., Grover, S., Knuttila, K., Howatt, B., Newman, K., **Nehemy, M.F.** and Laroque, C.P. The Lord of the Rings: What do tree rings reveal about pollution in Saint John, New Brunswick? *FYRE on the Beamlines Presentation Series - Canadian Light Source*, Saskatoon, Canada, 2016.

Williamson, C., Wentzel, E., Patton C., Cook, A., Magnus, A.I., Fluney, A., Magnus, A., Woodward, J., Walz, K., Walker, T., Blyth, R., Muir, D., Boechler, A. M., Laroque, P. C., Maillet, J., and **Nehemy, M.F.** Chemical Comparison of Crooked and Non-Crooked Aspen using XRF and XANES Technology. *Students on the Beamlines Poster Competition - Canadian Light Source, Saskatoon, Canada, 2016.*

RESEARCH EXPERIENCE

Visiting Scholar [05 2018 – 07 2018]
Ecohydrology Laboratory, École polytechnique fédérale de Lausanne (EPFL)
Dr. Andrea Rinaldo and Dr. Paolo Benettin

Project: Plant water source and transit-time distribution: High-resolution controlled lysimeter experiment
Delineated lysimeter experimental design and installed instruments
Collected and extracted samples for isotopic analysis

Visiting Scholar [04 2018 – 04 2018]
Université de Montréal
Dr. Oliver Sonnentag and Dr. Christophoros Pappas

Project: Sap flux and transpiration flux at Boreal Ecosystem Research and Monitoring Sites
Manufactured and conducted quality control of 40 Granier's sap flux sensors (Granier, 1985)
Discussed improvements on accuracy in measurements of sap flow velocities

Visiting Scholar [03 2018 – 03 2018]
Savannah River Ecology Laboratory, University of Georgia
Dr. Doug Aubrey

Project: Moving beyond fractionation effects: Using tritium to characterize source and age distribution of plant water
Visited phytoremediation tritium site at Savannah River Sites
Delineated experimental design

Intern - Researcher [05 2017 – 08 2017]
CREATE Internship Program
Watershed Hydrology Lab, University of Saskatchewan
Supervisor: Dr. Jeffrey J. McDonnell

Lead the research project: "Intermethod comparison of plant water extraction systems on a boreal tree species"
Conducted field work and processed isotopic analysis using five different water extraction methods.

Intern- Researcher [01 2015 – 08 2015]
Forest Science and Research Institute – IPEF
Partnership: Ministry of Environment – Government of Sao Paulo State, Brazil

Project: Sustainable Rural Development Program (PDRS)
Funded by: World Resource Institute (WRI)

Assessment of non-timber native species with economic and environmental potential to suit sustainable development and increase income of farmers in São Paulo, Brazil
Developed agroforestry models to facilitate the State Plan of Native Forests at São Paulo state
Provided guidelines for policy implementation

Research Assistant, [08 2014 – 12 2014]
Forest Ecology Laboratory, Lakehead University, Thunder Bay – ON
Department of Natural Resources Management
Supervisor: Dr. Han Chen

Conducted Forest carbon inventory and vegetation identification
Conducted fine root measurements and quantification (Lab and software WinRizo)

Research Assistant [05 2014 – 08 2014]
FoReST, Forest Resources & Soil Testing Laboratory, Lakehead University, Thunder Bay – ON
Department of Natural Resources Management
Supervisor: Dr. Nancy Luckai

Conducted the project: “The impact of biochar and industrial ash amendments on soil properties, growth and nutrition of black and white spruce seedlings”.
Completed analysis for North American Proficiency Testing (NAPT)

Scholar [02 2010- 02 2013]
Tutorial Education Program – PET (Competitive scholarship)
Funded by Ministry of Education (MEC) – Government of Brazil, São Paulo State University – UNESP
Supervisors: Dr. Renata Batista Fonseca and Dr. Magali Silva

“The PET comprises of twelve students and one professor, the tutor of the group. The goal of the program is to improve citizens, who can work in teams, have spirit of leadership and commitment to the generation of knowledge for solving problems.”

Main research projects:

“Urban Silviculture of Botucatu”

Identified potential regional native species suitable to urban silviculture
Developed an environmental education handbook providing guidelines for the implementation of sustainable urban silviculture practices and indicated species for the city of Botucatu

“Urban Orchard at Lavapés River”

Conducted interviews with the population living at the riparian zone of Lavapés river
Planted native tree species to initiate a restoration process of the riparian zone of Lavapés river in partnership with a local NGO

Research Assistant [04 2011- 01 2013]
Laboratory of Ecology and Forest Restoration (LERF), São Paulo State University – UNESP, Brazil
Department of Forest Science
Supervisor: Dr. Vera Lex Engel

Led the research project: “Edge influence on forest composition and diversity in fragmented landscapes in Atlantic Brazilian forest” in partnership with **DURATEX Florestal Ltd.**

Evaluated the impact of edge effect on forest structure and composition. Developed sampling design, conducted field work, and data analysis. Results were presented in international conference.

Contributed to graduate research projects related to landscape ecology and forest restoration

Research Assistant [03 2010- 03 2011]
Biotechnology Laboratory, São Paulo State University– UNESP, Brazil
Department of Natural Resources
Supervisor: Dr. Isaac Strigueta Machado

Led the research project: “In vitro cultivation of *Agave fourcroydes*”

Developed a low cost of *in vitro* multiplication protocol for *A. fourcroydes*.

Received training on techniques of microporpagation in vitro with emphasis on species of economic interest and environmental importance

Scientific Initiation Program - Scholar (PIBIC/CNPq) [09 2009- 06 2010]
Department of Forest Science
Supervisor: Valdemir Antonio Rodrigues
Led the research project: "Environmental Services of a Sustainable Drainage System in an Urban Watershed"

TEACHING

Guest Lecture [3 April, 2019]
Isotope Geochemistry (GEOL 429), University of Saskatchewan
"Plant water source apportionment: From stable isotopes to plant hydraulics"

Teacher Assistant [09 2018 – 12 2018]
Course: Field skills in Water Security Research
(Graduate level: Masters in Water Security)
School of Environment and Sustainability
University of Saskatchewan
Assisted teaching students field methods in water security related subjects. The course learning objectives included fundamentals of hydrology, fundamentals of social engagement, field skills in hydrology, and data collection and management.

Guest Lecture [26 September, 2017]
Principles of Plant Ecology (PLSC 213), University of Saskatchewan
"Climate and microclimate effect on species distribution and growth: From the Tropical to the Boreal forest"

Research Coach [09 2016, 2017, 2018 – 12 2016, 2017, 2018]
Course: Environmental Science (EVSC 110.3)
Department of Agriculture and Bioresources
University of Saskatchewan
FYRE – On the Beamline (First Year Research Experience)
Guided undergraduate research projects at Canadian Light Source – IDEAS Beamline.

Teacher Assistant [02 2013- 07 2013]
Course: Forest Ecology
Department of Forest Science
São Paulo State University – UNESP, Brazil

Teacher Assistant [02 2010- 07 2010]
Course: Silviculture of "Seringueira" (*Hevea brasiliensis*)
Department of Forest Science
São Paulo State University – UNESP, Brazil

COMMITTEES

[2019] Media Associate at "TEDxUniversityofSaskatchewan" Organizing team
(<https://tedx2019.usask.ca/>)

[2018] President at Global Institute for Water Security -Students and Young Researchers (GIWS – SYR)

- [2017] Social Coordinator at Global Institute for Water Security -Students and Young Researchers (GIWS – SYR)
- [2012] Representative student (elected position) from the Department of Natural Resources - São Paulo State University - UNESP.
- [2011] FONSECA, R. C. B.; **NEHEMY, M. F.**; RIBAS, L. C.; MARCATI, C. R.; CURVELO. (elected position). Selection process of new scholar for the Tutorial Education Program- Forest Engineer – PET/ MEC. São Paulo State University (UNESP), Brazil.
- [2011] Representative student (elected position) for the Teaching Committee - Faculty of Agricultural Science and Forestry – São Paulo State University - UNESP.
- [2010] SILVA, M. R.; ENGEL, V. L.; BALLARIN, A. W.; **NEHEMY, M. F.** (elected position). Selection process of new tutor (professor) for the Tutorial Education Program- Forest Engineer – PET/ MEC in 2010. São Paulo State University (UNESP), Brazil.

PROFESSIONAL DEVELOPMENT

- Intern (Co-op)** [01 2013 –07 2013]
International Paper Ltd.
 Mogi Guaçu, SP - Brazil
- Monitored environmental research projects: native forest restoration in areas of environmental preservation and wild fauna monitoring plan.
 Assisted in data collection projects inherent to the forest hydrology of an experimental watershed.
 Assisted in preparation of audits for certification (Forest Stewardship Council - FSC and Cerflor).
- Board Member** [03 2009 – 07 2013]
Conflor Jr - Junior Enterprise of Forestry
 Sao Paulo State University (UNESP)
- Provided forestry consulting projects
- President** [10 2011 –10 2012]
“SEAB - Week of Agricultural and Forestry Studies in Botucatu”
 São Paulo State University– UNESP, Brazil
- Organization and management of an integrated learning week where academic workshops were offered simultaneously in the area of Forestry, Agronomy, Veterinary Medicine and Animal Science (16 workshops, about 400 people attended to SEAB in 2012).
- Intern** [10 2011 –03 2011]
Grupo Orsa S.A. – Jari Celulose, Papel e Embalagens & Orsa Florestal
 Monte Dourado, PA - Brazil
- Conducted research projects in micropropagation and rejuvenation of commercial *Eucalyptus* sp. clones and curauá (*Ananas erictifolius*).

Relevant Workshops

- [2018] International Workshop on the Hydrology and Morphology of Sub-Alpine, Semi-Forested Catchments, Einsiedeln/Alptal, Swiss Federal Research Institute (WSL), Switzerland
- [2012] Interpretação de Padrões para Manejo Florestal Forest Stewardship Council [Forest Stewardship Council Forest Management Standards], Simetria - Parceria em Sustentabilidade Empresarial S/S Ltda, Brazil.

- [2012] Curso de Redação Científica [Scientific Writing Workshop].
Institute Gilson Volpato of Scientific Education (IGVEC), Brazil.
- [2009] Silvicultura de Precisão [Precision Silviculture], XXIV SEAB – Technological Advances in
Silviculture, Sao Paulo State University, UNESP, Botucatu, Brazil.
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TECHNICAL REPORTS

- Jackle, T., **Nehemy, M.F.** and Laroque, C.P. Forest Inventory: Tree-Ring Dating. (*MAD Lab Report 2017 – 01*).
- Jackle, T., **Nehemy, M.F.**, Maillet, J. and Laroque, C.P. Smith's Cove Sample: Tree-Ring Measurements and Analysis. (*MAD Lab Report 2016 – 03*).
- Nehemy, M.F.**, Wood, S. and Laroque, C.P. Tree Inventory Samples: Tree-Ring Measurements and Analysis. (*MAD Lab Report 2016 – 04*).
- Maillet, J., Marleau, N., Wood, S., Millette, V., **Nehemy, M.F.**; and Laroque, C.P. A Dendrochronological Analysis of Canadian Prairie Shelterbelts: Beckstead Farm (*MAD Lab Report 2015-25*).
- Garcia, C.W., Menegon, E.A., **Nehemy, M.F.** and Albuquerque, C.P. Forest inventory in a *Corymbia citriodora* (460 ha) silviculture at Guar II and Pntano Farms, in Trs Lagoas – MS/ Brazil. (*Conflor Jr. consulting project*).
- Garcia, C.W., Menegon, E.A., **Nehemy, M.F.** and Villar, F. Forest inventory in a *Eucalyptus* sp. (5 ha) silviculture in Botucatu – SP/Brazil. (*Conflor Jr. consulting project*).
- Garcia, C.W., Menegon, E.A., **Nehemy, M.F.** and Villar, F. Forest inventory in a silviculture of clone H13 (21,4ha) in Parapanema – SP/ Brazil. (*Conflor Jr. consulting project*).
- Arcal, L.F.L., Almeida, B.O., Menegon, E.A., **Nehemy, M.F.** and Silva, L.L. Forest inventory in a *Corymbia citriodora* silviculture (104 ha) at Serrinha Farm in Trs Lagoas - MT/Brazil. (*Conflor Jr. consulting project*).
- Arcal, L.F.L., Almeida, B.O., Menegon, E.A., **Nehemy, M.F.** and Silva, L.L. Forest inventory in a *Corymbia citriodora* silviculture (117ha) at Cerro Azul Farm in Trs Lagoas - MT/ Brazil (*Conflor Jr. consulting project*).
- Arcal, L.F.L., Almeida, B.O., **Nehemy, M.F.**, Silva, L.L. and Achilles, T.C. Forest inventory in a *Eucalyptus* sp. (20ha) in So Manuel- SP/ Brazil (*Conflor Jr. consulting project*).
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COMMUNITY INVOLVEMENT

Research Mentor (Volunteer) [02 2015 –present]
Students on the Beamline – Canadian Light Source (Education Program)

The impact of salting roads on trees

Group: Bishop James Mahoney – Guelph- ON (2017-2018)

The impact of urbanization on native plants chemical properties with the use of Mid IR, XRF and XANES Technology

Group: Bishop James Mahoney – Saskatoon- SK (2016-2017)

Solid Biofuels: Analysis of calcium scrubber properties with the use of XRF and XANES Technology

Group: J. Clarke Richardson Collegiate – Ajax-ON (2016-2017)

Chemical Comparison of Crooked and Non-Crooked Aspen using XRF and XANES Technology

Group: High School Group- Luseland- SK (2015-2016)

Teacher (Volunteer)

[Aug 2009- Dec 2009]

“Cursinho Pré Vestibulares”/ Pre-university preparatory course

São Paulo State University- UNESP, Brazil

Taught Portuguese to disadvantaged youth enrolled in public schools to help them to be approved in competitive university programs in Brazil.

Guide (Volunteer)

[Mar 2009-Dec 2009]

Project “Casa da Natureza”/ “Nature’s home”

São Paulo State University – UNESP, Brazil

Promoted environmental education to children and teenagers

MAIN EVENTS ORGANIZED

[2017] World Water Day, Global Institute for Water Security, Saskatoon, Canada

[2016] World Water Day, Global Institute for Water Security, Saskatoon, Canada

[2016] CAG - Annual Meeting of the Canadian Association of Geographers Conference - Session: “Dendrochronology: applications in environmental science and education in Canada”, Halifax

[2014] The Evolution of Darwin Finches, Lakehead University, Thunder Bay, Canada

[2009-2013] 5°, 6°, 7°, and 8° Eucalyptus Field Day, UNESP and Industry Partners, Botucatu, Brazil

[2012] I Symposium of Urban Silviculture and I Field Day of Arboriculture, UNESP, Botucatu, Brazil

[2011] XXIV SEAB – Technological Advances in Silviculture (Workshop), UNESP, Botucatu, Brazil

[2011] II SilviTrop – Symposium of Tropical Silviculture, UNESP, Botucatu, Brazil

[2010] II Symposium of Carbon Sequestration, UNESP, Botucatu, Brazil

MEMBERSHIP

Acta Horticulturae (2019- current)

American Geophysical Union (2018-current)

Association of Saskatchewan Forestry Professionals, student membership (2016 - current)