

PERSONAL INFORMATION

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EDUCATION

Oregon State University Corvallis, Oregon
PhD, *Sustainable Forest Management* 2016
Minor in Statistics
Thesis: Forest Harvest Residue Moisture Management in the Pacific Northwest, USA

Oregon State University Corvallis, Oregon
Master of Science, *Forest Engineering* 2008

Universidad Austral de Chile Valdivia, Chile
BS, *Forestry* 2006
Forest Engineer, Chile 2006

EXPERIENCE

8/2016-Present **Oregon State University** Corvallis, Oregon
Assistant Professor
Timber Harvesting Extension Specialist
Department of Forest Engineering, Resources and Management

1/2012-7/2016 **Oregon State University** Corvallis, Oregon
Graduate Research Assistant
Department of Forest Engineering, Resources and Management
Northwest Advanced Renewables Alliance (NARA) woody biomass to aviation fuel project

- Leading forest residue moisture management research to increase transportation efficiency as part of the feedstock team of the NARA project.
- Taught college senior level classes for three consecutive terms (Forest Operations Analysis, Production Planning and Control)

7/2008-12/2011 **Forestal Mininco S.A.** San Pedro de la Paz, Chile
Planning Engineer

Forestal Mininco S.A. is the forestry division of the second largest forest products company in Chile, *Empresas CMPC S.A.* The company produces saw wood, composites, pulp, paper, tissue and packaging materials. Most wood comes from their own forest plantations managed to meet their production goals. They have presence in 8 countries.

- Managed system of plantation economic evaluation (VALECO) of Mininco's forest land in Chile and Argentina. This evaluation is performed yearly for insurance premium negotiation and report forest asset growth to investors.
- Supported and actively trained for the company's strategic and tactical planning.
- Worked in road operational planning, updated road network (ArcMap) giving access to over 50,000 acres of forest land.

6/2006-8/2006
Intern

Forestal Mininco S.A.

San Pedro de la Paz, Chile

- Organized and analyzed Company's pruned log index (PLI) database.

PUBLICATIONS

White, R., L. Schimleck, F. Antony, F. Belart and R. Daniels. 2020. Monitoring seasonal transpiration drying of loblolly and slash pine with Time Domain Reflectometry. *European Journal of Wood and Wood Products*. Submitted.

Grand, L., A. Christiansen, F. Belart, T. Cushing, C. Schnepf and K. Ketcheson. 2020. Selling Logs from your Property: A Curriculum package for facilitators and educators in the Western United States. PNW739. 98p. <https://catalog.extension.oregonstate.edu/pnw739>

Belart, F., B. Leshchinsky and J. Wimer. 2020. Deadman anchoring design for cable logging: a new approach. *Canadian Journal of Forest Research* 50(3): 342-357. <https://doi.org/10.1139/cjfr-2019-0338>

Belart, F., J. Wimer and B. Leshchinsky. 2020. Guidelines for safe multi-stump and deadman anchors. Technical Report. Oregon OSHA. 42p. <https://osha.oregon.gov/edu/grants/train/Documents/OSU-Guidelines-for-safe-anchoring.pdf>

Grand, L., A. Christiansen and F. Belart. 2019. How the woodland stick benefits Oregon family forestland owners and extension volunteers. *Journal of Extension* 57(6): 1-9. <https://joe.org/joe/2019december/rb7.php>

Garland, J., F. Belart, R. Crawford, W. Chung, T. Cushing, S. Fitzgerald, P. Green, L. Kincl, B. Leshchinsky, B. Morrissette, J. Sessions and J. Wimer. 2019. Safety in steep slope logging operations. *Journal of Agromedicine* 24(2):138-145. <https://doi.org/10.1080/1059924X.2019.1581115>

- Belart, F., B. Leshchinsky, J. Sessions, W. Chung, P. Green, J. Wimer and B. Morrissette. 2019. Sliding Stability of Cable-Assisted Tracked Equipment on Steep Slopes. *Forest Science* 65(3):304-311. <https://doi.org/10.1093/forsci/fxy064>
- Belart, F. and L. Grand. 2019. Tools for measuring your forest. EC 1129. Oregon State University. 9p.
- Belart, F., J. Sessions and G. Murphy. 2019. Seasonal changes in live tree branch moisture in Oregon, USA: Four Case Studies. *Forest Science* 65(1):100-107. <https://doi.org/10.1093/forsci/fxy038>
- Mancuso, A., F. Belart and B. Leshchinsky. 2018. Operative loading in cable yarding systems: field observations of static and dynamic tensions in mobile anchor systems. *Canadian Journal of Forest Research* 48(11): 1406-1410. <https://doi.org/10.1139/cjfr-2018-0219>
- Mancuso, A., F. Belart, B. Leshchinsky, M.L. Russell and J. Kiser. 2018. Behavior and assessment of mobile anchors in cable yarding systems. *Canadian Journal of Forest Research* 48(11):1382-1387. <https://doi.org/10.1139/cjfr-2018-0269>
- Cushing, T., F. Belart and S. Bowers. 2018. A Survey of Logger Concerns When Working with Small Woodland Owners. *Small Scale Forestry* 17(4): 523-534. <https://doi.org/10.1007/s11842-018-9401-x>
- Bowers S. and F. Belart. 2018. Harvesting and Selling Timber. A field guide for Woodland Owners EM9197. Oregon State University Extension Service. 103p.
- Belart, F., B. Leshchinsky and J. Sessions. 2017. Finite element analysis to predict in-forest stored harvest residue moisture content. *Forest Science* 63(4) 362-376. DOI: 10.5849/FS-2016-064R1
- Belart, F., J. Sessions, B. Leshchinsky and G. Murphy. 2017. Economic implications of moisture content and logging system in forest harvest residue delivery for energy production: a case study. *Canadian Journal of Forest Research* 47(4) 458-466. DOI: 10.1139/cjfr-2016-0428
- Belart, F. 2016. Forest Harvest Residue Moisture Management in the Pacific Northwest, USA. PhD dissertation. Oregon State University, Corvallis, OR. 146p.
- Bowers, S., F. Belart. 2015. Small-scale harvesting for woodland owners EM 9129. Oregon State University Extension. 14p.

TEACHING

Workshops: Cable Anchoring Workshop: failure mechanisms, safe design and new technologies. Taught by Francisca Belart, Jeff Wimer, Ben Leshchinsky. Eugene (November 2018), Springfield (March 2019).

Workshops: Skyline Analysis and Unit Layout. Loren Kellogg, Jeff Wimer, Francisca Belart. October 2019. Corvallis, OR

Workshops: Skyline Analysis and Unit Layout. Loren Kellogg, Jeff Wimer, Jeff Halbrook, Francisca Belart. November 2017. Corvallis, OR

Workshops: Effective Forest Roads. Jon Souder, Francisca Belart, county agents. Coos Bay, OR (April 2017), Waldport, OR (June 2017), St Helens, OR (December 2017), Bly, OR (May 2018), Sutherlin, OR (December 2018), Lebanon, OR (March 2019), Mapleton, OR (November 2019).

Class Series: Master Woodland Manager. Logging, roads and log marketing. Baker City, OR (October 2017), Eugene, OR (November 2018), Corvallis OR, (June 2019), Roseburg OR (November 2019).

School: Logs to Lumber to Living: Clackamas Tree School (March 2017, March 2018), Umpqua Tree School (March 2017), Lane Tree School (June 2018).

School: Small Scale harvesting: Clackamas Tree School (March 2019)

School: Effective forest roads: Clackamas Tree School (March 2019)

Symposiums: Selling Logs From Your Property: An Educational Symposium for Landowners: Crow, OR (October 2017), Clackamas, OR (November 2018), Roseburg, OR (January 2019), La Grande, OR (May 2019).

PRESENTATIONS

Belart, F. 2020. Modern forest operations: a forest and human health perspective. State of the State 2020 Forest Health Conference. February 27, Corvallis, OR.

Belart, F. and M. Pokharel. 2019. Timber Faller Safety on Integrated Mechanized Operations in Steep Terrain. Western ANREP mobile study tour and professional development meeting. November 14-15. Tucson, AZ.

Belart, F., K. Lyons, J. Garland and V. Bovbjerg. 2019. Timber Faller Safety on Integrated Mechanized Operations in Steep Terrain. Western AG Safety and Health Conference. August 7-9. University of Washington, Seattle, WA.

Chung, W., Belart, F., P. Green and B. Morrisette. 2019. OSU Research on tether assist harvesting. April 17, 2019. Habitat Management Working Group Annual Spring Meeting, Bureau of Land Management. Rickreall, OR.

Belart, F., B. Leshchinsky and J. Wimer. 2019. Deadman anchor design charts. March 14, 2019. Forest Activity Advisory Committee Meeting. Salem, OR.

Belart, F. 2019. Cable logging anchoring safety. 1st Northwest Logging Safety Summit. February 20, 2019. Springfield, OR.

- Belart, F., B. Leshchinsky, W. Chung, P. Green, B. Morrisette, J. Garland and J. Sessions. 2018. Mobility of Tethered Equipment on Steep Slopes: Soil-Machine Interactions. 41st Annual Council on Forest Engineering Meeting. July 15-18, 2018. Williamsburg, Virginia.
- Belart, F. 2018. Deadman and multi stump anchoring safety. Pacific Logging Conference. Corvallis OR. September 13, 2018.
- Belart, F. 2018. Forest harvest residue moisture management. WFI International Fellow Tour 2018. June 2018 La Grande, OR. (Invited speaker)
- Belart, F., J. Wimer, B. Leshchinsky, P. Green, W. Chung, J. Sessions and J. Garland. 2018. OR-OSHA educational program and OSU Research Update. Associated Oregon Loggers 48th Annual Convention. January 19, 2018 Eugene, OR.
- Leshchinsky, B., F. Belart, W. Chung, P. Green, B. Morrisette, J. Garland, J. Sessions and J. Wimer. 2018. Mobility of Tethered Equipment on Steep Slopes: Soil-Machine Interactions. January 18, 2018. WR-COFE meeting Eugene, OR.
- Belart, F. 2017. Timber harvesting in Oregon. Chile Initiative Seminar. October 18, 2017. Oregon State University, Corvallis, OR.
- Belart, F. 2017. Finite element analysis to predict in-forest stored harvest residues. IUFRO 2017. September 18, 2017 Freiburg, Germany.
- Belart, F. 2017. Forest harvest residue moisture management. WFI International Fellow Tour 2017. June 2017 La Grande, OR. (Invited speaker)
- Belart, F. 2017. Forest harvest residue in the Pacific Northwest. OSAF Annual Meeting 2017. April 27, 2017 Tigard, OR. (Invited speaker)
- Belart, F. 2017. Industrial Forestry in Chile. Chile Initiative Seminar. March 16, 2017. Oregon State University, Corvallis, OR.
- Bowers, S., F. Belart. 2016. Logs to lumber to living: a cabin in the woods. Baker County Extension Office. November 9, Baker City, Oregon.
- Belart, F. 2016. Value of Trees. Workshop for Women Owning Woodlands Retreat. November 6, Silver falls, Oregon.
- Bowers, S., F. Belart. 2016. Logs to lumber to living: a cabin in the woods. Lane County Extension Office. October 27, Eugene, Oregon.
- Bowers, S., F. Belart. 2016. Logs to lumber to living: a cabin in the woods. Douglas County Extension Office. October 26, Roseburg, Oregon.
- Bowers, S., F. Belart. 2015. Ponds on woodland properties. Lane County Extension Office. December 7, Eugene, Oregon.

Bowers, S., F. Belart. 2015. Logging small woodlands. Coos County Extension Office. November 18, Myrtle Point, Oregon.

Belart F. 2015. Field presentation for World Forestry Center International Fellows at MC Ranch (Eastern Oregon site of one of NARA moisture management experiments) in June 24, 2015.

Belart, F., B. Leshchinsky, and J. Sessions. 2015. Finite element analysis to predict in-forest biomass moisture content. Western Forestry Graduate Research Symposium, April 27-28, College of Forestry, OSU, Corvallis, Oregon.

SERVICE

FERM Department:

- Search committee meetings with candidates: Forest Policy Professorship June 10-June 13, 2019.
- P&T FERM Department Committee Member: July 17, 2019-Present.
- Faculty search Committee Member for Fire Specialist. FNR Extension Fire Program: November 13, 2019- March 2020.
- Dean of FNR Extension Search Committee Member: August 2020-Present.

OSU College of Forestry Chile initiative:

- Translator and facilitator for Dean's Tour of Chile, Nov. 2014: Led by Dean Maness, CoF faculty and Oregon industry leaders visited Chile to learn about its forest industry.
- Major role in building an exchange program for undergraduate student internships in Forestal Mininco/CMPC Chile. One undergraduate student completed her internship in 2014 and a second student has been accepted for 2016.
- Assisting establishment of professional development program for Chilean forest engineers to come to OSU for specialized coursework/research, English language training, and experience in the Oregon forest industry.
- Visitor and exchange student presentations in 2016 and 2017.

Journal reviewer: Canadian Journal of Forest Research, Forest Ecology and Management, International Journal of Forest Engineering, Southern Forests: a Journal of Forest Science, BioResources, Forest Science, Forests, Biomass and bioenergy.

Guest editor: Forests Journal (2018)

Professional: Oregon Logging Conference in Eugene OR, CoF booth (2007, 2012 to 2019), WR COFE meeting (2013, 2015, 2017, 2018, 2019, 2020). Oregon Logging Conference in Eugene Oregon in charge of booth (2017- 2019), NW Logging Safety Summit (organizing committee) 2019.

HONORS & AWARDS

- Xi Sigma Pi Honor Society 2012-Present
- Lee Harris Travel Grant Award – August 2012
- Rick Strachan Graduate Fellowship – January-December 2012
- Richardson Family Graduate Fellowship – September 2006-June 2008

COMPUTER SKILLS

Platforms & applications: Visual Basic 6, ArcMap, R, Microsoft Access, Powerpoint, Word and Excel, Lingo, NETWORK 2000, Comsol Multiphysics, VALECO (CMPC), Matlab.

LANGUAGES

Spanish (native), English (full professional proficiency)