

Curriculum Vitae

for

Sándor F. Tóth

Title:

- Associate Professor of Natural Resource Informatics, SEFS, College of the Environment
- Adjunct Associate Professor of Industrial & Systems Engineering, College of Engineering, University of Washington, Seattle

Office: Bloedel Hall 358, School of Environmental and Forest Sciences, College of the Environment, University of Washington, Box 352100, Seattle, WA 98195-2100

Ph.: +1.206.616.2738 E-mail: toths@uw.edu

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Research Interests:

- Mathematical programming and optimization applications in forestry
- Operations research applications in forestry, natural resources and the environment
- Forest Management Science, Systems Engineering
- Forest economics

Education:

- PhD, Dual Title in Operations Research and Forest Management, Penn State University, 2005. GPA: 3.83. Dissertation title: Modeling Timber and Non-timber Tradeoffs in Spatially-explicit Forest Planning
- Master of Agriculture, Shinshu University, Nagano (Minami-Minowa), Japan, 2002. Thesis title: Current Problems in the Management of Private Forests in Japan
- Dipl. Forest Engineer, University of Forestry and Wood Sciences, Sopron, Hungary, 1994. Thesis title: Potential Utilization of Global Position Systems (GPS) in Forest Management

Employment:

September 2013 to present

- Associate Professor of Natural Resource Informatics, School of Environmental and Forest Sciences, College of the Environment, University of Washington, Seattle
- Adjunct Associate Professor of Industrial and Systems Engineering, Department of Industrial and Systems Engineering, College of Engineering, University of Washington, Seattle

June 2007 to September 2013

- Assistant Professor of Natural Resource Informatics, School of Environmental and Forest Sciences, College of the Environment, University of Washington, Seattle
 - Research and Outreach (75%): Multiple-criteria decision making, environmental economics, spatial optimization, forest planning, invasive species management, reserve design
 - Teaching (25%): Quantitative decision techniques in natural resources

September 2010 to September 2013

- Adjunct Assistant Professor of Industrial and Systems Engineering, Department of Industrial and Systems Engineering, College of Engineering, University of Washington, Seattle

July 2006 to June 2007

- Assistant Professor of Forest Resource Management/Economics, Department of Natural Resource Ecology and Management, Oklahoma State University
 - Research (70%): Spatially-explicit harvest scheduling models, multiple objective decision support systems for natural resource management. Economics of non-timber forest services.
 - Teaching (30%): Forest Economics & Finance, Forest Management

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- March 2006 to July 2006

 - Postdoctoral Research Fellow, Ensis Environment (formerly known as New Zealand Forest Research Institute), Rotorua, New Zealand. Primary duty: developing decision tools to quantify, value and sell non-timber forest services from managed forests in New Zealand.

 - June 2005 to March 2006

 - Research Associate, Penn State School of Forest Resources Duties: 1) develop programs for applying spatially-explicit forest planning models and methods for the DCNR Bureau of Forestry, 2) help develop new spatially-explicit forest planning applications using case studies from the Bureau of Forestry, 3) develop documentation of the new planning tools and applications, including users guides and general publications, and 4) help supervise and assist graduate students and post-docs working on the DCNR planning project.

 - May 2002 – June 2005

 - Graduate Research Assistant, Penn State School of Forest Resources. Developed forest management plans for the Pennsylvania DCNR Bureau of Forestry and researched economic optimization techniques for forest planners who make management decisions under conflicting objectives.

 - April 1999 – April 2002

 - Japanese Government (Monbusho) Research Student: Hitotsubashi University, Tokyo and Shinshu University, Nagano, Japan. Worked out an action plan to revitalize the private forestry sector in Japan.

 - December 1994 – March 1999

 - Chief Forest Planner with the Hungarian State Forest Service, Veszprém Directorate. Job focused on preparing forest management plans for public and private forests. Other duties: inventory surveys and analyses, afforestation, site investigation, land-use planning, providing professional assistance for private forest landowners, developing the nation-wide GIS system for Hungary's forests and surveys for the International Co-operative Programme on the Assessment and Monitoring of Air Pollution Effects on Forests (ICP Forests) and the National Growth and Yield Monitoring Network.

Awards and Honors:

- Fulbright Scholar to Chile (January – December 2018)
 - Donald J. & Robert G. McLachlan Endowed Professorship, School of Environmental & Forest Sciences, University of Washington, Seattle (2015 -)
 - “2013 Best Publication Award in Environment-Sustainability”, INFORMS 2013 (October 2013)
 - US Forest Service Chief’s Honor Award for work on open space protection (January 2010)
 - “Best Paper in Forestry Sponsored Sessions” award for PhD student N. Könnnyű, INFORMS 2010 (October 2010)
 - Forest Science paper titled “Finding Efficient Harvest Schedules under Three Conflicting Objectives” is selected as Research Highlights in the Journal of Forestry (March 2009)
 - “Best Paper in Forestry Sponsored Sessions” award, INFORMS 2008 (October 2008)
 - Honorable Mention winner of the INFORMS ENRE Student Travel Contest (November 2005)
 - Penn State Graduate School Teaching Certificate (November 2004)
 - Recipient of Top-Up Fund from the Graduate School, Penn State University (2002-2003)
 - Fulbright Scholarship for graduate study in the United States (declined)
 - Monbusho (Japanese Government) Scholarship for graduate study in Japan
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<u>Patents/ Commerciali- zation:</u>	<ul style="list-style-type: none"> ▪ Provisional Patent Application 61/527,997 filed on behalf of the University of Washington's Center for Commercialization (C4C) on 8/26/2011: "ECOSEL: An Auction Mechanism for Forest Ecosystem Services". Inventor: S.F. Tóth, Co-inventors: G.J. Ettl, L.W. Rogers and S.S. Rabotyagov
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PUBLICATIONS

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- Peer-Reviewed Journal Articles:** (25) St. John, R., **S.F. Tóth**, and Z. Zabinsky. In Press. Optimizing the Geometry of Wildlife Corridors in Conservation Reserve Design. *Operations Research*.
- (24) Ross, K., **S.F. Tóth**, and W. Jaross. 2018. Forest Harvest Scheduling with Endogenous Costs. *Interfaces* 48(3):260-270.
- (23) Kushch, S.A., **S.F. Tóth**, R. Deal and G.J. Ettl. 2016. Multi-objective optimization to evaluate tradeoffs among forest ecosystem services following fire hazard reduction in the Deschutes National Forest, USA. *Ecosystem Services* 22(2016): 328-347.
- (22) Ross, K. & **S.F. Tóth**. 2016. A Model for Managing Edge Effects in Harvest Scheduling Using Spatial Optimization. *Scandinavian J. of Forest Research* 37(1): 346-354.
- (21) St. John, R., K. Öhm, and **S.F. Tóth**, P. Sandström, A. Korosuo, and L.O. Eriksson. 2016. Combining Spatiotemporal Corridor Design for Reindeer Migration with Harvest Scheduling in Northern Sweden. *Scandinavian J. of Forest Research* 37(1): 355-363.
- (20) Roesch-McNally, G., S.S. Rabotyagov, J. Tyndall, G.J. Ettl, and **S.F. Tóth**. 2016. Auctioning the Forest: A qualitative approach to exploring stakeholder responses to bidding on forest ecosystem services. *Small-Scale Forestry* 15(3): 321-333.
- (19) McDill, M.E., **S.F. Tóth**, R. St. John, J. Braze, and S.A. Rebain. 2016. Comparing Model I and Model II Formulations of Spatially-Explicit Harvest Scheduling Models with Adjacency Constraints. *Forest Science* 62(1): 28-37.
- (18) St. John, R., and **S.F. Tóth**. 2015. Spatially-Explicit Forest Harvest Scheduling with Difference Equations. *Annals of Operations Research* 232(1):235-257.
- (17) Könnnyű, N., **S.F. Tóth**, M.E. McDill and B. Rajasekaran. 2014. Temporal Connectivity of Mature Patches in Forest Planning Models. *Forest Science* 60(6): 1089-1099.
- (16) Rabotyagov, S.S., **S.F. Tóth**, and G.J. Ettl. 2013. Testing the Design Variables of ECOSEL: A Market Mechanism for Forest Ecosystem Services. *Forest Science* 59(3): 303-321.
- (15) **Tóth, S.F.**, N. Könnnyű, G.J. Ettl, L.W. Rogers, and S.S. Rabotyagov. 2013. ECOSEL: Selling Forest Ecosystem Services. *Forest Policy & Economics* 35(2013): 73-82
- (14) Könnnyű, N. and **S.F. Tóth**. 2013. A Cutting Plane Algorithm for Area-Based Adjacency Formulations in Harvest Scheduling Models. *Eur. Journal of Operational Research* 228(1): 236-248.
- (13) Passolt, G., M.J. Fix, & **S.F. Tóth**. 2013. A Voronoi Tessellation-based Approach to Generate Hypothetical Forest Landscapes. *Canadian J. of Forest Research* 43(1): 78-89.
- (12) **Tóth, S.F.**, N. Könnnyű, M.E. McDill & S. George. 2013. Lazy Constraints for Area-Based Adjacency Formulations in Harvest Scheduling Models. *Forest Science* 59(2): 157-176
- (11) Burns, E.S., **S.F. Tóth**, and R.G. Haight. 2013. A Modeling Framework for Life History-Based Conservation Planning. *Biological Conservation* 158(1): 14-25.
- (10) **Tóth, S.F.**, M.E. McDill, N. Könnnyű, S. George 2012. A Strengthening Procedure for the Path Formulation of the Area-based Adjacency Problem in Harvest Scheduling Models. *Mathematical and Computational Forestry & Natural-Resource Sciences* 4(1):16-38.
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- (9) **Tóth, S.F.**, R.G. Haight and L.W. Rogers. 2011. Dynamic Reserve Selection: Modeling Land Price Feedback Effects in Strategic Land Retention. *Operations Research* 59(5):1059-1078.
- (8) **Tóth, S.F.**, G.J. Ettl and S.S. Rabotyagov. 2010. ECOSEL: An Auction Mechanism for Forest Ecosystem Services. *Mathematical and Computational Forestry & Natural-Resource Sciences* 2(2): 99-116.
- (7) **Tóth, S.F.**, R.G. Haight, S.A. Snyder, S. George, J.R. Miller, M.S. Gregory and A.M. Skibbe 2009. Reserve Selection with Minimum Contiguous Area Restrictions: An Application to Open Space Protection Planning in Suburban Chicago. *Biological Conservation* 142(8): 1617-1627.
- (6) **Tóth, S.F.** and M.E. McDill 2009. Finding Efficient Harvest Schedules under Three Conflicting Objectives. *Forest Science* 55(2): 117-131.
- (5) **Tóth, S.F.**, and M.E. McDill 2008. Promoting Large, Compact Mature Forest Patches in Harvest Scheduling Models. *Environmental Modeling and Assessment* 13(1):1–15.
- (4) **Tóth, S.F.**, M.E. McDill, and Stephanie Rebain 2006. Exploring the Efficient Frontier of a Bi-Criteria, Spatially Explicit, Harvest Scheduling Model. *Forest Science* 52(1):93-107.
- (3) **Tóth, S.F.**, T. Ueki and M.E. McDill 2006. Monitoring the Forest Resources and Management of Private Landowners in Nagano, Japan, *Japanese Journal of Forest Planning* 12:59-64.
- (2) **Tóth, S.F.**, T. Ueki and Y. Uozumi 2001. The Current Situation of Hungarian Forest Management, with Special Emphasis on the Recent Changes in Forest Ownership, *Japanese Journal of Forest Planning* 7:21-28.
- (1) **Tóth, S.F.**, T. Ueki and Y. Uozumi 2001. The Ecological and Historical Background of Forest Management in Hungary, *Japanese Journal of Forest Planning* 7:11-19.

Peer-Reviewed Conference Proceedings:

- (3) **Tóth, S.F.**, S.S. Rabotyagov, and G.J. Ettl 2009: Experimental Testbeds for ECOSEL: A Market Framework for Private Provision of Forest Ecosystem Services. The Agricultural and Applied Economics Association 2009 Joint Annual Meeting, Milwaukee, WI.
- (2) **Tóth, S.F.** 2007. Using Spatial Tradeoffs to Build Consensus and to Value Non-Market Services in Forest Management. In *Forest Resource Management and Mathematical Modeling – FORMATH Kobe 2007 International*: 7(6): 79-94.
- (1) **Tóth, S.F.**, T. Ueki and M.E. McDill 2003: Monitoring the Forest Resources and Management of Private Landowners in Nagano, Japan, *The Proceedings of FAO World Forestry Congress (Paper ranked 1: “Outstanding Contribution to Congress”)– XII, Quebec City, Canada* Vol. C: 177-185.

Other Publications:

- (7) **Tóth, S.F.**, J. Turner, S.A. Kushch, R. Yao, S.S. Rabotyagov, B. Dhakal, and L.W. Rogers 2010. ECOSEL: Application of Environmental Auctions to a New Zealand Planted Forest. *New Zealand Forest Research Institute (Scion) General Technical Report* no. 47085. October 2010.
 - (6) **Tóth, S.F.**, G.J. Ettl and S.S. Rabotyagov 2008: ECOSEL: An Auction Mechanism for Forest Ecosystem Services. *The Center for International Trade in Forest Products Newsletter*. Fall 2008.
 - (5) **Tóth, S.F.**, 2002. Japán erdeiről és erdőgazdálkodásáról, 5. rész: *Erdészeti Lapok* 137(5):139-140. [*in Hungarian*]
 - (4) **Tóth, S.F.**, 2002. Japán erdeiről és erdőgazdálkodásáról, 4. rész: A japán erdők birtokstruktúrája, gazdálkodási formák, magánerdőgazdálkodás. *Erdészeti Lapok* 137(4):118-119. [*in Hungarian*]
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Other Publications cont.:

(3) **Tóth, S.F.**, 2002. Japán erdeiről és erdőgazdálkodásáról, 3. rész: A japán erdőgazdálkodás gazdasági környezete. *Erdészeti Lapok* 137(3):91-94. [in Hungarian]

(2) **Tóth, S.F.**, 2002. Japán erdeiről és erdőgazdálkodásáról, 2. rész: Mesterséges erdők és kezelésük. *Erdészeti Lapok* 137(2):61-62. [in Hungarian]

(1) **Tóth, S.F.**, 2002. Japán erdeiről és erdőgazdálkodásáról, 1. rész: *Erdészeti Lapok* 137(1):1-2. [in Hungarian]

GRANTS

Grants:

- **Internat'l competitive:**
 - (21) *Forest Ecosystem Management Decision Making Methods 2018*. PI: J. Borges, Partners: **S.F. Tóth** & M.E. McDill. Fundação para a Ciência e Tecnologia, Portugal. **\$4,642**.
 - (20) *Symposium on Systems Analysis of Forest Resources 2017*. **PI: S.F. Tóth**, Co-PIs: L.M. Moskal, J.G. Borges, & J. Garcia-Gonzalo. Organisation for Economic Co-operation and Development, Co-Operative Research Programme. **\$35,078**. 12/2016-2/2019
 - (19) *Models & Decision Support Tools for Integrated Forest Policy Development Under Global Change and Associated Risk & Uncertainty*. PI: J. Garcia-Gonzalo, Co-PIs: L.D. Baltiero, L.O. Eriksson, K. Reynolds, M.E. McDill, J.G. Borges, A. Weintraub, **S.F. Tóth**, B. Louman, R. Yousefpour, H. Peltola, M.P. Fernandez, and L.C.E. Rodriguez. Marie Skodowska-Curie Research and Innovation Staff Exchange (RISE). **\$2,217,607**. 2/2016-1/2020
 - (18) *Multi-objective Optimization to Evaluate and Sell Forest Ecosystem Services*. **PI: S.F. Tóth**, Co-PIs: G.J. Ettl, S.S. Rabotyagov. USDA National Institute of Food and Agriculture Competitive Grants Program (Managed Ecosystems). **\$499,986 (100% UW)**. 1/2010-12/2012
 - (17) *The Feasibility and Expected Outcomes of the ECOSEL Auction Mechanism to Evaluate and Sell Forest Ecosystem Services*. **PI: S.F. Tóth**, Co-PI: G.J. Ettl. USDA National Research Initiative Competitive Grants Program. **\$50,000 (100% UW)**. 8/2008-8/2010
- **Federal competitive:**
 - (16) *Developing a Decision System to Aid Multipurpose Forest Management in Chile*. **PI: S.F. Tóth**. National Science Foundation (OISE-0601838). **\$57,000**. 3/2006 (**This grant was cancelled by the PI due to transfer issues to UW**).
 - (15) *Expert Review of the Washington State Dept. of Natural Resources' Sustainable Harvest Calculations*. **PI: S.F. Tóth**. Washington State Department of Natural Resources, Olympia, WA. **\$50,000 (100% UW)**.
 - (14) *Multi-objective inventory optimization for monitoring climate impact on boreal forests*. **PI: S.F. Tóth**, Co-PIs: H.E. Andersen. USDA Forest Service, Pacific Northwest Research Station. Portland, OR. **\$84,965 (100% UW)**.
 - (13) *Accounting for habitat range shifts in species conservation planning*. **PI: S.F. Tóth**, Co-PIs: R.G. Haight, and A. Phillips. USDA Forest Service, Northern Research Station. St. Paul, MN. **\$40,627 (100% UW)**. 5/2014-12/2015
 - (12) *Forest road network optimization to mitigate sediment delivery and restore salmon habitat*. **PI: S.F. Tóth** and C. Torgersen. US Geological Survey, Seattle, WA. **\$19,000 (100% UW)**.
 - (11) *Modeling Forest Roads and the Effect of Forest Edges on Yield in Spatial Harvest Scheduling for the Olympic Experimental State Forest, Washington*. **PI: S.F. Tóth**. Washington State Dept. of Natural Resources, Olympia, WA. **\$68,250 (100% UW)**.
 - (10) *Optimization of Carbon, Timber and Cultural Values for Ecosystem Services in Alaska*. PI: S.F. Tóth, Co-PIs: S. Kushch, and R. Deal. USDA Forest Service, Pacific Northwest Research Station. Portland, OR. \$105,000 (100% UW). 5/2014-12/2015
- **External, contact-based:**
 - (16) *Developing a Decision System to Aid Multipurpose Forest Management in Chile*. **PI: S.F. Tóth**. National Science Foundation (OISE-0601838). **\$57,000**. 3/2006 (**This grant was cancelled by the PI due to transfer issues to UW**).

	(9) <i>Integrating Carbon & Other Ecosystem Services into a Framework for Forest Management</i> . PI: S.F. Tóth , Co-PIs: G.J Ettl, and R. Deal. <u>USDA Forest Service</u> , Pacific Northwest Research Station. Portland, OR. \$180,000 (100% UW) . 8/1/2010-7/31/2015.
	(8) <i>Modeling Edge Effects on Yield in Spatial Harvest Scheduling for the Olympic Experimental State Forest</i> . PI: S.F. Tóth , Co-PI: R. Deal. <u>USDA Forest Service</u> , Pacific Northwest Research Station. Portland, OR. \$49,833 (100% UW) . 7/23/2012-7/31/2014.
	(7) <i>Dynamic Reserve Selection: Modeling the Land Price Feedback Effect in Strategic Land Retentions in Western Washington</i> . PI: S.F. Tóth , Co-PIs: R.G. Haight, and L.W. Rogers. <u>USDA Forest Service</u> , Northern Research Station. St. Paul, MN. \$66,037 (100% UW) . 9/2007-10/2010
	(6) <i>Reserve Selection with Minimum Contiguous Area Restrictions</i> . PI: S.F. Tóth , Co-PIs: R.G. Haight, S.A. Snyder and J.R. Miller. <u>USDA Forest Service</u> , Northern Research Station. St. Paul, MN. \$20,000 (\$16,500 of which was UW) . 9/2007-10/2010
	(5) <i>ECOSEL Experimental Auctions in New Zealand</i> . PI: S.F. Tóth , Co-PIs: G.J Ettl, and S.S. Rabotyagov. <u>Forest Research Institute (Scion)</u> , New Zealand. Rotorua, New Zealand. \$31,194 (100% UW) . 4/2010-8/2010
▪ Internal, competitive:	(4) <i>Lagrangian Pricing of Climate Uncertainty in Discount Premiums for Spatially Explicit Forest Planning Models</i> . PI: S.F. Tóth , Co-PI: W. Jaross. <u>USDA CSREES McIntire-Stennis Formula Fund</u> . \$32,547 (internal allocation within UW) . 1/2019-6/2019
	(3) <i>Providing Forest Ecosystem Services with the ECOSEL Auction Mechanism in Experimental Settings</i> . PI: S.F. Tóth , Co-PIs: S.S. Rabotyagov and G.J. Ettl. <u>USDA CSREES McIntire-Stennis Formula Fund</u> . \$32,420 (internal allocation within UW) . 1/2009-9/2009
▪ Co-PI-ed grants:	(2) <i>Proposal for the University of Washington to join the I/UCRC Center for Advanced Forest Systems</i> . Lead-PI: D. Briggs, Co-PIs: R. Harrison, L.M. Moskal, S.F. Tóth and E. Turnblum. <u>National Science Foundation</u> . \$350,000 (100% UW) . 1/2009-
	(1) <i>Development of a LIDAR-driven forest inventory protocol</i> . Lead-PI: L.M. Moskal, Co-PI: S.F. Tóth . <u>USDA Forest Service</u> , Pacific Northwest Research Station. Portland, OR. \$55,000 (100% UW) . 2/2009-

<u>Graduate Student Chair/Committees:</u>	Students - Current
	▪ M. Bagaram (PhD Forest Resources): August 2017 –
	▪ C. Pastore (MS Quantitative Ecology & Resource Management): August 2016 –
	Visiting Students
	▪ A.P. Arranz (Forest Resources): March – October 2017
	PhD Students - Graduated
	▪ N. Könnnyű (Forest Resources): June 2008- Dec. 2011
	▪ R. Kantawichai (Forest Resources): Oct. 2009- Dec. 2011 (Co-chair w/ D. Briggs)
	▪ S. Kushch (Forest Resources): December 2008 – December 2013
	▪ R. St. John (Industrial Engineering): January 2012 – March 2016
	▪ K. Ross (Quantitative Ecology & Resource Management): June 2013 - December 2016
	MS Students - Graduated
	▪ E. Burns (Quantitative Ecology & Resource Management): June 2009- March 2011
	▪ R. Krieg (Quantitative Ecology & Resource Management): June 2010- Dec., 2011
	▪ T. Walter (Forest Resources): October 2009- December 2011 (Co-chair w/ G. Ettl)
	▪ G. Passolt (Quantitative Ecology & Resource Management): June 2010 – May 2012 (Co-chair w/ J. Anderson)
	▪ N. Kullman (Quantitative Ecology & Resource Management): July 2014 – Dec. 2017
	Graduate committee membership
	▪ K. Ceder (PhD Forest Resources): January 2010 –
	▪ A. Fullerton (PhD Forest Resources): Sept. 2011 – May 2016
	▪ A. Phillips (PhD Quant. Ecology & Resource Management): Oct. 2013 – Mar. 2017

	<ul style="list-style-type: none"> ▪ Jose Alejandro Samper Casas (PhD Mathematics): January 2014 – 2016 ▪ Danica Xiao (Industrial Engineering): April 2015 - November 2016 ▪ C. Schloss (MS Forest Resources): October 2009- August 2011
<u>Post Docs/ Visiting Scientists:</u>	<p>Visiting Scientists</p> <ul style="list-style-type: none"> ▪ K. Czimber (University of Western Hungary, Sopron): December 2015-July 2016 ▪ José C. Borges (University of Lisbon, Portugal): July-August 2017 ▪ Manuela Oliveira (University of Évora, Portugal): July-August 2017 <p>Postdoctoral Scientist</p> <ul style="list-style-type: none"> ▪ S. Kushch (Forest Resources): January 2014 – December 2015
<u>Invited/ Keynote Speaker:</u>	<p>(13) Tóth, S.F.: Dynamic Reserve Selection in the Face of Climate Change. <i>Models and decision Support tools for integrated FOREst policy development under global change and associated Risk and UNcertainty. Lisbon, Portugal (2/18/2016)</i></p> <p>(12) Tóth, S.F.: ECOSEL: Selling Forest Ecosystem Services Marketing Tool. <u>Keynote.</u> <i>Models and decision Support tools for integrated FOREst policy development under global change and associated Risk and UNcertainty. Lisbon, Portugal (2/16/2016)</i></p> <p>(11) Tóth, S.F.: Egész-számú Programozáson Alapuló Erdészeti és Természetvédelmi Téroptimalizáció. <i>Hungarian Forest Research Institute. Sárvár, Hungary (3/13/2015)</i></p> <p>(10) Tóth, S.F.: ECOSEL: Selling Forest Ecosystem Services Marketing Tool. <u>Keynote.</u> <i>Forestry Modelling for Integrated Policy, A European Cooperation in Science & Technology (COST) Action FP1207 (ORCHESTRA). Cascais, Portugal, (3/9/2015)</i></p> <p>(9) Tóth, S.F.: ECOSEL: A Forest Ecosystem Services Marketing Tool. <u>Keynote.</u> <i>Decision Support System Workshop and Community of Practice. Lisbon, Portugal, (12/4/2013)</i></p> <p>(8) Tóth, S.F.: Multi-Objective Optimization for Forest Ecosystem Services. <u>Keynote</u> <i>Decision Support Systems for Sustainable Forest Management. Umeå, Sweden, (4/24/2013)</i></p> <p>(7) Tóth, S.F., S.S. Rabotyagov, G.J. Ettl and L.W. Rogers. ECOSEL: Selling Forest Ecosystem Services. One of seven invited to present at the <i>International Conference on New Frontiers of Forest Economics ETH, Zurich, Switzerland, (6/27/2012)</i></p> <p>(6) Tóth, S.F., ECOSEL: Linking Biometrics with Economics to Sell Forest Ecosystem Services. <u>Keynote</u> - 2010 Joint Western Forest Economists and Mensurationists Meeting. <i>Newport, Oregon, USA (6/10/2012)</i></p> <p>(5) Tóth, S.F. and N. Könnyű. A Cutting-Plane Method for Solving Harvest Scheduling Models with Area Restrictions. <i>2011 FORMATH, Tokyo, Japan (11/22/2011)</i></p> <p>(4) Tóth, S.F., G.J. Ettl, S.S. Rabotyagov, N. Könnyű, and L. Rogers . ECOSEL: Selling Forest Ecosystem Service. <i>International forum for Ecosystem Adaptability Science III: Adaptability of Human Societies to Perturbations, Sendai, Japan (11/17/2011)</i></p> <p>(3) Tóth, S.F., S.S. Rabotyagov, and G.J. Ettl: Forest Ecosystem Services and Auctions: Emerging Opportunities for Operations Research and the Management Sciences. <u>Keynote</u> Presentation for the <i>2009 Symposium for Systems Analysis in Forest Resources, Charleston, SC (5/29/2009)</i></p> <p>(2) Tóth, S.F.: Using Spatial Tradeoffs to Build Consensus and to Value Non-Market Services in Forest Management. <i>FORMATH Kobe 2007 International Meeting, Kobe, Japan (3/17/2007)</i></p> <p>(1) Tóth, S.F., T. Ueki and M.E. McDill: Monitoring the Forest Resources and Management of Private Landowners in Nagano, Japan. <i>FAO World Forestry Congress - XII, Quebec City, Canada (09/27/2003)</i></p>
<u>Professional Conference Presentations:</u>	<p>(49) *Kullman, N. & S.F. Tóth. Quantifying Conflict between Competing Forest Ecosystem Services under Alternative Climate Scenarios. <i>2017 Symposium on Systems Analysis in Forest Resources, Suquamish, WA (8/30/2018)</i></p>

**Professional
Conference
Presentations
(cont.):**

- (48)*Pastore, C., **S.F. Tóth**, & H.E. Andersen. Optimal Sampling Design in Forest Resource Survey. *2017 Symposium on Systems Analysis in Forest Resources, Suquamish, WA (8/29/2018)*
- (47) **Tóth, S.F.**, C. Pastore, K. Czimber, & H.E. Andersen. Optimal Sampling Design for Forest Carbon with No Bias and Minimal Spatial Autocorrelation. *2017 FORMATH Annual Meeting, Hiroshima, Japan (3/17/2017)*
- (46) **Tóth, S.F.** Review of models, methods and decision support systems at the U. of Washington. *2017 SuFoRun Annual Meeting, State College, PA (1/19/2017)*
- (45)*Kullman, N. & **S.F. Tóth**. Quantifying the Conflict between Competing Forest Ecosystem Services under Alternative Climate Scenarios. *2016 INFORMS Annual Meeting, Nashville, TN (11/16/2016)*
- (44) **Tóth, S.F.**, C. Pastore, K. Czimber, & H.E. Andersen. Optimal Carbon Sampling in Remote Forest Regions. *2016 INFORMS Annual Meeting, Nashville, TN (11/15/2016)*
- (43)* St.John, R., K. Öhman, **S.F. Tóth**, P. Sandström, A. Korosuo, and L.O. Eriksson. Wildlife Corridors in Harvest Scheduling Models: A Case Study in Northern Sweden. *2015 INFORMS Annual Meeting, Philadelphia, PA (11/2/2015)*
- (42)* Kullman, N., and **S.F. Tóth**. Multi-objective Optimization to Study the Impact of Climate Change on the Joint Provision of Ecosystem Services. *2015 INFORMS Annual Meeting, Philadelphia, PA (11/3/2015)*
- (41)* Phillips, A., **S.F. Tóth**, and R.G. Haight. Incorporating Acclimation and Feedback into Reserve Selection During Climate Change. *2015 INFORMS Annual Meeting, Philadelphia, PA (11/3/2015)*
- (40)*St.John, R., **S.F. Tóth**, L.O. Eriksson, K. Öhman, A. Korosuo, and P. Sandström. Width-Constrained Reserve Design. *2015 Symposium for Systems Analysis in Forest Resources, Umea, Sweden (8/19/2015)*
- (39)*Ross, K., and **S.F. Tóth**. A New Model to Capture Edge Effects in Forest Management. *2015 Symposium for Systems Analysis in Forest Resources, Umea, Sweden (8/19/2015)*
- (38) **Tóth, S.F.**, A. Phillips, & R.G. Haight. Dynamic Reserve Selection in the Face of Climate Change. *2015 Symposium for Systems Analysis in Forest Resources, Umea, Sweden (8/20/2015)*
- (37)* Ross, K., and **S.F. Tóth**. Incorporating Edge Effects in Harvest Scheduling. *2014 INFORMS Annual Meeting, San Francisco (10/10/2014)*
- (36)* Ross, K., **S.F. Tóth**, and W. Jaross. Optimal Harvest Schedules with Endogenous Maintenance Costs. *2014 INFORMS Annual Meeting, San Francisco (10/9/2014)*
- (35)**Tóth, S.F.**, K. Ross and W. Jaross. Integrated Forest Roads Maintenance and Harvest Scheduling with Endogenous Costs. *15th International Conference on Operations Research, Osijek, Croatia (9/25/2014)*
- (34)* St.John, R., and **S.F. Tóth**. Width-Constrained Reserve Design. *2013 INFORMS Annual Meeting, Minneapolis, MN (10/6/2013)*
- (33)*St.John, R., and **S.F. Tóth**. Width-Constrained Reserve Design. *2013 Symposium for Systems Analysis in Forest Resources, Quebec City, Canada (8/20/2013)*
- (32) Ettl, G.J., **S.F. Tóth**, S.S. Rabotyagov, L.W. Rogers, N. Könnnyű, J. Comnick, P. Fischer, K. Ceder & A. Wirsing. ECOSEL: An Online Market Mechanism for Monetizing Ecosystem Services. *2012 SAF Annual Convention, Spokane, WA (10/27/2012)*
- (31) Fischer, P., G.J. Ettl, **Tóth, S.F.**, N. Könnnyű, J. Comnick and K. Ceder. Effects of Harvest Practices on Carbon Sequestration in Western Washington. *2012 SAF Annual Convention, Spokane, WA (10/26/2012)*

**Professional
Conference
Presentations
(cont.):**

- (30)*Kushch, S.A. and **S.F. Tóth**. Multiobjective Forest Planning in the Deshutes National Forest, United States. *2012 SAF Annual Convention, Spokane, WA (10/26/2012)*
- (29) **Tóth, S.F.**, and R. St.John. The Computational Properties of Model 4 Harvest Scheduling Models. *2012 INFORMS Annual Meeting, Phoenix, AZ (10/16/2012)*
- (28) **Tóth, S.F.**, S.A. Kushch, G.J. Ettl, R. Deal, T.E. Mafera and L. Yanez. Fire, Water and Owl: Multi-objective Forest Planning in the Deschutes National Forest, USA. *2012 INFORMS Annual Meeting, Phoenix, AZ (10/16/2012)*
- (27) **Tóth, S.F.**, E.S. Burns and R.G. Haight. A Modeling Framework for Life History-based Conservation Planning. *2012 INFORMS Annual Meeting, Phoenix, AZ (10/14/2012)*
- (26) Ettl, G.J., **Tóth, S.F.**, N. Könnnyű, J. Comnick, K. Ceder, S.S. Rabotyagov, A. Wirsing and L.W. Rogers. ECOSEL, An Online Market-based Tool for Monetizing Ecosystem Services: Pack Forest, A Case Study. *2012 ESA Annual Meeting, Portland, OR (8/8/2012)*
- (25) **Tóth, S.F.**, S.A. Kushch, G.J. Ettl, R. Deal, T.E. Mafera and L. Yanez. Fire, Water and Owl: Multi-objective Forest Planning in the Deschutes National Forest, Oregon, USA. *IUFRO Division 5 Conference. Estoril, Portugal (7/10/2012)*
- (24) **Tóth, S.F.**, G.J. Ettl, S.S. Rabotyagov, N. Könnnyű, and L. Rogers . Selling Forest Ecosystem Services with ECOSEL: A Case Study at Pack Forest Washington. *2011 INFORMS Annual Meeting, Charlotte, NC (11/14/2011)*
- (23)*Könnnyű, N., and **S.F. Tóth**. A New Cluster Enumeration Algorithm for the Minimum Patch Size Problem. *2011 INFORMS Annual Meeting, Charlotte, NC (11/13/2011)*
- (22)*Könnnyű, N., and **S.F. Tóth**. Quantifying the Economic and Landscape Implications of Clear-cut Size Restrictions w/ Brach-And-Cut. *2011 INFORMS Annual Meeting, Charlotte, NC (11/14/2011)*
- (21)*St. John, R., and **S.F. Tóth**. Model IV: Adaptive Volume Coefficients and Discrete-Time Differential Equations Forest Planning. *2011 INFORMS Annual Meeting, Charlotte, NC (11/14/2011)*
- (20)*St. John, R., and **S.F. Tóth**. A Network Formulation for Wildlife Corridors in Forest Harvest Scheduling Models. *2011 INFORMS Annual Meeting, Charlotte, NC (11/16/2011)*
- (19)*St. John, R., and **S.F. Tóth**. Combining Cluster Packing with the Path Formulation for Spatially Explicit Harvest Scheduling Models. *2011 INFORMS Annual Meeting, Charlotte, NC (11/14/2011)*
- (18) **Tóth, S.F.**, R.G. Haight, and L. Rogers. Dynamic Reserve Selection in the Presence of Land-Price Feedback Effects: Sensitivity Analyses and Computational Performance. *2011 Symposium for Systems Analysis in Forest Resources. Maintencillo, Chile (3/11/2011)*
- (17)*Burns, E.S., **S.F. Tóth**, and R.G. Haight. A Modeling Framework for Life History-Based Conservation Planning. *2011 Symposium for Systems Analysis in Forest Resources. Maintencillo, Chile (3/11/2011)*
- (16)*St. John, R., and **S.F. Tóth**. Using Adaptive Volume Coefficients in Multi-harvest Forest Planning Models. *2011 Symposium for Systems Analysis in Forest Resources. Maintencillo, Chile (3/11/2011)*
- (15)*Könnnyű, N., and **S.F. Tóth**. A Cutting-Plane Method for Solving Harvest Scheduling Models with Area Restrictions. *2010 INFORMS Annual Meeting, Austin, TX (11/8/2010)*
- (14)*Kushch, S.A., **S.F. Tóth**, J. Turner, and S.S. Rabotyagov. Bundling Water Quality and Native Forest Restoration Services in a New Zealand Forest Plantation. *2010 INFORMS Annual Meeting, Austin, TX (11/9/2010)*
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**Professional
Conference
Presentations
(cont.):**

- (13) **Tóth, S.F.**, R.G. Haight, S.A. L.W. Rogers. Dynamic Reserve Selection: Modeling Land Price Feedback Effects in Strategic Land Retention. *2009 INFORMS Annual Meeting, San Diego, CA (10/11/2009)*
- (12) Rabotyagov, S.S., **S.F. Tóth** and G.J. Ettl. Experimental Testbeds for ECOSEL: Market Framework for Private provision of Forest Ecosystem Services. *The Agricultural and Applied Economics Association 2009 Joint Annual Meeting, Milwaukee, WI. (7/27/2009)*
- (11) **Tóth, S.F.**, R.G. Haight, S.A. L.W. Rogers. Dynamic Reserve Selection: Modeling Land Price Feedback Effects in Strategic Land Retention. *23rd European Conference on Operational Research. Bonn, Germany (7/7/2009)*
- (10) **Tóth, S.F.**, R.G. Haight, S.A. Snyder, M. Gregory, A.M. Skibbe and J.R. Miller: Optimal Reserve Selection Subject To Contiguous Habitat Requirements. *2008 INFORMS Annual Meeting, Washington DC (10/12/2008)*
- (9) **Tóth, S.F.**, G.J. Ettl and L. Rogers: Multi-criteria Optimization to Auction Forest Ecosystem Services. *2008 INFORMS Annual Meeting, Washington DC (10/12/2008)*
- (8) **Tóth, S.F.**: Multi-Objective Optimization to Auction Forest Ecosystem, *Western Forest Economists 43rd Annual Meeting, Welches, Oregon (5/7/2008)*
- (7) McDill, M.E. and **S.F. Tóth**: Does the size in ARM matter? *2007 INFORMS Annual Meeting, Forestry Applications, Seattle, Washington, (11/2/2007)*
- (6) **Tóth, S.F.**: A linear approach to model sigmoid growth curves. *2006 INFORMS Annual Meeting, Forestry Applications, Pittsburgh, Pennsylvania, (11/6/2006)*
- (5) **Tóth, S.F.** and M.E. McDill: Numerical Issues in Multi-Objective Spatial Forest Planning. *2006 Symposium for Systems Analysis in Forest Resources, Burlington, Vermont, (9/8/2006)*
- (4) **Tóth, S.F.** and M.E. McDill: Finding the Efficient Frontier of a Tri-Criteria, Spatially Explicit, Harvest Scheduling Model. *2005 INFORMS Annual Meeting, Forestry Applications, San Francisco, California, (11/16/2005)*
- (3) **Tóth, S.F.**, M.E. McDill and S. George: The Computational Performance of Strengthened Cover Inequalities in Area-based Harvest Scheduling. *2005 INFORMS Annual Meeting, Forestry Applications, San Francisco, California, (11/16/2005)*
- (2) McDill, Marc E., **S.F. Tóth** and S. George: Strengthening Cover Inequalities for Area-Based Adjacency Formulations of Harvest Scheduling Models. *2004 INFORMS Annual Meeting, Forestry Applications, Denver, Colorado (10/25/2004)*
- (1) **Tóth, S.F.** and M.E. McDill, S.A. Rebaun: Exploring the Efficient Frontier of a Bi-Criteria, Spatially Explicit, Harvest Scheduling Model. *2003 Symposium on Systems Analysis in Forest Resources, Stevenson, Washington, (10/09/2003)*

*: Student presentations with Tóth serving as major advisor.

OUTREACH

**Invited
seminars,
guest lectures,
stakeholder
workshops
and tutorials
(6/16/07 –):**

- (37) **Tóth, S.F.**, Integer Optimization in Forestry and Conservation. Guest Seminar for the Institute of Complex Systems Engineering, University of Chile, Santiago (3/22/2018)
 - (36) **Tóth, S.F.**, Multi-Objective Spatial Optimization to Provide Forest Ecosystem Services from Chile's Plantation Forests. Seminar for the Fulbright Commission Chile, Santiago (3/9/2018)
 - (35) **Tóth, S.F.**, Can Sampling Design be Optimized. Invited Seminar at the Faculty of Forestry, University of British Columbia, Vancouver, Canada (10/23/2017)
 - (34) **Tóth, S.F.**, Binary Programming in Forestry and Natural Resources. Guest lecture at the Faculty of Forestry, University of British Columbia, Vancouver, Canada (10/23/2017)
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Invited seminars, guest lectures, stakeholder workshops and tutorials (Cont.):

- (33) **Tóth, S.F.**, Optimal Sampling Design with No Bias and Minimal Spatial Autocorrelation. School of Aquatic & Fisheries Sciences Quantitative Seminar, College of the Environment, U. of Washington, Seattle, WA (12/9/2016)
 - (32) **Tóth, S.F.**, A series of three seminars on spatial optimization. Instituto Superior de Agronomia, MedFor Consortium, Lisbon, Portugal (12/2-3/2014, 3/3-3/26/2015)
 - (31) **Tóth, S.F.**, ECOSEL Workshop. Porto, Portugal (11/28/2014)
 - (30) **Tóth, S.F.** ECOSEL Workshop. Leiria, Portugal (11/27/2014)
 - (29) **Tóth, S.F. and Jaross, W.**, Woodstock-Spatial Optimization Workshop, Eatonville, WA (4/15/2014-4/16/2014)
 - (28) **Tóth, S.F.**, Ecosel Workshop at the invitation of the University of Hyogo, Kobe, Japan (12/18/2013)
 - (27) **Tóth, S.F.**, A series of three seminars on spatial optimization. Instituto Superior de Agronomia, MedFor Consortium, Lisbon, Portugal (12/2-6/2013)
 - (26) **Tóth, S.F.**, Spatially Explicit Harvest Scheduling with Integer Programming. Invited Tutorial in Integer Programming, Portland, OR (5/11/2012)
 - (25) **Tóth, S.F.** Advances in Spatially Explicit Harvest Scheduling at the UW's Precision Forestry Coop. Invited Seminar, Port Blakely Tree Farms. Tumwater, WA (2/9/2012)
 - (24) **Tóth, S.F.**, S.A. Kushch, G.J. Ettl, R. Deal, T.E. Mafera and L. Yanez. Fire, Water and Owl: Multi-objective Forest Planning in the Deschutes National Forest, central Oregon, USA. Invited Seminar at the UW Industrial Engineering Dept., Seattle, WA (11/8/2011)
 - (23) **Tóth, S.F.**, GIS in Aid of Natural Resource Management Planning. Guest Lecture for ESRM250 – Introduction to GIS, University of Washington (10/25/2011)
 - (22) Ettl, G.J., S.S. Rabotyagov, and **S.F. Tóth**. ECOSEL: An Auction Mechanism for Forest Ecosystem Services. Invited Seminar at the Catholic University of Chile, Santiago, Chile (3/22/2010)
 - (21) **Tóth, S.F.**, R.G. Haight, S.A. L.W. Rogers. Dynamic Reserve Selection: Modeling Land Price Feedback Effects in Strategic Land Retention. Invited Seminar at the UW Industrial Engineering Department, Seattle, WA (10/20/2009)
 - (20) **Tóth, S.F.** The Role of GIS in Building an Auction Mechanism for Forest Ecosystem Services. Guest Lecture for ESRM250 – Introduction to GIS, University of Washington (2/9/2009)
 - (19) **Tóth, S.F.**, G. Ettl and S.S. Rabotyagov: ECOSEL: Selling Forest Ecosystem Services – A Workshop and Mock Auction. The USDA Forest Service Northwest Research Station, Corvallis, Oregon (1/21/2009)
 - (18) **Tóth, S.F.** ECOSEL: An auction mechanism to sell forest ecosystem services. Invited Seminar at the Weyerhaeuser Corporation Headquarters, Federal Way, Washington (12/2/2008).
 - (17) **Tóth, S.F.** The Role of GIS in Building Optimal Reserve Selection Models. Guest Lecture for ESRM250 – Introduction to GIS, University of Washington (11/20/2008)
 - (16) **Tóth, S.F.** Guest Seminar Facilitator for Bioresource-based Energy for Sustainable Societies NSF-IGERT Program, University of Washington (11/18/2008)
 - (15) **Tóth, S.F.**, R.G. Haight, S.A. Snyder, S. George, J.R. Miller, M. Gregory and A.M. Skibbe. Optimal Reserve Selection with Minimum Contiguous Area Restrictions. Autumn 2008 UW College of Forest Resources Faculty Research Forum, Seattle, Washington (11/17/2008)
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Invited seminars, guest lectures, stakeholder workshops and tutorials (cont.):

- (14) **Tóth, S.F.**, G. Ettl and S.S. Rabotyagov. An Auction-Based Funding Mechanism for Recreational Services in Washington State Forestlands. Invited Seminar at a Washington State Department of Natural Resources Advisory Meeting. Snoqualmie, Washington (11/13/2008).
 - (13) **Tóth, S.F.**, G. Ettl and S.S. Rabotyagov: How Much Would You Pay to Produce Forest Ecosystem Services? – An Auction. The 2008 Northwest Environmental Forum. Blaine, Washington (10/30/2008).
 - (12) **Tóth, S.F.** and G. Ettl. An Auction Mechanism to Sell Forest Ecosystem Services. Invited Seminar at the October 17, 2008 Nisqually River Council Meeting. Longmire, Washington (10/17/2008).
 - (11) **Tóth, S.F.** Reserve Selection with Minimum Contiguous Area Restrictions. UW Aquatic & Fishery Sciences Quantitative Seminar. Seattle, Washington (9/26/2008).
 - (10) **Tóth, S.F.** Multi-objective Optimization to Auction Forest Ecosystem Services. Invited Seminar at the Washington State Department of Natural Resources. Olympia, Washington (7/1/2008).
 - (9) **Tóth, S.F.** The Role of GIS in Aid of Optimal Reserve Selection. Guest Lecture for ESRM250 – Introduction to GIS, University of Washington (5/8/2008)
 - (8) **Tóth, S.F.** Spatial Optimization in Natural Resource Management. UW Quantitative Ecology and Resource Management Seminar. Seattle, Washington (4/8/2008).
 - (7) **Tóth, S.F.** Multi-criteria optimization to auction forest ecosystem services. Seminar, USFS PNW Research Station, Portland, OR (2/20/2008)
 - (6) **Tóth, S.F.** Combinatorial Optimization in Spatial Forest Planning. Invited seminar for the Combinatorics Group at the UW Dept. of Mathematics. Seattle, WA, (2/6/2008)
 - (5) **Tóth, S.F.** Spatial Optimization in Natural Resources. Invited seminar at the Department of Natural Resources, Olympia, Washington (12/13/2007)
 - (4) **Tóth, S.F.** Multi-criteria Modeling Meeting Port Blakely Tree Farms, Tumwater, WA (12/12/2007)
 - (3) **Tóth, S.F.** The Adjacency Problem in Forest Management. Invited seminar at the UW Department of Mathematics. Seattle, WA, (12/7/2007)
 - (2) **Tóth, S.F.** Developing Quantitative Decision Tools to Aid Forest Natural Resource Management. Invited seminar at the Olympic Natural Resources Center. Forks, WA, (11/19/2007)
 - (1) **Tóth, S.F.** Spatial Optimization in Natural Resources. Invited seminar at the UW Department of Industrial Engineering. Seattle, WA, (10/9/2007)
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TEACHING

Teaching:

- University of Washington: Forest Management & Economics (ESRM 461); Optimization Techniques for Natural Resources (CFR540) in spring quarters. Student Evaluation: min: 3.00; max: 5.00.
 - Oklahoma State University: Timber Management (FOR 4223). Student Evaluation: 3.88/4.00 for instructor and 3.43/4.00 for course
 - Oklahoma State University: Forest Economics and Finance (FOR 3993). Student Evaluation: 4.00/4.00 for instructor and 3.63/4.00 for course
 - University of Lisbon, Instituto Superior de Agronomia: Applied Operations Research (graduate course). Spring in 2015 and 2016.
 - University of Chile, Department of Industrial Engineering: Model Building for Spatial Optimization with Integer Programming (graduate course). Austral fall, May-July 2018.
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SERVICE

<u>Journal Reviews:</u>	<ul style="list-style-type: none"> ▪ Forest Science Special Issue Editor (SSAFR 2017) ▪ Natural Resource Modeling (<u>Associate Editor</u>) ▪ Operations Research ▪ Biomass & Bioenergy ▪ Forest Science (<u>Associate Editor</u>) ▪ Biological Conservation ▪ Journal of Environmental Economics and Management ▪ Canadian Journal of Forest Research ▪ Scandinavian Journal of Forest Research 	<ul style="list-style-type: none"> ▪ Ecological Applications ▪ Eur. J. of Operational Research ▪ Landscape Ecology ▪ Southern Journal of Applied Forestry ▪ Mathematical and Computational Forestry & Natural-Resource Sciences ▪ Journal of Forestry
<u>Professional Associations:</u>	<ul style="list-style-type: none"> ▪ International Union of Forest Research Organizations (IUFRO) ▪ INFORMS: Institute for Operations Research and the Management Sciences <ul style="list-style-type: none"> ▪ Sub-division: ENRE (Energy, Natural Resources and the Environment) ▪ Society of American Foresters ▪ MCDM: International Society on Multiple Criteria Decision Making ▪ Xi Sigma Pi (Forestry Honor Society) 	
<u>Other Services:</u>	<ul style="list-style-type: none"> ▪ Symposium Chair for 2017 Symposium on Systems Analysis of Forest Resources (2016-) ▪ School of Environmental & Forest Sciences Elected Faculty Advisory Council member ▪ Hydrology Faculty Search Committee member (2017) ▪ Ecosystem Science & Services Faculty Search Committee member (2016) ▪ Quantitative Wildlife Faculty Search Committee member (2015) ▪ Coordinator for the International Union of Forest Research Organizations (IUFRO) ▪ Subject Matter Reviewer for the USDA Forest Service ▪ Panel member and site-referee for the Natural Sciences and Engineering Research Council of Canada 	
<u>Other Services (cont.):</u>	<ul style="list-style-type: none"> ▪ Executive Director of Symposium on Systems Analysis of Forest Resources (Aug. 2017-) ▪ Chair of Best Publication Award Committee for Natural resources (2012 – 2015), Institute of Operations Research and the Management Sciences ▪ Presentation Referee for the 2006 and the 2009 Annual Meetings of the Institute of Operations Research and the Management Sciences ▪ Core Faculty Member of the University of Washington’s Quantitative Ecology and Resource Management interdisciplinary graduate program ▪ School of Environmental and Forest Sciences Promotion, Merit and Tenure Committee (2013-) ▪ College of Forest Resources Dean’s Budget Advisory Committee Member (2008) ▪ School of Environmental and Forest Sciences Search Committee for position in quantitative wildlife management (2015) ▪ School of Environmental and Forest Sciences Search Committee for position in ecosystem science and services (2016) ▪ University of Washington Faculty Senate (2009-2011) ▪ School of Environmental and Forest Sciences Curriculum Committee (2009-10) ▪ Quantitative Ecology and Resource Management Qualifying Exam Chair (2014-2015) ▪ Quantitative Ecology and Resource Management Curriculum Task Force (2009-2010) ▪ Quantitative Ecology and Resource Management Admissions Committee (2009-2010) ▪ SEFS Representative of UW Math Across Campus (2009-) ▪ College of Forest Resources Elected Faculty Advisory Council member 	
<u>Languages:</u>	Fluent in Hungarian, Japanese and English, Beginner Spanish	

<u>Technical Skills:</u>	Linear, integer, dynamic and multi-objective programming, discrete event system simulation, spatially-explicit harvest/road scheduling models, stand, forest and landscape-level decision making tools, economic optimization and financial analysis.
<u>Computer Skills:</u>	Microsoft Office (Excel, Word, Access, Power Point), Microsoft Visual Studio (Visual Basic), MINITAB (statistics), LINDO (optimizer), CPLEX (optimizer), AutoMod (simulator), Database Programming with VB, ESRI ArcInfo (GIS), LaTeX
<u>Immigration Status:</u>	U.S. Citizen
