CURRICULUM VITAE
Ph.D. Candidate Ergin C. Cankaya

PERSONAL INFORMATION

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EDUCATION

2023 - Ongoing	**Ph.D., Renewable Resources** University of Alberta, Edmonton, AB **Thesis Title**: *Advancing Enhanced Forest Inventory with Multiple Lidar Platforms and Multispectral Sensor Across Diverse Forest Types in Alberta* **Advisor**: Dr. Robert E. Froese
2016 - 2018	**M.Sc., Forest Resources and Environmental Conservation** Virginia Polytechnic Institute and State University, Blacksburg, VA **Thesis Title**: *Testing methods for calibrating Forest Vegetation Simulator (FVS) diameter growth predictions* **Advisor**: Dr. Harold Burkhart and Dr. Phil Radtke
2016 - 2017	**Certificate Program, Intensive English Education** The University of Georgia, Intensive English Program, Athens, GA
2009 - 2013	**B.Sc. International Relations** Anatolia University, Faculty of Economics, Eskisehir, TR
2008 - 2012	**B.Sc. Forest Engineering** Sutcu Imam University , Faculty of Forestry, Kahramanmaras, TR **Thesis Title**: *Study of Open and Green Areas of Historical Urban Park (Stadtpark) in Vienna-Austria* **Advisor**: Dr. Murat Zengin

RESEARCH INTEREST

- Remote sensing applications in forest growth and yield modeling using multiple lidar platforms in mixed forest,
- Monitoring forest structure changes and canopy dynamics pre- and post-thinning treatments using lidar platforms,
- Dominant and understory tree species classification combining multispectral and drone-based lidar platforms,
- Extraction of forest inventory metrics via different lidar platforms using machine learning algorithms with full-automated process.

EXPERIENCE

2023 (Ongoing)	**Position:** Graduate Research Assistantship Fellowship **Organization:** University of Alberta, Edmonton, AB **Project**: MPB PSP Enhanced Forest Monitoring **Supervisor**: Dr. Robert Froese
2016 – 2023 - 2024	**Position:** Graduate Teaching Assistant **Organization:** Virginia Tech, Blacksburg, VA and UofA, Edmonton, AB **Course**: Intro Land and Field Measurements (FREC 2214), Forest Measurement (RENR 215), Special Topics in Field Skills and Their Application in For Science (RENR 295), Introduction to Geomatic Techniques in Natural Resource Man. (RENR 201) **Duties**: Grading, helping with student's final project, managing lab sessions
2021-2022	**Position:** Project Leader **Project:** Automated Approach for Extracting Forest Inventory Data from Individual Trees Using a Handheld Mobile Laser Scanner **Duties:** Surveying, extracting forest inventory (diameter at breast height, tree height, stem position and quality, crown cover, volume), machine learning algorithms application and overcoming big data problems.

2018 - 2023	**Position:** Technical Expert, Ankara, TURKEY
	Organization: The General Directory of Forestry (GDF)
	Department: Forest Management and Planning
	Duties: Modeling forest stand dynamics, growth and yield; applying quantitative analysis techniques to forestry problems

2019-2023	**Position:** Technical Expert, Ankara, TURKEY
	Project: Land Use, Land-Use Change and Forestry (LULUCF)
	Organization: United Nations Framework Convention on Climate Change (UNFCC) cooperated with GDF
	Duties: Technical assessment sessions of proposed forest reference emission levels and/or forest reference levels for the implementation of the activities referred to in decision gold standards in Turkey

2018-2019	**Position:** Project Co-Leader, Ankara, TURKEY
	Project: Integrated Approach to Management of Forests in Turkey, with Demonstration in High Conservation Value Forests in the Mediterranean Region, TURKEY & USA
	Collaboration: Yale University, University of Washington, The General Directorate of Forestry in Turkey, United Nation Development Program (UNDP)
	Duties: Calibration of tree species, maintenance and optimization of FEMS application
	Supervisor: Pinchot Professor Emeritus, Chadwick Dearing Oliver, Yale University

2018-2020	**Position:** Project Co-Leader, Ankara, TURKEY
	Project: Project Forest Resources Assessment and Monitoring to Strengthen Forestry Policy and Knowledge Framework, TURKEY & AZERBAIJAN
	Duties: Development of forest growth and yield models
	Collaborations: General Directorate of Forestry, TURKEY and UNDP

2019-2020	**Position:** National Forest Inventory (NFI) Expert
	Organization: The General Directorate of Forestry, Ankara
	Duties: Database management, data collection and creating web application with RShiny for Turkish NFI

2017-Summer	**Position:** Forest Engineer
	Organization: U.S. Forest Service
	Project: Biomass Sampling and Measurements, Escalante, UT
	Graduate Teaching and Research Assistantships

2011 (Summer)	**Position:** Forest Engineer (Erasmus Summer Internship)
	Organization: University of Natural Resources and Applied Life Sciences (BOKU), Institute of Silviculture, Vienna, Austria
	Duties: Sample preparation for tree ring analysis; collecting inventory, sampling, mapping for *Sorbus torminalis* and *Taxus baccata* species; Intensive field trips in Austrian forest
	Supervisor: Dr. Raphael Thomas Klumpp

2010 (Summer)	**Position:** Forest Engineer (Summer Internship)
	Organization: Saricam Forestry Operation Directorate, Adana, Turkey
	Duties: Remote Sensing Techniques and GIS Application in Forest Management; Ecosystem-Based Multiple Use Planning of Forest Resources; Intensive Field Trips

PUBLICATIONS

2024 (Under Review)	**Cankaya E.C.,** Sonmez T., Gencal B., 2024. Advancing Forest Land Monitoring in Istanbul Regional Directorate of Forestry: Integrating U-Net Deep Learning, Remote Sensing. Forestist.
2024 (Accepted)	**Cankaya E.C.,** Radtke P., 2024. Evaluating Local Calibration Methods for Improving Diameter Growth Predictions in the Southern Variant, Forest Vegetation Simulator (FVS-Sn), Forest Science.
2022	Sönmez, T., Gencal, B. and **Cankaya, E.C.,** 2022. Single-and double-entry volume equations for Turkey oak (*Quercus cerris* L.) stands in Bursa regional directorate of forestry. Forestist, 73(1), 51-62. https://doi.org/10.5152/forestist.2022.22010

2021	**Cankaya, E.C**. et al. 2021. Forest inventory with Handheld Mobile Laser Scanners in Karagol Sahara National Park, Forestry Research Journal, TR. 9(1), pp.81-96. https://doi.org/10.17568/ogmoad.1016879.
2017	Copenheaver, C.A., Pulice, M.J., Lawrence, N.J., Raso, C.H., **Cankaya, E.C**., Wan, H. et al. 2017. Dendroarchaeology reveals influence of early-European settlement on forest disturbance regimes in the Appalachian Mountains, USA. Ecoscience, 24 (1-2), 33-40. https://doi.org/10.1080/11956860.2017.1354579.

CONFERENCE PRESENTATIONS (Presenter indicates bold)

2023	**Cankaya E.,** Froese R., *Application Results of Handheld Mobile Lidar Study in Turkey*, Growth and Yield Innovations Conference, June 18-21, 2023, Canmore, AB.
2021	**Cankaya E.C**., *Decision Supports Systems for Forest Management* – Encountered Problems on Turkish Forest Management Planning System Workshop, 2021, Istanbul, TR.
2017	**Cankaya E.C**., Radtke P. *Seeking a Better Way to Calibrate FVS (Forest Vegetation Simulator) Growth and Yield Predictions in Virginia* - Southern Mensurationists Conference, 2017, Athens, GA.
2015	Bozali, N., **Cankaya, E**., Sivrikaya, F., Okumus, A. *Evaluating Forest-Based Land Use Change Trends Using a Cellular Automata-Markov Model: A Case Study of Turkey* - 38th Annual Council on Forest Engineering (COFE) Meeting Engineering Solutions for Non-Industrial Private Forest Operations July 19th – 22nd 2015, Lexington, KY.
2015	Sivrikaya, F., **Okumus, A**., Bozali, N., Cankaya, E. *Forest Road Network Effect on Forest Fire: A Case Study of Turkey* - 38th Annual Council on Forest Engineering (COFE) Meeting Engineering Solutions for Non-Industrial Private Forest Operations July 19th – 22nd 2015, Lexington, KY.
2015	**Bozali, N.,** Cankaya, E., Sivrikaya, F., Okumus, T*he Availability of Fire Risk Maps: A Case Study of Nurdagi Forest Planning Unit* - IV. Forest Construction-Transportation and Technology Workshop and Symposium on Precision Forestry in Forest Operations, June 4th and 6th, 2015, Kastamonu, TURKEY.
2015	**Sivrikaya, F**., Okumus, A., Bozali, N., Cankaya, E. *The Evaluation of the Forest Management Planning Process in Turkey in Terms of Precision Forestry* - IV. Forest Construction-Transportation and Technology Workshop and Symposium on Precision Forestry in Forest Operations, June 4th and 6th, 2015, Kastamonu, TURKEY.

PERSONAL SKILLS

Programming:
- High proficiency with modeling tools: R, SPSS, JMP Pro, Minitab,
- Advanced at PostgreSQL, ESRI products, Idrısı Selva, Erdas Imagine, WinDendro, Microsoft Office Apps,
- Familiar with Python, Java, HTML, MapInfo, Ubuntu, CentOS-GNU/Linux.

Instruments:
- GeoSLAM Zeb Horizon, DJI Matrice 300 RTK, DJI Mavic 3M, Rock Robotic R2A Lidar, Leica RTC360, Emlid Reach RS2 GNSS, DP II Computer Caliper, Vertex Lazer-VL5.

AWARDS/HONORS/ACHIEVEMENTS

2023	Graduate Recruitment Scholarship at University of Alberta (5.000 CAD)
2023	Graduate Teaching and Research Assistantships at University of Alberta (120.000 CAD)
2015	Turkish Ministry of National Education, Selection and Placement of Candidates Sent Abroad for Postgraduate Education in USA (150.000 USD)
2014	MVP (Most Valuable Player) in the Cross-Faculty Basketball Tournament
2011	LLP Erasmus Programme Traineeship in Austria (7.000 EURO)
2011-2012-2013-2014	The Cross-Faculty Basketball Tournament Championship at KSU
2008-2014	Faculty of Forestry Basketball Team Player at KSU
2009-2012	Nature and Environment Club Activities at BOKU University
2008	The Cross-High School Basketball Tournament Championship at KSU

CERTIFICATIONS

19 March 2023	Pilot certificate: Small Remotely Piloted Aircraft System (RPAS), Visual line-of-sight (VLOS), Certificate Number: PC2307821845
31 January 2023	Intermediate First Aid – Level C CPR and AED, Reference Number: 1030744791
3-9 March 2020	Statistical Modeling Techniques and Applications in Natural Sciences – TUBITAK and Haccetepe University
25-26 March 2019	Project Cycle Training – Ankara Development Agency
10 October 2018	R programming Language Certificate – Kodex IT R&D Unit, Middle East Technical University
25 October 2017	Basic Responsible Conduct of Research Course – CITI Program, Record ID: 24884114
10-25 June 2014	4th International Summer School Tree Rings, Climate, Natural Resources, and Human Interaction
08-10 May 2014	3rd International Non-wood Forest Products Symposium
08-10 May 2014	3rd International Non-wood Forest Products Symposium
03-06 September 2012	IUFRO 7.01.08 Hydroecology Conference (certificate of participation)

PERSONAL INTERESTS / MEMBERSHIPS

Personal Interests: Playing basketball, taking nature/wildlife photos, rockhounding, hiking.
Memberships:

- Bosnia and Herzegovina Culture and Solidarity Association – Adana, TURKEY
- Chamber of Forest Engineers - Ankara, TURKEY

REFERENCES

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