

## Personal information

Surname(s) / First name(s) **LECA Ștefan**  
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Mobile +40721974158  
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E-mail(s) stefan.leca@icas.ro  
Nationality Romanian  
Date of birth 02 July 1984  
Gender Male

## Desired employment / Occupational field

### Work experience

Dates 01 July 2008 - 02 February 2010  
Occupation or position held National Forest Inventory - Team leader  
Main activities and responsibilities -NFI team coordination  
Name and address of employer Forest Research and Management Institute - ICAS  
128 / Bd. Eroilor, Voluntari 077190 (Romania)  
Type of business or sector Forest Management  
Dates 01 February 2010 - 01 June 2012  
Occupation or position held Research assistant  
Main activities and responsibilities Member of the research team and collaborator in national and international projects.  
Name and address of employer Forest Research and Management Institute - ICAS  
128 / Bd. Eroilor, Voluntari 077190 (Romania)  
Type of business or sector Forestry research  
Dates 01 June 2012 - 2016  
Occupation or position held Researcher – Forest Biometrics and Monitoring Department  
Main activities and responsibilities Member of the research team and actions responsible in national and international projects.  
Name and address of employer Forest Research and Management Institute – ICAS / National Institute for R&D in  
Forestry “Marin Dracea” - INCDS  
128 / Bd. Eroilor, Voluntari 077190 (Romania)  
Type of business or sector Forestry research  
Dates 2016 - present  
Occupation or position held Senior Researcher / Head of Forest Management Department

Main activities and responsibilities Coordinator of the Romanian Forest Monitoring system  
Co- responsible of the Romanian NFC of UNECE ICP Forests program  
Responsible with NECD directive reporting information for Romanian forests.  
Responsible for national and international projects and activities.  
Coordination of the forest monitoring research laboratory.

Type of business or sector Forestry research  
Name and address of employer National Institute for R&D in Forestry "Marin Dracea" - INCDS  
128 / Bd. Eroilor, Voluntari 077190 (Romania)

### Education and training

Dates 01 October 2003 - 01 June 2008  
Title of qualification awarded forest engineer  
Principal subjects / occupational skills covered Forestry, technical studies  
Name and type of organisation providing education and training Faculty of Silviculture and Forest Engineering (University)  
1 / Str. Sirul Beethoven , 500123 Brasov (Romania)

Dates December 2014  
Title of qualification awarded PhD  
Principal subjects / occupational skills covered Dendrometrics, dendrochronology and auxology in Romanian forest monitoring system.  
Name and type of organisation providing education and training Faculty of Silviculture and Forest Engineering (University)  
(Romania)

### Personal skills and competences

Mother tongue(s) Romanian  
Other language(s)

Self-assessment <i>European level</i> (*)	Understanding		Speaking		Writing	
	Listening	Reading	Spoken interaction	Spoken production		
<b>English</b>	C1 Proficient user	C1 Proficient user	B2 Independent user	B2 Independent user	B2 Independent user	B2 Independent user
<b>French</b>	B1 Independent user	B1 Independent user	A2 Basic User	A2 Basic User	A2 Basic User	A2 Basic User

(\*) [Common European Framework of Reference \(CEF\) level](http://www.cedefop.europa.eu/en/faq/35307)

Social skills and competences . experience in project management and research teams management within projects; creating and keeping deadlines; teamwork spirit; listening skills; creative thinking; developing strategies; working with data, etc.

Computer skills and competences Forestry professional software and equipment for field and laboratory measurements and analysis, good knowledge of SPSS, Statistica, ArcGis, Corel Draw, etc.

## Additional information Publications:

### ISI articles

- Braga, C. I., Petrea, S., Radu, G. R., Cucu, A. B., Serban, T., Zaharia, A., & **Leca, S.** (2024). Carbon Sequestration Dynamics in Peri-Urban Forests: Comparing Secondary Succession and Mature Stands under Varied Forest Management Practices. *Land*, 13(4), 492.
- Chivulescu, S., Radu, R. G., Capalb, F., Hapa, M., Pitar, D., Marmureanu, L., **Leca, S.**, Petrea, S. & Badea, O. (2024). Cost Valuation and Climate Mitigation Impacts of Forest Management: A Case Study from Piatra Craiului National Park, Romania. *Land* (2012), 2024, 13(1).
- **Leca, Ș.**, Popa, I., Chivulescu, Ș., Popa, A., Pitar, D., Dobre, A.C., Pascu, I.S., Apostol, B. and Badea, O., 2023. Structure and diversity in a periurban forest of Bucharest, Romania. *Annals of Forest Research*, 66(1), pp.139-153.
- Sicard P., Khaniabadi Y.O., **Leca S.**, De Marco A., 2023. Relationships between ozone and particles during air pollution episodes in arid continental climate. *Atmospheric Pollution Research*, Volume 14, Issue 8, 101838.
- Kittipornkul, P., Thiravetyan, P., Hoshika, Y., Sorrentino, B., Popa, I., **Leca, S.**, Sicard, P., Paoletti, E. and De Marco, A., 2023. Surface ozone risk to human health and vegetation in tropical region: The case of Thailand. *Environmental Research*, 234, p.116566.
- Cakaj, A., Qorri, E., Coulibaly, F., De Marco, A., Agathokleous, E., **Leca, S.** and Sicard, P., 2023. Assessing surface ozone risk to human health and forests over time in Poland. *Atmospheric Environment*, p.119926.
- Tudoran, G.M., Cicșa, A., Dobre, A.C., Cicșa, M., Pascu, I.S. and **Leca, Ș.**, 2023. Health and Growth of Black Pine outside Its Natural Distribution Range in the Romanian Carpathians. *Forests*, 14(5), p.884.
- Baesso Moura, B., Carrari, E., Dalstein-Richier, L., Sicard, P., **Leca, S.**, Badea, O., Pitar-Silaghi, D., Shashikumar, A., Ciriani, M.L., Paoletti, E. and Hoshika, Y., 2022. Bridging experimental and monitoring research for visible foliar injury as bio-indicator of ozone impacts on forests. *Ecosystem Health and Sustainability*, 8(1), p.2144466.
- Sidor, CG; Cuciurean, CI; Popa, I; **Leca, S**; Vlad, R; Badea, O. 2022. *Broad-Leaved Tree Growth Modulated by Industrial Air Pollution in the Northern Romania (Baia Mare Region)*. *FORESTS*, 13(5), 10.3390/f13050807
- de Wergifosse, L; Andre, F; Goosse, H; Boczon, A; Cecchini, S; Ciceu, A; Collalti, A; Cools, N; D'Andrea, E; De Vos, B; Hamdi, R; Ingerslev, M; Knudsen, MA; Kowalska, A; **Leca, S**; Matteucci, G; Nord-Larsen, T; Sanders, TG; Schmitz, A; Termonia, P; Vanguelova, E; Van Schaeybroeck, B; Verstraeten, A; Vesterdal, L; Jonard, M. 2022. *Simulating tree growth response to climate change in structurally diverse oak and beech forests*. *SCIENCE OF THE TOTAL ENVIRONMENT*, 806(2), DOI: 10.1016/j.scitotenv.2021.150422
- Chivulescu, S; Pitar, D; Apostol, B; **Leca, S**; Badea, O. 2022. *Importance of Dead Wood in Virgin Forest Ecosystem Functioning in Southern Carpathians*. *FORESTS*, 13(3), DOI: 10.3390/f13030409
- Carrari, E; De Marco, A; Laschi, A; Badea, O; Dalstein-Richier, L; Fares, S; **Leca, S**; Marchi, E; Sicard, P; Popa, I; Hoshika, Y; Materassi, A; Pallante, G; Pitar, D; Paoletti, E. (2021). *Economic and Life Cycle Analysis of Passive and Active Monitoring of Ozone for Forest Protection*. *ENVIRONMENTS*, 8(10), 10.3390/environments8100104
- Dobre A C, Pascu I S, **Leca Ș**, Garcia-Duro J, Dobrota C E, Tudoran GM, Badea O (2021). *Applications of TLS and ALS in evaluating forest ecosystem services: A Southern Carpathians case study*. *Forests*, 12(9),1269.

- A. Ciceu, I. Popa, **S. Leca\***, D. Pitar, S. Chivulescu, O. Badea. 2020. *Climate change effects on tree growth from Romanian forest monitoring Level II plots*. Science of the Total Environment, Vol. 698, 1 January 2020, 134129. <https://doi.org/10.1016/j.scitotenv.2019.134129>
- E. Paoletti, A. Alivernini, A. Anav, O. Badea, E. Carrari, S. Chivulescu, A. Conte, M.L. Ciriani, L. Dalstein-Richier, A. De Marco, S. Fares, G. Fasano, A. Giovannelli, M Lazzara, **S. Leca**, A Materassi, V Moretti, D Pitar, I Popa, F Sabatini, L Salvati, P Sicard, T Sorgi, Y Hoshika. 2019. *Toward stomatal-flux based forest protection against ozone: The MOTTLES approach*. Science of the Total Environment, Vol. 691, pg. 516-527. <https://doi.org/10.1016/j.scitotenv.2019.06.525>.
- Tanase, M. A., L. Villard, D. Pitar, B. Apostol, M. Petrila, S. Chivulescu, **S. Leca**, I. Borlaf-Mena, I. S. Pascu, A. C. Dobre, D. Pitar, G. Guiman, A. Lorent, C. Anghelus, A. Ciceu, G. Nedea, R. Stanculeanu, F. Popescu, C. Aponte, and O. Badea. 2019. "Synthetic Aperture Radar Sensitivity to Forest Changes: A Simulations-Based Study for the Romanian Forests." Science of the Total Environment, Vol. 689, pg. 1104-11114. DOI: 10.1016/j.scitotenv.2019.06.494
- Apostol, B., Chivulescu, S., Ciceu, A., Petrila, M., Pascu, I., Apostol, E., **Leca, S.**, Lorent, A., Tanase, M., & Badea, O. (2018). *Data collection methods for forest inventory: a comparison between an integrated conventional equipment and terrestrial laser scanning*. Annals Of Forest Research, 61(2), 189-202. doi:10.15287/afr.2018.1189
- Dick J., Orenstein D. E., Holzer J. M., Wohner C., Achard A., Andrews C., Avrieli-Avni N., Beja P., Blond N., Cabello J.,... **Leca S.**, Melecis V., Miklós K., Mimikou M., ...Gunther Van Ryckegem. 2018. *What is socio-ecological research delivering? A literature survey across 25 international LTSER platforms*. Science of The Total Environment, Volumes 622–623, Pages 1225-1240, ISSN 0048-9697
- Nussbaumer A., Waldner P., Apuhtin V., Aytar F., Benham S., Bussotti F., Eichhorn J., ..., **Leca S.**, ... Wulff S., Gessler A.. (2018). *Impact of weather cues and resource dynamics on mast occurrence in the main forest tree species in Europe*, *Forest Ecology and Management*, Volume 429, Pages 336-350, ISSN 0378-1127, <https://doi.org/10.1016/j.foreco.2018.07.011>.
- De Marco A., Vitale M., Popa I., Anav A., Badea O., Silaghi D., **Leca S.**, Screpanti A., Paoletti E., 2017, *Ozone exposure affects tree defoliation in a continental climate*, SCIENCE OF THE TOTAL ENVIRONMENT, Volume: 596, Pages: 396-404 DOI: 10.1016/j.scitotenv.2017.03.135
- Popa, I., **Leca, S.**, Crăciunescu, A., Sidor, C., Badea, O., 2013, *Dendroclimatic Response Variability of Quercus species in the Romanian Intensive Forest Monitoring Network*, *Notulae Botanicae Horti Agrobotanici Cluj – Napoca*, vol. 41, No 1. 326-332pp. (FI = 0.547)
- Badea, O., D. Silaghi, S. Neagu, I. Taut și **S. Leca**, 2013 - *Forest Monitoring - Assessment, Analysis and Warning System for Forest Ecosystem Status*. *Notulae Botanicae Horti Agrobotanici Cluj-Napoca* 41(2): 613-625. (FI = 0.547).
- Badea, O., Bytnerowicz, A., Silaghi, D., Neagu, S., Barbu, I., Iacoban, C., Iacob, C., Guiman, G., Preda, E., Seceleanu, I., Oneata, M., Dumitru, I., Huber, V., Iuncu, H., Dinca, L., **Leca, S.** și Taut, I., 2012 - *Status of the Southern Carpathian forests in the long-term ecological research network*. *Environmental Monitoring and Assessment* 184(12): 7491-7515. (FI = 1.679).

#### Other publications

- **Leca S.**, Popa A., Chivulescu Ș., Pitar D., Dobre A.C., Pascu I. S., Badea O., Popa I. 2022. *Climate impact on the forest ecosystem health status in Romania*

- . Revista de Silvicultură și Cinegetică, Anul XXVII, Nr. 51 | 2022, [http://progresulsilvic.ro/wp-content/uploads/RSC\\_nr\\_51\\_2022.pdf](http://progresulsilvic.ro/wp-content/uploads/RSC_nr_51_2022.pdf). in review...
- **Leca S.**, Dobre A.C., Pascu I.S., Tudoran G.M., Pitar D., Chivulescu Ș., Moldovanu D.Ș., Constantin A., Miriță M. G., Badea O. 2022. *Methods for assessing ecosystem services – case study of RPLP Kronstadt forests*. Revista de Silvicultură și Cinegetică, Anul XXVII, Nr. 50 | 2022, [http://progresulsilvic.ro/wp-content/uploads/RSC\\_nr\\_50\\_2022.pdf](http://progresulsilvic.ro/wp-content/uploads/RSC_nr_50_2022.pdf).
  - **Leca, S.**, Popa, I., Silaghi, D., Chivulescu, S., Badea, O. (2015). *The inter-annual dynamics of basal area increment derived from permanent girth bands measurements in intensive forest monitoring network*. Bulletin of the Transilvania University of Brasov. Forestry, Wood Industry, Agricultural Food Engineering. Series II 8(1).
  - **Leca, S.**, Dumitru, I., Silaghi, D., Chivulescu, S. (2014). *Structura arboretelor din suprafetele extinse de monitorizare forestiera intensiva (nivel II)*. Revista pădurilor 129(1-2): 3-11.
  - Chivulescu, S., O. Badea, R. Tomescu, D. Silaghi, **S. Leca** and D.-O. Turcu (2014). *Structural features of virgin beech forests in Semenic Mountains. the dynamic structure of virgin beech forest p20 semenic between 2005–2013*. Proceedings of Romanian Academy, Series B Agriculture 16(2): 19-27.
  - Badea, O., Ș. Neagu, G. Marin, M. Dumitru, C. Calotă, D. Silaghi and **Ș. Leca** (2011). *Crearea unei rețele Futmon la scară mare (16× 16 km) de evaluare a stării de sănătate a pădurilor (ICP) și de inventariere a resurselor forestiere (IFN)*. Revista pădurilor 126 (3–4): 11-20.
  - Badea, O., Ș. Neagu, **Ș. Leca**, D. Silaghi, C. Iacob, G. Guiman and M. Teodosiu (2011). *Creșterea arborilor și arboretelor în sistemul de monitoring forestier*. Revista pădurilor 126(3–4): 28-34.
  - Neagu, Ș., O. Badea, D. Chira, C. Nețoiu, N. Olenici, D. Silaghi and **Ș. Leca** (2011). *Evaluarea stării de sănătate a pădurilor în rețeaua de supraveghere intensivă în anul 2009*. Revista pădurilor 126(3–4): 21-27.
  - Silaghi, D., Badea O., Iacoban C., Neagu Ș. and **Leca Ș.** (2011). *Concentrațiile agenților poluanți (O<sub>3</sub>, NO<sub>2</sub> și NH<sub>3</sub>) înregistrate în ecosistemele forestiere selectate (core plots) din rețeaua de monitoring intensiv (Nivel II)*. Revista pădurilor 126(3–4): 85-92.

#### Projects and activities:

##### International

- *Monitoring ozone injury for setting new critical levels – MOTTLES, Contract nr. LIFE15 ENV/IT/000183 (finanțator Comisia Europeană). Perioada 2016-2020 . Valoare 157 000 Euro. **Action responsible.***
- *Environmental quality and pressure assesment across Europe: the LTER network as an integrated and shared system for ecosystem monitoring (EnvEurope), Contract nr. LIFE08 ENV/IT/000399 (finanțator Comisia Europeană). Perioada: 2010 –2013 **Member of the research team***
- *Tropospheric ozone effects on forest growth and diversity – TROZGRODIV (finanțator Academia Română, CNR Italia). Perioada: 2014 –2016. **Member of the research team***
- *Tropospheric ozone effects on forest growth and diversity – TROZGRODIV 2 (finanțator Academia Română, CNR Italia). Perioada: 2017 –2019. **Member of the research team***
- *Operationalisation of natural capital and ecosystem services : from concepts to real-world applications (OpenNESS), Contract nr. FP7-ENV (finanțator Comisia Europeană). Perioada: decembrie 2012 – 2017 **Member of the research team.***

- *Further development and implementation of an EU-level forest monitoring system (FutMon), Contract nr. LIFE07 ENV/D/000218 (finanțator Comisia Europeană). Perioada: 2009 –2011* **Member of the research team**

#### **National**

- *Improving the multifunctional long-term ecological research system on the state of representative forest ecosystems in Romania for developing new scientific knowledge regarding the effects of air pollution, climate change, and other stress factors, and utilizing this information for decision-making. - project leader - Program Nucleu FORCLIMSOC - PN 23090101 (2023-2026) - Ministry of research and innovation – 4 900 000 euro.* **project leader**
- *Optimizing the forest management solutions for the Public Forest District of Brasov (RPLP) Kronstadt RA – Ctr. no. 15/01.09.2016 - CRESFORLIFE, Subsidiary contract no. 17 / 11.03.2020. 300 000 euro.* **project leader**
- *Increasing the institutional capacity and performance of the National Research and Development Institute for Silviculture (INCDS) ‘Marin Drăcea’ in research and development activities. – CresPerfInst , Ctr. 34PFE/2021, action responsible - Ministry of research and innovation – 600 000 euro,* **action responsible**
- *Monitoring forest ecosystems in Romania in accordance with the forest monitoring systems adopted at the European level (Level I and II) (funded by MCI) Period: 2019-2022 (4 years),PN 19070101.* **project leader**
- *Assessment and analysis of the state of the Romanian forest ecosystems in the pan-European (Level I) and intensive (Level II) forest monitoring networks (finanțator MCI) Perioada: 2016-2017 (2 ani), PN 16330101. 300 000 Euro.* **project leader**
- *Analiza, evaluarea și monitorizarea inter- și transdisciplinară a stării și biodiversității ecosistemelor forestiere aflate sub acțiunea poluării atmosferice, schimbărilor climatice și a altor factori de stres prin sistemul de supraveghere forestieră adoptat la nivel European. (finanțator MCI) Perioada: 2018 (1 ani), PN 18040114. 215 000 Euro.* **project leader**

**July, 2024**

**Signed,  
Stefan LECA**