

Jakub Houška (*1976)



📍 9, Arbesova, Brno, 63800, Czech Republic

☎ +420 734 874 445

✉ houskaj@vukoz.cz

🌐 <https://www.vukoz.cz/project/houska-jakub/>

Sex Male | Date of birth 14/11/1976 | Nationality Czech

Employer: The Silva Tarouca Research Institute for Landscape and Ornamental Gardening, Head of the Department of Landscape Ecology, Lidická 25/27, Brno, Czech Republic

Education

2008 Ph.D. in Landscape Engineering at Faculty of Forestry and Wood Technology, Mendel University of Agriculture and Forestry in Brno (Czech Republic);

2001 DESS (Diplôme d'Études Supérieures Spécialisées) in Remote Sensing (RS) and Geographical Information Systems (GIS) in Toulouse (France) - master's degree delivered by University of Paris VI;

2000 Ing. (M.Sc.) Mendel University of Agriculture and Forestry in Brno, Faculty of Forestry and Wood Technology; specialization: Forestry.

Jobs and positions

2018 – present The Silva Tarouca Research Institute for Landscape and Ornamental Gardening, p.r.i.; Department of Landscape Ecology, Brno – head of the department, senior researcher;

2012 – present Department of Soil Science and Soil Protection, Faculty of Agrobiology, Food and Natural Resources, Czech University of Life Sciences;

2015-2018 Department of Vegetation Ecology, Institute of Botany, Czech Academy of Science – senior scientist;

2016-2017 Department of Geology and Pedology, Faculty of Forestry and Wood Technology, Mendel University in Brno: researcher - academic staff;

2009 – 2011 Asset Manager, Quality Analyst, Project Manager: IBM IDC Brno;

2003 – 2012 Mendel University in Brno, Faculty of Forestry and Wood Technology – research assistant (Department of Forest Geology and Pedology), lecturer (Department of Forest Botany, Dendrology and Geobiology, Department of Landscape Management);

Research interest: landscape ecology; application of remote sensing techniques, agroforestry (ecological aspects), agriculture soils and its properties and protection, agricultural landscape.

Selected scientific activities in the last 5 years:

Ongoing projects:

- Main lead of the project of the Ministry of Environment: Landscape policy (strategic document to be approved by the government of the Czech Republic) and Methodology of Landscape Planning.
- Principal investigator Horizon Europe HORIZON-CL6-2021-CLIMATE-01-08 (RIA): DIGITAL Tools to help AgroForestry meet climate, biodiversity and farming sustainability goals: linking field and cloud (DigitAF), <https://digitaf.eu/>;
- Leader of WG Agrosystems&Soil, research project Center for landscape and biodiversity TAČR SS02030018 (consortium lead by VÚKOZ, <https://divland.cz/>);
- Main investigator (on behalf of VÚKOZ) TAČR SS07010439: Development and verification of local measures for the long-term support of soil organisms and desirable groups of invertebrates on intensively farmed land;
- Researcher (on behalf of VÚKOZ) TAČR SS07020042: Potential replacement vegetation modelling for nature conservation

Past projects:

- Main investigator (on behalf of VÚKOZ) TAČR beta2 TITBMMR805: Definition of green infrastructure in spatial planning documentation, especially in the spatial plan, as a tool for strengthening ecosystem services in the territory;
- Principal investigator of national research project TAČR TL02000160: The role of charcoal kilns in terms of cultural heritage and landscape protection;
- Researcher TAČR epsilon TH04030409: Agroforestry systems for the protection and restoration of landscape functions threatened by the effects of climate change and human activity;
- Researcher TAČR epsilon TL01000298: Agroforestry - a chance for regional development and sustainability of the rural landscape;

Membership:

- member of the Committee for Landscape, Water and Biodiversity at the Government Council for Sustainable Development;
- Czech Agroforestry Association (Český spolek pro agrolesnictví) (national office of the EURAF, <https://agrolesnictvi.cz/>), chair of the organisation;
- European Agroforestry Federation (<https://euraf.isa.utl.pt/welcome>), Czech national delegate in Executive Committee;
- European Union for Agroforestry (<https://iuaf.org/>); Board of Trustees member;
- Czech Society of Soil Science (<https://pedologie.czu.cz/>);
- Czech Society for Ecology (<https://www.cspe.cz/>);
- IALE-CZ (national office of the International Association of Landscape Ecology, <http://www.iale.cz/>);

Publication record: 29 Publications - WoS (CC), 578 total times cited, H-index 14

ResearcherID: K-4404-2012; **ORCID:** 0000-0003-2163-4486

Languages: Czech (native), active: English, French, passive: German, Spanish, Russian

Five selected publications:

Abebrese, D. K., Biney, J. K. M., Kara, R. S., Bářková, K., **Houška, J.**, Matula, S., Badreldin, N., Truneh, L.A., & Shawula, T. A. (2024). Estimating the spatial distribution of soil volumetric water content in an agricultural field employing remote sensing and other auxiliary data under different tillage management practices. *Soil Use and Management*, 40(1), e12981.

Szabó, P., Diniz, É. S., & **Houška, J.** (2024). Traditional agroforestry on forested land: a comprehensive analysis of its distribution pattern in the 19th century. *Agroforestry Systems*, 98(1), 115-127.

Biney, J. K. M., **Houška, J.**, Volánek, J., Abebrese, D. K., & Cervenka, J. (2023). Examining the influence of bare soil UAV imagery combined with auxiliary datasets to estimate and map soil organic carbon distribution in an erosion-prone agricultural field. *Science of The Total Environment*, 870, 161973.

Biney, J. K. M., Saberioon, M., Borůvka, L., **Houška, J.**, Vašát, R., Chapman Agyeman, P., Coblinski, J.A. & Klement, A. (2021). Exploring the Suitability of UAS-Based Multispectral Images for Estimating Soil Organic Carbon: Comparison with Proximal Soil Sensing and Spaceborne Imagery. *Remote Sensing*, 13(2), 308.

Lojka, B., Teutscherová, N., Chládová, A., Kala, L., Szabó, P., Martiník, A., Weger, J., **Houška, J.**, Červenka, J., Kotrba, R., Jobbiková, J., Doležalová, H., Snášelová, M., Krčmářová, J., Vávrová, K., Králík, T., Zavadil, T., & Lawson, G. (2021). Agroforestry in the Czech Republic: What hampers the comeback of a once traditional land use system?. *Agronomy*, 12(1), 69.

Dahlsjö, C. A., Stiblík, P., Jaklová, J., Zídek, M., Wicman Huaycama, J., Lojka, B., & **Houška, J.** (2020). The local impact of macrofauna and land-use intensity on soil nutrient concentration and exchangeability in lowland tropical Peru. *Biotropica*, 52(2), 242-251.

Navrátil, T., Šimeček, M., Shanley, J. B., Rohovec, J., Hojdová, M., & **Houška, J.** (2017). The history of mercury pollution near the Spolana chlor-alkali plant (Neratovice, Czech Republic) as recorded by Scots pine tree rings and other bioindicators. *Science of the Total Environment*, 586, 1182-1192.

Monography:

Chapter (among other topics) on environmental aspects of agroforestry systems in the book (monography) awarded by the price of the Josef Hlavka Foundation and the Czech Literary Fund.

ŠIMEK, M., BORŮVKA, L., ELHOTTOVÁ, D., HOUŠKA, J., KONVALINA, P., KOPECKÝ, M., MACKOVÁ, J., MOUDRÝ, J., PAVLŮ, L., SEMANČÍKOVÁ, E., ŠIMEK, P. and UHLÍK, O. Soil use and degradation. In: ŠIMEK, Miloslav et al. *Living soil: biology, ecology, management and degradation of soil*. Praha: Academia, 2019. Volume 2, p. 649–768. ISBN 978-80-200-2976-8. [in Czech]

In Brno, 22th September, 2024