Jakub Houška (*1976)

Employer: The Silva Tarouca Research Institute for Landscape and Ornamental Gardening,

Departmant 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'Etudes 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 – senior researcher, head of the department;

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:

• 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/;

• Principal investigator of national research project TAČR TL02000160: The role of charcoal kilns in terms of cultural heritage and landscape protection;

• leader of WG Agrosystems&Soil, research project Center for landscape and biodiversity TAČR SS02030018 (consortium lead by VÚKOZ, https://divland.cz/);

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;

• 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:

• Czech Society of Soil Science (https://pedologie.czu.cz/)

• Czech Society for Ecology (https://www.cspe.cz/)

• IALE-CZ (Česká společnost pro krajinnou ekologii – regional organization of the International Association of Landscape Ecology, http://www.iale.cz/)

• Český spolek pro agrolesnictví (regionální organizace EURAF, https://agrolesnictvi.cz/), vice-chair;

• European Agroforestry Federation (https://euraf.isa.utl.pt/welcome), CZ national delegate in Executive Committee;

• European Agroforestry Federation (https://iuaf.org/); Trustee.

Publication record: 30 Publications - WoS (CC), 603 total times cited, H-index 15

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

Five selected publications:

Szabó, P., Diniz, É.S., Houška, J. (2023): Traditional agroforestry on forested land: a comprehensive analysis of its distribution pattern in the 19th century. *Agroforestry Systems*. https://doi.org/10.1007/s10457-023-00894-4

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., Stiblik, 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.

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, 10th September, 2023