

CURRICULUM VITAE

Eva Holtanová, Ph.D.

Born: 17 July 1983 (Jičín, Czechoslovakia)
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EDUCATION

2010 Charles University, Prague, Ph.D. in Meteorology and Climatology
Dissertation thesis: Uncertainties in regional model outputs
Supervisor: doc. RNDr. Jaroslava Kalvová, CSc.
2009 Charles University, Prague, RNDr. in Meteorology and Climatology
2006 Charles University, Prague, MSc. in Physics
Diploma thesis: Changes in length of periods with characteristic air temperature
Supervisor: doc. RNDr. Jaroslava Kalvová, CSc.

WORK EXPERIENCE

since 2011 Assistant professor, Faculty of Mathematics and Physics, Charles University
2006-2023 Researcher - climatologist, Czech Hydrometeorological Institute

RESEARCH INTERESTS

- Evaluation of climate model outputs with a focus on uncertainties, interaction between global and nested regional climate models
- Internal climate variability, spatiotemporal variability of climatic variables
- Added value of high-resolution climate model simulations
- Climate change scenarios; methods for estimates and reduction of uncertainties in projected climatic changes
- Constraints on projected climate changes over Central Europe
- Analysis of extreme climatic events (heat waves, cold spells, drought, extreme precipitation), their observed changes and future projections
- Classification of climate types; continentality of climate

TEACHING ACTIVITIES

FACULTY OF MATHEMATICS AND PHYSICS, CHARLES UNIVERSITY, PRAGUE

Guarantor and lecturer of a number of courses for undergraduate and graduate students since 2009.

Currently involved in the following courses for undergraduate students:

- General physical climatology, Climate changes and their causes, Applied climatology

Currently involved in the following courses for graduate students:

- Advanced climatology topics, Overview of meteorology and climatology, Project seminar

Supervisor of students in bachelor, master, and doctoral study programs

- six supervised theses successfully defended:
 - one doctoral thesis, one diploma thesis, four bachelor thesis
- Currently supervising one Ph.D. student and one bachelor student

TEACHING EXCELLENCE

The academic year 2022/2023	Dean's Award for best teachers, based on the students' vote
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EXPERIENCE ABROAD AND INTERNATIONAL COLLABORATION

February - July 2025 Visiting scholar at Colorado State University, Fort Collins, USA; <https://rugenstein.atmos.colostate.edu/>; Fulbright Scholarship for Scholars and Researchers 2024/2025

November 2023 Visiting researcher at the Department of Meteorology and Geophysics, Universität Wien, Wien, Austria; <https://klimadynamik.univie.ac.at/>; AKTION scholarship

March-June 2018 Visiting researcher at Wegener Center for Climate and Global Change, University of Graz, Austria; AKTION scholarship

Cooperation with colleagues from University of Graz and Universität Wien initiated during the above research visits, resulting in joint publications.

Involvement in international scientific projects and initiatives dealing with the topic of regional climate modeling, mainly the projects CECILIA, UHI (Urban Heat Island, member of the Czech Meteorological Institute team), and currently in the project FOCI (<https://www.project-foci.eu/wp/>).

Participation in Euro-CORDEX, the European branch of CORDEX (Coordinated Regional Downscaling Experiment), a World Climate Research Programme framework evaluating the performance of regional climate models and producing regional climate projections.

PUBLICATION AND CITATION RECORD (APRIL 2025)

Web of Science 24 publications, 537 citations (490 without self-citations), h-index = 11
ResearcherID: A-5964-2017
SCOPUS ID: 36504080500
ORCID ID: 0000-0002-8393-7119

RESEARCH GRANTS AND PROJECTS (LAST FIVE YEARS)

Internal climate variability over Europe, funded by the Czech Science Foundation, nr. 25-15855S (2025-2027)

- Principal investigator: Project coordination, research tasks related to analysis of internal climate variability in Earth-system model outputs and paleo-reanalysis simulations.

Natural and anthropogenic georisks, funded from OP JAK through Ministry of Education, Youth and Sports of the Czech Republic, project registration nr. CZ.02.01.01/00/22_008/0004605 (2024 - 2028)

- Team member; tasks related to climate model outputs analysis and uncertainty assessments, construction of specialized climate change scenarios

FOCI Project on Non-CO2 Forcers and Their Climate, Weather, Air Quality and Health Impacts, funded by European Union, Call: HORIZON-CL5-2021-D1-01-0 (2022-2026)

- Team member responsible for climate model outputs validation and assessment concerning added value of newly integrated aspects of chemical processes

Prediction, Evaluation and Research for Understanding National sensitivity and impacts of drought and climate change for Czechia (PERUN), funded by the Technology Agency of the Czech Republic project, nr. SS02030040 (2020-2026)

- Team member responsible for the assessment of uncertainties in climate change scenarios, selection of appropriate bias correction methods, analysis of the added value of high-resolution convection-permitting regional climate simulation

Modeling the interactions of air pollution with meteorology over urban areas in high resolution, funded by Czech Science Foundation, nr. 19-10747Y (2019-2021)

- Team member responsible for the methods of climate model outputs evaluation

Hierarchical Climate Model Uncertainties and Propagation to Transport Models, funded by the Ministry of Education of the Czech Republic, nr. 8J18AT017 (2018-2019)

- Principal investigator: Project coordination, responsible for research tasks related to climate model evaluation. Innovative application of functional data analysis for investigation of inter-model dependencies

Urbanization of weather, air quality, and climate scenarios for Prague "URBI PRAGENSI", funded by the European Union and the City of Prague (2018-2020)

- Team member responsible for climate models validation and uncertainty assessment

PREVIOUS RELEVANT RESEARCH GRANTS AND PROJECTS

Extreme weather events in the Czech Republic and their relationship to meso-alpha meteorological patterns, funded by Czech Science Foundation, nr. GACR 209/11/1990; team member in 2011-2012

Global and regional climate model simulations in Central Europe in the 18th-20th centuries in comparison with observed and reconstructed climate, funded by Czech Science Foundation, nr. GACR P209/11/0956; team member in 2011-2012

Specification of existing estimates of climate change impacts in hydrology, water management, agriculture and forestry sectors and proposals for adaptation options, funded by the Ministry of the Environment of the Czech Republic, nr. SP/1a6/108/07; team member in 2008-2011

Central and Eastern Europe Climate Change Impact and Vulnerability Assessment "CECILIA", funded by the European Commission, FP6 STREP project, contract GOCE 037005; team member in 2010

Impact-targeted validation of statistical and dynamical downscaling models, funded by the Czech Science Foundation, nr. GACR 205/08/1619; team member in 2008-2010

Education model of e-learning for lifelong learning in selected branches of the environment (e-klima), funded by Ministry of the Environment of the Czech Republic, nr. SPII/4h6/35/07; team member in 2007-2010

OUTREACH AND POPULARIZATION ACTIVITIES

Participation in the outreach activities for both the general public as well as secondary and primary school students, including:

- Open house day of the faculty, "One Day with Physics", "Science Playground", "Experimental university for grandparents and their grandchildren", Excursions for high school students showing examples of research activities of the home department

Lectures within the course of the University of the Third Age

The main author of the E-learning course "EKLIMA", created under financial support of the Ministry of Education of the Czech Republic. The course targeted increasing the awareness of anthropogenic influence on recent and projected climatic changes.

MEMBERSHIP AND ACTIVITIES IN PROFESSIONAL ASSOCIATIONS

Czech Meteorological Society

- regular member since 2006
- member of the working group for education since 2010
- member of working group for terminology with a focus on climatology since 2023

European Meteorological Society

- regular member since 2006

European Geosciences Union

- regular member in 2008, 2012, 2014, 2023

PEER REVIEW SERVICE

International journals, including:

- Climatic Change, Geoscientific model development, Hydrology Research, Scientific Data, Earth and Space Science

Proceedings of the Week of Doctoral Students, Faculty of Mathematics and Physics

Charles University Grant Agency

Reviews of bachelor, diploma, and doctoral thesis:

- Faculty of Mathematics and Physics, Charles University
- Faculty of Natural Sciences, Charles University
- Faculty of Environmental Sciences, Czech University of Life Sciences

MATERNITY AND PARENTAL LEAVES

2012 – 2020 In total, 38 months on several maternity and parental leaves with three children