

Portfolio for doctoral students

Information on doctoral student:

- First and last name **Anna Bohushenko**
- Structural unit (department, institute) **Odessa State Environmental University.**
- Curriculum title **Earth Sciences**



General information on studies:

- Thesis title in English and in local language **Dynamics of extreme temperatures and precipitation in Ukraine in the context of modern climate change. Динаміка екстремальних температур та опадів в Україні в умовах сучасних кліматичних змін.**
- Supervisor(s) **Sergiy Stepanenko, Doctor of Science in Geophysics. Inna Khomenko, Candidate of Geographical Sciences, Associate Professor.**
- Curriculum, year of matriculation: The second year of study.
- Academic leaves

INFORMATION ON ACADEMIC YEAR NO. 1

Status of research work:

A review of the scientific literature and analysis of the state of problems in the field of dissertation research. The translation of foreign literature in the direction and the main directions of the future dissertation research are determined. Methods and research methods are chosen. Annual indicators for 6 extreme climatic indices (TX_x, TN_n, TX_{90p}, RX_{1day}, RX_{5day}, CDD) were collected for sixteen stations of Ukraine. The indices of TX_x, TN_n, TX_{90p}, RX_{1day}, RX_{5day}, CDD were predicted until 2050 for stations of Ukraine, for which the value was obtained by the Mann-Kendall test 1 for the level of 0.05, using harmonic analysis. The spatial distribution of trends of 6 extreme indices in different seasons of the year for the territory of Ukraine for the period 1945 - 2018 was also revealed.

Courses completed during academic year:

During the first academic year of postgraduate studies, she attended the compulsory subjects of the educational program.

1. "Methods of processing meteorological observations" - 5 ECTS credits
2. "Professional English" - 5 ECTS credits
3. "Philosophical and ethical aspects of scientific activity" - 6 ECTS credits
4. "Foreign language for professional purposes" - 4 ECTS credits
5. "Modeling of processes and phenomena in different environments" - 5 ECTS credits

and elective subjects of the educational program:

1. "Optimization of nature management" within the project INTENSE - Integrated Doctoral Program for Environmental Policy, Management and Technology 586471-EPP-1-2017-1-EE-EPPKA2-CBHE-JP - 1 ECTS credit
2. "Project writing, project management, and finding sources" within the project Modernization of Doctoral Education in Science and Improvement of Teaching Methodologies (MODEST, 2018-2021) 598549-EPP-1-2018-1-LV-EPPKA2-CBHE- JP



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Also participated in the training Erasmus + ClimEd Training (online) on Competency-Based Approach, which took place from April 19 to May 12, 2021.

Performance at conferences:

During the reporting period took part in the conference of young scientists of OSENU (May 7, 2020). According to the results of the conference the abstracts of the report were published. Took part in the international conference 'EGU General Assembly 2021', which took place online from April 19-30, 2021 with a report and publication of abstracts on "Detecting climate change in Ukraine: trends, prediction and extreme events".

During the reporting period she took part in the international conference of the IV specialized international Zaporizhya ecological forum. Zaporizhya. October 15-17, 2020

Doctoral seminars:

Presentation of research results at the scientific seminar of the department

Articles published:

Bohushenko AO, Yatsenko VO, Khomenko IA Assessment of future climate change in the cities of Ukraine and proposed adaptation measures. Collection of abstracts of the IV specialized international Zaporizhya ecological forum. Zaporizhya. October 15-17, 2020, 63-64 p.

Public engagement and outreach

Popular science article: <https://my.science.ua/pro-zminu-klimatu-za-3-hvylyny/>

Energy Policy Expert in NGO "Ecoaction": <https://ecoaction.org.ua/komanda>

Climate and Environmental Blog: <https://www.instagram.com/ann.velvet/>

Activity plan for the next academic year

Prepare an article for publication in a scientific publication recommended by the SAC. Investigate the characteristics of daily maximum temperatures, daily minimum temperatures, average daily temperatures and daily precipitation amounts from 1961 to 2020 for all regional centers of Ukraine. and calculate a new climatic norm.

INFORMATION ON ACADEMIC YEAR NO. 2

IN PROGRESS

Status of research work:

A review of the scientific literature and analysis of the state of the problem in the direction of dissertation research. The translation of foreign literature in the direction and the main directions of the future dissertation research are determined.

Digitization of data required for dissertation research, namely daily maximum temperatures, daily minimum temperatures, average daily temperatures and daily precipitation amounts from 1961 to 2020 for all regional centers of Ukraine.



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Courses:

1. «Professional English»
2. «Modern approaches to teaching in high school»

Also finished ClimEd Training 2 (Online) “Adaptation of the Competency Framework for Climate Services to conditions of Ukraine” (29 June – 26 August 2021). And in process ClimEd Training 3 (Online) "Digital Tools and Datasets for Climate Change Education" (26 October - 12 November 2021).

Performance at conferences:

Participated in International Research-to-Practice Conference 'Climate Services: Science and Education'.

Public engagement and outreach

Energy Policy Expert in NGO “Ecoaction”: <https://ecoaction.org.ua/komanda>

Climate and Environmental Blog: <https://www.instagram.com/ann.velvet/>

Author of an online course, an educational section on climate change: <https://study.ed-era.com/uk/courses/course/426> and <https://osvita.diiia.gov.ua/courses/11-steps-towards-the-environment>

PhD student: **Anna Bohushenko**
PhD supervisors: **Sergiy Stepanenko,**
Inna Khomenko