Заведующий кафедрой

общего землеведения и гидрометеорологии

факультета географии и геоинформатики БГУ

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Ю.А. Гледко

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**Вопросы**

**к зачету по учебной дисциплине**

**«Neural Network Analysis in Hydrometeorology» /**

**«Нейросетевой анализ в гидрометеорологии»**

**(магистратура англоязычная)**

1. Global and regional climate processes.

2. The concept of weather and climate in numerical modeling.

3. Using neural networks to predict weather.

4. Application of neural networks in hydrology.

5. General characteristics of the main observed meteorological phenomena. The concept of the temporal and spatial scales of atmospheric processes.

6. Modeling of atmospheric processes of various scales.

7. General characteristics of climate models.

8. Using programming languages for data analysis.

9.Statistical methods for processing and presenting hydrometeorological information.

10. Selecting the number of layers and neurons in them.

11.Types of neural networks.

12. Methods of neural network analysis.

13. Construction of the algorithm.

14. Types of algorithms.

15. Types of numerical models by scale.

16. Possibilities of using numerical modeling in atmospheric analysis.

17. Combined use of numerical modeling and neural network analysis in hydrometeorology.

18. Sequence of actions for neural network analysis.

19. Formation of a data bank.

20.Creating an automatic database.

21. Using programming languages in data visualization.

22. Application of neural networks for recognition of hazardous atmospheric phenomena.

23.Methods of artificial intelligence in hydrometeorology.

24. Links between hydrometeorological data.

25. Machine learning.

26.Data formats.

27.Input data.

28. Weather and climate forecasting.

29. Analysis of ancient climate.

30. Links between hydrological and meteorological processes.

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