

Introduction

Editorial board *

NAS RA V. Ambartsumian Byurakan Astrophysical Observatory (BAO)

The leading role of Astronomy in the development of inter- and multi- disciplinary sciences between Astronomy and all other natural sciences is explained in providing vast amount of new data from Space, namely data useful for the expansion of our knowledge that before was based only on the information collected on the Earth, in fact a tiny part of the studied Universe. This way Astronomy also becomes the key science for Big Data collection, storage, reduction, analysis and interpretation. All these data become basis for development of Astronomy related interdisciplinary sciences, such as Astrophysics, Astrochemistry, Astrobiology, Planetology, Astroinformatics, etc. That is why the International Council of Scientific Unions (ICSU) has created World Data System (WDS) to unify data coming from different science fields for further possibility of exchange, combination and new science projects. And that is why, in the year of the celebration of the 75th anniversary of the Byurakan Astrophysical Observatory, it was decided to hold an international symposium "Astronomy in the Crossroads of Interdisciplinary and Multidisciplinary Sciences".

The symposium will be devoted to the leading role of astronomy in science, culture and other fields of human activity and development of these fields due to the knowledge obtained from the Universe. In modern era, astronomy is probably the field of science, which plays the most important role in the formation and development of interdisciplinary sciences. Especially those scientists are encouraged to participate who work in astrophysics with heavy usage of knowledge from chemistry, biology, geology, and other sciences. The meeting is also aimed at the development of problems of interdisciplinary sciences and preparation of a basis for further possible collaborations by means of presentations of available modern knowledge in various areas by experts from different professions and by joint discussions. There also is transdisciplinarity, when results obtained in one science area may be implemented in other one and contribute to its development. The Symposium also is aimed at achieving better collaboration between all natural and social sciences with benefits for all of them. Particularly poor are the links between the natural and social sciences, and astronomy is exactly the science that may provide necessary background for new collaborations.

Symposium Topics

- Astronomy as a link to connect all sciences in the Space
- Cosmic Data for all Sciences.
- Astrophysics and Cosmology for High-Energy and Particle Physics.
- Astrochemistry and Astrobiology; Exoplanets and Life in the Universe.
- Earth, Geology and Planetology.
- Astroinformatics, Virtual Observatories and Data Science; Artificial Intelligence.
- Astronomical Instrumentation. Astronomy as a Leader of Technical Developments.
- Archaeoastronomy and Astronomy in Culture, Astronomy and Society.
- Synergies between Sciences.

This issue of "Communications of BAO" includes the proceedings presented international symposium "Astronomy in the Crossroads of Interdisciplinary and Multidisciplinary Sciences". All the papers passed relevant peer-review

*combao@bao.am