

Dear Colleagues!

On April 26-28, 2023, the 5th annual international conference “Construction Mechanics, Hydraulics and Water Resources Engineering” (CONMECHYDRO-2023) was held, dedicated to the 50th anniversary of the commissioning of one of the most powerful machine water lifting systems in the world - Karshi main canal with a cascade of unique pumping stations, which took place in a hybrid mode (offline + online).

The complex of Karshi main canal and Pumping stations structures has no analogues in the world hydraulic engineering construction. Its unique working equipment was specially designed for Karshi main canal facilities by the leading design organizations of the Soviet Union. Established for this purpose in 1972, the Operations Department of Karshi main canal and Pumping stations coordinates the work of all hydraulic facilities included in this system.

The organizer of this conference was the "Tashkent Institute of Irrigation and Agricultural Mechanization Engineers" National Research University ("TIAME"NRU) (Uzbekistan), which took first place in the annual ranking of universities of the Republic of Uzbekistan in 2022, and took 401st place in the international ranking of higher educational institutions in Eastern Europe and Central Asia.

The traditional 5th International Scientific Conference "Construction, Hydraulics, Water Resources" "Construction Mechanics, Hydraulics and Water Resources Engineering" (CONMECHYDRO-2023) of this level and scale brought together representatives of the most popular areas of hydraulic engineering, hydromelioration, mechanization and electrification of agriculture, hydropower, renewable energy, integrated water resource management, climate change adaptation from around the world.

Its main goal was to popularize the results of research and development in the above areas in the international scientific and information space, expand scientific cooperation and form new interdisciplinary projects, develop scientific communications and scientists' competencies.

During the conference, 562 papers were discussed in a hybrid format with the organization of access for all participants to the materials of the presented conference reports.

The CONMECHYDRO-2023 conference was held within the walls of the "TIAME" National Research University and during the discussions, more than tens of thousands of questions were received by the conference alone.

The discussion was attended by scientists, young specialists from the USA, Germany, Japan, Poland, Vietnam, South Korea, Syria, Bulgaria, the Russian Federation, Uzbekistan, Tajikistan, Kyrgyzstan, Afghanistan and other countries of near and far abroad.

In total, 562 poster reports were heard at the Conference within three working days in five thematic sections:

- Section 1. Ecology, hydropower and modeling of physical processes;
- Section 2. Road construction, building structures and materials;

- Section 3. Hydraulics of structures, hydrotechnical and reclamation construction;
- Section 4. Mechanization, electrification of agriculture and renewable energy sources;
- Section 5. Engineering materials science, intelligent transport systems and transport logistics.

Following the results of the conference, the reports of the participants, subject to the observance by the authors of all conditions and terms, the texts of the articles adopted as a result of review and discussion, were included in this collection of conference materials.

I express my gratitude to all participants of the international scientific conference and guests who showed interest in our joint event and thank you for your active participation, and we look forward to further cooperation.

Sincerely,

**Chairman of the Conference Organizing Committee
Professor D.R. Bazarov, Doctor of Technical Sciences,
"Tashkent Institute of Irrigation and Agricultural
Mechanization Engineers" National Research University**