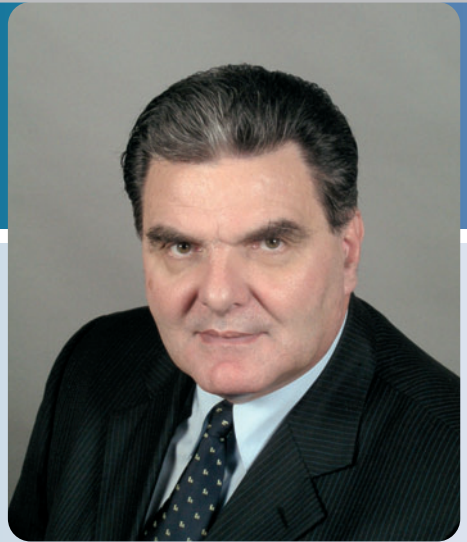


Editorial



The National Council of Ukraine for Mechanism and Machine Science as a Member Organisation of the International Federation for Promotion of Mechanism and Machine Science and Council of Scientific and Engineer Union in the Khmel'nitsky National University have been carrying out the active activeness for many years. For many years they have been organising twice or three times per year scientific conferences in various countries. The first Egyptian conference on Dynamics of the rotors systems and oscillation processes passed on 12th-19th December 2004 in Khurgarde, in which scientists from the former countries of SSSR including academicians and members-correspondents, doctors of sciences and professors, known specialists and young scientists from industry of national economy from Israel, the USA, Romania and Poland took part. The purpose of these conferences is to discuss actual issues of upgrading, reliability and longevity of machines, mechanisms, devices for the most different industries of national economies, buildings constructions, other technical systems and technologies of their production, to pick up thread and fasten the scientific collaboration of scientists from the countries of former SSSR, to extend it for scopes of these countries, to join forces of scientific different countries of the world on working out actual problems of national economy. The conferences are an open forum for scientists and engineers of entire countries, the forums, called to co-ordinate and join forces of specialists on working out general technical problems regardless of political processes what is going on in the world and given countries. The successive conferences were organised alternately in Egypt and Israel and the next ones are planned among others: in Montenegro.

The Organisational Committee of those Conferences under the chairmanship of Prof. Vilen Rojzman organised this year the International Conference on "Science and Education" on 10th-22nd February 2010 in Hotel Rivierina along the golden sandy beaches on the outskirts of Beruwela town on the south west coast of Sri Lanka, 96 km from the International Airport in Colombo. Conference topics cover the consideration of a variety of scientific and educational tasks which will promote scientific and technological progress. The presentations were systematised and grouped into sections, among others of the quality and life time of the technical systems and technological processes, applied technology and materials science, strength of materials, economics and management and education. The participation in the Conference was announced by numerous representatives of the world of science from a dozen or so countries including Ukraine, Russia and Poland. The conference was the next occasion to familiarise with this exotic country for many people. A lot of information on this exotic country can be found in the Internet.

The island of Sri Lanka lies in the Indian Ocean, to the southwest of the Bay of Bengal. It is separated from the Indian subcontinent by the Gulf of Mannar and the Palk Strait. The island consists mostly of flat-to-rolling coastal plains, with mountains rising only in the south-central part. Amongst these there is the highest point Pidurutalagala, reaching 2,524 metres above sea level. Varieties of flowering acacias are well adapted to the arid conditions and flourish on the Jaffna Peninsula. Among the trees of the dry-land forests, are some valuable species such as satinwood, ebony, ironwood, mahogany and teak. In the wet zone, the dominant vegetation of the lowlands is a tropical evergreen forest, with tall trees broad foliage, and a dense undergrowth of vines and creepers. Subtropical evergreen forests resembling those of temperate climates flourish in the higher altitudes. Forests at one time covered nearly the entire island, but by the late 20th century lands classified as forests and forest reserves covered around 1/3 of the land. The Yala National Park in the southeast protects herds of elephants, deer, and peacocks, and the Wilpattu National Park in the northwest preserves the habitats of many water birds, such as storks, pelicans, ibis, and spoonbills. During the Mahaweli Ganga Programme of the 1970s and 1980s in northern Sri Lanka, the government set aside four areas of national parks. The island has four biosphere reserves, Bundala, Hurulu Forest Reserve, the Kanneliya-Dediyagala-Nakiyadeniya, and Sinharaja. The national flower of Sri Lanka is the Nymphaea stellata, the national tree is the Ironwood and the national bird is the Sri Lanka Junglefowl, which is endemic to the country.

In ancient times, Sri Lanka was known by a variety of names: ancient Greek geographers called it Taprobane and Arabs referred to it as Serendib (the origin of the word "serendipity"). One of the first written references to the island is found in the Indian epic Ramayana, which described the emperor Ravana as monarch of the powerful kingdom of Lanka, which was created by the divine sculptor Vishwakarma for Kubera, the treasurer of the Gods. English historian James Emerson Tennent also theorized Galle, a southern city in Sri Lanka, was the ancient seaport of Tarshish from which King Solomon is said to have drawn ivory, peacocks and other valuables. The main written accounts of the country's history are the Buddhist chronicles of Mahavamsa and Dipavamsa. From the ancient period date some remarkable archaeological sites including the ruins of Sigiriya, the so-called "Fortress in the Sky", and huge public works. Among the latter are large "tanks" or reservoirs, important for conserving water in a climate that alternates rainy seasons with dry times, and elaborate aqueducts, some with a slope as finely calibrated as one inch to the mile. Ancient Sri Lanka was also the first in the world to have established a dedicated hospital in Mihintale in the 4th century BCE. Ancient Sri Lanka was also the world's leading exporter of cinnamon, which was exported to Egypt as early as 1400 BCE. Sri Lanka was also the first Asian nation to have a female ruler, Queen Anula (47-42 BC).

After over two thousand years of rule by local kingdoms, parts of Sri Lanka were colonised by Portugal and the Netherlands beginning in the 16th century, before control of the entire country was ceded to the British Empire in 1815. Ceylão was the name given to Sri Lanka by the Portuguese when they arrived in 1505, which was transliterated into English as Ceylon. During World War II, Sri Lanka served as an important base for Allied forces in the fight against the Japanese Empire. A nationalist political movement arose in the country in the early 20th century with the aim of obtaining political independence, which was eventually granted by the British after peaceful negotiations in 1948. As a British colony, the island was known as Ceylon, and achieved independence under the name Dominion of Ceylon in 1948 and for the time period of 1948-1972 known under this name. In 1972, the official name of the country was changed to "Free, Sovereign and Independent Republic of Sri Lanka". In 1978 it was changed to "Democratic Socialist Republic of Sri Lanka". The current name is derived from the Sanskrit with the word lankā, meaning "island", also being the name of the island as described in the ancient Indian epics Mahabharata and the Ramayana. The word śrī is a Sanskrit title meaning "venerable". The country is famous for the production and export of tea, coffee, coconuts, rubber and cinnamon – which is native to the country. The natural

beauty of Sri Lanka's tropical forests, beaches and landscape, as well as its rich cultural heritage, makes it a world famous tourist destination.

On 26th December 2004 at 00:58:53 UTC the 2004 Indian Ocean earthquake, which was an undersea megathrust earthquake with an epicentre off the west coast of Sumatra, Indonesia, took place. The quake itself is known by the

scientific community as the Sumatra-Andaman earthquake. The resulting tsunami itself is given various names, including the 2004 Indian Ocean tsunami, Asian Tsunami, Indonesian Tsunami, Boxing Day Tsunami, and, simply, the Tsunami. It was one of the deadliest natural disasters in recorded history. With a magnitude of between 9.1 and 9.3, it is the second largest earthquake ever recorded on a seismograph. This earthquake had the longest duration of faulting ever observed, between 8.3 and 10 minutes. It caused the entire planet to vibrate as much as 1 cm and triggered other earthquakes as far away as Alaska. The authorities of Sri Lanka confirmed the death over 38 thousands of people, ca.16,5 thousands of the wounded and 23 thousands of the lost. The biggest waves attacked the south and east coast of the island. Over 570 thousand people deprived of their houses wandered along the island. Among others: the Colombo-Galle express train "The Queen of the Sea" was carried away together with railways. Among all 1600 passengers 300 persons were saved by a miracle. The education in Sri Lanka suffered a loss. As many as 170 buildings were destroyed by the element and the next 180 were changed into refugee camps. In spite of houses of the island citizens waves devastated many hotels.

The tourist centres situated at the southern coast were full of foreign tourists. In the Yala National Park most of wide animals were saved. They escaped to the regions situated higher, as if they sensed the coming danger earlier. A few tourists died in this Park under the water. More than 5 years after it the country removes with the difficulty results of Tsunami visible yet in many places. It became possible thanks to the broad international help. The life was back to normal, although the whole coast is covered with graves of those who died and the monuments commemorating the casualties.

Sri Lanka is inhabited by ca. 20 million of inhabitants. It is an island country in South Asia, located about 31 kilometres off the southern coast of India, a nation of which it shares common culture, language and religion.

As a result of its location in the path of major sea routes, Sri Lanka is a strategic naval link between West Asia and South East Asia. The earliest-known inhabitants of the island now known as Sri Lanka were probably the ancestors of the Wanniyala-Aetto people, also known as Veddahs and numbering roughly 3,000. Linguistic analysis has found a correlation of the Sinhalese language with the languages of the Sindh and Gujarat, although most historians believe that the Sinhala community emerged well after the assimilation of various ethnic groups. Sri Lanka has also been a centre of the Buddhist religion and culture from ancient times and is one of the few remaining abodes of Buddhism in South Asia. The Sinhalese community forms the majority of the population (≈73.9%); Tamils (≈12.6%), who are concentrated in the north and east of the island, form the largest ethnic minority. Other communities include Moors (≈7.4%), Indian Tamil (≈5.2%), Burghers, Kaffirs, Malays and the indigenous Vedda people.

With a literacy rate of 92%, and 83% of the total population having had Secondary Education, Sri Lanka has one of the most literate populations amongst developing nations. An education system which dictates 9 years of Compulsory Schooling for every child is in place, with 99% of the children entering the first grade. Sri Lanka has around 16 public universities. They include the University of Colombo, the University of Peradeniya, the University of Kelaniya, the University of Sri Jayawardenepura, the University of Moratuwa, the University of Jaffna, the University of Ruhuna, the Eastern University of Sri Lanka, the Sabaragamuwa University of Sri Lanka and the Wayamba University of Sri Lanka. However the lack of space in these institutions and the unwillingness to establish private universities has led to a large number of students being denied entry into formal universities as well as high undergraduate unemployment. As a result, a number of public and private institutions have emerged, which provide specialised education in a variety of fields, such as computer science, business administration and law. These include the government owned Sri Lanka Institute of Information Technology and the Institute of Technological Studies. The free education system ensures that primary to tertiary education is provided free of charge to its citizens.

Concluding this year International Conference on "Science and Education" one should congratulate the organisers from the Khmel'nitsky National University the good idea, the attractive scientific programme and the interesting initiative of joining the scientific challenges with the possibilities of familiarisation with cultures and output of interesting countries of the world, in that case of Sri Lanka. As usual we invite P.T. Authors to publish their scientific output on the pages of our Journal.

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