

Editorial



The World Academy of Materials and Manufacturing Engineering carries out the close cooperation with many scientific centres in various continents and numerous international organisations. Among many academic centres the cooperation with scientists from the Queensland University of Technology in Brisbane and the Swinburne University of Technology in Melbourne in Australia and the organisation of the Global Congresses on Manufacturing and Management, directed by the President – Professor Prasad K.D.V. Yarlagadda, a Fellow of WAMME from Australia, for last two years takes a prominent place.

Australia, officially the Commonwealth of Australia, is a country in the southern hemisphere comprising the mainland of the world's smallest continent, the major island of Tasmania, and numerous other islands in the Indian and Pacific Oceans. Neighbouring countries include Indonesia, East Timor, and Papua New Guinea to the north, the Solomon Islands, Vanuatu, and New Caledonia to the north-east, and New Zealand to the south-east. The next details concerning this country presented in the given Editorial used as citations comes from the electronic encyclopaedia – Wikipedia.

Human habitation of Australia is estimated to have begun between 42,000 and 48,000 years ago. These first Australians may have been ancestors of modern Indigenous Australians; they may have arrived via land bridges and short sea-crossings from what is now South-East Asia. Most of these people were hunter-gatherers, with a complex oral culture and spiritual values based on reverence for the land and a belief in the Dreamtime. The Torres Strait Islanders, ethnically Melanesian, were originally horticulturalists and hunter-gatherers. Their cultural practices have always been distinct from those of the Aborigines. Then for more than around 40,000 years before European settlement commenced in the late 18th century, the Australian mainland and Tasmania were inhabited by around 250 individual nations of indigenous Australians. The name Australia is derived from the Latin *Australis*, meaning "Southern". Legends of an "unknown land of the south" (*terra australis incognita*) date back to Roman times and were commonplace in medieval geography but were not based on any documented knowledge of the continent. After sporadic visits by fishermen from the immediate north, and European discovery by Dutch explorers in 1606, the eastern half of Australia was claimed by the British in 1770 and initially settled through penal transportation to the colony of New South Wales, founded on 26th January 1788. The population grew steadily in the following years; the continent was explored, and during the 19th century another five largely self-governing Crown Colonies were established. The name Australia was popularised by the 1814 work *A Voyage to Terra Australis* by the navigator Matthew Flinders, the first person known to have circumnavigated Australia. Though its title reflected the British Admiralty's usage, Flinders used the word Australia in his book, and because it was widely read it gave the term general currency. Governor Lachlan Macquarie of New South Wales subsequently used the word in his dispatches to England, and on 12th December 1817 recommended to the Colonial Office that it be formally adopted. In 1824, the Admiralty agreed that the continent should be known officially as Australia. On 1st January 1901, the six colonies became a federation, and the Commonwealth of Australia was formed. Since Federation, Australia has maintained a stable liberal democratic political system and remains a Commonwealth realm. The Indigenous Australian population, estimated at 350,000 at the time of European settlement, declined steeply for 150 years following settlement, mainly because of infectious disease combined with forced re-settlement and cultural disintegration. Following the 1967 referendum, the Federal government gained the power to implement policies and make laws with respect to Aborigines. Traditional ownership of land – native title – was not recognised until 1992, when the High Court case *Mabo v Queensland (No 2)* overturned the notion of Australia as *terra nullius* (literally "no one's land", effectively "empty land") at the time of European occupation. The population is just over 21.3 million, with approximately 60% concentrated in and around the mainland state capitals of Sydney, Melbourne, Brisbane, Perth, and Adelaide. The nation's capital city is Canberra, located in the Australian Capital Territory (ACT). The states are New South Wales, Queensland, South Australia, Tasmania, Victoria, and Western Australia. The two major mainland territories are the Northern Territory and the Australian Capital Territory (ACT). The Indigenous population – mainland Aborigines and Torres Strait Islanders – was 410,003 (2.2% of the total population) in 2001, a significant increase from the 1976 census, which showed an indigenous population of 115,953. Indigenous Australians suffer from higher rates of imprisonment and unemployment, lower levels of education, and life expectancies for males and females that are 17 years lower than those of non-indigenous Australians. Remote Indigenous communities in Australia have been described as having "failed state"-like conditions.

Australia's landmass of 7,617,930 square kilometres is on the Indo-Australian Plate. Surrounded by the Indian and Pacific oceans, Australia is separated from Asia by the Arafura and Timor seas. Australia has 34,218 kilometres of coastline (excluding all offshore islands) and claims an extensive exclusive economic zone of 8,148,250 square kilometres. Although most of Australia is semi-arid or desert, it includes a diverse range of habitats from alpine heaths to tropical rainforests, and is recognised as a megadiverse country. Because of the continent's great age, its extremely variable weather patterns, and its long-term geographic isolation, much of Australia's biota is unique and diverse. About 85% of flowering plants, 84% of mammals, more than 45% of birds, and 89% of in-shore, temperate-zone fish are endemic. Australia has the greatest number of reptiles of any country, with 755 species. Many of Australia's ecoregions, and the species within those regions, are threatened by human activities and introduced plant and animal species. Most Australian woody plant species are evergreen and many are adapted to fire and drought, including many eucalypts and acacias. Australia has a rich variety of endemic legume species that thrive in nutrient-poor soils because of their symbiosis with rhizobia bacteria and mycorrhizal fungi. Among well-known Australian fauna are the monotremes (the platypus and the echidna); a host of marsupials, including the kangaroo, the koala, and the wombat; the saltwater and freshwater crocodiles; and birds such as the emu and the kookaburra. Australia is home to some of the most venomous snakes in the world. The dingo was introduced by Austronesian people

who traded with Indigenous Australians around 3000 BC. Many plant and animal species became extinct soon after first human settlement, including the Australian megafauna; others have become extinct since European settlement, among them the thylacine.

Technologically advanced and industrialised, Australia is a prosperous multicultural country and has good results in many international comparisons of national performance such as health care, life expectancy, quality-of-life, human development, public education, economic freedom, and the protection of civil liberties and political rights. Australia is one of the most laissez-faire capitalist economies, according to indices of economic freedom. Australia's per capita GDP is slightly higher than that of the UK, Germany, and France in terms of purchasing power parity.

The 9th Global Congress on Manufacturing and Management took place on 12th–14th November 2008 in Holiday Inn Hotel in Gold Coast, Australia. In the Congress in spite of the President of the GCMM Organisation Professor Prasad K.D.V. Yarlagadda, a Fellow of WAMME from Australia and me personally, other WAMME Fellows such as: Prof. Yong Taek Im from Korea, Prof. Janez Kopac from Slovenia and Prof. Gilmar Batalha from Brazil (who in fact did not arrive but published a paper) took part. All the mentioned Professors after the last by-election are included in the makeup of the Board of the GCMM organisation.

The Technical Sessions of the 9th Global Congress M&M were divided into various themes. The Congress was offered flexibility to the contributors to add new themes of wider interests. Ca. 100 papers on the following themes and related fields were qualified after the careful selection to the Conference Programme. The selected papers were sent to be published in the following awards international scientific journals. On the next GCMM Congresses awards: (1) Outstanding research contribution award in manufacturing related research, (2) Outstanding academic contribution award for excellence in manufacturing engineering education, (3) Outstanding community award for supporting the promotion of manufacturing profession in Australia, and in addition, a Best Paper prize given to one of the papers presented at the Congress will happen to be awarded every 2 years. In 2008 the second one of the mentioned awards was granted to me, what is treated by me as a great honour and significant distinction and in such a way I would like to thank for it again.

The subsequent, last issue of the JAMME, published in 2008 is a special one. It differs from the rest of this year issues especially with its thickness. It includes as many as 776 pages. Almost a year ago we announced that the publication of the annual of JAMME, except normal issues would take place. After the detailed analysis we

have decided that one of regular Issues will be published as an extended one and we will give up publishing all special issues. This time it is a December issue. 3 research monographs that is: extensive reports, including results of researches are included in it. It is a new form of the publication, which is planned to be published in the future in such a kind of issues. Moreover, most of the publications are research papers, although there are also short and technical ones. Authors come from a few dozen or so countries. All the papers achieved, as usual, at least 2 positive reviews, and before the review process made by our Journal some of them were recommended as chosen ones by the Organisers of important international conferences organised in 2007-2008 and content-relatedly sponsored by the WAMME Academy among others in Turkey, Tunisia, Brasilia, Bahrain, Australia, Bosnia and Herzegovina, Israel and Poland. I am deeply convinced that the great organisational and editorial efforts made by the Editorial Board were worth doing. We pass on to P.T. Readers a very trick and valuable set of papers, which is a peculiar photo of the present achievements of materials and manufacturing engineering in many countries of the World. It is surely a fascinating lecture and also rich bibliographic source and means of inspiration for next own scientific inquiries. I cannot resist the impression that the issue is an important publishing event. I wish P.T. Readers a successful reading and thank P.T. Authors for their content-related output and at the same time I encourage for further cooperation with our Publishing House and Journal in the future.

Because year 2008 comes to an end I would like to wish P.T. Readers and Authors, Deputies of Editor-in-chief, members of the Editorial Board, associated Editors and all the persons who contributed to the publication of the Journal in the passing year all the best and successes in the coming year 2009 with the sincere thanks for affinity for our efforts. Happy New Year!

Gilwice, in November 2008

Prof. Leszek A. Dobrzanski, M. Dr H.C
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