

Abbreviated curriculum vitae

Professor Mike Bruton MSc, PhD, DSc, FRSSAfr

1. **Full names:** Michael Noel Bruton
2. **Date and place of birth:** 30th November, 1946, in East London, South Africa.
3. **Citizenship:** South Africa.
4. **Permanent residential address:** 22 Forth Road, Rondebosch 7700, Cape Town, South Africa.
5. **Family:** Married toCarolynn, with two sons (Craig and Ryan) and a daughter (Tracey).
6. **Hobbies:** Hiking, diving, kayaking, public speaking, reading, writing, travel, photography, cycling.
7. **Special scientific interests:** History of science, Islamic contributions to science and technology, South African inventions, technological innovation, nature of creativity, brain structure and function, theory of education, conservation of biodiversity.
8. **Formal qualifications:** BSc (Hons) (1969, with distinction); Master of Science (1972, with distinction); Doctor of Philosophy (1976), Rhodes University, Grahamstown, South Africa; Doctor of Science *honoris causae* (2012), Rhodes University, South Africa.
9. **Main research fields:** Initially, ichthyology, aquatic biology and ecology, fish life histories, aquatic conservation and management, traditional fishing methods, indigenous knowledge systems and environmental education. More recently, psychology of learning, nature of creativity, structure and function of the brain, history and development of museums and science centres, history and role of science and technology, history of Islamic contributions to science and technology, technological innovation.
10. **Awards:** *Fellow of the Linnean Society of London* (1979); *Fellow of the Royal Society of South Africa* (1984); Jaycees 'Outstanding Young South African' Award (1985); *British Association for the Advancement of Science Captain Scott Medal* (1986); *Chevalier dans l'Ordre des Palmes Académique* from the Government of France (2001); *Lifetime Achievement Award*, National Science and Technology Forum, South Africa (2001); Emeritus Professor, University of Cape Town, South Africa (2004-present); Honorary doctorate in Science, Rhodes University, South Africa (2012); Honorary Life Member, Two Oceans Aquarium,

Cape Town (2013); Honorary Life Member, South African Association for Science & Technology Centres (SAASTEC, 2015).

11. Previous employer: MTE Studios, Dubai, Cape Town and Bahrain (January 2007 to 15th April 2015).

12. Current employer: Self-employed in the company 'Mike Bruton Imagineering'.

13. Scope of work previously undertaken:

- Scientific research and knowledge management.
- Consultancy services in the fields of science centre and museum conceptualization, design, project management and development; development of cost: benefit analyses and business plans for science centres and museums; conceptualization, design and development of indoor and outdoor exhibitions; development of exhibition content, and presentation using different media.
- Training of science centre and museum personnel in science centre management and development.
- Conceptualization and development of new science centres and museums.
- Conceptualization and development of new exhibitions and displays in science centres and museums.
- Popular science lectures in the fields of environmental conservation, creativity, brain structure and function, efficiency of learning, and the evolution and future of science centres and informal science education.
- Development of science and technology teaching aids (books, teacher's and learner's kits, activity sheets, science shows, science demonstrations, science theatre, science festivals, science weeks).

14. Prior experience:

- Originally trained as a marine and freshwater biologist and ecologist.
- Studied and conducted research in southern and central Africa, western Europe, Middle East, North America and south-east Asia.
- Achieved top research rating by National Research Foundation in South Africa in chosen fields of research (aquatic ecology, invasion ecology, ichthyology).
- Internationally recognized expert on African fish and fisheries and on the coelacanth.
- Published over 120 peer-reviewed scientific papers and authored, co-authored and edited 24 scientific books on aquatic biology, ichthyology, South African inventions and related topics.
- Published six books targeted at children on marine and freshwater biology.

- Published over 800 popular science and technology articles in magazines, newspapers and newsletters worldwide.
- Lectured under- and post-graduate students at universities and museums in South Africa, Malawi, Botswana, England, Wales, Scotland, France, Belgium, Netherlands, Malaysia, Thailand, U.S.A., Canada, Australia, New Zealand, Bahrain and Saudi Arabia.
- Supervised the studies of over 40 post-graduate students in aquatic sciences at the Masters and Doctoral levels.
- Acted as external examiner for Masters and Doctoral degree studies from African, European, Australian and American universities.
- Served on numerous national and international scientific research committees, including Cape Nature, the Scientific and Technical Review Panel of the International Ramsar Wetland Convention, and IUCN, WWF, SSC and other international committees.
- International consultant on marine research, conservation, aquaculture and mariculture projects.
- Published book entitled 'Great South African Inventions' through Cambridge University Press. Developed two travelling exhibitions, and made many public presentations, on this topic.
- Directly involved in the establishment of several field research stations, museums, aquaria and science centres in southern Africa, including Lake Sibaya Research Station, KwaZulu-Natal; JLB Smith Institute of Ichthyology (now the South African Institute for Aquatic Biodiversity), Grahamstown; Department of Ichthyology & Fisheries Science, Rhodes University, Grahamstown; Two Oceans Aquarium, Cape Town; MTN Sciencentre, Cape Town; Old Mutual-MTN Sciencentre, Umhlanga; Sci-Bono Discovery Centre, Johannesburg; Knysna Angling Museum, Knysna; Museum of Science & Technology in Islam, King Abdullah University of Science and Technology, Thuwal, Saudi Arabia; Bahrain Science Centre, Bahrain.
- MTE Studios Director of the Bahrain Science Centre: January 2012 to April 2015.
- Now a specialist consultant based in Cape Town.

15. Previous positions held:

- Officer-in-Charge, Lake Sibaya Research Station, KwaZulu-Natal, South Africa.
- Visiting Research Fellow, British Museum (Natural History), London, England.
- Professor and Founding Head, Department of Ichthyology & Fisheries Science, Rhodes University, Grahamstown, South Africa.
- Director, JLB Smith Institute of Ichthyology, Rhodes University, Grahamstown, South Africa.
- Founder, Knysna Angling Museum, Knysna, South Africa.
- Director of the Two Oceans Environmental Education Trust at the Two Oceans Aquarium, Cape Town, South Africa.

- Founder-Director, MTN Sciencentre, Cape Town, South Africa. During this tenure the MTN ScienCentre received over 120 000 visitors per year and was one of the most influential informal science education facilities in South Africa.
- Founder, Old Mutual-MTN Sciencentre, Umhlanga, near Durban, KwaZulu-Natal, South Africa.
- Developed business plans for the UDDI Discovery Centre in Uitenhage and the Sci-Bono Discovery Centre in Johannesburg.
- Conceptualized, designed, researched and developed content for nine traveling exhibitions from the MTN ScienCentre, including exhibitions on scientific discoveries and inventions, science of sport and the educational value of games.
- Through MTE Studios, conducted research for a series of iconic interactive displays in the Ibn Battuta Mall, Dubai, on great Islamic inventions.
- Through MTE Studios, conducted research and prepared signage for a major international traveling exhibition entitled 'Sultans of Science'.
- Through MTE Studios, conducted research and prepared signage for a modern interactive exhibition on the Pebble Bed Modular Reactor (PBMR) and on nuclear energy.
- President, Southern African Association of Science and Technology Centres (SAASTEC, 2001-2003); member of the Board of Directors of SAASTEC (2001- 2012).
- Member of the International Programme Committee of the Science Centre World Congress (2001-2004, 2007-2011)
- Chairman of the Local Organizing Committee and of the International Programme Committee of the Sixth Science Centre World Congress, Cape Town (2007-2011).
- Member of the Board of Directors and Scientific Advisory Committee, MTN Sciencentre (now Cape Town Science Centre), Cape Town (2007- present).
- Member of numerous national and international science centre development committees and commissions of enquiry.
- Participated in science festivals, science centre conferences and workshops in 19 countries on five continents.
- Carried out a four-month consultancy to develop a new mission, vision and goals for Iziko Museums of Cape Town (2011/12).
- Active participant in Science Centre World Congresses held in Calcutta (1999), Canberra (2002), Rio de Janeiro (2005), Toronto (2008), Cape Town (2011) and Mechelen (2014).

16. **Relevant experience:** I have been involved in a number of scientific research, science education, museum and science centre projects from initial conceptualization through design, development, implementation, launch and operation. These include:

- JLB Smith Institute of Ichthyology (now South African Institute for Aquatic Biodiversity), Grahamstown, South Africa.
- Department of Ichthyology & Fisheries Science, Rhodes University, Grahamstown, South Africa.
- Knysna Angling Museum, Knysna, South Africa.

- MTN Sciencentre (now Cape Town Science Centre), Cape Town, South Africa.
- Old Mutual-MTN Sciencentre, Umhlanga, KwaZulu-Natal, South Africa.
- Sci-Bono Discovery Centre, Johannesburg, South Africa.
- Museum of Science and Technology in Islam, Thuwal, Saudi Arabia.
- Bahrain Science Centre, Isa Town, Bahrain.
- Travelling exhibitions on 'Great South African Inventions' (2004 and 2015).
- Biomimicry Discovery Park near Knysna
- 'Nature Chobe' Environment Park near Kasane, Botswana.

In most of these projects my tasks have included the following:

- Development of the Brief.
- Development of the mission, goals, scope, theme, story line and take-home messages.
- Development of the 'personality traits' of the institution.
- Development of cost: benefit analyses and business plans.
- Conducting SWOT analyses.
- Contributions to the concept design of exhibition galleries and exhibitions.
- Content development for exhibitions and displays.
- Liaison with statutory authorities.
- Preparation of fund-raising proposals.
- Selection and co-ordination of professional teams and consultants.
- Development and monitoring of work schedules.
- Appointment of staff and volunteers.
- Design and design development review.
- Chairing steering committee meetings.
- Reporting to sponsors and other stakeholders.
- Staff and volunteer training.
- Development of public relations, marketing and media relations campaigns.
- Development of outreach programmes.
- Development of partnerships and collaborative programmes
- International liaison.

17. **Contact details:** Professor Mike Bruton, Mike Bruton Imagineering.
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