**Citation: Dr Meyya Meyyappan**

Dr Meyya Meyyappan is Chief Scientist for Exploration Technology at National Aeronautics and Space Administration (NASA) Ames Research Center located in Silicon Valley, California, USA. Dr. Meyyappan is an internationally recognized researcher and pioneer in the field of nanotechnology and a tireless volunteer who educates students, the public, and professionals in the field of nanotechnology. He was responsible for the first, and one and only nanotechnology product to be flown to outer space aboard a satellite when the Navy tested the nanochemical sensors from his group in 2007. Later this sensor was used for crew cabin air quality monitoring in the International Space Station.

Dr Meyya Meyyappan was born in Karaikudi, India. After obtaining a Chemical Engineering degree in India, he studied in Birmingham, UK for his M.Sc in Chemical Engineering. He completed his PhD at Clarkson University in New York and subsequently became a US Citizen.

After working in industry for 12 years, Dr Meyyappan joined NASA in 1996. Soon after, he became one of the four founding members of the Interagency Working Group on Nanotechnology, established by the White House. This group was responsible for creating the National Nanotechnology Initiative, which President Clinton signed as an official act in 2000. Because of this and his deep and broad knowledge of nanotechnology, he was consulted by governments of many countries regarding their own nanotechnology initiatives. Today nanotechnology has spawned multibillion dollars industrial opportunities all around the world and is considered to be *the* Technology of the 21st Century.

Dr Meyyappan is an active collaborator of Wits School of Chemical & Metallurgical Engineering. He recognized that South African coal has tremendous potential as a source to produce carbon nanotubes, the wonder material of the 21st Century. This innovative idea has resulted in an ongoing project at Wits, in collaboration with local industry. New reactors have been designed and built at Wits and a patent has been filed.

He co-supervises PhD students at Wits and serves on thesis committees. He already has 6 joint journal publications with Wits researchers in nanotechnology. He has made several visits to Wits, presented two short courses on nanotechnology, and has given two public lectures. The most recent and memorable two weeks visit was through a Carnegie Fellowship. During this visit, he focused on outreach activities in Johannesburg by visiting several high schools and making presentations on the importance of science and engineering education. He has met with the South African Government Science and Technology Agency Officials and discussed the importance of nanotechnology to South Africa.

Dr Meyyappan has published over 200 peer-reviewed journal articles and given over 200 Plenary/Keynote/Invited Talks on nanotechnology subjects in international conferences, in addition to over 250 Invited Seminars at universities, companies and government laboratories around the world. He holds 18 patents in nanotechnology, many of which have been licensed by industry.

Dr Meyyappan has developed technologies for electronics, chemical sensors, biosensors, energy storage devices and other sectors using novel nanomaterials such as carbon nanotubes, graphene and inorganic nanowires – all not only for space exploration but also for societal needs. His sensor technology is largely for biomedical needs such as cancer diagnostics, infectious disease diagnostics and routine health check-up using a chip-based platform instead of a week-long laboratory analysis.

In addition to the exceptional technical work, Dr Meyyappan has excelled in public service. He created high school and undergraduate student research programs in nanotechnology, which have trained over 250 students in each category to date. He also regularly advises industry and start-up companies on nanotechnology.

Dr Meyyappan is the recipient of many awards for his technical excellence in nanotechnology and educational and public service, including NASA's Outstanding Leadership Medal; the Arthur Flemming Award by the Arthur Flemming Foundation and George Washington University, Distinguished Engineering Achievement Award by the Engineers' Council, and the Pioneer Award in Nanotechnology by the IEEE. He was inducted into the Silicon Valley Engineering Council Hall of Fame in February 2009. For his educational contributions he has received recognition in various forms, such as the Outstanding Recognition Award from the NASA Office of Education; the Engineer of the Year Award by the American Institute of Aeronautics and Astronautics, and the IEEE-Educational Activities Board Meritorious Achievement Award in Continuing Education. He is an elected Fellow of six professional societies.

It is fitting that University of Witwatersrand confer on Dr Meyyappan the honorary Doctor of Science degree to recognize his excellence in research and dedication to public service.