

The Contribution of Local Chinese to Science, Technology and Innovation



NIHERST
NATIONAL INSTITUTE
OF HIGHER EDUCATION
RESEARCH SCIENCE AND TECHNOLOGY
INCORPORATED BY ACT OF PARLIAMENT ACT NO. 20 OF 1984

National Institute of Higher Education, Research, Science and Technology (NIHERST)

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Acknowledgements

NIHERST wishes to thank all persons and institutions that contributed to this publication.

We are especially grateful to the featured individuals as well as their families, secretaries and peers, who cooperated with the researchers and supplied the documents and photographs that provided the essential raw materials for the profiles.

We specially thank Professor David Picou, Dr Theodosius Poon-King and the Chinese Association of Trinidad and Tobago for their assistance and recommendations of the persons featured in the book. We also thank the National Library and Information System Authority of Trinidad and Tobago (NALIS), Mr Kelvin Poon Affat for *The Book of People* and Mr Walton Look Lai for *The Chinese of Trinidad and Tobago Since Independence*, which were important reference sources.

NIHERST is indebted to the dedicated team who brought this work to fruition - researchers and writers, Candy Moses Ferreira and David Ramcharan, as well as editors Trinity Belgrave, Christiane Francois and Joycelyn Lee Young.

Finally, NIHERST thanks the Ministry of Science, Technology and Tertiary Education for endorsing the development of this important historical resource.

Foreword

In Trinidad and Tobago, nationals of Chinese descent are part of a visible and highly influential minority that has excelled in business, science and innovation and has made a significant impact on the country's development. However, many Trinidadians and Tobagonians are unaware of the history of this prominent group of people, and the various paths that led their ancestors to our shores.

The first wave of Chinese immigrants came to Trinidad in 1809 as indentured labourers, in an experiment of immigration from Penang and Macao that ultimately failed. Of the 200 men who came, less than 30 remained after three years. Apart from plantation work, the early Chinese worked as carpenters, butchers, fishermen and shoemakers, and the few who chose to remain continued in these trades.

There was a second wave of immigration during the 1850s and 1860s, when China was in the throes of tremendous political upheaval. The antiquated Qing Dynasty was faced with the Second Opium War against the British and the Taiping Rebellion, which the *Guinness Book of World Records* describes as the bloodiest civil war in history, having claimed between 20 and 30 million lives. Chinese people left the country in throngs but only a small fraction of this great mass of departing immigrants responded to Trinidad's call for indentured labourers after the abolition of slavery. Most made their way to the United States, Cuba, Peru, Australia and other Caribbean territories. Both indentured and free Chinese, mainly Cantonese and Hakka people from Guangdong and Fujian, were part of this wave of immigration. Indentureship ceased in 1866 when the Chinese authorities demanded free return passage for the labourers – a condition that the British thought too expensive.

Chinese immigration to Trinidad was revived after the passing of the Chinese Exclusion Act in the United States in

1882. Trinidad received skilled Chinese labourers and the family and friends of those who had come before. This influx was augmented by Chinese people who had previously settled in other Caribbean territories, notably British Guiana, and who were seeking better opportunities after the end of their indentureship. In time, the children and grandchildren of these immigrants would find their way to Trinidad as well. Waves of Chinese migrants to the Caribbean continued until World War II and by the 1960s, when immigration regulations became more stringent, there were over 8,000 persons of Chinese descent in the country and people who claimed Chinese ethnicity comprised 1% of the local population at the time.

Although immigration ceased for two decades after the 1949 Chinese Revolution, a small influx began in the 1970s. This was, however, countered by a marked increase in emigration by Chinese nationals seeking better lives in more developed countries. Many left because they had become uncomfortable with the political climate of post-independence Trinidad and Tobago, especially during the upheaval caused by the Black Power movement in the 1970s. In a 2004 census, the number of citizens of Chinese origin was 3,800 or 0.3% of the total population.

It is beyond the scope of this work to present the full contribution of the Chinese to Trinidad and Tobago. With NIHERST's continued commitment to the popularisation of science and technology, the focus of this book has been narrowed to those whose contributions are in the areas of science, technology and innovation. Dr Bert Achong who co-discovered the Epstein-Barr virus; Mr Keith Awong who helped build the energy sector; Dr Joseph Pawan who discovered that vampire bats transmitted rabies; and Mr Conrad Lau whose designs produced aircraft that dominated the skies during World War II, are just a few of these noteworthy individuals.

Dr Bert Geoffrey Achong, an outstanding clinical pathologist, is one of the co-discoverers of the Epstein-Barr virus (EBV).

Born on December 6th, 1928 in Port-of-Spain, Trinidad, Bert Achong was a brilliant student who won both the St. Mary's College Science Scholarship and the national Jerningham Gold Medal for top performance in the 1947 Higher School Certificate Examinations. He went on to study medicine at University College Dublin, Ireland (now also known as the National University of Ireland), receiving a Bachelor of Medicine, Surgery and the Art of Obstetrics (MB BCh BAO) with honours in 1953. After graduating, he trained as a clinical pathologist at Lambeth Hospital in London, England.

Achong's training in electron microscopy was put to good use when he conducted research on viruses associated with human cancers, with Sir Anthony Epstein and Dr Yvonne Barr at the Bland Sutton Institute at Middlesex Hospital in England. There, they discovered a previously unknown virus of the herpes family that caused Burkitt's lymphoma - a tumour found in children in central Africa. After the team published their findings in 1964, this virus, which also causes a rare form of nasal cancer, became known as the Epstein-Barr virus.

Dr Achong also discovered the first case in which a human was infected by a "foamy virus" - a virus related to HIV that usually affects chimpanzees. He wrote several scientific articles and books on his research and discoveries, including a book co-edited with Sir Anthony Epstein entitled *The Epstein-Barr Virus*. Achong went on to spend many years at the Department of Pathology at the University of Bristol in England, where he gained a reputation as a gifted, dynamic lecturer who motivated his students to succeed.

In 1965, he received a Doctor in Medicine (MD) from the National University of Ireland and, in 1983, he was awarded a Doctor of Science (DSc) degree for his contribution to medical research. Dr Achong was also a Foundation Fellow of the Pathology Faculty of the Royal College of Physicians of Ireland.

Dr Bert Geoffrey Achong passed away on November 20th, 1996.



Dr Bert
Achong
Clinical Pathologist

Dr Kongshiek Achong Low, a noted obstetrician and gynaecologist, is the executive chairman of Medcorp Limited. This innovative company has greatly contributed to the provision of high quality health care in Trinidad and Tobago.

Born on June 28th, 1950 in Port-of-Spain, Trinidad, Achong Low attended Tranquillity Boys' Intermediate School and won a College Exhibition to continue his studies at St. Mary's College. He then pursued his Bachelor of Science (BSc) in Genetics at McGill University in Montreal, Canada, graduating with first class honours in 1971. He obtained his Doctor of Medicine, Master of Surgery (MD CM) in 1975. In 1980, he became a Fellow of the Royal College of Surgeons (FRCS) with a speciality in Obstetrics and Gynaecology.

In 1981, after achieving these qualifications, Dr Achong Low returned to his homeland where he began private practice. In 1985, he performed the first successful delivery of male conjoined twins in the English-speaking Caribbean, and led the team that separated them later that year. In 1994, with a number of his colleagues, Achong Low founded Medcorp Limited. Medcorp Limited quickly became the largest private health service provider in the region, one of only two organisations in Trinidad and Tobago that provides both interventional cardiology with open heart surgery, and radiation treatment for many cancers. In addition, Medcorp Limited has been credited with introducing mammography to the country, and contributed to developing the nation's first dedicated Intensive Care Unit in 2000, which was later emulated by the Port-of-Spain General Hospital and other hospitals in the country. Today, Medcorp Limited comprises several companies and operates from five locations – St. Clair Medical Centre, Doctors Radiology Center, the Brian Lara Cancer Treatment Centre, Austin Street Clinic and Goodhealth Medical Centre.

In other pursuits, Dr. Achong Low was a successful horse owner and breeder. He bred two Derby winners in 1990 and 1995, Phardance and Vitesse Oblige. He acted in *Thunderstorm*, a play directed by Raymond Choo Kong. He also sang calypso at the national level as "Dr Soca."



Dr Kongshiek
Achong Low
Obstetrician &
Gynaecologist

Mr Chiang Keith Awong is a chemical engineer by profession, and was a key player in the development of the local energy sector.

Born on August 19th, 1940 in Trinidad, Keith Awong grew up in Moruga and Point Fortin. He attended San Fernando Boys' Government and went on to Presentation College in 1952. He studied mechanical engineering and received a Technician's Diploma from the San Fernando Technical Institute in 1957. He worked as a plant operator at Federation Chemicals Limited for several years and was awarded a scholarship by Shell Oil Trinidad to pursue his degree in chemical engineering at UWI, St. Augustine in Trinidad. He was the first student to enter the programme without studying GCE Advanced Level Chemistry. However, he worked hard and earned his Bachelor of Science (BSc) with first class honours in 1973.

Mr Awong has held some of the most senior positions in Trinidad and Tobago's petroleum sector for over 35 years. He was a senior manager with the Trinidad and Tobago Oil Company Limited (Trintoc). He was later appointed the first Chief Executive Officer of the Petroleum Company of Trinidad and Tobago Limited (Petrotrin) when it was established in 1993, a post that he held up to his retirement in 1997. He was the chairman of the boards of the National Gas Company (NGC), the National Energy Corporation (NEC) and Phoenix Park Gas Processors Limited. In 2005, he received one of the country's national awards, the Chaconia Medal (Gold), for long and meritorious service to Trinidad and Tobago in the sphere of national energy development.



Keith
Awong
Chemical Engineer

Dr Astor Victor Awon is one of the top specialists in oral surgery in Trinidad and Tobago and a practitioner who has served his country's public health sector with great dedication.

Astor Awon, called "Pouy" by his family, was the last of nine children, the son of Joseph and Alice Awon, who was the daughter of a Chinese indentured worker and a descendant of a member of the Corps of Colonial Marines. Astor Awon was born on July 22nd, 1927 in Port-of-Spain. He was educated at Belmont Boys' Intermediate School, where he passed the College Exhibition examination in 1939, coming third in the country. He excelled in both academics and sports at St. Mary's College, where he earned distinctions in Chemistry and Physics, placed third in the 1946 Island Scholarship examination and also became Victor Ludorum in cycling. He taught science at the Queen's Royal College before winning a Commonwealth Scholarship in 1950. This enabled him to pursue his Bachelor in Dental Surgery (BDS) and Master in Dental Surgery (MDS) from University College Dublin in Ireland. He finished his academic career as a Fellow of Dental Surgery of the Royal College of Surgeons, England (FDSRCS).

In 1960, he returned from England as the first Trinidadian to be qualified in oral surgery. He worked as a Specialist Dental Surgeon at the Port-of-Spain General Hospital. A year later, he opened his dental clinic in Anthony's Arcade on Frederick Street, Port-of-Spain and soon attracted patients from around the country. Throughout his career, he was highly regarded for his professionalism and his willingness to always accommodate patients. Today, Dr Astor Awon continues to practise oral surgery at the Port-of-Spain General Hospital.



Dr Astor
Awon
Dental Surgeon

Dr Maxwell Phillip Awon was a distinguished obstetrician and gynaecologist who also contributed to politics, the arts, carnival, business and community organisations.

Maxwell Awon was the son of Joseph and Alice Awon and the fifth of nine children. Born on March 10th, 1920 in Port-of-Spain, Trinidad, he attended Belmont Boys' Intermediate School, moving on to Queen's Royal College in 1932 and St. Mary's College from 1937. He went to England next, where he studied at the University of London, attaining a Bachelor of Science (BSc) in Economics in 1941. He then attended the National University of Ireland where he received a Bachelor of Science (BSc) and a Master of Science (MSc) in Physiology in 1950 and 1952 respectively. He completed his Bachelor of Medicine, Bachelor of Surgery, Bachelor of the Art of Obstetrics (MB BCh BAO) there in 1953 and pursued postgraduate studies at the Institute of Obstetrics and Gynaecology at Hammersmith Hospital in London, England in 1958, becoming a Member of the Royal College of Obstetrics and Gynaecology and a Fellow of the Royal College of Surgeons of Edinburgh (FRCSEd) in 1960. He later became a Fellow of the Royal College of Physicians of Ireland (FRCPI) in 1970 and a Fellow of the American College of Obstetricians and Gynaecologists (FACOG) in 1974.

Dr Awon was a leader in the field of obstetrics and gynaecology for over 25 years. He was also active in national politics, serving as a member of the House of Representatives from 1966 to 1976, Minister of Health from 1957 to 1971, and Minister of Local Government from 1969 to 1971.

Dr Awon took a keen interest in local culture. He was head of the Stick Fighting Association and was a popular carnival bandleader. His band, Max Awon D'Midas and Associates, won Band of the Year in 1984 and 1987. He was involved with the Orchid Society, the Horticultural Society and the Family Planning Association. He was the chairman of several private companies and even invented an energy-efficient combustion engine.

Dr Awon was humble, passionate and dedicated to the health sector. For his commitment, he received the Father of the Year Award from the National Father's Day Council in 1976, a Long Service Award from the Government of Trinidad and Tobago in 1981, and a Long Service Award from the Family Planning Association in 1996.

Dr Maxwell Phillip Awon passed away on October 18th, 1998.



Dr Maxwell
Awon

Obstetrician &
Gynaecologist

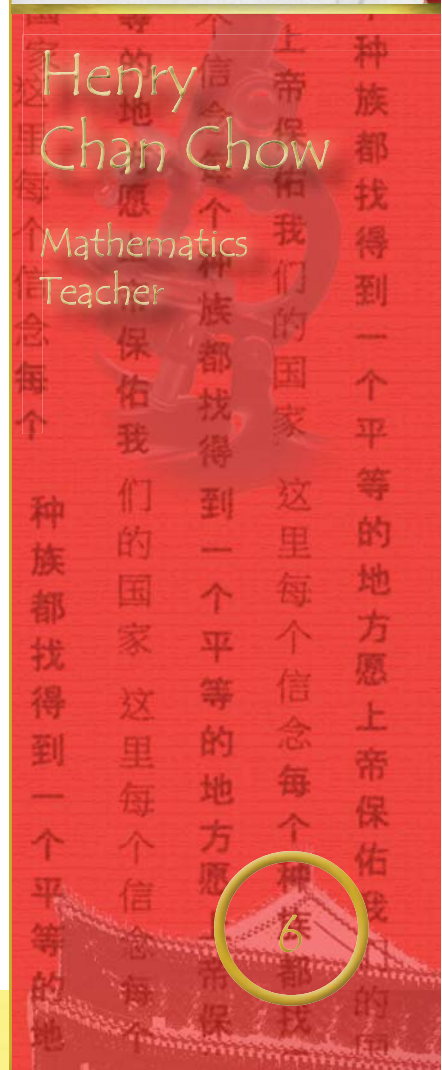
Mr Henry Leonard Echong Chan Chow was a revered educator who served his students and his community with loyalty and humility.

Henry Chan Chow was born on November 5th, 1925 in his father's shop in St. James, Trinidad. His father was an immigrant from China and his mother was a Trinidadian of Chinese descent. As a child, he attended Nelson Street Boys' RC School and won a College Exhibition scholarship to attend St. Mary's College. After completing his secondary education, he accepted a teaching post in Chaguanas and moved there.

At age 32, Chan Chow decided to leave for Canada to read for his Bachelor of Science (BSc) degree at the University of British Columbia, majoring in mathematics and minoring in nuclear physics. At that time, the latest research in mathematics and physics was published by Russian and German scientists who had been involved in rocket research during and after World War II, so he had to learn these languages in order to facilitate his studies.

After graduating in Vancouver, Chan Chow returned to Trinidad after deciding not to accept his immigration residency for Canada, and resumed teaching at Presentation College, Chaguanas where he taught Additional Mathematics and Advanced Level Mathematics. Although he worked briefly in the petroleum sector, he realised that teaching was his true calling, and he sacrificed a much higher salary to continue nurturing students. He mentored many Open Scholarship winners including Jerningham Gold Medal and President's Medal winners. His past students have since become successful in engineering, medicine, mathematics, actuarial science, education and industry. Near the end of his career, he was made Vice Principal of Presentation College, Chaguanas and served in this post until retirement in 1985.

In 1998, Mr Chan Chow was honoured for his contribution to education by the Rotary Club. This dedicated educator passed away on December 25th, 2006. He touched many lives through his teaching and his encouraging excellence in students.



Mr Anthony Peter Chan Tack has been a senior engineer and top executive in the petrochemical industry for over three decades. He has played a major role in the development of the petroleum sector and the establishment of petroleum-related industries.

Born on September 22nd, 1944, Anthony Chan Tack grew up in Belmont, East Dry River. He attended Rosary Boys' RC School and St. Mary's College in Port-of-Spain. He then attended The University of the West Indies (UWI), St. Augustine, Trinidad where he studied chemical engineering and graduated with honours.

Between 1968 and 1999, Chan Tack held several senior technical and managerial posts with Texaco, Trintoc and Petrotrin. In these positions, he managed a fuel refinery that also manufactured petrochemicals and base lube oils, was a general manager, and directed business and strategic planning and marketing. He later became CEO of the Titan Methanol Company, Managing Director of Methanex Trinidad Unlimited and President of Atlas Methanol Unlimited, as well as Chairman of Trinidad Methanol Company.

Mr Chan Tack's many achievements have revolutionised the local petrochemical sector. In 2000, under his leadership as Chief Technical Officer, he managed Titan's interest throughout the construction, commissioning and operation of the 2500 metric tonnes per day (MTPD) Titan Methanol Plant. Shortly after, Methanex Inc acquired the assets of the Titan Methanol Company and established the local subsidiary, Methanex Trinidad Unlimited, appointing Chan Tack as Managing Director.

Methanex Inc also initiated the Atlas Methanol Company, a joint venture with British Petroleum of Trinidad and Tobago (bpTT), which involved the construction and operation of the 5000 MTPD Atlas Methanol Plant in 2004. When they were built, Titan was the largest methanol plant in the Americas, and Atlas was the largest single train unit in the world. Both are located at the Point Lisas Industrial Estate and operate as globally competitive, reliable, low-cost manufacturing plants. In the companies he managed, Chan Tack improved efficiency and productivity, reduced operating costs, and promoted a high performance culture and learning environment.

Mr. Anthony Chan Tack has served as Chairman of the Trinidad and Tobago Methanol Company and Alutrint, and on the boards of several energy sector companies. He is currently the Chairman of the Trinidad and Tobago Bureau of Standards.



Anthony
Chan Tack
Chemical Engineer

Dr Ivan Chang Yen helped to establish the Analytical Chemistry Programme at The University of the West Indies (UWI), St. Augustine, Trinidad and has headed the analytical programme since 1978.

Ivan Chang Yen was born in Georgetown, Guyana on February 14th, 1947 to Chinese immigrant parents. He attended the Central High School and then Queen's College in Georgetown. He completed his Bachelor of Science (BSc) in Chemistry at the University of Guyana in 1971 and subsequently pursued both his Master of Science (MSc) and Doctor of Philosophy (PhD) in Analytical Chemistry at the University of Bristol between 1973 and 1976. On completion of his studies, he immediately joined UWI, St. Augustine.

Dr Chang Yen initiated the first Analytical Chemistry Programme at that campus, which has since produced over 400 graduates and later inspired the Mona and Cave Hill campuses to introduce equivalent programmes. Because analytical chemistry was a largely unrecognised area of science in Trinidad and Tobago, he ensured that the programme's curriculum encouraged collaboration with local institutions and industries in order to satisfy national and regional needs, and to identify critical areas to be addressed in teaching and research. Today, many former analytical chemistry graduates currently occupy senior positions in local and extra-regional companies and institutions.

Dr Chang Yen is also credited for his research and environmental assessments on land and marine pollution from oil-based chemicals, heavy metals and agro-chemicals. He has developed novel crude oil fingerprinting systems for environmental and oil exploration applications. The results of his studies on mycotoxins (poisons released by fungi), pesticide residues in foods, lead poisoning and the clean-up of lead-contaminated sites have significantly improved food and environmental safety. He has published extensively in recognised scientific journals and has produced several technical reports on laboratory and environmental assessments.

Dr Chang Yen's expertise is widely recognised and he has given public service to the Institute of Marine Affairs, a Cabinet-appointed committee on lead pollution, the Basel Convention of the UN, the Trinidad and Tobago Bureau of Standards, NIHERST and the Environmental Management Authority. He is currently involved in research on cocoa quality to assist the local cocoa industry in meeting international food safety standards, as well as in developing a flavour profiling system for Trinidad and Tobago's fine flavour cocoa, in collaboration with the Cocoa Research Unit and the Ministry of Agriculture, Land and Marine Resources.



Dr Ivan
Chang Yen
Analytical Chemist

Mr Mervyn Chen is a self-made and self-taught inventor whose designs and technological creations have been commercialised in Trinidad and Tobago and in the United States.

Born on January 10th, 1945 in Dow Village, Trinidad, Mervyn Chen first attended San Fernando Boys' RC School and then went to Presentation College, San Fernando. At school, he was fascinated by physics because he was curious to "know how things worked." He left Trinidad for the United States in 1964 to pursue a degree in architecture at Sacramento City College in California. However, illness struck and forced him to return home in 1966.

After coming back to Trinidad, Chen assisted his father with the family bakery and also branched out into several businesses of his own during the oil boom in the seventies. In 1975, he constructed the massive screen at Kay Donna Cinema, the first drive-through cinema in the country. In 1986, he migrated to the United States where he started a manufacturing company specialising in steel products, and undertook significant work for many prominent institutions and companies including the US Army Corps of Engineers, Coca Cola, Disney and the Marriott Hotel.

In 1990, Chen began researching and experimenting with designs to solve inefficiencies in the oil-drilling process. He developed and tested a prototype of his "Thru-Tube Backsurging Tool" in Trinidad, patented it and licensed it to an American company. His next invention was the "Downhole Magnetic Pump," which was cheaper and smaller than the pumping jack units that were previously considered irreplaceable in the oil extraction process. It was patented and is now used in wells in California.

Chen also channelled his creativity into the design of two automatic machines for the construction industry, a walking aid for disabled persons, a "water-making" condensation device, and equipment used to assist in flood relief. He also has a patent pending for a turbine that uses well pressures to generate electricity.



Mervyn
Chen
Inventor

Mr Cecil Ignatius Chin is recognised as a master civil engineer: an expert in all aspects of civil engineering – building, highway, road, and waterway construction. Among his major undertakings were the dredging and reclamation of various sites around the Caribbean including parts of Claxton Bay, the land now occupied by the Train 1 and Train 2 LNG plants at Point Fortin, and areas of Kingstown in St. Vincent. His projects have increased the land area of Trinidad and Tobago by about a hundred acres.

Cecil Chin was born on January 26th, 1943 in Bartica, Guyana to parents from China. He grew up under modest conditions in a small village, and attended Queenstown RC and Central High Preparatory School. His secondary education was completed at Central High School, Georgetown and he finished his GCE Advanced Levels at Stanislaus College. In 1962, he was accepted to The University of the West Indies (UWI), St. Augustine, and came to Trinidad to study. A brilliant student, he gained a first class honours degree in civil engineering and was one of the earliest graduates of the institution. In 1966, he then went to Queen's University in Canada to continue his studies, returning to Trinidad after graduating with a postgraduate diploma in civil engineering.

In 1968, Chin began working at one of the country's largest construction companies, Trinidad Contractors Ltd, serving as Chief Engineer between 1976 and 1986. Mr Chin was appointed President of the Association of Professional Engineers of Trinidad and Tobago (APETT) in 1985. He joined the Caribbean Industrial Research Institute (CARIRI) in 1986, and served as the Divisional Manager from 1989 to 1991. From 1986 to 1993, he served as Chairman of the Board of Directors of the National Maintenance, Training and Security Company (MTS). He has also been a part-time lecturer at UWI for many years.



Cecil Chin
Civil Engineer



Dr Myron
Chin
Civil Engineer

Dr Myron Chin is a chartered civil and structural engineering consultant who played a role in building a robust Department of Civil Engineering at The University of the West Indies (UWI), St. Augustine, Trinidad. An expert on disaster management and structural engineering, he was Project Manager on the compilation of the Caribbean Uniform Building Code (CUBiC).

Born on August 17th, 1938 in Macqueripe, Trinidad, Myron Chin attended Nelson Street Boys' RC School and Queen's Royal College. In 1962, he attained first class honours in civil engineering from Loughborough University in England under a Shell scholarship. He went on to complete a Doctor of Philosophy (PhD) in Structural Engineering at Manchester University in 1966 under a Commonwealth scholarship, and began working for Shell, which had sponsored his first degree at Loughborough.

He joined UWI, St. Augustine in 1972 as a lecturer of civil engineering and was appointed Senior Lecturer in 1977. In 1986, he was awarded a Fulbright Research Fellowship to Lehigh University in Pennsylvania, USA, where he specialised in expert systems technology and earthquake-resistant design of structures. From 1989 to 1992, he served as Head of the Department of Civil Engineering. After serving UWI for over three decades, he retired in 2003, shifting his focus to private consultancy.

Dr Chin was instrumental in developing CUBiC, which is used as a model for building codes throughout the Caribbean region. He is one of the region's principal advisors to governments and inter-governmental bodies on disaster mitigation, management and reconstruction. He has also served in local, regional and international capacities, including President of the Association of Professional Engineers of Trinidad and Tobago (APETT) and, on three separate occasions, Regional Chair for the Caribbean in the World Congress on Expert Systems. For over a decade, he was an advisor to UNESCO on continuing education for engineers and technicians. He was presented with a Career of Excellence award by APETT in 2007.

Dr Chin has written extensively on civil, structural and construction engineering, low-cost housing, expert systems, disaster management and continuing education. He has left a rich legacy for the engineers who follow in his footsteps.

Mr Clive Chu Cheong was a founding director of Consulting Engineers Partnership (CEP) Limited and was one of few Caribbean engineers to become a Fellow of the Institution of Structural Engineers (FIStructE). The Board of Engineers of Trinidad and Tobago described him as “a pioneer of local practice in civil engineering.”

Clive Chu Cheong was born on April 11th, 1929 in Port-of-Spain, Trinidad and attended Tranquillity Boys' Intermediate School and later Queen's Royal College. He studied civil engineering at Cardiff University in Wales. After university, he worked at Oscar Faber Consulting Engineers in England before returning to Trinidad. After spending some time at the Trinidad and Tobago Electricity Company (T&TEC), he joined David Key and Partners in 1961.

Mr Chu Cheong proved himself to be as capable at administration as he was in engineering. Within three decades, the partnership opened offices in six Caribbean countries and England. Today, CEP Limited provides consulting engineering services in these locations, mainly in structural and civil engineering. It has a wide track record due to its cadre of skilled civil and structural engineers and specialist consultants with extensive experience.

Mr Chu Cheong's projects included Tierra Nueva Estate in Maracas Valley and Tanteak Saw Mill in Carlson Field. He was involved in the design of 77 schools and also contributed significantly to the development of APETT, attaining the highest level of Fellow with the Association and holding executive rank in General Council positions. Additionally, he was a Fellow of the Institution of Civil Engineers (FICE) and a member of the Barbados Association of Engineers.

Clive Chu Cheong retired in 1984. He passed away on April 18th, 2001.



Clive Chu
Cheong
Civil Engineer

Father Lai Fook is a renowned mathematics educator who has instructed many island scholars over the five decades of his career.

Arthur Lai Fook was born on July 5th, 1919 in Penal, Trinidad but grew up in Port-of-Spain. He attended St. Mary's College, where his love for mathematics started late in his school career. He won the Jerningham Gold Medal and an Open Scholarship in 1937 and, after a year of teaching at St. Mary's, went to Paris where he completed his noviciate - a year of sustained observation and meditation that allows prospective priests to seriously consider their decision - and became a professed member of the Holy Ghost Congregation (better known as the Holy Ghost Fathers).

He went on to University College, Dublin in Ireland, where he gained his Bachelor of Science (BSc) in Mathematics and Mathematical Physics in 1942. The following year, he completed his Master of Science (MSc) in Mathematics. He achieved both degrees with first class honours. At the same university, he also obtained a Bachelor of Arts (BA) in Mental and Moral Philosophy and a Higher Diploma in Education in 1944. He began theology studies in Dublin but completed his baccalaureate in sacred theology in Fribourg, Switzerland where he was ordained on July 20th, 1947.

After his return to Trinidad in 1948, Father Lai Fook taught at St. Mary's College and was Junior Dean of Studies for a decade. Between 1962 and 1966, he lectured at the University of Nigeria and then at The University of the West Indies (UWI), St. Augustine, Trinidad after which he returned to St. Mary's College. He served as the college's Principal from 1971 until 1978, when he officially retired.

Despite his retirement, Father Lai Fook continued to teach at St Mary's College, first on a contract basis, then voluntarily until 2006. In 1990, the Government of Trinidad and Tobago awarded him the Chaconia Medal (Gold) for his contribution to education.



Father
Arthur
Lai Fook
Mathematics
Educator

Mr Conrad Albert Lau was a first-rate aeronautical engineer and inventor whose designs produced military aircraft that gave the Allied forces air superiority in the Pacific during World War II.

Conrad Lau was born on February 8th, 1921 and grew up at Scott Bush Street in Port-of-Spain, Trinidad. He attended Queen's Royal College until his fourth year, when he travelled to the United States to pursue his higher education at the Massachusetts Institute of Technology (MIT). He excelled, receiving his Bachelor of Science (BSc) in Mechanical Engineering in 1942, and his Master of Science (MSc) in Aeronautical Engineering in 1943. He was elected to the Dean's List and gained membership in the National Honorary Engineering Fraternity.

After his graduation from MIT, Mr Lau joined Chance Vought Aircraft, a division of United Aircraft Corporation. He devoted his entire career to that company, which later became Ling-Temco-Vought Inc. He personally made significant contributions to the United States' defence programmes, beginning with the famous World War II fighter plane, the F4U Corsair, which was flown by both Navy and Marine Corps pilots, who benefited from an 11:1 kill ratio against the Japanese in the Pacific.

Under Lau's leadership, the F7U Cutlass series and the many versions of the famous F8U Crusader aircraft were also developed within the Vought VAL Light Attack Aircraft Program. When the US Navy sought a new aircraft based on an existing design, Conrad Lau retooled the F8U into the Corsair II, beating the competition, winning the contract, and proving himself to be one of the foremost aircraft designers in the world.

Mr Lau was an Associate Fellow of the American Institute of Aeronautics and Astronautics and an advisory member of the NASA Committees on Aerodynamics and Aircraft Design. He died of cancer on April 18th, 1964 at the age of 43.



Conrad Lau
Aeronautical
Engineer



Dr Carl Alexander Roland Lee devoted over 25 years to the public health service and, over 40 years, built a very successful private practice, working out of the Lee Building in Port-of-Spain, Trinidad.

Born on February 27th, 1925 in Port-of-Spain, Carl Lee attended Tranquillity Boys' Intermediate School, coming first in the island in the College Exhibition examination. At Queen's Royal College, he won an Island Scholarship in Mathematics. During World War II, he volunteered his services as an air-raid warden. In 1943, he went on to McGill University, where he obtained his Doctor of Medicine, Master of Surgery (MD CM). Afterwards, he took advantage of an internship in Montreal and Ottawa, specialising in otolaryngology (the more commonly known term for this specialty is ENT for ear, nose and throat). During this time, he gained practical experience in medicine by working at several clinics before returning to Trinidad.

In 1951, Dr Lee entered the Ears, Nose and Throat (ENT) Department at the General Hospital, Port-of-Spain, lending his expertise to general practice. In the same year, he also started his private practice on Frederick Street. The Lee Building was purchased (and renamed) in 1953. Owned by Dr Carl Lee and his father, it housed the practices of the Lee brothers, and became popular for its provision of efficient, convenient and affordable service.

In 1966, Lee became the President of the Trinidad and Tobago Medical Association. He received both the Scroll of Honour and the Gold Medal from the Association in 1980, and an Icon Award from the Trinidad Hilton Hotel and Conference Centre in 2005. He was also a member of several other organisations including the St. John's Ambulance Brigade, Red Cross Society, QRC Old Boys' Association, and McGill Graduate Society.

Well into his old age, Dr Lee's love for medicine, joy in service and desire to help others prevented him from fully retiring. He passed away on January 30th, 2009.



Dr Carl Lee
Medical Practitioner

Dr D'arcy "Johnny" Lee is a dental consultant and surgeon, a horticulturist and a writer on the topic of gardening.

D'arcy Alexander Lee, also known as "Johnny", was born on February 5th, 1940 to parents who had immigrated to Trinidad from Guyana. He attended Tranquillity Boys' Intermediate School and later, St. Mary's College, where he obtained the Senior Cambridge School Leaving Certificate House Scholarship. He studied medicine at McGill University in Montreal, Canada, emerging with his Doctor of Dental Surgery (DDS) degree in 1966. He was an honours student and the Chairman of the International Students Association. He was also the Vice President of his fraternity, Vice President of the Student Council and Vice President of the Dental Class of 1966.

Although Dr Lee was President of the Trinidad and Tobago branch of the British Medical Association in 1966 and a practising dental surgeon until 2005, he is better known to many as a horticulturist. He discovered new methods for improving plant growth and was dedicated to educating the public about horticulture, serving as president of the Horticultural Society of Trinidad and Tobago, as well as a trustee and life member. He is also the founder of the Garden Club and a member of the Bonsai Society of Trinidad and Tobago. He was also actively involved in Carnival, leading a J'ouvert band called The Blue Devils of St. Clair for roughly ten years.

In 1998, Dr Lee was awarded the Humming Bird Medal (Silver) for outstanding service to Trinidad and Tobago in the field of horticulture. After a head injury left him visually impaired in 2002, he focused his attention on writing. Since 2006, he has contributed to the "Happy Gardener" column in the *Trinidad Guardian*, and his articles have also appeared in other magazines such as *MACO*, *Island Life* and *Field Naturalist*.



Dr D'arcy
"Johnny"
Lee
Horticulturist



Dr Selwyn
Lee Young
Civil/Coastal
Engineer

Dr Selwyn Lee Young is one of Trinidad and Tobago's leading civil engineers and one of the nation's few specialist coastal engineers.

Born on October 10th, 1934 in Balmain, Trinidad, Selwyn Lee Young was the son of James Lee Young of China and Alma Martin of San Fernando. He was schooled at Balmain Canadian Mission School and Presentation College, San Fernando. After teaching physics for five years, he left for England to pursue his Bachelor of Science (BSc) in Civil Engineering at the University of Liverpool. After graduating in 1960, he went on to pursue his Doctor of Philosophy (PhD) in Coastal Engineering at the same university, conducting research in tidal hydraulics. He received his doctorate in 1962.

In 1963, Dr Lee Young returned to Trinidad, taking up the post of Port Engineer with the Port Authority of Trinidad and Tobago. Over a six-year period, he was responsible for upgrading port operations, phasing out palletisation in favour of containerisation. In 1969, he established the consultancy practice of Lee Young and Partners.

Dr Lee Young was the consulting engineer on major infrastructural projects such the Port-of-Spain Container Terminal in 1975, the Point Lisas Industrial Estate in the 1970s, the Finance Building in 1980, the Mount Hope Medical Complex between 1980 and 1985, as well as the development of the Sea Lots Port, the Mucurapo Foreshore Freeway, and the Crown Point International Airport. He has also directed major civil works in other Caribbean countries such as the St. Kitts' Deep Water Port in 1980, and the Vieux Fort Container Terminal in St. Lucia in 1984. He was the President of the Association of Professional Engineers of Trinidad and Tobago (APETT) from 1979 to 1980, and is a Fellow of the Institution of Civil Engineers in the United Kingdom.

Dr Lee Young has endeavoured to create structured employment for indigenous young engineers, emphasising the need for professional development to strengthen local engineering capacity and reduce the outflow of skilled engineers to other countries. Lee Young and Partners is the largest indigenous engineering consultancy firm in the Caribbean, providing full-time employment for 100 engineers, technicians and members of support staff at the end of 2008.

Dr Selwyn Lee Young is Professor and Honorary Fellow of The University of the West Indies (UWI). He is also the owner and executive director of the Coblentz Inn in Cascade, Trinidad.

Mrs Wendy Lee Yuen is internationally recognised in the fields of agriculture and horticulture .

Born in October 16th, 1956 in Diego Martin, Trinidad, Wendy Rollock grew up on a farm in La Romaine where her love for horticulture began. She was educated across the region, finishing her GCE Ordinary Level Examinations in Barbados and her GCE Advanced Level Examinations in Jamaica. In 1982, she graduated with honours from The University of the West Indies (UWI), St. Augustine, Trinidad with a Bachelor of Science (BSc) in Agriculture, winning the Marie Curie Prize for best final year student.

In 1994, Mrs Lee Yuen was a founding member of the Association of Professional Agri-Scientists of Trinidad and Tobago. She served as the youngest president of the Horticultural Society of Trinidad and Tobago (HSTT) between 1995 and 1997. Since 1999, she has been a member of the planning committee of the UWI Continuing Education Programme and has co-coordinated training for staff of the Ministry of Local Government through this programme. Also in 1999, she became the first female president of the Agricultural Society of Trinidad and Tobago. She was re-elected President over a five-year period. During her term of office, praedial larceny laws were revised, agricultural infrastructure was improved and the Society gained prominence for its advocacy on behalf of farmers.

In 1998, Mrs Lee Yuen represented Trinidad and Tobago at the First Meeting of Inter-American Organizations of Rural Farmers held in Santiago, Chile. In 2000, she designed a Trinidad and Tobago garden for the BBC Gardeners' World Live and won a bronze medal. In 2002, she chaired the opening session of the Royal Agricultural Society of the Commonwealth Conference, which took place in Ireland.

Under Mrs Lee Yuen's leadership, the HSTT received the Prime Minister's Award for Tourism in 1998. In 1999, she was awarded the HSTT President's Trophy and the Bermudez Cup. She was the first female chairperson of the National Agricultural Marketing and Development Corporation (NAMDEVCO), serving from 2000 to 2005. Her expertise and her work in agriculture and food production have been recognised locally and internationally.

Mrs Lee Yuen now teaches landscape management at UWI, St. Augustine, manages her farm, runs her own landscaping company, and is the deputy political leader of the Congress of the People's Party. A passionate environmentalist, she champions sustainable development and the need for countries to achieve food security.



Wendy
Lee Yuen
Horticulturist

Dr James Ling is a distinguished surgeon who is known internationally for his expertise in cardiology.

Born on April 3rd, 1931, James Alexis Ling grew up in Princes Town but later moved to Port-of-Spain. He attended Tranquillity Boys' Intermediate Government School and later, Queen's Royal College, where he won the Jerningham Silver Medal. He won an Island Scholarship in 1949 and proceeded to the University College of the West Indies (UCWI) in Kingston, Jamaica to study medicine. In 1957, he graduated with his Bachelor of Medicine and Bachelor of Surgery (MBBS) and then commenced his internship at the University Hospital of the West Indies in Kingston. He pursued his postgraduate training both there and at the Brompton Hospital and Institute for Diseases of the Chest in London, England. He completed his training in 1962 and went on to become a Member of the Royal College of Physicians (MRCP) of London and a Fellow of the Royal College of Physicians (FRCP) in the following year.

In 1964, Dr Ling returned to the University Hospital and served as Consultant Physician and Cardiologist until 1976. In that year, he was elected Fellow of the Royal College of Physicians (FRCP) and appointed Director of the Coronary Care and Surgical Cardiac Units at Cedars Medical Center in Miami. Together with Dr Robert Reis, he established the open heart surgical programme at the Center. In 1984, he became the Consultant Cardiologist to Miami Heart Institute and to Mount Sinai Medical Center and Mount Sinai Medical Hospitals, holding this position until 2000. He also served as Consultant Cardiologist to Cedars Medical Center from 1984 to 2005. He is currently affiliated with the VA Medical Center in Miami.

In 1994, Dr Ling was elected a Fellow of the Royal College of Physicians of Edinburgh (FRCPE) and awarded the Chaconia Medal (Silver) by the Government of Trinidad and Tobago for his contribution to medicine. In 1998, he was given the honour of Distinguished Graduate by the Council and Senate of The University of the West Indies. In 2002, the Caribbean Cardiac Society honoured him for his advancement of cardiology in the region.

Dr James
Ling
Cardiologist

Mr Frank Look Kin has contributed significantly to the development of the oil and gas industry in Trinidad and Tobago for four decades. Under his leadership, the National Gas Company of Trinidad and Tobago (NGC) prospered and is a highly regarded and socially responsible corporation.

Born on May 13th, 1948, Frank Look Kin grew up in Claxton Bay, Trinidad. He attended several primary schools and attained his secondary education at Presentation College in San Fernando before going to the United States to study. He obtained his Professional Degree in Geophysical Engineering from the Colorado School of Mines, and completed a Master of Science (MEng) in Mineral Engineering Management at Pennsylvania State University. After graduating, Mr Look Kin returned to Trinidad in 1970 where he took up employment with the Ministry of Petroleum and Mines as a Petroleum Engineer I. He remained there for 20 years, during which time he rose to the position of Chief Technical Officer. He left the Ministry in 1990 to take up the position of Vice President for Business Development and later Vice President of Technical Services at NGC. In 1996, he was appointed President.

Mr Look Kin has played a major role in the negotiation of natural gas purchase and sales contracts. Under his tenure as the company's president, NGC's gas transmission capacity had a four-fold increase and now stands at 4.4 billion cubic feet per day. He kept NGC firmly committed to community service in the fields of education, sport and culture, including the sponsorship of NIHERST's National Science Centre, the first such facility in the Caribbean. He has also been a director of Phoenix Park Gas Processors Limited, Atlantic LNG, National Enterprises Limited, The University of Trinidad and Tobago and National Quarries Company Limited.

In 2006, NGC undertook a US\$260 million capital investment for the construction of a 56" diameter cross-island, natural gas transmission pipeline from Beachfield to Point Fortin – the largest diameter natural gas pipeline to be constructed in the western hemisphere.

In 2008, Mr Look Kin received the Chaconia Medal (Gold) for his contribution to the development of the energy sector. In March 2009, he retired as President of the NGC after 12 years of loyal and dedicated service.



Frank
Look Kin
Geophysical
Engineer

For 30 years, Mrs Maureen Manchouck has stood at the forefront of regional science, technology and innovation promotion. Her visionary leadership has made NIHERST into a Caribbean pioneer in science popularisation, science and technology statistics, and sector foresight and innovation studies.

Maureen Myrna Ou Young was born on August 23rd, 1947 in Port-of-Spain. She attended St. Rose's Girls Intermediate School and Holy Name Convent. When she was twelve, her father passed away, compounding her responsibilities in the home and family grocery. She excelled nonetheless, attending The University of the West Indies (UWI), St. Augustine and graduating with her Bachelor of Science (BSc) in Zoology and Chemistry in 1972. She then began working at the National Science Advisory Council, becoming its Executive Director before joining a fledgling NIHERST in 1979.

During the 1980s, Mrs Manchouck steered NIHERST's School of Languages as it undertook bold, modern approaches to language education. In 1989, she envisioned and directed the establishment of the NIHERST/NGC National Science Centre (NSC), the only science centre in the region. Established with the assistance of the National Gas Company (NGC), the NSC's unique programme of activities has boosted the average citizen's creativity, awareness of, and engagement in, science, technology and innovation.

In 1990, Mrs Manchouck was appointed President of NIHERST, having served as Acting President for four years. With Dr Alvin Ashton, NIHERST's Vice President for Higher Education, she helped to establish the College of Science, Technology and the Arts of Trinidad and Tobago (COSTAATT) and the Accreditation Council of Trinidad and Tobago (ACTT). She guided the preparation of a seminal document for the creation of a seamless education system, and spearheaded NIHERST's science popularisation endeavours, many of which benefited other Caribbean countries.

Mrs Manchouck has played a major role in the formulation of draft science policies for Trinidad and Tobago, as well as the 2005 regional science policy. She has also held important positions with several influential agencies. She chaired the Commonwealth Science Council from 1997 to 2000 and was Vice-Chair of the Vision 2020 Sub-Committee on Science, Technology and Innovation. She has also been the Secretary of the Caribbean Council of Science and Technology since 1999, and a founding member of the Global Water Partnership, Caribbean Chapter (GWP-C).

In her spare time, Mrs Manchouck enjoys gardening, cooking and the rich cultural life of Trinidad and Tobago.



Maureen
Manchouck
Science
Administrator

Mr Bertram Wesley Manhin is the entrepreneur and director of the La Vega Estate, a 250-acre agro-tourism eco-resort with a large Garden Center.

Born in Arima, Trinidad on July 6th, 1934, Bertram Manhin later moved to Port-of-Spain. He attended Tranquillity Boys' Intermediate School, Queen's Royal College and St. Mary's College. He also attended the University of British Columbia in Canada.

Although he had not studied horticulture formally, his interest in it was sparked when he was very young from observing his uncle, Eugene Kong, tending to his orchids. That interest developed into a great lifelong passion.

Throughout his life, Mr Manhin travelled often to Florida, South America, Malaysia and Singapore in search of fruits, flowers and ornamental plants, which he would later cultivate in Trinidad. He purchased the La Vega Estate in 1983 and introduced exotic tropical fruits and flowers such as rambutan, carambola, canistel, dwarf pommecythere, rollinia, langsat, longan, dwarf white frangipani and yellow leaf duranta. In 1985, Mr Manhin became a member of both the Horticultural Society of Trinidad and Tobago and the Rare Fruit Council in Florida in the United States.

Outside of the field of horticulture, he is a well-known sports personality. He was a national pistol champion from 1963 to 1999 (except for three years when he did not compete) and a bronze medallist at the Commonwealth Games in 1978. He has won several medals in Central American and Caribbean competitions. For his sporting achievements, he was awarded the Humming Bird Medal (Silver) in 1990, and was nominated for the West Indian Tobacco Sportsman of the Year Award in 1978, 1986 and 1990. He was inducted into the First Citizens Sports Foundation Hall of Fame for rifle and pistol shooting in 2008.

Throughout his career, Mr Manhin has promoted horticulture in Trinidad and Tobago. He encourages young people to "remain positive and to never give up on their goals."



Bertram
Manhin
Horticulturist



Dr Joseph Lennox Pawan is renowned internationally for discovering that vampire bats are able to transmit rabies. This knowledge resulted in the development of a vaccine for rabies.

Joseph Pawan was born in Port-of-Spain, Trinidad in 1887 to Aloysius Pawan, an immigrant from the island of Palawan in the Philippines, and his wife who was of French origin. He gained a College Exhibition scholarship and attended St. Mary's College where he won an Island Scholarship, coming first in the world in Latin. In 1907, he entered the University of Edinburgh in Scotland, graduating with his Bachelor in Medicine, Bachelor of Surgery (MB ChB) in 1912. He then did postgraduate studies in virology at the Pasteur Institute in Paris, France and at the University of Hamburg in Germany.

In 1913, Dr Pawan returned to Trinidad to serve during World War I as an assistant surgeon in the Colonial Hospital in Port-of-Spain and, later, as the District Medical Officer in Tobago and Cedros. In 1923, he was promoted to Bacteriologist and Senior Pathologist. As the island's only trained virologist, he was responsible for laboratory services and public health work in the whole territory.

In 1925, there was an outbreak of rabies in Trinidad among farm animals and, by the 1930s, humans had also begun to die. In 1932, Dr Pawan and his team of researchers isolated the rabies virus from bats, including the vampire bat. This discovery, which brought him worldwide fame, led to the development of an antidote and later, a vaccine against the virus. During the 1940s, Dr Pawan also did research on tuberculosis, malaria and other tropical diseases. He retired in 1947.

Dr Pawan was made a Member of the British Empire (MBE) in 1934, soon after his discovery. He passed away on November 3rd, 1957, after a long illness. In 2002, Pan American Health Organization (PAHO) posthumously named him a "Hero in Health" for his contribution to medical science.



Dr Joseph
Pawan
Pathologist

Professor Emeritus David Picou is an outstanding medical educator and researcher. Known internationally for his expertise in childhood malnutrition, he has advised the Pan American Health Organization (PAHO), the World Health Organization (WHO) and the United Nations.

Born on March 23rd, 1927 in Port-of-Spain, Trinidad, David Picou attended Tranquillity Boys' Intermediate School and Queen's Royal College (QRC). He pursued premedical studies at the Brooklyn Campus of Long Island University, New York, USA, and then obtained his Bachelor of Medicine and Surgery (MBBS) at the University College of the West Indies in Mona, Jamaica in 1955. After an internship at the University College Hospital in Jamaica, he pursued postgraduate studies in paediatrics at the Children's Hospital in Philadelphia, USA from 1957 to 1959.

In 1959, Dr Picou was recruited as a scientific officer at the Tropical Metabolism Research Unit (TMRU) at Mona. There, he headed a team that advanced knowledge on infant malnutrition, producing a manual that was adopted and published in 1981 by the WHO as *The treatment and management of severe protein-energy malnutrition*.

In 1963, he obtained his Doctor of Philosophy (PhD) in medicine from the University of London. In 1970, the TMRU was transferred to UWI and Dr Picou was appointed Head and Professor of Experimental Medicine. He was appointed Director of TMRU in 1973, serving for seven years.

Professor Picou served on world committees that dealt with childhood malnutrition, world hunger and research ethics. From 1978 to 1987, he led the Task Force that planned and implemented the Mount Hope Medical Sciences Complex in Trinidad. A dedicated researcher, he has published scores of papers and books, and presented his work at local, regional and international conferences. He was closely associated with the Caribbean Health Research Council from 1960 to 2003 and served as its first Director of Research from 1988 to 2002.

For his outstanding contribution to medical science, Professor Picou has received several awards, including the PAHO/WHO Medal in 1986, the UWI Medical Alumni Award in 1993, the Commonwealth Research Council Award in 1995, the Trinidad and Tobago Medical Association Award in 1998 and Scroll of Honour in 2000, the Sir Philip Sherlock Distinguished Award in 2001, and the Chaconia Medal (Gold) in 2006. He retired in 2002 after nearly 50 years as a doctor and was inducted into QRC's Hall of Fame in 2006. In 2007, UWI bestowed upon him the title of Professor Emeritus. He has also contributed to the political arena, serving as an Independent Senator several times.



Professor
David Picou
Medical Researcher



Dr Theodosius
Poon-King
Medical Researcher

Dr Theodosius (Theo) Poon-King has had an impressive medical career, marked by groundbreaking discoveries in several branches of medical research.

Born in Biche, Trinidad on January 4th, 1928, Theo Poon-King attended Arouca Boys' RC School and later St. Mary's College. He studied medicine at University College Dublin (now known as the National University of Ireland) and graduated in 1953 with a Bachelor of Medicine, Bachelor of Surgery, Bachelor of the Art of Obstetrics (MB BCh BAO). As a postgraduate student, he worked with the research group in the Arteriosclerosis Unit of the Massachusetts General Hospital that identified four new risk factors for coronary heart disease. In 1972, he received a Doctor of Medicine (MD) degree from the National University in Ireland for his published research.

In 1958, Dr Poon-King's research proved that scorpion stings were responsible for cases of inflammation of the heart muscle among cane-cutters, the first scientific proof of such a relationship, and he published his findings in the *British Medical Journal*. He was a member of a Harvard University team that published a seminal study on coronary heart disease in 1966, discovering three previously unidentified factors that cause it. Two years later, he published in the prestigious journal, *The Lancet*, the findings of the largest island-wide survey of diabetes ever conducted in Trinidad, identifying heredity, obesity and multiparity as key risk factors. This eight-year study, which was published in the prestigious journal, *The Lancet*, involved a sample of 24,000 persons and revealed that diabetes was more common in Trinidad and Tobago than it was in Great Britain or North America.

He also investigated an acute nephritis epidemic among children and young adults in south Trinidad, identifying streptococcal bacteria as the cause, isolating four types that were new to science between 1965 and 1971. These studies were complemented by the establishment of the Streptococcal Disease Unit at the San Fernando General Hospital in 1966, which would eradicate the disease 30 years later. In 1974, Dr Poon-King and Dr Rasheed Rahaman conducted valuable research on paraquat (gramoxone) poisoning and developed a special treatment for it that would ultimately increase patients' survival rates to 75%. Additionally, Dr Poon-King diagnosed the first patient in a 1977 outbreak of yellow fever in Trinidad.

In recognition of his sterling contribution to medicine, Dr Poon-King received the Chaconia Medal (Gold) in 1975.

The President of the Republic of Trinidad and Tobago, His Excellency Professor George Maxwell Richards TC, CMT, PhD, is a distinguished academic in the field of chemical engineering and an Honorary Fellow of the world renowned Institution of Chemical Engineers of the United Kingdom. He pursued his higher education at the University of Manchester Institute of Science and Technology and the University of Cambridge.

He entered the world of work in 1950 as a staff trainee at the United British Oilfields of Trinidad Ltd, a precursor to Shell Trinidad Ltd. Then, as a young graduate, he gained professional experience in the petroleum industry working in several managerial positions at Shell Trinidad Ltd. He left in 1965 to pursue a career in academia at The University of the West Indies (UWI), St. Augustine, Trinidad. He served as Senior Lecturer and Head of the Department of Chemical Engineering, and then Dean of the Faculty of Engineering, before ascending to the ranks of Deputy Principal, Acting Principal, Pro-Vice Chancellor and, finally, Principal in 1985.

In both his academic and administrative capacities, Professor Richards played a vital role in the development of the university's recognised capability in engineering and left a legacy which lives on today. He was one of the pioneers who built the Department of Chemical Engineering, establishing strong links with the Institution of Chemical Engineers and ensuring that the department's programmes were internationally accredited. This was, at the time, a unique distinction for a university in a developing country. He developed the department's focus on the process industries, which has benefited Trinidad and Tobago and the region. Thanks to his vision and contribution, the Faculty of Engineering became a centre of excellence whose graduates are in leadership positions throughout the region and abroad. In addition to these achievements, Professor Richards also lent his expertise to the boards of several key service organisations, as well as private and public companies and institutions.

In 2003, Professor Richards was elected President of the Republic, and was re-elected to the office in 2008. He has retained a role in academia, serving as Chancellor of The University of Trinidad and Tobago (UTT) since 2005. Professor Richards is the recipient of two of the country's national awards – the Chaconia Medal (Gold) and the nation's highest award, the Trinity Cross - which were bestowed upon him in 1977 and 2003 respectively, in recognition of his outstanding achievements.



Professor
George
Maxwell
Richards
Chemical Engineer

Dr Oswald Horace Siung is remembered for his impact on the field of public health in Trinidad and Tobago and England.

Oswald Siung was born on August 18th, 1915 in Belmont, Trinidad. He attended Queen's Royal College and graduated in 1935. He studied medicine in Scotland, graduating from the University of Edinburgh with both his Bachelor in Medicine and Bachelor of Surgery (MB ChB) in 1941, and a Diploma in Public Health (DPH) in 1943.

During his time in England, Dr Siung was a casualty house surgeon at the Royal Halifax Infirmary, a general practitioner, an Assistant Medical Officer of Health for Whitehaven, and a bacteriologist at King's College, Oxford. At the age of 31, he became the first non-white Medical Officer of Health for Wallsend, an event that caused quite a stir in England at the time. He introduced standards of quality for ice-cream making and set up a trading guild for food providers to guard public interests. Under his direction, the Borough of Wallsend sponsored a plan to reduce pollution in the River Tyne, which was later adopted by other boroughs.

Dr Siung spent the next two years as the Medical Officer for Health in Berbice County, Guyana. He left for Trinidad in 1952, where he became the County Medical Officer for Health for Caroni and a bacteriologist at the Port-of-Spain General Hospital, specialising in malaria. By 1967, his efforts had been instrumental in eradicating hook-worm infections in Caroni and malaria in Trinidad and Tobago. He was then promoted to Principal Medical Officer of Health, specialising in preventative medicine, and he remained in this position until his retirement in 1973.

In 1974, Dr Siung received the Public Service Medal of Merit (Gold) for his contribution to public health in Trinidad and Tobago. He served as the Medical Officer for Health of the Port-of-Spain City Corporation from 1975 until April 28th, 1981 when he passed away.



Dr Oswald
Siung
Bacteriologist

Dr Avril Mayling Siung-Chang is one of Trinidad and Tobago's first female marine biologists, a pioneer who has contributed significantly to environmental research.

Avril Siung was born on May 9th, 1949 in Newcastle-upon-Tyne, England but grew up in Trinidad. She attended Tranquillity Girls' Primary School and then Bishop Anstey High School in Port-of-Spain. She pursued her first degree in zoology at the University of Newcastle-Upon-Tyne and attained her doctorate in zoology from The University of the West Indies (UWI), St. Augustine, Trinidad.

In 1978, Dr Siung-Chang started her career as a researcher at the Institute of Marine Affairs (IMA), and rose to senior management and research positions there. She is credited with establishing the IMA's Environmental Research Programme in 1982. She spearheaded extensive research on the marine environment as well as studies on the effects of both land and marine pollution. She contributed to the country's scientific development by nurturing a generation of scientists and technologists at the IMA, many of whom now have important positions at local companies and the Environmental Management Authority (EMA).

Dr Siung-Chang has served a number of key government committees and agencies, and also many international bodies including the United Nations Environmental Programme, the International Ocean Commission, the World Health Organization (WHO) and the Pan American Health Organization (PAHO). She was on the Standing Committee on the Environment, which advised Government on the establishment of the EMA and drafted bills for the prohibition of pollution.

She is currently an Environmental Health Advisor with PAHO/WHO. In this role, she has contributed to risk assessment and reduction, disaster preparedness training for communities and hospitals, the dissemination of a public health programme, the improvement of solid waste management and the promotion of standards for water and food safety.



Dr Avril
Siung Chang
Marine Biologist

Mr Roderick A. Gene Thomas was one of Trinidad and Tobago's early petroleum engineers and a successful local entrepreneur in the petroleum and gas sector.

Gene Thomas was born on August 10th, 1929 in Mene Grande in Venezuela to Trinidadian parents, who returned to their homeland soon after his birth. He attended Tranquillity Boys' School and St. Mary's College, after which he went to the United States to study. In 1952, he graduated from the Colorado School of Mines with a degree in petroleum engineering and spent the next six years working as an engineer with Creole Petroleum, a subsidiary of Exxon, in Venezuela. In 1958, he enrolled in Pennsylvania State University where he obtained his Master of Science (MSc) in Petroleum Engineering.

Mr Thomas returned to Trinidad in 1960, where he joined the Ministry of Petroleum and Mines as a petroleum technologist and quickly worked his way up the ranks. He was appointed Permanent Secretary in the Ministry in the mid-1960s. Under his watch, the country conducted its first exploration for oil and gas off the north and east coasts of Trinidad, which led to the discovery of both oil and natural gas. That field, initially a major source of crude oil, is today an important natural gas reserve.

After retirement from his post as Permanent Secretary, Mr Thomas started a petroleum consultancy business, Petroleum Offshore Services, which repaired offshore wells and drilled many of the development wells for AMOCO in the mid-1970s.



Gene Thomas
Petroleum Engineer