

**The Australian Academy of Technological Sciences and Engineering (ATSE)**  
ATSE is an independent body of 800 eminent Australian engineers and scientists  
enhancing Australia's prosperity through technological innovation

**MEDIA RELEASE**

**17 October 2013**

## **Eight women elected ATSE Fellows**

Key business names, leading academics, prominent commercial innovators and high-ranking public sector figures – including eight prominent women – have been elected Fellows of the Australian Academy of Technological Sciences and Engineering (ATSE).

The new Fellows, elected by the Academy's Fellowship from a variety of fields, include some of the most prominent Australian women in research and technology:

**Dr Mary Ann Augustin FTSE**, Research Program Leader (Food Science), CSIRO;

**Dr Susan Barrell FTSE**, Acting Deputy Director, Bureau of Meteorology;

**Ms Kathryn Fagg FTSE**, Board Member, Reserve Bank of Australia;

**Ms Denise Goldsworthy FTSE**, consultant and former Chief Commercial Officer, Rio Tinto Autonomous Haul Trucks, Rio Tinto Iron Ore Pty Ltd;

**Dr Bronwyn Harch FTSE**, Chief, Computational Informatics Research Division, CSIRO;

**Professor Hua Kun Liu FTSE**, Professor, Institute of Superconducting Materials, University of Wollongong;

**Emeritus Professor Maria Skyllas-Kazacos AM FTSE**, Emeritus Professor, Chemical Engineering and Industrial Chemistry, University of NSW; and

**Ms Catherine Tanna FTSE**, Chairman, BG Australia.

Leading business figures include:

**Mr Peter Coleman FTSE**, Chief Executive Officer, Woodside Petroleum Ltd;

**Mr John McGagh FTSE**, Global Head of Innovation, Rio Tinto Ltd;

**Mr Steve Sargent FTSE**, President and Chief Executive Officer, GE Australia and New Zealand; and

**Mr David Thodey FTSE**, Chief Executive Officer, Telstra Corporation.

High-impact academics include:

**Professor John Beynon FREng FTSE**, Executive Dean, Faculty of Engineering, Computer and Mathematical Sciences, University of Adelaide;

**Professor Graham Davies FREng FTSE**, Dean of Engineering, University of NSW;

**Professor Christopher Greig FTSE**, Professor Energy Strategy and Director, UQ Energy Initiative, University of Queensland;

**Professor Yingjie Jay Guo FTSE**, Director, Australia-China Research Centre for Wireless Communication and Research Director, Smart and Secure Infrastructure, Digital Productivity and Services National Flagship, CSIRO;

**Professor Robert Henry FTSE**, Professor of Innovation in Agriculture, University of Queensland;

**Professor Ross McAree FTSE**, Professor of Mechanical Engineering, University of Queensland;

**Professor Peter Quinn FTSE**, Professor of Astronomy and Astrophysics, University of WA, and Director of the International Centre for Radio Astronomy Research (ICRAR);

**Professor Robert Short FTSE**, Pro Vice Chancellor, Information Engineering, Technology and the Environment, University of SA;

Leading innovators include:

**Dr Silviu Itescu FTSE**, Chief Executive, Mesoblast Ltd;

**Dr George Morstyn FTSE**, Deputy Chair, Victorian Comprehensive Cancer Centre; and

**Dr John Ness FTSE**, Managing Director, EM Solutions;

Public sector leaders include:

**Dr Ian Oppermann FTSE**, Director, Digital Product and Services Flagship, CSIRO; and

**Dr Robert Vertessy FTSE**, Director and CEO, Bureau of Meteorology.

The Academy elected one Foreign Fellow – **Professor Liang-Shih Fan FTSE**, from Ohio State University, a world leader in chemical engineering.

**The full list follows:**

## **2013 FELLOWS**

### **Dr Mary Ann Augustin FTSE**

Research Program Leader (Food Science), CSIRO  
(Victoria)

Mary Ann Augustin has made outstanding contributions to food science and the food industry through initiating and leading excellent research and working to apply the outcomes to creation of an impressive array of commercially successful food ingredients, products and processes.

### **Dr Susan Barrell FTSE**

Acting Deputy Director, Bureau of Meteorology  
(Victoria)

Sue Barrell is a world leader in weather and climate observation technologies and a widely respected authority on international climate change monitoring and research. She has been the driving force in the modernisation of Australia's meteorological observing systems and networks involving automatic weather stations, ocean buoys, advanced Doppler radars and satellite ground stations. She has led the introduction of many new cutting-edge observing technologies.

### **Professor John Beynon FTSE**

Executive Dean, Faculty of Engineering, Computer and Mathematical Sciences,  
University of Adelaide  
(SA)

John Beynon has made a major contribution to metallurgical research, academic leadership and developing links between research and industry. His research has had important applications in the manufacture of steel and in the development of railway track systems. He is a leader in the development of engineering education in Australia, at a time when the sector is evolving rapidly.

### **Mr Peter Coleman FTSE**

Chief Executive Officer, Woodside Petroleum Ltd  
(WA)

Peter Coleman has an outstanding record of leadership in the petroleum exploration and production industry with particular expertise in oil and gas production. Before being appointed to lead Woodside in 2011, he had 27 years' industry experience with the ExxonMobil group, filling a variety of senior roles in Australia, Africa, Asia and the United States with responsibility for oil and gas developments around the world.

**Professor Graham Davies FREng FTSE**

Dean of Engineering, University of New South Wales  
(NSW)

Graham Davies has achieved an international reputation for his research into opto-electronic circuits for telecommunications applications, and for advances in the growth of semiconductors for these devices. Distinguished for 30 years of innovative leadership of research at British Telecom, he also led the development of sophisticated tools for research management.

**Ms Kathryn Fagg FTSE**

Board Member, Reserve Bank of Australia  
(Victoria)

Kathryn Fagg has a broad range of experience particularly in the industrial sector. A graduate in chemical engineering, her early career was with Esso where she led the planning for the innovative use of technology in new oil fields in Bass Strait. She went on to lead large businesses in logistics, manufacturing and banking in Australia, Asia and New Zealand. Ms Fagg is an active and public advocate for women in leadership, particularly in engineering and operational roles.

**Ms Denise Goldsworthy FTSE**

Chief Commercial Officer, Rio Tinto Autonomous Haul Trucks, Rio Tinto Iron Ore Pty Ltd  
(WA)

Denise Goldsworthy was until recently a senior executive at Rio Tinto with an outstanding reputation for leadership in various aspects of the mining industry. As a metallurgist at BHP Steel for 17 years, she made significant contributions in a number of areas including sinter plant, blast furnace and steelmaking operations. She subsequently was appointed a General Manager at Rio Tinto where she has been an outstanding leader of a number of Rio Tinto companies and subsidiaries in mining and resources areas.

**Professor Christopher Greig FTSE**

Professor Energy Strategy and Director, UQ Energy Initiative, University of Queensland  
(Queensland)

Chris Greig is an innovator and business leader who has made outstanding contributions in the sugar, mining and energy industry sectors. His patented inventions in the sugar and kaolin processing industries have had enduring industrial impact. His engineering project management skills have had significant economic impact within Australia and

abroad. He is also internationally recognised for his vision and leadership in low-emissions energy, especially carbon capture and storage.

**Professor Yingjie Jay Guo FTSE**

Director, Australia-China Research Centre for Wireless Communication and Research  
Director, Smart and Secure Infrastructure, Digital Productivity and Services National  
Flagship, CSIRO  
(NSW)

Jay Guo has had a sustained and outstanding impact in wireless and mobile systems innovation and development in Australia and internationally. He is recognised as a leading expert in antennas and wireless communications systems, and as an industrial innovator with major industrial impact. As Research Director, Wireless & Broadband, at CSIRO, he provided strategic leadership in the development of R&D through to commercialisation in international markets.

**Dr Bronwyn Harch FTSE**

Chief, Computational Informatics Research Division, CSIRO  
(Queensland)

Bronwyn Harch has had an outstanding career in CSIRO where, after joining initially as a postdoctoral research statistician, she is now heads its Computational Informatics function. She works in partnership with the organisation's National Research Flagship program to address key national challenges across the information and decision-making value chain for government, industry and the innovation sectors.

**Professor Robert Henry FTSE**

Professor of Innovation in Agriculture, University of Queensland  
(Queensland)

Robert Henry is a distinguished researcher whose innovations in agricultural biotechnology together with a strong commitment to industry engagement have significantly enhanced Australia's competitive agricultural market advantage. Professor Henry is renowned internationally for the quality and influence of his work spanning biotechnology, plant biochemistry and molecular biology and has earned the accolade of being one of the most highly cited scientists in agriculture in the past 20 years.

**Dr Silviu Itescu FTSE**

Chief Executive, Mesoblast Ltd  
(Victoria)

Silviu Itescu is a medical researcher who has made the transition from being a global leader in his research field to be a highly successful entrepreneur. He has a distinguished record as a researcher in a search for effective therapeutic agents involving the use of adult stem cells which avoid rejection by the recipient. He formed Mesoblast, a \$2 billion market capitalisation biotechnology company engaged in late-stage clinical trials of his products.

**Professor Hua Kun Liu FTSE**

Professor, Institute of Superconducting Materials, University of Wollongong (NSW)

Hua Kun is an international leader in the development and commercialisation of new superconducting and other materials. She has established an international network of academic and industry partners, contributing to commercialisation and industry development via technology transfer, and spin-off companies. Professor Liu has also worked tirelessly to promote women postgraduates in science and technology and has trained many dedicated leaders in the clean energy field.

**Professor Peter Ross McAree FTSE**

Professor of Mechanical Engineering, University of Queensland (Queensland)

Ross McAree is a significant academic and engineer who made a major contribution at Oxford University to developing tele-robotic systems for the nuclear industry and rapid prototyping systems for the manufacturing industry. His current, and most profound contributions, have been with the Australian mining industry and global mining equipment manufacturers. Professor McAree's research team at CRCMining and the University of Queensland is an internationally-recognised pioneer in the rapidly growing field of mining equipment automation.

**Mr John McGagh FTSE**

Global Head of Innovation, Rio Tinto Ltd (Queensland)

John McGagh has led the development of important research and development centres in universities that are addressing key technical issues for the global mining industry, covering automation of surface mines, the advanced recovery of minerals, the reduction of energy required for crushing and grinding processes, and technologies for massive underground block-cave mines – with considerable benefits to the mining industry.

**Dr George Morstyn FTSE**

Deputy Chair, Victorian Comprehensive Cancer Centre (Victoria)

George Morstyn has provided exemplary leadership and outstanding contributions to translating basic science discoveries into medically and commercially important clinical practice. As a researcher he was responsible for the discovery of a means of eliciting haemopoietic stem cells in the blood, which is now used worldwide in place of bone marrow transplantation. As a senior executive of Amgen he played a foundational role in the implementation of this and other significant medical and commercial products to global markets.

**Dr John Ness FTSE**

Managing Director, EM Solutions (Queensland)

John Ness has been at the forefront of developing innovative designs for microwave components including antennas, amplifiers and filters that are now used in wireless

systems such as microwave radios and satellite terminals around the world. He has been the co-founder and head of three start-up companies. His creative design contributions have demonstrated excellence in technical innovation. His legacy is the creation of a significant Australian industry sector in wireless and microwave systems.

**Dr Ian Oppermann FTSE**

Director, Digital Productivity and Services Flagship, CSIRO  
(NSW)

Ian Oppermann has contributed to the core technology base of broadband wireless communications systems, and to the collaborative evolution and business deployment of mobile communications globally. He has led CSIRO's initiatives in information and communications technologies (ICT), contributed to the formation of the Flagship, been an active initiator of national collaborative initiatives in ICT-based innovation and been a strong contributor to university, industry and government advisory bodies.

**Professor Peter Quinn FTSE**

Professor of Astronomy and Astrophysics, University of Western Australia and Director of the International Centre for Radio Astronomy Research (ICRAR) at the university  
(WA)

Peter Quinn is a world leader in data-intensive science; the design, development and operation of super-science facilities; the theory of galaxy formation and the search for Dark Matter. He is ranked by Thomson Reuters as one of the top 250 astronomers in the past 25 years. Professor Quinn has worked closely with global data companies towards the design and development of the SKA data processing systems.

**Mr Steve Sargent FTSE**

President and Chief Executive Officer, GE Australia and New Zealand  
(NSW)

Steve Sargent has worked overseas and in Australia for GE – a company with industry initiatives in energy, water, oil and gas, locomotives, aviation, and healthcare. With revenues of \$6.7 billion, GE Australia and New Zealand is the second largest component of GE in the world behind its US companies. He was appointed a member of the Australian Treasurer's Financial Sector Advisory Council and has recently been appointed a member of the Prime Minister's influential Australian B20 group, a body to advise the government on policy to promote global economic prosperity and jobs in the lead up to Australia's presidency of the G20 summit in 2014.

**Professor Robert Short FTSE**

Pro Vice Chancellor, Information Engineering, Technology and the Environment,  
University of South Australia  
(SA)

Rob Short has exploited outstanding new science to develop products with profound impacts on human health and wealth creation. He pioneered the deposition of polymer coatings from electrically-excited gases and their use in medical devices and founded two successful spin-out companies. He oversaw the development of six commercially successful, patent-protected, products. As inaugural director of the Mawson Institute at the University of South Australia, he built a world class research institute at the

manufacturing/biotechnology interface, nurturing technologies with demonstrable global impact.

**Emeritus Professor Maria Skyllas-Kazacos AM FTSE**

Emeritus Professor, Chemical Engineering and Industrial Chemistry, University of New South Wales  
(NSW)

Maria Skyllas-Kazacos is an internationally acclaimed researcher in the area of energy storage. Her pioneering work on the Vanadium Redox Battery is already having a major impact on the electricity sector and renewable energy industry world-wide. The technology that she pioneered is internationally regarded as the foremost battery technology for large-scale energy-storage applications. It is being used to remove inherent instability problems of wind and solar energy (via load balancing), allowing large-scale penetration of renewables into the "smart grid" of the future. It is now being manufactured by several companies in Europe, USA, Japan and China.

**Ms Catherine Tanna FTSE**

Chairman, BG Australia  
(Queensland)

Catherine Tanna is a globally acknowledged leader in the gas resources industry, having forged an outstanding career internationally with BHP Petroleum and Shell before returning to join BG Group in Australia. In a professional career of more than 20 years in the natural gas production industry she has a remarkable record of achievement and impact including European, Asian and African countries. She currently oversees the leading coal seam gas-to-LNG project in Australia. She is one of Australia's most influential business women.

**Mr David Thodey FTSE**

Chief Executive Officer, Telstra Corporation  
(Victoria)

David Thodey was formerly Chief Executive Officer of IBM Australia/New Zealand before taking his current role at Telstra, Australia's largest telecommunications company. Through his widely acclaimed record of leadership and public influence, he has had outstanding impact on Australia's information technology and telecommunications industry. He has recently been designated as 13<sup>th</sup> in a list of the top 50 most influential Australians and 3<sup>rd</sup> in the top 50 most influential people in business.

**Dr Robert Vertessy FTSE**

Director and CEO, Bureau of Meteorology  
(ACT)

Robert Vertessy has provided outstanding national scientific and technological leadership in the meteorology field. This has included achievements including the marshalling and coordinating of Australia's efforts in hydrological modelling, the design and scientific development of a national water resources observation network, and the design of the water information component of the \$10 billion National Plan for Water Security.

## **2013 FOREIGN FELLOW**

### **Professor Liang-Shih Fan FTSE**

Distinguished University Professor and C. John Easton Professor of Engineering, Ohio State University  
(USA)

Liang-Shih Fan has an international reputation for his pioneering research and development in the chemical engineering fields of particulates, multiphase reaction engineering and clean fossil energy technology. His prolific body of work includes multiple research papers and books that are referenced widely in academia and industry, and 39 patents of which a majority have been licensed or commercialised. He is also recognised for his achievements in facilitating and diversifying cross-cultural international exchanges. He is a Fellow of the US National Academy of Engineering, and a Foreign Fellow of the Chinese Academy of Engineering.

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