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News Release

For immediate release
25 August 2015

Microwave pioneer to receive Sir Frank Whittle Medal

Internationally renowned British microwave engineer Professor Peter Clarricoats CBE FREng FRS is to receive one of the Royal Academy of Engineering's highest accolades, the Sir Frank Whittle Medal, for his influential achievements spanning more than half a century.

Academy President Professor Dame Ann Dowling DBE FREng FRS will present the award to Professor Clarricoats, Emeritus Research Professor at Queen Mary University of London, at the Academy's AGM in London on Monday 21 September.

Over the last 50 years, Professor Clarricoats' successes have ranged from pioneering research with Nobel laureate Sir Charles Kao KBE FREng FRS on optical fibre technology, to influential work on the design and development of high-performance microwave antennas for space-borne satellite communications. His immense contributions have made him one of the best-known microwave engineers of his generation.

Professor Clarricoats was the first person in the UK to explore the behaviour of ferrites – ceramic compounds of iron oxide with other metals – at microwave frequencies. His book, *Microwave Ferrites* (1960), became an essential text for those developing microwave radar and communications systems. Working at the University of Leeds from 1963, he was the first to use computers to design microwave waveguide junctions, a function which exists in many software packages to this day. He also established *Electronic Letters*, which went on to become an internationally successful journal.

At Queen Mary University of London, Professor Clarricoats developed a theory that confirmed the correct choice of physical attributes in optical fibre, essential for long-distance communication links, before turning his attention to microwave antennas for communication and radar systems. Most ground station reflectors, radio astronomy reflectors and satellite antennas now use corrugated horns of the type first investigated by Professor Clarricoats in the 1970s and '80s. Since his partial retirement, Professor Clarricoats has remained as an emeritus professor and continued his industrial and senior government appointments with institutions including the Ministry of Defence and the European Space Agency.

Academy Past President Sir David Davies CBE FREng FLSW FRS, who supported Professor Clarricoats' nomination, said: "I have known Peter since the 1960s and have always been an admirer of his work. His long and substantial list of major contributions to the field of

microwaves and antennas, extending well beyond his retirement, speaks for itself. I am delighted that he is to receive the 2015 Sir Frank Whittle Medal."

Professor Clarricoats said: "Since I joined the academic world from industry in 1959, I have been able to start research groups at Queens University Belfast, the University of Leeds and finally at Queen Mary University of London where I have spent the last 47 years. In all three I was greatly helped by outstanding colleagues and from the outset was fortunate to have support from industry, government and the European Space Agency. We had great success in solving many of the problems they posed, often with innovative ideas. My message to academics is to get involved with industry."

Notes for Editors

1. **Named after Britain's jet engine genius**, the Sir Frank Whittle Medal is awarded to an engineer resident in the UK whose outstanding and sustained achievements have had a profound impact on their engineering discipline.

2. **Royal Academy of Engineering**. As the UK's national academy for engineering, we bring together the most successful and talented engineers for a shared purpose: to advance and promote excellence in engineering. We provide analysis and policy support to promote the UK's role as a great place to do business. We take a lead on engineering education and we invest in the UK's world-class research base to underpin innovation. We work to improve public awareness and understanding of engineering. We are a national academy with a global outlook. We have four strategic challenges: Drive faster and more balanced economic growth; foster better education and skills; lead the profession; promote engineering at the heart of society.

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