



Honorary Degree of Doctor of Science

**Professor Elmer Gethin Rees, M.A.,
Ph.D., Hon.D.Sc., F.R.S.E.**

Presented by Professor Sir Michael Atiyah, M.A.,
Ph.D., O.M., F.R.S., F.R.S.E., Hon.F.R.Eng.,
Sc.D., Honorary Professor of Mathematics

Elmer Rees was appointed to the Chair of Mathematics in 1979 and retired in August 2005 after twenty-six years of distinguished service to the University of Edinburgh. He was born in 1941 at Llandybie, Carmarthenshire, and after completing his school education in Wales, went up to Cambridge, graduating BA in 1963. He then moved to Warwick to undertake doctoral studies and obtained his PhD in 1967. Following four years at Hull, Princeton and Swansea, he moved to lecture at Catherine's College, Oxford in 1971. He remained there for eight years until his appointment to the Chair in Edinburgh (one of the four original Chairs here, dating from 1583).

Elmer's arrival in Edinburgh immediately brought new purpose and direction to the Department of Mathematics, as then was. For the previous fifteen years or so, the primary focus of research activity had been in the area of analysis. Elmer's initial research interests were in algebraic topology and geometry, though he has great knowledge of, and interest in, the broad sweep of mathematics. His publications range from topology, differential and algebraic geometry, linear algebra and Morse theory to robotics. His contributions to mathematics were recognised with his election in 1982 to Fellowship of the Royal Society of Edinburgh.

Elmer was Head of Department (1983-86), a member of the Senate Personal Chairs Committee (1984-87) and on the Dean's Committee of the Faculty of Science (and Engineering, as it was to become) for ten years. Elmer's greatest legacy to the mathematical life of Edinburgh lies in the International Centre for Mathematical Sciences (ICMS). This was jointly established by Edinburgh and Heriot-Watt in 1990, with initial support from the City of Edinburgh District Council, the Scottish Development Agency and the International Centre for Theoretical Physics (Trieste). It arose when the Science and Engineering Research Council asked for bids to establish a UK national institute in mathematics and theoretical physics.

It was not surprising that, with this wealth of experience, he was attracted on his retirement from Edinburgh to take up the Directorship of the Heilbronn Institute for Mathematical Research for the next four years. This is a new mathematics institute that has been established through a partnership between Bristol University and GCHQ. It is typical of Elmer that, rather than retiring as a mathematical elder statesman, he would rather seek a new challenge. Outside the world of mathematics, Elmer has a passion for all things Welsh – Welsh was his first language and, as he himself has stated, he "likes everything written in Welsh". As befits a son of the Welsh valleys, he has an abiding interest in Rugby Union Football. Throughout, Elmer has enjoyed the support of his wife Mary and their sons, Gethin and David.

HONORARY DEGREE OF DOCTOR OF SCIENCE

Professor Elmer Rees

Laureation Address – Tuesday, 24th June, 2008

Laureator – Sir Michael Atiyah

Mr. Vice-Chancellor, in the name and by the authority of the Senatus Academicus, I have the honour to present for the Honorary Degree of Doctor of Science,

Elmer Gethin Rees

For over forty years Elmer Rees has made major contributions to mathematics in Britain and particularly here in Edinburgh.

He was an undergraduate at St. Catharine's College, Cambridge from 1960-63, moving on to be one of the first Ph.D. students at the new University of Warwick. After short stints at Hull, Princeton and Swansea he settled down as a Tutorial Fellow and Lecturer in Oxford. By a pleasing symmetry his College there was also St. Catherine's. He was then head-hunted, to use a now fashionable phrase, by Edinburgh University to take up the prestigious Chair of Mathematics. Finally, after a quarter-century of exceptional service to this University, he moved to become the Director of the new Heilbronn Institute at Bristol. This institute is a partnership between Bristol University and GCHQ at Cheltenham, the nerve centre of UK security, on whose efficient operation we all rely.

Such are the bare bones of Professor Rees's career and they clearly show that he is held in high regard in the mathematical world. Despite holding onerous administrative posts both within and outwith the university, he has throughout maintained an active research output in his field of geometry. But he is no narrow specialist, he interprets geometry in the broad sense so that it encompasses topology, differential geometry and algebraic geometry. This has enabled him to attract many students and also younger staff, making the mathematics department at Edinburgh a lively, active and friendly place. This helped to maintain and enhance the standing of Edinburgh mathematics, reflected now in its high RAE score.

At an early stage Professor Rees helped to initiate a close collaboration with mathematics at Heriot-Watt, which eventually culminated in the establishment of the International Centre for Mathematical Sciences, a research institute jointly supported by Edinburgh and Heriot-Watt and appropriately housed in the former family home in India Street of the great mathematical physicist James Clerk Maxwell. Such joint ventures between university departments are now all the rage, under the name of "pooling", so we must recognize Professor Rees as a pioneer far ahead of his time.

As you may have deduced, Elmer Rees is a Welshman, fluent in his native tongue and an avid rugby supporter. During his many years in Scotland he may have suffered torn loyalties, but I suspect that this year his Welsh enthusiasm will have triumphed.

Elmer has been a close friend and colleague of mine for more than forty years, in Princeton, Cambridge and Edinburgh, so it is a great personal pleasure for me to introduce him today.

Mr. Vice-Chancellor, I now invite you to confer on Elmer Gethin Rees the Honorary Degree of Doctor of Science.

**Elmer Rees's speech at Honorary Degree ceremony
Edinburgh, June 24, 2008**

Principal, Sir Michael, Colleagues, Fellow Graduands and Distinguished Guests.

I would first like to thank Sir Michael for his kind words. I heard of Sir Michael when I was an undergraduate, he was described as an up and coming UK mathematician; his subsequent achievements have shown how true this assessment was. On a personal level, I attended a seminar series given by him when I was working towards my PhD. I have known him as a colleague and friend for almost forty years.

I stand here with a mixture of humility and pride; humility because I feel this honour is more than I deserve; pride because the honour is being bestowed by people who know me all too well. The 26 years I have worked here has seen many changes and I believe that the university has responded positively to the new challenges. Personally, I enjoyed the various aspects of the work

- the research work always pushed me to my intellectual limits
- teaching was always stimulating and very rewarding
- on the administrative side, there was a peculiar sense of achievement when one could manage to overcome some bureaucratic barrier or other.

On these occasions, it is customary to give some advice to one's fellow graduands based on one's own experience. Do what you enjoy and enjoy what you are doing.

It is particularly pleasing to share this ceremony with many that I taught and I wish every one of you good fortune in your careers – just remember that hard work brings good luck.

As well as thanking the Principal, the University and Sir Michael again, I would like to thank all those who work hard to make these ceremonies run so smoothly.



Prof. Sir Michael Atiyah Prof. J.Figueroa-O'Farrill Prof. A.Ranicki Prof. T.A.Gillespie Dr. I.Thompson
Lady Lily Atiyah Prof. E.Rees Prof. M.Singer Mrs. G.Temple