Biography of Prof Kevin O'Grady

Kevin O'Grady was born in Wolverhampton, England in 1954. He was educated at the University of Wales in Bangor obtaining a BSc and PhD in Physics in 1981. The subject of his PhD was "Cobalt nanoparticles dispersed as ferrofluids". Following his PhD he was a junior lecturer initially in Bangor and subsequently Loughborough University of Technology before returning to Bangor for a permanent position in 1985. He then transferred to the School of Electronic Engineering where he became a full Professor in 1996.

His research career initially in fine particle magnetism migrated through to information storage materials initially magnetic tapes, magneto-optic discs and finally thin film media. His work was recognised through the development of new measurement techniques including remanence curves, the ΔM curve and studies of thermal activation or time dependent magnetisation.

In 2000 he moved to become Professor of Experimental Physics at The University of York and whilst continuing his work on magnetic media began a major programme on the phenomenon of exchange bias which is used in recording heads to pin one layer in a GMR of TMR stack. He developed what is now known as the York Model of Exchange Bias in which he demonstrated that in polycrystalline thin films, exchange bias is a grain volume dependent effect leading to complex behaviour due to the distribution of grain sizes. This model is now accepted as that defining the behaviour of these materials and is used by all major companies currently manufacturing read heads.

Most recently he has also started a programme on the phenomenon of magnetic hyperthermia for the reduction of tumours including cancer. Again the concept of the control and understanding of grain volumes and anisotropy has made significant advances.

Throughout his career he has been active in the IEEE Magnetics Society and many European and UK societies. In particular in 2000 he was elected Secretary/Treasurer of the IEEE Magnetics Society becoming President from 2004 to 2006. In 2010 he was elected to be a Distinguished Lecturer by the Society delivering a set piece lecture on the York Model of Exchange Bias over 60 times. He was also the Chair of the 11th Joint MMM-Intermag Conference held in Washington DC in 2010.

He is the author of over 300 refereed works on the subject of fine particle magnetism, magnetic recording media, exchange bias and magnetic hyperthermia.