

## Professor Paul Tofts

Paul's career in MRI physics has focused on quantification – measuring tissue characteristics non-invasively to evaluate human disease and its response to treatment. After a first class degree in physics at Wadham College Oxford, he fled to the more relaxed mixed-gender environment of Sussex University. A DPhil on NMR in solid helium confirmed that his passions lay with medical applications. Just before MRI arrived, he discovered how to measure absolute metabolite concentrations in-vivo using MR spectroscopy and some radiofrequency analysis that came from his experience in amateur radio (call sign G3WBK). The MRI contrast agent Gd-DTPA arrived at the Institute of Neurology, Queen Square London whilst he was a new-blood lecturer there; he was fortunate enough to be able to mathematically model the time-behaviour of this uptake, and measure some tissue physiology in multiple sclerosis. The work was taken up by the cancer imaging community, who called it the 'Tofts model'. Later, the paradigm-shift that is quantification in medical imaging was collected into the first book on the subject, which he edited and part-wrote. After holding a personal chair at UCL for 10 years, he once again fled to Sussex, this time to take up the new chair of Imaging Physics at the Brighton and Sussex Medical School. Released from the brain, he modelled Gd uptake in the kidney to measure renal function. In 2006 he took early retirement, and now holds the position of Emeritus Professor at the University of Sussex. He undertakes consultancy and research collaborations from time-to-time.