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The Inaugural George Daniels Lecture

Dr George Daniels CBE FBHI.

The inaugural George Daniels Lecture will take place at City University, London, on Wednesday 18 September, celebrating the life and works of a watchmaker considered by many to have been the finest horologist in the world.

Dr Daniels CBE FBHI, who died in October 2011, was famous for creating the co-axial escapement, which has been used by Omega in their highest-grade watches since 1999.

The lecture *'Optical Atomic Clocks – Light Years Ahead?'* will be given by Professor Patrick Gill, who is a world-leading expert on the development of cold trapped ion systems as optical frequency standards with potential for future redefinition of the SI second.

In his lecture he will look to the future of extremely accurate time measurement using highly advanced techniques, illustrating the continuous development of time measurement through his work at the National Physical Laboratory in the UK.

Since 1967, the microwave caesium atomic clock has formed the basis for the international definition of time, the SI second. The advent of laser cooling methods during the 1980s led to the achievement of cold atom temperatures within a mK above absolute zero, and underpinned the development of cold caesium fountain clocks, the best of which now demonstrate a frequency uncertainty of ~2 parts in 1016. Since the turn of the century, however, the pace of research into alternative technologies based on optical atomic clocks has quickened considerably, such that they now challenge, and in some cases, exceed the Cs fountain clock performance, with frequency inaccuracies below 10^{-17} recently reported. These results not only impact on leading science and technology applications, but also raise the issue of a future re-definition of the second.

Optical clocks are based on state-of-the-art frequency-stabilised lasers probing very weak absorptions in a single cold trapped ion confined by an electromagnetic trap or in an ensemble of cold atoms trapped by light fields. This presentation will briefly point to leading-edge performance and future developments of optical clocks, the need for global inter-comparison of such frequency standards and clock systems, and the wider spectrum of applications.

City University London's College Building and the clock which will be renamed in George's honour.

Professor Gill won the 2008 Young Medal and Prize, awarded by the Institute of Physics for his work in the field.

Also at the event, the clock in the College Building will be renamed 'The George Daniels Clock', in honour of the master watchmaker.

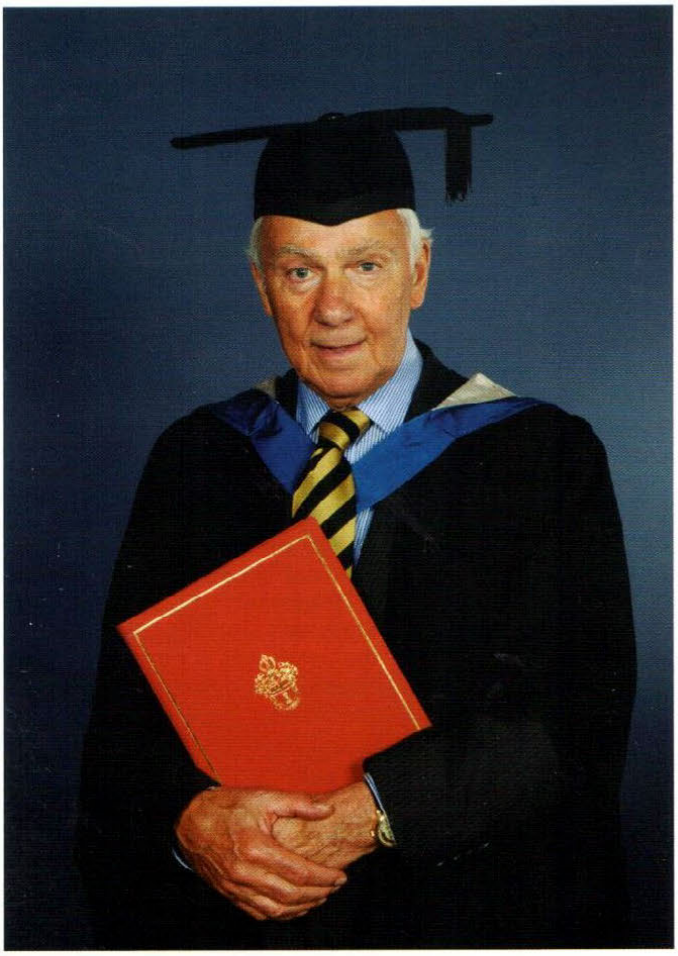
Registration takes place at 6pm in the Oliver Thompson Lecture Theatre, at the University, in London's, Northampton Square.

The lecture itself will start at 6.30pm and is followed by refreshments at 7.45pm. The evening closes at 9pm.

Anyone wishing to attend will be required to book online prior to the event.

www.city.ac.uk/georgedaniels

Honorary Fellowship for David Newman



David Newman.

David Newman, Chairman of the George Daniels Educational Trust, was awarded an Honorary Fellowship by City University London, during its graduation ceremony on Wednesday 17 July.

David, a liveryman of the Worshipful Company of Clockmakers, was honoured for his outstanding contribution to the Trust, which has greatly furthered the work of the University.

Professor Paul Curran, Vice-Chancellor of City University London, said: 'As Chairman, David has made a substantial contribution to preserving George Daniels' legacy of which City is a major beneficiary. We awarded Mr Daniels an honorary doctorate in 2007 for his outstanding contribution to horology and I am delighted that, with David's Honorary Fellowship, this proud association will continue.'

In response, David said: 'I regard this as a special day for the George Daniels Educational Trust. As someone who attended City's predecessor, the Northampton College of Advanced Technology, George Daniels had a special love for this institution. He believed that his outstanding success as a horologist was linked directly to his time as a student.'

George, who died in 2011, was arguably one of the world's greatest watchmakers and famous for creating the co-axial escapement which is regarded as the most important horological development in the last 250 years.

He was sensitive to the difficulties university students face accessing grants, scholarships and reasonably priced accommodation in London. To this end, the Trust has administered the substantial funds he has bequeathed to provide scholarships for City's students and to benefit research in measurement and instrumentation at the University.

David Newman's association and friendship with George Daniels began in 1961, when they discovered a shared interest in restoring vintage Bentley cars. David's interest in horology soon took root after observing Daniels' work in making and restoring clocks and watches.

David was a close confidant of George Daniels. He worked efficiently in the background for over 45 years on his correspondence, financial and legal matters. He also provided valuable help in the publication of his definitive textbooks and with his auctions and exhibitions around the world.

About City University London

City University London attracts over 17,000 students (35% at postgraduate level) from more than 150 countries and academic staff from over 50 countries. Its history dates back to 1894, with the foundation of the Northampton Institute on what is now the main part of City's campus. In 1966, City was granted University status by Royal Charter and the Lord Mayor of London was invited to be Chancellor, a unique arrangement that continues today. Professor Paul Curran has been Vice-Chancellor of City University London since 2010.

George's Workshop Bequest Complete

On 10 June 2013, the final piece of equipment from the George Daniels' Riversdale Workshop was removed, for relocation to the Roger Smith studio.

The piece shown in the images is a Hauser P325 Optical Jig Boring machine (Nr 82), which is a high-precision manually operated milling and drilling machine capable of achieving tolerances of 0.001 mm. This historic piece played a pivotal role in the development of the Daniels co-axial escapement, as George used it for the conversion of the various Omega, Rolex, Patek Philippe and recently discovered Zenith watches from the lever escapement to co-axial. These were converted in order to prove to the watchmaking industry that his co-axial escapement was viable and offered a significant improvement to the long term rate of the mechanical timekeeper.

The removal of this piece is the culmination of a year long project by Roger Smith as the pieces have been meticulously photographed and catalogued before their integration into his studio, based on the Isle of Man.

It was George Daniels' wish that this important horological collection be preserved and used by Roger Smith and his team of watchmakers in the maintenance of all existing Daniels watches, in continuation of Daniels London and, of course, in the making of Roger Smith's own RW Smith watches.

This final piece now means that George's wish and bequest are now complete.