

UW REPRODUCIBILITY SEMINAR SERIES

LOCATION | 6th floor Physics/Astronomy Tower TUESDAY April 28th
TIME | 1:30 - 2:30 pm

SPR 2015

Physics and Computing: Open Science Decoded

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ABSTRACT

The talk will start with the OSTP memo on open access, and then go on to discuss executable papers and best practice for reproducibility of computational physics research. After looking at computing for Big Physics (e.g. the ATLAS collaboration at the CERN LHC), for Medium-scale Physics (with the UK's Collaborative Computational Projects), and for Long Tail Physics, the paper ends with some comments about open source, scientific software quality and career paths for scientific software developers.

BIO

Tony Hey began his career as a theoretical physicist with a doctorate in particle physics from the University of Oxford in the UK. After a career in physics that included research positions at Caltech and CERN, and a professorship at the University of Southampton in England, he became interested in parallel computing and moved into computer science. In the 1980's he was one of the pioneers of distributed memory message-passing computing and co-wrote the first draft of the successful MPI message-passing standard.

After being both Head of Department and Dean of Engineering at Southampton, Tony Hey escaped to lead the U.K.'s ground-breaking 'eScience' initiative in 2001. He recognized the importance of Big Data for science and wrote one of the first papers on the 'Data Deluge' in 2003. He joined Microsoft in 2005 as a Vice President and was responsible for Microsoft's global university research engagements. He worked with Jim Gray and his multidisciplinary eScience research group and edited a tribute to Jim called 'The Fourth Paradigm: Data-Intensive Scientific Discovery.' Hey left Microsoft in 2014 and is now a Senior Data Science Fellow at the eScience Institute at the University of Washington.

In 1987 Tony Hey was asked by Caltech Nobel physicist Richard Feynman to write up his 'Lectures on Computation'. This covered such unconventional topics as the thermodynamics of computing as well as an outline for a quantum computer. Feynman's introduction to the workings of a computer in terms of the actions of a 'dumb file clerk' was the inspiration for Tony Hey's attempt to write a popular book about computer science.

Tony Hey is a fellow of the AAAS and of the UK's Royal Academy of Engineering. In 2005, he was awarded a CBE by Prince Charles for his 'services to science.'

