***Ciphers and Codes: Past, Present, Future***

**Public Lecture & Wine Reception**

**The Great Hall, Queen’s University, Belfast**

**24 June 2022, 4pm**

**Dr Ciara Rafferty**

**School of Electronics, Electrical Engineering and Computer Science**

**Centre for Secure Information Technologies (CSIT), Queen’s University, Belfast**

**Prof. Willard McCarty**

**Professor of Digital Humanities, King’s College London**

Dr Rafferty will begin with the evolution of cryptography from wax tablets and basic ciphers to modern cryptography. She also will look at current research on post-quantum cryptography, with the future advent of quantum computers. Professor McCarty will next ask: why do we encode messages? Rather than consider ‘intelligence’ in the military sense, and so Alan Turing’s famous story of code-breaking, this brief lecture will address encoding and decoding in ordinary life, that is, in the lives of teachers and students. To shine a light on that, four historical examples are examined: the 12th century Cistercian abbot, St Bernard of Clairvaux, who will speak for the whole of the Middle Ages; the 17th century English bishop, Thomas Sprat, who will spell out the revolutionary ambitions of Early Modern science; our beloved 19th century author, Charles Dickens, whose fictional schoolmaster Thomas Gradgrind will go Sprat one better (or, rather, worse); and finally, the modern digital project, with its complementary requirements for absolute consistency and complete explicitness of representation. And that in turn will bring us back to St Bernard with renewed appreciation and some relief.

The lecture foregrounds the importance of cryptography, an area in which Queen’s University Belfast has made a significant contribution through the work of Professor Maire O’Neill (Leading Cyber Security Expert) and the late Professor Keith Jeffery (Historian of M16). It is part of a series of events designed to celebrate the public exhibition *Ciphers, Codes and Notes: Crafting Knowledge in the Medieval and Modern Worlds*, The McClay Library (May-July 2022) and commemorates Professor Jeffery. The event is organised by Dr Sinéad O’Sullivan as part of an AHRC Leadership Fellowship in conjunction with the Centre for Public History, QUB.

