

# Mathematics and Patronage

British Society for the History of Mathematics

Saturday 23 June 2018

Rewley House, 1 Wellington Square, Oxford OX1 2JA

## PROGRAMME & ABSTRACTS

**9.30 Registration and coffee**

**10.00 Introduction and welcome**

**10.05 Professor Robert Iliffe (Oxford): *Creativity and Mathematical Patronage in the Early Modern Period***

Early modern mathematicians were supported by a wide variety of patrons and institutions. In this talk I look at how mathematicians crafted their work to appeal to the different demands placed on them by princes, governments, dockyards, universities and religious orders. I address the related questions of what 'reward structures' were prevalent in the period, and the extent to which different forms of patronage allowed mathematicians to develop research along lines of their own choosing.

**10.55 Dr. Stephen Clucas (Birkbeck): *Henry Percy, ninth Earl of Northumberland (1564-1632) as a patron of mathematics***

In the *Athenae Oxonienses*, Anthony à Wood described Henry Percy, ninth Earl of Northumberland as "a great patron of mathematicians", naming amongst his familiars Thomas Harriot, John Dee, Walter Warner, and Nathaniel Torporley: 'the Atlantes of the mathematic world'. In this paper I reconsider the nature of patron-client relations in late sixteenth- and early seventeenth-century England through a series of case studies. I argue that while Percy did not establish a formal academy, and did not sponsor the publication of any mathematical works, he was nonetheless a promotor of mathematical studies, and was presented with manuscript works by his clients who sought to "satisfy" the curiosity of their employer on various questions.

**11.45 Coffee**

**12.10 Dr. Sulamith Gehr (Basel): *The role of patronage in mathematics illustrated through the example of the letter exchanges of Johann I Bernoulli***

In the 18th century the production and diffusion of new mathematical knowledge was only weakly institutionalised and therefore depended mainly on the personal initiative of the scientists and their supporters. These different actors of the scientific community often entered into a patronage relationship with specific rules and liabilities. The letter exchanges of Johann I Bernoulli will be used here to illustrate how such relationships functioned and how they influenced the scientific work. Additionally, it will be shown that Bernoulli pursued to some extent the abolition of the system of patronage through his engagement of reforming the mathematical teaching.

### **13.00 Lunch**

#### **14.10 Drs Dmitri Gouzévitch (Centre D'études Des Mondes Russe, Caucasien et Centre-Européen, Paris) and Irina Gouzévitch (Centre Maurice Halbwachs, EHESS, Paris): *Mathematics For the Russian Empire under the Reign of Catherine II and Paul I (1762-1801)***

Under Catherine II's reign, the development of mathematics in Russia saw cardinal changes. The Empress managed to return Leonard Euler from Berlin (1766), and this gave a new impulse to the mathematical studies carried out in the Academy of Sciences of Saint-Petersburg. However, the Academy of Sciences ceased to be the only institution where exact sciences developed. New directions emerged in line with the needs of technical (engineering and naval) training. The death of Leonard Euler (1783) changed the whole structure of mathematical research in the Academy, as for several decades it tried to comprehend and publish the work of this giant. In the 19th century, with the opening of universities and higher technical schools (1803-1810), the next stage in the development of mathematics in the country began.

#### **15.00 Professor Reinhard Siegmund-Schultze (Agder, Norway): *Patronage in mathematics between private, public and dictatorial interests: from Rockefeller to the Nazis***

The first half of the 20<sup>th</sup> century saw deep changes in funding of mathematics worldwide, supplementing more traditional state patronage through the education of teachers and engineers primarily in continental Europe. In the U.S. private funding of mathematics through universities was complemented by foundations such as those associated with Rockefeller and Guggenheim, and was primarily restricted to pure research. The first industrial laboratories for mathematics were founded at Bell and IBM during the 1920s. Public funding of mathematics was increased in all leading industrial countries mainly due to the wars. The dictatorial regimes in Germany and Italy gave much support mainly to applied mathematics in preparation of WWII. In the U.S. public funding culminated in support given by the Office of Naval Research from WWII and the National Science Foundation soon thereafter.

### **15.50 Tea**

**16.10 Professor Ursula Martin (Oxford): *Modern patronage and the impact of mathematics on a global scale***

As countries around the world increasingly demand 'return' on investment in research, universities seek to demonstrate their influence, locally, nationally and internationally, often through government-related assessment of impacts. In the US and Europe, the mid-twentieth century saw the traditional humanistic approach, of those who saw mathematics as an intellectual endeavour pursued for its own sake, increasingly challenged by an instrumental view of the discipline as contributing to the nation. Vannevar Bush's forcefully articulated argument, justifying government investment in science since unfettered intellectual curiosity of scientists gives rise to unpredictable and useful discoveries, endures in present day advocacy for mathematics funding.

**17.00 Close**