| *b s h m* |

British Society for History of Mathematics

Research in Progress

Saturday 21 February 2015 in The Queen's College, Oxford

Programme

10:30	Registration	
11:00	Welcome	
11:10	ROSIE CRETNEY Open University	J. H. Lambert on the mathematics of map-making
11:50	AUDREY BOROWSKI UC London	Leibniz's mathematico-ontological method: transfiguring the infinite into the finite
12:30	REMUS STANA Glasgow	Mathematics in Nazi Germany
12:45	ELIZA COOKE-YARBOROUGH Oxford	The Hadamard–Lévy theorem and its development over the course of the twentieth century
13:00	Lunch in Magrath Room	
14:00	LUKÁŠ VÍZEK Charles University, Prague (CZ)	Josef Úlehla (1852–1933) and his History of Mathematics
14:40	Panel discussion	The future for history of mathematics
15:30	Refreshment break	
15:45	Professor ADRIAN RICE (Randolph-Macon College, Virginia, USA)	*Invited lecture*: "Standing on the shoulders of giants", or How I became a historian of mathematics

Abstracts

Rosie Cretney (Open University)

J. H. Lambert on the mathematics of map-making

Before the eighteenth century, mathematics was used to produce various map projections, most famously the Mercator projection of 1569, but no systematic treatment of the subject was achieved. In 1772, the Swiss mathematician Johann Heinrich Lambert produced the first general theory of cartography in his *Anmerkungen und Zusätze zur Entwerfung der Land- und Himmelscharten* [*Notes and addenda on the design of maps of land and sky*]. In this talk I shall discuss some of the main features of this important work.

p.t.o.

Audrey Borowski (University College London)

Leibniz's mathematico-ontological method: transfiguring the infinite into the finite

To solve the problem of motion and more broadly of the infinite, Leibniz formulated his mathematical law of Continuity according to which "the rules of the finite are found to succeed in the infinite". This law later served as a general epistemological principle which, through the recourse to fictions, made possible the expression of the infinite through the finite. Crucially, it found its justification in the very structure of contingent reality itself, one which unfolded logically and 'homogonously', in a process of continuous change whereby one species naturally 'vanished' into its opposite whilst upholding 'the permanence of the same reason.

Remus Stana (Glasgow)

Mathematics in Nazi Germany

This presentation is an account of the winning essay in the BSHM Undergraduate Prize competition 2014.

Eliza Cooke-Yarborough (Oxford)

The Hadamard–Lévy theorem and its development over the course of the twentieth century

The Hadamard–Lévy theorem is an important result in global inversion theory, and the beginnings of Functional Analysis. It was first stated by Jacques Hadamard in 1906, for the finite-dimensional case. It was extended to Banach spaces by Paul-Pierre Lévy in 1920, generalised by Gunter Meyer in 1968, and further extended by Roy Plastock in 1974. It has since been extended and applied to a diverse range of mathematical problems. This short presentation will aim to detail the formulation of the theorem, and to explain some of its extensions in the latter half of the twentieth century.

Lukáš Vízek (Charles University, Prague, CZ)

Josef Úlehla (1852–1933) and his History of Mathematics

Josef Úlehla (1852–1933) was a Czech primary and secondary school teacher. He taught mathematics and science, wrote monographs, textbooks and many articles in pedagogy and other fields. This presentation mentions his life and work, and analyses his book *Dějiny mathematiky* (History of Mathematics) in the European context.

Panel discussion: The future for history of mathematics

Possible topics: the design of undergraduate history of mathematics courses; funding for postgraduate history of mathematics study, digital versus paper resources; . . .

Professor Adrian Rice (Randolph-Macon College, Virginia, USA)

"Standing on the shoulders of giants", or How I became a historian of mathematics

This talk is divided into three parts. In the first, since everyone seems to come to the history of mathematics via a slightly different route, I thought it might be interesting to show you how I became a historian of mathematics and why. In the second part, I will give a summary of an early piece of my research, of which I am still very proud, as well as an outline of how my research interests have evolved over the years. And in the third and final part, I will highlight three particular scholars who have especially influenced and helped my own development as a historian of mathematics.