| b s h m |

LONDON
MATHEMATICAL
SOCIETY
150 YEARS

The BSHM-LMS 150th Anniversary
De Morgan Day
Saturday 9 May 2015

Programme

10.00 Coffee and Registration

10.30 Opening of the Society Meeting

10:30 Adrian Rice,

An Introduction to the Life and Work of Augustus De Morgan

11.30 Chris Hollings,

"A batch of observations & enquiries": the correspondence of Ada Lovelace and Augustus De Morgan

12.00 Sloan Despeaux,

Augustus De Morgan's 'Budget of Paradoxes'

1.00   Lunch Exhibition

2.00   John Heard,

Augustus De Morgan and the Early History of the London Mathematical Society

3.00   Ian Stewart,

Augustus De Morgan and George Boole

4.00   Tea

4.30   Wilfrid Hodges,

The Influence of Augustus De Morgan

5.30   Close of meeting

5.30   Wine Reception

7.00   Society Dinner

This meeting is organised in collaboration with the British Society for the History of Mathematics (BSHM).

Abstracts

Adrian Rice
An Introduction to the Life and Work of Augustus De Morgan

Augustus De Morgan is remembered primarily for the pair of algebraic laws that bear his name, as well as for his formative association with the London Mathematical Society. But his career spanned a far greater array of interests and venues than his limited fame of today would suggest. In the last few decades, historical research has shed light on forgotten aspects of De Morgan's life and work to give us a more complete picture of the range and diversity of his mathematical activities, some of which will be discussed in more detail in subsequent talks. To place this material in context, this talk will give an introduction to the singular character of Augustus De Morgan, including an overview of his life, his contributions to mathematics, particularly algebra and logic, and his work as the first professor of mathematics at University College London.

Chris Hollings
A Batch of Observations & Enquiries: The Correspondence of Ada Lovelace and Augustus De Morgan

During the years 1840–1841, Augustus De Morgan corresponded with Ada King, Countess of Lovelace, on mathematical subjects, tutoring her in elementary calculus, amongst other topics. Previous readings of this correspondence have resulted in wildly differing assessments of Lovelace's mathematical abilities, though seemingly without any in-depth analysis of the mathematics. In this talk, I will report on work that is underway to determine what mathematics Lovelace was learning with De Morgan, and finally, it is hoped, to provide an accurate, unbiased evaluation of her mathematical proficiency.

Sloan Despeaux
Augustus De Morgan's 'Budget of Paradoxes'

De Morgan's often-quoted and highly entertaining work, *A Budget of Paradoxes*, was an natural outgrowth of his anonymous book reviews for the weekly London-based literary magazine, *The Athenæum*. This talk will give a sample some of the *Budget's* most enjoyable excerpts, discuss De Morgan's motivations for writing them, and consider why the work enjoyed such wide-ranging appeal.

John Heard
Augustus De Morgan and the Early History of the London Mathematical Society

Augustus De Morgan was involved with the London Mathematical Society from the day that it was first proposed, and it was largely because of him that it rose above its humble beginnings and rapidly became the only national society focussing on mathematics. This talk will consider the role that he played in the founding of the Society, his continuing involvement up to the time of his death in 1871, and the extent to which his hopes and expectations were realised during the following three decades."

Ian Stewart
Augustus De Morgan and George Boole

In 1842 George Boole introduced himself to Augustus De Morgan in a letter about De Morgan's book *Differential and Integral Calculus.* This led to a lifelong friendship. The two had much in common. The most obvious was an interest in symbolic logic. It is said that De Morgan's *Formal Logic* and Boole's *The Mathematical analysis of Logic* appeared on the same day; certainly very close to each other. However, their common interests also included symbolic algebra, probability, differential equations, and 'paradoxers' — mathematical cranks. The talk will provide a short trip through their interactions, including career advice as well as mathematics and more personal discussions. It is based on Desmond MacHale's *The Life and Work of George Boole*.

Wilfrid Hodges
The Influence of Augustus De Morgan

As a mathematician, Augustus De Morgan was not outstandingly original or insightful. It's hard to point to much in today's mathematics that he was responsible for, apart from some terminology and notation. But being a very determined educator, he published intelligent comments and suggestions on a lot of things, particularly in logic. In this way he was one of the first people to bring to general attention some things that we now regard as fundamental, for example mathematical induction, the De Morgan laws and boolean duality, quantifiers and their domains, relational logic. We will discuss in non-technical terms how these things are important, and what they owe to him.