

The Newsletter of the Yorkshire Branch of the Mathematical Association

Enriching the teaching of A level mathematics: a study day for teachers

**Saturday, 10 March 2018
at the School of Mathematics, The University of Leeds**

11am Registration and coffee

**11.15am Teaching mechanics: assumptions, misconceptions and
Newton’s Laws**

Workshop leader:
Dr Tom Roper



Tom taught mathematics in schools and colleges for 17 years, before joining the School of Education at the University of Leeds. Tom has given many talks on mathematics and has led workshops in schools and at conferences. Currently he is President of the Mathematical Association.

This workshop will cover basic assumptions, misconceptions and Newton’s Laws in the teaching of mechanics. There will be many activities used that can be taken very easily directly into the classroom.

12.45pm Lunch

1.30pm Using rich tasks for teaching A level Mathematics

Workshop leader
Dr Lizzie Kimber



Lizzie taught A-level mathematics in schools for seven years. She has worked on curriculum projects as a Nuffield Foundation Education Fellow and has designed resources for Underground Mathematics. Lizzie now teaches mathematics at Bishop Grosseteste University in Lincoln.

We will work together on some rich tasks offered by Underground Mathematics and consider the different ways in which the resources could be used to develop students' mathematical thinking. We will also discuss how classroom video clips can be used for teacher professional development.

3pm Tea and departure

Fee: £10 including refreshments and lunch.

Places at this Day School must be booked in advance no later than March 1st. To book a place please complete this form and send it, *together with a cheque for £10* (payable to YBMA), or cash, to Alan Slomson, YBMA Secretary, 20 Grosvenor Park Gardens, Leeds, LS6 2PL.

Your name:(capitals, please).

Your school:.....

Your postal address:.....

..... postcode

Your email address:

Please list your dietary requirements, if any:

You will be sent a receipt by post to confirm your place, together with travel directions.

Wednesday, March 21st 2018
2.30pm-3.30pm
Rupert Beckett Lecture Theatre, University of Leeds

W.P.Milne Lecture for Sixth Formers

Are large databases good for your health?



by Paul Baxter, Associate Professor of Biostatistics in the Leeds Institute of Cardiovascular and Metabolic Medicine

Paul is well known for giving excellent talks to young people. He was the Royal Statistical Society's Guy Lecturer 2011-2.

The big increase in computing power over recent years has made it possible to routinely record large volumes of information about our daily lives (and especially our health). Statistics is the essential tool for making sense of the huge quantities of data available.

There are many exciting challenges – often the data that are missing or poorly recorded are at least as informative as the data that are present. The real strength of such databases comes when they are linked together to see the bigger picture. But how do we do this, and should we worry that our privacy is being invaded?

This lecture forms part of a Key Stage 5 Maths Day in the Leeds Festival of Science. Places at these events are free, but must be booked in advance by schools. Please go to www.leeds.ac.uk/festivalofscience and use the on-line booking form. Enquiries to fesitivalofscience@leeds.ac.uk

Individual members of the YBMA are welcome to attend this lecture.

W. P. Milne was Professor of Mathematics in the University of Leeds from 1919 to 1946. It was through his initiative that the Yorkshire Branch of the Mathematical Association was established in 1920. The W.P.Milne Sixth form Lecture was established in his memory shortly after his death in 1967. Unfortunately we do not have a record of when the first lecture was given, but we believe that we must be coming up to the 50th anniversary of the first of these lectures. Can any member with a long memory provide some information about this?

Mathematics in the Classroom

What difference does a diagram make?

Let $ABCD$ be a convex quadrilateral. Let E be the point where the diagonals AC and BD meet. The triangles AEB and DEC have the same area.

Prove that AD is parallel to BC .

We have deliberately not given a diagram for this problem. It can be solved in more than one way. Our conjecture is that the way you tackle the problem will depend on which diagram you draw.

Officers of the Yorkshire Branch of the Mathematical Association 2016-17

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