



Surrey Network
Universities of the Third Age

MATHEMATICS IN ACTION

A Study Day on Friday, 21st June 2019

At The Menuhin Hall, Stoke d'Abernon (map on next page)

Speaker Roger Luther

In this study day, we will look at a number of ways in which mathematics - often at a fairly elementary level - can be applied to real world situations. As part of this, we'll look at the lives of two famous mathematicians - Kepler and Ramanujan. Also there will be the opportunity to do some maths puzzles, so you may wish to bring pencil and paper!

Programme

- 9.30 Registration
- 10.00 Maths and Democracy. There are a number of issues regarding electoral systems and the allocation of seats where some simple maths and logic can be relevant. This culminates in Arrow's Theorem, which states that there is no perfect way of fairly electing someone!
- 11.00 Coffee / Tea
- 11.30 Maths and Genetics. We'll look at the role of basic probability in the transmission of characteristics from parents to offspring, starting with the work of Mendel. This leads to the Hardy-Weinberg theorem, and we'll look at the life and work of Hardy's famous collaborator, the amazing Indian mathematician Ramanujan.
- 12.30 Lunch - Bring your own - Tea / Coffee available
- 1.30 Maths and Traffic. If you were ever puzzled by the stopping distances listed in the Highway Code, all will be revealed. We will also see why opening a new road sometimes causes increased congestion (even with no overall increase in traffic!).
- 2.30 Tea / Coffee
- 3.00 The mathematician and scientist Kepler had an interesting approach to choosing his wife, which can now be used to analyse the best time to sell your shares! We'll discuss this, and other aspects of his life, including the best way to pack oranges in a pile.
- 4.00 Departure

Speaker Roger Luther is a part-time lecturer in Mathematics at Sussex University, having taught in secondary schools for the first half of his career. He is active in his own local U3A, running maths and physics groups, together with a monthly pub quiz. He runs a maths course each year as part of the South East U3A Forum Summer School at Chichester - to be held in the week following this study day.

To book send the slip below, with a cheque for £10 (non-U3A guest £12) payable to 'Surrey U3A Network', or bank transfer to HSBC acct 11519018 40-27-07, ref 'Event month(s)' e.g. Feb, Mar, to John Kennedy - U3A, 20 Greville Park Road, Ashted, KT21 2QT, Tel 01372 273561, e-mail surreyu3astudyday@btinternet.com. Enclose a SAE or e-mail address for confirmation. Fees are not normally refundable. Website, see the next page.

Mathematics Study Day **See - Nut Allergy & Other Notes page 2** 21st June 2019

Please print Confirm by ticking E-mail or enclosed SAE Cheque or Bank Transfer



Title First Name Surname Name of U3A

Address

Post Code Telephone E-mail

See page 2 if you need disabled parking, tick , or a wheelchair space in the hall, tick

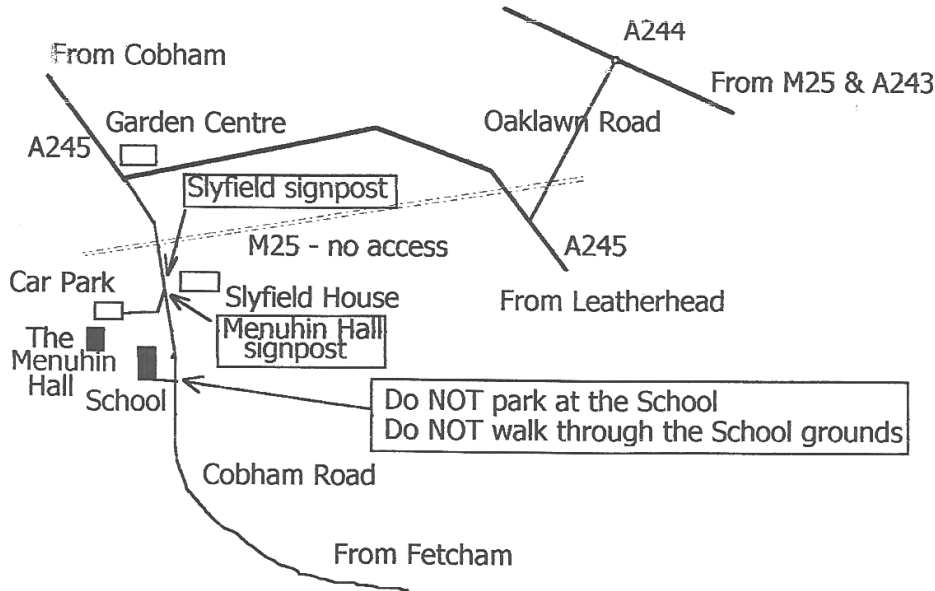
The Menuhin Hall

Cobham Road, Stoke d'Abernon, KT11 3QQ

Map ref: TQ 132 579 on Landranger 187, Explorer 146

Telephone 07763 805046 (emergency, on day only)
or Menuhin Hall Office 08700 842020

There is a Garden Centre (01932 862530), about 800 metres to the north of the Menuhin Hall where light lunches are available. Reservations not required.



The Menuhin School was founded in 1963 in London and moved to its present site in 1964. It has about 80 pupils learning to play stringed instruments including piano and is financed, in part, by the DfE. Lord Menuhin was born in New York on 22nd April 1916 and died on 12th March 1999 in Berlin. His parents had come from Russia. His first public concert was in March 1924 and his first in Europe, in Paris, in 1927. His performance of Elgar's Violin Concerto was recorded at the Abbey Road Studios in 1932. The Hall, designed by Mark Foley, was conceived as a memorial to Yehudi and was handed over to the school on 5th August 2005. The official opening was on 7th January 2006. Yehudi is buried near the stone pillar in front of the Hall. Nearby is an oak which he planted on his 80th birthday. The Hall was first used for U3A Study Days on 14th October 2005 when the Steinway grand piano was used as no other was available.

Surrey Network Website - <http://u3asites.org.uk/surreyu3anetwork/> has application forms for study days & other events plus information about the Surrey Network and links to Surrey U3A websites.

Nut Allergy. The Menuhin School has pupils who have an allergic reaction to nuts and the staff have taken the decision to make the school and the Menuhin Hall a nut free environment. Please ensure that your lunch does not contain any trace of nuts.

Disabled Parking. There are six spaces behind the hall, there are more in the main car park. If you have a blue badge and need level access to the hall then tick "Disabled parking" on the booking slip. You will then be allocated a space at the back of the hall if available and sent a permit. If you can manage from the main car park (i.e. you are able to manage some steps with handrails) then please do not tick "Disabled parking". That will leave the back of the hall spaces for those that are very immobile.

There is a "drop off" space at the back of the hall where disabled who are not the driver can gain level access to the hall.

Wheelchair spaces. If you need a seat removed in the hall to accommodate a wheelchair then tick Wheelchair on the booking slip.