



# Surrey Network

## EUREKA – A BRIEF HISTORY OF MATHS FROM 3000 BC TO 2000 AD

A Study Day on Friday 21<sup>st</sup> October 2022 at The Menuhin Hall, Stoke d'Abernon

### Speaker Roger Luther

We will look at some of the key moments in the history of mathematics, from the Babylonians in 3000 BC to the Clay Millennium problems of 2000 AD. Mathematics is a human endeavour, and we'll look at a variety of interesting characters along the way, from Pythagoras to Perelman.

#### Programme

- 9.30 Registration
- 10.00 **Numbers** – Different systems (Babylonian, Greek, Roman, Hindu–Arabic) and different types of numbers (rationals, irrationals, infinity). We'll also talk about two fascinating thinkers, Fibonacci and Oresme.
- 11.00 Coffee / Tea
- 11.30 **The Axiomatic Approach** – Including Geometry (the Greeks, Euclid and non–Euclidean geometry), and Logic, with set theory and Boolean algebra, the basis of modern computing.
- 12.30 Lunch – Bring–Your–Own – Tea / Coffee available
- 1.30 **20<sup>th</sup> Century Uncertainty** – Looking at Godels' theorems from 1931 followed by the development of chaos theory from the 1970's, and then two great successes, proving theorems that had defied resolution for centuries.
- 2.30 Tea / Coffee
- 3.00 **21<sup>st</sup> Century Maths** – What's left to do? The Clay Millennium problems (each with a \$1m prize for solution) have set the agenda for the future, even on topics as basic as prime numbers
- 4.00 Departure

**Speaker – Roger Luther** recently retired from lecturing in Maths at Sussex University. He is active in his own u3a in Brighton, and runs a number of maths and physics courses for u3a, both locally and nationally. He also delivers a maths course as part of the South East u3a Forum Summer School at the University of Chichester each year."

To book Members should send the slip below, with a cheque for £12, or £5 for Virtual Attendance or £15 for a Guest, payable to Surrey u3a Network, or bank transfer to HSBC Account No. 11519018 Sort Code 40-27-07, Event Reference Oct22, to Denise Dobbs – u3a, 5 Aldridge Rise, New Malden KT3 5RJ, Phone 07964 798791 or send an email to – [surreyu3astudyday@btinternet.com](mailto:surreyu3astudyday@btinternet.com). Enclose a SAE or an e-mail address for confirmation.

-----  
**MATHS                    Member £12    Guest £15    Virtual Attendance £5                    21<sup>st</sup> October 2022**

**Please Tick** – Attend Hall  or Virtually ; E-mail  or SAE ; Cheque  or BankTrsf

Title ..... First Name ..... Surname ..... Name of u3a .....

Address .....

Post Code ..... Telephone..... E-mail .....

If you need disabled parking, tick , or a wheelchair space in the hall, tick .

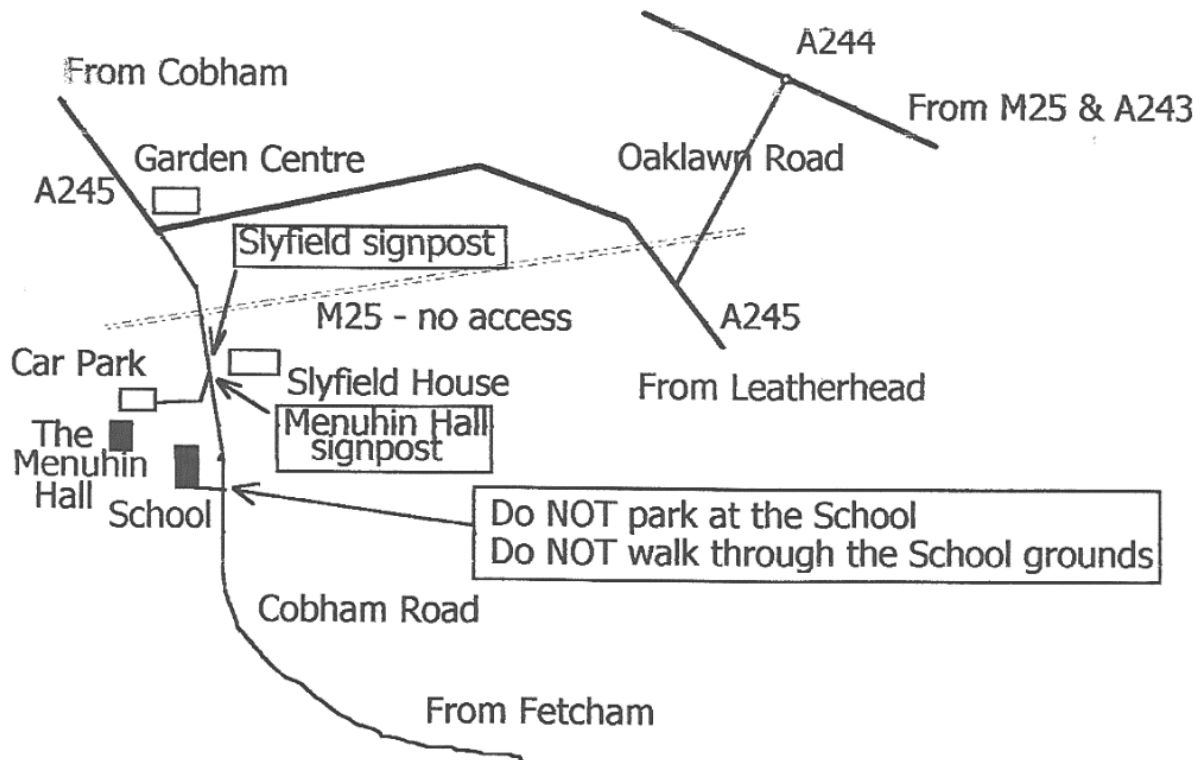
## Location & Contact Details for Study Day

The Menuhin Hall, Cobham Road, Stoke d'Abernon, Surrey KT11 3QQ

Map Ref: TQ 132 579 on Landranger 187 & Explorer 146

u3a contact: on-day-only 07763 805046 or Menuhin Hall Box Office 01932 559400

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



The Menuhin School was founded in 1962 in London and moved to its present site in 1964. It has around eighty pupils learning to play stringed instruments including piano and is financed, in part, by the DfE. Lord Menuhin was born in New York on 22<sup>nd</sup> April 1916 and died on 12<sup>th</sup> 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 5<sup>th</sup> August 2005. The official opening was on 7<sup>th</sup> January 2006. Yehudi is buried by the stone pillar in front of the Hall. Nearby is an oak which he planted on his 80<sup>th</sup> birthday. The Hall was first used for a Surrey Network Study Day on 14<sup>th</sup> October 2005.

## STUDY DAYS AT THE MENUHIN HALL

**Surrey Network Study Days** – After an eighteen-month gap, study days at The Menuhin Hall resumed in September 2021. We welcome members to our study days in the hall, as in the past, while also making it possible to view the study days remotely.

**Advertising & Booking** – The practice of applying by post or by email will continue, with booking responses being sent as members chose, while payment can be made by cheque or bank transfer. We have discussed using on-line booking and consider that this is our likely next step, but the workload in setting up the programme for 2022 and 2023 is our first priority. We advertise the study days with full details and booking forms on our website – <http://u3asites.org.uk/surreyu3anetwork/> and also circulate the information electronically to all u3as in Surrey Network and surrounding areas. In the past we posted booking forms to all those u3as but as the great majority of members have internet access and due to the work involved, we have decided to discontinue that service. We have been electronically circulating a poster suitable for advertising the future programme on display boards or websites and this will continue. The booking fee was £9 when the study days started in 2004 and has been £10 for the last five years. The fee will rise to £12 in 2022 with the virtual attendance fee staying at £5. The fee for guests will rise to £15. Further information is given above, including the booking form, details of the programme and the speaker's background.

**Nut Allergies** – 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 and 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 and sent a permit. There is a drop-off space where disabled members have 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.

**Appreciation of Team Members and Plea for Support** – Over the period of lock-down we were very sad to hear that four team members had passed away due to various causes and we wish to acknowledge the valuable support they gave for many years; Alison Gaitonde, Banstead u3a, John Harbridge, Dorking u3a, Sheila Hill, Fetcham u3a and Sheila Pomfret, Bookham u3a. The study days have been running successfully for eighteen years and new volunteers with ideas for the future programme and the energy to help run the study days will be made very welcome. Our website is based on the u3a software Site Builder, and as a transfer to a new system is required in 2023 some extra support for the website would be very welcome.

**Please contact Surrey Network Chairman, Caroline Sawers, on 01483 560590.**