Thursday Banda Salari Banda Sal





Anna and an HP teddy

The Sports Tournament

The sun shone yesterday as the girls descended on St Edmund's College Playing Field for an afternoon of sporting fun. Croquet was a popular option with the girls learning how to play this ancient pastime under the guidance of Sally-Anne and Sharon.

Lucy and Alice, with the invaluable help of Carole from Luxembourg, explained how the European game of Boules is played, and elsewhere on the field there were energetic games of Rounders, Fris-

bee and Football for the girls to enjoy.

The obstacle races devised by Laura and Andrea provided much entertainment and laughter, as the blindfolded contestants were directed over hurdles, through hoops and round cones. The races incorporated a hula-hoop challenge, which revealed the exceptional talents of Katherine from Bulgaria, Yuliya from Ukraine and Emese from Hungary, earning them a prize of a fluffy teddy from sponsors HP Labs. It turns out that all three can



The Overall Champions

hula-hoop indefinitely and at least one of them can do this with multiple hoops! Hungary and Latvia joined forces to become overall obstacle champions!



Yuliya from Ukraine

Wallace & Gromit



Thursday Evening, 19:30, Long Room

The Opening Ceremony

Wednesday marked the official commencement of EGMO 2012. The lovely, and admirably brief, speeches from organiser Ceri Fiddes; Professor Ruth Lynden-Bell, Acting President of Murray Edwards College; and Jury Chair, Geoff Smith, welcomed everyone to the event.



Maths Talk: Faster Detection of attacks on computer networks

A common problem in computer science is that you have a pattern (written in a standard format) and you want to find all the matches to this pattern in a large set of data items, and report back parts of the matches to the pattern. This kind of pattern matching is used, for example, to detect attacks on computer networks. The usual ways of solving this problem are very fast for small or simple patterns, but can take an impractically long time if the pattern is complicated.

Some colleagues at HP Labs and I have found a way of doing this faster than was possible before, by turning the patterns into two labelled graphs (in the sense of graph theory) and then using these graphs to process the data. This result hasn't been published yet, and EGMO will be the first occasion that it will be talked about it outside HP.

The talk will be given by Miranda Mowbray at 19:30 on Friday evening, don't miss it!

Miranda will also be talking about some of the mathematical things that she wishes she had known when she was at school.

Two Puzzles

There are 15 rooms labelled 1 to 15 each with a single light which is initially off. It is possible to toggle the light in room 1 at any time but for all n>1, we may only toggle the light in room n if the light in room (n-1) is on. Is it possible to turn on the light in room 15 without ever having more than 4 lights on?

The diagram to the left contains 5 triangles (a 3-sided shape with a line crossing its interior doesn't count). Can you create a diagram with 10 triangles by adding 2 lines to the diagram?



Interview with the Chief Guides: Penny Thompson and Sally Anne Huk

How are you finding EGMO 2012?

It's proving to be a great experience and it's living up to all our expectations. The girls are so friendly and enthusiastic and we are excited to be involved with this new venture.

Yes, and the best is yet to come. What are you looking forward to most in the upcoming days?

After the fun of yesterday's sports tournament, we're looking forward to an equally enjoyable afternoon of punting on Friday and we hope the sun will shine on us again.

What are your top tips for an enjoyable stay?

Get involved! Mix with as many teams as you can, make the most of this amazing opportunity and appreciate your wonderful Guide.

The week ahead:

Thursday

7:30 Breakfast for Contestants and Leaders 8:00 Breakfast for Deputies and Observers 8:30 – 13:00 Paper 1 13:15 Lunch PM Free time for contestants 19:30 Film: Wallace and Gromit, Long Room

Friday

7:30 Breakfast for Contestants and Leaders 8:00 Breakfast for Deputies and Observers 8:30 – 13:00 Paper 2 PM Punting & Tourist Activities 17:30 Maths Talk—see poster Evening – Ceilidh (traditional music and dancing)

Saturday

8:00 Breakfast for Leaders, Coordinators and Deputies 11:30 Brunch for Contestants and Guides 12:00 Lunch for Leaders, Coordinators and Deputies PM Cambridge Maths Tour 18:15 Dinner 19:30 Maths Talk—see poster Craft Evening, Dome

Sunday Excursion

Gala Dinner

