

The Daily Group Theorist

No. 2

2B OR NOT 2B THAT IS THE INVOLUTION.

Monday 1st August 2022

Badges

Please wear your badge at all times, otherwise you may well forget who you are.

Newcastle people and conference helpers have stars on their badges and perplexed looks on their faces to aid identification of those with local knowledge.

Today's talks

Day outline

9:30 Kassel 1; 10:30 Coffee; 11:00 Contributed talks; 12:00 Lunch break; 13:30 Contributed talks; 14:30 Pálfy; 15:30 Tea/coffee; 16:00 Tiep 1; 17:00 Conference photo, followed by Wine reception.

Contributed talks

11:00am – 12:00pm, Location – 4th Floor Herschel, Teaching Room 4 (HERB.4.TR4)

Chair: Leo Margolis

Saul D. Freedman, *The intersection graph of a finite simple group*

Kamilla Rekvényi, *The orbital diameter of affine and diagonal groups*

11:00am – 12:00pm, Location - 4th Floor Herschel, Teaching Room 2 (HERB.4.TR2)

Chair: Justin McInroy Seungjai Lee, *Higman's PORC conjecture on the p-groups of maximal class* Martin van Beek, *Exotic fusion systems related to sporadic simple groups*

13:30 – 14:30pm, Location – 4th Floor Herschel, Teaching Room 4 (HERB.4.TR4) Chair: Casey Donoven

Eshita Mazumdar, Zero sums in restricted sequences over finite groups

Gareth A. Jones, *Groups and the Bateman-Horn* conjecture

13:30 – 14:30pm, Location - 4th Floor Herschel, Teaching Room 2 (HERB.4.TR2) Chair: David Stewart Henry Bradford, *Local permutation stability* David Cushing, *The curvature of Cayley graphs*

Abstracts

Abstracts of all talks can be obtained as a pdf file from the conference website. A small number of paper copies of the abstract booklet are available at the registration desk, for those that need them.

Today: Conference photo

This will happen immediately after the final talk at 17:00 on the steps outside the Herschel Building. Join so that you can look back on Sunday morning and remember how you looked before a week of groups.

Today: Wine reception

After the photo we'll head to the top floor of the Herschel Building for a wine reception. Follow the locals or keeping going up until you can't go further.

Pub of the day!

In case the wine reception leaves you thirsty, today's pub will be *Lady Grey's* on Shakespeare St.

An interview with David Stewart

Your trusty editor interviewed our local organiser David Stewart over WhatsApp.

Question 1: *If you had to describe yourself as a group, which group would you be?* The Divine Comedy

Question 2: *Tell us your highlight of organising this conference.*

Colva Roney-Dougal gave me a silver star for my badge. However, the experience was rather tarnished because she went on to say that she'd deliberately purchased removable ones, and then looked at me with menace in her eyes and whispered: "in case ...".

Question 3: What is your desert island book? (As usual, you get a religious text, the complete works of Shakespeare and the ATLAS.)

At the moment, all I can think of is Bulgakov's "The Master and Margarita" because, in addition to being a great read, it involves making a pact with the devil.

Food, glorious food!

Breakfast

If you are staying in Castle Leazes, then breakfast is provided each morning. On Monday to Friday, a traditional/continental breakfast will be provided through the servery in the main Dining Hall between 8am and 9am.

Lunch

The closest convenient lunch spot is the university canteen, "Courtyard". For a wider range of options, try out Grainger Market, 5 minutes walk away.

Dinner

We have made a document giving a description of a large number of places to eat and drink, which you can read here:

https://tinyurl.com/5n7r989x

Plan ahead! Talks on Tuesday (probably!)

Day outline

9:30 Brion 2; 10:30 Coffee; 11:00 Contributed talks; 12:00 Lunch break; 13:30 Kassel 2; 14:30 Abert; 15:30 Tea/coffee; 16:00 Osin 2.

Contributed talks

11:00am – 12:00pm, Location – 4th Floor Herschel, Teaching Room 4 (HERB.4.TR4)

Chair: Marcel Herzog

Renu, The Schur Multiplier of finite p-groups of maximal class

Komma Patali, *Bounding the exponent of a group and its commutator subgroup and Schur's exponent conjecture*

11:00am – 12:00pm, Location - 4th Floor Herschel, Teaching Room 2 (HERB.4.TR2)

Chair: Carmine Monetta

Víctor Sotomayor, *Finite groups and the class-size prime graph*

M. Dolores Pérez-Ramos, *Carter and Gaschütz* theories beyond soluble groups

Cryptic crossword

No reputable newspaper is ever complete without a crossword. Enjoy this (mainly) group theory themed one. The solutions will appear in The Datly Group Theorift at the end of the week.



Across

- 1. Ignoring order and going into work (9)
- 5. Forbid very loud music at research station (5)
- 8. Queen informally names a cardinal (4,3)
- 9. The sort you shouldn't believe! (3,4)
- 10. Latin character follows Greek one in series (5)
- 11. Right to cancel inside picture houses (4)
- 12. Standard chain (4)
- 14. The fringe is sure to change with no hint of victory (8)
- 16. An algebra sum: Tao confused (6)
- 18. Transport structure from a simple group (6)
- 20. A huge rap composed for Danish mathematician (8)
- 23. Country without any local information (4)
- 24. "The best conference!" "Hear, hear!" (4)
- 25. Received wisdom is that all groups could be this? (5)
- 28. Over twos only, add port drunkenly (3,4)
- 29. Small group trial involves four (or six) (7)
- 30. Inspector is enthralled by boundless space for a valuation (1-4)
- 31. Former strain in STEM, say (9)

Down

- 1. Write up extract of Giudici: "Buckminsterfullerene has valency three" (5)
- 2. French mathematician is extremely insane to follow an American subject with uranium (7)
- 3. E.g. "Translation 1" by some half-hearted tory (8)
- 4. Mathematician in prison: "Without love, nothing is" (6)
- 5. We hear he's naked (4)
- 6. Travels by bike after bearing these elements (1-6)
- 7. Sixth character: ${}^{2}G_{2}(q)$ is an unrelated structure (4,5)
- 13. A book worth singing about at New Year? (4)
- 14. Degrees, for example with Open University in Queen's
- English, give foundation in wreath products (4,5)
- 15. Add field to outstanding journal (4)
- 17. 150% of finite groups are 2-groups! (4,4)
- 19. Got worst mark for having labelled with integers (1-6)
- 21. Hidden scruff in Italy who didn't solve the quintic (7)
- 22. 100 about 1 with all (6)
- 26. Regularly scroll down to find semidirect product (5)
- 27. Series of arrows, from nameless crank, fired up (1-3)

Registration

This continues at coffee breaks through the week.

Wifi

Wifi is available across the campus either as Eduroam or Wifi Guest. If you have an Eduroam account then use that, otherwise ask at the registration desk for help getting on the Wifi Guest network.

Taxis

Try Blue Line taxis on 0191 262 6666. They also have an app you can download.

For those with no soul, there is also Uber.