The Daily Group Theorist

No. 5 | IN VECTORS VERITAS. | Thu. 4th 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 3; 10:30 Coffee; 11:00 Pevtsova; 12:00 Lunch; 13:30 Contributed talks; 14:30 Hulpke; 15:30 Coffee; 16:00 Tiep 3; 17:30 Organ recital

Contributed talks

13:30pm – 14:30pm, Location – 4th Floor Herschel, Teaching Room 4 (HERB.4.TR4)
Chair: Jill Dietz
Mattia Brescia: *On the absolute centre of a group*
María José Felipe: *Structure of a normal subgroup from its G-character tables*

13:30pm – 14:30pm, Location – 4th Floor Herschel, Teaching Room 2 (HERB.4.TR2)
Chair: Colva Roney-Dougal
Peiran Wu: *Irredundant bases for the primitive actions of the symmetric and the alternating groups*
Hongyi Huang: *Base-two primitive permutation groups*

Organs, and how to use them

At 5.30pm today there will be a demonstration of the King's Hall Aubertin Organ, which was specially commissioned for the university. King's Hall is in the Armstrong building on campus, and is a very short walk from the Herschel building. A party will leave the Herschel foyer at 5.20pm.

Pub of the day!

The Free Trade Inn. A 35 minute walk (or take a taxi), along the river, past the bridges. It has the best view of Newcastle and an excellent range of beers.

A co-interview with the Monster

We interviewed a company of mathematicians at breakfast, dinner and coffee breaks.

The Question: ***If you could rename the Monster what would you call it?***

Tiep: *A huge friendly giant.*Tiep also shared some further secrets with us, but unfortunately those are beyond the scope of this paper.
Saul D. Freedman: *A big Baby Monster*
Chris Parker: *Mighty Mouse, because it seems big but in comparison to some other simple groups it really isn't.*
Àngel García Blàzquez: *Scary big thing*
The Editors: *The Fischer-Griess Whale*

Food, glorious food!

Breakfast and lunch

If you are staying in Castle Leazes, breakfast is provided each morning.
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

A description of a large number of places to eat/drink is here: `https://tinyurl.com/5n7r989x`

How can we prove theorems without coffee???

Following the practice of the iconic Hungarian role models Alfréd Rényi and Pál Erdős, we also are machines that turn coffee into theorems. For this purpose, coffee and tea will be served each day at 10:30am and 3:30pm in the foyer of the Herschel building. Other than that, there is a coffee shop called "Anyone", which is on the main road (Percy Street), almost opposite Haymarket metro station.

Plan ahead! Talks on Friday

Day outline

9:30 Brion 3; 10:30 Coffee; 11:00 Contributed talks; 12:30 Lunch; 13:30 Tiep 4; 14:30 Kassel 4; 15:30 Coffee; 16:00 Contributed talks

Contributed talks

[ADDENDUM FROM CHIEF EDITORS: Note additional contributed talks added to the schedule.]

11:00am – 12:30pm, Location – 4th Floor Herschel, Teaching Room 4 (HERB.4.TR4)
Chair: Alan Logan
Marcel Herzog: *On $D(j)$-groups with an element of order p^{j+1}*
Marco Trombetti: *Uncountable Groups and Abstract Group Properties*

Rick Thomas: *Word problems and formal language theory*

11:00am – 12:30pm, Location – 4th Floor Herschel, Teaching Room 2 (HERB.4.TR2)
Chair: Rebecca Afandi
Luca Di Gravina: *The Möbius function of finite classical groups*
Carmine Monetta: *The structure of a finite group from a neighborhood's point of view*
Sofia Brenner: *The socle of the center of a group algebra*

16:00pm – 17:00pm, Location – 4th Floor Herschel, Teaching Room 4 (HERB.4.TR4)
Chair: Simon Smith
Àngel García Blàzquez: *The Isomorphism Problem for Rational Group Algebras of Metacyclic Groups*
Erzsébet Horváth: *Constructing arbitrary depth with the help of wreath products*

16:00pm – 17:00pm, Location – 4th Floor Herschel, Teaching Room 2 (HERB.4.TR2)
Chair: Adam Thomas
Aluna Rizzoli: *On the isometry group of a finite dimensional Banach space*
Vanthana Ganeshalingam: *Subgroup Structure of the Exceptional Group of Type* F_4

Certificates

If you requested a certificate of attendance, it will be available to collect at the registration desk during morning coffee - Colva has them.

Weekend check-out

When leaving Castle Leazes on Saturday, post keys and key-cards through the vent in the reception door.

Personality Type Quiz

Have you always wondered about your personality type? Take our quiz to find out! We can promise that this will help you understand yourself and your favorite groups. Record how many A, B and C answers you choose.

Question 1: *Which is your favorite prime?*
(A) 2 (B) 23 (C) 71
Question 2: *Do people look at you from two sides often?*
(A) yes (B) no (C) only parts
Question 3: *Are you direct?*
(A) yes (B) no (C) semidirect
Question 4: *Do you commu(nica)te?*
(A) yes (B) no (C) sometimes
Question 5: *Do your friendgroups intersect?*
(A) yes (B) some (C) all disjoint
Question 6: *When are you most in your element?*
(A) When I hear quot(i)e(nt)s (B) When I understand my identity (C) When I read about (per)mutations
Question 7: *What do you prioritize in life?*
(A) Stability (B) Small things (C) New experiences
Question 8: *What did you drink at the conference dinner?*
(A) Wine (B) Beer (C) Cider/Soft-drinks.

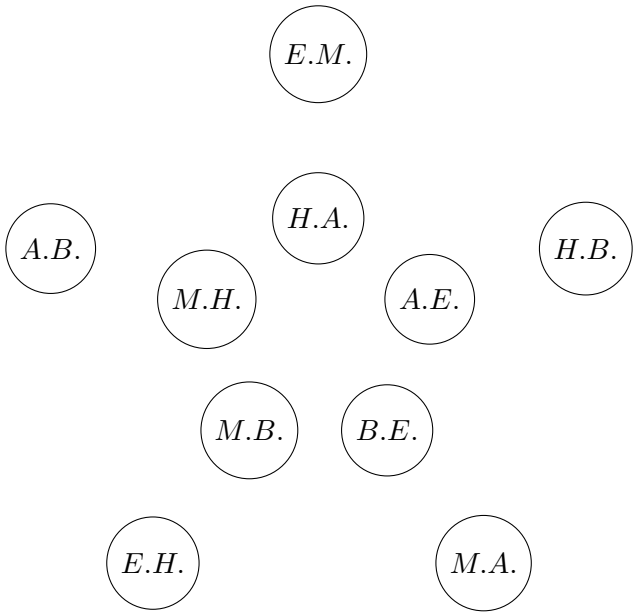
MOSTLY (A): NORMAL
Your personality type is normal, this means that you can have small talk with every other person in your fiendgroup. People find it easy to be around you (via conjugation) and you stay true to yourself every time.

MOSTLY (B): SIMPLE
Your personality type is simple. You like like-minded people so you try to classify others with simple personality types and hang out with them. You are not very good at communication unless you enjoy going around in circles.

MOSTLY (C): PRIMITIVE
Your personality type is primitive. However, you are more sophisticated than others might think. You get on easily with other personality types, and some of you are even almost simple.

The Daily Orbital Graph

Connect the initials with a line if their intersection of the set of letters is trivial!



Question 1: *Can you identify which speakers they are?*
Question 2: *Which orbital graph do you get?*

Solutions will appear in The Daily Group Theorist later in the week.

Does this graph have a collaboration subgraph? If not, then it maybe should!