



# The Daily Group Theorist

No. 1

GOD INVENTED THE INTEGERS.

Sunday 4th August 2013

## Welcome to day 1

All plenary talks are in Lecture Theatre A of the Physics Building (Building 15 on "Maps & Facts" map). All contributed talks are in the Mathematical Institute (Building 14 on "Maps & Facts" map). To get from Maths to Physics (or vice versa), you can either walk outside or use the internal bridge.

Theatre A of the Mathematical Institute is on the ground floor: go down the steps by the bridge from Physics. Level 1 of the Mathematical Institute is not connected, so if you go down other steps you are unlikely to find Theatre A. Theatre B of the Mathematical Institute is on Level 2, the same level as the bridge from Physics. Theatres C and D are on Level 3: go up the steps by the bridge from Physics.

## Badges

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

Locals have stars on their badges, for ease of identification.

## Vegetarians and other non-standard eaters

Declare yourselves at the registration desks so that our workforce can ensure you are served the correct food at the banquet (and at other times, if you are staying in halls).

## Today's Talks

### Day outline

9:30 Reid 1; 10:30 Coffee; 11:00 Contributed talks; 12:30 Lunch; 1:30 Lohrey; 2:30 Breuillard 1; 3:30 Tea; 4:00 Vogtmann 1; 6:00 Dinner; 8:00 Walking Tours

### Contributed talks

**11:30am** – 12:30pm, Maths Lecture Theatre A

Chair: Alexander Hulpke

(Note: no talk at 11:00; Maths A's session now starts at 11:30)

Nicola Sambonet, *On the exponent of the Schur multiplier*

Dan Levy, *Sylow multiplicities in finite groups*

11:00am – 12:30pm, Maths Lecture Theatre B

Chair: Richard Parker

Leo Margolis, *Zassenhaus Conjecture for cyclic-by-abelian groups*

Andreas Bächle, *Rational conjugacy of torsion units in integral group rings of non-solvable groups*

Alexander Konovalov, *Recent advances on prime graphs of integral group rings*

11:00am – 12:30pm, Maths Lecture Theatre C

Chair: Jeff Burdges

Anthony M. Gaglione, *Turner's Theorem is not First Order*

Elena Aladova, *Logically and algebraically homogeneous groups*

Urban Jezernik, *Commuting probability and commutator relations*

11:00am – 12:30pm, Maths Lecture Theatre D

Chair: Arturo Magidin

Justin McInroy, *Sidki's Conjecture; showing finiteness of group presentations using amalgams*

Andrey Mamontov, *Groups of exponent 12 without elements of order 12*

Andrei Zavarnitsine, *On a finite 2, 3-generated group of period 12.*

## Updates to the week's schedule

The timetable for the week in your delegate pack will become increasingly fictional as the week progresses: the Daily Group Theorist and the conference website are your reliable sources of information. Since printing the weekly timetable, Peter Cameron has replaced Ben Fine on Tuesday 6th, title "Permutation groups and transformation semigroups", Daniel Lytkin will speak at 11:00 on Wednesday 7th in Maths A, Jan Krempa will speak at 11:30 on Wednesday 7th in Maths A, Natalia Makarenko will speak at 12:00 on Wednesday in Maths A, and Daria Lytkina will speak at 11:30 on Friday 9th in Maths B: see the abstract book for their titles and abstracts.

## This evening: walking tours

This evening some of our local students will be leading semi-guided walking tours around the delightful historic town of St Andrews. One tour will leave each residence at 8pm, for a walk that will take around an hour or so, and finish in a local watering-hole. If you're interested in coming along, please sign up at one of the registration desks beforehand so that we don't leave without you. We make no advance claims as to the accuracy of the information provided by your guides; indeed they have been encouraged to be as inventive as possible.

## Food, glorious food!

### Staying in one of the residences?

If you are staying in hall, then breakfast will be provided each morning from 7.30 to 9. Lunch for all residents will be served from 12.30 to 1.30 each day, all in Agnes Blackadder Hall. With the exception of the night of the conference banquet, you'll have dinner in your own hall each evening, at 6pm most days but 6.30 on Monday 5th.

### Staying elsewhere?

Then I'm afraid, with the exception of morning coffee, afternoon tea, and the conference banquet, you'll need to fend for yourself for meals. Lunch today may be a little rushed, as the Medical Building Cafe is closed at weekends, but the closest place to buy lunch is the Whey Pat Tavern (on Argyle St, opposite the west end of South St) and we have warned them that hungry mathematicians may appear. The West Port (very close to the Whey Pat) has a wider range of options, but service can be slow when it is busy.

### Never mind the food, where's the coffee?!

Coffee, together with tea and a range of other inferior (= non-caffeinated) beverages, will be served each day at 10:30am and 3:30pm in the Physics Foyer. This is the large area directly outside Physics Lecture Theatre A, where the plenary talks are happening.

## Wifi

If you are staying in one of the residences, then you should have been provided with a university wifi login by the residence staff. Eduroam in theory should work in all of the academic buildings, but in practice the service can be a bit patchy – ask a local for the best place to stand with your laptop above your head to receive a signal. We also have a small number of spare wifi logins, for non-residents.

## Actual computers you can access

We have a very small number (four, to be precise) of desktops for delegates, located in Room 1B of the Mathematical Institute. Please ask at the registration desk for a login. To get Room 1B, first enter the Institute, and stand with your back to the front door. Now walk to the end of the corridor in front of you, and down the set of stairs. Walk through the double doors, then 1B is directly ahead of you.

## Book stalls

CUP, OUP and De Gruyter will all have stalls in the Physics Foyer. Sam Harrison from CUP will be here from today to the 6th, Friederike Dittberner from De

Gruyter will be here on the 7th and 8th, and Clare Charles from OUP on the 8th and 9th. They are all lovely people so do go along and chat to them!

## Giving a contributed talk?

If you're giving a contributed talk, and want to use a computer, please ensure that you email your slides to [gps2013@mcs.st-and.ac.uk](mailto:gps2013@mcs.st-and.ac.uk). Please send us slides in **pdf format only**, with the file **labelled by your surname**. We will ensure that they are on the computer in the room where you are speaking.

## Photos and Chat

To cater all of your burgeoning social media requests, your media-savvy hosts (or, more accurately, their PhD students) have set up a Facebook "event" for the conference, join us at <https://www.facebook.com/events/539813526085443/>. Please feel free to upload photos, start discussions, and contribute mathematical problems!

## Wanting to skive already?

If you feel like a break from talks today, [Ed: Already? Should we be encouraging this?] the Botanic Gardens are having an open day from 11 til 4pm, with free entry. The gardens themselves are really beautiful to wander around, but in addition the organisers promise: Live music! Face painting!! Beer!!!

## Seeking climbers (preferably with car access)

Eric Freden is keen to go rock-climbing whilst here, if anyone would like to go with him, and has equipment and a car, please get in touch with him: his email address is [freden@suu.edu](mailto:freden@suu.edu).

## Plan ahead! Talks Monday 5th

### Day outline

9.30 Liebeck 1; 10.30 Coffee; 11.00 Contributed talks; 12.30 Lunch; 1.30 Contributed talks; 3.30 Tea; 4.00 Robertson; 5.00 Wine reception; 6.30 Dinner.

### Contributed talks

11:00am – 12:30pm, Maths Lecture Theatre A

Chair: Jose Javier Etayo

Lucia Sanus, *Real character degrees*

Ayoub B. M. Basheer, *On Clifford-Fischer Theory*

Carolina Vallejo, *Certain monomial characters and character correspondences*

11:00am – 12:30pm, Maths Lecture Theatre B

Chair: Alexander Konovalov

Andreas Distler, *Constructing group extensions with special properties*

Dane Flannery, *Algorithms for arithmetic groups with the congruence subgroup property*

Alexander Hulpke, *Practical algorithms for matrix groups*

EDITOR OF THE DAY: MRQ & CMRD

11:00am – 12:30pm, Maths Lecture Theatre C

Chair: Pádraig Ó Catháin

Marian Deaconescu, *Finite groups acting on groups*

Patrizia Longobardi, *On Groups with Few Isomorphism Classes of Derived Subgroups*

Martino Garonzi, *Covering permutation groups*

11:00am – 12:30pm, Maths Lecture Theatre D

Chair: Gunnar Traustasson

Alejandra Garrido, *Subgroup structure of branch groups*

Rögnvaldur G. Möller, *Simplicity result for groups acting on trees*

Alexander Zakharov, *Intersecting free subgroups in virtually free groups*

1:30pm – 15:30pm, Maths Lecture Theatre A

Chair: Rex Dark

Ann Kiefer, *Generators and relations for a discrete subgroup of  $SL_2(\mathbb{C}) \times SL_2(\mathbb{C})$*

Waldemar Holubowski, *Subgroup structure in the group of infinite triangular matrices*

Stephen Humphries, *Weak Cayley tables and generalized centralizer rings of finite groups*

Kenneth W. Johnson, *Group matrices old and new*

1:30pm – 15:30pm, Maths Lecture Theatre B

Chair: Sarah Hart

John Britnell, *Orbit coherence in permutation groups*

Pádraig Ó Catháin, *A construction for the outer automorphism of  $S_6$*

Simon M Smith, *A classification of primitive permutation groups with finite stabilizers*

Eric Swartz, *New examples of partial difference sets in finite nonabelian groups*

1:30pm – 15:30pm, Maths Lecture Theatre C

Chair: Russell Blyth

Marcel Herzog, *Some inverse problems in*

*Baumslag–Solitar groups*

Dmytro Savchuk, *Submanifold projection for  $Out(F_n)$*

Matthias Neumann-Brosig, *On the homology of hyperbolic groups*

Eric Freden, *Growth in Baumslag-Solitar groups: asymptotics*

1:30pm – 15:30pm, Maths Lecture Theatre D

Chair: Péter P. Pálffy

Michael R. Bush, *Schur sigma-groups*

Theo A. D. Zapata, *Splitting theorems for pro-p groups acting on pro-p trees and 2-generated pro-p subgroups of free pro-p products with procyclic amalgamations*

Pavel Zalesskii, *Pro-p ends*

Amaia Zugadi-Reizabal, *Hausdorff dimension in pro-p groups*

### Additional Information

There will be a registration desk in the Physics Foyer that will be open all day today (roughly 9:00 to 5:15) where you can ask questions. The registration desk will remain open all week, but with gradually reducing hours. Near the desk are poster boards with full abstracts. Abstracts can also be viewed via the conference website, and there's also a board with abstracts outside Theatre B of the Maths Department.

### Pub of the day!

After the glorious success/abject failure of last night's pub trip [Ed: delete as appropriate before printing] we suggest a different pub to congregate in tonight, namely the Central on Market Street. This will be where the walking tours finish.