

Conference booklet and talks

A conference celebrating the enduring success of the New York Group Theory Seminar

In memory of the work of long time seminar leader Gilbert Baumslag

And to celebrate the 70th birthday of long time participants, Benjmain Fine and Tony Gaglione

Fairfield University – November 1, 2018

Graduate Center CUNY – November 2, 2018

The New York Group Theory seminar which now runs Friday afternoons at the City University Graduate Center is the world's longest running Group Theory seminar. For over 60 years, the Group Theory Seminar has been crucial to the research efforts and accomplishments of the New York group Theory community. This will be a 2-day conference to honor the achievements of the seminar and in memory of the long time seminar leader, Gilbert Baumslag, who died 2 years ago. Through his students and his own work, Gilbert inspired a great deal of the research done by the seminar's participants, many of whom have been attending the seminar throughout their professional lives. The conference will also celebrate the 70th birthday of two of the long time participants, Ben Fine and Tony Gaglione, both of whom have worked closely with Gilbert and with many other people associated with the seminar.

Over the past 20 years, there has been tremendous progress in both infinite group theory and the interactions of group theory with logic and cryptography. Much of this material came together in the monumental work that resulted in a proof, by Kharlamovich and Myasnikov and, independently, by Sela, of the Tarski conjectures on free groups.

To show an appreciation of these achievements that arose from the Group Theory seminar and to honor on their 70th birthdays two people, Benjamin Fine and Anthony Gaglione, who have made significant contributions to the area, there will be a 2-day conference on November 1–2, 2018. Thursday, November 1, it will be at Fairfield University in Fairfield, Connecticut, while November 2, 2018, it will be at the Graduate Center of CUNY at 34th Street and 5th Avenue in Manhattan. On Thursday evening there will be a dinner and birthday party, free of charge to conference participants, hosted by Fairfield University. The speakers are predominantly people associated with the Group Theory Seminar.

Conference dinner

There will be a conference dinner and celebration on Thursday night at 6 PM at the Kelley Center Auditorium hosted by Fairfield University. This is free to conference participants.

Festschrift volume

We are planning a Festschrift volume and invite papers.

Transportation

Fairfield, Connecticut and New York City are connected by the Metro North rail line (New Haven Branch). In New York City, the local station is Grand Central Station at 42nd Street. It is a 15–20 minute walk from Grand Central to the Graduate Center. In Fairfield, the local station is Fairfield Station (not Fairfield Metro!). Fairfield University is a 15–20 minute walk from the station. Tickets may be bought in the station from kiosks or, for a hefty surcharge, on the train. Fares differ whether the trip is peak or nonpeak.

Organizing committee

Paul Baginski (Fairfield)

Ben Fine (Fairfield)

Gerhard Rosenberger (University of Hamburg)

Vladimir Shpilrain (CUNY Graduate Center)

Elementary Theory of Group Rings and Related Topics. A Conference in Honor of Gilbert Baumslag and the 70th Birthdays of Ben Fine and Tony Gaglione

November 1, 2018 – Fairfield University, November 2, 2018 – CUNY Graduate Center

Tentative schedule

Thursday, November 1 – Alumni House Fairfield University

8:00–8:30 – Coffee and Breakfast

8:30–8:45 – Opening Remarks

8:50–9:20 – Martin Kreuzer – “Gröbner basis methods in group theory”

9:30–10:10 – Walter Neumann – “Applications of Leighton’s theorem”

10:10–10:40 – Coffee

10:40–11:10 – Alexander Ushakov – “Quadratic equations in free metabelian groups”

11:20–11:50 – Dennis Spellman – “Some model theory of the Heisenberg group”

12:00–2:00 – Lunch

2:00–2:30 – Alexei Myasnikov – “On elementary theories of one-relator groups”

2:40–3:10 – Neha Hooda – “Rational subgroups and invariants of F_4 and G_2 ”

3:20–3:50 – Jon Gryak – “Solving the conjugacy decision problem via machine learning”

3:50–4:15 – Coffee

4:15–4:45 – Volker Diekert – “The elementary theory of free inverse monoids: about decidable and undecidable fragments”

4:45–5:15 – Anthony Clement – “Some properties of the Baumslag groups $G(m, n)$ ”

5:25–5:55 – Barry Mittag – “On nested infinite radicals”

6:00–Onward – Drinks, dinner and party – Alumni House Fairfield University

Friday – November 2 – CUNY Graduate Center – Science Center – Fourth Floor

10:00–10:15 – Opening remarks

10:20–10:50 – Al Thaler – “On Gilbert Baumslag and the Group Theory Seminar”

11:00–11:30 – Olga Karlampovich – “First-order properties of group rings and limit groups”

11:40–12:10 – Ilya Kapovich – “Attracting trees of ‘random’ automorphisms of free groups”

12:10–2:00 – Lunch

2:00–2:30 – Mahmood Sohrabi – “Bi-interpretability of the ring of integers $\mathbb{Z}$ with the pure groups $\mathrm{SL}(n, \mathbb{Z})$, $\mathrm{GL}(n, \mathbb{Z})$, and $\mathrm{T}(n, \mathbb{Z})$, $n > 2$ ”

2:40–3:10 – Lev Shneerson – “On conditions for polynomial growth in inverse semi-groups”

3:10–3:40 – Coffee

3:40–4:10 – Gerhard Rosenberger – “On vector-valued Hecke forms”

4:20–4:50 – Mariana Bonanome – “A sampling of remarkable groups: Thompson’s, self-similar, lamplighter and Baumslag-Solitar”

4:50–5:20 – Zoran Sunic – “Rewriting in Thompson’s Group F ”

5:30–6:00 – Ben Steinberg – TBA

6:30–Onward – Dinner at the Persian Grill.

