

# Canadian Abstract Harmonic Analysis Symposium (CAHAS) 2014 August 29–31, 2014

organized by

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## **Abstract Harmonic Analysis.**

Abstract harmonic analysis is the area of mathematics that deals with locally compact groups, their representations, and the Banach algebras associated with them. It has had a strong presence in Canada's mathematical community for several decades.

## **The Conference in Perspective.**

The *Canadian Abstract Harmonic Analysis Symposium—CAHAS*, in short—originated in 1997 with a meeting in Vancouver at the University of British Columbia on the occasion of Edmond Granirer's retirement. Ever since, it has been held on an annual basis at various locations throughout Canada. The moniker *Canadian Abstract Harmonic Analysis Symposium* probably originated with the 2005 meeting of the series, which was held at the University of Waterloo. Most of these meetings were two days conferences in an “on a shoestring” format. However, some CAHAS meetings lasted longer. In 2009, for instance, the *CAHAS* was held in a one week format with almost 80 participants, of whom 15 were plenary speakers, to celebrate the 65th birthday of Anthony To-Ming Lau—one of the organizers of this meeting at BIRS. *CAHAS* has by now become an established fixture of Canada's mathematical community.

## **The Conference and the Thematic Program on *Abstract Harmonic Analysis, Banach and Operator Algebras* at the Fields Institute.**

From January to June 2014, there was a Thematic Program held at the Fields Institute organized by the first named organizer of this conference and MATTHIAS NEUFANG of Carleton University and the Université de Lille, I, in France. The conference at BIRS was intended to be a coda to that program with the focus on mostly junior people.

## **Intentions and Outcome.**

As there had been a thematic program at the Fields Institute in the very same area earlier that year, there had—understandably—been a certain fatigue among more seasoned mathematicians in the area to attend this installment of *CAHAS*. As we had hoped, this resulted into an unusually high participation of junior mathematicians, i.e., people at the the postdoctoral and graduate student level: of the 25 participants of the meeting, four were at the postdoctoral level, and 13 were graduate students. There were 13 talks given altogether (sadly MICHAEL LAMOUREUX of Calgary had to cancel his participation at the last notice), three of which were given by postdocs and five by PhD students. To be precise:

1. MAHMOOD ALAGHMANDAN (University of Waterloo; postdoc), *Weighted discrete hypergroups and their application to locally compact groups*;

2. MAHYA GHANDEHARI (University of Waterloo; postdoc), *On projections in the group algebra of unimodular groups*;
3. JOSEPH IVERSON (University of Oregon; PhD student), *Translation invariance over an abelian subgroup*;
4. SAFOURA JAFAR-ZADEH (University of Manitoba; PhD student), *Isometric isomorphisms on the annihilator of  $C_0(G)$  in  $LUC(G)^*$* ;
5. MATTHEW MAZOWITA (University of Waterloo; postdoc), *The  $LUC$ -compactification and Beurling algebras*;
6. VARVARA SHEPELSKA (University of Manitoba; PhD student), *Weak amenability of weighted group algebras*;
7. NAZANIN TAHMASEBI (University of Alberta; PhD student), *Hypergroups and complementation problems*;
8. MATTHEW WIERSMA (University of Waterloo; PhD student),  *$L^p$ -Fourier and Fourier–Stieltjes algebras*.

### **Outlook for the Area.**

As already stated before, eight of the 13 talks presented were delivered by PhD students and postdoctoral fellows. These talks were all of high quality, with respect to both the content and to the style of the delivery. This bodes well for the future of abstract harmonic analysis in Canada. One important fact should not be overlooked: of the 25 participants of the meetings, ten were female, and so were five of the 13 speakers. When it comes to the eight speakers at the postdoctoral or PhD student level, then four of them were female. We are therefore sure that our area will be thriving in the future.