

ESF RESEARCH CONFERENCES

Rapporteur Report

Partnership:	EMS and ERCOM
Conference Title:	THIRD EUROPEAN SET THEORY CONFERENCE
Dates:	3-8 July 201
Chair:	Dr. Philip Welch, University of Bristol, UK
Rapporteur:	Dr. Morris L. Aizenman

General Comments

Any general comments you might have concerning the conference, your role, the scientific area covered by this conference, etc.

By the middle of the 19th century mathematical proofs became formalized and Georg Cantor asked puzzling questions about infinity. His work led to a formalization of what numbers are. This has led to modern mathematics being reconstructed using set theory.

In 1874 and in the years that followed Cantor published a series of papers that led to the development of transfinite arithmetic. By the turn of the century Cantor's set theory was beginning to have a major impact on other areas of mathematics. Since that time, set theory has become a major area of mathematics that continues to yield new discoveries and questions.

It is within this context that the Third Conference on Set Theory was held.

The conference brought together researchers from many parts of the world to discuss current problems in this field. New techniques have been developed in this area that are enabling attacks on problems that have hitherto been considered unsolvable. This conference presented many of the most recent results in this field and the various subject areas presented at the conference are discussed in the accompanying report by Dr. Welch. I was impressed by the number of new results that were presented both in the invited talks and in the poster papers. I was also very pleased to see the participation of so many young researchers presenting their results at this conference. I was able to interact with the participants of the conference in a substantive manner, and was able to learn a great deal from them. I consider the conference to have been a significant success and congratulate the organizer of this conference on the very high quality of the meeting.

Quality of Scientific Programme, Presentations and Discussion

Comments on the balance and scope of the scientific programme, the scientific quality of the presentations and discussions.

The scope, extent, and order of presentation of the topics was excellent, and a significant factor in its success. The conference focused on a number of major fields in set theory: Inner Model and Large Cardinals; Descriptive Set Theory, Applications of Set Theory, and Constructive Set Theory. Present at the conference were some of the world's experts in these fields. The quality of the presentations was very high, and there was significant discussion and interaction between the speakers and the audience after each presentation.

Informal Networking and Exchange; Atmosphere

Was the schedule and the atmosphere conducive to an easy exchange of information? Was there time and space for an informal discussion? Were younger researchers integrated?

The conference was held at the University of Edinburgh, United Kingdom. As I mentioned earlier, there were very strong interactions between the participants during the presentations and during the breaks. There were numerous discussions of a scientific nature going on at the breaks. This was also true with respect to the poster sessions. There was a considerable amount of interest in the poster presentations. There was adequate time for these interactions. In fact, there were three sessions reserved for viewing of the posters and discussions with those who had prepared the posters. and I was impressed by the number of young persons, both men and women, at the conference. These younger researchers were fully integrated into the conference as both speakers and participants.

Balance of Participants

Was there an appropriate balance between young and senior participants? Was a balance of national groups and researchers from different (sub)fields achieved?

The balance of participants was appropriate. There was significant participation by both younger and senior members of this community. In addition, there was strong participation of women at this conference, both in terms of giving presentations and in the audience. With respect to national groups, of the 20 speakers 5 were from the United States, 3 were from Germany, 2 each were from France, Italy, Poland, and the United Kingdom, with 1 speaker from Canada, Czechoslovakia, Hungary, and Russia. There was an appropriate division of subfields, as there were 4 areas addressed during the conference. Four of the speakers were women and a woman chaired one of the sessions. There were 23 posters presented, with a variety of countries and topics represented.

Outlook and Future Developments

Will new collaborations emerge from this conference? (How) could the conference outcomes be utilized further? Are there suitable (ESF) programmes or instruments to further the work of the conference?

I found the Forward Look part of the conference particularly impressive because of the enthusiasm with which it was approached by the participants. Each of the areas under discussions [State of the Art (emerging topics, scientific challenges), Vision for the Future, and Future Plans] evoked considerable discussion with numerous topics being suggested for each area. In fact, it became obvious that because of the success and interest in this area, the Forward Look section of conferences could be allocated more time. It is clear that there should be future conferences on these topics, and it was felt, in fact, that four days had been too short to cover everything that might have been discussed at the conference, and that in the future conferences should be extended to five days.

Organisation and Infrastructure

Were venue, catering and accommodation appropriate for this conference? Were participants satisfied with the on-site administration and support?

The venue was excellent. The meeting was hosted by the International Centre for Mathematical Sciences at the Informatics Forum of the University of Edinburgh. The room provided for the conference was extremely spacious, and had more than adequate seating both for the participants. In fact, the posters were placed at the back of the room with plenty of space for participants to view and discuss the posters. The locale had excellent wifi capabilities, yet what impressed me particularly was that the participants devoted their full attention to the speakers, and there were very few who seemed to access their computers during the presentations. This spoke, in my mind, very highly of the calibre of the speakers and the interest they presented to the listeners.

The catering was first class. Coffee breaks were sufficiently long so that interactions, essential to conferences of this type could take place. I found the on-site administration and support excellent, and they were attentive to everyone's needs.

Summary & Overall Assessment

Was the conference successful; were its aims achieved?

In a word, yes. This conference was a success and brought together set theorists from Europe, the United States, and Canada. I believe that its aims were achieved, and the enthusiasm with which Forward Looks session was received and addressed as well as the audience participation throughout the meeting attests to its success. This is a field that is the very basis of mathematics. At the conference new results were reported, unsolved problems were discussed and remain to be attacked, all of which is evidence of a very dynamic field. The conference presented the latest results in this field, and one could sense the excitement in the conference that these results have engendered.

About ESF Research Conferences

The Scheme

This conference is part of the European Science Foundation's (ESF) Research Conferences Scheme. The Scheme aims to promote scientific excellence and frontier level research throughout Europe and the rest of the world. Conferences aim to provide leading scientists and other participants, including young researchers, with a platform to present their work, to discuss the most recent developments in their fields of research and to network.

Conference Format

The core activities should be based on lectures by invited speakers, who are leaders in their respective fields, followed by extensive discussion periods. An informal exchange of ideas, both inside and outside the lecture room, should be encouraged, and the number of sessions in the daily timetable should be limited in order to allow sufficient time for interaction between the participants. Time should be reserved for a 'Forward Look Plenary Discussion' about future developments in the field.

Participants can take all their meals together to encourage further contact and networking, which can be particularly beneficial to younger researchers who may be less outspoken in the formal lecture room setting. In order to gain optimum benefit from the conference, both the speakers and the participants are asked to stay for the whole duration.

Division of Tasks

The Conference Chair is responsible for ensuring the quality of the scientific programme through the selection and invitation of speakers, and through the selection of participants.

The ESF Conferences Unit is responsible for managing all the logistical aspects of the conference organisation, including the provision of an on-site secretariat.

Further information: www.esf.org/conferences