

Mini-symposium Applied and Computational Algebraic Topology

In the framework of the

6th European Congress of Mathematics at Krakow

Scientific Report

Summary

The 6th European Congress of Mathematics, held every fourth year since 1992, took place in Krakow, Poland, in the week July 2-7, 2006; cf <http://www.6ecm.pl/> . It gathered around 1100 mathematicians from all over the world. The scientific programme included ten plenary lectures (one of them given by Prof. Edelsbrunner, member of the ACAT steering committee), thirty-three invited lectures, lectures by the prize-winners, and twenty-four mini-symposia reporting on new developments in brief, cf <http://www.6ecm.pl/en/programme/mini-symposia> . Every mini-symposium was given a two hour slot.

The mini-symposium Applied and Computational Algebraic Topology took place on Wednesday, July 4, from 2:30 pm to 4:30 pm. Four speakers - all associated to the ACAT RNP - covered diverse working areas of the ESF-RNP network Applied and Computational Algebraic Topology in talks of about 25 minutes followed by 5 minutes of discussion. Around 30 mathematicians followed the presentations; some of them asked interesting questions. Many copies of the ACAT brochures were distributed. The mini-symposium made the network and the ESF visible at the congress.

Description of the scientific content

The scientific content of the mini-symposium is described in the document `<html>` with abstracts of all four talks and slides for three of them. The purpose was to give a brief description of and some results from the following working areas of the ACAT community:

- Image Analysis and Persistent Homology
- Robot Motion Planning and Topological Complexity
- Distributed Computing and Algebraic Topology
- Concurrency and Directed Algebraic Topology

Assessment of results and impact

Due to time constraints, the presentations had to be brief. Many interesting questions after the talks showed that participants had followed them with interest and put them into their perspective. The event did not trigger new scientific results, but it certainly helped to raise the interest of many mathematicians in this new scientific field – even though the plenary talk by Edelsbrunner certainly was more important in this respect.

Programme

The programme of the minisymposium with abstracts and slides are available online at <http://acat.lix.polytechnique.fr/index.php/Main/KrakowMiniSymp> . It includes names and affiliations of the speakers.

