Support

Organization

Organizing committee

J. Alaminos (Granada, España)

J. Extremera (Granada, España)

E. Kaniuth (Paderborn, Alemania)

A. T. Lau (Edmonton, Canada)

A. Ulger (Istanbul, Turquía)

A. R. Villena (Granada, España)

Scientific committee

E. Kaniuth (Paderborn, Alemania)

A. T. Lau (Edmonton, Canada)

C. W. Leung (Hong Kong)

Z. J. Ruan (Urbana-Champaign, USA)

A. Ulger (Istanbul, Turquía)

7th International Conference on Abstract Harmonic Analysis

Universidad de Granada

May 20–24, 2013

Introducción

This conference is a forum where the participants will present the state of the art on Abstract Harmonic Analysis. It will take place in the Facultad de Ciencias of the Universidad de Granada. This is the seventh edition of an ongoing series of conferences. The previous ones took place in

Koc University, Istanbul, Turkey. July 22–28, 2002.

Koc University, Istanbul, Turkey. July 11–17, 2004.

Koc University, Istanbul, Turkey. July 16–22, 2006.

Chinese University of Hong Kong, Hong Kong. December 16–22, 2007.

National Sun-Yatsen University, Kaoshiung, Taiwan. December 17–22, 2009.

Chern Institute, Nankai University, Tianjin, China. June 19–25, 2011.

Overview and Topics

Classic Harmonic Analyis was born at the beginning of the nineteenth century to explain the diffusion of heat. From this, Harmonic Analysis has evolved to become an important part in many scientific and technological issues. It is key to understand and analyze a great amount of physical phenomena like heat diffusion or wave propagation. It's one of the main tools to process audio or video signals and, therefore, an important part in our every day life. Radio, television, telephony, all of them make use in one way or another of Harmonic Analysis. We would like to mention also that Harmonic Analysis provides the theoretical framework that sustain instruments like PET or CAT.

At the beginning of the 20th century, Abstract Harmonic Analysis start as an attempt to harness, within the spirit of classical analysis, the group theory that lies behind the physical phenomena. You can find applications to areas like robotics, image analysis or tomography. Abstract Harmonic Analysis has its roots in Classical Harmonic Analysis but also in Functional Analysis, with ideas coming from Banach algebras, measure theory and group theory. This variety of topics promote the participation of researchers coming from different areas that usually are very fruitful.

In order to ensure the scientific excellence and to promote the participation of young researchers, the limited amount of participants is chosen among the top researchers in the area by the organizing committee.

The main areas of interest are:

- Banach algebras, mainly those related to locally compact groups like measure algebras, Fourier and Fourier-Stieltjes algebras.

- Problems of algebraic, harmonic or geometric nature in this algebras

- Representation theory. Analysis and synthesis by elementary functions.

- Lie groups. Groups arising from Physics and Geometry.

- Quantum groups and applications of Functional Analysis to Harmonic Analysis. The duality theory for general groups and the understanding of some phenomena from Harmonic Analysis is based on some concepts coming from quantum theory.

- Hypergroups.

Accomodation

All participants will be lodged in Granada Center Hotel. This hotel is opposite the Faculty of Sciences where the conference will take place. The address is:

Hotel Granada Center
Avenida Fuente Nueva, s/n
18003 Granada