

ICM Operator Algebras Satellite Conference - ICMOA

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Abstract

From July 26th to 30th, 2018, Florianópolis (Brazil) will host the 6th conference of a series of meetings that have been organized under cooperation with Universidade Federal de Santa Catarina, University of Ottawa and Universität Münster. This conference is dedicated to the 60th birthday of Prof. Ruy Exel.

Introduction

This conference will be the sixth international mathematical meeting arising from a fruitful collaboration between the mathematics departments of the Universidade Federal de Santa Catarina (Brazil) and the University of Ottawa (Canada). Both departments have strong research groups in dynamical systems and operator algebras. Recent years the mathematics department of the Universität Münster (Germany) emergence in the collaborative network.

Past events:

- Fields Institute Extended Workshop on Groups and Group Actions in Operator Algebra Theory, University of Ottawa, 12-16 July, 2010.
- Brazilian Operator Algebras Symposium (BOAS 2011), Universidade Federal de Santa Catarina, Jurere, Florianópolis, SC, Brazil, January 31 - February 4, 2011.
- SFB-Workshop on Groups, Dynamical Systems and C*-Algebras, Münster, August 20-24, 2013.
- International Conference on Functional Analysis and Dynamical Systems (FADYS), Praia dos Ingleses, Florianópolis, February 24-27, 2015.
- Workshop on Dynamical Systems and Operator Algebras, May 30 to June 1, 2016, University of Ottawa.



Figure: Prof. Ruy Exel

Prof. Ruy Exel is one of the finest Brazilian mathematicians, and while his work is focused mainly in Operator Algebras and Dynamical Systems, his research encompasses Ergodic Theory, K-Theory, Harmonic analysis, C*-algebras, Mathematical Physics, Algebra and Number Theory as well as partial representations of groups. His interest in operator algebra began during his PhD at the University of California, Berkeley (1981-1985), which was followed by a post-doctorate at the University of Warwick, England (1986-1987 school year). As a professor at IMEUSP and during his time as a visiting professor at the University of New Mexico in the early 90's, he became increasingly interested in the applications of Operator Algebras to Dynamical Systems. In 1998 Exel began his career as a full professor at the Universidade Federal de Santa Catarina. In a milieu where efforts still focus on undergraduate programs, Exel found the freedom to set up a strong and active research team, which led to the consolidation of the Operator Algebras group at UFSC. Despite his retirement last year, Exel keeps active on his research supervisory roles.

Subject of the conference

Operator Algebras originated in the work of von Neumann, in his search for a mathematical framework for quantum mechanics, and of Gelfand and Naimark. They are the noncommutative versions of measure theory, topology and differential geometry and have deep ties with operator theory, ergodic theory, harmonic analysis, representation theory and quantum physics. In recent years the connections with other fields have guaranteed to Operator Algebras a central role in Mathematics, as it is seen from the work of A. Connes in noncommutative geometry and V. Jones in polynomial invariants. One of the many ramifications of these developments is the fruitful interaction with Dynamical Systems. The deep connections between Ergodic Theory and von Neumann algebras, established in the 70's by A. Connes, W. Krieger, J. Feldman, C. Moore and others, has recently found its counterpart in equally deep connections linking Topological Dynamics and C*-algebras. For example, for the class of symbolic dynamical systems there exists a correspondence with the theory of C*-algebras (through the notion of crossed products and their K-theory groups). For Markov shifts, for example, the corresponding C*-algebra is the well known Cuntz-Krieger algebra and its K0-group is the known invariant introduced by Bowen and Franks in 1977. The theory of operator algebras is undoubtedly one of the domains in Mathematics most notable for the depth of its problems, the richness of its new ideas, its connections to so many different fields, and its great potential as a unifying language and source of illumination.

Conference Venue

The workshop will take place in Canasvieiras, in the Hotel Palace Praia (www.palacepraia.com.br).



Figure: Canasvieira Beach



Figure: Palace Praia Hotel

Every participant should book his/her own room. To do it, please send an email to reservas@palacepraia.com.br or marina.castro@palacepraia.com.br, informing that you are a participant of the Satellite ICMOA 2018. The negotiated special room prices as follows:

- Single room - R\$ 203,00.
- Double room - R\$ 246,50.
- Triple room - R\$ 323,00.
- Quadruple: R\$ 395,00.

Registration

We ask everyone to register. To register please fill out the form below using your favourite text editor, save it as text (please avoid unnecessarily complicated editor formats) and e-mail it as an attachment to icm2018oasatellite@gmail.com. Alternatively you may copy and paste it directly on your mail editor and send it to us as the body of your message. In this case a "plain text" message is preferred over "rich formatting".

ICM Operator Algebras Satellite Conference - ICMOA
6th Florianópolis-Munster-Ottawa meeting
July 26-30, 2018 in Florianópolis, Santa Catarina,
Brazil

REGISTRATION

Last Name:
First Name:
Email address:
University affiliation:
Category (Student|Postdoc|Faculty|Other):
Country:
Arrival date and time:
Arrival airline and flight number:
Departure date and time:
Departure airline and flight number:
Title:
Abstract (in LaTeX or TeX):

The registration deadline is July 15, 2018. It is important to provide your date and time of arrival in the registration form. We will try to organize transfers from the airport. Please do not forget to make your hotel reservation!

Registration fees: There will be a registration fee of R\$ 250 (approximately 80 USD), payable upon arrival. Registration fees should be paid in Reals (the local currency), either in cash or Brazilian checks. We are not prepared to deal with credit cards, foreign checks or foreign currency.

Posters

Instructions for elaboration and submitting of a Poster

Title: We recommend that the title contains a maximum of 150 letters, preferably without mathematical formulas.

Abstract: We recommend that the abstract should contain a maximum of 300 words, that you do not use tables, diagrams or figures, and that you do not include references.

Dimensions: We recommend that the Poster must have dimensions:

Width: 90 cm; Height: 100 to 120 cm.

Language: The Poster should be written in the English language.

Quantities: Only 1 (one) work per main author is allowed. However, the same author can be a co-author in others.

Submitting Your poster must be submitted along with your registration. For this, just write in the subject of the email 'Registration and Poster' and follow all other registration guidelines. However, the submission deadline is June 23, 2018.

Organizers

Local Organizers:

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Nathanial Brown

Scientific

Committee:

Alcides Buss

Daniel Gonçalves

George Elliott

Joachim Cuntz

Marcelo Laca

Vaughan Jones

References

[1] ICM 2018 International Congress of Mathematicians website. Available in: <http://www.icm2018.org/portal/en/>. Access in: January 4, 2018.

[2] ICM Operator Algebras Satellite Conference website. Available in: <http://mtm.ufsc.br/icmoa/>. Access in January 4, 2018.

Acknowledgment/Sponsors

