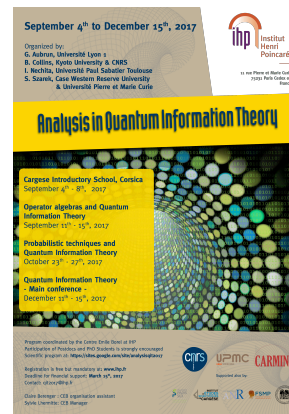


«**Analysis in Quantum Information Theory**»
Paris, September 4th – December 15th, 2017

Workshop «Operator Algebras and Quantum Information Theory»
Paris, September 11th – 15th, 2017

Amphitheater Hermite



Organizers : **Benoit Collins** (Kyoto University & CNRS), **Marius Junge** (University of Illinois at Urbana-Champaign), **Quanhua Xu** (Université de Franche-Comté)

Invited speakers :

Michael Brannan (College station)
Zeqian Chen (Wuhan Institute of Physics and Mathematics)
Runyao Duan (University of Technology, Sydney)
Edward Effros (Los Angeles)
Douglas Farenick (University of Toronto)
Li Gao (UIUC)
Aurelian Gheondea (Bilkent University / IMAR)
Rolf Gohm (Aberystwyth)
Fumio Hiai (Tohoku University)
Seung-Hyeok Kye (Seoul National University)
Nicholas LaRacunte (UIUC)
Adam Majewski (Gdansk)

Alexander Müller-Hermes (University of Copenhagen)
Magdalena Musat (University of Copenhagen)
Yoshiko Ogata (Tokyo)
Hiroyuki Osaka (Ritsumeikan)
Carlos Palazuelos (Instituto de Ciencias Matematicas, Madrid)
Vern Paulsen (Waterloo)
David Pérez-García (Universidad Complutense de Madrid)
Thomas Vidick (Caltech)
Ignacio Villanueva (Madrid)
Dan Voiculescu (UC Berkeley)
Reinhard F. Werner (Hannover)
Andreas Winter (Barcelona)

PROGRAM

Monday September 11th

09.00 am – 09.30 am	Registration and welcome coffee – IHP ground floor	
09.30 am – 10.15 am	Ignacio Villanueva	Random quantum correlations are generically non classical.
10.15 am – 10.45 am	Coffee break	IHP ground floor
10.45 am – 11.30 am	Li Gao	Operator Algebras Aspects of Quantum Teleportation and Superdense Coding.
11.45 am – 12.15 am	Aurelian Gheondea	Symmetry versus Conservation Laws in Dynamical Quantum Systems: A Unifying Approach through Propagation of Fixed Points.
12.15 pm – 02.00 pm	Lunch break – Free time	
02.00 pm – 02.45 pm	Adam Majewski	Quantum correlations.
03.00 pm – 03.45 pm	Rolf Gohm	Asymptotic Completeness and Controllability of Open Quantum Systems.
03.45 pm – 04.15 pm	Coffee break	IHP ground floor
04.15 pm – 05.00 pm	Andreas Winter	Monogamy and faithfulness of quantum entanglement.

Tuesday September 12th

09.30 am – 10.15 am	Vern Paulsen	C*-algebras and Synchronous Games.
10.15 am – 10.45 am	Coffee break	IHP ground floor
10.45 am – 11.30 am	Michael Brannan	Entangled subspaces from quantum groups and their associated quantum channels.
11.45 am – 12.15 pm	Problem session	
12.15 pm – 02.00 pm	Lunch break – Free time	
02.00 pm – 02.45 pm	Alexander Müller-Hermes	Tensoring Positive maps.
03.00 pm – 03.45 pm	Reinhard F. Werner	Alice and Bob and von Neumann.
03.45 pm – 04.15 pm	Coffee break	IHP ground floor
04.15 pm – 05.00 pm	Runyao Duan	Asymptotic entanglement manipulation under PPT operations: new SDP bounds and irreversibility.

06.00 pm – 09.00 pm **Cocktail Dinner** **Pierre and Marie Curie University**
Zamansky Tower – 24th floor
4 place Jussieu – 75005 Paris
Subway line 7 – Station : Jussieu
Note : bring your ID card or Passport

Wednesday September 13th

09.30 am – 10.15 am	Edward Effros	Some remarkable gems and persistent difficulties in quantized functional analysis.
10.15 am – 10.45 am	Coffee break	IHP ground floor
10.45 am – 11.30 am	Yoshiko Ogata	A class of asymmetric gapped Hamiltonians on quantum spin chains and its characterization.
11.45 am – 12.15 pm	Douglas Farenick	Isometric and Contractive of Channels Relative to the Bures Metric.

Free time to visit Paris

Thursday September 14th

09.30 am – 10.15 am	Fumio Hiai	Different quantum divergences in general von Neumann algebras.
10.15 am – 10.45 am	Coffee break	IHP ground floor
10.45 am – 11.30 am	David Pérez-García	Matrix Product Operators and the algebras that they generate.
11.30 am – 02.00 pm	Lunch break – Free time	
02.00 pm – 02.45 pm	Hiroyuki Osaka	Operator means and application to generalized entropies.
03.00 pm – 03.45 pm	Magdalena Musat	Quantum correlations, tensor norms, and factorizable quantum channels.
03.45 pm – 04.15 pm	Coffee break	IHP ground floor
04.15 pm – 05.00 pm	Nicholas LaRacuente	Non-commutative L_p Spaces and Asymmetry Measures.
06.00 pm – 07.00 pm	Conference Public lecture by Thomas VIDICK (Caltech): Ordinateur quantique - vraiment quantique?	

Friday September 15th

09.30 am – 10.15 am	Dan Voiculescu	The Macaeu operator norm, entropy and supramenability.
10.15 am – 10.45 am	Coffee break	IHP ground floor
10.45 am – 11.30 am	Zeqian Chen	The geometric phase associated with quantal observable space.
11.30 am – 02.00 pm	Lunch break	
02.00 pm – 02.45 pm	Seung-Hyeok Kye	Positivity of multi-linear maps and applications to quantum information theory.
03.00 pm – 03.45 pm	Carlos Palazuelos	Classical vs Quantum communication in XOR games.
03.45 pm – 04.15 pm	Coffee break	IHP ground floor

Abstracts are available on the website of the trimester «Analysis in Quantum Information Theory»
<https://sites.google.com/site/analysisqit2017/main-events/workshop1>



Institut Henri Poincaré – Centre Émile Borel 11 rue Pierre et Marie Curie, 75005 Paris – Telephone : 01 44 27 67 78

