



Institute of Physics, Nicolaus Copernicus University
Reports on Mathematical Physics, The Editors
Open Systems & Information Dynamics, The Editors

49th Symposium on Mathematical Physics

Toruń, Poland, June 17–18, 2017

Talks and meetings take place in the lecture hall 20 of the Institute of Physics,
Nicolaus Copernicus University, Grudziądzka 5/7

Saturday, June 17, 2017

8.30-9.15 *Registration*

9.15-9.30 *Opening address*

Morning session

Chairman: J. Jurkowski

9.30-10.00 J. Naudts (Antwerpen): Recent progress in reducible QED

10.00-10.30 D. Alsina (Barcelona): An operational approach to Bell inequalities: application to qutrits

10.30-11.00 P. Horodecki (Gdańsk): Quantum state independent contextuality can improve 1-way communication

11.00-11.30 A. Mandarino (Warsaw): Long time behaviour of nonlocal quantum gates

Coffee break

Chairman: A. Sawicki

12.00-12.30 M. Kamoń (Gdańsk): Games and monogamy in the relativistically causal correlations

12.30-13.00 G. Sewell (London): A new formulation of space-time operations in quantum theory

13.00-13.30 S. Weiss (Bruxelles): On lattices of ground spaces

ROMP & OSID Editorial Board Meetings

Lunch & Posters

Afternoon session

Chairman: A. Jamiolkowski

15.00-15.30 N. Watanabe (Tokyo): On transmitted complexity for quantum dynamical systems

15.30-16.00 K. Życzkowski (Kraków): Quantum entanglement, quantum orthogonal arrays and quantum Latin squares

16.00-16.30 T. Matsuoka (Suwa): Mutual entropy on quantum encoding

Coffee break

Chairman: P. Horodecki

- 17.00-17.30 M. Białończyk (Kraków): Spectral properties of quantum operations - algebraic methods
- 17.30-18.00 A. Szymusiak (Kraków): Entropy, special geometric configurations in the quantum state space and combinatorial designs
- 18.00-18.30 K. Siudzińska (Toruń): Quantum semi-Markov evolution for the generalized Pauli channels
- 18.30-19.00 T. Kamizawa (Toruń): The existence of decoherence-free subspaces and an effective criterion
- 19.00 *Reception*

Sunday, June 18, 2017

Morning session

Chairman: K. Życzkowski

- 8.30-9.00 P. Mironowicz (Gdańsk): Quaestiones disputatae de observatione
- 9.00-9.30 S. Akashi (Tokyo): Topological classification of the set of all expansive dynamical systems on totally disconnected compact metric spaces
- 9.30-10.00 M. Wieśniak (Gdańsk): Subadditivity of violation of geometrical Bell inequalities for qudits
- 10.00-10.30 A. Sawicki (Warsaw): Asymptotic properties of entanglement polytopes for large number of qubits and RMT
- 10.30-11.00 A. Dąbrowska (Bydgoszcz): Quantum filtering for environment in single photon state

Coffee break

Chairman: J. Naudts

- 11.30-12.00 A. Grudka (Poznań): Uncertainty relations based on conditional majorization
- 12.00-12.30 M. Mozrzyk (Wrocław): Structure of irreducibly covariant quantum channels for finite groups
- 12.30-13.00 R. Augusiak (Warsaw): Energy as a detector of nonlocality in many-body systems
- 13.00-13.30 G. Baio (Palermo): Bounds on bipartite entanglement from marginal measures
- 13.30-14.00 Ł. Paweł (Gliwice): Asymptotic properties of quantum states and channels

Lunch