

1. LIST OF PUBLICATIONS OF PROF. DR. FARRUKH MUKHAMEDOV

1.1. Books.

- (1) MUKHAMEDOV F., GANIKHODJAEV N., *Quantum Quadratic Operators and Processes*, Lect. Notes Math. Vol. **2133**, Springer, 2015.
- (2) MUKHAMEDOV, F. GANIKHODJAEV N., SABUROV M. (Eds.) *Recent Achievements in Dynamical Systems, Proc. Dep. Comput. & Theor. Sci., Faculty of Science, IIUM*, Vol. 2, IIUM Press, 2011, 260 p.
- (3) GANIKHODJAEV N., MUKHAMEDOV, F., PAH C.H.(Eds) *Investigation in Pure mathematics, finance mathematics and optics. Proc. Dep. Comput. & Theor. Sci., Faculty of Science, IIUM*, Vol.1, IIUM Press, 2011, 245 p.
- (4) GANIKHODJAEV N., MUKHAMEDOV, F., PAH C.H. *Lattice Models with Competing Interactions*, IIUM Press, 2011.
- (5) GANIKHODJAEV N.N., MUKHAMEDOV F.M. *The Theory of Real functions*, Textbook, National Univ. Uzbekistan Press, Tashkent, 2003, 179 p (Uzbek).

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| | Published Refereed journals | # 225 |
| 1.2. List of Publications. | Papers in Conference Proceedings (Scopus Indexed) | #31 |
| | Chapter in Books & Proceedings | #35 |

1.3. Submitted papers.

- (1) Erkursun-Ozcan M., Mukhamedov F., Uniform P-ergodicities and perturbations of Markov semigroups on abstract states spaces, (submitted).
- (2) Erkursun-Ozcan M., Mukhamedov F., An Extension of the zero-two law on L_p -spaces, (submitted).
- (3) Mukhamedov F., Khakimov O., Qaralleh I., A few remarks on topological aspects of evolution algebras, (submitted).
- (4) Ganiev I., Mukhamedov F., The zero-two law for positive contractions in the Orlicz-Kantorovich spaces, (submitted).
- (5) Mukhamedov F., El Gheteb S., Phase Transitions for quantum Ising model with generalized competing XY -interactions on a Cayley tree, (submitted).
- (6) Mukhamedov F., Souissi A., Entropy of quantum Markov states on Cayley trees, (submitted).
- (8) Mukhamedov F., Souissi A., Hamdi T., Open Quantum Random Walks and Quantum Markov chains on Trees I: Phase transitions, (submitted).
- (9) Mukhamedov F., Jamilov U., Historical behavior and non-ergodicity of Lotka-Volterra systems, (submitted).
- (10) Mukhamedov F., Jamilov U., A class of Lotka-Volterra operators with Historical Behavior, (submitted).

1.4. Refereed journals.

- **Accepted papers**

- MUKHAMEDOV F., AL-RAWASHDEH A., Generalized Dobrushin Ergodicity Coefficient and Ergodicities of Non-homogeneous Markov Chains, *Banach J. Math. Anal.*
- MUKHAMEDOV F., RAHMATULLAEV M., RASULOVA M.A., Extremality of translation-invariant Gibbs measures for λ -Model on the binary Cayley Tree, *Theor. Math. Phys.*
- MUKHAMEDOV F., KHAKIMOV O., Chaotic behavior of the p -adic Potts-Bethe mapping II, *Ergod. Theor. & Dyn. Sys.*

2022

- (227) MUKHAMEDOV F., KHAKIMOV O., SOUISSI A., A Few Remarks on Supercyclicity of Non-Archimedean Linear Operators on $c_0(\mathbb{N})$, *P-adic Numb Ultra. Anal. Appl.* **14**(2022), no. 1.
- (226) MUKHAMEDOV F., A few remarks on asymptotic stabilities of Markov Operators on L^1 -spaces, *Lobachevskii J. Math.* **43** (2022), no. 1, 113-123.
- (225) MUKHAMEDOV F., Extremality of disordered phase of λ -Model on Cayley Trees, *Algorithms* **15**(2022), no. 1, article 18, doi.org/10.3390/a15010018

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- (224) MUKHAMEDOV F., AL-RAWASHDEH A., Approximations of Non-homogeneous Markov Chains on Abstract States Spaces, *Bulletin Math. Sci.* **11**(2021), no. 3, 2150002.
- (223) MUKHAMEDOV F., KHAKIMOV O., SOUISSI A., Supercyclic and Hypercyclic Generalized Weighted Backward Shifts over a Non-Archimedean $c_0(\mathbb{N})$ space, *Mathematics* **9**(2022), no. 22, 2986. doi.org/10.3390/math9222986
- (222) MUKHAMEDOV F., KHAKIMOV O., Translation-invariant generalized P -adic Gibbs measures for the Ising model on Cayley trees, *Math. Methods in Appl. Sci.* **44**(2021), no. 16, 12302-12316.
- (221) MUKHAMEDOV F., SOUISSI A., Refinement of quantum Markov states on trees, *J. Stat. Mech.* (2021) 083103
- (220) ERKURSUN-OZCAN M., MUKHAMEDOV F., Spectral conditions for uniform P -ergodicities of Markov operators on abstract states spaces, *Glasgow Math. J.* **63**(2021), 682-696.
- (219) QARALLEH I., MUKHAMEDOV F., Volterra evolution algebras and their graphs, *Linear & Multilinear Algebra*, **69**(2021), no. 12, 2228-2244.
- (218) MUKHAMEDOV F., Weighted Laws of Large Numbers and Weighted One-Sided ergodic Hilbert Transforms, *Adv. Operator Theor.* **6**(2021), no. 3, Article 57.
- (217) MUKHAMEDOV F., SOUISSI A., HAMDY T., Quantum Markov Chains on the Comb Graphs: Ising Model, *Proc. Steklov Inst. Math.* **313**(2021), 178–192.
- (216) MUKHAMEDOV F., AKIN H., Characterization of bistochastic Kadison-Schwarz operators, *Proc. Steklov Inst. Math.* **313**(2021), 165–177.
- (215) MUKHAMEDOV F., QARALLEH I., S -evolution algebras and their enveloping algebras, *Mathematics* **9**(2021), 1195.
- (214) MUKHAMEDOV F., KHAKIMOV O., EMBONG A.F., Projective Surjectivity of Quadratic Stochastic Operators on L^1 and its application, *Chaos, Solitons & Fractals* **148**(2021), 111034.
- (213) MUKHAMEDOV F., EMBONG A.F. Infinite dimensional orthogonality preserving nonlinear Markov operators, *Linear & Multilinear Algebra* **69**(2021), no. 3, 526-550.
- (212) MUKHAMEDOV F., SOUISSI A., Diagonalizability of quantum Markov States on trees, *J. Stat. Phys.* **182**(2021), Article 9.

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- (211) MUKHAMEDOV F., RAFEIRO H., Weighted Strong Laws of Large Numbers on vector-valued variable exponent Lebesgue spaces, *Rend. Lincei Mat. Appl.* **31**(2020), No. 4, 791-814.
- (210) MUKHAMEDOV F., OHMURA K., WATANABE N., Renyi entropy on C^* -algebras, *J. Stochastic Anal.* **1**(2020), no. 4, Article 12.
- (209) MUKHAMEDOV F., SOUISSI A., Types of factors generated by Quantum Markov Chains of Ising model with competing interactions on the Cayley tree, *Infin. Dimen. Anal. Quantum Probab. Related Topics*, **23**(2020), 2050019.
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- (207) MUKHAMEDOV F., KHAKIMOV O., EMBONG A.F., On omega limiting sets of infinite dimensional Volterra operators, *Nonlinearity* **33** (2020), no. 11, 5875-5904.
- (206) MUKHAMEDOV F., BARHOUMI A., SOUISSI A., EL GHETEB S., A quantum Markov chain approach to phase transitions for quantum Ising model with competing XY-interactions on a Cayley tree, *J. Math. Phys.* **61**(2020), no. 9, 093505.
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- (200) MUKHAMEDOV F., RAHMATULLAEV M., RASULOVA M.A., Weakly periodic ground states for the λ -model, *Ukr. Math. Zhur.* **72**(2020), no. 5, 771-784.
- (199) OSTILLI M., MUKHAMEDOV F., 1D Three-state mean-field Potts model with first- and second-order phase transitions, *Physica A* **555** (2020), 124415.
- (198) MUKHAMEDOV F., PAH C.H., JAMIL H., RAHMATULLAEV M., On ground states and phase Transition for λ -model with the competing Potts interactions on Cayley trees, *Physica A* **549** (2020), 124184.
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- (196) MUKHAMEDOV F., ERKURSUN N., Perturbation bounds of Markov semigroups on abstract states spaces, *Mediterranean Jour. Math.* **17**(2020), 44.
- (195) MUKHAMEDOV F., EL GHETEB S. Factors generated by XY -model with competing Ising interactions on the Cayley tree, *Annales Henri Poincare* **21**(2020), 241–253.
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- (194) CHRUSCINSKI D., MUKHAMEDOV F. Dissipative generators, divisible dynamical maps and Kadison-Schwarz inequality, *Phys. Rev. A* **100**(2019), 052120.
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- (150) MUKHAMEDOV F., BARHOUMI A., SOUISSI A., Phase transitions for Quantum Markov Chains associated with Ising type models on a Cayley tree, *Jour. Stat. Phys.* **163** (2016), 544–567.
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