

## CURRICULUM VITAE – TIMUR V. TLYACHEV

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- Current Position** Research scientist, Center for Computational and Data-Intensive Science and Engineering (CDISE), Skolkovo Institute of Science and Technology
- Education** Candidate of Sciences (Theoretical Physics), Lomonosov Moscow State University (2011-2014).  
Thesis title: "The method of canonical transformations in the theory of squeezed states" (defence date 18/12/2014), thesis supervisor: Prof. A.M. Chebotarev.  
  
Specialist degree (Physics), Chair of Quantum Statistics and Field Theory, Physics Department, Lomonosov Moscow State University (2005-2011).  
M.Sc. thesis title: "Squeezed States and Their Applications to Quantum Evolution", thesis supervisor: Prof. A.M. Chebotarev.
- Fellowships** Riemann Fellowship (Nov 2015 – Feb 2016), Riemann Center for Geometry and Physics, Leibniz Universität Hannover, Quantum Information group
- Grants** Participation in the project of the Russian Foundation for Basic Research (grant no. 14 – 02 – 00458): "Multi-mode entangled states of light in non-linear optical structures: generation and applications".  
Participation in the project of the Russian Foundation for Basic Research (grant no. 11 – 02 – 00610a): "Generation of multimode light fields in coupled parametric interactions; quantum properties of the fields and their application".
- Fields of Research Interest** Quantum computations, machine learning, quantum open systems, quantum information
- Industry experience** ex-Head of Machine Learning Department at Conundrum (<http://conundrum.ai>), optimization solutions for big data).
- Conferences and talks** Seminar of the Department of Mathematical Physics, Steklov Mathematical Institute, November 20, 2014, Moscow, Steklov Mathematical Institute // T.V. Tlyachev "The method of canonical transformations in the theory of squeezed states"  
  
XII International Workshop on Quantum Optics (IWQO-2015)// P. Gostev, T. Tlyachev, A. Chirkin "Six-Mode Entangled States of Continuous Variables"  
  
Quantum physics and quantum information, Moscow, MIPT, 11 November 2014 // T.V. Tlyachev "On two methods of decomposing exponential operators and their applications"  
  
21th Central European Workshop on Quantum Optics (CEWQO-2014), 23-27 June 2014, Brussels, Belgium// T. Tlyachev "Entropy analysis of four mode entangled states generated in coupled nonlinear optical processes"  
  
21th Central European Workshop on Quantum Optics (CEWQO-2014), 23-27 June 2013, Brussels, Belgium// A. Chebotarev, A. Teretenkov, T. Tlyachev "A

note on the Takagi factorization of symmetric matrices and diagonalization of multimode squeezings"

34th International Conference on Quantum Probability and Related Topics, 16-20 September, Moscow, Russia// A. S. Chebotarev, T.V. Tlyachev, A.E. Teretenkov, V.Belokurov "On the normal form of multimode squeezing"

20th Central European Workshop on Quantum Optics (CEWQO-2013), 16-20 June 2013, Stocholm, Sweden// T.V. Tlyachev, "Multipartite coupled parametric processes and uncertainty relations"

ICONO/LAT, 18-22 June 2013, Moscow, Russia// A.S. Chirkin, A.M. Chebotarev, T.V. Tlyachev, "Complete quantum theory of nondegenerate optical parametric amplification at low frequency pumping"

8th D. N. Klyshko Workshop, 20-23 May 2013, Moscow, Russia// T.V. Tlyachev, A.M. Chebotarev and A.S. Chirkin "A new approach to quantum theory of multimode coupled parametric processes"

The 19th Central European Workshop on Quantum Optics (CEWQO-2012), 2 - 6 July 2012 , Sinaia, Romania// T.V. Tlyachev, A.S. Chirkin, "General approach to the quantum theory of multipartite coupled parametric processes"

"The Second International Conference on Mathematical Physics and Its Applications", Samara, Russia, August 29 - September 4, 2010 //A.M. Chebotarev, T.V. Tlyachev, A.A. Radionov "Squeezed States and Their Applications to Quantum Evolution"

## Papers

A.M. Chebotarev and T.V. Tlyachev *Normal forms, inner products and Maslov indices of general multimode squeezings*, Mathematical Notes, **95** (2014), 721–737 arXiv:1405.2473

T.V. Tlyachev, A.M. Chebotarev and A.S. Chirkin *Canonical transformations and multipartite coupled parametric processes*, Physica Scripta, **T160**(2014)

T.V. Tlyachev, A.M. Chebotarev and A.S. Chirkin *A new approach to quantum theory of multimode coupled parametric processes*, Physica Scripta, **T153**(2013)

A.M. Chebotarev, T.V. Tlyachev, A.A. Radionov *Generalized Squeezed States and Multimode Factorization Formula*, Mathematical Notes, **92**(2012), 700–713

A.M. Chebotarev, T.V. Tlyachev, A.A. Radionov *Squeezed States and Their Applications to Quantum Evolution*, Mathematical Notes, **89**(2011), 577–595