

Curriculum Vitae

Vyacheslav Yukalov

Active Languages: English, French, Russian

Higher Education

Gold Medal of Russian Education Ministry (1964)
Moscow French College, Moscow, Russia (Sept. 1953 – June 1964)

M. Sc. in Theoretical Physics (1970)
Moscow State University, Moscow, Russia (Sept. 1964 – Feb. 1970)

Ph. D. in Theoretical and Mathematical Physics (1974)
Moscow State University, Moscow, Russia (Feb. 1970 – March 1973)

Honorary Degrees

Dr. Hab. in Theoretical Physics (1999)
University of Poznan, Poznan, Poland

Dr. Sci. in Physics and Mathematics (2001)
Higher Attestation Committee, Moscow, Russia

Employment History

Graduate Assistant (Sept. 1970–March 1973): Moscow State University, Department of Theoretical Physics, Moscow, Russia.

Assistant Professor (Sept. 1973–March 1976), **Senior Lecturer** (March 1976–June 1979), **Associate Professor** (June 1979–Nov. 1984): Moscow Engineering Physics Institute, Department of Theoretical Physics, Moscow, Russia.

Senior Scientist (Nov. 1984–Jan. 1991), **Department Head** (Jan. 1991–Nov. 1994), **Leading Scientist** (Nov. 1994–present): Joint Institute for Nuclear Research, Bogolubov Laboratory of Theoretical Physics, Dubna, Russia.

Visiting Positions

Visiting Researcher, *University of Oxford*, Department of Theoretical Physics, Oxford, UK (Aug. 1980 – July 1981).

Visiting Researcher, *Institute of Solid State Physics*, Department of Theoretical Physics, Sofia, Bulgaria (May 1987).

Visiting Researcher, *Dresden University of Technology*, Department of Theoretical Physics, Dresden, Germany (Sept. 1988).

Visiting Researcher, *University of Poznan*, Institute of Physics, Poznan, Poland (Sept. 1989, Aug. 1990, Oct. 1991, Dec. 1998).

Visiting Researcher, *University of Ljubljana*, Jozef Stefan Institute, Ljubljana, Slovenia (Oct. 1990).

Visiting Researcher, *University of Mainz*, Department of Physics, Mainz, Germany (May 1991).

Visiting Professor, *Queen's University*, Department of Mathematics and Statistics, Kingston, Canada (Jan. 1990 – May 1990, Sept. 1992 – May 1996).

Visiting Professor, *University of Brasilia*, International Centre of Condensed Matter Physics, Brasilia, Brazil (May 1996 – Nov. 1997).

Visiting Professor, *Western University*, Interdisciplinary Centre for Chemical Physics, London, Canada (Jan. 1998 – July 1998).

Visiting Professor, *University of São Paulo*, National Institute of Optics and Photonics, São Carlos, Brazil (Nov. 1996, Apr. 1999 – Oct. 1999, Nov. 2001 – May 2002, Nov. 2009 – Dec. 2009, June 2010 – July 2010, Apr. 2011, Aug. 2014, Oct. 2016 – Nov. 2016).

Visiting Professor, *Iowa State University*, International Institute of Theoretical and Applied Physics, Ames, USA (Oct. 2000 – Dec. 2000).

Visiting Professor, *University of Konstanz*, Department of Physics, Konstanz, Germany (Sept. 2002 – Oct. 2002, June 2003 – July 2003).

Visiting Professor, *University of Augsburg*, Department of Physics, Augsburg, Germany (May 2003 – June 2003).

Visiting Professor, *Free University of Berlin*, Institute for Theoretical Physics, Berlin, Germany (Sept. 2003 – Dec. 2003).

Mercator Professor, *Free University of Berlin*, Institute for Theoretical Physics, Berlin, Germany (Aug. 2004 – Aug. 2005).

Visiting Professor, *University of Trento*, National Institute for Physics of Matter, Trento, Italy (July 2004).

Visiting Professor, *University of Essen*, Department of Physics, Essen, Germany (Oct. 2005 – Dec. 2005, Apr. 2006 – June 2006).

Visiting Professor, *University of Duisburg*, Department of Physics, Duisburg, Germany (Apr. 2007 – June 2007).

Visiting Professor, *Peking University*, International Center for Quantum Materials, Beijing, China (Feb. 2011).

Visiting Professor, *Swiss Federal Institute of Technology in Zürich*, Department of Technology and Economics, Zürich, Switzerland (Sept. 2006 – Dec. 2006, Sept. 2008 – Aug. 2009, Sept. 2010 – Dec. 2010, March 2012 – Apr. 2012, Oct. 2012 – Jan. 2013, May 2013 – Aug. 2013, May 2014 – July 2014, Oct. 2018).

Distinguished Professor, *Swiss Federal Institute of Technology in Zürich*, Department of Technology and Economics, Zürich, Switzerland (Oct. 2015 – March 2016).

Lecturing Experience

Moscow State University, Moscow, Russia: *Classical Mechanics* (1970–1973), *Condensed Matter Theory* (1990–1992).

Moscow Engineering Physics Institute, Moscow, Russia: *Classical Mechanics*, *Electromagnetic Theory*, *Quantum Mechanics* (1973–1980), *Field Theory*, *Statistical Mechanics*, *Kinetic Theory* (1981–1984),

University of Oxford, Oxford, UK: *Solid State Theory* (1980–1981).

Joint Institute for Nuclear Research, Dubna, Russia: *Quantum Statistics*, *Phase Transitions*, *Renormalization Group* (1984–1992).

Queen's University, Kingston, Canada: *Mathematical Physics* (1990), *Differential Equations*, *Applied Mathematics* (1992–1996).

University of Brasilia, Brasilia, Brazil: *Solid State Physics* (1996–1997).

Western University, London, Canada: *Nonlinear Coherent Phenomena* (1998).

University of São Paulo, São Carlos, Brazil: *Coherent Matter Waves* (1999), *Bose-Einstein Condensation* (2001–2002), *Theory of Bose Systems* (2009–2010), *Equilibration in Atomic Systems* (2011), *Nonequilibrium Bose-Einstein Condensates* (2014), *Turbulence of Trapped Atoms* (2016).

Iowa State University, Ames, USA: *Nonlinear Spin Dynamics* (2000).

University of Konstanz, Konstanz, Germany: *Bose-Einstein Condensates* (2002–2003).

Free University of Berlin, Berlin, Germany: *Many-Body Theory*, *Bose-Einstein Condensation* (2003–2005).

University of Essen, Essen, Germany: *Theory of Bose-Condensed Systems* (2005–2006).

University of Duisburg, Duisburg, Germany: *Random Bose Systems* (2007).

Perm State University, Perm, Russia: *Dynamics of Magnetic Nanoclusters* (2011).

Swiss Federal Institute of Technology in Zürich, Zürich, Switzerland: *Optimization of Complex Systems* (2008–2013), *Quantum Decision Theory* (2010–2016).

Editorial Boards

Laser Physics, Institute of Physics, Bristol, UK (1990–present).

Laser Physics Letters, Institute of Physics, Bristol, UK (2003–present).

Physics of Particles and Nuclei, JINR, Dubna, Russia (2013–present).
Physics, MDPI, Basel, Switzerland (2018–present).
Asian Journal of Economics and Banking, Emerald, Bingley, UK (2020–present).
Frontiers in Quantum Science and Technology, Frontiers, Lausanne, Switzerland (2022–present).

Program Committees

International Symposium on Selected Topics in Statistical Mechanics, Dubna (1987).
School on Mathematical Problems in Statistical Mechanics and Quantum Field Theory, Samara (1987).
International Seminar on Problems in Quantum Optics, Dubna (1987, 1988).
International Workshop on Laser Physics, Dubna (1992, 1993), New York (1994), Moscow (1995, 1996), Prague (1997), Berlin (1998), Budapest (1999), Bordeaux (2000), Moscow (2001), Bratislava (2002), Hamburg (2003), Trieste (2004), Kyoto (2005), Lausanne (2006), Léon (2007), Trondheim (2008), Barcelona (2009), Iguazu (2010), Sarajevo (2011), Calgary (2012), Prague (2013), Sofia (2014), Shanghai (2015), Yerevan (2016), Kazan (2017), Nottingham (2018), Gyeongju (2019), Lyon (2021), Zoom (2022), Zoom (2023), São Carlos (2024).
International School on Symmetry and Structural Properties of Condensed Matter, Poznan (1992, 1994, 1996), Myczkowce (2005, 2007, 2009), Rzeszow (2016).
International Workshop on Computer Simulations in Nonlinear Optics, Nizhny Novgorod (1993).
International Seminar on Quantum Optics, Raubichi (1998).
International Workshop on Quantum Optics, Kazan (1999), Saint Petersburg (2003), Samara (2007), Volgograd (2011), Troitsk (2015), Vladimir (2019).
International Symposium on Photon Echo and Coherent Spectroscopy, Veliky Novgorod (2001, 2005).
International Workshop on Quantum Physics and Communication, Dubna (2005, 2007).
International Conference on Current Developments in Atomic, Molecular, and Optical Physics, Delhi (2006, 2011).
International Conference on Quantum Electrodynamics and Statistical Physics, Kharkov (2006).
International Symposium on Quantum Informatics for Cognitive, Social, and Semantic Processes, Washington (2010), Aberdeen (2011), Paris (2012), Leicester (2013).
International Conference on Quantum in Complex Matter, Ischia (2013), Erice (2014).
International Workshop on Quantum Optics, Svetlogorsk (2023).

Scientific Awards

Research Fellowship of British Council, Oxford, UK (1980–1981).
Senior Fellowship of Western University, London, Canada (1998).
First Prize of Joint Institute for Nuclear Research, Dubna, Russia (2000).
Science Prize of Academic Publishing Company, Moscow, Russia (2002).
Senior Fellowship of German Academic Exchange Program, Berlin, Germany (2003).
Mercator Professorship of German Research Foundation, Berlin, Germany (2004–2005).

Distinguished Professorship of Swiss Federal Institute of Technology in Zürich, Zürich, Switzerland (2015–2016).

Best Paper Annual Prize of Joint Institute for Nuclear Research, Dubna, Russia (2020).

Title of Honored Scientist of Joint Institute for Nuclear Research, Dubna, Russia (2021).

Research Grants

British Council, UK (1980–1981).

Natural Sciences and Engineering Research Council, Canada (1990, 1992–1996).

Queen’s University Research Council, Canada (1992–1994).

Ferguson Fund, Canada (1995–1996).

National Science and Technology Development Council, Brazil (1996–1997).

São Paulo State Research Foundation, Brazil (1997, 1999, 2001–2002, 2009–2010, 2011, 2014, 2016).

Western University, Canada (1998).

Bogolubov–Infeld International Program, Poland (1999–2007).

Russian Foundation for Basic Research, Russia (2001, 2008–2016).

Heisenberg–Landau International Program, Germany (2002–2003).

German Academic Exchange Service, Germany (2003).

German Research Foundation, Germany (2004–2007).

Scientific Program of Russian Universities, Russia (2005).

Swiss Federal Institute of Technology in Zürich, Switzerland (2006–2016, 2018).

Swiss National Science Foundation, Switzerland (2011–2019).

Some Memberships

American Physical Society, American Mathematical Society, European Physical Society, International Association of Mathematical Physics, Oxford University Society.

Published Books

1. A.S. Shumovsky and V.I. Yukalov, *Phase States and Transitions* (JINR, Dubna, 1985).
2. V.I. Yukalov and A.S. Shumovsky, *Lectures on Phase Transitions* (World Scientific, Singapore, 1990).
3. V.I. Yukalov, *Statistical Green’s Functions* (Queen’s University, Kingston, 1998).
4. A.J. Coleman and V.I. Yukalov, *Reduced Density Matrices* (Springer, Berlin, 2000).

Edited Books

1. *Problems in Quantum Optics*, edited by V.I. Yukalov (JINR, Dubna, 1988).
2. *Interaction of Electromagnetic Field with Condensed Matter*, edited by N.N. Bogolubov, A.S. Shumovsky, and V.I. Yukalov (World Scientific, Singapore, 1990).

3. *Transient Coherent Phenomena*, edited by S.R. Hartmann, J.T. Manassah, A.M. Prokhorov, and V.I. Yukalov, special issue of *Laser Phys.* **5**, #3 (1995).
4. *Bose-Einstein Condensation of Trapped Atoms*, edited by V.S. Bagnato, W. Ketterle, L.P. Pitaevskii, S. Stringari, and V.I. Yukalov, special issue of *Laser Phys.* **12**, #1 (2002).
5. *Physics of Cold Trapped Atoms*, edited by A. Aspect, L.P. Pitaevskii, and V.I. Yukalov, special issue of *Laser Phys.* **19**, #4 (2009).
6. *Symmetry and Mesoscopic Physics*, edited by R.G. Nazmitdinov and V.I. Yukalov (MDPI, Basel, 2022).
7. *Symmetry in Many-Body Physics*, edited by V.S. Bagnato, R.G. Nazmitdinov, and V.I. Yukalov (MDPI, Basel, 2023).
8. *Symmetry and Approximation Methods*, edited by I.V. Andrianov, S. Gluzman, and V.I. Yukalov (MDPI, Basel, 2023).
9. *Cooperative Effects in Finite Systems*, edited by V.S. Bagnato, R.G. Nazmitdinov, and V.I. Yukalov (MDPI, Basel, 2024).