



# CURRICULUM VITAE

## Personal information

Family name:	Fedorchenko
Given name:	Alexey (Ukrainian transcription: Oleksii)
Date of birth:	26 May 1981
Place of birth:	Kharkiv, Ukraine
Prof. address:	ILTPE - B.Verkin Institute for Low Temperature Physics & Engineering 47 Nauky Ave., 61103 Kharkiv, Ukraine
Network links:	<a href="http://fedorchenko.scienceontheweb.net">http://fedorchenko.scienceontheweb.net</a> (own micro-site) <a href="http://www.linkedin.com/in/alexey-fedorchenko">www.linkedin.com/in/alexey-fedorchenko</a>
Hirsch factor ( <i>h</i> -index)	<b>10</b>

## Scientific degree

Mar 2013	<b>Dr.rer.nat.</b> - Ph.D. degree in physics and mathematics Ph.D. thesis: "Magnetic and magnetoelastic properties of anisotropic metallic systems based on <i>d</i> -elements."	ILTPE, Kharkiv, Ukraine
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## Education

Nov 2008 – Oct 2012	Ph.D. student (certificate summa cum laude)	ILTPE - B.Verkin Institute for Low Temperature Physics & Engineering, Kharkiv, Ukraine
Sep 2002 – Jul 2003	<b>Magister</b> , Physics (diploma summa cum laude)	V.N. Karazin Kharkiv National University, Kharkiv, Ukraine
Sep 1998 – Jul 2002	<b>Bachelor</b> , Physics (diploma summa cum laude)	V.N. Karazin Kharkiv National University, Kharkiv, Ukraine

## Academic career

Nov 2017 – present	Senior Research Scientist	ILTPE - B.Verkin Institute for Low Temperature Physics & Engineering, Kharkiv, Ukraine
Nov 2015 – Oct 2017	Invited Research Scientist	UPJS - P.J. Šafárik University in Košice, Košice, Slovak Republic
Apr 2015 – Aug 2015	Invited R&D Specialist	UDE - Universität Duisburg-Essen, Nordrhein-Westfalen, Essen, Germany
Jan 2014 – Oct 2015	Research Scientist	ILTPE, Kharkiv, Ukraine
Jan 2004 – Dec 2013	Junior Research Scientist	ILTPE, Kharkiv, Ukraine
Sep 2003 – Dec 2003	Research Engineer	ILTPE, Kharkiv, Ukraine

**Research and Development (R&D) experience** (full-time positions \ contracts)

Nov 2018 – Dec 2018 May 2018 – Jun 2018 Nov 2017 – Dec 2017 Apr 2015 – Aug 2015	TUMOCs: TUneable Multiferroics based on oxygen Octahedral Structures <b>[R&amp;D]</b>	UDE - Universität Duisburg-Essen, Nordrhein-Westfalen, Essen, Germany
Sep 2018 – Nov 2018 Sep 2017 – Oct 2017 Feb 2017 – Mar 2017 Jun 2016 – Jul 2016	TUMOCs: TUneable Multiferroics based on oxygen Octahedral Structures <b>[Research]</b>	Universidade de Aveiro, Instituto de Materiais de Aveiro, Aveiro, Portugal
Nov 2015 – Oct 2017	Invited Research Scientist <b>[R&amp;D]</b>	Institute of Physics, Faculty of Science, UPJS, Košice, Slovak Republic
Feb 2015 – Apr 2015	Exchange bias phenomena in spontaneously phase-segregated $(\text{Nd}_{1-x}\text{Y}_x)_{2/3}\text{Ca}_{1/3}\text{MnO}_3$ ( $x=0; 0.1$ ) perovskites <b>[Research]</b>	Institute of Physics, Faculty of Science, UPJS, Košice, Slovak Republic
Jan 2012 – Apr 2015	Spectroscopic, transport, magnetic and elastic properties of new low-dimensional structures and superconducting compounds <b>[Research]</b>	ILTPE, Kharkiv, Ukraine
May 2013 – Jul 2013	Synthesis and investigation of new iron-based high-temperature superconductors <b>[Research]</b>	IFW-Dresden - Leibniz-Institut für Festkörper- und Werkstoffforschung Dresden, Sachsen, Dresden, Germany
Jan 2011 – Dec 2014	Diagnostics of defects in constructional materials for nuclear power plants with application of the magnetic methods <b>[R&amp;D]</b>	ILTPE, Kharkiv, Ukraine
Jan 2012 – Dec 2013	Interplay of the magnetic and superconducting states in layered compounds which contain transition and rare-earth metal ions <b>[Research]</b>	ILTPE, Kharkiv, Ukraine
Jan 2011 – Dec 2012	Theoretical and experimental study of superconducting properties of iron-based chalcogenides and pnictides <b>[Research]</b>	ILTPE, Kharkiv, Ukraine
Jan 2011 – Dec 2012	Determination of magnetic properties of materials in the areas of destruction of nuclear power plants pipelines to predict the occurrence of discontinuities <b>[R&amp;D]</b>	ILTPE, Kharkiv, Ukraine
Jan 2010 – Dec 2011	Coexistence of superconductivity and magnetism in layered iron based HTSC <b>[Research]</b>	ILTPE, Kharkiv, Ukraine
Jan 2007 – Dec 2010	Magnetic analysis of the structural state of functional materials <b>[R&amp;D]</b>	ILTPE, Kharkiv, Ukraine
Jan 2005 – Dec 2006	Development of quantum magnetometer for early detection of the radiation damage in structural materials <b>[R&amp;D]</b>	ILTPE, Kharkiv, Ukraine

## Awards & Scholarships

Jan 2015	Scholarship: <b>Marie Skłodowska-Curie</b> Research and Innovation Staff Exchange <i>European Commission, Brussels, Belgium</i>
Dec 2014	Scholarship: <b>Government of the Slovak Republic</b> <i>Government of the Slovak Republic, Bratislava, Slovak Republic</i>
Oct 2014	Scholarship: <b>President of Ukraine</b> for young scientists <i>The Presidential Administration of Ukraine, Kyiv, Ukraine</i>
Feb 2014	Award: <b>National Academy of Sciences of Ukraine</b> for young scientists <i>Presidium of the National Academy of Sciences of Ukraine, Kyiv, Ukraine</i>
Mar 2012	Scholarship: <b>Alexander von Humboldt</b> Foundation <i>Alexander von Humboldt Foundation, Nordrhein-Westfalen, Bonn, Germany</i>
Jun 2010	Scholarship: <b>National Academy of Sciences of Ukraine</b> for young scientists <i>Presidium of the National Academy of Sciences of Ukraine, Kyiv, Ukraine</i>

## Skills & Activities

Languages	English, Slovak, Czech, German (basic), Russian (native), Ukrainian (native)
Skills	Python, Pascal, Shell Scripting (sh, bash), Automation & Control, Laboratory Automation, Process Automation, PID controller, Data Collection, Data Visualization, Signal Processing, Data Modeling, Scientific Visualization, Linux Operating Systems, Linux System Administration, Secure Shell (SSH), Linux Tools, Boolean Logic, Algorithms, AutoCAD, qQAD, OriginLab, Maple, Office, GIMP, SQL, Statistical Data Analysis, LaTeX, Cascading Style Sheets (CSS), HTML, Joomla, Spintronics, Superconducting Quantum Interference Device (SQUID), Cryogenics, Mathematical Modeling, Approximation Algorithms, Mathematical Analysis, Ultra Fast Learning; any existing tool which can solve posed problem (in case of tool absence I create it); etc.
Personal qualities	Multi-national teamwork, Multi-cultural teamwork, Responsibility, Ability to work independently

## Publication highlights

(total published papers\* – 109: articles – **43**, conference papers – 66)

<ul style="list-style-type: none"><li>• <b>Fedorchenko A.V. et al.</b> / Unusual magnetic properties of the polar orthorhombic <math>\text{BiFe}_{0.5}\text{Sc}_{0.5}\text{O}_3</math> perovskite // <i>Journal of Magnetism and Magnetic Materials</i>, Vol. 465, pp. 328-332 (2018).</li><li>• <b>Fedorchenko A.V. et al.</b> / Magnetic and superconducting properties of <math>\text{FeSe}_{1-x}\text{Te}_x</math> (<math>x \sim 0, 0.5</math>, and <math>1.0</math>) // <i>Low Temperature Physics</i>, Vol. 37(1), pp. 83-89 (2011).</li><li>• Lyakhno V.Y., <b>Fedorchenko A.V.</b>, Kivirenko O.B. et al. / FRP Dewar for measurements in high pulsed magnetic fields // <i>Cryogenics</i>, Vol. 49(8), pp. 425-428 (2009).</li></ul>
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\*All published papers can be found at <http://fedorchenko.scienceontheweb.net>