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**CV (Resume)**

**Michael Marchenko**

**Work experience:**

Present – 2017 New Zealand Independent School

http://nzis.school.nz/

Responsibilities: Physics teacher.

Present – 2014 Trilogi University: universitas-trilogi.ac.id

Responsibilities: Lecturing in math and physics

2017 – 2016 Denso Japanese company

https://www.denso.com/global/en/about-us/at-a-glance/

Responsibilities: Teaching Indonesian Denso employees English and Science.

2014 – 2012 Royal Buckingham International School (RBIS)

http://royalbuckinghaminstitution.com/

Responsibilities: Director of studies and teacher of math, science and computers

2012 – 2011 LAPAN space technology, Indonesia (Lapan.go.id)

Responsibilities: Research in rockets, missiles, satellites, and space technology; consulting, translating and interpreting.

2012 – 2011 PT Subur Sakti: http://www.subursakti.co.id/

Responsibilities: Consulting in technology transfer

2011 “Wave Tech” (A high tech company from the USA) (WaveTekk.com) (YellowMice.com)

Responsibilities: Manager in information technology (computer web-programming, development and design)

2011 – 2008 Journalist of “The Spark” newspaper in Ukraine, specializing in science and technology.

2007 Journalist of “Predawn Lights” newspaper in Ukraine, specializing in science and technology.

2006 “Oranta”, Insurance Company, Ukraine (Oranta.ua)

Responsibilities: Business risks assessments

2006 – 2001 Ecology – GEOS, Ukraine

Address: 2 Simferopol Street, Dnepropetrovsk 49000 Ukraine

Responsibilities: Satellite technology, space mechanics, remote sensing, image processing, and pattern recognition.

2003 Auckland University of Technology (AUT)

Address: Auckland university of technology (AUT (AUT.ac.nz)), Auckland City, New Zealand

Responsibilities: research in biomedical engineering

2002 – 2000 UNSW, Australia (UNSW.edu.au)

Responsibilities: nuclear physics research

2000 Dnepropetrovsk State (National) University (DNU.dp.ua)

Address: 13 Science Street, Dnepropetrovsk City 49000 Ukraine

Responsibilities: Teaching public relations to the most advanced students specializing in public relations

2000 – 1997 Environmental Institute, Ukraine

Address: 6 Moscow Street, Dnepropetrovsk City 49000 Ukraine

Responsibilities: research in environmental monitoring and analysis.

1999 World Bank. worldbank.org

Position: analyst.

1999 – 1998 Duke University, the USA (Duke.edu)

Responsibilities: using quantitative research methods in politics and business

1999 – 1994 “Orbit” (Orbita.dp.ua)

Address: 2 Panikahi Street, Dnepropetrovsk City 49600 Ukraine

Responsibilities: Satellite technology, space mechanics, remote sensing, image processing, and pattern recognition.

**Education:**

2006 – 2002 UNSW, Australia (PhD program) (UNSW.edu.au)

Research in nuclear physics

2002 UTS, Australia (English language program) (UTS.edu.au)

1999 – 1998 Duke University, the USA (Master’s program) (Duke.edu)

International Development research

1998 UPENN, the USA (English language program) (UPENN.edu)

1997 – 1996 Course in political science in English language taught by Dr. Golam Mustafa at Dnepropetrovsk National (State) University,

The Civic education project (CEP) University course

1996 – 1995 Course of world history in English language by Dr. Paul Bradbeer at Dnepropetrovsk National (State) University, Dnepropetrovsk City, Ukraine

1997 – 1989 Dnepropetrovsk National University (DNU), Ukraine (Master’s and Bachelor’s studies) (DNU.dp.ua). Studying math, science, rockets, missiles, and space technology.

**Publications:**

Application of electrical engineering mathematical methods in social sciences 2017.

Submitting to IEEE: http://www.ieee.org

Application of Chebyshev polynomials in pattern recognition 2017.

Submitting to IEEE: http://www.ieee.org

Increasing precision of telemetry measurement 2017. Submitting to IEEE: http://www.ieee.org

Saaty Analytic hierarchy process improvement for multi-criteria optimization 2017.

Submitting to IEEE: http://www.ieee.org

Formal method of describing (modeling) the uncertainty of input data required for the calculation of technical and economic indicators 2016**.**

Submitting to IEEE: http://www.ieee.org

Testing differential equations numerical methods for dynamics of technical systems 2016.

Submitting to IEEE: http://www.ieee.org

Analytical method of solving of the equations of orbital motion of a satellite using Legendre polynomials. 2016. Submitted to IEEE: http://www.ieee.org

Alpha- dependence of transition frequencies for some ions of Ti, Mn, Na, C, and O, and the search for variation of the fine-structure constant J.C. Berengut, V.A. Dzuba, V.V. Flambaum, and M.V. Marchenko, Phys. Rev. A Phys. Rev. A 70, 064101 (2004), physics/0404008 and more recent astro-ph/0408542

Alpha- dependence of transition frequencies for ions SiII, CrII, FeII, NiII, and ZnII, V.A. Dzuba, V.V. Flambaum, M.G. Kozlov, and M. Marchenko, Phys. Rev. A, 66, 022501 (2002).

V.A. Dzuba, V.V. Flambaum, M.V. Marchenko, Phys. Rev. A 68, 022506 (2003).

Laboratory spectroscopy and the search for space-time variation of the fine structure constant using QSO spectra J.C. Berengut, V.A. Dzuba, V.V. Flambaum, M.G. Kozlov, M.V. Marchenko, M.T. Murphy, and J.K. Webb physics/0408017

Dzuba V., Flambaum V., Kozlov M. and Marchenko M. The Alpha- dependence of transition frequencies for ions Si II, Cr II, Fe II, Ni II, and Zn II. International Journal Physical Review, 2002.

Marchenko M. Mathematical modeling of remote sensing and its application to the most efficient distribution of resources. Annual publication of NATO Advanced Research Workshop papers, 2001.

Marchenko M.V. Published paper of the conference: Environmentally Safe Products; Way to Survival. Dnepropetrovsk, Ukraine, 29-30 November 1999. The topic of my presentation: On the Transition from the Economic Paradigm to the Environmental Paradigm.

Loboda V.V. and Marchenko M.V. Combination of Analytical and Numerical Methods for Determining Stress Intensity Factor for Interfacial Crack. Journal of Physical-Chemical Dynamics of Materials, N. 6, 1998. Lvov, Ukraine.

Marchenko M.V. Description of the Physical Processes Around the Crack on the Interface of Two Materials, Taking Into Account Electromagnetic Effects and Electroelasticity. "Collection of Scientific Papers in Physics." Dnepropetrovsk State University Press, Dnepropetrovsk, Ukraine (1998).

Marchenko M.V. Application of Boundary Element Method to Description of ?Crack on the Interface of Two Media. Journal "Collection of Scientific Papers in Physics." Dnepropetrovsk State University Press, Dnepropetrovsk, Ukraine (1996).

Marchenko M.V. Texts of presentations at the conference "FRANCE ET UKRAINE, EXPERIENCE SCIENTIFIQUE ET PRACTICUE DANS LE CONTEXTE DU DIALOGUE DES CULTURES NATIONALES" which took place on the 22-25 of May of 1995 in Dnepropetrovsk, Ukraine. The theme of my presentation was "Mathematical Modeling of Distribution of Pollutants in the Air". Dnepropetrovsk State University Press 1995.

Loboda V.V. and Marchenko M.V. Texts of presentations at the conference "Problems Physics and Applied Mathematics" in Ternopol (Ukraine) in April of 1995. Ternopol State University Press 1995. The theme of presentation: "Application of Boundary Integral Equations for Determining of Stress Intensity Factors for the Interfacial Crack".

**Workshops presentations:**

Present – 2014 The Universities workshops

2014 – 2012 RBIS workshops

2011 LAPAN workshops in space technology.

2008 DNU research seminar, PhD thesis presentations and publications in nuclear science (DNU.dp.ua)

2001 NATO advanced research workshop (in English language), presentations and publications in remote sensing in environmental monitoring

2000 In Poland (in English language) workshop in environmental science, presentations and publications on remote sensing in environmental monitoring.

1997 CEU workshop in Budapest, Hungary (in English language) workshop in philosophy of science, presentations on philosophy of science

1997 Slovakia, Czech Republic, and Poland (in English language) workshop in environmental science and cultures.

1996 CEP, CEU workshop in Budapest, Hungary (in English language) workshop in international relations, presentations and publications on international relations

1995 Dnepropetrovsk State University (in French, Russian and Ukrainian languages) workshop in environmental science, presentations and publications on remote sensing in environmental monitoring and analysis.

**My participation in the world math, physics and computer programming championships:**

http://azspcs.net/

http://sokoban-gild.com/ranking.cgi

http://www.v-sonline.com/index.pl?C5\_leader

**My own computer code:**

I have created by own computer code to solve many problems of mathematical physics and discrete mathematics.

**Works in progress:**

Pattern recognition

Financial market modeling

Integrating the equations of motion of the satellite

Quantum cryptography assessments

Application of Graph Theory in cryptography

Smart Grids modeling

**Member of professional societies:**

Computer society of Australia

Society of Australian physicists

**Languages:**

Native languages: Ukrainian and Russian

English: TOEFL score is above 600

Basic Indonesian language.