## CURRICULUM VITAE Oleksandra KUKHARENKO

#### **CURRENT AFFILIATION**

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### PERSONAL INFORMATION

Birth: 27.11.1987 (Kyiv)

Citizenship: Ukraine Marital status: Married

Degree: Candidate of Science in Physics and Mathematics (10.10.2013)

# **UNIVERSITY EDUCATION**

01.10.2009 – 10.10.2013: Ph.D. (Candidate of Science in Physics and Mathematics), **Ukraine**, Taras Shevchenko National University of Kyiv, Faculty of Cybernetics, Department of Complex System Modeling. Thesis: *Modeling of Linearly Distributed Systems with an Aftereffect*.

01.09.2008 – 30.06.2009: M.Sc. (Specialist Diploma in Applied Mathematics), **Ukraine**, Taras Shevchenko National University of Kyiv, Faculty of Cybernetics, Department of Complex System Modeling. Thesis: *Absolute Stability Investigations of Difference Systems with Delay*.

01.09.2004 – 30.06.2008: B.Sc., **Ukraine**, Taras Shevchenko National University of Kyiv, Faculty of Cybernetics, Department of Complex System Modeling. Thesis: *Calculation of Lorenz Attractor Dimension Using Poincare Method*.

### **EMPLOYMENT**

01.10.2014 – present time: Research Fellow, Department of Chemistry, the University of Konstanz, **Germany**.

08.01.2014 – 31.12.2014: Junior Researcher, Research Department, Taras Shevchenko National University of Kyiv, **Ukraine**.

01.10.2012 – 30.09.2014: Official at the Department for International Scientific - Technical Cooperation and Innovation Technology (part time), Taras Shevchenko National University of Kyiv, **Ukraine**.

01.10.2012 – 31.12.2013: Assistant at the Research Laboratory. Faculty of Cybernetics, Taras Shevchenko National University of Kyiv, **Ukraine**.

01.10.2012 – 30.06.2013: Assistant lecturer (part time, seminars on the theory of differential and difference equations and random processes). Kiev National Economic University named after V. Hetman, **Ukraine**.

### **PUBLICATIONS**

- 1. O. Kukharenko, K. Sawade, J. Steuer, C. Peter, "Using dimensionality reduction to systematically expand conformational sampling of intrinsically disordered proteins", *J. Chem. Theory Comput.*, **2016**, vol. 12 (10), 4726–4734, doi: 10.1021/acs.jctc.6b00503.
- 2. O Kukharenko, "Control in Systems of Delay Hyperbolic Equations", *Advances in Dynamical Systems and Applications*, **2014**, vol. 9 (2), 199-211.
- 3. J. Diblik, D. Y. Khusainov, O. Kukharenko, Z. Svoboda, "Solution of the first boundary-value problem for a system of autonomous second-order linear partial differential equations of parabolic type with a single delay", *Abstract and Applied Analysis*, **2012**, Vol. *2012*, Article ID 219040, 27 pages, doi:10.1155/2012/219040.



- 4. J. Diblik, D. Khusainov, O. Kukharenko, "Representation of the Solution for Linear System of Delay Equations with Distributed Parameters", *Nonlinear Dynamics and Systems Theory*, **2012**, *12* (2), 251-268.
- 5. H. Harovoi, Z. Smardy, A. Kukharenko, "Application of homotopy perturbation method to solving singular initial value problems", *APLIMAT Journal of Applied Mathematics*, **2012**, *5* (2), 69-75.
- 6. O. Kukharenko, D. Khusainov, "Control of Solutions of Parabolic Linear Equation", *Bulletin of Institute of Mathematic of Ukraine*, **2011**, *8* (2), 112-131. (in Russian)
- 7. D. Khusainov, J. Diblik, O. Kukharenko, "Solution of the Dirichlet Boundary Value Problem for One System of Linear PDE with Delay", *7th Conference on Mathematics and Physics on Technical Universities, Proceedings of Contributions*, ISBN 978-80-7231-816-2, Brno, Czech Republic, **2011**, 235-242.
- 8. J. Diblik, B. Moravkova, D. Khusainov, O. Kukharenko, "Delayed Exponential Functions and their Application to Representations of Solutions of Linear Equations with Constant Coefficients and with Single Delay", *Proceedings of the 2<sup>nd</sup> International Conference on Mathematical Models for Engineering Science* (MMES '11), Puerto De La Cruz, Tenerife, Spain, **2011**, 82-87.
- 9. O. Kukharenko, "Solution of the Cauchy Problem for Oscillatory Equation with Delay", *Bulletin of the Kyiv National Taras Shevchenko University, Series: Cybernetics*, **2011**, 26-30.
- 10. O.V. Kukharenko, J. Diblik, D.Ya. Khusainov, "Representation of solution of the first boundary value problem for delay systems", *Bulletin of the Kyiv National Taras Shevchenko University, Physic and Mathematics*, **2011**, *1*, 59-62. (in Ukrainian)
- 11. O.V. Kukharenko, "Existence conditions of solution of the first boundary value problem for system of delay equations", *Bulletin of the Kyiv National Taras Shevchenko University, Physic and Mathematics*, **2011**, *2*, 125-130. (in Ukrainian)
- 12. O. Kukharenko, D. Khusainov, M. Verejkina, "Representation of the Solution for the Vibrating Delay System in the Form of Series", *Bulletin of the Kyiv National Taras Shevchenko University, Cybernetics*, **2010**, 15-22. (in Ukrainian)

## **RESEARCH VISITS and INTERNSHIPS**

12.04.2014 – 13.06.2014: **Germany**, a research visit to the Department of Chemistry, University of Konstanz.

11.10.2013 – 30.11.2013: **Czech Republic**, a research visit to the Department of Informatics, Faculty of Business and Management, Brno University of Technology.

01.10.2011 - 31.10.2011,

01.08.2010 – 31.08.2010: **Germany**, a month internship at the University of Konstanz.

#### **GRANTS and AWARDS**

**2017**, Interdisciplinary collaborative project Programme, Zukunftskolleg, the University of Konstanz, Germany.

**2017**, 6 months Interim Grant 2017, Zukunftskolleg, the University of Konstanz, Germany.

**2015**, 2- year ZIF-Marie Curie Postdoctoral Fellowship, Zukunftskolleg, the University of Konstanz, Germany.

**2014**, 9 months scholarship from the Equal Opportunity Office of the University of Konstanz, Germany.

**2012**, Bernd Aulbach Prize fur Studenten und Abiturienten from the International Society of Difference Equations.

**2012**, Grant to attend the 6th European Congress of Mathematics, Krakow, Poland.

**2011**, **2010**, scholarship for the one month internship at the University of Konstanz, Germany, in the framework of cooperation between Taras Shevchenko National University of Kyiv and the University of Konstanz.

**2011**, Grant to attend ICIAM-2011 Congress, Vancouver, Canada.

**2010**, Financial support from Daimler-Fonds for participation at the AIMS conference ICDSDEA – 2010, Dresden, Germany.

# PARTICIPATION AT INTERNATIONAL CONFERENCES AND WORKSHOPS (main)

- **Italy**, Erice, 07<sup>th</sup>-12<sup>th</sup> of October, **2016**, Erice School: Exploring and Quantifying Rough Free Energy Landscapes.
- **Germany**, Berlin, 22<sup>nd</sup>-26<sup>th</sup> of February, **2016**, Workshop on Markov modeling and Free Energy calculation.
- **Austria**, Vienna, 16<sup>th</sup>-18<sup>th</sup> of September, **2015**, From trajectories to reaction coordinates: making sense of molecular simulation data.
- **France**, Toulouse, 1<sup>st</sup> -3<sup>rd</sup> of June, **2015**, 8th International Conference in Chemistry Toulouse-Kiev (ICTK-8).
- **Germany**, Homburg, 5<sup>th</sup> 8<sup>th</sup> of September, **2014**, Symposium on Differential Equations and Difference Equations 2014, European Advanced Studies Conferences, SDEDE 2014.
- **Germany**, Bayzischzell, 1<sup>st</sup> 5<sup>th</sup> September, **2013**, Symposium on Differential Equations and Difference Equations 2013, European Advanced Studies Conferences, SDEDE 2013.
- **Italy**, Novacella, 28<sup>th</sup> October 1<sup>st</sup> November **2012**, Symposium on Differential Equations and Difference Equations 2012, European Advanced Studies Conferences, SDEDE 2012.
- **Slovak Republic**, Terchová, 23<sup>rd</sup> 27<sup>th</sup> June, **2012**, Conference on Differential and Difference Equations and Applications, CDDEA 2012.

## **ORGANIZATIONAL ACTIVITIES**

Member of Conference Organizing Committees:

- International workshop "Mobility. A concept and a way of life", Singen, Germany, **2016**.
- European Advanced Studies Conference 2014 "Symposium on Differential and Difference Equations 2014", Homburg/Saar, Germany, **2014**.
- International Conference "National System of Qualifications in Ukraine: information technology and management", Kyiv, Ukraine, **2014**.
- International Conference "Norway and Ukraine: Experiences and Opportunities of cooperation", Kyiv, Ukraine, **2013**.
- International Conference "Dynamical System Modeling and Stability Investigation", Kyiv, Ukraine, **2009**, **2011**, **2013**.

*Adviser for students* from Taras Shevchenko National University of Kyiv applying for the educational program No.2201250 «Education, Training of students, PHD students, scientific and pedagogical staff abroad» launched by the Ministry of Education and Science of Ukraine, **2012** – **2014**.

*Member of the working groups* of the TEMPUS project 543901-TEMPUS-1-2013-1-AM-TEMPUS-JPGR ALIGN and 530601 -TEMPUS-l-2012-l-PL-TEMPUS-SMHES HES-SM - INARM.

#### LINGUISTIC PROFICIENCY

Ukrainian, Russian – native; English (98/120 TOEFL iBT); German – advanced (C1).

# MISCELLANEOUS QUALIFICATIONS

Computer literacy

Programming (Java, C/C++, Python) Symbolic Programming (Maple, Mathematica, Matlab) Typesetting Programming (MikTeX, LaTeX)

#### **MEMBERSHIPS**

ISDE (International Society of Difference Equations)