

Elena Arseneva (Khramtcova)

Curriculum Vitae

☎ (+7) 964 391 58 00

✉ elena.khramtcova@gmail.com

🌐 <http://homepages.ulb.ac.be/~ekhramtc/>

Research interests

Algorithms and Data Structures, Computational and Discrete Geometry

Professional Appointments

- Sept. 2018 – present **Assistant Professor**, *Mathematics and TCS Program*, St. Petersburg State University (SPbU), Russia.
- Aug. 2016 – July 2018 **Postdoctoral researcher**, *Algorithms Research Group*, Department of Mathematics and Computer Science, Université libre de Bruxelles (ULB), Brussels, Belgium.
- Oct. 2011 – Jul. 2016 **Research and teaching assistant**, *Faculty of Informatics, Università della Svizzera Italiana (USI)*, Lugano, Switzerland.
- Sep. 2010 – Sep. 2011 **Junior Researcher**, *NEUROSCIENCE LAB.*, Saint-Petersburg State University (SPbU), Russia.

Education

- Oct. 2011 – Jul. 2016 **PhD**, *Faculty of Informatics, Università della Svizzera Italiana (USI)*, Lugano, Switzerland.
Thesis title: *On the Hausdorff and Other Cluster Voronoi Diagrams*
Supervisor: Prof. Evanthia Papadopoulou
- Sep. 2005 – Jul. 2010 **Specialist Diploma (equal to MSc degree) with Distinction**, *Saint-Petersburg State University (SPbSU)*, Russia, Major: Mathematician and Software Engineer; GPA: 4.8/5.0.
Thesis title: *Presaccadic peak detection problem in electrooculography method of eye-tracking*
- Sep. 2001 – Jun. 2005 **Graduate**, *Physics and Mathematics Lyceum 239*, St. Petersburg, GPA: 4.5/5.0.

Teaching, Mentoring, and University service

Currently taught at SPbU

- Fall 2018/19 Models of computations (seminars)
Fall 2018/19 Complexity theory (seminars)
Fall 2018/19 Theoretical Computer Science (seminars)

Courses at ULB

- Fall 2017/18 Geometric Algorithms (MSc): guest lectures

Assisted courses at USI

- Spring 2014/15 Geometric Algorithms (MSc)
- Spring 2013/14 Geometric Algorithms (MSc)
- Fall 2013/14 Topics in Algorithms (BSc)
- Spring 2012/13 Algorithms and Data Structures (BSc)
- Fall 2012/13 Topics in Algorithms (BSc)
- Spring 2011/12 Algorithms and Data Structures (BSc)

Other activities at USI

- July, August 2015 Mentored a summer internship (UROP) for Andreia Faria Carvalho.
Topic: *Visualizing the 3D Farthest-segment Voronoi diagram and its Gaussian Map*
- 2014/15 PhD students' representative, Faculty of Informatics

Grants

- Jan. 2017 – Jul. 2018 **Early PostDoc Mobility fellowship**, *Swiss National Science Foundation (SNF)*.
Project title: Computational geometry on convex polyhedral surfaces

Conference and invited talks

- (planned) 28.09.2018 *Pole Dancing: 3D Morphs for Tree Drawings*, 26th International Symposium on Graph Drawing and Network Visualization, Barcelona, Spain (“Best paper” talk)
- 23.03.2018 *Reconstructing a convex polygon from its ω -cloud*, 34th European Workshop on Computational Geometry (EuroCG'17), Berlin, Germany
- 15.09.2017 *Searching edges in the overlap of two plane graphs*, Tohoku University, Sendai, Japan
- 30.08.2017 *Which convex polyhedra can be made by gluing regular hexagons?*, the 20th Japan Conference on Discrete and Computational Geometry, Graphs, and Games (JCDCG³'2017), Tokyo, Japan
- 14.08.2017 *Cluster Voronoi Diagrams, Stabbing Circles, and Searching Edges in Two Graphs*, Aalto University, Helsinki, Finland
- 2.08.2017 *Searching edges in the overlap of two plane graphs*, WADS'17: Algorithms and Data Structures 15th International Symposium, Newfoundland, Canada
- 8.06.2017 *Dynamic stabbing queries with sub-logarithmic local updates for overlapping intervals*, 12th International Computer Science Symposium in Russia (CSR'17), Kazan, Russia
- 5.04.2017 *Searching edges in the overlap of two plane graphs*, 33th European Workshop on Computational Geometry (EuroCG'17) Malmö, Sweden
- 13.04.2016 *Stabbing circles for sets of segments in the plane*, LATIN 2016: Theoretical Informatics - 12th Latin American Symposium, Ensenada, México

- 30.03.2016 *Stabbing circles for sets of segments in the plane*, 32th European Workshop on Computational Geometry (EuroCG'16), Lugano, Switzerland
- 8.10.2015 *On cluster Voronoi diagrams*, Eindhoven University of Technology (TU/e), Netherlands
- 1.10.2015 —————, Université Libre de Bruxelles, Belgium
- 21.06.2015 *Stabbing circles, Voronoi diagrams and duality*, Algorithmic methods laboratory, Steklov Institute of Mathematics, St. Petersburg, Russia
- 3.07.2015 *Stabbing circles for sets of segments in the plane*, 16th Spanish Meeting on Computational Geometry (EGC'15), Barcelona, Spain
- 18.03.2015 *Linear-Time Algorithms for the Farthest-Segment Voronoi Diagram and Related Tree Structures*, 31th European Workshop on Computational Geometry (EuroCG'15), Ljubljana, Slovenia
- 2.04.2014 *A Randomized Incremental Approach for the Hausdorff Voronoi Diagram of Non-crossing Clusters*, LATIN 2014: Theoretical Informatics - 11th Latin American Symposium, Montevideo, Uruguay
- 5.03.2014 *A simple RIC for the Hausdorff Voronoi Diagram of Non-crossing clusters*, 30th European Workshop on Computational Geometry (EuroCG'14), Ein-Gedi, Israel
- 18.02.2014 *Randomized Incremental Constructions for the Hausdorff Voronoi diagram of point clusters*, ESF EuroGIGA final conference, Berlin, Germany
- 10.07.2013 *On Hausdorff Voronoi diagram of non-crossing clusters*, ESF EuroGIGA meeting, Graz, Austria
- 19.03.2013 *Randomized incremental construction of Hausdorff Voronoi diagram of non-crossing clusters*, 29th European Workshop on Computational Geometry (EuroCG'13), Braunschweig, Germany

Research visits, workshops, and summer schools

- (planned) *Seventh Workshop on Geometry and Graphs*, Bellairs Research Institute, 10-15.03.2019 Holetown, Barbados
- 15.04.2018 – 19.05.2018 *Intensive Research Program in Discrete, Combinatorial and Computational Geometry*, Barcelona, Spain
- 11-16.03.2018 *Sixth Annual Workshop on Geometry and Graphs*, Bellairs Research Institute, Holetown, Barbados
- 1-10.03.2018 Carleton University, Ottawa, Canada; Visiting: Prosenjit Bose
- 16.12.2017 – 18.02.2018 ITMO University, Saint-Petersburg, Russia; Visiting: Kira Vyatkina
- 4-15.09.2017 Tohoku University, Sendai, Japan; Visiting: Matias Korman
- 31.07.2017 – 4.08.2017 Fields Workshop on Discrete and Computational Geometry, Ottawa, Canada
- 22-26.05.2017 Summer school: *Recent Advances in Algorithms*, Saint-Petersburg, Russia
- 28.11-2.12.2016 Workshop: *Uncertainty in Motion*, U. Utrecht, the Netherlands
- 2-10.10.2016 U. Helsinki, Finland; Visiting: Simon Puglisi

- 5-16.09.2016 U. Urtecht, the Netherlands; Visiting: Maarten Löffler
- 17-30.04.2016 Carleton University, Ottawa, Canada; Visiting: Prosenjit Bose
- 10-16.10.2015 CMO-BIRS Workshop: *Searching and Routing in Discrete and Continuous Domains*, Oaxaca, Mexico
- 7-8.10.2015 U. Utrecht and TU. Eindhoven, the Netherlands; Visiting: Irina Kostitsina, Maarten Löffler, Bettina Speckmann
- 30.09.2015 – 6.10.2015 Université Libre de Bruxelles, Belgium; Visiting: Stefan Langerman
- 8-13.03.2015 *Third Annual Workshop on Geometry and Graphs*, Bellairs Research Institute, Holetown, Barbados
- 29-30.06.2015 Universitat Politècnica de Catalunya, Barcelona, Spain; Visiting: Carlos Seara

Hosted research visits

- 16-18.08.2017 Visitors: Ivor van der Hoog, Maarten Löffler (U. Utrecht, the Netherlands)

Community service

- Program committee CCCG'17, EuroCG'18, SOCG YRF'18
- Reviewer journals: ACM TSAS, CJTA; conferences: SODA'18, SOCG'18, WADS'17, SOCG'17, EuroCG'16, ISAAC'15, EuroCG'15
- Organizing committee EuroCG'16

Patents

D. Belov, E. Khramtcova, A. Ossadtchi. A program for epilepsy diagnostics through EEG (EpiEEG). Patent number 2011616293, Russian Federation. Rightholder: Saint-Petersburg State University

Programming skills

- Languages C/C++, Python, Sage, Matlab, Mathematica, Java/JScript, HTML/XML, SQL, Pascal
- Libraries CGAL library
- Markup Latex

Languages

- Russian Mother tongue
- English Proficient
- Italian Upper-intermediate
- German Beginners level
- French Beginners level

Personal information

Date of birth 12.03.1988
Nationality Russian
Children Evgeniia, 10 years old
Viktor, 8 years old