



# Dmitry ANISIMOV

PHD  
R&D ENGINEER  
GEOMETRY PROCESSING

## PROFILE

Ph.D.

research and development  
senior geometry engineer with  
7+ years of experience

## SKILLS

EXPERT LEVEL  
C++

### SIDE EXPERIENCE

java, swift, python, ruby,  
web, math software, latex, ...

## CONTACTS

 rudanston@gmail.com

 +33 7 67 37 22 52

 [anisimov.work](https://anisimov.work)

 Paris, France

## SOCIAL

 [github/danston](https://github.com/danston)

 [in/dmitry-anisimov](https://in/dmitry-anisimov)

 [instagram/rudanston](https://instagram.com/rudanston)

## WORK EXPERIENCE

### GEOMETRY ENGINEER @ SAMP

2022 - ....., France

point cloud processing for large-scale data, semantic classification and segmentation, simplification, object detection, and backend geometry kernel



### GEOMETRY ENGINEER @ ZENLY (SNAP INC)

2021 - 2022, France

geometry processing algorithms for interactive 3D world maps, procedural model generation, simulation, and backend geometry kernel



### R&D ENGINEER @ GEOMETRYFACTORY

2019 - 2021, France

geometry simplification, surface mesh reconstruction with levels of detail, various packages and support for Computational Geometry Algorithms Library (CGAL)



### R&D ENGINEER @ INRIA

2017 - 2019, France

fully automatic pipeline for large-scale 3D urban reconstruction from LIDAR data with multiple levels of detail (LODs)



### R&D ENGINEER @ USI

2014 - 2017, Switzerland

various geometry-related projects, image warping, 2D and 3D geometry and function visualizations, Ph.D. related software at Università della Svizzera italiana (USI)



### TEACHING ASSISTANT @ USI

2011 - 2016, Switzerland

mathematics and informatics at bachelor and master levels, mostly calculus, linear algebra, computer graphics, and geometry processing at Università della Svizzera italiana (USI)



### SYSTEM ADMINISTRATOR @ SPSU

2010 - 2011, Russia

computer class support, system administration at Saint-Petersburg State University (SPSU)







### PRIVATE TUTORING @ FREELANCE

2005 - 2010, Russia

private classes on mathematics, geometry, and informatics



## LANGUAGES

	russian	native
	english	proficient
	french	intermediate
	italian	intermediate

## MENTORSHIP

### Google Summer of Code (GSoC)

2021	<u>3D barycentric coordinates</u>
2019	<u>generalized global regularization</u>
2018	<u>extending generalized barycentric coordinates</u>
2018	<u>generalized region growing</u>

## AWARDS

2016	the best paper honorable mention award at MUM, Rovaniemi, Finland
2012	the best poster award at NSF Workshop, New York City, USA

## CONFERENCES

2017	GMP, San Antonio, USA
2016	GMP, Xiamen, China
2014	CAS, Paris, France
2013	NTAG, Bad Herrenalb, Germany
2012	NSF, New York City, USA
2010	XLI ISC, Saint-Petersburg, Russia

## EDUCATION

### PH.D. IN INFORMATICS @ USI



2012 - 2017, Switzerland

ph.d. thesis in informatics at Università della Svizzera italiana (USI), supervised by Kai Hormann, with the subject on generalized barycentric coordinates and their applications to geometry processing

### INTERNSHIP IN CGAL @ INRIA



2013, France

2D Generalized Barycentric Coordinates (GBC) package for the Computational Geometry Algorithms Library (CGAL), supervised by David Bommes and Pierre Alliez

### DIPLOMA IN APPLIED MATHEMATICS @ SPSU



2005 - 2010, Russia

master thesis in applied mathematics from the faculty of applied mathematics and control processes at Saint-Petersburg State University (SPSU), supervised by Igor. L. Bratchikov, with the subject on solving NP-complete problems by means of DNA properties with applications to DNA computers

### HIGH-SCHOOL DEGREE @ SCHOOL № 53



1995 - 2005, Russia

program oriented to natural sciences

## MAIN PUBLICATIONS AND BOOKS

### GENERALIZED BARYCENTRIC COORDINATES IN COMPUTER GRAPHICS AND COMPUTATIONAL MECHANICS

2018, Book, Chapter 1, Editors: K. Hormann and N. Sukumar

### BEHAVIOUR OF EXPONENTIAL THREE-POINT COORDINATES AT THE VERTICES OF CONVEX POLYGONS

2019, Article, Journal of Computational and Applied Mathematics, with K. Hormann and T. Schneider

### BLENDED BARYCENTRIC COORDINATES

2017, Article, Computer Aided Geometric Design, with D. Panozzo and K. Hormann

### SUBDIVIDING BARYCENTRIC COORDINATES

2016, Article, Computer Aided Geometric Design, with C. Deng and K. Hormann

### NP-COMPLETE PROBLEMS SOLVING BY MEANS OF DNA PROPERTIES (in russian)

2010, Master Thesis, Saint-Petersburg State University

## INTERESTS

design, science, sport, games,  
reading, writing, learning, ...

## HACKATHONS

**2017** [HackZurich](#), Switzerland

**2014** [HackZurich](#), Switzerland

## MORE

you can find my full visual  
portfolio and values I can  
contribute to your business on  
my personal website

[anisimov.work](http://anisimov.work)

## MAIN PROJECTS

### CGAL

<https://doc.cgal.org/latest>

different packages for open-source Computational Geometry Algorithms Library (CGAL) including [Weight Interface](#), [2D Generalized Barycentric Coordinates](#), [Shape Detection](#), [Shape Regularization](#), and smaller contributions to other packages

C++

### GBC

<https://github.com/danston/gbc>

efficient implementation of all currently (up to 2017, June)  
available generalized barycentric coordinates

C++, Shell

### IMAGE WARPING

<https://github.com/danston/warpit>

image warping tool that is using subdivision of the underneath  
triangle mesh, available for macOS and Windows

C++, Qt, GL

### 4TODDLER APP

<http://www.fourtoddler.altervista.org>

iPad app for babies, where they can explore different colorful  
geometric shapes and learn new things, made with Teseo  
Schneider in 2014

Objective C, iOS

### SECUREX APP

<http://www.securexapp.altervista.org>

android app that helps to protect one's life in the emergency  
situation, made with Randolph Scharfig in 2016

Java, Android