Martin Drozdík

Curriculum Vitae

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Key skills

MATHEMATICS

Multi-objective optimization, evolutionary computation, computational geometry, algorithm design, graph algorithms, probability theory, statistics.

C++

6 years active experience. Deep interest in best practices and C++11/14. Experience with high-performance code and parallelization.

 ${\rm Q_T}~$ 3 years active experience, especially in GUI design and implementation.

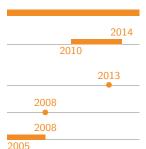
IT skills

Operating systems LINUX / UBUNTU / BASH

Office MERCURIAL, LIBREOFFICE, LATEX, INKSCAPE

Programming JAVASCRIPT, MATLAB / OCTAVE, SQL, R, EIGEN, MATHGL

Web development HTML, CSS



Awards and scholarships

Monbukagakusho, Scholarship of the Japanese Ministry of Education, Awarded to two students from Slovakia annually to pursue a PhD course.

IEEE Young Researcher Presentation Award, IEEE Session, Niigata.

Erasmus, Full scholarship and tuition for 6 months (University of Pisa).

Dean's motivational scholarship, top 10% of class, awarded 4 times.

Languages

English Advanced 10+ years, IT and mathematics terminology. Japanese Intermediate Living in Japan for 3 years, actively studying.

8 months on an IT project in Austria. German Intermediate

Studied mathematics and economics in Italian. **Italian** Intermediate

French Beginner Actively studying.

Slovak/Czech Native

About me

I have a very strong sense of *beauty* and *quality*. I aim for the highest efficiency in everything I do, and I always strive to *do The right thing*.



Professional experience

 $\label{eq:phd_student} \begin{center} PhD \ student, \ Tanaka-Hernan-Akimoto \ laboratory, \\ Shinshu \ University, \ Nagano, \ Japan, \end{center}$

Multi-objective optimization using evolutionary computation.

- Study of :
 - self-adaptation and learning within multi-objective evolutionary algorithms
 - rotational invariance of multi-objective optimizers.
- O Development of:
 - high-performance, multi-dimensional, geometric data structures (C++)
 - graphical application to analyze data from numerical experiments (QT)
 - a library of multi-objective evolutionary algorithms (C++).
- Publishing in one of the best journals in the field (IEEE TEVC).
- Presentation at top tier conferences (GECCO, LION, SEAL).
- Peer review of top journals and conferences (EJOR, IEEE TEVC, GECCO). My publications are available at researchgate.net/profile/martin_drozdik.



2011

2010

Open source project contributor, $\rm Eigen: C++$ linear algebra library. Recently my first patch was merged.

Researcher, DOLPHIN TEAM, INRIA, Lille, France, Exploration of differential evolution parameters $(C++/Q_T)$.

- Extensive numeric experimentation using the Grid5000 cluster computer.
- Analysis and interpretation of the data using a simple laptop computer.

Programmer, Accenture Technology Solutions, Vienna, Austria, Greenfield project for $\operatorname{Allianz}\ AG.$

- Communication in German and English.
- Administration of IBM mainframe jobs (JCL, ISPF, DB2, PL/I).
- Writing technical documentation.



Freelance programmer, Ministry of environment of Slovakia, Bratislava, Slovakia,

Digital archive of news articles.

- o Implementation of a data entry form in MS Access.
- Design and implementation of retrieval software in C++.

Volunteer, *Initiative to preserve environment in Bratislava old town*.

- Collecting signatures.
- Public relations.
- Participation in legal battles.

We saved the park on Belopotockeho street from being replaced by an apartment building (park.estranky.sk).



Formal education

PhD, COMPUTER SCIENCE,

Department of Mathematics and System Development, Shinshu University, Nagano, Japan, Graduating on $25^{\rm th}$ of March 2015.

Title of thesis: Improvements in Understanding and Performance of Multiobjective Differential Evolution

Master, APPLIED MATHEMATICS,

Comenius University in Bratislava, Slovakia,

Graduated with honors.

Title of thesis: Stochastic Processes in State Space Form and ML Estimation of

Their Parameters

Erasmus exchange student, MATHEMATICS AND ECONOMICS,

University of Pisa, Italy.

Bachelor, APPLIED MATHEMATICS,

Comenius University in Bratislava, Slovakia,

Graduated with honors.

Title of thesis: Strange Functions in Mathematical Analysis

Books that influenced me professionally

Robert C. Martin Clean Code

Scott Meyers Effective C++, Effective Modern C++

Herb Sutter Exceptional C++ Style

Free time

Football I play regularly.

Videogames Real time strategy.

Sci-fi literature Especially Robert Heinlein, Arthur C. Clarke, and Joe Haldeman.