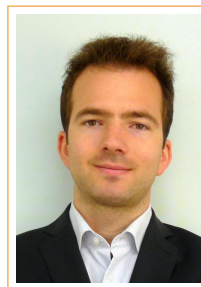# Martin Drozdík

Curriculum Vitae

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bitbucket.org/martin_drozdik
stackoverflow.com/users/1097451/

Research interests

- Multi-objective optimization
- Differential evolution
- Computational geometry
- Evolutionary computation in general

Key programming skills

C++	6 years active experience, including the newest C++11/14 standard
Matlab/Octave	3 years active experience

Auxiliary IT skills

Operating systems	Linux / Ubuntu / Debian
Office	LibreOffice, LaTeX, Inkscape, Mercurial
Programming	Python, Bash, R
Libraries	Qt, Eigen, Mathgl, GMP, Algolib

Career summary

2011 to present	**Doctoral student** at Shinshu University, studying evolutionary computation.
2013 to 2014	**Exchange student** at Dolphin team, Inria Lille.
2010 to 2011	**Programmer** at Accenture Technology Solutions.
2008 to 2010	**Master student** Applied mathematics - graduated with honors.
2005 to 2008	**Bachelor student** Applied mathematics - graduated with honors.

Awards and scholarships

2011 to 2014	**Monbukagakusho**: Scholarship of the Japanese Ministry of Education. Awarded to two students from Slovakia annually. (Shinshu University)
2013	**IEEE Young Researcher Presentation Award**: IEEE Session in Niigata.
2008 to 2009	**Erasmus**: Full scholarship and tuition for 6 months. (University of Pisa)
2005 to 2010	**Dean's motivational scholarship**: (top 10% of class) awarded 4 times.

Major publications

2015   M. Drozdik, H. Aguirre, Y. Akimoto, and K. Tanaka
Comparison of Parameter Control Mechanisms in Multi-objective Differential Evolution
To be presented at the *Learning and Intelligent Optimization Conference LION 9*, To appear in *Lecture Notes in Computer Science*.

2014   M. Drozdik, H. Aguirre, Y. Akimoto, and K. Tanaka
Computational Cost Reduction of Non-dominated Sorting Using M-front
In *IEEE Transactions on Evolutionary Computation*.

2014   M. Drozdik, K. Tanaka, H. Aguirre, S. Verel, A. Liefooghe, and B. Derbel
An Analysis of Differential Evolution Parameters on Rotated Bi-objective Optimization Functions
Presented at *The Tenth International Conference on Simulated Evolution And Learning (SEAL 2014)*, published in *Lecture Notes in Computer Science, volume 8886*.

2013   M. Drozdik, H. Aguirre, and K. Tanaka
Attempt to Reduce the Computational Complexity in Multi-objective Differential Evolution Algorithms
Presented at the *GECCO 2013 conference*, published in *Proceedings of the 15th Annual Conference on Genetic and Evolutionary Computation*.

Work Experience

Aug 2010 – Mar 2011   **Programmer**, Accenture Technology Solutions, Vienna.
Greenfield project for Allianz AG. Working in an international team, communicating in both German, and English. Administration of IBM mainframe jobs, writing technical documentation, and performing support tasks.

Jul 2008 – Aug 2008   **Freelance programmer**, Ministry of Environment of the Slovak Republic, Bratislava.
Creation of a digital archive of newspaper articles. Design and implementation of retrieval software in Borland C++ and MS Access.

Formal education

Oct 2011 – Mar 2015   **PhD studies**, *Department of Mathematics and System Development*, Interdisciplinary Graduate School of Science and Technology, Shinshu University, Nagano, Japan.
Thesis title: "Improvements in understanding and performance of multi-objective differential evolution". Supervisors: Hernán Aguirre and Kiyoshi Tanaka.

Nov 2013 – Sep 2014   **Exchange student**, *Inria Lille - Nord Europe, Dolphin Project-team*, JSPS Strategic Overseas Visits Program for Accelerating Brain Circulation, Research into the parameters of differential evolution.
Execution of large number of numeric experiments on the Grid5000 cluster computer and interpretation of results.

October 2011	**Accenture mainframe training**, *Accenture Delivery Center, Pune, India*, 12 day intensive course on PL/I, IBM MAINFRAME, JCL, z/OS.
2008 – 2010	**Master's degree (with honors)**, *Comenius University in Bratislava*, Faculty of Mathematics, Physics, and Informatics, Applied mathematics course. Thesis title: "Stochastic processes in state space form and ML estimation of their parameters"
Sep 2008 – Jun 2009	**Exchange student**, *University of Pisa*, Faculty of Economics and Department of Mathematics.
2005 – 2008	**Bachelor's degree (with honors)**, *Comenius University in Bratislava*, Faculty of Mathematics, Physics, and Informatics, Applied mathematics course. Thesis title: "Special functions of mathematical analysis"

Languages

English	Advanced	10+ years of active usage including IT and mathematics terminology.
German	Intermediate	Fluent, but did not speak a long time. Worked for 8 months on an IT project in Austria.
Italian	Intermediate	Fluent, lived in Italy for 10 months, passed oral exams in Italian language.
Japanese	Intermediate	Fluent, lived in Japan for 3 years, actively studying.
French	Beginner	Lived in France for 10 months, started to actively study.
Slovak	Native speaker	
Czech	Native speaker	

Books that influenced me professionally

Robert C. Martin	Clean Code
Herb Sutter	Exceptional C++ Style: 40 New Engineering Puzzles, Programming Problems, and Solutions
Scott Meyers	Effective Modern C++ 42: Specific Ways to Improve Your Use of C++11 and C++14
Anthony Williams	C++ Concurrency in Action: Practical Multithreading

Voluntary work

2008 – 2014	**Citizen's initiative to preserve environment in old town**, *The goal was to save the park on Belopotockeho street in Bratislava from being replaced by an apartment building. After 18 years of legal battles, exposing corruption, petitions, and protests, the park has been saved by a decree of the municipal government*, http://www.park.estranky.sk/, (Slovak only).