Radoslav Fulek | Curriculum Vitae

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Computer Scientist and Software Developer

Education

École Polytechnique Fédérale de Lausanne <div align="right">**Lausanne, Switzerland**</div>
PhD. in Mathematics <div align="right">*September 2008–May 2012*</div>

Specialization: **Discrete and Computational Geometry**
Thesis Title: *Intersection patterns of edges in topological graphs*
Advisor: *Prof. János Pach*

Simon Fraser University <div align="right">**Burnaby, BC, Canada**</div>
M.Sc. in Computing Science <div align="right">*September 2006–June 2008*</div>

Specialization: **Discrete and Computational Geometry**
Thesis Title: *Intersecting convex sets by rays*
Advisor: *Prof. Gábor Tardos*

Comenius University <div align="right">**Bratislava, Slovakia**</div>
M.Sc. ("magister") in Computing Science <div align="right">*September 2000–June 2005*</div>

Specialization: **Artificial Intelligence and Parallel Computation**
Thesis Title: *Convex crossing numbers of selected classes of graphs* (in Slovak)
Advisor: *Prof. Ondrej Sýkora*

Postdoctoral Experience

Stanford University <div align="right">**Stanford, CA, USA**</div>
acting assistant professor <div align="right">*January 2022–August 2022*</div>

UC San Diego <div align="right">**La Jolla, CA, USA**</div>
lecturer <div align="right">*July 2020–December 2021*</div>

University of Arizona <div align="right">**Tucson, AZ, USA**</div>
postdoctoral researcher hosted by Prof. Stephen Kobourov <div align="right">*September 2019–September 2020*</div>

IST Austria <div align="right">**Klosterneuburg, Austria**</div>
Lise Meitner Fellow hosted by Prof. Uli Wagner <div align="right">*July 2017–June 2019*</div>

IST Austria <div align="right">**Klosterneuburg, Austria**</div>
IST Fellow hosted by Prof. Uli Wagner <div align="right">*March 2015-June 2017*</div>

Columbia University <div align="right">**New York City, NY, USA**</div>
postdoctoral fellow hosted by Prof. Maria Chudnovsky <div align="right">*September 2013–February 2015*</div>

Charles University <div align="right">**Prague, Czech Republic**</div>
postdoctoral researcher hosted by Prof. Jan Kratochvíl <div align="right">*February 2013–August 2013*</div>

École Polytechnique Fédérale de Lausanne <div align="right">**Lausanne, Switzerland**</div>
postdoctoral researcher in the group of Prof. János Pach <div align="right">*June 2012–January 2013*</div>

Software Development Work Experience

Toptal — **remote**
Freelance Software Developer — *Toptal 2021–*
Developed a system validation method for a virtual hospital
Built a restaurant reservation system in React.js
Enhanced a trading bot based on Python and Cython

Comity Inc. — **remote**
Back-end developer — *October 2021– June 2022*
Server side development of a fintech application in Kotlin

Isomi a.s. — **Bratislava, Slovakia**
Developer — *June 2005–August 2006*
Development of web applications based on ASP.NET

Isomi a.s. — **Bratislava, Slovakia**
Developer — *August 2004–December 2004*
Development of a standalone database solution based on Object Pascal

Honors and Awards

- Lise Meitner fellowship, FWF, Austria, 2017, EUR 162, 000
- Mobility grant for young researchers, Swiss National Science Foundation, Switzerland, 2012, CHF 69, 000
- PIMS Postdoctoral fellowship, Pacific Institute for Mathematical Sciences, Canada 2012, declined
- Marie Curie fellowship, Alfréd Rényi Institute of Mathematics, Budapest, Hungary, 2009
- SFU Graduate fellowship, Simon Fraser University, Burnaby, BC, Canada, 2007

Professional Service

Program committee member of 38th Int. Symposium on Computational Geometry (2022)
Program committee member of 28th Int. Symposium on Graph Drawing and Network Visualisation (2020)
Program committee member of Computational Geometry: Young Researchers Forum (2019)
Program committee member of 26th Int. Symposium on Graph Drawing and Network Visualisation (2018)
Program committee member of 24th Int. Symposium on Graph Drawing and Network Visualisation (2016)

Review Duties (selection)

Algorithmica, Combinatorica, Computational Geometry Theory and Applications, Discrete & Computational Geometry, Discrete Mathematics, Electronic Journal of Combinatorics, Journal of Combinatorial Theory Series A (JCTA), Journal of Graph Theory, SIAM Journal on Discrete Mathematics (SIDMA), European Symposium on Algorithms (ESA), Int. Symposium on Graph Drawing and Network Visualisation (GD), Symposium on Computational Geometry (SoCG), Symposium on Discrete Algorithms (SODA), Workshop on Graph-Theoretic Concepts in Computer Science (WG)

Invited Lectures (selection)

2022 Copenhagen-Jerusalem Combinatorics Seminar, remote
2022 Mathematics Colloquium, Worcester Polytechnic Institute, Worcester, MA, USA, remote
2020 Mathematics Colloquium, Baruch College, NYC, USA
2019 Computer Science Colloquium, University of Arizona, Tucson, AZ, USA

2019 Mathematics Colloquium, Iowa State University, Aimes, IA, USA
2018 Workshop on Combinatorial Geometry (CG Week'18), Budapest, Hungary
2018 BIRS Workshop 'Extremal Problems in Combinatorial Geometry', Banff, Canada
2017 BIRS Workshop 'Geometric and Structural Graph Theory', Banff, Canada
2017 Current Trends in Theoretical Computer Science (STTI'17), Prague, Czech Republic
2016 Joint STOC/SoCG Workshop Day 'Geometric representations of graphs', Boston, USA
2015 Current Trends in Theoretical Computer Science (STTI'15), Prague, Czech Republic
2014 Oberwolfach Workshop 'Discrete Geometry', Oberwolfach, Germany
2013 BIRS Workshop 'Geometric and Topological Graph Theory', Banff, Canada
2013 Current Trends in Theoretical Computer Science (STTI'13), Prague, Czech Republic
2012 Bernoulli Reunion Conference on Discrete and Computational Geometry, EPFL, Switzerland
2011 Current Trends in Theoretical Computer Science (STTI'11), Prague, Czech Republic
2010 Special Semester on Discrete and Computations Geometry, Culminating Workshop, EPFL, Switzerland

Supervision Duties

Semester Projects

o *Teresa Heiss*
Project: *Additivity of Z_2-genus*, Spring 2018

o *Robin Dupuis*
Project: *Crossing number of graphs and some related parameters*, Fall 2012

o *Igor Malinović*
Project: *Hanani-Tutte and 3-clustered cycle*, Fall 2012

o *Aleksandar Markovic*
Project: *Crossing numbers of graphs*, Spring 2011

o *Slobodan Mitrović*
Project: *Homometric sets in trees*, Fall 2010

o *Nouredine Hussain*
Project: *Expander graphs*, Fall 2010

Master Thesis

o *Slobodan Mitrović*
Project: *Metric problems on graphs*, Fall 2012
The first price at IEEE Region 8 Student Paper Contest 2014

Teaching Experience

o **Lecturer**
Stanford University   *March 2022–June 2022*
Undergraduate Level Class on Mathematical Analysis

o **Lecturer**
UC San Diego   *July 2020–December 2021*

Undergraduate Level Classes: Calculus, Mathematical Analysis, Probability, Applicable Mathematics and Computing

- **Lecturer**
  University of Arizona *February 2020–May 2020*
  Theory of Computation

- **Lecturer**
  IST Austria *April 2018–June 2018*
  Graduate level class on Geometric Representations of Graphs

- **Lecturer**
  IST Austria *October 2016–December 2016*
  Graduate level class on Topological Methods in Discrete Mathematics and Computer Science

- **Lecturer**
  Columbia University *January 2014–May 2014*
  Graduate level class on Geometric and Topological Graphs

- **Teaching Assistant**
  École Polytechnique Fédérale de Lausanne *September 2012–December 2012*
  Undergraduate level class on Combinatorial Optimization

- **Teaching Assistant**
  École Polytechnique Fédérale de Lausanne *February 2012–May 2012*
  Undergraduate level class on Discrete Optimization

- **Teaching Assistant**
  École Polytechnique Fédérale de Lausanne *September 2011–December 2011*
  Undergraduate level class: Geometry and Mathematics for Architects

- **Teaching Assistant**
  École Polytechnique Fédérale de Lausanne *February 2011–May 2011*
  Undergraduate level class on Linear Algebra

- **Teaching Assistant**
  École Polytechnique Fédérale de Lausanne *September 2010–December 2010*
  Undergraduate level class: Geometry and Mathematics for Architects

- **Teaching Assistant**
  École Polytechnique Fédérale de Lausanne *February 2010–May 2010*
  Undergraduate level class on Graph Theory

- **Teaching Assistant**
  École Polytechnique Fédérale de Lausanne *February 2010–May 2010*
  Undergraduate level class on Linear Algebra

- **Teaching Assistant**
  École Polytechnique Fédérale de Lausanne *September 2009–December 2009*
  Undergraduate level class: Geometry and Mathematics for Architects

- **Teaching Assistant**
  École Polytechnique Fédérale de Lausanne *February 2009–May 2009*
  Undergraduate level class on Graph Theory

- **Teaching Assistant**
  École Polytechnique Fédérale de Lausanne *September 2008–December 2008*
  Undergraduate level class on Linear Algebra

- **Teaching Assistant**
  École Polytechnique Fédérale de Lausanne *September 2008–December 2008*
  Undergraduate level class on Discrete Mathematics

- **Teaching assistant**
  Simon Fraser University *September 2006–June 2008*
  Introduction to Computing Science/Programming, Database Systems

Professional Skills

- **Cloud:** AWS Certified Developer - Associate
- **Databases:** Cloud Firestore, MS SQL, MySQL, PostgreSQL
- **Programming Languages:** C, C++, C#, Java, Javascript, Kotlin, Pascal, Python
- **Software:** Git, IntelliJ IDEA, LaTeX, MS Excel, PyCharm, Retool, Visual Studio Code

Language Skills

- *Slovak* (native), *English* (fluent), *French* (passive), *German* (passive)

References

Prof. János Pach

Alfréd Rényi Institute of Math.   E-mail: pachjanos@gmail.com
Hungarian Academy of Sciences
Reáltanoda utca 13-15
Budapest, Hungary

Prof. Gábor Tardos

Alfréd Rényi Institute of Math.   E-mail: tardosgabor@gmail.com
Hungarian Academy of Sciences
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Budapest, Hungary

Prof. Csaba D. Tóth

California State University   E-mail: csaba.toth@csun.edu
Room SN 434, 18111 Nordhoff St.
Northridge, CA, USA

Prof. Maria Chudnovsky

Princeton University   E-mail: mchudnov@math.princeton.edu
211 Fine Hall
Princeton, NJ, USA

Prof. Uli Wagner

IST Austria   E-mail: uli@ist.ac.at
Am Campus 1
Klosterneuburg, Austria

Prof. Marcus Schaefer

DePaul University   E-mail: mschaefer@cdm.depaul.edu
1 E Jackson Blvd.
Chicago, IL, USA

Prof. Andrew Suk

UCSD   E-mail: andrew.h.suk@gmail.com
9500 Gilman Dr.
La Jolla, CA, USA