

# Pavel Rytir, Ph.D.

## curriculum vitae

Center for Algorithms and Interactive Scientific Software  
The City University of New York  
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### Summary

I received my Ph.D. from the Charles University in Prague in 2013. I am currently a computer scientist working as a postdoctoral researcher at the City University of New York. My research is a combination of computer science, combinatorics, topology, coding theory and statistics.

### Education

Charles University in Prague, Czech Republic. 10/2007 – 07/2013  
Faculty of Mathematics and Physics.  
**Ph.D. in Computer Science.**

Charles University in Prague, Czech Republic. 10/2001 – 05/2007  
Faculty of Mathematics and Physics.  
**M.S. in Computer Science, Discrete Mathematics and Optimization.**

### Work experience

**Postdoctoral scientific researcher** 01/2014 – to date  
Center for Algorithms and Interactive Scientific Software, The City University of New York.  
Research topic: Approximations algorithms, permanent bounds, convex optimization.

**Junior scientific researcher** 10/2007 – 12/2013  
Department of Applied Mathematics, Charles University in Prague.

**Java developer and analyst** 02/2007 – 10/2013  
1.PF s.r.o., Prague, Czech Republic  
Developing web applications in banking and educational industry, Java, Tomcat, Oracle, Firebird DB.

### Computer skills

Java, C++, Python, SQL, web-dev, linux

### Professional service

Organizer of Midsummer Combinatorial Workshop XVIII, Prague. 2012  
Organizer of Midsummer Combinatorial Workshop XV, Prague. 2009

## Seminar talks

Polytechnic University of Catalonia, Barcelona, Spain.	November 2012
Simon Fraser University, Burnaby, Canada.	November 2011
Center for Nonlinear Studies, Los Alamos National Lab., USA.	February 2011

## Teaching experience

Teaching assistant at Charles University, Prague.

- Discrete Mathematics Fall 2007, 2008, 2009, 2012
- Combinatorics and Graph Theory I Spring 2008, 2009, 2013

Adjunct assistant professor at the City University of New York.

- Discrete Mathematical Structures Spring, Fall 2015, 2016
- Introduction to Computing in C++ Fall 2015
- Computability Spring 2016

## Languages

English: fluent

Czech: native

## Papers in refereed journals

- P. Rytíř. Geometric representations of linear codes.  
*Advances in Mathematics* 282 (2015) 1–22.
- P. Rytíř. Geometric representations of binary codes and computation of weight enumerators.  
*Advances in Applied Mathematics* 45 (2010) 290–301.

## Papers in refereed conference proceedings

- M. Loeb and P. Rytíř. Binary linear codes, dimers and hyperdeterminants.  
*10th Random Generation of Combinatorial Structures (GASCom)*, (2016).

## Theses

- P. Rytíř. Geometric and algebraic properties of discrete structures.  
PhD thesis, Faculty of Mathematics and Physics, Charles University in Prague, 2013.  
<http://kam.mff.cuni.cz/~rytir/papers/rytirphdthesis.pdf>

## Papers submitted for publication

- P. Rytíř. Geometric representations of binary codes embeddable in three dimensions.  
*Preprint, arXiv*, 1212.1056, 2012.