

Sarka Petrickova

petrckv2@illinois.edu

- CURRENT POSITION** *Lecturer in the Department of Mathematics, since Fall 2017*
University of Illinois at Urbana-Champaign
- EDUCATION** *Ph.D. in Mathematics, University of Illinois at Urbana-Champaign, 2012 – 2017*
Adviser: Prof. Jozsef Balogh
Doctoral Thesis: Extremal problems on counting combinatorial structures
- PhD in Applied Mathematics, University of West Bohemia (UWB), 2010 – 2017*
Adviser: Prof. Tomas Kaiser
Doctoral Thesis: Chromatic graph theory
- MS in Mathematics, UWB, 2008 – 2010*
Master's Thesis: Combinatorial Game Theory
Adviser: Prof. Tomas Kaiser
Graduated with honors, Dean's award
- BS in Applied Mathematics, UWB, 2005 – 2008*
Bachelor's Thesis: Existence of periodic solutions of nonlinear oscillator models in two dimensions
Graduated with honors, Dean's award
- TEACHING** *Teaching Assistant at UIUC:*
Fall 2016: MATH 231 E (Calculus II, Engineering Section)
Fall 2015: MATH 231 E (Calculus II, Engineering Section)
Spring 2015: MATH 231 (Calculus II) - head TA
Fall 2014: MATH 231 E (Calculus II, Engineering Section)
Spring 2013: CS 173 (Discrete Structures)
Fall 2012: MATH 221 (Calculus I)
Spring 2012: MATH 234 (Calculus for Business)
I appeared on the 'List of teachers ranked as excellent by their students' every semester except Spring 2012. In Fall 2016, I received a star (outstanding ratings).
- Teaching Assistant at UWB:*
Fall 2011: Linear Algebra; Calculus I; Seminar for Calculus I
Spring 2011: Fundamental Mathematics II
Fall 2010: Calculus I
- VOLUNTEER EXPERIENCE** *Tutor for the Education Justice Project, Fall 2013 – Spring 2014*
General tutoring and co-organizing math workshops in Danville Correctional Center
- FELLOWSHIPS** *Dr. Lois M. Lackner Mathematics Fellowship, Fall 2013, Spring 2014, Spring 2015, Spring 2016*
- Scholarship from The EEA Grants and Norway Grants, Fall 2009*

PUBLICATIONS *Typical Structure of maximal triangle-free graphs*,
J. Balogh, H. Liu, S. Petrickova, M. Sharifzadeh, Forum of Mathematics, Sigma,
Vol. 3, e20, 2015.

The number of the maximal triangle-free graphs,
J. Balogh, S. Petrickova, Bull. London Math. Soc. (2014) 46 (5): 1003–1006.

A note on list-coloring powers of graphs,
N. Kosar, S. Petrickova, B. Reiniger, E. Yeager, Discrete Mathematics, Vol. 332,
October 2014, 10-14.

Online Ramsey Theory for Planar Graphs,
S. Petrickova, Electron. J. Combin., 12(1), 2014.

Coloring fractional powers of graphs,
S. Hartke, H. Liu, S. Petrickova, accepted to JGT, arXiv:1212.3898.

Families in posets minimizing the number of comparable pairs,
J. Balogh, S. Petrickova and A.Z. Wagner, submitted.

On the periodic motion of a generalized oscillator in two dimensions,
S. Petrickova, P. Necsai, Journal of Interdisciplinary Mathematics, Issue 02, Vol. 12,
2009.

ACADEMIC Workshop *Probabilistic and Extremal Combinatorics*, ETH Zurich, Switzerland, May
EXPERIENCE 23–27, 2016.

Conference *Random Structures and Algorithms*, Pittsburgh, PA, July 27–31, 2015
Contributed talk: ‘Number of maximal triangle-free graphs’

Czech-Slovak Graph Theory Conference, Boží Dar, June 1–5, 2015
Contributed talk: ‘Maximal triangle-free graphs’

AMS Sectional Meeting, Special Session ‘Extremal and Structural Graph Theory’,
Las Vegas, NE, Apr 18–19, 2015
Contributed talk: ‘Number of maximal triangle-free graphs’

AIM workshop *Graph Ramsey theory*, Palo Alto, CA, January 26–30, 2015

Conference *Sum(m)it:240*, Budapest, Hungary, July 7–11, 2014
Contributed talk: ‘Choosability of Graph Powers’

Czech-Slovak Graph Theory Conference, Teplice n.B., Czech Rep., June 9–13, 2014
Contributed talk: ‘Coloring fractional powers of graphs’

Conference *EXCILL2: Extremal Combinatorics at Illinois 2*, March 16–18, 2013,
University of Illinois Urbana-Champaign, USA.

Midwestern Graph Theory LIII Conference, Iowa State University, September 2012
Contributed talk: ‘On the coloring of fractional powers of graphs’

Workshop *Cycles and Colourings*, Nový Smokovec, Slovakia, September 2011
Contributed talk: ‘Online Ramsey games on planar graphs’

REGS in Combinatorics, UIUC, Summer 2011
Working mainly on ‘On the coloring of fractional powers of graphs’

Research stay, University of Ljubljana, January 2011
Cooperation with Prof. Riste Škrekovski on vertex suppression in 3-connected graphs

International Conference on Advances in Interdisciplinary Statistics and Combinatorics, University of North Carolina at Greensboro, October 2007
Presentation: ‘On the periodic motion of a generalized oscillator in two dimensions’

**OTHER
EXPERIENCE**

PI4 – Computational Bootcamp, UIUC, May 26 – June 9, 2017

Scientific internship: Data Analysis in Biological Sciences, NCSA, Summer 2016 and 2017

Mentor: Dr. David LeBauer

Certificate program *Industrial Design*, UWB, 2010

Objective: 3D Modelling, Industrial Design, Ergonomics, Final Project

Study stay, University of Tromso, Norway, Fall 2009

Courses: Continuum Models, Fishing Vessel Designs and Technology, Norwegian

**COMPUTER
SKILLS**

basics: Microsoft Office, L^AT_EX, HTML

programming: Matlab, Mathematica, Python, R, Java

graphics editors: GIMP, Corel, Photoshop

3D modellers: CATIA, Rhino

INTEREST

running, dancing, traveling