

## CV- Boštjan Brešar

### Personal data

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### Affiliation

- University of Maribor, Faculty of Natural Sciences and Mathematics, Slovenia
- Institute of Mathematics, Physics and Mechanics, Ljubljana, Slovenia

### Education

- BS in Applied Mathematics, University of Ljubljana, 1994
- MS in Computer Science, University of Maribor, 1998
- Ph.D. in Mathematics, University of Maribor, 2000

### Positions

1996 - 2001: assistant for mathematics (University of Maribor);

2001-present: professor for mathematics (University of Maribor);

since 2011: full professor for mathematics (University of Maribor)

### Professional duties

- 2011-present: member of the Senate at Faculty of Natural Sciences and Mathematics, University of Maribor
- 2012-2016: deputy dean for research and graduate studies (Faculty of Natural Sciences and Mathematics, University of Maribor)
- 2016- present: deputy dean for research and international affairs (Faculty of Natural Sciences and Mathematics, University of Maribor)
- Memberships in **committees** at University of Maribor: Scientific research committee (since 2012), Graduate studies committee (since 2012), Statute committee (2015-2017), International and inter-university cooperation (since 2016)

**Research statement:** various branches of graph theory and combinatorics with emphasis on metric graph theory, graph products, graph classes, graph invariants (domination, packing, coloring), games on graphs, partially ordered sets, and algorithmic issues.

**Scientific publications:** Over 100 scientific papers published in international mathematical journals.

### Book chapter

B. Brešar, M. Kovše, A. Tepeh, Geodetic sets in graphs, in: M. Dehmer ed., *Structural Analysis of Complex Networks*, Birkhäuser, Boston (2010), 197-218.

### Editorial work:

- Section Editor for *Discrete Mathematics and Theoretical Computer Science*, since 2015
- Guest Editor for the special issue of *Discrete Applied Mathematics*; »Algorithmic Graph Theory on the Adriatic Coast», Volume 231, Pages 1-234 (2017)
- Member of the Editorial board of *Discussiones Mathematicae, Graph Theory*, since 2017

## **PhD students**

Former:

- Aleksandra Tepeh (Horvat), 2009
- Tadeja Kraner Šumenjak, 2009
- (Karl Benkič, co-supervised, 2010)
- Tanja Gologranc, 2013
- Tim Kos, 2019

Current:

- Jasmina Ferme (since 2016)
- Daša Štesl (since 2017)

## **Conference scientific committees:**

- Indo-Slovenia Conference on Graph Theory and Applications (Indo-Slov-2013), Trivandrum, 2013
- 1st Conference on Algorithms and Discrete Applied Mathematics (CALDAM 2015), Kanpur, 2015
- Algorithmic Graph Theory on the Adriatic coast (AGTAC 2015), Koper, 2015
- 2nd Conference on Algorithms and Discrete Applied Mathematics (CALDAM 2016), Trivandrum, 2016
- 3rd Conference on Algorithms and Discrete Applied Mathematics (CALDAM 2017), Goa, 2017
- 30th Ljubljana - Leoben Graph Theory Seminar, Maribor, 2017
- 4th Conference on Algorithms and Discrete Applied Mathematics (CALDAM 2018), Guwahati, 2018
- 5th Conference on Algorithms and Discrete Applied Mathematics (CALDAM 2019), Kharagpur, 2019

## **Organizing committees of conferences:**

- 5th Slovenian International Conference on graph Theory, Bled, June, 2003
- 28th Ljubljana - Leoben Graph Theory Seminar, Koper, Sept., 2014
- 8th Slovenian Conference on graph Theory, Kranjska Gora June, 2015
- 30th Ljubljana - Leoben Graph Theory Seminar, Maribor, Sept., 2017
- 9th Slovenian Conference on graph Theory, Bled, June, 2019

## **Referee**

- Serving regularly as the referee (over 20 journals in mathematics).
- Serving as the reviewer for Mathematical Reviews (MathSciNet).

## **Research projects led**

- ARRS, Slovenia: Z1-3073 Structural and algebraic properties of graph classes; 2001-2004
- ARRS, Slovenia: J1-2043 Graphs and related mathematical structures; 2009-2012
- ARRS, Slovenia: J1-9109 Contemporary invariants of graphs; 2018-2021

## **Bilateral projects led**

- University P.J.Safarik (Kosice, Slovakia) 2008-2009 and 2010-2011
- Université de la Méditerranée (Marseille, France); 2010-2011
- University of Buenos Aires, (BA, Argentina); 2012-2014
- Université Bordeaux 1 (Bordeaux, France); 2013-2014
- Université du Bourgogne (Dijon, France); 2018-2019
- Trinity college (Hartford, CT, USA); 2019-2021

**Invited talks at institutions:** University of Leoben (2000, 2004), Hereditarnia Club, University of Zielona Gora (2004) University of Košice (2006, 2009), Clemson University (2008), University of Vienna (2012)

**Invited talk** at the event "Odlični v znanosti 2013" ("Excellent in Science 2013") organized by the Slovenian Research Agency (ARRS), Ljubljana, December 2014.

#### **Invited talks at conferences**

- Algebraic Graph Theory 2009, invited talk at 'Gert Sabidussi is 80', Dubrovnik, Croatia, June 2009
- International Conference on Recent Trends in Graph Theory and Combinatorics, invited talk at minisymposium, Cochin, India, August 2010.
- 7th Slovenian International Conference on Graph Theory, invited speaker and organizer of a minisymposium, Bled, Slovenia, June 2011
- *Quinto Seminario de la Red Latinoamericana Optimización Discreta y Grafos: Algoritmos y Aplicaciones*, invited talk, Universidad Nacional de General Sarmiento, Buenos Aires, Argentina, November 2012
- Indo-Slovenia Conference on Graph Theory and Applications, invited speaker, Trivandrum, Indian, February 2013
- CSASC 2013 Joint Mathematical conference, invited talk at a minisymposium, Koper, Slovenia, June 2013
- 23<sup>rd</sup> Workshop on Cycles and Colourings, invited plenary talk, High Tatras, Slovakia, September 2013
- 26<sup>th</sup> Workshop '3in1', invited talk, Dosłonce, Poland, October 2017
- International Conference on Discrete Mathematics, invited talk, Salem, Tamil Nadu, India, January 2018
- Conference ICDM 6, invited talk, Tiruchirapalli, India, December, 2018
- 18 Workshop on Graph Theory - CID, Piechowice, Poland, September, 2019

**Awards:** Slovenian national award ("Zoisovo priznanje") for important scientific achievements in graph theory; 2019.

#### **Selected publications:**

1. BREŠAR, Boštjan. On the natural imprint function of a graph. *European journal of combinatorics*, ISSN 0195-6698, 2002, vol. 23, no. 2, 149-161.
2. BREŠAR, Boštjan. Intersection graphs of maximal hypercubes. *European journal of combinatorics*, ISSN 0195-6698, 2003, vol. 24, no. 2, 195-209.
3. BREŠAR, Boštjan. Vizing-like conjecture for the upper domination of Cartesian products of graphs - the proof. *The Electronic journal of combinatorics*, ISSN 1077-8926. [Online ed.], 2005, vol. 12(1), n 12 (6 p.).
4. BREŠAR, Boštjan, KLAVŽAR, Sandi, RALL, Douglas F. On the packing chromatic number of Cartesian products, hexagonal lattice, and trees. *Discrete applied mathematics*, ISSN 0166-218X. [Print ed.], 2007, vol. 155, iss. 17, 2003-2311.
5. BREŠAR, Boštjan, HENNING, Michael A., RALL, Douglas F. Rainbow domination in graphs. *Taiwanese journal of mathematics*, ISSN 1027-5487, 2008, vol. 12, no. 1, p.213-225.
6. BREŠAR, Boštjan, RALL, Douglas F. Fair reception and Vizing's conjecture. *Journal of graph theory*, ISSN 0364-9024, 2009, vol. 61, no. 1, 45-54.
7. BREŠAR, Boštjan, KLAVŽAR, Sandi, RALL, Douglas F. Domination game and an imagination strategy. *SIAM journal on discrete mathematics*, ISSN 0895-4801, 2010, vol. 24, no. 3, 979-991.
8. BREŠAR, Boštjan, KARDOŠ, František, KATRENIČ, Jan, SEMANIŠIN, Gabriel. Minimum k-path vertex cover. *Discrete applied mathematics*, ISSN 0166-218X. [Print ed.], 2011, vol. 159, iss. 12, 1189-1195.

9. BREŠAR, Boštjan, CHALOPIN, Jérémie, CHEPOI, Victor, GOLOGRANC, Tanja, OSAJDA, Damian. Bucolic complexes. *Advances in mathematics*, ISSN 0001-8708, 2013, vol. 243, 127-167.
10. BREŠAR, Boštjan. Vizing's conjecture for graphs with domination number 3 - a new proof. *The Electronic journal of combinatorics*, ISSN 1077-8926. [Online ed.], 2015, vol. 22, iss. 3, p3.38 (8 str.).
11. BREŠAR, Boštjan. Improving the Clark-Suen bound on the domination number of the Cartesian product of graphs. *Discrete Mathematics*, ISSN 0012-365X. [Print ed.], 2017, vol. 340, iss. 10, str. 2398-2401.
12. BREŠAR, Boštjan, FERME, Jasmina. An infinite family of subcubic graphs with unbounded packing chromatic number. *Discrete Mathematics*, ISSN 0012-365X. [Print ed.], Aug. 2018, vol. 341, iss. 8, str. 2337-2342.
13. BONOMO, Flavia, BREŠAR, Boštjan, GRIPPO, Luciano, MILANIČ, Martin, SAFE, Martin Dario. Domination parameters with number 2 : interrelations and algorithmic consequences. *Discrete applied mathematics*, ISSN 0166-218X. [Print ed.], Jan. 2018, vol. 235, str. 23-50.
14. BREŠAR, Boštjan, KOS, Tim, KRIVOŠ-BELLUŠ, Rastislav, SEMANIŠIN, Gabriel. Hitting subgraphs in P4-tidy graphs. *Applied mathematics and computation*, ISSN 0096-3003. [Print ed.], July 2019, vol. 352, str. 211-219.

DECEMBER, 2019