

## CURRICULUM VITAE

**Dr. Mária Ždímalová**  
**Znievská 21, 851 06 Bratislava, Slovakia**  
**Date of birth: 16.10.1979**  
**Place of Birth: Nitra**  
**tel.: 00421 908 540 162**  
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### Education:

- 2010            November, Ph.D. Degree, Applied Mathematics, Slovak  
University of Technology in Bratislava, Faculty of Civil Engineering  
Department of Mathematics and Descriptive Geometry, Slovakia  
Title of the Dissertation: *Large vertex – transitive and Cayley graphs  
and digraphs of given degree and diameter*  
Advisor: prof. RNDr. Jozef Širáň, DrSc.
- 2003 – 2009    Ph.D. Studies at Slovak University of Technology in Bratislava,  
Slovakia, Faculty of Civil Engineering, Department of  
Mathematics and Descriptive geometry
- 2003            MSc. Degree, Comenius University in Bratislava,  
Slovakia, Faculty of Mathematics, Physics and Computer Science
- 1998 – 2003    Master Studies, Comenius University in Bratislava,  
Slovakia, Faculty of Mathematics, Physics and Computer Science

### Additional information on education:

- 2006 – 2007    E - learning courses from Projective Geometry and Chapters  
for Teaching of the Mathematics – certificates, Comenius University in  
Bratislava, Faculty of Mathematics, Physics and Computer Science

### Researcher stays:

- 2004 –            Univerity of Ostrava, Ostrava, Czech Republic (one month)
- 2010 –            Universidad Polytechnica de Catalunya, Barcelona, Spain (one week,  
November), hosted by prof. Camino Balbuena
- 2011 –            Universidad Polytechnica de Catalunya, Barcelona, Spain (one week  
January), hosted by prof. Camino Balbuena
- 2013 –            Universidad Polytechnica de Catalunya, Barcelona, Spain (one week  
June), hosted by prof. Camino Balbuena
- 2013 –            Universidad Polytechnica de Catalunya, Barcelona, Spain (one week  
October), hosted by prof. Camino Balbuena

2014 – University in Lleida, Research and Teacher stay in the University in Lleida, Spain, (one week, November), hosted by Dr. Nacho Lopez, supported by the Spain mobility Grant supported by La Caixa Bank in Spain

2015 - Karadeniz University in Trabzon, Turkey, Research and Teacher stay hosted by prof. Funda Karadzal, Dr. Bahadır Özgür Güller (one week April), supported by ERASMUS + Program

2015 – University in Lleida, Research and Teacher stay in the University in Lleida, Spain, (one week, November), hosted by Dr. Nacho Lopez, supported by the Erasmus + Program

2016- University UNAM Mexico, Institute of Mathematics UNAM, Mexico City, Institute of Applied Mathematics UNAM Mexico City, Institute of Mathematics, Campus, Juriquia, Querretaro, Research and teacher stay, 1 month, August, hosted by prof. Gabriela Araujo Pardo

- 2017- Ghent University, Faculty of Engineering and Architecture, Department of Math. Analysis, Erasmus + Project, one week, May 2017

### **Employment history:**

2009 – Researcher at Slovak University of Technology in Bratislava, Faculty of Civil Engineering, Dept. of Mathematics and Descriptive Geometry; Teaching: *Calculus I, II, Calculus for Architectures (Faculty of Architecture) Calculus for Geodesy, Graph Theory (Mathematical - Computing Modelling)*

Lecture: *Calculus I for Architecture (Faculty of architecture) Mathematics in Architecture*

Teaching in English: *Mathematics for foreigners*

2004 – 2004 Teacher of Mathematics, 1st Private Gymnasium in Bratislava, Slovakia

2015- Mathematic for architectures, Academy of fine Arts, Department of Architecture

2014 – University in Lleida, Spain, Teaching in the University in Lleida, Master Degree, during the Spain Mobility program

2015 – Karadeniz Technical University in Trabzon, Faculty of Science, Math Department Turkey, 8 lectures from Graphs theory and Group theory, Mathematical days with Maria Zdimalova, Erasmus + Program

2016-Algebraic graph Theory-Teaching Course-Mexico, Querretaro, 2016

## **Language skills**

English – advanced  
German – intermediate  
Czech – advanced

## **Programming skills:**

LaTeX (advanced), C (beginners), OS Windows (advanced), OS Linux (advanced), Nauty (beginners), Gephi

## **Professional Activities:**

- 2011 Member of the committee in the international Czech – Slovak student university competition ŠVOČ 2011 in Mathematics and Computer Science, (graph theory section) in Ústí nad Labem, Czech Republic.
- 2012 Organizer of the international Czech – Slovak student university competition ŠVOČ 2012 in Mathematics and Informatics, Slovak University of Technology in Bratislava
- 2013 Organizer of the seminar: 12.04. 2013 – 13.04. 2013 Seminar of Mathematical and Computing Modeling, Slovak University of Technology
- 2013 Organisation of the international conference GEMS 2013 in Smolenice (Graphs, Maps and their Symmetries)
- 2014 - Organizer of the seminar: 7. 2. 2014 – 8.2. 2014 Seminar of Mathematical and Computing Modeling, Slovak University of Technology
- 2017- Member of the committee in the international Czech – Slovak student university competition ŠVOČ 2017 in Mathematics and Computer Science, (algebra and geometry section) in Pilsen, Czech Republic.

## **Members:**

- Member of the Union of Slovak Mathematicians and Physicists
- Member of the Slovak Mathematics Company
- Member of European Women in Mathematics

## **Editorial board:**

- Member of editorial board of international journal Indonesian Journals of Combinatorics

## **Students' Promotion Activities:**

2011 – 2012 BSc. Tomáš Bohumel, Bachelor Thesis, Graph Cutting and their applications

- 2012 in image processing (common work with doc. RNDr. Zuzana Krivá, PhD.)  
BSc. Tomáš Bohumel, Using Graph Algorithms for finding max flow  
in networks and their applications in image processing, students university  
competition ŠVOČ 2012 FCE STU in Bratislava, Slovakia
- 2012 BSc. Tomáš Bohumel, Using Graph Algorithms for finding max flow  
in networks and their applications in image processing, international Czech -  
Slovak competition ŠVOČ 2012 in Bratislava, FCE STU in Bratislava, Slovakia
- 2014 BSc. Richard Rožňovjak, Bachelor Thesis, Data Mining of Networks  
represented by Graphs
- 2015 Jozef Major, Simultaneous annealing and its application in the graph  
theory problems, , students university competition ŠVOČ 2012 FCE STU in  
Bratislava, Slovakia
- 2015 Jozef Major, Simultaneous annealing and its application in the graph  
theory problems, , students international Czech-Slovak University competition  
ŠVOČ 2012 FMFI UK in Bratislava, Slovakia,
- 2015 Jozef Major, Bachelor Thesis, Simultaneous annealing and its application in the  
graph theory problem, FCE STU in Bratislava, Slovakia
- 2016 Richard Rožňovjak, Using of Graph algorithms in image processing using  
intelligent scissors, Diploma Thesis

### **Personal qualities and hobbies:**

Communicative, flexible, creative and responsible.  
I like working with people and teaching young people.  
I enjoy travelling and learning new things, playing piano.

### **List of Publications:**

- [z1] M. Ždímalová, Diameter-two lifts of dipoles, in: MAGIA 2004 Proceedings,  
FCE STU Bratislava, ISBN 80-227-2165-4 (2004), pp. 119-123.
- [z2] M. Ždímalová, Which Kautz digraphs of diameter two are Cayley digraphs?,  
Proc. Int. Conf. 70 Years of FCE STU, Bratislava, ISBN 978-80-227-2979  
(2008).
- [z3] Ľ. Staneková, M. Ždímalová, Line-digraphs and Faber-Moore-Chen digraphs, in:  
MAGIA 2009 Proceedings, FCE STU Bratislava, ISBN 978-80-227-3207-9  
(2009), pp. 117-120.
- [z4] M. Ždímalová, Ľ. Staneková, Asymptotic comparison of two constructions for  
large digraphs of given degree and diameter, Acta Math. Univ. Ostraviensis 17,  
2009, pp. 5-9.
- [z5] M. Ždímalová, Revisiting the Comellas-Fiol-Gómez constructions of large  
digraphs of given degree and diameter, Discrete Mathematics 310 (9), 2010,  
pp. 1439-1444.
- [z6] M. Ždímalová, Ľ. Staneková, Which Faber-Moore-Chen digraphs are Cayley  
digraphs?, Discrete Mathematics 310 (17-18), 2010, pp. 2238-2240.

- [z7] M. Ždímalová, M. Olejár, Large Cayley digraphs of given degree and diameter from sharply t-transitive groups, *Australasian Journal of Combinatorics*, 47 (2010), pp. 211-216.
- [z8] Ľ. Staneková, M. Ždímalová, Computer results on the size of the automorphism group of Comellas-Fiol digraphs. In: P. Struk, *MAGIA 2010 : Mathematics, geometry and their applications. Conference Proceedings*. Kočovce, SR, 12.-14.11.2010. Bratislava: STU v Bratislave SvF, 2010, pp. 75--80. ISBN 978-80-227-3423-3.
- [z9] M. Ždímalová, A note on large Cayley graphs of diameter two and given degree, *Acta Politechnica Hungarica, Acta Polytechnica Hungarica* 8(3), pp. 57--64. ISSN 1785-8860, 2011.
- [z10] M. Ždímalová, Large vertex-transitive and cayley graphs and digraphs of given degree and diameter. Bratislava: STU v Bratislave SvF, 2011. 98 pp. ISBN 978-80-227-3449-3 [MONOGRAPH]
- [z11] J. Širáň, J. Šiagiová, M. Ždímalová, Large graphs of diameter two and given degree. In *IWONT 2010 : Proceedings.3rd International Workshop on Optimal Network Topologies*. Barcelona, 9.-11.6.2010. Barcelona: Universitat Politecnica de Catalunya, 2011, s. 347--359. ISBN 978-84-7653-565-3., 2011.
- [z12] M. Ždímalová, Ľ. Staneková, Large digraphs of given diameter and degree from coverings. In: *IWONT 2010: Proc. 3rd International Workshop on Optimal Network Topologies*. 9.-11.6.2010. Barcelona: Universitat Politecnica de Catalunya, 2011, pp. 373--378. ISBN 978-84-7653-565-3.
- [z13] Ľ. Staneková, M. Ždímalová, The automorphism group of Comellas Fiol digraphs, *AKCE International Journal of Graphs and Combinatorics* 9(2), 2012, pp. 187--193. ISSN 0972-8600.
- [z14] Bacigál Tomáš, Korbašová Michaela, Villim Andrej, Ždímalová Mária, Variance Components Estimate in 2D Geodetic Network. In *INGEO 2004 - 3rd International Conference on Engineering Surveying : FIG Regional Central and Eastern European Conference/November 11-13, 2004*. Bratislava, Slovakia. Bratislava: International Federation of Surveyors, 2004, ISBN 87-90907-34-5.
- [z15] M. Ždímalová, Netradičný prístup k Vyučovaniu matematiky, In: *PYTAGORAS 2004, Zborník príspevkov, Kováčová pri Zvolene, 3. - 10.7 2004, Zvolen, Jednota Slovenských matematikov a fyzikov*, ISBN 80-89194-X, (2004), 125.-129. (Slovak).....Nontraditional approach fot teaching of mathematics
- [z16] M. Ždímalová, Poznávame zmysly a zmyslami, In: *Pytagoras 2006, Letná škola z teórie vyučovania matematiky, Hronec, 2.7-9.7. 2006, Zborník Príspevkov, Vydavateľ P-MAT, n.o., Bratislava, (2006), 110.*(Slovak)  
Lerning by ourself and mathematics

- [z17] M. Gondová, M. Ždímalová, Nontraditional approach for teaching science. In PYTAGORAS 2009 : Summer school for theory of education, /Hronec pri Brezne, 4.-11.7.2009. Bratislava: P-MAT, n.o., 2009, s. 37--41. ISBN 978-80-89370-01-6.(Slovak)
- [z18] C. Balbuena, M. Miller, J. Širáň, M. Ždímalová, Large vertex-transitive graphs of diameter two from biaffine planes, Discrete Mathematics, in press.  
C. Balbuena, M. Miller, J. Širáň, Camino Balbuena, Large vertex-transitive graphs of diameter 2 from incidence graphs of biaffine planes. Discrete Mathematics, (19): 2014-2019 (2013)
- [z19] M. Ždímalová, A note on the construction of large graphs and diagraphs of given degree and diameter, In Uncertainty Modelling 2013 : Proceedings. Bratislava, SR, 10.10.2013. Bratislava: Printers STU, 2013, s. 73--78. ISBN 978-80-227-4067-8.
- [z20] M. Ždímalová, Reseach stay in UPC Barcelona. Spektrum : periodikum Slovenskej technickej univerzity v Bratislave Roč.20, č.2. zv. 2, s. 8. ISSN 1336-2593.  
Research stay in the UPC in Barcelona
- [z21] Bacigál, Ždímalová: Additive generators of copulas and Williamson's n transform, ZAMAT 2014, Proceeding from applied mathematics, ISBN 978-80-8959-17-8, UIAM FCHPT, STU v BRATISLAVE
- [z22] Ždímalová Mária, Krivá Zuzana, Bohumel Tomáš, Graph cuts in image processing, submitted in APLIMAT 2015, published 2015
- [z23] M Ždímalová, Mathematics and its application in architecture and urban design of selected parts of Mexico, Proceeding APLIMAT 2017
- [z24] Ždímalová Mária, Valéria Kocianová, Mathematics, art, Dizajn and Ekodizajn, Informácie III, Printer STU in Bratislave, 2015 (Mathematics, Art, Architecture, Design, Eco-Design), 2015
- [z25] Ždímalová M., Mathematics in Architecture, Design and Structure Engineering, Proceedings of Aplimat (in Scopus), Aplimat 2016, Conference on Applied mathematics 2016, February 2.-4.2016, Slovak University of Technology in Bratislava, Faculty of Mechanical Engineering, Vydavateľstvo STU in Bratislava, First Edition, pp. 1154-1163, ISBN 978-80-227-4531-4, 2016
- [z26] M. Ždímalová, R. Rožnovjak, Hisham El Falougy, P. Weismann, Using graph algorithm processing and image analysis for the processing of bio-medical data, Ladziansky Proceeding, Medical Faculty, Slovak Society for Anatomy, Anatómia v obrazoch histórie, PROPRINT s.r.o. , Bratislava, 2016, ISBN: 978-80-89747-07-87

[z27]G. Araujo-Padro, C. M. Balbuena, M. Miller, M. Ždímalová, A construction of dense mixed graphs of diameter 2, Electronic Notes of Discrete Mathematics 54, 2016

[z28]N. López, H. Pérez - Róses, G. Pujolás, M. Ždímalová, A variant of MacKay-Miller-Siran graphs for mixed graphs, Electronic Notes of Discrete Mathematics 54, 151-156, 2016

[z29]T. Bacigál, M. Ždímalová: Examples of Archimedean generators from the Williamson transform and why to use a linear approximation, Proceedings of Uncertainty Modelling 2015, Published by Jednota slovenských matematikov a fyzikov, Bratislava 2016, ISBN 978-80-89829-03-3, pp. 7-15, 2016

[z30] G. Araujo-Padro, Miller M., Balbuena C., Ždímalová M., A family of mixed graphs with large order and diameter  $2\sqrt{n}$ , Discrete applied mathematics, 10.1016/j.dam.2016.09.034

[z31]M. Ždímalová, L. Vavříková, Mathematics, Garden and Landscape Architecture, Proceeding APLIMAT 2017

[z32]M. Kopani, B. Filon, P. Sevik, D. Krasnac, J. Misek, S. Polak, M. Kohan, J. Major, M. Zdímalova, J. Jakus, Iron decomposition in rabbit cerebellum after exposure to generated and mobile GSM electromagnetic fields, Bratisl. Med. J. 2017, 118 (10), 575-579.

[z33]M. Zdímalova, R. Roznovjak, P. Weismann, El Falougy H, E. Kubikova, Use of graph algorithms in the processing and analysis of images with focus on the biomedical data, Bratisl. Med. J. 2017, 118 (8), 485-490.

[z34]G. Araujo-Padro, Miller M., Balbuena C., Ždímalová M., A family of mixed graphs with large order and diameter  $2\sqrt{n}$ , Discrete Applied Mathematics, 218, (2017), 57-63.

[z35] M. Ždímalová, Mathematics and its application in architecture and urban design of selected parts of Mexico, Proceeding APLIMAT 2017

### **Conference Talks:**

1. MAGIA 2004, Kočovce, Slovakia
2. ISCAM 2005, Bratislava, Slovakia
3. GRAPHS' 2008 Zadov, Czech Republic
4. CYCLES AND COLOURINGS 2008, Tatanská Štrba, Slovakia
5. ISCAMI' 09, Malenovice, Czech Republic
6. GRAPHS' 09, Terchová, Slovakia
7. CYCLES AND COLOURINGS 2009, Tatanská Štrba, Slovakia

8. MAGIA 2009, Kočovce, Slovakia
9. 70. VÝROČIE SvF STU Bratislava, 2009, Slovakia
10. ISCAMI' 010 Bratislava, Slovakia
11. IWONT 2010, Barcelona, Spain
12. MAGIA 2010, Kočovce, Slovakia
13. GRAPHS' 11, Šachtičky, Slovakia
14. IWONT 2011, Brussels, Belgium
15. IWONT 2012, Bandung, Indonesia
16. 8 – TH SYMPOZIUM ON GRAPH THEORY, 2013, Košice, Slovakia
17. ACCGT 2014, and Winter School from harmonic functions 2014, Sepetna, Czech Republic, 2014
18. IWONT 2014, A family of dense mixed Moore graphs of diameter two, common work with Gabriela Arraujo Pardo(Mexico), Mirka Miller(Australia and Czech Republic), Camino Balbuen(Spain)a, Bratislava, Slovakia, 2014
19. 19.12.2014 Seminar from Uncertainty Modeling 2014, Archimedean copulas and the Williamson Transform, common work with Tomáš Bacigál, STU in Bratislava, Bratislava, Slovakia, Department of Mathematics and Descriptive Geometry
20. APPLIMAT 2015, Slovak University of Technolgy in Bratislava, Sjf STU, Bratislava, January 2015, Graph cuts in image processing, common work wih doc. Zuzana Krivá, Bc. Tomáš Bohumel, 2015
21. COSENZA 2015, Mathematics in art, design and eco-eco design, Calabria University, Italy, talk by skype
22. Tomáš Bacigál, Mária Ždímalová: Archimedean copulas and Laplace transform, Uncertainty Modelling 2015, presented by Tomáš Bacigál
23. Aplimat 2016, Sjf STU in Bratislava, Mathematics in Architecture, Design, and Structure Engineering, Bratislava, Slovak
24. University of Technology in Bratislava, Faculty of Mechanical Engineering Slovakia, 2016
25. International Seminar from Uncertainty Modelling, Bratislava, 2.-3.6 2016, Mária Ždímalová (with Tomáš Bacigál): Approximation of Archimedean copulas via the Williamson transform
26. International Seminar from Uncertainty Modelling, Bratislava, 2.-3.6 2016, Mária Ždímalová (with Maddalena Manzi and Martin Kalina): Choquet integral based on extreme points
27. APLIMAT 2017, Mathematics and its application in architecture and urban design of selected parts of Mexico, APLIMAT 2017, Bratislava, 31.1.2017-2.1.2017, Slovakia

## Researcher stays:

- 2004 – Univerity of Ostrava, Ostrava, Czech Republic (one month)
- 2010 – Universitat Polytechnica de Catalunya, Barcelona, Spain (one week, November)
- 2011 – Universitat Polytechnica de Catalunya, Barcelona, Spain (one week January)



- 2013 – Universitat Polytechnica de Catalunya, Barcelona, Spain (one week June)
- 2013 – Universitat Polytechnica de Catalunya, Barcelona, Spain (one week October)
- 2014 – University in Lleida, Research and Teacher stay in the University in Lleida, Spain, (one week November)
- 2015 - Karadeniz Technical University, Faculty of Science, Math Department, University in Trabzon, Turkey,
  - Erasmus + Project, (one week April)
- 2015 – University in Lleida, Research and Teacher stay in the University in Lleida, Spain, (one week,
  - July), hosted by Dr. Nacho Lopez
- 2015 – University in Lleida, Research and Teacher stay in the University in Lleida, Spain, (one week,
  - December), hosted by Dr. Nacho Lopez
- 2016- University UNAM Mexico, Institute of Mathematics UNAM Mexico City, Institute of Applied Mathematics UNAM Mexico City, Institute of Mathematics, Campus
  - Juriquia, Querretaro, Research and teacher stay, 1 month, August, hosted by prof. Gabriela Araujo Pardo
- -Ghent University, Faculty of Architecture and Engineering,
  - Department of Mathematics Analysis, hosted by prof. Marian Slodicka

### **Talks at Seminars, Invited talks in the Universities and Summer schools:**

1. Nontraditional Approach for teaching mathematics (Summer School Pythagoras , Slovakia, 2004)
2. Bratislava's seminar on graph theory (2010)
3. Bratislava's seminar on graph theory (November 2011)
4. Seminar Barcelona (January 2011), COMGRAPH Seminar , UPC Barcelona, Spain
5. Lecture from history and philosophy of graph theory, students of Mathematical and Computer Modelling, FCE STU in Bratislava, 2012, Slovakia
6. Lecture about FG moduls and groups, Seminar, FCHPT, SVF STU in Bratislava, 2012, Bratislava, Slovakia
7. Graph Theory and its applications, Seminar for teachers and students of Mathematical and Computer Modelling, Bratislava, Slovakia, 2013
8. Lecture from history and philosophy of graph theory, students of Mathematical and Computer Modelling, FCE STU in Bratislava, 2013, Slovakia
9. Graph Theory, Seminar for teachers and students of Mathematical and Computer Modelling, Bratislava, Slovakia, 2014
10. Additive generators of copulas and Williamson „n“-transform, Seminar from uncertainty

- modelling, CVE, STU Bratislava, 2. April 2014
11. Graph Theory and its applications, students of Mathematical and Computer Modelling, Bratislava, Slovakia, 2014, (2 lectures)
  12. Invited talk, Seminar in Lleida, Covering technique in the degree diameter problem and Voltage assignment approach, University in Lleida, Spain, November 2014
  13. Invited talk, Extremal graphs of given degree and diameter, November 2014, Department de Mathematica, University in Lleida, Spain
  14. Karadeniz Technical University, Faculty of Science, Math Department, University in Trabzon, Turkey, 8 lectures from Graphs theory and group theory, Mathematical days with Maria Zdimalova, Erasmus + Program, The course devoted to the Graph Theory and Group Theory, Mathematical Days on Graph Theory with Maria Zdimalova, Math. Department. Trabzon, Turkey, April 2015
  15. Summer School from Discrete Mathematics, Summer 2015, July 2-18. 2015, University of Lleida, Catalunya, Spain, Erasmus + Program
  16. University UNAM Mexico City, Mexico Institute of Mathematics: Extremal graphs and digraphs of given degree and diameter, August 2016
  17. University UNAM Mexico City, Mexico Institute of Applied Mathematics, Example of Archimedean generators from the Williamson transform and why to use linear approximation, August 2016
  18. University UNAM Mexico City, Institute of Applied Mathematics, Mexico, Choquet integral based on extremal points, August 2016
  19. University UNAM, Institute of Mathematics, Campus Juriquija, Queretaro, Mexico, seminar Pregunton, Extremal graphs of given degree and diameter, August 2016
  20. University UNAM, Institute of Mathematics, Campus Juriquija, Queretaro, Mexico: teaching course: Algebraic Graph Theory, 4, 2016  
 days: <http://www.matem.unam.mx/actividades/otras-actividades/eventos-2016/juriquilla-curso-algebraic-graph-theory-y-seminario>
  21. Ghent University, Faculty of Architecture and Engineering, Department of Mathematics Analysis, hosted by prof. Marian Slodicka, Big graphs and digraphs of given degree and diameter, 2017

### **Referee's reports:**

1. MAGIA 2009, Tomáš Vetrík, A note on bipartite Cayley digraphs of diameter 3
2. MAGIA 2009, Šipošová Alexandra, Pareto optimality in multicriteria optimization on graphs, 2009

3. *Discussiones Mathematicae Graph Theory*, Štefan Gyürky, Goal-minimally  $k$ -diametric digraphs, in *Scopus*, 2010
4. *Discrete Mathematics*, Author: Zbigniew R. Bogdanowicz, Title: On Arc Reversal in Balanced Digraphs, in *Scopus*, 2010,
5. Referee's report for the grant for Young Researchers, 2010, Title: Dominácia v digrafoch, Dominantion in the graphs, Leaders: Mgr. Štefan Gyürky, PhD. , FCHPT STU, Bratislava
6. *Graphs and Combinatorics*, Y.O. Hamidoune, A. Lladó, S.C.López, On vosperian and superconnected vertex-transitive digraphs, in *Scopus*, 2011
7. Referee' s report for the students competition ŠVOČ 2011: Jaromir Sýs: Radially Moore graphs, Slovak Republic
8. Referee' s report for the students international Slovak-Czech competition ŠVOČ 2011: Jaromir Sýs: Radially Moore graphs
9. MAGIA 2011: Miroslav Sabo, Lucia Vavříková: Analysis of public universities and their faculties based on artificial neural networks
10. MAGIA 2011: Dávid Mesežnikov: Focused on lifts in the degree diameter proble
11. Diploma Thesis: Bc. Ján Kováč, Rozšíriteľnosť párení na grafoch, FMFI UK, Bratislava, 2012
12. *Algorithms 2012*, Xavier Desquesnes, Abderrahim Elmoataz and Olivier Lézoray, Generalized fronts propagation on weighted graphs, *Algoritmy 2012*
13. Dávid Mesežnikov, THE DEGREE-DIAMETER PROBLEM FOR ABELIAN CAYLEY AND BI-CAYLEY GRAPHS, *Advances in Architectural Civil and Enviromental Engineering*, 15.11.2012, Bratislava, Slovakia
14. Ladislav Šipeky, „Matematické problémy šachových súťaží“ , *Mathematical problems in chess*, MAGIA 2012, *Mathematics, geometry and their applications*, 2012
15. Tomáš Bohumel, referees report for Bachelor Thesis: Graphs algorithms for finding the shortest paths and their application in image processing, 2012, Bratislava, Slovakia
16. International Slovak-Czech Students Competition: Tomáš Bohumel, Graph cutting and its application in image processing and segmentation, 2012
17. Diploma Thesis: Jaromír Sýs, Dominantion in Cayley digraphs of Metacyclic groups, Slovak University of Technology, SvF, STU in Bratislave, 2013
18. Bachelor Thesis: Andrea Vranková, Spread of diseases in discrete structures, Slovak University of Technology, SvF, STU in Bratislave, 2013
19. *Discrete mathematics*, 2014

20. Australasian Journal of Graphs and Combinatorics, 2014
21. Referee's Report-Bachelor thesis on my student Richard Roznovjak: Data-mining of Networks represented by graphs
22. Discrete Mathematics: Graham Eskine, Diameter 2 Cayley graphs of Dihedral Groups, Scopus (english) (Scopus), 2014
23. Australasian Journal of Combinatorics, Jana Šiagiová, Approaching the mixed Moore bound for diameter two by Cayley graphs, Scopus (english), (Scopus), 2014
24. Zamat, FCHPT SvF STU, Martin Néhez, On Combinatorial Properties of Kolmogorov Random Binary Matrices, ZAMAT proceeding, 2014
25. Discrete Mathematics, Graham Eskine, Diameter 2 Cayley graphs of Dihedral Groups, Scopus (english) (Scopus), 2015
26. Jozef Major, Bachelor thesis, Final advisor report, Simultaneous annealing and its application in the graph theory problem

And many others.... **Referres activities:**

International journal: Graph and Combinatorics, Discrete Applied Mathematics, Australasian Journal of Combinatorics, Iranian Journal of Fuzzy Sets and Systems, others, Math Reviews(USA), Journal of Algebra.....

### **Grants:**

### **Erasmus + programs:**

July 2015: Summer School with Dr. Maria Zdimalova, University of Lleida, Catalunya, Spain, (one week)

April 2015: Mathematical days with Dr. Maria Zdimalova, Karadeniz Technical University in Trabzon, Turkey, (one week)

### **Spain: 2015: Mobility grant:**

Convocatoria del programa d'ajuts finançats per l'Obra Social la Caixa per afavorir la internacionalització de la UdL i l'estada de professorat d'institucions estrangeres, Universitat de Lleida, Spain, 2014, November

**Grant for young researchers of Slovak University of Technology in Bratislava:  
Large vertex-transitive and Cayley graphs  
of given degree and diameter**  
The leader ... 2010

**APVV – 0040 – 06: Veľké komunikačné siete s daným stupňom a priemerom**

**Big communication Networks of given degree and diameter**

Term: 1.1.2007-31.12.2009  
Coauthor, member of a team

**VEGA 1 / 0489 / 08: Topologické metódy štúdia diskretných štruktúr a ich  
grúp symetrií**

**Topological methods in discrete structures and their groups of  
symmetries**

Term: 1.1.2008-31.12.2010  
Coauthor, member of a team

**VEGA 1 / 0280 / 10: Extremálne grafy daného stupňa a priemeru, resp. obvodu  
s vysokým stupňom symetrie**

Extremal graphs of given degree and diameter, and girth with high  
symmetries

Term: 1.1.2010-31.12.2011  
Coauthor, member of a team

**VEGA 1/0871/11: Algebraické a topologické metódy v štúdiu kombinatorických  
štruktúr s vysokým stupňom súmernosti**

Algebraic and topological methods in combinatorial structures and their  
symmetries

Term: 1.1.2011-31.12.2013  
Coauthor, member of a team

**EuroGIGA ESF – EC – 0009 - 10: Geometrické reprezentácie a symetrie grafov,  
máp a iných diskretných štruktúr s aplikáciami vo vede.**

Geometric representation and symmetrie of graphs, maps and others  
discrete structures and their applications in science

Term: 1.5.2011-30.4.2014  
Coauthor, member of a team

## 1. Citation

In Scopus:

1. Citation of the work:

Tomáš Vetrík, Large Cayley digraphs of given degree and diameter, Discrete Mathematics 213 (2), 472-475, 2012

Citation in the work:

Ždímalová Mária, Staneková Lucia, Which Faber-Moore-Chen digraphs are Cayley digraphs? Discrete-Mathematics, 310, 17-18, 2238-2240.

2. citation in Scopus

1. Citation in the work: Ždímalová, Mária: Revisiting the Comellas-Fiol-Gómez constructions of large digraphs of given degree and diameter. In: Discrete Mathematics. - ISSN 0012-356X. - Vol. 310, Iss. 9 (2010), s. 1439-1444

Citation of the: Heather Macbeath, Jana Šiagiová, Jozef Širáň, Tomáš Vetrík, Large Cayley graphs and vertex-transitive non-Cayley graphs of given degree and diameter, Journal of Graph Theory, Volume 64, Issue 2, pages 87-98, June 2010

## 3. autocitation: 3 times:

Širáň, Šiagiová, Ždímalová,

Large graphs of diameter two and given degree. A: International Workshop on Optimal Networks Topologies. "Proceedings of the 3rd International Workshop on Optimal Networks Topologies IWONT 2010". Barcelona: Iniciativa Digital Politècnica, 2011, p. 347-359. 978-84-7653-565-3

<http://hdl.handle.net/2099/10383>

Citation in the work: Miller, Širáň,

Mirka Miller, Širáň Jozef, Dynamic Survey, Electronic Journal of Combinatorics, 2013, published online, DS14, pp. 1-92

## 4. Citation in Scopus

Cited article: J. Siran, J. Siagiova, M. Zdimalova, Large graphs of diameter two and given degree, In. Proc. IWONT 2010, Univ. Politecnica de Catalunya, 347-359

Citation in: Marcel Abas, Cayley graphs of diameter two and any degree with order half the Moore bound, Discrete Applied Mathematics, 173 (2014) 1-7.

## 5. Citation in Scopus

Cited article: J. Siran, J. Siagiova, M. Zdimalova, Large graphs of diameter two and given degree, In. Proc. IWONT 2010, Univ. Politecnica de Catalunya, 347-359 Scopus a mozno **aj** CC

Citation in: Tomáš Vetrík, Abelian Cayley graphs of Given Degree and Diameter 2 and 3, Graphs and Combinatorics (2014), 30: 1587-1591.

## 6. Scopus:

Ždímalová, Mária: Revisiting the Comellas-Fiol-Gómez constructions of large digraphs of given degree and diameter. In: Discrete Mathematics. - ISSN 0012-356X. - Vol. 310, Iss. 9 (2010), s. 1439-1444

[Camino Balbuena, Diego González-Moreno, J. Salas: Edge-Superconnectivity of Semiregular Cages with Odd Girth, Networks 10/2011; 58\(3\):201-206.](#)  
DOI:10.1002/net.20431 · 0.74 Impact Factor

Available at:

[https://www.researchgate.net/publication/220209345\\_Edge-Superconnectivity\\_of\\_Semiregular\\_Cages\\_with\\_Odd\\_Girth](https://www.researchgate.net/publication/220209345_Edge-Superconnectivity_of_Semiregular_Cages_with_Odd_Girth) [accessed Jun 13, 2015].  
Networks 10/2011; 58(3):201-206. DOI:10.1002/net.20431 · 0.74 Impact Factor

## 7. Citation in [arXiv](#), 2014

Ždímalová Mária, Staneková Lucia, Which Faber-Moore-Chen digraphs are Cayley digraphs? Discrete-Mathematics, 310, 17-18, 2238-2240.

[Randall Dougherty, Vance Faber: Network routing on regular directed graphs from spanning factorizations](#), [arXiv](#), 07.2014

## 8. Citation [arXiv](#), 2015

J. Siran, J. Siagiova, M. Zdimalova, Large graphs of diameter two and given degree, In. Proc. IWONT 2010, Univ. Politecnica de Catalunya, 347-359 Scopus and also CC

Graham Eskine, Diameter 2 cayley graphs of dihedral groups, 2015

## 9. Citation in international journal:

НЕОРИЕНТИРОВАННЫЕ ЦИРКУЛЯНТН

Monakhova Emilia ANATOLJEVNA: О ПОСТРОЕНИИ МНОГОМЕРНЫХ ЦИРКУЛЯНТНЫХ ГРАФОВ ДИАМЕТРА ДВА, МОНАХОВА ЭМИЛИЯ АНАТОЛЬЕВНА, Известия Томского политехнического университета. 2013. Т. 323. No 2

Журнал Известия Томского политехнического университета

Выпуск № 2 / том 323 / 2013

Научная библиотека КиберЛенинка: <http://cyberleninka.ru/article/n/o-postroenii-mnogomernyh-tsirkulyantnyh-grafov-diametra-dva#ixzz3d3Dgwz8w>

Известия Томского политехнического университета. 2013. Т. 323. No 2

### **10. Citation in arXiv, 2015, submitted to Discrete Applied Mathematics**

J. Siran, J. Siagiova, M. Zdimalova, Large graphs of diameter two and given degree, In. Proc. IWONT 2010, Univ. Politecnica de Catalunya, 347-359 Scopus a **aj CC**

On Record Cayley Graphs of Diameter 2, Marcel Abas, 2015

### **Students PhD Competition:**

Competition of the phd students in Bratislava, FCE STU in Bratislava, Slovakia, Slovak University of Technology in Bratislava

1.place:

Ždímalová, M.: Construction of large digraphs of a given diameter and degree, PhD. Students Competition, Bratislava, 21.11. 2008

In Bratislava, 22. 2. 2018

Mgr. Mária Ždímalová, PhD.