

PUBLICATIONS IN THE YEAR 2004

SCIENTIFIC MONOGRAPHS

1. D. Cvetković, P. Rowlinson, S. Simić, Spectral Generalizations of Line Graphs - On Graphs with Least Eigenvalue -2 , Cambridge University Press, Cambridge, 2004.
2. Cvetković D., Rowlinson P., Spectral graph theory, Topics in Algebraic Graph Theory, ed. L.W.Beineke, R.J.Wilson, Cambridge University Press, Cambridge, 2004, 88-112.
3. Cvetković D., Čangalović M., Kovačević-Vujčić V., Optimization and highly informative graph invariants, Two Topics in Mathematics, ed. B.Stanković, Zbornik radova 10(18), Matematički institut SANU, Beograd 2004, 5-39.

SCIENTIFIC PAPERS

Spectral Properties of Graphs

1. D. Cvetković, D. Stevanović, Spectral moments of fullerene graphs, MATCH Commun. Math. Comput. Chem 50 (2004), 62-72
2. Branković Lj., Cvetković D., The eigenspace of the eigenvalue -2 in generalized line graphs and a problem in security of statistical data bases, Univ. Beograd, Publ. Elektrotehn. Fak., Ser. Mat., 14(2003), 37-48.
3. Cvetković D., Graphs with least eigenvalue -2 : The eigenspace of the eigenvalue -2 , Rendiconti Sem. Mat. Messina, Ser. II, 25(9)(2003), 63-86.
4. Cvetković D., Lepović M., Sets of cospectral graphs with least eigenvalue at least -2 and some related results, Bull. Acad. Serbe Sci. Arts, Cl. Sci. Math. Natur., Sci. Math., 129(2004), No. 29, 85-102.
5. Cvetković D., Notes on maximal exceptional graphs, Univ. Beograd, Publ. Elektrotehn. Fak., Ser. Mat., 15(2004), 103-107.
6. W.Xiao, I.Gutman
Relations between resistance and Laplacian matrices and their applications, MATCH COMMUN.MATH.COMPUT.CHEM. 51 (2004), 119-127.
7. G.G.Cash, I.Gutman
The Laplacian permanent polynomial: Formulas and algorithms
MATCH COMMUN.MATH.COMPUT.CHEM. 51 (2004), 129-136.

8. D. Vukičević, I. Gutman
Laplacian matrix and distance in trees
Kragujevac Journal of Mathematics 26 (2004) 19-24.
9. I. Gutman, W. Xiao
Generalized inverse of the Laplacian matrix and some applications
Bulletin de l'Academie Serbe des Sciences et des Arts (Cl. Math. Natur.)
129 (2004) 15-23.
10. H. S. Ramane, H. B. Walikar, S. B. Rao, B. D. Acharya,
P. R. Hampiholi, S. R. Jog, I. Gutman
Equienergetic graphs
Kragujevac Journal of Mathematics 26 (2004) 5-13.
11. I. Gutman, A. A. Dobrynin, S. Klavžar, Lj. Pavlović
Wiener-type invariants of trees and their relation
Bulletin of the Institute of Combinatorics and Applications
40 (2004) 23-30.
12. D. Stevanović,
The largest eigenvalue of nonregular graphs,
J. Combin. Theory, Ser. B 91 (2004), 143-146
13. D. Stevanović,
Bipartite density of cubic graphs: the case of equality
Discrete Math. 283 (2004), 279-281
14. D. Stevanović,
Note on a question of Karimi, Lewinter and Stauffer,
Graph Theory Notes of New York 46 (2004), 43-44
15. D. Stevanović,
Maximal planar biregular graphs,
Graph Theory Notes of New York 46 (2004), 45-48
16. D. Stevanović,
4-Regular integral graphs avoiding ± 3 in the spectrum,
Univ. Beograd, Publ. Elektr. Fak., Ser. Mat. 14 (2003), 99-110
17. S. Simić, D. Stevanović,
Two new and shorter proofs in graph theory,
Univ. Beograd, Publ. Elektr. Fak., Ser. Mat. 14 (2003), 94-98
18. F.K. Bell, S.K. Simić,
On graphs whose star complement for -2 is a path or a cycle,
Linear Algebra and Appl., 377(2004), 249-265.
19. F.K. Bell, E.M. Li Marzi, S.K. Simić,
Some new results on graphs with least eigenvalue not less than -2 ,
Rendiconti del Seminario Matematico di Messina, Ser. II 9(2003), 11-30.

20. M. Lepović, On Integral Graphs which Belong to the Class $\overline{\alpha K_{a,b}}$,
Graphs nad Combinatorics, 19(2003), 527-532.
21. M. Lepović, On Integral Graphs which Belong to the Class $\overline{\alpha K_a \cup \beta K_b}$,
J. Appl. Math. and Computing 14(2004), No.1-2, 39-49.
22. M. Lepović, Some Classes of Integral Graphs which Belong to the Class
 $\overline{\alpha K_a \cup \beta K_{b,b}}$, Pub. Inst. Math. (Beograd), 74(88)(2003), 25-36.
23. M. Lepović, On integral graphs which belong to the class $\overline{\alpha K_a \cup \beta K_{b,b}}$,
Discrete Mathematics, 285 (2004), 183-190.
24. M. Lepović, On the Seidel eigenvectors of a graph,
Univ. Beograd, Publ. Elektrotehn. Fak. Ser. Math. 14 (2003), 4-10.
25. M. Petrović, B. Borovićanin, A. Torgašev, On graphs with at most three
Laplacian eigenvalues greater than or equal two,
Linear Algebra Appl., 380(2004), 173-184.
26. Z. Radosavljević, M. Rašajski, A class of reflexive cactuses with four cycles,
Univ. Beograd, Publ. Elektrotehn. Fak., Ser. Mat., 14(2003), 64-85.
27. K. T. Balińska, S. K. Simić and K. T. Zwierzyński
Which non-regular bipartite integral graphs with maximum degree four do not
have ± 1 as eigenvalues?
Discrete Mathematics, Volume 286, Issues 1-2, 6 September 2004, Pages 15-24

Graph Theoretical Models in Chemistry

1. I.Gutman, D.Vukičević, A.Graovac, M.Randić
Algebraic Kekule structures of benzenoid hydrocarbons
J.CHEM.INF.COMPUT.SCI. 44 (2004) 296-299.
2. I.Gutman, K.C.Das The first Zagreb index 30 years after
MATCH COMMUN.MATH.COMPUT.CHEM. 50 (2004)
83-92.
3. O.Miljković, B.Furtula, I.Gutman
Statistics of equiseparable trees and chemical trees
MATCH COMMUN.MATH.COMPUT.CHEM. 51 (2004)
179-184.
4. I.Gutman, N.Cmiljanović, S.Milosavljević, S.Radenković
Effect of non-bonding molecular orbitals on total
pi-electron energy
CHEM.PHYS.LETT. 383 (2004) 171-175.
5. I.Gutman, T.Morikawa, S.Narita
On pi-electron content of bonds and rings in benzenoid hydrocarbons
Z.NATURFORSCH. 59a (2004) 295-298.

6. I.Gutman, L.Turker
Estimating the angle of total pi-electron energy
J.MOL.STRUCT.(THEOCHEM) 668 (2004) 119-121.
7. T.Morikawa, S.Narita, I.Gutman
Hexagonoidal partitioning and quasi-single bonds in
benzenoid hydrocarbons
POLYC.AROM.COMP. 24 (2004) 75-82.
8. I.Gutman, B.Furtula, D.Vidović, H.Hosoya
A concealed property of the topological index Z
BULL.CHEM.SOC.JAPAN 77 (2004) 491-496.
9. I.Gutman, B.Furtula, D.Vukičević, B.Arsić
Equiseparable molecules and molecular graphs
INDIAN J.CHEM. 43A (2004) 7-10.
10. I.Gutman, Hyper-Wiener index and Laplacian spectrum
J.SERB.CHEM.SOC. 68 (2003) 949-952.
11. I.Gutman, B.Furtula, J.Belić, Note on the hyper-Wiener index,
J.SERB.CHEM.SOC. 68 (2003) 943-948.
12. I.Gutman, B.Furtula, B.Arsić, Z.Bošković
On the relation between Zenkevich and Wiener indices of alkanes
J.SERB.CHEM.SOC. 69 (2004) 265-271.
13. I.Gutman
On the distribution of pi-electrons in benzenoid hydrocarbons
BULL.CHEM.TECHNOL.MACED. 22 (2003) 105-110.
14. I. Gutman, Z. Tomović, K. Mullen, J. P. Rabe
On the distribution of pi-electrons in large polycyclic aromatic hydrocarbons
Chemical Physics Letters 397 (2004) 412-416.
15. I. Gutman, B. Furtula, S. Radenković
Relation between Pauling and Coulson bond orders in benzenoid hydrocarbons
Zeitschrift fur Naturforschung 59a (2004) 699-704.
16. H. S. Ramane, I. Gutman, H. B. Walikar, S. B. Halkarni
Another class of equienergetic graphs
Kragujevac Journal of Mathematics 26 (2004) 15-18.
17. K. Salem, I. Gutman, Clar number of hexagonal chains
Chemical Physics Letters 394 (2004) 283-286.
18. B. Zhou, I. Gutman
Relations between Wiener, hyper-Wiener and Zagreb indices
Chemical Physics Letters 394 (2004) 93-95.

19. I. Gutman, B. Furtula, B. Arsić
On structure descriptors related with intramolecular energy of alkanes
Zeitschrift fur Naturforschung 59a (2004) 694-698.
20. I. Gutman, N. Turković, J. Jovičić
Cyclic conjugation in benzo-annelated perylenes: How empty is the "empty" ring?
Monatshefte fur Chemie 135 (2004) 1389-1394.
21. I. Gutman
Electron content and electron excess of rings of benzenoid hydrocarbons
Indian Journal of Chemistry 43A (2004) 1615-1618.
22. T. Morikawa, S. Narita, I. Gutman
Balancing the Pauling bond orders in Kekulean benzenoid hydrocarbons
Journal of Molecular Structure (Theochem) 686 (2004), 181-183.
23. Z. Marković, D. Badjuk, I. Gutman
Geometry and conformations of benzenecarboxylic acids
Journal of the Serbian Chemical Society 69 (2004) 877-882.
24. D. Vukičević, I. Gutman
Almost all trees and chemical trees have equiseparable mates
Journal of Computer Chemistry Japan 3 (2004) 109-112.
25. B. Zhou, I. Gutman
Estimating the modified Hosoya index
MATCH Communications in Mathematical and in Computer
Chemistry 52 (2004) 183-192.
26. I. Gutman, D. Stevanović, S. Radenković,
S. Milosavljević, N. Cmiljanović
Dependence of total pi-electron energy on large number of
non-bonding molecular orbitals
J. Serb. Chem. Soc. 69 (2004), 777-782
27. I. Gutman, B. Furtula
Effect of ethyl groups on the relation between Zenkevich and
Wiener indices
Kragujevac Journal of Science 26 (2004) 31-42.
28. I. Gutman, B. Furtula, O. Miljković, M. Rakić
Families of equiseparable trees and chemical trees
Kragujevac Journal of Science 26 (2004) 19-30.
29. V. Brankov, D. Stevanović, I. Gutman
Equienergetic chemical trees
J. Serb. Chem. Soc. 69 (2004), 549-553
30. I. Gutman, N. Cmiljanović, S. Milosavljević, S. Radenković
Dependence of total pi-electron energy on the number of non-bonding
molecular orbitals
Monatshefte fur Chemie 135 (2004) 765-772.

31. K. C. Das, I. Gutman
Some properties of the second Zagreb index
MATCH Communications in Mathematical and in Computer
Chemistry 52 (2004) 103-112.

32. Dj. Baralić, I. Gutman, B. Popović
Solution of the Turker inequality
Kragujevac Journal of Science 26 (2004) 13-18.

33. J. Aires-de-Sousa, J. Gasteiger, I. Gutman, D. Vidović
Chirality codes and molecular structure
Journal of Chemical Information and Computer Sciences 44
(2004) 831-836.

34. I. Gutman, D. Vukičević, J. Žerovnik
A class of modified Wiener indices
Croatica Chemica Acta 77 (2004) 103-109.

35. I. Gutman, A new hyper-Wiener index
Croatica Chemica Acta 77 (2004) 61-64.

Methods of Combinatorial Optimization

1. Cvetković D., Hansen P., Kovačević-Vujčić V., On some interconnections
between combinatorial optimization and extremal graph theory, YUJOR,
14(2004), No. 2, 147-154.

2. M. Vujošević, Ž. Dulanović, O. Jaško, UTICAJ DEREGULACIJE NA
ODRŽAVANJE I POUZDANOST ELEKTROENERGETSKOG SISTEMA,
Preventivno inženjerstvo, Beograd, 2003, str. 19-23.

3. M. Vujošević, A. Vukmanović, OPTIMIZATION IN SUPPLY CHAIN MANAGEMENT,
Management, No. 32, December, 2003, 8-13.

Mathematical Programming and Calculus of Variations

1. Nebojša V. Stojković, Predrag S. Stanimirović and Marko D. Petković,
Several modifications of simplex method, Filomat 17 (2003), 169-176.

2. Predrag S. Stanimirović and Milan Tasić,
A modification of gradient method of convex programming and its application
Journal of Applied Mathematics & Computing, 16 (2004), 91-104.

3. N. Đuranović-Miličić, On line search methods, International Journal
of Computational and Numerical Analysis and Applications, Volume 4, No.3,
251-263, 2003.

4. N. Miličić, P. Trifunović, M. Miličić, Evaluation of the Hoisting
Rope Working Endurance Based on the Periodical Laboratory Testing,
Underground Mining Engineering 12 , 137-142, 2003.

PAPERS IN THE CONFERENCE PROCEEDINGS

Methods of Combinatorial Optimization

1. Lj. Pavlović, On the Randić index, Proc. XXXI Symposium on Operations Research, Iriški Venac, Serbia and Montenegro, 2004, 213-216.
2. Dragana Makajić-Nikolić, Biljana Panić, Mirko Vujošević, Bullwhip Effect and Supply Chain Modelling and Analysis Using CPN Tools, Fifth Workshop and Tutorial on Practical Use of Coloured Petri Nets and the CPN Tools, Aarhus, Denmark, October 8-11, 2004, 219-234
3. Mirko Vujošević, Dragana Makajić-Nikolić, Miodrag Strak, Fuzzy Petri Net Based Reasoning for the Diagnosis of Bus Condition, Proceedings of NEUREL 2004: Seventh Seminar on Neural Networks Applications in Electrical Engineering, (B. Reljin, S. Stankovic, Eds.) Belgrade, Serbia and Montenegro, September 23-25, 2004, 225-29
4. Miroslav Huđec, Mirko Vujošević, A Fuzzy System for Municipalities Classification, NEUREL 2004: Seventh Seminar on Neural Networks Applications in Electrical Engineering, Belgrade, Serbia and Montenegro, September 23-25, 2004., 231-36
5. Milan Stanojević, Mirko Vujošević, O kardinalnosti skupa efikasnih tačaka u višekriterijumskim problemima kombinatorne optimizacije, SYM-OP-IS 2004, XXXI Simpozijum o operacionim istraživanjima, Fruška Gora, 14.-17.09.2004., 579-582.
6. N.Đuranović-Miličić, A generalization of an optimization algorithm for C1,1 optimization, Proceedings of XXXI Symposium on Operations Research, Iriški Venac, Fruška Gora, Serbia and Montenegro, 14.-17.09.2004., 271-274, 2004.
7. Mirko Vujošević, Kooperacija i koordinacija kao uslov uspešnosti lanaca snabdevanja, XI naučni skup Tehnologija, kultura i razvoj, 6-10. septembar 2004.g., Palić, Serbia and Montenegro, str. 110-19.
8. Dragana Makajić-Nikolić, Mirko Vujošević, Nebojša Nikolić, Određivanje minimalnih skupova preseka pomoću Petrijevih mreža” SYM-OP-IS 2004, XXXI Simpozijum o operacionim istraživanjima, Fruška Gora, Serbia and Montenegro, 14.-17.09.2004., str. 217-220.
9. Biljana Panić, Dragana Makajić-Nikolić, Mirko Vujošević “Modeliranje i simulacija efekta biča pomoću obojenih Petrijevih mreža” SYM-OP-IS 2004, XXXI Simpozijum o operacionim istraživanjima, Fruška Gora, Serbia and Montenegro, 14.-17.09.2004., str. 13-16

Mathematical Programming and Calculus of Variations

1. Kovačević-Vučjić, V., Čangalović, M., Dražić, M., Mladenović, N., VNS-based heuristics for continuous global optimization, in: Le Thi Hoai An, Pham Dinh Tao (eds.), Modelling, Computation and Optimization in Information Systems and Management Sciences, Proc. International Conference on Modelling, Computation and Optimization in Information Systems and Management Sciences, University of Metz, July 01-03, 2004, Hermes Sciences Edition, 2004, 215-222.
2. Kovačević-Vučjić, V., Čangalović, M., Stable Cholesky factorizations in interior-point algorithms for linear programming, u: S. Vujić (ed.), Zbornik radova XXXI Simpozijuma o operacionim istraživanjima, Iriški Venac, Serbia and Montenegro, 14-17. 9.2004, 259-262.
3. Dugošija, Đ., A Generalization of the Muirhead-Rado Inequality, u: S. Vujić (ed.), Zbornik radova XXXI Simpozijuma o operacionim istraživanjima, Iriški Venac, Serbia and Montenegro, 14-17.9.2004, 239-241.