

**Project: Graph theory and mathematical programming with
applications in chemistry and engineering**

PUBLICATIONS IN 2010

SCIENTIFIC PAPERS

Spectra of graphs

1. D. Cvetković, S.K. Simić, Towards a spectral theory of graphs based on the signless Laplacian, II, *Linear Algebra and Appl.*, 432(2010), 156-166.
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3. J. Wang, F. Belardo, Q.X. Huang, B. Borovićanin, On the two largest Q-eigenvalues of graphs, *Discrete Mathematics*, 310 (21) (2010), 2858-2866.
4. S.K. Simić, Z. Stanić, On Q-integral (3,s)-semiregular bipartite graphs, *Appl. Anal. Discrete Math.*, 4(2010), 167-174.
5. M. Anđelić, S.K. Simić, Some notes on threshold graphs, *Discrete Math.*, 310(2010), 2241-2248.
6. D. Cvetković, S.K. Simić, Z. Stanić, Spectral determination of graphs whose components are paths and cycles, *Computers and Math. with Appl.*, 59(2010), 3849-3857.
7. F. Belardo, E.M. Li Marzi, S.K. Simić, J. Wang, On the spectral radius of unicyclic graphs with prescribed degree sequence, *Linear Algebra and Appl.*, (432)9(2010), 2323-2334.
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14. D. Stevanović, Resolution of AutoGraphiX conjectures relating the index and matching number of graphs, *Linear Algebra Appl.* 433 (2010), 1674--1677.
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Chemical graph theory

1. I. Gutman, J. Đurđević, Cycles in dicyclopenta-derivatives of benzenoid hydrocarbons, *MATCH Communications in Mathematical and in Computer Chemistry* 65 (2011) 785-798.
2. I. Gutman, J. Đurđević, D. Bašić, D. Rašović, On π -electron configuration of cyclopenta-derivatives of benzenoid hydrocarbons, *Indian Journal of Chemistry* 49A (2010) 853-860.
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8. I. G. Yero, J. A. Rodriguez-Velazquez, I. Gutman, Estimating the higher-order Randić index, *Chemical Physics Letters* 489 (2010) 118-120.
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12. A. Heydari, I. Gutman, On the terminal Wiener index of thorn graphs, *Kragujevac Journal of Science* 32 (2010) 57-64.
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18. S. B. Bozkurt, A. D. Güngör, I. Gutman, A. S. Cevik, Randić matrix and Randić energy, *MATCH Communications in Mathematical and in Computer Chemistry* 64 (2010) 239-250.
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31. G. Fath-Tabar, B. Furtula, I. Gutman, A new geometric-arithmetic index, *Journal of Mathematical Chemistry* 47 (2010) 471-486.
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42. D. Stevanović, Counterexamples to conjectures on graphs with greatest edge-Szeged index, *MATCH Commun. Math. Comput. Chem.* 64 (2010), 603—606
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Graph spectra in computer science

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Structural graph theory

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Optimization

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2. T. Davidović, D. Ramljak, M. Šelmić, D. Teodorović, Parallel Bee Colony Optimization for Scheduling Independent Tasks on Identical Machines, *Proc. 37th Symp. on Operational Research, SYM-OP-IS 2010*, pp. 389-392, Tara, Sept. 21-24, 2010.
3. G. Singh, A. Ernst, T. Davidović, Variable Neighborhood Search for Resource-Constrained Scheduling, *Proc. 37th Symp. on Operational Research, SYM-OP-IS 2010*, pp. 417-420, Tara, Sept. 21-24, 2010.
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3. J.F. Wang, S.K. Simić, Q.X. Huang, F. Belardo, E.M. Li Marzi, Laplacian spectral characterization of disjoint union of paths and cycles, *Linear Multilinear Algebra*, to appear, doi: 10.1080/03081081003605777.
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10. J. Kratica, A. Savić, V. Filipović, M. Milanović, "Solving the task assignment problem with a variable neighborhood search", *Serdica Journal of Computing*, to appear.
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