

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

## **PUBLICATIONS IN 2009**

### **SCIENTIFIC MONOGRAPH**

1. Cvetković D., Rowlinson P., Simić S.,  
*An Introduction to the Theory of Graph Spectra*, Cambridge University Press,  
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2. *Applications of Graph Spectra*, Zbornik radova 13(21), eds. D.Cvetković,  
I.Gutman, Mathematical Institute SANU, Belgrade, 2009.

### **SCIENTIFIC PAPERS**

#### **Spectra of Graphs**

1. Cvetković D., Simić S.K., Towards a spectral theory of graphs based on the signless Laplacian, I, *Publ. Inst. Math. (Beograd)*, 85(99)(2009), 19-33.
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3. F. Belardo, E.M. Li Marzi, S.K. Simić, Bidegreed trees with a small index, *MATCH Commun. Math. Chem.*, 61(2009), 503-515.
4. M. Petrović, B. Borovićanin, T. Aleksić, Bicyclic graphs for which the least eigenvalue is minimum, *Linear Algebra Appl.* 430 (2009), 1328-1335.
5. D. Stevanović, M. Milošević, A spectral proof of the uniqueness of strongly regular graph with parameters (81,20,1,6), *European J. Comb.* 30 (2009), 957-68.
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10. B. Borovićanin, I. Gutman, Nullity of graphs, u knjizi: D. Cvetković, I. Gutman (Eds.), *Applications of Graph Spectra*, Math. Inst., Belgrade, 2009, pp. 107–122.
11. I. Gutman, D. Kiani, M. Mirzakhah, B. Zhou, On incidence energy of a graph, *Linear Algebra and Its Applications* 431 (2009) 1223–1233.
12. I. Gutman, D. Kiani, M. Mirzakhah, On incidence energy of graphs, *MATCH Communications in Mathematical and in Computer Chemistry* 62 (2009) 573–580.
13. M. Lepović, On Conjugate Characteristic Polynomial Of A Graph, *J. Appl. Math. and Computing*, 28(2008), 473-483.
14. M. Lepović, Some Results On Walk Regular And Strongly Regular Graphs, *New Zealand Journal of Mathematics*, 38(2009), 161-169.
15. M. Lepović, Some Characterizations Of Strongly Regular Graphs, *J. Appl. Math. and Computing*, 29(2009), 373-381.

## **Chemical Graph Theory**

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### **Theory of Graph Spectra in Computer Science**

1. Cvetković D., Applications of Graph Spectra: An introduction to the literature, *Applications of Graph Spectra*, Zbornik radova 13(21), ed. D.Cvetković, I.Gutman, Mathematical Institute SANU, Belgrade, 2009, 7-31.
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## Optimization

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## **PROCEEDINGS PAPERS**

1. F. Belardo, E.M. Li Marzi, S.K. Simić, Schwenk-like formulas for weighted digraphs, *Numerical Analysis and Applied Mathematics, Inter. Conf.* 2009 (eds. T.E. Simos, G. Psihoyios, Cyh. Tsitouras), AMS 2009, CP1168, vol. 2, pp. 1251-1254.
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1. Cvetković D., Simić S.K., Towards a spectral theory of graphs based on the signless Laplacian, II, *Linear Algebra Appl.*, doi: 10.1016/j.laa.2009.05.020, to appear.
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