

LIST OF PUBLICATIONS

Florin-Dorian Buzatu

[ISI] Articles:

1. F. D. Buzatu, Stud. Cerc. Fiz. **36** (1984) 163-182.
Soliton solutions and the quantization of the sine-Gordon theory
2. A. Corciovei and F. D. Buzatu, Rev. Roum. Phys. **29** (1984) 577-586.
Soliton solutions and conservation laws
3. F. D. Buzatu and A. Corciovei, Stud. Cerc. Fiz. **39** (1987) 265-275.
Monodromy matrices, Stokes multipliers and harmonic oscillator
4. F. D. Buzatu, F. H. Liu, L. Macarie, L. Vasiliu-Doloc and M. Apostol, Fizika **21** Suppl.3 (1989) 243-246.
Oxygen displacive interaction in high-temperature superconductors
5. M. Apostol, F. D. Buzatu and F. H. Liu, Int. J. Mod. Phys. B **4** (1990) 159-177.
Critical temperature of third generation high-temperature superconductors
6. L. Macarie, L. Vasiliu-Doloc, F. D. Buzatu and M. Apostol, Studia Univ. Babes-Bolyai, Physica **36** (1991) 45-57.
On the superconducting critical temperature of $La_{2-x}Ba_xCuO_4$
7. F. D. Buzatu, Stud. Cerc. Fiz. **43** (1991) 169-188.
The Hubbard model in the low concentration limit of the charge carriers
8. F. D. Buzatu, Stud. Cerc. Fiz. **43** (1991) 319-362.
The Bardeen-Cooper-Schrieffer model of superconductivity
9. F. D. Buzatu, Mod. Phys. Lett. B **6** (1992) 1593-1600.
Ground-state energy for the 1D (t, U, X) model at low densities
- [1]10. F. D. Buzatu, Phys. Rev. B **49** (1994) 10176-10180.
One-dimensional (t, U, X) model: Ground-state phase diagram in a mean-field-type approximation
- [2]11. F. D. Buzatu, Int. J. Mod. Phys. B **9** (1995) 1503-1514.
The effect of a bond-site interaction on the ground-state instabilities of the one-dimensional Hubbard model

- [3]12. F. D. Buzatu, Mod. Phys. Lett. B **9** (1995) 1149-1157.
Ground-state energy of the one-dimensional Hubbard model in a simple self-consistent version of the ladder approximation
- [4]13. A. Belkasri and F. D. Buzatu, Phys. Rev. B **53** (1996) 7171-7175.
Ground-state instabilities in the one-dimensional Penson-Kolb-Hubbard model
- [5]14. F. D. Buzatu, Phys. Rev. B **55** (1997) 2114-2121.
One-dimensional fermions with delta-function repulsion in the Brueckner theory
- [6]15. F. D. Buzatu, Phys. Lett. A **224** (1997) 367-371.
The independent-pair model for one-dimensional fermions interacting through a repulsive delta-potential
16. F. D. Buzatu and E. Pieleanu, Rom. J. Phys. **42** (1997) 185-196.
Hubbard-type interactions in alternating chains
17. F. D. Buzatu, Rom. J. Phys. **42** (1997) 431-441.
One-dimensional Yang model in the independent-pair approximation
- [7]18. F. D. Buzatu and G. Jackeli, Phys. Lett. A **246** (1998) 163-171.
Alternating chains with Hubbard-type interactions: renormalization group analysis
19. A. Avella, F. Mancini, M. M. Sánchez, D. Villani, and F. D. Buzatu, J. Phys. Stud. **2** (1998) 228-231.
Local quantities for the 1D Hubbard model in the Composite Operator Method
- [8]20. D. A. Huckaby, A. Pękalski, D. Buzatu, and F. D. Buzatu, J. Chem. Phys. **115** (2001) 6775-6779.
Amphiphile-rich phase in a model ternary solution on the honeycomb lattice
- [9]21. F. D. Buzatu and D. A. Huckaby, Physica A **299** (2001) 427-440.
An exactly solvable model ternary solution with strong three-body interactions
- [10]22. F. D. Buzatu, D. Buzatu, and J. G. Albright, J. Sol. Chem. **30** (2001) 969-983.
Spinodal curve of a model ternary solution

23. F. D. Buzatu and D. Buzatu, Rom. J. Phys. **47** (2002) 293-305.
Effective spinodal curve of a three-component molecular system
24. F. D. Buzatu, D. Buzatu, and J. G. Albright, Rom. J. Phys. **47** (2002) 359-370.
Spinodal curve of the Wheeler-Widom model with three-body interactions on the Bethe lattice
25. F. D. Buzatu and D. A. Huckaby, Rom. J. Phys. **48** (2003) 557-565.
Exact results for a model ternary solution with strong three-body interactions
26. F. D. Buzatu and D. Buzatu, Rom. J. Phys. **48**, Suppl. I (2003) 521-532.
Antiferromagnetic-like ordering in a model ternary solution
- [11]27. D. Buzatu, E. Petrescu, C. Popa, F. D. Buzatu, J. G. Albright, Rev. Chim. (Buc.) **55** (2004) 435-438.
Measurements of multicomponent diffusion coefficients for lysozyme chloride in water and aqueous Na_2SO_4
- [12]28. F. D. Buzatu, R. P. Lungu, and D. A. Huckaby, J. Chem. Phys. **121** (2004) 6195-6206.
An exactly solvable model for a ternary solution with three-body interactions and orientationally dependent bonding
- [13]29. D. Buzatu, E. Petrescu, C. Popa, F. D. Buzatu, J. G. Albright, Rev. Chim. (Buc.) **55** (2004) 759-763.
Extraction of thermodynamic data from ternary diffusion coefficients of lysozyme chloride in water and aqueous Na_2SO_4
- [14]30. D. Buzatu, E. Petrescu, C. Popa, F. D. Buzatu, Rev. Chim. (Buc.) **56** (2005) 61-65.
Conductivity and viscosity measurements for binary lysozyme chloride aqueous solution and ternary lysozyme-salt-water solution
- [15]31. D. Buzatu, E. Petrescu, C. Popa, F. D. Buzatu, Rev. Roum. Chim. **50** (2005) 193-199.
Conductimetric method applied to ternary lysozyme- $NaCl$ -water solution and lysozyme- NH_4Cl -water solution
- [16]32. D. Buzatu, E. Petrescu, C. Popa, F. D. Buzatu, Rev. Roum. Chim. **50** (2005) 185-191.

Conductimetric method applied to ternary lysozyme-KCl-water solution and lysozyme-NH₄Cl-water solution

- [17]33. D. Buzatu, E. Petrescu, C. Popa, F. D. Buzatu, J. Optoel. Adv. Mat. **7** (2005) 1079-1090.
Determination of the diffusion coefficients for ternary systems by Gosting difusiometer; apparatus and method
- [18]34. D. Buzatu, O. Annunziata, E. Petrescu, C. Popa, F. D. Buzatu, J. Optoel. Adv. Mat. **7** (2005) 3161-3168.
Dynamic light scattering: a useful optical method to probe common ion-effects in protein-salt aqueous solutions.
35. F. D. Buzatu, Radu P. Lungu, Dale A. Huckaby, D. Buzatu, Rom. J. Phys. **50** (2005) 417-425.
A three-component molecular model with bonding three-body interactions
36. R. P. Lungu, D. A. Huckaby, F. D. Buzatu, D. Buzatu, Rom. J. Phys. **51** (2006) 769-782.
Three-body and bonding effects on phase separation in a model binary solution
- [19]37. R. P. Lungu, D. A. Huckaby, F. D. Buzatu, Phys. Rev. E **73** (2006) 021508(1-14).
Phase separation in an exactly solvable model binary solution with three-body interactions and intermolecular bonding
- [20]38. F. D. Buzatu and D. Buzatu, Rom. Rep. Phys. **59** (2007) 351-356.
One dimensional ionic Hubbard model in the high ionicity limit
39. D. Buzatu, A. M. Popovici, F. D. Buzatu, L. Paduano, and R. Sartorio, Sci. Bull. UPB **69** (2007) 73-80.
Hydrodynamic and thermodynamic aspects of diffusion coefficients in the ternary system water-chloroform-acetic acid at 25⁰C.
- [21]40. D. Buzatu, F. D. Buzatu, L. Paduano, and R. Sartorio, J. Sol. Chem. **36** (2007) 1373-1384.
Diffusion coefficients in the ternary system water-chloroform-acetic acid at 25⁰C. Part 1.
- [22]41. Gh. Adam, S. Adam, A. Ayriyan, E. Dushanov, E. Hayryan, V. Korrenkov, A. Lutshenko, V. Mitsyn, T. Sapozhnikova, A. Sapozhnikov, O. Streletsova, F. Buzatu, M. Dulea, I. Vasile, A. Sima, C. Visan, J.

Buša, I. Pokorny, Rom. J. Phys. **53** (2008) 665-667.
Performance assesment of the SIMFAP parralel cluster at IFIN-HH Bucharest

- [23]42. F. D. Buzatu and D. Buzatu, Rom. J. Phys. **53** (2008) 1045-1052.
Site density waves vs. bond density waves in the one-dimensional ionic Hubbard model in the high ionicity limit
- [24]43. D. Buzatu, F. D. Buzatu, and R. Sartorio, Sci. Bull. UPB **70** (2008) 103-110.
Partial molar volumes and diffusion coefficients for ternay system water-chloroform-acetic acid at 25°C for different choices of solvent.
- [25]44. F. D. Buzatu, R. P. Lungu, D. Buzatu, R. Sartorio, and L. Paduano, J. Sol. Chem. **38** (2009) 403-415.
Spinodal composition of the system water + chloroform + acetic acid at 25°C
- [26]45. D. Buzatu, F. D. Buzatu, R. P. Lungu, L. Paduano, and R. Sartorio, Rom. J. Phys. **55** (2010) 342-351.
On the determination of the spinodal curve for the system water + chloroform + acetic acid from the mutual diffusion coefficients
- [27]46. R. P. Lungu, R. Sartorio, and F. D. Buzatu, J. Sol. Chem. **40** (2011) 1687-1700.
New method for theoretical spinodals corresponding to ternary solutions with an amphiphile component
- [28]47. R. P. Lungu, R. Sartorio, and F. D. Buzatu, Rom. J. Phys. **56** (2011) 1069-1079.
Theoretical spinodal for ternary solution with an amphiphile component using a generalized Wheeler-Widom model

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