Curriculum vitae

Name: Néda **Surname:** Zoltán

Position: Professor of Theoretical Physics

Professional address: Babes-Bolyai Univ., Dept. of Theoretical and Computational Physics str. Kogalniceanu 1, RO-400084, Cluj-Napoca

Date and place of birth:

Citizenship: romanian **Marital status:** married, two daughters

Education:

Institution	Period	Diplomas
Babes-Bolyai University	Sept. 1983-Jun. 1987	Bachelor o Science
Bucharest University	Sept. 1987- Jun. 1988	Masters, Specialization in Polymer Physics
Babes-Bolyai University	Sept. 1990- Oct. 1994	PhD in Physics

Scientific title: Doctor in Physics (2004)

External member of the Hungarian Academy of Sciences

Professional experience:

Institution	Period	Position	Description
IRNE-Pitesti, Mioveni, Romania	Aug.1988-Sept.1990	physicist	Numerical calculations and simulations in physics
Babes-Bolyai University, Cluj, Romania	Ian. 1991-present	Assistant, Associate and full Professor	Lecturing and research. Supervising PhD students
INPG/ENSEEG-LTPCM, Grenoble, France	Ian. 1996-Ian.1997	Post-doc	Research in statistical and computational physics
Academia Sinica, Inst. of Physics, Taipei, Taiwan	Feb.1998-March 1999	Post-doc	Research in statistical and computational physics
Notre-Dame University, Notre-Dame, SUA	Aug. 2000-Mai 2001, and Aug. 2003- Ian. 2004	Visiting professor	Teaching, supervising and research in complex systems

Specializations and qualifications:

- Specialization in Polymer Physics (Univ. Bucharest); Specialization in C programming (Univ. Debrecen, Hungary); Tempus bursary in Complex Systems (Naples, Italy); Computational Physics Program coordination and fellowship (Bergen, Norway); Fellowship in Theoretical and Statistical Physics (Collegium Budapest, Institute for Advanced Studies, Budapest, Hungary); University of Porto - NATO Science Fellowship, Portugal, invited researcher Northeastern and Harvard University

Foreign languages: English (excellent), French (good), Hungarian (native), Romanian (native)

Research competence: statistical and computational physics applied in interdisciplinary problems and problems from material sciences and nonlinear phenomena

- published ISI papers: **91** ; total number of ISI citations: **2153**
- total number of independent ISI citations: **2010**
- total number of Google Scholar citations: **4359**
- Hirsch index: **18 (ISI), 19 (Scopus), 25 (Google Scholar)**

Address of the researcherid.com profile: http://www.researcherid.com/rid/C-3754-2011

major awards and honors:

- elected fellow of Collegium Budapest-Institute of Advanced Studies, Budapest, Hungary
- Bolyai prize (as supervisor) in junior category with student M. Ercsey-Ravasz in 2003 (Hungary)
- the Romanian Academy Prize, "Ştefan Procopiu" in 2004
- elected external member of the Hungarian Academy of Sciences in 2007
- NATO science senior fellowship (Porto, Portugal)
- Master of the Transylvanian Science (Cluj, offered by Academy of Hungary, Cluj Branch, 2013)
- Excelllence in Teaching prize (Budapest, offered by the Hungarian Students Committee in Hungary, 2013)

echoes about the research results in: New York Times, BBC Science News, Discovery Channel, Die Welt, Fe Figaro, Népszabadság. South Bend Tribune, Duna TV etc.

invited professor/researcher at: University of Notre Dame (USA), Eotvos Lorand University, Budapest, (Hungary), University of Bergen (Norway), Academia Sinica (Taiwan, Taipei), Los Alamos National Laboratory (USA)

regular referee for: Phys. Rev. Lett., Phys. Rev. E şi B, Physica A şi D, Europhys. Lett.

principal organizer for the following international conferences: [1]. Bolyai-Gauss-Lobachevsky, 7-th International Conference on Differential Geometry and its Applications, Cluj-Napoca, Romania 2010 (http://bgl.math.ubbcluj.ro) [2] Stochastic Phenomena (Cluj, June, 2008) (http://www.summerschools.ro) [3] Complex Systems and Networks, Sovata, 2007, Romania (http://www.summerschools.ro)

Director for national/international programs/projects: director for 4 national research projects (IDEI, CNCSIS grants, KPI/Sapientia grants); Institute responsible for 2 national projects (Complex

IDEI, Parteneriat); director for 2 international projects (Bergen Computational Physics Lab, Brancusi program); coordinator for the POSDRU/post-doc programs at UBB: Studies and control of complex systems;

selected invited talks at international conferences

[1] Z. Néda, Spring-block models for Complex Systems, CSCS17, IAFA, 2009, Bucuresti, Romania 26-29 Mai, 2009 [2] Z. Néda, A nem várt ritmus (The unexpected rhythm), International conference on physics education, Budapest, Aug. 27-29, Ungaria, 2009 [3] Z. Néda, Nontrivial Synchronizations, PIM09, Cluj-Napoca, Romania 24-26 September 2009 [4] Z. Néda, Monte Carlo Methods for magnetic systems, European School on Magnetism, September 1-10, 2009, Timisoara, Romania, [5] Z. Néda, Correlation clustering on scalefree networks + Synchronization of multimode stochastic oscillators, European Conference on Complex Systems, Ierusalem, Israel [6]. Z. Neda, Synchronization of two-mode stochastic oscillators: a new model for rhythmic applause and much more, Statphys 2003, Taipei, Taiwan [7] Z. Neda, A novel kinetic Monte Carlo method for heteroepitaxial growth – IUVISTA '38, August, 2006 Budapest, Hungary; [8] Z. Neda, MEan-field approach: European School on Magnetism, September 2011

PUBLICATIONS

ISI publications:

1. Sz. Boda. L. Davidova, **Z. Neda**; Order and disorder in coupled metronome systems, **European Physical Journal – ST,** vol. 233, pp. 649-663 (2014)
2. L. Davidova, Sz. Boda and **Z. Neda**; Order-disorder transitions in a minimal model of self-sustained coupled oscillators, **Romanian Reports in Physics,** vol .66, pp. 1018-1028 (2014)
3. B. Tyukodi and **Z. Neda**; Kinetic Roughening of a soft dewetting line under quenched disorder: A numerical study, **Physical Review E,** vol. 90, 052404 (2014)
4. Sz. Boda, Sz. Ujvari, A. Tunyagi and **Z. Neda**, Kuramoto0type phase transition with metronomes, **European Journal of Physics**, vol. 34, pp. 1451-1463 (2013)
5. Sz. Horvat and **Z. Neda**, The complex parameter space of a two-mode oscillator model, **Physica D – Nonlinear Phenomena**, vol. 256, pp. 43-50 (2013)
6. Sz. Boda, **Z. Neda**, B. Tyukodi and A. Tunyagi, The rhythm of coupled metronomes, **European Physical Journal B**, vol. 86, 263 (2013)
7. B. Sandor, F. Jarai-Szabo, T. Tel and **Z. Neda**, Chaos on the conveyor belt, **Physical Review E**, vol. 87, 042920 (2013)
8. B. Tyukodi, I.A. Chioar and **Z. Neda**, A kinetic Monte Carlo study for stripe-like magnetic domains in ferrimagnetic thin films, **Central European Journal of Physics**, vol. 11, pp. 487-496 (2013)
9. D.J. Wang, **Z. Neda** and L.P. Csernai, Viscous potential flow analysis of peripheral heavy ion collisions, **Physical Review C**, vol. 87, 024908 (2013)
10. F. Simini, A. Maritan and **Z. Neda**, Human mobility in a Continuum Approach, **PLOS One**, vol. 8, e60069 (2013)
11. B. Tyukodi, Z. Sarkozi, **Z. Neda**, A. Tunyagi and E. Gyorke, The Boltzmann constant from a snifter; European Journal of Physics, vol. 33, 455-465 (2012)
12. Z. Sarkozi, E. Kaptalan, **Z. Neda**, S. Boda, A. Tunyagi and T. Roska, Optimization induced collective behavior in a system of flashing oscillators, International Journal of Bifurcation and Chaos, vol. 22, 1230002 (2012)
13. L. P. Csernai, G. Mocanu and **Z. Neda**; Fluctuations in hadronizing quark-gluon plasma, **Physical Review C**, vol. 85, pp. 068201 (2012)
14. R. Deak and **Z. Neda**; Kinetic Monte Carlo approach for triangular-shaped Pt islands on Pt(111) surfaces, **Physica Status Solidi B**, vol. 249, pp. 1709-1716 (2012)
15. A. Derzsi and **Z Neda**; A seed difusion model for tropical tree diversity patterns, **Physica A**, vol. 391, pp. 4798-4806, (2012)
16. F. Jarai-Szabo and **Z. Neda**; Earthquake models describes traffic jams caused by imperfect driving styles, **Physica A**, vol. 391, pp. 5727-5738 (2012)
17. N. Derzsi, **Z. Neda** and M.A. Santos; Income distribution patterns from a complete social security database, **Physica A**, vol. 391, pp. 5611-5619 (2012)
18. F. Jarai-Szabo **and Z. Neda**; Winning strategies in congested traffic, **Int. J. of Modern Physics C,** vol. 23, pp. 1250063 (2012)
19. R. Deak, **Z. Neda** and P.B. Barna; A kinetic Monte Carlo approach for self-diffusion of Pt atom clusters on a Pt(111) surface, **Comm. in Comp. Phys.**, vol. 10, pp. 920-939 (2011)
20. F. Jarai-Szabo, E.A. Horvat, R, Vajtai and **Z. Neda**; Spring-block approach for nanobristle patterns, **Chem. Phys. Lett.**, vol. 511, pp. 378-383 (2011)
21. F. Jarai-Szabo, S. Bulcsu and **Z. Neda**; Spring-block model for a single-lane highway traffic, **Central European Journal of Physics**, vol. 9, pp. 1002-1009 (2011)

22. A. Derzsi, N. Derzsy, E. Kaptalan and **Z. Neda**; Topology of the Erasmus student mobility network, **Physica A**, vol. 390, pp. 2601-2610 (2011)

23. G. Mate, **Z. Neda** and J. Benedek, *Spring-Block model reveals region-like structures*, **PLOS ONE**, vol. 6, e16518 (2011)

24. E. Balogh, I. Simonsen, B.Z. Nagy and **Z. Neda**, *Persistent collective trend in stock markets*, **Physical Review E**, vol. 82, 066113 (2010)

25. K.T. Leung and **Z. Neda**, *Criticality and pattern formation in fracture by residual stresses*, **Physical Review E**, vol. 82, 046118 (2010)

26. Sz. Horvat, A. Derzsi, **Z. Neda** and A. Balog, *A spatially explicit model for tropical tree diversity patterns*, **Journal of Theoretical Biology**, vol. 265, pp. 517-523 (2010)

27. A.E. Horvath, F. Jarai-Szabo, G. Kaptay, R. Vajtai and **Z. Neda**, *Pattern formation and selection in nanotube arrays*, **Univ. Politehnica of Bucharest Scientific Bulletin, Series A, Applied Mathematics and Physics**, vol. 72, pp. 27-32 (2010)

28. **Z. Neda**, F. Jarai-Szabo, E. Kaptalan and R. Mahnke, *Spring-block models and highway traffic*, **Control Engineering and Applied Informatics**, vol. 11 pp. 3-10 (2009)

29. **Z. Néda**, R. Sumi, M. Ercsey-Ravasz, M. Varga, B. Molnár and Gy. Cseh, Correlation clustering on Networks, **J. Phys. A**, vol. 42, 345003 (2009)

30. M. Ercsey-Ravasz, T. Roska and **Z. Neda**, *Stochastic optimization of spin-glasses on cellular neural/nonlinear network based processors*, **Physica A**, vol. 388, pp. 1024-1030 (2009)

31. R. Sumi, **Z. Neda**, A. Tunyagi and Cs. Szasz, *Nontrivial spontaneous synchronization*, **Physical Review E**, vol. 79, 056205 (2009)

32. M. Ercsey-Ravasz, T. Roska and **Z. Neda**,*Cellular Neural Networks for NP-hard optimizations*, **EURASIP Journal on Advances in Signal Processing**,, vol. 2009, Article ID 646975 (2009)

33. M. Ercsey-Ravasz, T. Roska and **Z. Neda**, Stochastic optimization of spin-glasses on cellular neural/nonlinear network based processors, **Physica A**, vol. 388, pp. 1024-1030 (2009)

34. M. Ercsey-Ravasz, Zs. Sarkozi, **Z. Neda**, A. Tunyagi and I. Burda; *Collective behavior of electronic fireflies*, **European Journal of Physics** *B*, vol. 65, pp. 271-277 (2008)

35. R. Deak, **Z. Neda** and P.B. Barna; *A simple kinetic Monte Carlo Approach for Epitaxial Submonolayer growth* **.Communications in Computational Physics**, *vol. 3, 822-833 (2008)*

36. M. Ercsey-Ravasz, T. Roska and **Z. Neda**, *Statistical physics on cellular neural network computers*, **Physica D**, vol. 237, 1226-1234 (2008)

37. R. Sumi and **Z. Neda; *Molecular dynamics approach to correlation clustering*, International Journal of Modern Physics C**, vol. 19, pp. 1349-1358 (2008)

38. R. Deak, Z. Neda and P. Barna; A *novel kinetic Monte Carlo method for epitaxial growth*, **Journal of Optoelectronics and Advanced Materials**, vol. 10, pp. 2445-2450 (2008)

39. R. Sumi and Z. Neda; Synchronization of multi-mode pulse-coupled stochastic oscillators, **Journal of Optoelectronics and Advanced Materials**, vol. 10, pp. 2455-2460 (2008)

40. A. E. Horvath, F. Jarai-Szabo and Z. Neda, *Spring-block type model for crack propagation in glass plates*, **Journal of Optoelectronics and Advanced Materials**, vol. 10, pp. 2433-2437 (2008)

41. F. Jarai-Szabo and **Z. Neda**, *On the size distribution of Poisson Voronoi cells*, **Physica A**, *vol. 385, pp. 518-526 (2007)*

42. F. Jarai-Szabo, **Z. Neda**, S. Astilean, C. Farcau and A. Kuttesch, *Shake induced order in nanosphere systems*, **European Physical Journal E,** *vol. 23, pp. 153-159 (2007)*

43. M.A Santos, R. Coelho, G. Hegyi, **Z. Neda** and J.J. Ramasco, *Wealth distribution in modern and medieval societies*, **European Physical Journal ST**, *vol. 143, pp. 81-85 (2007)*

44. G. Hegyi, Z. Neda and M.A. Santos, *Wealth distribution and Pareto's law in the Hungarian medieval society*, **Physica A**, vol. 380, 271-277 (2007)

45. K. Kovacs and Z. Neda, Disorder-driven phase transition in a spring-block type magnetization model,

Physics Letters A, vol. 361, 18-23 (2007)

46. M. Ercsey-Ravasz, T. Roska and **Z. Neda**, *Stochastic simulations on the cellular wave computers*, **European Physical Journal** B Vol. 51, 407-411 (2006)
47. K. Kovacs and **Z. Neda**, *Critical behavior of a spring-block model for magnetization*, **J. of Optoelectronics and Advanced Materials**, ***Vol.* 8**, *1088-1092* (2006)
48. M. Ercsey-Ravasz, T. Roska and **Z. Neda**, *Perspectives for Monte Carlo simulations on the CNN universal machine*, **Int. J. of Modern Physics C**, vol. **17**, 909-922 (2006)
49. F. Jarai-Szabo, A. Kuttesch, S. Astilean, **Z. Neda**, N. Chakrapami, P.M. Ajayan and R. Vajtai, Spriing-block models for capillarity driven self-organized nanostructures, **J. of Optoelectronics and Advanced Materials,** Vol. **8**, 1083-1087 (2006)
50. **Z. Neda**, R. Florian, M. Ravasz et al., *Phase transition in an optimal clusterization model*, **Physica A**, vol. **362**, 357-369 (2006)
51. K. Kovacs, Y. Brechet and **Z. Neda**; **Modelling and Simulation in Mat. Sci. Eng.** , vol. **13** (8): 1341-1352 (2005)
52. F. Jarai-Szabo, S. Astilean and **Z. Neda**; *Understanding self-assembled nanosphere patterns*, **Chemical Physics Letters**, Volume **408**, pp. 241-246 (2005)
53. R. Coelho, **Z. Néda**, J.J. Ramasco And M.A. Santos; *A family-network model for wealth distribution in societies*; **Physica A**, vol. 353, 515-528 (2005)
54. **Z. Néda, A.** Nikitin and T. Vicsek; "Synchronization of two-mode stochastic oscillators: a new model for rhythmic applause and much more", **Physica A,** vol. 321, 238 (2003)
55. **Z. Néda** and S. Volkán-Kacsó; "Flatness of the setting Sun", **Am. J. Phys.**, vol. 71, 379 (2003)
56. H. Jeong, **Z. Néda** and A.L. Barabási; "Measuring preferential attachment in evolving networks", **Europhys. Lett.,** vol. 61, 567 (2003)
57. Farkas, I. Derényi, H. Jeong, **Z. Néda**, Z.N. Oltvai, E. Ravasz, A. Schubert, A.-L. Barabási, T. Vicsek, "Networks in life, scaling properties and eigenvalue spectra", **Physica A**, vol. 314, 25 (2002)
58. A.L. Barabasi, H. Jeong, **Z. Neda**, E. Ravasz, A. Schubert, T. Vicsek, " Evolution of the social network of scientific collaborations", **Physica A** , vol. 311, 590 (2002)
59. **Z. Neda,** K.-t. Leung, L. Jozsa and M. Ravasz; "Spiral cracks in drying precipitates", **Phys. Rev. Lett.** vol. 88, 095502 (2002)
60. A. Nikitin, **Z. Néda** and T. Vicsek; "Dynamics of two-mode stochastic oscillators"; **Phys. Rev. Lett.**, vol. 87, 024101 (2001)
61. Y.H. Shiau, **Z. Neda;** "A novel resonance in n-GaAs diodes", **Japanese Journal of Applied Physics, Part I.**, vol. 40, 6675 (2001)
62. M. Perez, J.C. Barbe, Z. **Neda**, Y. Brechet, L. Salvo, M. Suery, "Investigation of the microstructure and the rheology of semi-solid alloys by computer simulation" **Jornal de Physique IV,** vol. 11 (PR5), 93 (2001)
63. K.-t. Leung, L. Jozsa, E. Ravasz and **Z. Néda**; *"Spiral cracks without twisting";* **NATURE**, vol. 410, 166 (2001)
64. M. Perez, J.-C. Barbe, **Z. Néda**, Y. Brechet and L. Salvo; *"Computer simulation of the microstructure*

and rheology of semi-solid alloys under shear", **Acta. Mater.**, vol. 48, 3773 (2000)

65. K.-t. Leung and **Z. Néda**; "*Pattern formation and selection in quasi-static fracture*", **Phys. Rev. Lett.** vol. 85, 662 (2000)

66. **Z. Néda**, E. Ravasz, T. Vicsek, Y. Brechet and A.L. Barabasi; "*Physics of the rhythmic applause*", **Phys. Rev. E**, vol. 61, 6987 (2000)

67. **Z. Néda**, E. Ravasz, Y. Brechet, T.Vicsek and A.L. Barabasi; *"The sound of many hands clapping*", **NATURE**, vol. 403, 849 (2000)

68. **Z. Néda**, A. Rusz, E. Ravasz, P. Lakdawala and P.M. Gade; "*Spatial Stochastic Resonance in one-dimensional Ising Systems*", **Phys. Rev. E**, vol. 60, R3463 (1999)

69. **Z. Néda**, R. Florian and Y. Brechet; "*Continuum percolation of isotropicly oriented sticks in 3d revisited*", **Phys. Rev. E**, vol. 59, 3717 (1999)

70. K-T. Leung and **Z. Néda**; *"Non-trivial stochastic resonance temperatures for the kinetic Ising models*", **Phys. Rev. E** , vol. 59, 2730 (1999)

71. Y. Brechet and **Z. Néda**; "*On the circular hydraulic jump*", **Am. J. Phys.** vol. 67, 723 (1999).

72. Z.D. Lu, **Z. Néda**, L.P. Csernai, J. Sollfrank and P.V. Ruuscanen; "*Quantum statistical effect in production of K and π mesons"* **High Energy Physics and Nuclear Physics** (chinese edition) vol.22, 910 (1998)

73. Z. Gabos and **Z. Néda**; "*Construction of the Joos-Weinberg equations from Dirac equations*", **Heavy Ion Physics** vol. 7, 125 (1998)

74. K-T. Leung and **Z. Néda**; "*Response in kinetic Ising model to oscillating magnetic fields*", **Phys. Lett. A**, vol. 246, 505 (1998)

75. D. Weygand, Y. Brechet and **Z. Néda**; "*Cappilarity-driven interface dynamics: application to grain growth phenomenon*", **Phil. Mag. B**, vol. 75, 937 (1997)

76. **Z. Néda** and Y. Brechet; *"A two-step Monte Carlo method for wetting on heterogeneous surfaces*", **Modelling Simul. Mater. Sci. Eng.** vol. 5, 93 (1997)

77. **Z. Néda**; "*Stochastic resonance in 3D Ising ferro-magnets*", **Phys. Lett. A**, vol. 210, 125 (1996)

78. **Z. Néda**, B. Bako and E. Rees; "*The dripping faucet experiment revised*", **CHAOS**, vol. 6, 59 (1996)

79. Y. Brechet. D. Bellet and **Z. Néda**; *"Patterns in fracture: Drying experiments and thermal shock"*, **Key Engineering Materials** vol. 103, 247 (1995) (Solid State Phenomena Vols. 42-43, Eds. G. Ananthakrishna, L.P.Kubin and G. Martin)

80. Y. Brechet and **Z. Néda**; "*On the Structure of Thermal Cracks in Glass*", **Europhys. Lett.**, vol. 32, 475 (1995)

81. **Z. Néda**; "*Stochastic resonance in Ising systems*", **Phys. Rev. E**, vol. 51, 5315 (1995)

82. L. Csernai and **Z. Néda**; "*Phase coexistance in Quark-Gluon Plasma*", **Phys. Lett. B**, vol. 337, 25 (1994)

83. **Z. Néda**; *"Curie temperatures for three-dimensional, binary Ising ferro-magnets*", **Phys. Rev. B**, vol. 50, 3011 (1994)

84. **Z. Neda**; "*Curie temperatures for site-diluted Ising ferro-magnets*", **J. Phys. I** (France), Vol. 4, 175 (1994)

85. **Z. Néda**, A. Mocsy and B. Bako; *"Structures obtained by mechanical fragmentation of glass plates*", **Materials Science and Engineering A**, vol.169, L1 (1993).

86. **Z. Néda** and G. Lipi; "*Instantaneous configurations of the Bloch walls in a two-dimensional and S=1/2 model*", **Journal of Magnetism and Magnetic Materials**, vol. 125, L263-268 (1993)

Other international publications

1. L. Davidova, Sz. Ujvari and Z. Neda; Sync or anti-sync - dynamical pattern selection in coupled self-sustained oscillator systems, **Journal of Physics -CS**, vol. 510, pp. 012009 (2014)
2. A. Dombi, A. Tunyagi and Z. Neda, Walkie-talkie measurement for the speed of radio-waves in air, Physics Education, vol. 48, pp. 80-86 (2013)
3. K. Bakos, A. Dombi, F. Jarai-Szabo and **Z. Neda**, Fragmentation of drying paint layers, **AIP Conference Proceedigs**, vol. 1564, pp. 205-210 (2013)
4. G. Máté, E.Á. Horváth, E. Káptalan, A. Tunyagi, **Z. Néda** and T. Roska, *Peridocity enhancement of two-mode stochastic oscillators in a CNN type architecture*, **IEEE proceedings: 2010 12th International Workshop on Cellular Nanoscale Networks and their Applications (CNNA),** pp. 313-317 (2010)
5. Sz. Horvát, E. Á Horváth, G. Máté, E. Káptalan and **Z. Néda**, The Unexpected Synchronization, **Journal of Physics, CS**, vol. 182, 012026 (2009)
6. M. Ercsey-Ravasz, T. Roska and **Z. Neda**, *Cellular neural networks for NP-hard optimization*, **2008, 11'th International Workshop on Cellular Neural Networks and their Applications,** pp. 52-56 (2008)

7. **A.** Neda and **Z. Néda**; "*Influence on the heat-treatment on the thermal diffusivity of $NiFe_{2x}Al_xO_4$ compounds*", **Proc. Supp. BPL.**, vol. 2, 219 (1994)

8. D. Ciurchea, A.V. Pop, Gh. Ilonca, **Z. Néda** and Al. Cecal; "*Texture and morphology in colloidal graphite*", **Proc. Supp. BPL.**, vol. 2, 632 (1994)

9. **Z. Néda** and M. Popov; "*Fractals in irradiated UO_2 nuclear fuel study*", **Materials Sciences Forum**, vol. 62-64, 783-786 (1990)

Journals of the Romanian Academy of Sciences

1. **Z. Néda**; "*1/f fluctuations in an electric device with fluorescent tube starter and resistor*", **Rom. Journ. Phys.**, vol. 41, 635 (1996)
2. **Z. Néda**; "*Curie temperatures for binary Ising ferromagnets on the square lattice*", **Rom. Journ. Phys.**, vol. 39, 575 (1994).

CNCSIS –Romanian journals

1. M. Ercsey-Ravasz, T. Roska and **Z. Neda**, *"Analog cellular Computers - A new computational paradigm"*; **Muszaki Szemle**, vol. 42, pp. 19-25 (2008)
2. K. Kovacs and **Z. Neda**, *"Disorder-Induced Phase Transition in a Spring-Block type magnetization model"*, **Muszaki Szemle**, vol. 42, pp. 26-30 (2008)
3. M. Ercsey-Ravasz, **Z. Neda** , R. Florian and A. Libal, *"Coalition formation and phase-transition in frustrated networks"*, **Muszaki Szemle**, vol. 42, pp. 3-8 (2008)
4. I. Balogh, B. Nagy and **Z. Neda**; *"The analysis of stock market indexes with the method of inverse statistics"*, **Forumul Economic**, vol. 11 (80), pp. 55-68 (2008)
5. **Z. Neda**, M. Ravasz, A. Balog and A. Derzsi, "The species abundances distribution in a neutral community model", **Studia Universitatis Babes-Bolyai**, Physica L, 2, 63-79 (2005)
6. **Z. Néda** and Y. Brechet; "*Thermal fluctuations of domain interfaces in the 2D kinetic Ising model*", **Studia Univ. Babeş-Bolyai**, Physica, XLIV, 1, (1999)

7. **Z. Néda**, R. Albert, I. Albert and T. Neda; *"On the applicability of the Quantum Monte Carlo methods"*, **Studia Univ. Babeş-Bolyai**, Physica XXXIX, 1, 91 (1994)
8. Z. Gingl and **Z. Néda**; *"About the fractal structure of the zerosets"*, **Studia Univ. Babeş-Bolyai**, Physica XXXVI, 1, 45 (1991)
9. **Z. Néda** and Z. Gabos; *"On the applicability of the Joos-Weinberg equations"*, **Studia Univ. Babeş-Bolyai**, Physica XXXII, 1, 49 (1987)

Science popularization:

1. Z. Néda; *"A véletlenszerû bolyongással kapcsolatban"* (About the random walks), **Matematikai Lapok**, XCIV, 3, 100-105 (1989)

2. Z. Néda; *"A Julia halmazok matematikai szépségei"* (The mathematical beauty of Julia sets), **Matematikai Lapok**, XCV, 1-2, 18-22 (1990)

3. **Z. Néda;** " Szociális hálózatok és a vagyoneloszlás a társadalmakban" (Social networks and the wealth distribution in societies), **Korunk,** "A hálók tudománya, a művészetek hálója", June, pp. 23-31, 2005

4. Z. Néda, E. Ravasz, T. Vicsek, Y. Brechet and A.L. Barabasi; "A vastaps fizikája" (Physics of the rhythmic applause), **Fizikai Szemle**, Aprilis, (2000) (articlol anului!)

5. A. Szasz and **Z. Neda;** Halozati Ping-Pong, - avagy a fenysebesseg szamitogepes merese (Ping-Pong on the Net, - or the computational measurement of the speed of light), **Fizikai Szemle,** Aprilis (4) , pp. 132-133, 2007

6. Z. Néda and E. Káptalan, *A sokaság ritmusa (The rhythm of the society),* **Fizikai Szemle,** Szeptember 2009

Books

1 **Z. Néda**; *"**Stochasztikus szimulácós módszerek***" (Stochastic simulation methods), Erdélyi Tankönyvtanács, (2000, Cluj, Romania)

2. Z. Néda, *"**A Fényre szabott Fizika** (...**vagy A speciális relativitás elmélete**)"* (Special Relativity from a new perspective) Presa Universitara (2008)

3. Z. Néda, A. Libál and K. Kovács; **"Elemi Kvantummechanika"** (Introductory Quantum Mechanics), Univ. Press of Cluj, 2005 ISBN 973-610-399-4

4. **Z. Neda**, B. Tyukodi and A.E. Kacso, **A klasszikus statisztikus fizika alapjai** (Introduction to Classical Statistical Physics) (ISBN: 978-973-114-187-9, Editura Abel , Cluj-Napoca, 2014) 180 pagini