

БИБЛИОГРАФИЈА (1986–2017)

НА АКАД. ЉУПЧО КОЦАРЕВ

Edited books

1. V. In, L. Kocarev et al (Editors), Proceeding of 7th Experimental Chaos Conference, American Institute of Physics, 2004
2. L. Kocarev and G. Vattay (Editors), Complex Dynamics in Communication Networks, Series: Understanding Complex Systems, Springer, 2005
3. L. Kocarev, Z. Galias, and S. Lian (Editors), Intelligent Computing Based on Chaos, Series: Studies in Computational Intelligence, Springer, 2009
4. L. Kocarev and S. Lian (Editors), Chaos-based Cryptography: Theory, Algorithms and Applications, Series: Studies in Computational Intelligence, Springer, 2011
5. L. Kocarev (Editor) Proceedings of ICT Innovations 2011, Series: Advances in Intelligent and Soft Computing, Springer, 2012
6. L. Kocarev (Editor) Consensus and Synchronization in Complex Networks, Series: Understanding Complex Systems, Springer, 2013
7. Т. Фити [ред.], А. Беџети, Ц. Грозданов, ... Љ. Коцарев, ... и др. [чл. на раб. група], Приоритети на идниот развој на Република Македонија : quo vadis res publica Macedonia?, МАНУ, 2017 (изд. од истражувачки проект)

Patents

1. L. Kocarev, T. Stojanovski, G. Rizzotto, F. Italia, D. Porto, Method for generating a random number sequence and a relative random bit generator, European Patent EP1320026; Publication Date: 18/06/2003
2. L. Kocarev, G. Jakimoski, G. Rizzotto, P. Amato, Chaos-based block encryption, European Patent EP1326363; Publication Date: 09/07/2003; United States Patent 7106864; Publication Date: 12/09/2006
3. L. Kocarev, Z. Tasev, P. Amato, G. Rizzotto, Encryption process employing chaotic maps and digital signature process, European Patent EP1467512; Publication Date: 13/10/2004; United States Patent 6892940; Publication Date: 17/05/2005
4. L. Kocarev, P. Amato, G. Rizzotto, Method and apparatus of generating a chaos-based pseudo-random sequence, European Patent EP1420542; Publication Date: 19/05/2004
5. L. Kocarev, P. Amato, G. Rizzotto, Encryption process employing modified chaotic maps and relative digital signature process, European Patent EP1467514; Publication Date: 14/06/2006
6. L. Kocarev, S. Markovski, D. Gligoroski, Cryptographic primitives, error coding, and pseudo-random number improvement methods using quasi-groups, European Patent EP1800432; Publication Date: 27/06/2007
7. L. Kocarev, V. Zdraveski, M. Todorovski, Method and system for dynamic intelligent load balancing, Application number US15124190, Filing date 2015-03-03
8. L. Kocarev, V. Zdraveski, M. Todorovski, A. Gajduk, L. Basnarkov, Battery control methods and circuits, and energy storage to grid connection systems, Application number PCT/US2016/032903, Filing date 2016-05-17

Journal publications:

1. V. Urumov and L. Kocarev, "The Phase Diagram of a Piecewise-Linear Oscillator", ZAMM, Z. Angew. Math. Mech., Vol. 66, pp. 396–398, 1986
2. L. Kocarev, "The Basin Boundaries of One-Dimensional Maps", Physics Letters A, Vol. 121, pp. 274–278, 1987
3. L. Kocarev, "Quasifractal Metamorphosis of 1-D Maps," Physics Letters A, Vol. 125, pp. 389–342, 1987
4. L. Kocarev, "On a Class of Symmetrical Chaotic Attractors," Physics Letters A, Vol. 130, pp. 7–10, 1988
5. V. Urumov and L. Kocarev, "New Metric Elements of the Universal Fine Structure due to Multifurcation," Physics Letters A, Vol. 144, pp. 220–223, 1990
6. L. O. Chua, L. Kocarev, K. Eckart, and M. Itoh, "Experimental synchronization in Chua's circuit", International Journal of Bifurcation and Chaos, Vol. 2, pp. 705–708, 1992
7. L. Kocarev, K. S. Halle, K. Eckert, L. O. Chua, and U. Parlitz, "Experimental demonstration of secure communication via chaotic synchronization", International Journal of Bifurcation and Chaos, Vol. 2, pp. 709–713, 1992
8. U. Parlitz, L. O. Chua, L. Kocarev, K. S. Halle, and A. Shang, "Transmission of digital signals by chaotic synchronization", International Journal of Bifurcation and Chaos, Vol. 2, pp. 973–977, 1992
9. L. Kocarev and L. O. Chua, "On chaos in digital filters: case $b = -1$ ", IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing, Vol. 40, pp. 404–407, 1993
10. L. Kocarev, L. Karadzinov and L. O. Chua, "N-dimensional canonical Chua's circuit", Journal of Circuits, Systems and Computers, Vol. 3, pp. 239–258, 1993
11. L. O. Chua, M. Itoh, L. Kocarev and K. Eckart, "Chaos synchronization in Chua's circuit", Journal of Circuits, Systems and Computers, Vol. 3, pp. 93–108, 1993
12. V. Belykh, N. N. Verichev, L. Kocarev and L. O. Chua, "On chaotic synchronization in a linear array of Chua's circuits", Journal of Circuits, Systems and Computers, Vol. 3, pp. 579–589, 1993
13. T. Kapitaniak, L. Kocarev and L. O. Chua, "Controlling chaos without feedback and control signals", International Journal of Bifurcation and Chaos, Vol. 3, pp. 459–568, 1993
14. L. Kocarev, A. Shang and L. O. Chua, "Transitions in dynamical regimes by driving: a unified method of control and synchronization of chaos", International Journal of Bifurcation and Chaos, Vol. 3, pp. 479–483, 1993
15. L. Kocarev, K. S. Halle, K. Eckart and L. O. Chua, "Experimental observation of anti-monotonicity in Chua's circuit", International Journal of Bifurcation and Chaos, Vol. 3, pp. 1051–1055, 1993
16. L. Kocarev, D. Dimovski, Z. Tasev and L. O. Chua, "Knotted periodic orbits in Chua's circuit", International Journal of Bifurcation and Chaos, Vol. 4, pp. 609–621, 1994
17. L. Kocarev and Z. Tasev, "Analytical Description of a Fractal Set Generated by the time-delayed Chua's Circuit", International Journal of Bifurcation and Chaos, Vol. 4, pp. 1639–1643, 1994
18. L. Kocarev, Z. Tasev, and D. Dimovski, "Topological Description of Chaotic Attractors with Spiral Structure", Physics Letters A, Vol. 190, pp. 399–402, 1994
19. L. Kocarev, "Chaotic Behavior in Digital Filters", Journal of the Franklin Institute, Vol. 331B, pp. 937–955, 1994
20. L. Kocarev and T. Kapitaniak, "On an equivalence of chaotic attractors", J. Phys. A: Math. Gen., Vol. 28, pp. L249–L254, 1995
21. L. Kocarev and U. Parlitz, "General Approach for Chaotic Synchronization with Application to Communication", Physical Review Letters, Vol. 74, pp. 5028–5031, 1995

22. L. Kocarev and T. Stojanovski, "On Chaotic Synchronization and Secure Communication", *IEICE Transactions on Fundamentals and Electronics, Communications and Computer Science*, Vol. J78-A, pp. 1142–1147, 1995
23. L. Kocarev and P. Janjic, "On Turing Instability in a System of Diffusely Coupled Oscillators", *IEEE Transactions on Circuits and Systems I: Fundamental Theory and Applications*, Vol. 42, pp. 779–784, 1995
24. J. Brindely, T. Kapitaniak, and L. Kocarev, "Controlling Chaos by Chaos in Geophysical Systems", *Geophysical Research Letters*, Vol. 22, pp. 1257–1260, 1995
25. L. Kocarev and U. Parlitz, "Generalized Synchronization, Predictability and Equivalence of Unidirectionally Coupled Systems", *Physical Review Letters*, Vol. 76, pp. 1816–1819, 1996
26. L. Kocarev, C. W. Wu, and L. O. Chua, "Complex behavior in digital filters: analytical results", *IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing*, Vol. 43, pp. 234–246, 1996
27. U. Parlitz and L. Kocarev, "Multichannel Communication Using Auto - Synchronization", *International Journal of Bifurcation and Chaos*, Vol. 6, pp. 581–591, 1996
28. L. Kocarev and T. Stojanovski, "Linear Conjugacy of Vector Fields in Lur'e Form", *IEEE Transactions on Circuits and Systems I: Fundamental Theory and Applications*, Vol. 43, pp. 782–785, 1996
29. U. Parlitz, L. Kocarev, T. Stojanovski and H. Preckel, "Encoding Messages Using Chaotic Synchronization", *Physical Review E*, Vol. 53, pp. 4351–4361, 1996
30. L. Kocarev, U. Parlitz and T. Stojanovski, "An Application of Synchronized Dynamic Arrays", *Physics Letters A*, Vol. 217, pp. 280–284, 1996
31. U. Parlitz, L. Junge, W. Lauterborn and L. Kocarev, "Experimental observation of phase synchronization", *Physical Review E*, Vol. 54, pp. 2115–2117, 1996
32. T. Stojanovski, L. Kocarev and U. Parlitz, "Driving and synchronizing by chaotic impulses", *Physical Review E*, Vol. 54, pp. 2128–2131, 1996
33. L. Kocarev and U. Parlitz, "Synchronizing spatiotemporal chaos in coupled nonlinear oscillators", *Physical Review Letters*, Vol. 77, pp. 2206–2209, 1996
34. U. Parlitz, L. Junge and L. Kocarev, "Synchronization based parameter estimation from time series", *Physical Review E*, Vol. 54, pp. 6253–6259, 1996
35. T. Stojanovski, L. Kocarev and U. Parlitz, "A simple method to reveal the parameters of the Lorenz system", *International Journal of Bifurcation and Chaos*, Vol. 6, pp. 2645–2652, 1996
36. D. Gligorovski, D. Dimovski, L. Kocarev, V. Urumov and L. O. Chua, "A method for encoding messages by time targeting of the trajectories of chaotic systems", *International Journal of Bifurcation and Chaos*, Vol. 6, pp. 2119–2125, 1996
37. T. Stojanovski, L. Kocarev, U. Parlitz, and R. Harris, "Sporadic driving of dynamical systems", *Physical Review E*, Vol. 55, pp. 4035–4048, 1997
38. T. Stojanovski, L. Kocarev, and U. Parlitz, "Digital Coding via Chaotic Systems", *IEEE Trans. on Circuits and Systems, Part I*, Vol. 44, pp. 562–565, 1997
39. L. Kocarev, Z. Tasev and U. Parlitz, "Synchronizing spatiotemporal chaos of partial differential equations", *Physical Review Letters*, Vol. 79, pp. 51–54, 1997
40. L. Kocarev, U. Parlitz, T. Stojanovski, and P. Janjic, "Controlling Spatiotemporal Chaos in Coupled Nonlinear Oscillators", *Physical Review E*, Vol. 56, pp. 1238–1241, 1997
41. T. Stojanovski, U. Parlitz, L. Kocarev, and R. Harris, "Exploiting Delay Reconstruction for Chaos Synchronization", *Physics Letters A*, Vol. 233, pp. 139–152, 1997
42. T. Stojanovski, L. Kocarev, and R. Harris, "Applications of Symbolic Dynamics in Chaos Synchronization", *IEEE Trans. on Circuits and Systems, Part I*, Vol. 44, pp. 1014–1018, 1997

43. U. Parlitz, L. Kocarev, T. Stojanovski, and L. Junge, "Chaos Synchronization Using Sporadic Driving", *Physica D*, Vol. 109, pp. 139–152, 1997
44. L. Kocarev, Z. Tasev, T. Stojanovski and U. Parlitz, "Synchronizing spatiotemporal chaos", *CHAOS*, Vol. 7, pp. 635–643, 1997
45. U. Parlitz and L. Kocarev, "Using surrogate data analysis for unmasking chaotic communication systems", *International Journal of Bifurcation and Chaos*, Vol. 7, pp. 407–413, 1997
46. U. Parlitz, L. Junge, and L. Kocarev, "Subharmonic entrainment of unstable period orbits and generalized synchronization", *Physical Review Letters*, Vol. 79, pp. 3158–3161, 1997.
47. L. Kocarev, U. Parlitz, and B. Hu, "Lie derivatives and dynamical systems", *Chaos, Solitons and Fractals*, Vol. 9, pp. 1445–1455, 1998
48. L. Kocarev, P. Janjic, U. Parlitz, and T. Stojanovski, "Controlling spatiotemporal chaos in coupled oscillators by sporadic driving", *Chaos, Solitons, and Fractals*, Vol. 9, pp. 283–293, 1998
49. C. Mitrevski, L. Kocarev and N. Jonoska, "On a class of N - dimensional digital filters operating out of its stability region", *International Journal of Circuit Theory and Application*, Vol. 26, pp. 199–205, 1998
50. U. Parlitz, L. Junge and L. Kocarev, "Nonidentical synchronization of identical systems", *International Journal of Bifurcation and Chaos*, Vol. 9, pp. 2305–2309, 1999
51. L. Junge, U. Parlitz, Z. Tasev and L. Kocarev, "Synchronization and control of spatially extended systems using sensor coupling", *International Journal of Bifurcation and Chaos*, Vol. 9, pp. 2265–2270, 1999
52. L. Kocarev, U. Parlitz, and R. Brown, "Robust chaos synchronization", *Physical Review E*, Vol. 61, pp. 3716–3720, 2000
53. R. Brown and L. Kocarev, "A unifying definition of synchronization for dynamical systems", *CHAOS*, Vol. 10, pp. 344–349, 2000
54. Z. Tasev, L. Junge, U. Parlitz, and L. Kocarev "Synchronization of Kuramoto-Sivashinsky equations using local coupling", *International Journal of Bifurcation and Chaos*, Vol. 10(4), pp. 869–874, 2000
55. L. Kocarev and D. Walker, "Compactness of symbolic sequences from chaotic systems", *Phys. Letters A*, Vol. 274, pp. 200–205, 2000
56. G. Jakimovski and L. Kocarev, "Chaos and Cryptography: Block Encryption Ciphers Based on Chaotic Maps" *IEEE Trans. on Circuits and Systems, Part I*, Vol. 48(2), pp. 163–169, 2001
57. T. Stojanovski and L. Kocarev, "Chaos Based Random Number Generators Part I: Analysis", *IEEE Trans. on Circuits and Systems, Part I*, Vol. 48(3), pp. 281–288, 2001
58. T. Stojanovski, J. Pihl and L. Kocarev, "Chaos Based Random Number Generators Part II: Practical Realization", *IEEE Trans. on Circuits and Systems, Part I*, Vol. 48(3), pp. 382–385, 2001
59. C. Mitrovski and L. Kocarev, "Periodic Trajectories in Piecewise-Linear Maps, *IEEE Trans. on Circuits and Systems, Part I*, Vol. 48(10), pp. 1244–1246, 2001
60. L. Kocarev and G. Jakimovski, "Logistic map as a block encryption algorithm", *Phys. Letters A*, Vol. 289, pp. 199–206, 2001
61. L. Kocarev, "Chaos-Based Cryptography: a Brief Overview", *IEEE Circuits and Systems Magazine*, Vol. 1(3), pp. 6–21, 2001
62. G. Jakimoski and L. Kocarev, "Analysis of Some Recently Proposed Chaos-Based Encryption Algorithms," *Phys. Letters A*, Vol. 291, pp. 381–384, 2001
63. L. Kocarev and Z. Tasev, "Lyapunov Exponents, Noise-induced Synchronization and Parrondo's Paradox," *Physical Review E*, 65, pp. 046215 (4 pages), 2002
64. Z. Tasev and L. Kocarev, "Performance Evaluation of CPPM Modulation in Multi-path Environments," *Chaos, Fractals and Solitons*, Vol. 15, pp. 319–326, 2002

65. L. Illing, J. Brocker, L. Kocarev, U. Parlitz, and H. D. I. Abarbanel, "When are synchronization errors small?" *Physical Review E*, 66, pp. 036229, 2002
66. L. Kocarev, Z. Tasev, and A. Vardy, "Improving turbo codes by control of transient chaos in turbo-decoding algorithms," *Electronics Letters*, Vol. 38(20), pp. 1184–1186, 2002
67. G. Jakimoski and L. Kocarev, "Differential and Linear Probabilities of a Block Encryption Cipher," *IEEE Trans. on Circuits and Systems, Part I*, Vol. 50(1), pp. 121–123, 2003
68. L. Kocarev and G. Jakimoski, "Unpredictable Pseudo-Random Bits Generated by Chaotic Maps", *IEEE Trans. on Circuits and Systems, Part I*, Vol. 50(1), pp. 123–126, 2003
69. P. Popovski, L. Kocarev, and A. Risteski, "Design of Flexible-Length S-Random Interleaver for Turbo Codes," *IEEE Communications Letters*, Vol. 8, No. 7, pp. 461–463, 2004
70. L. Kocarev, M. Sterjev, A. Fekete and G. Vattay, "Public-key Encryption with Chaos," *CHAOS*, Vol. 14 (4), pp. 1078–1082, 2004.
71. L. Kocarev and Z. Tasev, "Chaos and control of transient chaos in turbo-decoding algorithms", *International Journal of Bifurcation and Chaos*, Vol. 14, No. 3, pp. 1147–1153, 2004
72. L. Kocarev and J. Szczepanski, "Finite-space Lyapunov exponents and pseudo-chaos," *Phys Rev Letters*, Vol. 93, pp. 234101(1–4), 2004
73. J. Szczepanski, J.M. Amigo, T. Michalek, and L. Kocarev, "Cryptographically secure substitutions based on the approximation of mixing maps," *IEEE Transactions on Circuits and Systems part I*, Vol. 52, No. 2, pp. 443–453, 2005
74. P. Bergamo, P. D'Arco, A. De Santis and L. Kocarev, "Security of Public Key Cryptosystems based on Chebyshev Polynomials," *IEEE Transactions on Circuits and Systems part I*, Vol. 52, No. 7, pp. 1382–1393, 2005
75. L. Kocarev and P. Amato, "Synchronization in Power-Law Networks," *CHAOS*, Vol. 15, pp. 024101 (1 - 6), 2005
76. L. Kocarev, J. Makraduli, and P. Amato, "Public-Key Encryption Based on Chebyshev Polynomials," *Circuits, Systems and Signal Processing*, Vol. 24, No. 5, pp. 497–517, 2005
77. R. Femat, L. Kocarev, L. van Gerven, and M. E. Monsivais-Perez, "Towards Generalized Synchronization of Strictly Different Chaotic Systems," *Physics Letters A*, Vol. 342, pp. 247–255, 2005
78. J.M. Amigo, J. Szczepanski, and L. Kocarev, "Cryptographically Secure Substitutions Based on Chaotic Maps," *Physics Letters A*, Vol. 343, pp. 55–60, 2005
79. J.M. Amigo, M.B. Kennel and L. Kocarev, "The permutation entropy rate equals the Kolmogorov-Sinai entropy rate for mixing dynamical systems," *Physica D*, Vol. 210, pp. 77–95, 2005
80. J.M. Amigo, L. Kocarev, and J. Szczepanski, "Order patterns", *Physics Letters A*, Vol. 355, pp. 27–31, 2006
81. A. Fekete, G. Vattay, and L. Kocarev, "Distribution of edge load in scale-free trees" *Physical Review E*, Vol. 73, 046102 (11 pages), 2006
82. L. Kocarev, F. Lehmann, G.M. Maggio, B. Scanavino, Z. Tasev, and A. Vardy, "Nonlinear Dynamics of Iterative Decoding Systems: Analysis and Applications," *IEEE Transactions on Information Theory*, Vol. 52(4), pp. 1366–1384, 2006
83. N. Masuda, G. Jakimoski, K. Aihara, and L. Kocarev, "Chaotic Block Ciphers: from theory to practical algorithms," *IEEE Transactions on Circuits and Systems*, Vol. 53(6), pp. 1341–1352, 2006
84. L. Kocarev, J. Szczepanski, J. M. Amigo, and I. Tomovski, "Discrete Chaos – I: Theory", *IEEE Transactions on Circuits and Systems*, Vol. 53(6), pp. 1300–1309, 2006
85. D. Yu, M. Righero, and L. Kocarev, "Estimating topology of networks," *Physical Review Letters*, Vol. 97, pp. 188701 (4 pages), 2006 (also published in *Virtual Journal of Biological Physics Research*).
86. J. M. Amigo, L. Kocarev, and I. Tomovski, "Discrete entropy," *Physica D*, Vol. 228, pp. 77–85, 2007

87. J. M. Amigo, L. Kocarev, and J. Szczepanski, "Theory and Practice of Chaotic Cryptography," *Physics Letters A*, Vol. 366, issue 3, pp. 211–216, 2007
88. J. M. Amigo, L. Kocarev, J. Szczepanski, "Discrete Lyapunov exponent and resistance to differential cryptanalysis," *IEEE Transactions on Circuits and Systems*, part II, Vol. 54, issue 10, pp. 882–886, October 2007
89. L. Pejov, M. La Rosa, and L. Kocarev, "Dynamics of the central phenylene ring torsional motion in phenylene ethynylene oligomers. A quantum - theoretical contribution to the study of conformational basis for single – molecule switching phenomena," *Chemical Physics*, Vol. 340, issue 1-3, pp. 1–11, 2007
90. G. S. Duane, D. Yu, and L. Kocarev, "Identical synchronization, with translation invariance, implies parameter estimation," *Physics Letters A*, Vol. 371, issues 5-6, 26, pp. 416–420, 2007
91. P. Checco, M. Biey, and L. Kocarev, "Synchronization in random networks with given expected degree sequences," *Chaos, Solitons, and Fractals*, Vol. 35, pp. 562–577, 2008
92. J. Amigo, L. Kocarev, and J. Szczepanski, "On some properties of the discrete Lyapunov exponent", *Physics Letters A*, Vol. 372, issue 41, pp. 6265–6268, 2008
93. Y. Liu, K.S. Tang and L. Kocarev, "An adaptive observer design for auto-synchronization of Lorenz System," *International Journal of Bifurcation and Chaos*, Vol. 18, No 8, pp. 2415–2423, 2008
94. I. Petreska, L. Pejov, and L. Kocarev, "Controlling the torsional stochastic switching in phenylene ethynylene oligomer molecules by external electrostatic fields", *Phys. Rev. B*, Vol. 78, 045209 (5 pages), 2008 (also published in *Virtual Journal*)
95. P. Checco, M. Righero, M. Biey, and L. Kocarev, "Synchronization in Networks of Hindmarsh–Rose Neurons", *IEEE Transactions on Circuits and Systems II: Express briefs*, Vol. 55, No. 12, pp. 1274–1278, 2008
96. T. Addabbo and L. Kocarev, "Periodic Dynamics in State Dependent Queuing Networks", *Chaos, Solitons, and Fractals*, Vol. 41, issue 4, pp. 2178–2192, 2009
97. Y. Mao, W. Tang, Y. Liu and L. Kocarev, "Identification of biological neurons using adaptive observers", *Cognitive processing*, Vol. 10 (Suppl 1), pp. 41–53, 2009
98. N. Zlatanov and L. Kocarev, "Random walks on networks: Cumulative distribution of cover time", *Physical Review E* 80, 041102 (8 pages), 2009
99. Y. Liu, Y. Mao, W. Tang, L. Kocarev, "Communication schemes by dynamical minimization algorithm" *International Journal of Bifurcation and Chaos*, Vol. 19, issue 7, pp. 2429–2437, 2009
100. D. Smilkov and L. Kocarev, "Rich-club and page-club coefficients for directed graphs", *Physica A*, Vol. 389, pp. 2290–2299, 2010
101. I. Petreska, I. Tomovski, E. Gutierrez, L. Kocarev, F. Bono, K. Poljansek, "Application of modal analysis in assessing attack vulnerability of complex networks", *Communications in Nonlinear Science and Numerical Simulation (Elsevier)*, Vol. 15, issue 4, pp. 1008 –1018, 2010
102. D. Trpevski, W. K. S. Tang, and L. Kocarev, "Model for rumor spreading over networks", *Physical Review E* 81, 056102 (11 pages), 2010
103. D. Trpevski, D. Smilkov, I. Mishkovski, and L. Kocarev, "Vulnerability of labeled networks", *Physica A: Statistical Mechanics and its Applications*, Vol. 389, issue 23, pp. 5538–5549, 2010
104. L. Kocarev, N. Zlatanov and D. Trajanov, "Vulnerability of networks of interacting Markov chains", *Phil. Trans. R. Soc. A* 368, 2205–2219, 2010
105. L. Kocarev and V. In, "Network science: A new paradigm shift", *IEEE Network*, vol. 24(6), pages: 6–9, 2010
106. M. Mishkovski, M. Biey, and L. Kocarev, "Vulnerability of complex networks", *Communications in Nonlinear Science and Numerical Simulation (Elsevier)*, Vol. 16, issue 1, pp. 341–349, 2011

107. I. Petreska, L. Pejov, and L. Kocarev, "Exploring the possibilities to control the molecular switching properties and dynamics: A field-switchable rotor-stator molecular system", *Journal of Chemical Physics* 134, 014708 (12 pages), 2011
108. D. Smilkov and L. Kocarev, "Analytically solvable processes on networks", *Physical Review E* 84, 016104 (8 pages) 2011
109. T. Addabbo, A. Fort, L. Kocarev, S. Rocchi, V. Vignoli, "Pseudo-Chaotic Lossy Compressors for True Random Number Generation", *IEEE Transactions on Circuits and Systems I: Regular Papers*, Vol. 58, issue 8, pp. 1897–1909, 2011
110. A. Stanoev, D. Smilkov, L. Kocarev, "Identifying communities by influence dynamics in social networks", *Physical Review E*, 84, 046102 (10 pages), 2011
111. M. Miskovski, M. Righero, M. Biey, and L. Kocarev, "Enhancing robustness and synchronizability of networks homogenizing their degree distribution", *Physica A*, Vol. 390, issues 23-24, p. 4610–4620, 2011
112. D. Smilkov and L. Kocarev, "Influence of the network topology on epidemic spreading", *Physical Review E* 85, 016114 (10 pages), 2012
113. I. Tomovski and L. Kocarev, "Simple Algorithm for Virus Spreading Control on Complex Networks", *IEEE Transactions on Circuits and Systems I: Regular Papers*, Vol. 59, issue 4, pp. 763–771, 2012
114. M. Mirchev, G. Duane, W. Tang, and L. Kocarev, "Improved modeling by coupling imperfect models", *Communications in Nonlinear Science and Numerical Simulation (Elsevier)*, Vol. 17, pp. 2741–2751, 2012
115. L. Basnarkov and L. Kocarev, "Forecast improvement in Lorenz 96 system", *Nonlinear Processes in Geophysics*, Vol. 19, 569–575, 2012
116. I. Trpevski, L. Basnarkov, D. Smilkov, L. Kocarev, "Empirical correction techniques: analysis and applications to chaotically driven low-order atmospheric models", *Nonlinear Processes in Geophysics*, Vol. 20, issue 2, pp. 199-206, 2013
117. A. Kanevce, I. Mishkovski, L. Kocarev, "Modeling long-term dynamical evolution of Southeast European power transmission system", *Energy*, Vol. 57, pp. 116-124, 2013
118. T. Stojanovski, L. Kocarev, "Construction of Markov Partitions in PL1D Maps", *IEEE Transactions on Circuits and Systems II: Express Briefs*, Vol. 60, issue 10, pp. 702–706, 2013
119. L. Basnarkov, G. Duane, L. Kocarev, "Generalized synchronization and coherent structures in spatially extended systems", *Chaos, Solitons & Fractals* 59, 35–41, 2014
120. I. Tomovski, I. Trpevski, L. Kocarev, "Topology independent SIS process: An engineering viewpoint", *Communications in Nonlinear Science and Numerical Simulation*, Vol. 19, pp. 627–637, 2014
121. A. Bogojeska, M. Mirchev, I. Mishkovski, L. Kocarev, "Synchronization and Consensus in State-Dependent Networks", *IEEE Transactions on Circuits and Systems I: Regular Papers*, Vol. 61, issue 2, pp. 522–529, 2014
122. M. Mirchev, L. Basnarkov, F. Corinto, L. Kocarev, "Cooperative Phenomena in Networks of Oscillators with Non-identical Interaction and Dynamics", *IEEE Transactions on Circuits and Systems I: Regular Papers*, Vol. 61, issue 3, pp. 811–819, 2014
123. D. Smilkov, C. A. Hidalgo, and L. Kocarev, "Beyond network structure: How heterogeneous susceptibility modulates the spread of epidemics", *Scientific Reports* 4, Article number: 4795, Published 25 April 2014, doi:10.1038/srep04795, 2014
124. A. Tenev, S. Markovska-Simoska, L. Kocarev, J. Pop-Jordanov, A. Müller, and G. Candria, "Machine learning approach for classification of ADHD adults", *International Journal of Psychophysiology*, (available online 26 January 2013), Vol. 93, pp. 162–166, 2014

125. A. Stanoev, D. Trpevski, and L. Kocarev, "Modeling the Spread of Multiple Concurrent Contagions on Networks", PLoS ONE 9(6): e95669. doi:10.1371/journal.pone.0095669, Published: June 12, 2014
126. K. Trivodaliev, A. Bogojeska, and L. Kocarev, "Exploring Function Prediction in Protein Interaction Networks via Clustering Methods", PLoS ONE 9(6): e99755. doi:10.1371/journal.pone.0099755, Published: June 27, 2014
127. A. Gajduk, M. Todorovski, and L. Kocarev, "Stability of power grids: An overview", Eur. Phys. J. Special Topics, Vol. 223, issue 12, pp 2387-2409, October 2014,
128. A. Gajduk, M. Todorovski, J. Kurths and L. Kocarev, "Improving power grid transient stability by plug-in electric vehicles", New J. Phys. 16 115011, Published 11 November 2014
129. I. Trpevski, A. Stanoev, A. Koseska and L. Kocarev, "Discrete-time distributed consensus on multiplex networks", New J. Phys. 16, 113063, Published 26 November 2014
130. I. Trpevski, L. Basnarov, ... [et al.], L. Kocarev, "Short-term and long-term forecasting with Lorenz 96 family of models", Прилози. Одделение за технички науки (МАНУ) = Contributions. Section of Technical Sciences (MASA), Vol. XXXV, no. 1–2, pp. [13]–27, 2014
131. A. Gajduk, L. Kocarev, "Opinion mining of text documents written in Macedonian language", Прилози. Одделение за технички науки (МАНУ) = Contributions. Section of Technical Sciences (MASA), Vol. XXXV, no. 1–2, pp. [29]–43, 2014
132. R. Chobanova, L. Kocarev, S. Josimovski, "Science policy for knowledge generation and implementation in Bulgaria and Macedonia", Knowledge : international journal : scientific and applicative papers V-4, Vol. 4, pp. 22–25, 2014
133. I. Tomovski, L. Kocarev, "Special cases of network topology inference from infection statistics", Прилози. Одделение за технички науки (МАНУ) = Contributions. Section of Technical Sciences (MASA), Vol. XXXVI, no. 1–2, pp. [29]–63, 2015
134. R. Chobanova, S. Josimovski, L. Kocarev, "Challenges and opportunities for knowledge driven growth in Bulgaria and Macedonia", Икономически растеж: стимули и ограничители - меѓународна научна конференција, 6-7 октомври 2014 г., Софија, Горекспрес, 2015
135. V. Zdraveski, M. Todorovski, and L. Kocarev, "Dynamic intelligent load balancing in power distribution networks", International Journal of Electrical Power & Energy Systems, Vol. 73, pp. 157–162, December 2015
136. I. Tomovski and L. Kocarev, "Network topology inference from infection statistics", Physica A: Statistical Mechanics and its Applications, Vol. 436, pp. 272–285, 15 October 2015
137. M. Jovanovik, A. Bogojeska, D. Trajanov, and L. Kocarev, "Inferring Cuisine - Drug Interactions Using the Linked Data Approach", Scientific Reports 5, article 9346, 2015
138. K. Trivodaliev, S. Kalajdziski, I. Ivanoska, B. Risteska Stojkoska, and L. Kocarev, "SHOPIN: Semantic Homogeneity Optimization in Protein Interaction Networks", Advances in Protein Chemistry and Structural Biology, Available online 24 August 2015
139. L. Pejov, I. Petreska, and L. Kocarev, "Designing field-controllable graphene-dot-graphene single molecule switches: A quantum-theoretical proof-of-concept under realistic operating conditions", The Journal of Chemical Physics, Vol. 143, 244704, 2015
140. Л. Грчев, "Библиографија на академик Љупчо Коцарев : (по повод неговиот 60. роденден)", Прилози. Одделение за технички науки (МАНУ) = Contributions. Section of Technical Sciences (MASA), Vol. XXXVI, no. 1–2, стр. [11]–28, 2015.
141. I. Mishkovski, S. Ilchev, R. Andreev, L. Kocarev, "Modeling Epidemic Spreading in Multiplex Graphs", Прилози. Одделение за технички науки (МАНУ) = Contributions. Section of Technical Sciences (MASA), Vol. XXXVII, no. 1–2, pp. [11]–23, 2016

142. A. Dedinec, S. Filiposka, A. Dedinec, and L. Kocarev, "Deep belief network based electricity load forecasting: An analysis of Macedonian case", *Energy*, Vol. 115, part 3, pp. 1688–1700, 2016
143. I. Petreska, V. Ohanesjaa, L. Pejov, and L. Kocarev, "Tunneling of electrons via rotor–stator molecular interfaces: Combined ab initio and model study", *Chemical Physics*, Vol. 473, 1, pp. 32–39, 2016
144. A. Dedinec, B. Jovanovski, A. Gajduk, N. Markovska, and L. Kocarev, "Analysis of renewable energy sources and electric vehicle penetration into energy systems predominantly based on lignite", *The European Physical Journal Special Topics*, Vol. 225 (3), pp 595–608, 2016
145. A. Stanoev, S. Filiposka, V. In, and L. Kocarev, "Cooperative method for wireless sensor network localization", *Ad Hoc Networks*, Vol. 40, pp. 61–72, 2016
146. V. Stojkoski, Z. Utkovski, and L. Kocarev, "The Impact of Services on Economic Complexity: Service Sophistication as Route for Economic Growth", *PLoS ONE* 11(8): e0161633. doi:10.1371/journal.pone.0161633, Published: August 25, 2016
147. Y. Tang, X. Xing, H. Reza Karimi, L. Kocarev, J. Kurths, "Tracking Control of Networked Multi-Agent Systems Under New Characterizations of Impulses and Its Applications in Robotic Systems", *IEEE Transactions on Industrial Electronics* Vol. 63 (2), pp. 1299–1307, 2016
148. I. Trpevski, T. Dimitrova, T. Boshkovski, N. Stikov, and L. Kocarev, "Graphlet characteristics in directed networks", *Scientific Reports* 6, article 37057, doi:10.1038/srep37057, 2016
149. V. Zdraveski, K. Mishev, D. Trajanov, and L. Kocarev, "ISO-Standardized Smart City Platform Architecture and Dashboard", *IEEE Pervasive Computing*, Vol. 16, issue 2, pages 35–43, 2017
150. V. Zdraveski, M. Todorovski, D. Trajanov, and L. Kocarev, "Dynamic Load Balancing and Reactive Power Compensation Switch Embedded in Power Meters", *IEEE Transactions on Circuits and Systems II: Express Briefs*, Vol. 64, issue 4, pp. 422–426, 2017
151. S. Filiposka, A. Gajduk, T. Dimitrova, and L. Kocarev, "Bridging online and offline social networks: Multiplex analysis", *Physica A*, Vol. 471, 825–836, 2017
152. N. Arsov, M. Pavlovski, L. Basnarkov, and L. Kocarev, "Generating highly accurate prediction hypotheses through collaborative ensemble learning", *Scientific Reports* 7 [El. resource], article 44649; doi: 10.1038/srep44649, 2017
153. Z. Utkovski, V. Stojkoski, L. Basnarkov, and L. Kocarev, "Promoting cooperation by preventing exploitation: The role of network structure", *Phys. Rev. E* 96, Vol. 96, article 022315, 2017
154. M. Pavlovski, A. Gajduk, M. Todorovski, and L. Kocarev, "Improving Power Grid Stability With Communication Infrastructure", *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, Vol. 7, issue 3, pp. 349–358, 2017
155. I. Mishkovski, M. Mirchev, S. Šćepanović, and L. Kocarev, "Interplay Between Spreading and Random Walk Processes in Multiplex Networks", *IEEE Transactions on Circuits and Systems I: Regular Papers*, Vol. 64 (10), pp. 2761–2771, 2017
156. M. Pavlovski, F. Zhou, I. Stojkovic, L. Kocarev, Z. Obradovic, "Adaptive Skip-Train Structured Regression for Temporal Networks", *ECML PKDD 2017: the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases*, Skopje, Macedonia, 18-22 September, article ID614 (16 pages), 2017
157. V. Stojkoski, T. Dimitrova ... [et al.], L. Kocarev, "Local Diffusion Versus Random Relocation in Random Walks", *ICT Innovations 2017: Proceedings of Data-Driven Innovation: 9th International Conference ICT Innovations 2017*, Skopje, Macedonia, September 18-23, 2017, eds. D. Trajanov, V. Bakeva, Cham: Springer, (Communications in Computer and Information Science; vol. 778), pp. 57–66, 2017
158. L. Basnarkov, M. Mirchev, L. Kocarev, "Persistent Random Search on Complex Networks", *ICT Innovations 2017: Proceedings of Data-Driven Innovation: 9th International Conference ICT*

- Innovations 2017, Skopje, Macedonia, September 18-23, 2017, eds. D. Trajanov, V. Bakeva, Cham: Springer, (Communications in Computer and Information Science; vol. 778), pp. 102–111, 2017
159. P. Jovanovski, I. Tomovski, L. Kocarev, "Modeling the Spread of Multiple Contagions on Multilayer Networks", arXiv [El. resource], article arXiv:1703.02906v1 (5 pages), Submitted: 8 March 2017
160. Z. Utkovski, M. F. Pradier ... [et al.], L. Kocarev, "Economic Complexity Unfolded: Interpretable Model for the Productive Structure of Economies", arXiv [El. resource], article arXiv:1711.07327v1 (28 pages), Submitted: 17 November 2017
161. A. Sokolovska, L. Kocarev, "Fairness, privacy, and accountability of algorithms and their impacts on human rights = Poštenje i odgovornost u algoritmima i njihovi uticaji na ljudska prava", [Zbornik radova Međunarodne konferencije "Globalizam naspram nacionalizma"]: Podgorica, CANU, 2–3 novembar 2017 = [Proceedings of the International Conference "Globalism vs Nationalism"]: Podgorica, MASA, 2–3 November 2017, [Podgorica : CANU = MASA] (во печат)
162. A. Соколовска, Љ. Коцарев, "Предизвици на Интернетот и на информатичките технологии : праведност, одговорност, приватност", Прилози. Одделение за општествени науки (МАНУ) = Contributions. Section of Social Sciences (MASA), XLVIII, 1 (2017). (во печат)

Составил:
Акад. Љупчо Коцарев

Редактирал:
Вангел Аџиовски
(Библиотека на МАНУ)
Скопје, април 2018