

Curriculum Vitae

- I. Прізвище** Панчук
II. Ім'я Анастасія **По-батькові** Анатоліївна
III. Місце народження Київ, Україна
IV. Дата народження 31.05.1978
V. Громадянство Україна
VI. Адреса

Робоча:
Інститут математики
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VII. Посада старший науковий співробітник
Інститут математики
Національної Академії Наук України

VIII. Наукова біографія

A. Освіта та місце роботи

- | | |
|-------------|--|
| 1995-2000 | студентка механіко-математичного факультету
Київського національного університету імені Тараса Шевченка
(диплом з відзнакою) |
| 2000-2003 | аспірантка
Інституту математики
Національної Академії Наук України
(науковий керівник — проф. Юрій Майстренко) |
| 2003 - 2008 | молодший науковий співробітник
Інституту математики
Національної Академії Наук України |
| 2008 - 2011 | науковий співробітник
Інституту математики
Національної Академії Наук України |

2011 - до сьогодні старший науковий співробітник
Інституту математики
Національної Академії Наук України

В. Науковий ступінь

магістр математики,
Дипломна робота: “Оцінювання складних опціонів в моделі Блека-Шоулса”.
(науковий керівник: Марія Свіщук) червень, 2000

кандидає фізико-математичних наук,
Дисертація: “Стійкість та асимптотична поведінка розв’язків
систем нелінійних різницевих рівнянь”.
(науковий керівник — проф. Юрій Майстренко) червень, 2005

С. Наукові інтереси:

- нелінійні динамічні системи, теорія бифуркацій та хаосу
- кусково-гладкі динамічні системи, що задаються різницевими рівняннями, та їх застосування в економіці та інших соціальних науках
- диференціальні рівняння з запізненням, моделі систем нейронів
- синхронізація та кластеризація в системах зв’язаних елементів

Д. Гранти:

- INTAS: стипендія для молодих науковців, 2001–2003 (№ YSF 01-165, назва “Asymptotic behaviour of systems of coupled oscillators”)
- Swedish Institute: короткостроковий дослідницький візит в університет м. Умео, Швеція, 23 травня – 20 червня, 2009 (в рамках програми Visby, № 382 /00635/2009/Ukraine)
- Swedish Institute: короткостроковий дослідницький візит в університет м. Умео, Швеція, 25 лютого – 10 березня, 2011 (в рамках програми Visby, № 382 /01936/2010/Ukraine)
- COST: короткострокова наукова місія в університет м. Тарту, Естонія, 03–15 грудня, 2012 (№ 031212-024707, в рамках проекту IS1104 “The EU in the new complex geography of economic systems: models, tools and policy evaluation”)

- COST: короткострокова наукова місія в Політехнічний університет м. Картахена, Іспанія, 15–24 квітня, 2013 (№ 150413-024708, в рамках проекту IS1104 “The EU in the new complex geography of economic systems: models, tools and policy evaluation”)
- COST: короткострокова наукова місія в Університет м. Амстердам, Нідерланди, 07–13 травня, 2013 (№ 070513-030405, в рамках проекту IS1104 “The EU in the new complex geography of economic systems: models, tools and policy evaluation”)
- COST: короткострокова наукова місія в Університет м. Урбіно, Італія, 08–19 вересня, 2013 (№ 080913-034490, в рамках проекту IS1104 “The EU in the new complex geography of economic systems: models, tools and policy evaluation”)
- COST: короткострокова наукова місія в Університет м. Умео, Швеція, 06–21 січня, 2014 (№ 060114-038016, в рамках проекту IS1104 “The EU in the new complex geography of economic systems: models, tools and policy evaluation”)
- COST: короткострокова наукова місія в Політехнічний університет м. Картахена, Іспанія, 04–14 лютого, 2014 (№ 040214-039719, в рамках проекту IS1104 “The EU in the new complex geography of economic systems: models, tools and policy evaluation”)
- COST: короткострокова наукова місія в Університет м. Урбіно, Італія, 17–30 березня, 2015 (№ 170315-056174, в рамках проекту IS1104 “The EU in the new complex geography of economic systems: models, tools and policy evaluation”)
- COST: короткострокова наукова місія в Університет м. Урбіно, Італія, 15–26 лютого, 2016 (№ 150216-066945, в рамках проекту IS1104 “The EU in the new complex geography of economic systems: models, tools and policy evaluation”)
- Тимчасова позиція дослідника: Університет м. Урбіно, Італія, травень–жовтень, 2022 (в рамках дослідницького проекту “Modelli Dinamici in Economia e Finanza”)

Е. Міжнародні конференції та симпозиуми:

1. 2nd European Interdisciplinary School on Nonlinear Dynamics for System and Signal Analysis EUROATTRACTOR 2001, June 19 – 28, 2001, Warsaw, Poland.
Talk: *Asymptotical behaviour of mean-field coupled maps*
2. International Workshop and Seminar on Control, Communication, and Synchronization in Chaotic Dynamical Systems (Workshop: October 14 – 19, 2001 Seminar: October 20 – 26, 2001), Max Planck Institute for the Physics of Complex Systems, Dresden, Germany.
Talk: *Stable periodic clusters in system of globally coupled logistic maps*
3. NATO Advanced Study Institute “Synchronization: Theory and Application”, May 19 - June 1, 2002, Yalta, Ukraine.
Talk: *Stability of periodic clusters in a system of globally coupled oscillators*
4. Nonlinear Dynamics of Electronic Systems 2003, May 18 - 21, 2003, Scuol, Switzerland.
Talk: *Clustering in the turbulent phase*
5. Trends in Pattern Formation: From Amplitude Equations to Applications (2nd Workshop), September 15 - 19, 2003, Dresden, Germany.
Poster: *Clustering in globally coupled map systems*

6. School-Forum “Coupled Map Lattices 2004”, Institute Henri Poincaré, June 21 – July 2, Paris, France.
Talk: *Partial synchronization in globally coupled map systems*
7. International Conference and Workshops “Nonlinear Dynamics, Chaos, and Applications (NDCA)”, May 15-26, 2006, Yalta, Crimea, Ukraine.
Talk: *Synchronization of globally coupled chaotic maps: clusters and quasi-clusters*
8. European Conference on Iteration Theory (ECIT) 2008, September 7-13, 2008, Yalta, Crimea, Ukraine.
Talk: *Synchronization and stability in a non-autonomous iterative system*
9. The 6th International Conference on Nonlinear Economic Dynamics (NED09), 31 May – 2 June, 2009, Jönköping International Business School, Sweden.
Talk: *Industry dynamics, stability of Cournot equilibrium, entry of firms and renewal of capital*
10. 17th International Workshop on Nonlinear Dynamics of Electronic Systems, June 21-24, 2009, Rapperswil, Switzerland.
Talk: *Regular spiking in FitzHugh-Nagumo systems coupled through linear delay term*
11. Ukrainian Mathematical Congress – 2009 (devoted to 100-anniversary of M.M.Bogolyubov birth), 27-29 August, 2009, Institute of Mathematics, NAS of Ukraine, Kyiv, Ukraine.
Talk: *Iteration system with periodic perturbation: Application to economics*
12. International Workshop on Nonlinear Maps and their Applications (NOMA’09), September 10-11, 2009, University of Urbino, Italy.
Talk: *Regular spiking in FitzHugh-Nagumo systems coupled through linear delay term*
13. International Workshop on Delayed Complex Systems, October 5-9, 2009, Max Planck Institute for the Physics of Complex Systems, Dresden, Germany.
Talk: *Regular spiking in asymmetrically delay-coupled FitzHugh-Nagumo systems*
14. 18th IEEE Workshop on Nonlinear Dynamics of Electronic Systems, May 26–28, 2010, Technische Universität Dresden, Germany.
Talk: *Coupled FitzHugh-Nagumo systems: Patterns induced by a delay coupling and a feedback*
15. International Workshop Nonlinear Dynamics on Networks, July 5–9, 2010, National Academy of Sciences of Ukraine, Kyiv, Ukraine.
Talk: *Coupled FitzHugh-Nagumo systems: patterns induced by a delay coupling and a feedback*
16. European Conference on Iteration Theory 2010, 12-17 September, 2010, Nant, France.
Talk: *Dynamics in the oligopoly model with recurring renewal of capital*
17. Third Workshop “Modelli Dinamici in Economia e Finanza” (MDEF2010), September 23-25, 2010, University of Urbino, Italy.
Talk: *Dynamics in the oligopoly model with recurring renewal of capital*

18. The 7th International Conference on Nonlinear Economic Dynamics (NED11), 1 — 3 June, 2011, Cartagena, Spain.
Talk: *Oligopoly model with recurring renewal of capital*
19. International Conference on Differential Equations and Their Applications, 8 — 10 June, 2011, Kyiv National Taras Shevchenko University, Ukraine.
Talk: *Delay differential equations for modeling coupled neurons*
20. International Workshop on Nonlinear Maps and their Applications (NOMA'11), September 15-16, 2011, University of Évora, Portugal.
Talk: *Three Segmented Piecewise-Linear Map*
21. International Conference on Structural Nonlinear Dynamics and Diagnosis (CSNDD), April 30-May 2, 2012, Marrakech, Morocco.
Talk: *Delay FitzHugh-Nagumo equations for modelling coupled neurons*
22. International Conference on Emergent Dynamics of Oscillatory Networks, May 20-27, 2012, Mellis, Crimea, Ukraine.
Talk: *Delay FitzHugh-Nagumo equations for modelling coupled neurons*
23. International Workshop “Modelli Dinamici in Economia e Finanza”, September 20-22, 2012, University of Urbino, Italy.
Talk: *Oligopoly model with recurrent renewal of capital: modifications and new results*
24. European Conference on Iteration Theory (ECIT) 2012, September 9-15, 2012, Ponta Delgada, São Miguel, Açores, Portugal.
Talk: *Cycles and their bifurcations in a bimodal piecewise linear map*
25. International Conference on Nonlinear Economic Dynamics (NED13), 4–6 July, 2013, Siena, Italy.
Talk (together with T. Puu): *Disequilibrium trade and dynamics of stock markets*
26. 8th SICC International Tutorial Workshop “Topics in nonlinear dynamics”, Bifurcations in Piecewise-Smooth Systems: Perspectives, Methodologies and Open Problems, 11–13 September, 2013, University of Urbino (PU), Italy
Talk: *Bifurcation structure in 1D PWL bimodal maps. Regular dynamics*
27. International Conference on Nonlinear Economic Dynamics (NED15), 25–27 June, 2015, Tokyo, Japan.
Talk (together with T. Puu): *Dynamics of a stock market involving disequilibrium trade*
28. Training School on “Qualitative Theory of Dynamical Systems, Tools and Applications”, 17–19 September, 2015, University of Urbino “Carlo Bo” — DESP, Italy
Lecture: *Global analysis of dynamical systems and numerical methods*
29. Final GeComplexity Conference “The EU in the new complex geography of economic systems: models, tools and policy evaluation”, 26–27 May, 2016, Heraklion, Crete, Greece.
Talk: *Dynamics of a stock market involving disequilibrium trade*

30. 9th International Workshop “Modelli Dinamici in Economia e Finanza”, 23–25 June, 2016, University of Urbino “Carlo Bo” — DESP, Italy.
Talk: *Renewable resource exploitation described by a discrete time nonlinear model with replicator dynamics*
31. 11th International Conference “Progress on Difference Equations” (PODE 2017), 29–31 May, 2017, University of Urbino “Carlo Bo” — DESP, Italy.
Talk: *Bifurcation structures related to chaotic attractors in a 1D PWL map defined on three partitions*
32. 10th International Workshop “Modelli Dinamici in Economia e Finanza”, 6–8 September, 2018, University of Urbino “Carlo Bo” — DESP, Italy.
Talk: *A piecewise linear map with two discontinuities: bifurcation structures in the chaotic domain*
33. International Conference on Nonlinear Economic Dynamics (NED19), 4–6 September, 2019, Kyiv, Ukraine.
Talk: *Modelling learning and teaching interaction by a map with vanishing denominators*
34. International Conference on Difference Equations and Applications (ICDEA 2021 Virtual), 26–30 July, 2021, Sarajevo, Bosnia and Herzegovina.
Talk: *Border collision bifurcations of chaotic attractors in 1D maps with multiple discontinuities*
35. International Conference on Nonlinear Economic Dynamics (NED21), 13–15 September, 2021, Milan, Italy.
Talk: *Interplay between honest and dishonest agents given an endogenous monitoring: bifurcation structure overview*
36. European Conference on Iteration Theory (ECIT) 2022, 13–17 June, 2022, Reichenau an der Rax, Austria.
Talk 1: *Border collision bifurcations of chaotic attractors in 1D maps with multiple discontinuities*
Talk 2: *The first return map: revealing bifurcation mechanisms in a 2D nonsmooth map*
37. International Conference on Difference Equations and Applications (ICDEA 2022), 18–22 July, 2022, Paris-Saclay University, Gif-sur-Yvette, France.
Talk: *Exterior, interior and expansion-like border collisions for chaotic attractors in 1D discontinuous maps*
38. 11th International Workshop “Modelli Dinamici in Economia e Finanza”, 8–10 September, 2022, University of Urbino “Carlo Bo” — DESP, Italy.
Talk: *A 2D nonsmooth map modeling fraud in a public procurement: Advantages of the first return map*
39. International Workshop “From Modeling and Analysis to Approximation and Fast Algorithms”, 2–6 December, 2022, Hasenwinkel, Germany.
Talk: *Border collision bifurcations for chaotic attractors in 1D maps with multiple discontinuities*

40. 13th International Conference “Progress on Difference Equations” (PODE 2023), 29–31 May, 2023, Università Cattolica del Sacro Cuore, Milano, Italy.
Talk: *Bifurcations of chaotic attractors in 1D maps with multiple discontinuities*
41. International Conference on Nonlinear Economic Dynamics (NED23), 19–21 June, 2023, University of Agder (UiA), Kristiansand, Norway.
Talk: *Evolution of dishonest behavior in public procurement. The role of updating control*
42. International Conference on Difference Equations and Applications (ICDEA 2023), 17–21 July, 2023, Pibulsongkram Rajabhat University, Phitsanulok, Thailand.
Talk: *Bifurcation structures in a discontinuous 2D map, modeling exchange rate dynamics*
43. Workshop on Dynamic Macroeconomics in Honour of Ingrid Kubin, 19 September, 2023, Vienna University of Economics and Business, Austria.
Talk: *Evolution of dishonest behavior in public procurement. The role of updating control*
44. International Conference “Complex Dynamical Systems” (CDS 2023), 2–4 October, 2023, Institute of Mathematics, NAS of Ukraine.
Talk: *Bifurcations of chaotic attractors in 1D maps with multiple discontinuities*
45. International Conference on Difference Equations and Applications (ICDEA 2024), 24–28 June, 2024, Paris, France.
Talk: *Bifurcation structures in a discontinuous 2D map, modeling exchange rate dynamics*

F. Наукові візити:

- Датський технічний університет, Люнгбю, Данія (березень–квітень, 2001)
- Швейцарський федеральний технологічний інститут, Лозанна, Швейцарія (січень–березень, 2002; січень–березень, 2003)
- Університет м. Брістоль, Велика Британія (лютий, 2006)
- Технічний університет м. Берлін, Німеччина (грудень, 2006; листопад, 2008; жовтень 2009; жовтень–листопад, 2010)
- Університет м. Умео, Швеція (березень, 2008; травень–червень, 2009; квітень, 2010; лютий–березень, 2011; січень, 2014)
- Університет м. Урбіно, Італія (вересень, 2009; червень–липень, 2010; вересень, 2010; вересень, 2011; вересень, 2012; вересень, 2013; вересень, 2014; березень, 2015; лютий, 2016; червень, 2017; травень–жовтень, 2022)
- Політехнічний університет м. Картахена, Іспанія (листопад, 2009; червень, 2012; квітень, 2013; лютий, 2014; жовтень, 2017)
- Університет м. Тарту, Естонія (грудень, 2012)
- Університет м. Амстердам, Нідерланди (травень, 2013)
- SAMGSD, Вищий технічний інститут, університет м. Лісабон, Португалія (квітень, 2018; квітень, 2022)

Викладання:

- Католицький університет Святого Серця, Мілан, Італія; Курс лекцій “Mathematics for Management” (жовтень–листопад, 2022; жовтень–листопад, 2023)

G. Публікації:**Вибрані публікації (для участі у конкурсі)**

1. G. Campisi, A. Panchuk, F. Tramontana, A discontinuous model of exchange rate dynamics with sentiment traders. *Annals of Operations Research*, **337**, P. 913–935, (2024). doi: 10.1007/s10479-023-05387-2. Q1. [Scopus]
2. V. Avrutin, A. Panchuk, I. Sushko, Can a border collision bifurcation of a chaotic attractor lead to its expansion?, *Proceedings of the Royal Society A*, **479**, P. 20230260 (2023); doi: 10.1098/rspa.2023.0260. Q1. [Scopus]
3. A. Panchuk, I. Sushko, E. Michetti, R. Coppier, Revealing bifurcation mechanisms in a 2D nonsmooth map by means of the first return map, *Communications in Nonlinear Science and Numerical Simulation*, **117**, P. 106946 (2023); doi: 10.1016/j.cnsns.2022.106946. Q1. [Scopus]
4. V. Avrutin, A. Panchuk, I. Sushko, Border collision bifurcations of chaotic attractors in one-dimensional maps with multiple discontinuities, *Proceedings of the Royal Society A*, **477**, P. 20210432 (2021); doi: 10.1098/rspa.2021.0432. Q1. [Scopus]
5. A. Panchuk, F. Westerhoff, Speculative behavior and chaotic asset price dynamics: On the emergence of a bandcount accretion bifurcation structure, *Discrete & Continuous Dynamical Systems – B*, **26**(11), pp. 5941–5964 (2021); doi: 10.3934/dcdsb.2021117. Q2. [Scopus]
6. L. C. Baiardi, A. Panchuk, Global dynamic scenarios in a discrete-time model of renewable resource exploitation: a mathematical study, *Nonlinear Dynamics*, **102**, pp. 1111–1127 (2020); doi: 10.1007/s11071-020-05898-8. Q1. [Scopus]
7. L. C. Baiardi, A. K. Naimzada, A. Panchuk, Endogenous desired debt in a Minskyan business model, *Chaos, Solitons & Fractals*, **131**, pp. 109470 (2020); doi: 10.1016/j.chaos.2019.109470. Q1. [Scopus]
8. U. Merlone, A. Panchuk, P. van Geert, Modeling learning and teaching interaction by a map with vanishing denominators: Fixed points stability and bifurcations, *Chaos, Solitons & Fractals*, **126**, pp. 253–265 (2019); doi: 10.1016/j.chaos.2019.06.008. Q1. [Scopus]
9. A. Panchuk, I. Sushko, F. Westerhoff, A financial market model with two discontinuities: bifurcation structures in the chaotic domain, *Chaos*, **28**, pp. 055908 (2018); doi: 10.1063/1.5024382. Q1. [Scopus]
10. A. Panchuk, T. Puu, Dynamics of a durable commodity market involving trade at disequilibrium, *Communications in Nonlinear Science and Numerical Simulation*, **58**, pp. 2–14 (2018); doi: 10.1016/j.cnsns.2017.08.003. Q1. [Scopus]

11. A. Panchuk, I. Sushko, V. Avrutin, Bifurcation structures in a bimodal piecewise linear map, *Frontiers in Applied Mathematics and Statistics*, **3**, pp. 1–7 (2017); doi: 10.3389/fams.2017.00007. [Scopus]
12. A. Panchuk, Some aspects on global analysis of discrete time dynamical systems, In: *Qualitative Theory of Dynamical Systems, Tools and Applications for Economic Modelling*, G. I. Bischi, A. Panchuk, D. Radi (Eds.), Springer(2016), pp. 161–186; doi: 10.1007/978-3-319-33276-5_2. [Scopus]
13. A. Panchuk, Dynamics of industrial oligopoly market involving capacity limits and recurrent investment, In: *Complexity and Geographical Economics*, P. Commendatore, S. Kayam, I. Kubin (Eds.), Springer (2015), pp. 249–275; doi: 10.1007/978-3-319-12805-4_10.
14. J. S. Cánovas, A. Panchuk, T. Puu, Asymptotic dynamics of a piecewise smooth map modelling a competitive market, *Math. Comp. Simul.*, **117**, pp. 20–38 (2015); doi: 10.1016/j.matcom.2015.05.004. Q2. [Scopus]
15. I. Foroni, A. Avellone, A. Panchuk, Sudden transition from equilibrium stability to chaotic dynamics in a cautious tâtonnement model, *Chaos, Solitons & Fractals*, **79**, pp. 105–115 (2015); doi: 10.1016/j.chaos.2015.05.013. Q2. [Scopus]
16. A. Panchuk, I. Sushko, V. Avrutin, Bifurcation structures in a bimodal piecewise linear map: Chaotic dynamics, *Int. J. Bif. Chaos*, **25**(3), 1530006 (2015); doi: 10.1142/S0218127415300062. Q2. [Scopus]
17. A. Panchuk, T. Puu, Oligopoly model with recurrent renewal of capital revisited, *Math. Comp. Simul.*, **108**, pp. 119–128 (2015); doi: 10.1016/j.matcom.2013.09.007. Q2. [Scopus]
18. J. S. Cánovas, A. Panchuk, T. Puu, Role of reinvestment in a competitive market, No 12, Geocomplexity Discussion Paper Series, Action IS1104 “The EU in the new complex geography of economic systems: models, tools and policy evaluation” (2015); <https://EconPapers.repec.org/RePEc:cst:wpaper:12>.
19. A. Panchuk, CompDTIME: Computing one-dimensional invariant manifolds for saddle points of discrete time dynamical systems, No 11, Geocomplexity Discussion Paper Series, Action IS1104 “The EU in the new complex geography of economic systems: models, tools and policy evaluation” (2015); <https://EconPapers.repec.org/RePEc:cst:wpaper:11>.
20. A. Panchuk, I. Sushko, B. Schenke, V. Avrutin, Bifurcation structures in a bimodal piecewise linear map: Regular dynamics, *Int. J. Bif. Chaos*, **23**(12), 1330040 (2013); doi: 10.1142/S0218127413300401. Q2. [Scopus]
21. A. Panchuk, D. P. Rosin, P. Hövel, E. Schöll, Synchronization of coupled neural oscillators with heterogeneous delays, *Int. J. Bif. Chaos*, **23**(12), 1330039 (2013); doi: 10.1142/S0218127413300395. Q2. [Scopus]
22. A. Panchuk, T. Puu, Industry dynamics, stability of Cournot equilibrium, and renewal of capital, In: *Nonlinear Economic Dynamics*, T. Puu, A. Panchuk, Eds., Nova Science Publishers, pp. 259–276 (2011). [Scopus]

23. A. Panchuk, Three segmented piecewise-linear map, In: Proc. Int. Conf. “Nonlinear Maps and their Applications” (NOMA), Evora, Portugal, September 15–16, pp.3–6 (2011).
24. T. Puu, A. Panchuk, Oligopoly and stability, *Chaos, Solitons & Fractals*, **41**(5), pp. 2505–2516 (2009); doi: 10.1016/j.chaos.2008.09.037. Q1. [Scopus]
25. A. Panchuk, T. Puu, Cournot equilibrium stability in a non-autonomous system modeling the oligopoly market, *Grazer Mathematische Berichte*, **354**, pp. 201–218 (2009).
26. A. Panchuk, T. Puu, Stability in a non-autonomous iterative system: An application to oligopoly, *Comp. Math. Appl.*, **58**(10), pp. 2022–2034 (2009); doi: 10.1016/j.camwa.2009.06.048. Q2. [Scopus]
27. M. A. Dahlem, G. Hiller, A. Panchuk, E. Schöll, Dynamics of delay-coupled excitable neural systems, *Int. J. Bif. Chaos*, **19**(2), pp. 745–753 (2009); doi: 10.1142/S0218127409023111. Q2. [Scopus]
28. A. Panchuk, M. Dahlem, E. Schöll, Regular spiking in asymmetrically delay-coupled FitzHugh-Nagumo systems, <http://arxiv.org/abs/0911.2071> (2009).
29. A. Panchuk, M. Dahlem, E. Schöll, Regular spiking in FitzHugh-Nagumo systems coupled through linear delay, In: Proc. 17th Int. Workshop on Nonlinear Dynamics of Electronic Systems (NDES 2009), pp. 176–179 (2009).
30. A. Panchuk, M. Dahlem, E. Schöll, Modelling coupled neurons: role of the delay terms in producing spiking and bursting, In: Proc. Int. Workshop on Nonlinear Maps and their Applications (NOMA’09), pp. 120–123 (2009).
31. M. A. Dahlem, F. M. Schneider, A. Panchuk, G. Hiller, and E. Schöll, Control of sub-excitable waves in neural networks by nonlocal coupling, In: Proc. Int. Workshop Networks 2007, Aranjuez, 10–11 September 2007, pp. 1–15 (2007).
32. A. Panchuk, Partial synchronization in systems of globally coupled maps, *Nonlin. Osc. (Kiev)*, **Vol. 7**(2), pp.229–240 (2004); (in Ukrainian); http://www.imath.kiev.ua/nosc/admin/private/published_files/205/NOSC205200471999.pdf.
33. Yu. Maistrenko, A. Panchuk, *Clustering zones in the turbulent phase of a system of globally coupled chaotic maps*, *Chaos* **Vol. 13**, No. 3, pp.990–998 (2003); doi: 10.1063/1.1592331. Q1. [Scopus]
34. A. Panchuk, Yu. Maistrenko, and M. Hasler, *Clustering in the turbulent phase*, Proc. of NDES’03, Scuol, Switzerland, 2003, pp.193–196 (2003).
35. A. Panchuk, Yu. Maistrenko, *Stability of periodic clusters in globally coupled maps*, *Nonlin. Osc. (Kiev)*, **Vol. 5**(3), pp.334–345 (2002);
36. A. Panchuk, Yu. Maistrenko, *Asymptotic behaviour of mean-field coupled maps*, Proc. of Int. Conf. EUROATTRACTOR 2001, **Vol. 2**, pp. 256–262 (2003).