

**UNIVERZITA KOMENSKÉHO
FAKULTA MATEMATIKY, FYZIKY A INFORMATIKY**

Zoznam publikačnej činnosti

Mgr. Richard Kollár, PhD.

ABA Štúdie charakteru vedeckej monografie v časopisoch a zborníkoch vydané v zahraničných vydavateľstvách

ABA01 Kollár, Richard 90% - Miller, Peter D. 10%: Graphical Krein signature theory and Evans-Krein functions

Lit. 89 zázň., 6 obr.

In: SIAM Review. - Vol. 56, No. 1 (2014), s. 73-123 [4,58 AH]

URL: <http://arxiv.org/pdf/1209.3185https://stella.uniba.sk/epc/MF/2014/vtIs000283773.pdf>

POZNÁMKA: Vyšlo aj - arXiv.org: Mathematics - Spectral Theory [elektronický zdroj]. - No. arXiv:1209.3185 (2012), s. 1-43 [online]. -

Ohlasy (4):

[o1] 2013 Kapitula, T. - Hibma, E. - Kim, H. P. - Timkovich, J.: Instability indices for matrix polynomials. In: Linear Algebra and Its Applications, Vol. 439, No. 11, 2013, s. 3412-3434 - SCOPUS

[o3] 2013 Kapitula, T. - Promislow, K.: Spectral and Dynamical Stability of Nonlinear Waves. New York : Springer, 2013, S. 352

[o3] 2013 Kirillov, I. N.: Nonconservative Stability Problems of Modern Physics. Berlin : De Gruyter, 2013, S. 404

[o3] 2014 Pelinovsky, D. E.: Spectral stability of nonlinear waves in KdV-type evolution equations. In: Nonlinear Physical Systems. London ; Hoboken : ISTE ; John Wiley & Sons, 2014, S. 399

ABC Kapitoly vo vedeckých monografiách vydané v zahraničných vydavateľstvách

ABC01 Kollár, Richard 90% - Bosák, Radomír 10%: Index theorems for polynomial pencils

Lit. 81 zázň., 2 obr.

In: Nonlinear Physical Systems. - London ; Hoboken : ISTE ; John Wiley & Sons, 2014. - S. 177-202. - ISBN 978-1-84821-420-0

URL: <https://stella.uniba.sk/epc/MF/2014/vtIs000283769.pdf>

ACA Vysokoškolské učebnice vydané v zahraničných vydavateľstvách

ACA01 Nosek, Jozef 19% [4,6 AH] - Brejová, Bronislava 8% [2 AH] - Neboháčová, Martina 10% [2,4 AH] - Baráth, Peter 7% [1,6 AH] - Bhatia, Ingrid 15% [3,6 AH] - Valent, Ivan 13% [3 AH] - Kollár, Richard 7% [1,6 AH] - Tomáška, Lubomír 21% [4,9 AH]: Genomika. - 1. vyd. - Charleston : CreateSpace Independent Publishing, 2013. - 276 s. [25 AH]

Lit. po kapitolách, obr., tab.

ISBN 978-1493731336

ADC Vedecké práce v zahraničných karentovaných časopisoch

ADC01 Gurski, K. F. 10% - Kollár, Richard 80% - Pego, Robert L. 10%: Slow damping of internal waves in a stably stratified fluid

Lit. 22 zázň.

In: Proceedings of the Royal Society A-Mathematical Physical and Engineering Sciences. - Vol. 460, No. 2044 (2004), s. 977-994

Ohlasy (6):

- [o1] 2008 Biro, I. - Szabo, K. G. - Gyure, B. - Janosi, I. M. - Tel, T.: Power-law decaying oscillations of neutrally buoyant spheres in continuously stratified fluid. In: *Physics of Fluids*, Vol. 20, No. 5, 2008, Art. No. 051705 - SCOPUS
- [o1] 2008 Haragus, M. - Kapitula, T.: On the spectra of periodic waves for infinite-dimensional Hamiltonian systems. In: *Physica D-Nonlinear Phenomena*, Vol. 237, No. 20, 2008, s. 2649-2671 - SCI
- [o1] 2009 Chugunova, M. - Pelinovsky, D.: On quadratic eigenvalue problems arising in stability of discrete vortices. In: *Linear Algebra and Its Applications*, Vol. 431, No. 5-7, 2009, s. 962-973 - SCI
- [o1] 2010 Chugunova, M. - Pelinovsky, D.: Count of eigenvalues in the generalized eigenvalue problem. In: *Journal of Mathematical Physics*, Vol. 51, No. 5, 2010, Art. No. 052901 - SCI
- [o1] 2010 Latushkin, Y. - Sukhtayev, A.: The Algebraic Multiplicity of Eigenvalues and the Evans Function Revisited. In: *Mathematical Modelling of Natural Phenomena*, Vol. 5, No. 4, 2010, s. 269-292 - SCI
- [o3] 2011 Pelinovsky, D. E.: Localization in Periodic Potentials: From Schrödinger Operators to the Gross-Pitaevskii Equation. Cambridge : Cambridge University Press, 2011, S. 388**

ADC02 Kollár, Richard 50% - Scheel, Arnd 50%: Coherent structures generated by inhomogeneities in oscillatory media

Lit. 25 zázň., 6 obr.

In: **SIAM Journal on Applied Dynamical Systems. - Vol. 6, No. 1 (2007), s. 236-262**

Ohlasy (2):

[o1] 2008 Sherratt, J. A. - Smith, M. J.: Periodic travelling waves in cyclic populations: field studies and reaction-diffusion models. In: Journal of the Royal Society Interface, Vol. 5, No. 22, 2008, s. 483-505 - SCI ; SCOPUS

[o1] 2010 Sherratt, J. A. - Smith, M. J. - Rademacher, J. D. M.: Patterns of sources and sinks in the complex Ginzburg-Landau equation with zero linear dispersion. In: *SIAM Journal on Applied Dynamical Systems*, Vol. 9, No. 3, 2010, s. 883-918- SCI ; SCOPUS

ADC03 Kollár, Richard 100%: Homotopy method for nonlinear eigenvalue pencils with applications

Lit. 45 zázň.

In: **SIAM Journal on Mathematical Analysis. - Vol. 43, No. 2 (2011), s. 612-633**

Ohlasy (9):

[o1] 2011 Kirillov, O. N. - Pelinovsky, D. E. - Schneider, G.: Paradoxical transitions to instabilities in hydromagnetic Couette-Taylor flows. In: *Physical Review E*, Vol. 84, No. 6, 2011, Art. No. 065301 - SCI ; SCOPUS

[o3] 2011 Pelinovsky, D. E.: Localization in Periodic Potentials: From Schrödinger Operators to the Gross-Pitaevskii Equation. Cambridge : Cambridge University Press, 2011, S. 389

[o1] 2013 Betti, M. - Pelinovsky, D. E.: Periodic traveling waves in diatomic granular chains. In: *Journal of Nonlinear Science*, Vol. 23, No. 5, 2013, s. 689-730 - SCI ; SCOPUS

[o1] 2013 Kapitula, T. - Hibma, E. - Kim, H. P. - Timkovich, J.: Instability indices for matrix polynomials. In: *Linear Algebra and Its Applications*, Vol. 439, No. 11, 2013, s. 3412-3434 - SCI ; SCOPUS

[o3] 2013 Kapitula, T. - Promislow, K.: Spectral and Dynamical Stability of Nonlinear Waves. New York : Springer, 2013, S. 352

[o3] 2013 Kirillov, I. N.: Nonconservative Stability Problems of Modern Physics. Berlin : De Gruyter, 2013, S. 404

[o1] 2014 Bridges, T. J.: Bifurcation from rolls to multi-pulse planforms via reduction to a parabolic Boussinesq model. In: *Physica D: Nonlinear Phenomena*, Vol. 275, 2014, s. 8-18 - SCOPUS

[o1] 2014 Bronski, J. - Johnson, M. A. - Kapitula, T.: An instability index theory for quadratic pencils and applications. In: *Communications in Mathematical Physics*, Vol. 327, No. 2, 2014, s. 521-550 - SCOPUS

[o3] 2014 Pelinovsky, D. E.: Spectral stability of nonlinear waves in KdV-type evolution equations. In: *Nonlinear Physical Systems*. London ; Hoboken : ISTE ; John Wiley & Sons, 2014, S. 399

ADC04 Kollár, Richard 45% - Bod'ová, Katarína 45% - Nosek, Jozef 5% - Tomáška, Lubomír 5%: Mathematical model of alternative mechanism of telomere length maintenance

Lit. 92 zázň., 11 obr., 1 tab.

In: *Physical Review E - Statistical, Nonlinear and Soft Matter Physics. - Vol. 89, No. 3 (2014), Art. No. 032701*
URL: <http://arxiv.org/pdf/1402.0430v1.pdf>

POZNÁMKA: Vyšlo aj - arXiv.org: Physics - Biological Physics [elektronický zdroj]. - No. arXiv:1402.0430 [physics.bio-ph] (2014), s. 1-17 [online]. -

ADE Vedecké práce v ostatných zahraničných časopisoch

ADE01 Fečkan, Michal - Kollár, Richard : Discontinuous wave equations and a topological degree for some classes of multi-valued mappings

In: Applications of Mathematics. - Vol. 44, No. 1 (1999), s. 15-32

Ohlasy (3):

[o3] 2006 Chen, Y. - O'Regan, D.: Coincidence degree theory for mappings of class $L - (S_+)$. In: Applicable Analysis, Vol. 85, No. 8, 2006, s. 963-970

[o1] 2006 Chen, Y. - O'Regan, D.: Generalized degree theory for semilinear operator equations. In: Glasgow Mathematical Journal, Vol. 48, 2006, s. 65-73 - SCOPUS

[o3] 2006 O'Regan, D. - Cho, Y. J. - Chen, Y. Q.: Topological Degree Theory and Applications, Vol. 10. Boca Raton Chapman and Hall/CRC, 2011, S. 202

ADE02 **Kollár, Richard 90% - Pego, Robert L. 10%: Spectral stability of vortices in two-dimensional Bose Einstein condensates via the Evans function and Krein signature**

Lit. 74 zázň., 7 obr. 1 tab.

In: **Applied Mathematics Research eXpress. - No. 1 (2012), s. 1-46**

URL:

<http://www.math.cmu.edu/CNA/Publications/publications2009/017abs/017abs.html><http://arxiv.org/pdf/1103.0157v1.pdf>

POZNÁMKA: Vyšlo aj ako preprint - Publication 09-CNA-17. - [Pittsburgh] : Center for Nonlinear Analysis, 2009S. 1-44

Vyšlo aj ako preprint - arXiv.org: Mathematics. - No. 1103.0157v1 (2011), s. 1-43. -

Ohlasy (10):

[o3] 2010 Law, K. H. J. - Kevrekidis, P. G. - Tuckerman, L. S.: Physical Review Letters, Vol. 105, No. 16, 2010, Art. No. 160405

[o3] 2011 Pelinovsky, D. E.: Localization in Periodic Potentials: From Schrödinger Operators to the Gross-Pitaevskii Equation. Cambridge : Cambridge University Press, 2011, S. 389

[o1] 2011 Pelinovsky, D. E. - Kevrekidis, P. G.: Variational approximations of trapped vortices in the large-density limit. In: Nonlinearity, Vol. 24, No. 4, 2011, s. 1271-1289 - SCI ; SCOPUS

[o1] 2013 Alama, S. - Gao, Q.: Symmetric vortices for two-component Ginzburg-Landau systems. In: Journal of Differential Equations, Vol. 255, No. 10, 2013, s. 3564-3591 - SCI ; SCOPUS

[o1] 2013 Benzoni-Gavage, S.: Planar traveling waves in capillary fluids. In: Differential and Integral Equations, Vol. 26, No. 3-4, 2013, s. 439-485 - SCI ; SCOPUS

[o1] 2013 Chen, Y. - Kolokolnikov, T. - Zhiron, D.: Collective behaviour of large number of vortices in the plane. In: Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, Vol. 469, No. 2156, 2013, Art. No. 0085- SCI ; SCOPUS

[o1] 2013 Kapitula, T. - Kevrekidis, P. G. - Yan, D.: The krein matrix: General theory and concrete applications in atomic bose-einstein condensates. In: SIAM Journal on Applied Mathematics, Vol. 73, No. 4, 2013, s. 1368-1395 - SCI ; SCOPUS

[o1] 2013 Pelinovsky, D. E. - Kevrekidis, P. G.: Bifurcations of asymmetric vortices in symmetric harmonic traps. In: Applied Mathematics Research eXpress, Vol. 2013, No. 1, 2013, s. 127-164 - SCOPUS

[o1] 2014 Maljutina, E. - Wyller, J. - Ponosov, A.: Two bump solutions of a homogenized Wilson-Cowan model with periodic microstructure. In: Physica D: Nonlinear Phenomena, Vol. 271, 2014, s. 19-31 - SCOPUS

[o3] 2014 Rodrigues, A. S. - Kevrekidis, P. G. - Carretero-González, R. - Cuevas-Maraver, J. - Frantzeskakis, D. J. - Palmero, F.: From nodeless clouds and vortices to gray ring solitons and symmetry-broken states in two-dimensional polaritoncondensates. In: Journal of Physics: Condensed Matter, Vol. 26, No. 15 (2014), Art. No. 155801

AFG Abstrakty príspevkov zo zahraničných vedeckých konferencií

AFG01 Kollár, Richard 100%: A new proof of the inertia law for quadratic Hermitian pencils via geometric

representation of Krein signature [elektronický dokument]

Recenzované

In: Emerging Topics in Dynamical Systems and Partial Differential Equations [elektronický zdroj]. - Barcelona : International Center for Numerical Methods in Engineering, 2010. - nestr. [1 s.] [USB klíč]

[DSPDEs' 2010 : Joint SIAM/RSME-SCM-SEMA Meeting. Barcelona, 31.5.-4.6.2010]

[Emerging Topics in Dynamical Systems and Partial Differential Equations : DSPDEs' 2010 : Joint SIAM/RSME-SCM-SEMA Meeting. Barcelona, 31.5.-4.6.2010]

AFG02 Kollár, Richard 90% - Pietrangelo, Sabino 10%: A mathematical model for heat damage

In: 8th AIMS International Conference on Dynamical Systems, Differential Equations and Applications :

Abstracts. - Dresden : Technische Universität, 2010. - Art. No. ss02/9, 1 s.

[ICDSDEA 2010 : International Conference on Dynamical Systems, Differential Equations and Applications. 8th, Dresden, 25.-28.5.2010]

URL: <http://aims sciences.org/AIMS-Conference/2010/ss-list1.htm>

AFG03 Kollár, Richard 100%: An unexpected geometric interpretation of Krein signature

In: SIAM Conference on Nonlinear Waves and Coherent Structures. - Philadelphia : SIAM, 2010. - S. 75

[SIAM Conference on Nonlinear Waves and Coherent Structures. Philadelphia, 16.-19.8.2010]

AFG04 Boďová, Katarína 40% - Tomáška, Lubomír 10% - Nosek, Jozef 10% - Kollár, Richard 40%: Factors determining length distribution of telomeric structures in absence of telomerase

In: Annual Meeting of The Society for Mathematical Biology [elektronický zdroj]. - Kraków : Institute of Mathematics of the Polish Academy of Sciences, 2011. - nestr. [1 s.] [CD ROM]

[ECMTB 2011 : European Conference on Mathematical and Theoretical Biology. 8th, Kraków, 28.6.-2.7.2011]

[Annual Meeting of The Society for Mathematical Biology. Kraków, 28.6.-2.7.2011]

AFG05 Kollár, Richard 90% - Miller, Peter D 10%: A simple connection of the Evans function and the Krein signature

In: Dynamics Days Europe 2011 : Abstracts and Participants. - Oldenburg : Institute for Chemistry and Biology of the Marine Environment, 2011. - S. 98-99

[Dynamics Days Europe 2011. 31st, Oldenburg, 12.-16.9.2011]

AFG06 Kollár, Richard 100%: Evans function and Krein signature

In: The Seventh IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena : Computation and Theory : Book of Abstracts. - Athens : University of Georgia, 2011. - S. 186

[IMACS International Conference : Nonlinear Evolution Equations and Wave Phenomena : Computation and Theory. 7th, Athens, 4.-7.4.2011]

AFG07 Kollár, Richard 40% - Tomáška, Lubomír 10% - Nosek, Jozef 10% - Boďová, Katarína 40%: Mathematical model of biophysical mechanisms of telomere length maintenance in mitochondrial DNA of *C. parapsilosis*

In: Annual Meeting of The Society for Mathematical Biology Mathematical model of biophysical mechanisms of telomere length maintenance in mitochondrial DNA of *C. parapsilosis* [elektronický dokument]. - Kraków : Institute of Mathematics of the Polish Academy of Sciences, 2011. - nestr. [1 s.] [CD ROM]

[ECMTB 2011 : European Conference on Mathematical and Theoretical Biology. 8th, Kraków, 28.6.-2.7.2011]

[Annual Meeting of The Society for Mathematical Biology. Kraków, 28.6.-2.7.2011]

AFK Postery zo zahraničných konferencií

AFK01 Boďová, Katarína 25% - Kollár, Richard 25% - Tomáška, Lubomír 25% - Nosek, Jozef 25%: Mathematical model of telomere length maintenance in mitochondrial DNA of yeast

In: Biophysical Journal. - Vol. 102, Iss. 3, Suppl. 1 (2012), s. 281a

[Annual Meeting of the Biophysical Society 2012. 56th, San Diego, 25.-29.2.2012]

BFA Abstrakty odborných prác zo zahraničných podujatí (konferencie, ...)

BFA01 Boďová, Katarína 45% - Kollár, Richard 45% - Tomáška, Lubomír 5% - Nosek, Jozef 5%:

Coagulation-fragmentation in alternative telomere length maintenance

Popis urobený 1.2.2013

In: SIAM Conference on Nonlinear Waves and Coherent Structures [elektronický zdroj]. - Philadelphia : SIAM, 2012. - S. 60 [online]

[Nonlinear Waves and Coherent Structures : SIAM Conference. Seattle, 13.-16.6.2012]

URL: http://www.siam.org/meetings/nw12/nw12_program.pdf

BFA02 Kollár, Richard 90% - Miller, Peter D. 10%: Evans-Krein function and eigenvalue counts

Popis urobený 1.2.2013

In: SIAM Conference on Nonlinear Waves and Coherent Structures [elektronický zdroj]. - Philadelphia : SIAM, 2012. - S. 79 [online]

[Nonlinear Waves and Coherent Structures : SIAM Conference. Seattle, 13.-16.6.2012]

URL: http://www.siam.org/meetings/nw12/nw12_program.pdf

BFA03 Kollár, Richard 80% - Dižo, Peter 20%: Mathematical modeling of macrophage motion in diffusive environment

Popis urobený 1.2.2013

In: Workshop on Stochastic Modelling of Reaction-Diffusion Processes in Biology. - Oxford : University of Oxford, 2012. - S. 10

[Stochastic Modelling of Reaction-Diffusion Processes in Biology : Workshop. Oxford, 9.-11.7.2012]

URL: <http://people.maths.ox.ac.uk/erban/workshop/abstracts.html>

BFA04 Kollár, Richard 100%: Graphical Krein signature and its applications

Popis urobený 1.2.2013

In: Spectral Analysis, Stability and Bifurcation in Modern Nonlinear Physical Systems [elektronický zdroj]. - Banff : Banff International Research Station, 2012. - S. 13 [online]

[Spectral Analysis, Stability and Bifurcation in Modern Nonlinear Physical Systems. Banff, 4.-9.11.2012]

URL: <http://www.birs.ca/workshops/2012/12w5073/programme12w5073.pdf>

BFA05 Miller, Peter D 10% - Kollár, Richard 90%: Graphical Krein signature and its applications to Hamiltonian-Hopf bifurcations

In: SIAM Conference on Applications of Dynamical Systems : Final Program and Abstracts. - Philadelphia : SIAM, 2013. - Art. No. CP4

[DS 2013 : Applications of Dynamical Systems : SIAM Conference. Snowbird, 19.-23.5.2013]

DAI Dizertačné a habilitačné práce

DAI01 Kollár, Richard 100% : Existence and stability of vortex solutions of certain nonlinear Schrödinger equations. - College Park : [s.n.], 2004. - 139 s.

Doktorandská dizertačná práca (PhD.) - University of Maryland, College Park, 2004

Lit. 71 záz. n.

FAI Redakčné a zostavovateľské práce knižného charakteru (bibliografie, encyklopédie, katalógy, slovníky, zborníky, atlasy ...)

FAI01 - Demáček, Ondrej 25% - Horák, Karel 25% - Kollár, Richard 25% - Višňovská, Jana 25%: 43. ročník matematickej olympiády na stredných školách : správa o riešení úloh zo súťaže konanej v školskom roku 1993/1994: 35. medzinárodná matematickáolympiáda: 6. medzinárodná olympiáda v informatike. - 1. vyd. - Bratislava : Jednota slovenských matematikov a fyzikov, 1994. - 91 s.

FAI02 - Horák, Karel 25% - Kollár, Richard 25% - Višňovská, Jana 25% - Vinař, Tomáš 25%: 44. ročník matematickej olympiády na stredných školách : správa o riešení úloh zo súťaže konanej v školskom roku 1994/1995: 36. medzinárodná matematická olympiáda:7. medzinárodná olympiáda v informatike. - 1. vyd. - Bratislava : Jednota slovenských matematikov a fyzikov, 1995. - 117 s.
ISBN 80-967454-1-7

FAI03 - Horák, Karel 20% - Kollár, Richard 20% - Višňovská, Jana 20% - Vinař, Tomáš 20% - Brejová, Bronislava 20%: 45. ročník matematické olympiády na středních školách : správa o řešení úloh z soutěže konané v školském roce 1995/1996: 37. mezinárodní matematická olympiáda: 8. mezinárodní olympiáda v informatice. - 1. vyd. - Bratislava : Jednota slovenských matematiků a fyziků, 1996. - 147 s.
ISBN 80-967454-3-3

FAI04 - Horák, Karel 20% - Kollár, Richard 20% - Višňovská, Jana 20% - Vinař, Tomáš 20% - Brejová, Bronislava 20%: 46. ročník matematické olympiády na středních školách : správa o řešení úloh z soutěže konané v školském roce 1996/1997: 38. mezinárodní matematická olympiáda: 9. mezinárodní olympiáda v informatice. - 1. vyd. - Bratislava : Iuventa, 1998. - 79 s.
ISBN 80-88893-18-6

FAI05 - Horák, Karel 20% - Kollár, Richard 16% - Višňovská, Jana 16% - Kováč, Eugen 16% - Vinař, Tomáš 16% - Brejová, Bronislava 16%: 47. ročník matematické olympiády na středních školách : správa o řešení úloh z soutěže konané v školském roce 1997/1998: 39. mezinárodní matematická olympiáda: 10. mezinárodní olympiáda v informatice. - 1. vyd. - Bratislava : Iuventa, 1999. - 165 s.
ISBN 80-88893-18-6

Štatistika kategórií (Záznamov spolu: 28):

ABA Štúdie charakteru vedeckej monografie v časopisoch a zborníkoch vydané v zahraničných vydavateľstvách (1)

ABC Kapitoly vo vedeckých monografiách vydané v zahraničných vydavateľstvách (1)

ACA Vysokoškolské učebnice vydané v zahraničných vydavateľstvách (1)

ADC Vedecké práce v zahraničných karentovaných časopisoch (4)

ADE Vedecké práce v ostatných zahraničných časopisoch (2)

AFG Abstrakty príspevkov zo zahraničných vedeckých konferencií (7)

AFK Postery zo zahraničných konferencií (1)

BFA Abstrakty odborných prác zo zahraničných podujatí (konferencie, ...) (5)

DAI Dizertačné a habilitačné práce (1)

FAI Redakčné a zostavovateľské práce knižného charakteru (bibliografie, encyklopédie, katalógy, slovníky, zborníky, atlasy ...) (5)

Štatistika ohlasov (34):

[o1] Citácie v zahraničných publikáciách registrované v citačných indexoch (21)

[o3] Citácie v zahraničných publikáciách neregistrované v citačných indexoch (13)

14.5.2014