

ПЪЛЕН СПИСЪК НА НАУЧНИТЕ ТРУДОВЕ

I. Статии, публикувани в реферирани чуждестранни издания (119)

1. **P. Petkov.** Componentwise perturbation analysis of the Schur decomposition of a matrix. *SIAM Journal on Matrix Analysis and Applications*, 42(2021), 108-133. DOI: 10.1137/20M1330774 **IF: 1.490**
2. Ts. Slavov, J. Kravev, **P. Petkov.** Identification, uncertain modelling, and robust control of embedded systems. *Engineering Science & Technology*, 2 (2021), 1-20. DOI: <https://doi.org/10.37256/est.222021711>
3. **P. Petkov**, T. Slavov, J. Kravev. Embedded robust control of multivariable plants. *IFAC Papers Online*, 52-25 (2019), 4-9. DOI: 10.1016/j.ifacol.2019.12.436 **IF: 0.960**
4. Ts. Slavov, J. Kravev, **P. Petkov.** Design and implementation of robust controllers: Theoretical and numerical issues. In: *Robust Control: Systems, Theory and Analysis*. S. Bennet (Ed.), *Mechanical Engineering Theory and Applications*. Nova Science Publishers, Inc., Hauppauge, NY, 2017, 1-38. ISBN: 978-1-53610-826-2
5. J. Kravev, Ts. Slavov, **P. Petkov.** Design and experimental evaluation of robust controllers for a two-wheeled robot. *International Journal of Control*, 89 (2016), 2201-2226. DOI: 10.1080/00207179.2016.1151940 **IF: 2.780**
6. M.M. Konstantinov, **P.H. Petkov.** Remainders vs. errors. *Applications of Mathematics in Engineering and Economics (AMEE'16)*. V. Pasheva, N. Popivanov and G. Venkov (Eds.), *American Institute of Physics Conference Proceedings*, **1789**, 2016, 060007- 1 - 060007-8. ISBN: 978-0-7354-1453-2, doi: 10.1063/1.4968499
7. M.M. Konstantinov, **P.H. Petkov.** Perturbation Analysis of Matrix Equations and Decompositions. In: *Numerical Algebra, Matrix Theory, Differential-Algebraic Equations and Control Theory, Festschrift in Honor of Volker Mehrmann*. P. Benner, M. Bollhöfer, D. Kressner, C. Mehl, T. Stykel (Eds.), *Springer, Heidelberg*, 2015, 161-197. ISBN: 978-3-319-15259-2, DOI: 10.1007/978-3-319-15260-8
8. **P. Petkov**, T. Slavov, L. Mollov, J. Kravev. Real-time implementation of H_∞ and μ – controllers. *Applied and Computational Mathematics*, 14(2015), 87-100. ISSN 1683-3511 **IF: 2.354**
9. N.D. Christov, M.M. Konstantinov, **P.H. Petkov.** Improved perturbation bounds for the continuous-time H_∞ -control problem. *Electronic Transactions on Numerical Analysis*, **43**(2014), 90-99. ISSN 1068-9613 **IF: 0.720**
10. L. Mollov, J. Kravev, T. Slavov, **P. Petkov.** μ -Synthesis and hardware-in-the-loop simulation of miniature helicopter control system. *Journal of Intelligent and Robotic Systems*, **76**(2014), 315-351. DOI: 10.1007/s10846-014-0033-x **IF: 2.259**
11. I. Popchev, M.M. Konstantinov, **P.H. Petkov**, V. Angelova. Norm-wise, mixed and component-wise condition numbers of matrix equation $A_0 + \sum_{i=1}^k \sigma_i A_i^* X^{p_i} A_i = 0$, $\sigma_i = \pm 1$. *Applied and Computational Mathematics*, 13(2014), 18-30. ISSN 1683-3511 **IF: 2.354**
12. T. Slavov, L. Mollov, J. Kravev, **P. Petkov.** Real-time robust control using digital signal processor. *Balkan Journal of Electrical & Computer Engineering*, **1**(2013), 56-63. ISSN 2147-284X
13. A.S. Yonchev, M.M. Konstantinov, **P.H. Petkov.** Linear perturbation bounds of the continuous-time LMI based H_∞ quadratic stability problem. *Applied and Computational Mathematics*, 12(2013), 133-139. ISSN 1683-3511 **IF: 2.354**

14. T. Slavov, L. Mollov, **P. Petkov**. Real-time linear quadratic control using digital signal processor. *TWMS Journal of Pure and Applied Mathematics*, 3(2012), 145-157. ISSN 2076-2585
15. I. Popchev, **P.H. Petkov**, M.M. Konstantinov, V. Angelova. Perturbation bounds for the nonlinear matrix equation $X + A^H X^l A + B^H X^l B = I$. *Large-Scale Scientific Computing, I. Lirkov, S. Margenov, J. Wasniewski (Eds.), Lecture Notes in Computer Science*, **7616**, Springer, Berlin, 2012, 155-162. ISBN 978-3-642-29842-4, DOI 10.1007/978-3-642-29843-1
16. M.M. Konstantinov, **P.H. Petkov**, I.P. Popchev, V.A. Angelova. Sensitivity of matrix equation $A_0 + \sum_{i=1}^k \sigma_i A_i^* X^{p_i} A_i = 0$, $\sigma_i = \pm 1$. *Applied and Computational Mathematics*, 10(2011), 409-426. ISSN 1683-3511 **IF: 2.354**
17. M.M. Konstantinov, **P.H. Petkov**, N.D. Christov. New results in perturbation analysis of matrix algebraic equations. *Applied and Computational Mathematics*, 9(2010), 153-161. ISSN 1683-3511 **IF: 2.354**
18. A.S. Yonchev, M.M. Konstantinov, **P.H. Petkov**. Perturbation analysis of the continuous LMI based bounded output energy problem. *Applied and Computational Mathematics*, 8(2009), 163-169. ISSN 1683-3511 **IF: 2.354**
19. B. Gilev, **P. Petkov**. Loop shaping design of distributed parameter system. *Applications of Mathematics in Engineering and Economics (AMEE'09). G. Venkov, R. Kovacheva, V. Pasheva (Eds.), American Institute of Physics Conference Proceedings*, **1184**, 2009, 41-48. ISBN 978-0-7354-0750-3
20. A.S. Yonchev, **P.Hr. Petkov**, N.D. Christov, M.M. Konstantinov. On the local sensitivity of the discrete-time H_∞ control problem. *Numerical Analysis and its Applications, S. Margenov, L.G. Vulkov, and J. Wasniewski (Eds.), Lecture Notes in Computer Science*, **5434**, Springer, Berlin 2009, 604-611. ISBN 978-3-642-00463-6, DOI: 10.1007/978-3-642-00464-3_71 **IF: 0.402** (2005)
21. **P.Hr. Petkov**, M.M. Konstantinov, N.D. Christov. LAPACK-based condition estimates for the discrete-time LQG design. *Numerical Analysis and its Applications, S. Margenov, L.G. Vulkov, and J. Wasniewski (Eds.), Lecture Notes in Computer Science*, **5434**, Springer, Berlin 2009, 454-460. ISBN 978-3-642-00463-6, DOI: 10.1007/978-3-642-00464-3_52 **IF: 0.402** (2005)
22. M.M. Konstantinov, **P.Hr. Petkov**, N.D. Christov. Perturbation bounds for certain matrix expressions and numerical solution of matrix equations. *Numerical Analysis and its Applications, S. Margenov, L.G. Vulkov, and J. Wasniewski (Eds.), Lecture Notes in Computer Science*, **5434**, Springer, Berlin 2009, 68-79. ISBN 978-3-642-00463-6, DOI: 10.1007/978-3-642-00464-3_7 **IF: 0.402** (2005)
23. M.M. Konstantinov, **P.H. Petkov**. Perturbation methods in linear algebra and control (Survey). *Applied and Computational Mathematics*, 7(2008), 141-161. ISSN 1683-3511 **IF: 2.354**
24. **P.H. Petkov**, N.D. Christov, M.M. Konstantinov. Robust real-time control of a two rotor aerodynamic system. *IFAC Proceedings Volumes*, 41 (2008), pp. 6422-6427. DOI: 10.3182/20080706-5-KR-1001.01083
25. M.M. Konstantinov, **P.H. Petkov**. Condition and error estimates in numerical matrix computations. *Applications of Mathematics in Engineering and Economics'34 (AMEE'34). M.D. Todorov (Ed.), American Institute of Physics Conference Proceedings*, **1067**, 2008, 38-47. ISBN 978-0-7354-0598-1
26. **P.H. Petkov**, A.S. Yonchev, N.D. Christov, M.M. Konstantinov. Numerical methods for robust control. *Large-Scale Scientific Computing, I. Lirkov, S. Margenov, J. Wasniewski (Eds.), Lecture Notes in Computer Science*, **4818**, Springer, Berlin, 2008,

- 350-357. ISBN 978-3-540-78825-6, DOI: 10.1007/978-3-540-78827-0_39 **IF: 0.402** (2005)
27. **P.Hr. Petkov**, M.M. Konstantinov, N.D. Christov. Conditioning and error estimates in LQG design. *Control and Cybernetics*, 37 (2008), 85-97. ISSN 0324-8569 **IF: 0.3** (2010)
 28. **P. Petkov**, N. Christov, M. Konstantinov. Numerical method for regional pole assignment of linear control systems. *Numerical Methods and Applications*, T. Boyanov, S. Dimova, K. Georgiev, G. Nikolov (Eds.), *Lecture Notes in Computer Science*, **4310**, Springer, Berlin, 2007, 660-667. ISBN 978-3-540-70940-4, DOI: 10.1007/978-3-540-70942-8_80 **IF: 0.402** (2005)
 29. J.K. Boneva, M.M. Konstantinov, **P.Hr. Petkov**. Perturbation analysis for the complex matrix equation $Q \pm A^H X^p A - X = 0$. *Surveys in Mathematics and its Applications*, 2(2007), 29-41. ISSN 1843-7265
 30. A.S. Yonchev, M.M. Konstantinov, **P.H. Petkov**. A new approach to the perturbation analysis for discrete H_∞ - optimization problem. *Applied and Computational Mathematics*, 6(2007), 3-9. ISSN 1683-3511 **IF: 2.354**
 31. D.D. Golcheva, **P.Hr. Petkov**, N.D. Christov. A numerical method for multiobjective optimization of linear control systems. *IFAC Proceedings Volumes*, 39 (2006), 507 - 512. DOI: 10.3182/20060705-3-FR-2907.00087
 32. V.A. Tsachouridis, B. Kouvaritakis, M. Konstantinov, **P. Petkov**. Scaling of general quadratic matrix equations. *International Journal of Control*, 79 (2006), 207-223. DOI: 10.1080/00207170500500014 **IF: 2.780**
 33. V. Angelova, M. Konstantinov, **P. Petkov**, I. Popchev. Perturbation analysis for the complex matrix equation $X - A^H \text{sqrt}(X^{-1})A = I$. *IFAC Proceedings Volumes*, 38 (2005), 43-47. DOI: 10.3182/20050703-6-CZ-1902.00951
 34. N. Christov, M. Konstantinov, **P. Petkov**. Improved perturbation bounds for the continuous-time H_∞ optimisation problem. *IFAC Proceedings Volumes*, 38 (2005), 19-24. DOI: 10.3182/20050703-6-CZ-1902.00947
 35. M.M. Konstantinov, **P.Hr. Petkov**, N.D. Christov. The technique of splitting operators in perturbation control theory. *Kybernetika*, 41(2005), 15-32. ISSN 0024-5954 **IF: 0.664**
 36. **P.Hr. Petkov**, M.M. Konstantinov, N.D. Christov. Conditioning and error estimation in the numerical solution of matrix Riccati equations. *Numerical Analysis and its Applications*, Z. Li, L. Vulkov, J. Waśniewski (Eds.), *Lecture Notes in Computer Science*, **3401**, Springer, Berlin 2005, 448-455. ISBN 3-540-24937-0 **IF: 0.402** (2005)
 37. M.M. Konstantinov, **P.Hr. Petkov**, N.D. Christov. Sensitivity analysis of generalized Lyapunov equations. *Numerical Analysis and its Applications*, Z. Li, L. Vulkov, J. Waśniewski (Eds.), *Lecture Notes in Computer Science*, **3401**, Springer, Berlin 2005, 368-374. ISBN 978-3-540-24937-5, DOI: 10.1007/978-3-540-31852-1_44 **IF: 0.402** (2005)
 38. N.D. Christov, M.M. Konstantinov, **P.Hr. Petkov**. New perturbation bounds for the continuous-time H_∞ - optimization problem. *Numerical Analysis and its Applications*, Z. Li, L. Vulkov, J. Waśniewski (Eds.), *Lecture Notes in Computer Science*, **3401**, Springer, Berlin 2005, 232-239. ISBN 978-3-540-24937-5, DOI: 10.1007/978-3-540-31852-1_27 **IF: 0.402** (2005)
 39. N. Higham, M. Konstantinov, V. Mehrmann, **P. Petkov**. Sensitivity of computational control problems. *IEEE Control Systems Magazine*, 24 (2004), 28-43. DOI: 10.1109/MCS.2004.1272744 **IF: 7.471**

40. M. Konstantinov, **P. Petkov**. Sensitivity analysis of unitary matrix decompositions. *Tensor, N.S.*, **64** (2003), 72-92. ISSN 0040-3504
41. M. Konstantinov, V. Mehrmann, **P. Petkov**. Perturbed spectra of defective matrices. *Journal of Applied Mathematics*, **3** (2003), 115-140. ISSN 1110-757X
42. **P.H. Petkov**, M.M. Konstantinov, N.D. Christov. LAPACK-based condition and error estimators for Kalman filter design. *Proceedings of the 42nd IEEE Conference on Decision and Control, Maui, Hawaii Dec. 09-12, 2003. IEEE, 2003, 2381-2382*. ISBN 0-7803-7924-1, DOI: 10.1109/CDC.2003.1272975
43. M. Konstantinov, V. Angelova, **P. Petkov**, D. Gu, V. Tsachouridis. Perturbation analysis of coupled matrix Riccati equations. *Linear Algebra and its Applications*, **359** (2003), 197-218. DOI: 10.1016/S0024-3795(02)00416-0 **IF: 0.988**
44. D. Gu, **P. Petkov**, M. Konstantinov. Formulae for discrete H_∞ loop shaping design procedure controllers. *IFAC Proceedings Volumes*, **35** (2002), 109 - 113. DOI: 10.3182/20020721-6-ES-1901.00353
45. M. Konstantinov, **P. Petkov**. The method of splitting operators and Lyapunov majorants in perturbation linear algebra and control. *Numerical Functional Analysis and Optimization*, **23** (2002), 529-572. DOI: 10.1081/NFA-120014751 **IF: 0.896**
46. M. Konstantinov, V. Angelova, **P. Petkov**, D. Gu, V. Tsachouridis. Perturbation analysis of coupled matrix Riccati equations. *IFAC Proceedings Volumes*, **35** (2002), 307-312. DOI: 10.3182/20020721-6-ES-1901.00385
47. **P. Petkov**, D. Gu, M. Konstantinov. Robust μ -design of a disk drive servo system. *Proceedings of the IEEE International Symposium on Computer Aided Control System Design, Glasgow, Scotland, Sep. 18-20, 2002, IEEE, 2002, 57-62*. ISBN 0-7803-7388-X, DOI: 10.1109/CACSD.2002.1036929
48. N.D. Christov, M.M. Konstantinov, **P.Hr. Petkov**. On the local sensitivity of the mixed H_2/H_∞ -optimisation problem. *Proceedings of the 2002 American Control Conference, Anchorage, AK, May 08-10, 2002, IEEE, 2002, 2759-2760*. ISBN 0-7803-7298-0, DOI: 10.1109/ACC.2002.1025205
49. M. Konstantinov, V. Mehrmann, **P. Petkov**. Perturbation analysis of Hamiltonian Schur and block-Schur forms. *SIAM Journal on Matrix Analysis and Applications*, **23** (2001), 387-424. DOI: 10.1137/S0895479898342420 **IF: 1.490**
50. N.D. Christov, S. Lesecq, M.M. Konstantinov, **P.Hr. Petkov**, A. Barraud. On the non-local sensitivity of Sylvester equations. *Proceedings of the 2001 American Control Conference, Arlington, VA, Jun 25-27, 2001, IEEE, 2001, 3488-3489*. ISBN 0-7803-6495-3, DOI: 10.1109/ACC.2001.946171
51. D. Gu, **P. Petkov**, M. Konstantinov. Condition and error estimates in the solution of matrix equations in control. *IFAC Proceedings Volumes*, **33** (2000), 71 - 76. DOI: 10.1016/S1474-6670(17)37168-9
52. N.D. Christov, S. Lesecq, A. Barraud, M.M. Konstantinov, **P.Hr. Petkov**, D.W. Gu. On the conditioning of the mixed H_2/H_∞ -optimisation problem. *IFAC Proceedings Volumes*, **33** (2000), 449 - 452. DOI: 10.1016/S1474-6670(17)36269-9
53. N. Christov, S. Lesecq, M. Konstantinov, **P. Petkov**, A. Barraud. New perturbation bounds for Sylvester equations. *Proceedings of the 39th IEEE Conference on Decision and Control, Sydney, Australia, Dec. 12-15, 2000. IEEE, 2000, 4233-4234*. ISBN 0-7803-6638-7, DOI: 10.1109/CDC.2001.914563
54. M.M. Konstantinov, **P.Hr. Petkov**, N.D. Christov, A. Barraud, S. Lesecq, D.W. Gu. Sensitivity analysis of generalized Riccati equations. *Proceedings of the 2000 American Control Conference, Chicago, Ill, Jun 28-30, 2000, IEEE, 2000, 1882-1883*. ISBN 0-7803-5520-2, DOI: 10.1109/ACC.2000.879528

55. M. Konstantinov, V. Mehrmann, **P. Petkov**. On properties of Sylvester and Lyapunov operators. *Linear Algebra and its Applications*, **312** (2000), 35-71. DOI: 10.1016/S0024-3795(00)00082-3 **IF: 0.988**
56. V. Angelova, M. Konstantinov, **P. Petkov**. Perturbation analysis of the discrete-time H_∞ optimal control problem. *IFAC Proceedings Volumes*, **32** (1999), 1067 – 1072. DOI: 10.1016/S1474-6670(17)56180-7
57. M. Konstantinov, **P. Petkov**. Note on “Perturbation theory for algebraic Riccati equations”. *SIAM Journal on Matrix Analysis and Applications*, **21** (1999), 327. DOI: 10.1137/S0895479898338111 **IF: 1.490**
58. M. Konstantinov, **P. Petkov**, J. Kawelke, A. Linnemann, D. Gu, I. Postlethwaite. Sensitivity of systems norms. *International Journal of Control*, **72** (1999), 1, 84-95. DOI: 10.1080/002071799221424 **IF: 2.780**
59. M. Konstantinov, **P. Petkov**, D. Gu. Improved perturbation bounds for general quadratic matrix equations. *Numerical Functional Analysis and Optimization*, **20** (1999), 717-736. DOI: 10.1080/01630569908816920 **IF: 0.896**
60. M. Konstantinov, **P. Petkov**, N. Christov, D. Gu, V. Mehrmann. Sensitivity of Lyapunov equations. In “*Advances in Intelligent Systems and Computer Science*”, N.E. Mastorakis (Ed.), World Scientific and Engineering Society Press, 1999, 289-292. ISBN 960-8052-16-5
61. M. Konstantinov, M. Stanislavova, **P. Petkov**. Perturbation bounds and characterization of the solution of the associated algebraic Riccati equation. *Linear Algebra and its Applications*, **285** (1998), 7-31. DOI: 10.1016/S0024-3795(98)10094-0 **IF: 0.988**
62. M. Konstantinov, **P. Petkov**, D. Gu. I. Postlethwaite. Perturbation analysis of orthogonal canonical forms. *Linear Algebra and its Applications*, **251** (1997), 267-291. DOI: 10.1016/0024-3795(95)00647-8 **IF: 0.988**
63. M. Konstantinov, **P. Petkov**, N. Christov. Sensitivity analysis of the feedback synthesis problem. *IEEE Transactions on Automatic Control*, **42** (1997), 568-573. DOI: 10.1109/9.566671 **IF: 5.625**
64. M. Konstantinov, **P. Petkov**, D. Gu, I. Postlethwaite. Nonlocal sensitivity analysis of the eigensystem of a matrix with distinct eigenvalues. *Numerical Functional Analysis and Optimization*, **18** (1997), 367-382. ISSN 0163-0563 **IF: 0.896**
65. **P. Petkov**, N. Christov, M. Konstantinov. Numerical solution of high order matrix Riccati equations. *Numerical Analysis and Its Applications*, L. Vulkov, J. Wasniewski and P. Yalamov (Eds.), *Lecture Notes in Computer Science*, **1196**, Springer 1997, 388-395. ISBN 978-3-540-62598-8, DOI: 10.1007/3-540-62598-4_118
66. M. Konstantinov, **P. Petkov**, P. Gancheva, V. Angelova, I. Popchev. Improved perturbation bounds for the matrix exponential. *Numerical Analysis and Its Applications*, L. Vulkov, J. Wasniewski and P. Yalamov (Eds.), *Lecture Notes in Computer Science*, **1196**, Springer 1997, 258-265. ISBN 978-3-540-62598-8, DOI: 10.1007/3-540-62598-4_
67. **P. Petkov**, M. Konstantinov, D. Gu, I. Postlethwaite. Optimal eigenstructure assignment of linear systems. *IFAC Proceedings Volumes*, **29** (1996), 1092-1097. DOI: 10.1016/S1474-6670(17)57810-6
68. M. Konstantinov, **P. Petkov**, N. Christov. Perturbation bounds for the general feedback problem. *IFAC Proceedings Volumes*, **29** (1996), 1404-1409. DOI: 10.1016/S1474-6670(17)57863-5
69. M. Konstantinov, **P. Petkov**, D. Gu, I. Postlethwaite. Two-dimensional measures of reachability for linear time-invariant systems. *International Journal of Control*, **64** (1996), 195-215. DOI: 10.1080/00207179608921624 **IF: 2.780**

70. **P. Petkov**, N. Christov, M. Konstantinov. Solution of high order matrix Riccati equations with condition and accuracy estimates. *Proceedings of the IEEE International Symposium on Computer-Aided Control System Design, Dearborn, MI, Sep. 15-18, 1996. IEEE, NY 1996, 93-98. ISBN 0-7803-3032-3, DOI: 10.1109/cacsd.1996.555236*
71. M. Konstantinov, **P. Petkov**, N. Christov. Nonlocal perturbation analysis of the Schur system of a matrix. *SIAM Journal on Matrix Analysis and Applications*, **15** (1994), 383-392. DOI: 10.1137/S089547989120267X **IF: 1.490**
72. **P. Petkov**, P. Lazarov. Numerical algorithms with condition and accuracy estimates for linear systems design. *International Journal of Systems Science*, **24** (1993), 1473-1486. DOI: 10.1080/00207729308949575 **IF: 2.149**
73. **P. Petkov**, N. Christov, M. Konstantinov. Comments on "Scaling of the discrete-time algebraic Riccati equation to enhance stability of the Schur method". *IEEE Transactions on Automatic Control*, **38** (1993), 1160. DOI: 10.1109/9.231479 **IF: 5.625**
74. **P. Petkov**. Perturbation bounds for orthogonal canonical forms and numerical controllability analysis. *IEEE Transactions on Automatic Control*, **38** (1993), 639-643. DOI: 10.1109/9.250539 **IF: 5.625**
75. **P. Petkov**, N. Christov, M. Konstantinov. A computational algorithm for pole assignment of linear multiinput systems. In "Numerical Linear Algebra Techniques for Systems and Control", R.V. Patel, A.J. Laub, P. Van Dooren (Eds.), IEEE Press, New York 1993, 380-383. ISBN 0-7803-0443-8
76. M. Konstantinov, **P. Petkov**, N. Christov. Perturbation analysis of the discrete Riccati equation. *Kybernetika*, **29** (1993), 1, 18-29. ISSN 0024-5954 **IF: 0.664**
77. M. Konstantinov, **P. Petkov**, N. Christov. Perturbation analysis of matrix quadratic equations. *SIAM Journal on Scientific and Statistical Computations*, **11** (1990), 1159-1163. DOI: 10.1137/0911065 **IF: 2.341**
78. M. Konstantinov, **P. Petkov**, S. Patarinski, N. Christov. Comments on "A generalization of the Rosenbrock's theorem". *IEEE Transactions on Automatic Control*, **34** (1989), 921-922. DOI: 10.1109/9.29446 **IF: 5.625**
79. N. Christov, **P. Petkov**, M. Konstantinov. An efficient QR-decomposition algorithm for block-Toeplitz and block-Hankel matrices. *IFAC Proceedings Volumes*, **21** (1988), 793 - 795. DOI: 10.1016/S1474-6670(17)54825-9
80. **P. Petkov**, N. Christov, M. Konstantinov. Comments on "On computational algorithms for pole assignment". *IEEE Transactions on Automatic Control*, **33** (1988), 892-893. DOI: 10.1109/9.1328 **IF: 5.625**
81. **P. Petkov**, N. Christov, M. Konstantinov. On the numerical properties of the Schur approach for solving the matrix Riccati equation. *Systems and Control Letters*, **9** (1987), 197-201. DOI: 10.1016/0167-6911(87)90040-5 **IF: 2.762**
82. M. Konstantinov, N. Christov, **P. Petkov**. Perturbation analysis of linear control problems. *IFAC Proceedings Volumes*, **20** (1987), 11-16. DOI: 10.1016/S1474-6670(17)55001-6
83. N. Christov, **P. Petkov**, M. Konstantinov. Numerical evaluation of systems algorithms with SYSLAB. *Journal A*, **28** (1987), 2, 71-75. ISSN 0771-1107
84. M. Konstantinov, N. Christov, **P. Petkov**. On the stability of linear stochastic systems with additive noise. *IFAC Proceedings Volumes*, **5** (1986), 157 - 160. DOI: 10.1016/S1474-6670(17)59785-2
85. **P. Petkov**, N. Christov, M. Konstantinov. A computational algorithm for pole assignment of linear multiinput systems. *IEEE Transactions on Automatic Control*, **31** (1986), 1044-1047. DOI: 10.1109/TAC.1986.1104167 **IF: 5.625**

86. **P. Petkov**, N. Christov, M. Konstantinov. Numerically stable algorithm for pole assignment of linear single-input systems. *Kybernetika*, **22** (1986), 349-367. ISSN 0024-5954 **IF: 0.664**
87. **P. Petkov**, N. Christov, M. Konstantinov. Numerical analysis of the reduction of linear systems into orthogonal canonical form. *Systems and Control Letters*, **7** (1986), 361-364. DOI: 10.1016/0167-6911(86)90053-8 **IF: 2.762**
88. **P. Petkov**, N. Christov, M. Konstantinov. SYSLAB: An interactive system for analysis and design of linear multivariable systems. *IFAC Proceedings Volumes*, **18** (1985), 167 – 171. DOI: 10.1016/S1474-6670(17)60362-8
89. N. Christov, **P. Petkov**, M. Konstantinov. On the identification and structure of uncertain linear systems. *IFAC Proceedings Volumes*, **18** (1985), 1713 - 1716. DOI: 10.1016/S1474-6670(17)60815-2
90. М. Константинов, **П. Петков**, Н. Христов. Общие задачи синтеза линейных стационарных систем. *Кибернетика и вычислительная техника*, **1985**, *65*, 11-23. ISSN 0452-9910
91. **P. Petkov**. LISPACK Summary. In: “Computer-Aided Control Systems Engineering”. Jamshidi M., C.J. Herget (Eds.), North-Holland, Amsterdam, pp. 375-376, 1985. ISBN 0-444-87779-7 [Превод на руски език. Автоматизированное проектирование систем управления, под ред. М. Джамишиди и Ч.Дж. Хергета, М., Машиностроение, стр. 329, 1989.]
92. **P. Petkov**, M. Konstantinov, N. Christov. Computational algorithms for linear control systems. A brief survey. *International Journal of Systems Science*, **16** (1985), 465-477. DOI: 10.1080/00207728508926687 **IF: 2.149**
93. M. Konstantinov, **P. Petkov**, N. Christov. Trajectory properties and cost invariance in discrete linear quadratic problems. *IFAC Proceedings Volumes*, **17** (1984), 7 - 42. DOI: 10.1016/S1474-6670(17)60940-6
94. **P. Petkov**, N. Christov, M. Konstantinov. Numerically stable algorithm and program for pole assignment of linear single-input systems. *Analysis and Optimization of Systems*, A. Besoussan and J.L. Lions (Eds.), *Lecture Notes in Control and Information Sciences*, **63**, Springer, Berlin 1984, 59-73. ISBN 978-3-540-13552-4, DOI: 10.1007/BFb0006277
95. N. Christov, **P. Petkov**, M. Konstantinov. A numerically stable algorithm for multivariable systems identification. *Systems Science*, **10** (1984), *1*, 17-23. ISSN 0137-1223
96. **P. Petkov**, N. Christov, M. Konstantinov. A stable computational algorithm for synthesis of state observers. *Control and Cybernetics*, **13** (1984), *1-2*, 5-13. ISSN 0324-8569
97. **P. Petkov**, N. Christov, M. Konstantinov. A computational algorithm for pole assignment of linear single-input systems. *IEEE Transactions on Automatic Control*, **29** (1984), 1045-1048. DOI: 10.1109/tac.1984.1103430 **IF: 5.625**
98. **P. Petkov**, N. Christov, M. Konstantinov. Remark on Algorithm 590. DSUBSP and EXCHQZ. FORTRAN subroutines for computing deflating subspaces with specified spectrum. *ACM Transactions on Mathematical Software*, **10** (1984), 207. DOI: 10.1145/399.319411 **IF: 2.339**
99. N. Christov, **P. Petkov**, M. Konstantinov. A computational algorithm for identification of linear multivariable systems. *IFAC Proceedings Volumes*, **16** (1983), 627 - 630. DOI: 10.1016/S1474-6670(17)61745-2
100. M. Konstantinov, **P. Petkov**, N. Christov. Geometric invariants and trajectory properties of a family of linear time-invariant systems. *Systems Science*, **9** (1983), *4*, 41-49. ISSN 0137-1223

101. **P. Petkov**, M. Konstantinov, N. Christov. Pole assignment by orthogonal transformations. *Systems Science*, **8** (1982), 2-3, 85-94. ISSN 0137-1223
102. M. Konstantinov, **P. Petkov**, N. Christov. Invariance of the quadratic cost on a set of non-optimal control laws. *Systems and Control Letters*, **2** (1982), 3, 169-174. DOI: 10.1016/0167-6911(82)90015-9 **IF: 2.762**
103. M. Konstantinov, **P. Petkov**, N. Christov. Orthogonal invariants and canonical forms for linear controllable systems. *IFAC Proceedings Volumes*, **14** (1981), 49 – 54. DOI: 10.1016/S1474-6670(17)63459-1
104. M. Konstantinov, **P. Petkov**, N. Christov. A Schur approach to pole assignment problem. *IFAC Proceedings Volumes*, **14** (1981), 1587 - 1592. DOI: 10.1016/S1474-6670(17)63700-5
105. M. Konstantinov, **P. Petkov**, N. Christov. A Schur approach to pole assignment problem. *Control and Cybernetics*, **10** (1981), 1-2, 19-29. ISSN 0324-8569
106. M. Konstantinov, **P. Petkov**, N. Christov. Invariants and canonical forms for linear multivariable systems under the action of orthogonal transformation groups. *Kybernetika*, **17** (1981), 5, 413-424. ISSN 0024-5954 **IF: 0.664**
107. M. Konstantinov, **P. Petkov**, N. Christov. On the general problem of synthesis of state observers. *Systems Science*, **6** (1980), 3, 201-210. ISSN 0137-1223
108. M. Konstantinov, **P. Petkov**, N. Christov. Synthesis of linear systems with desired equivalent form. *Journal of Computational and Applied Mathematics*, **6** (1980), 27-35. DOI: 10.1016/0771-050X(80)90014-5 **IF: 2.037**
109. M. Konstantinov, S. Patarinski, **P. Petkov**, N. Christov. Program package for computer-aided design of linear control systems. *IFAC Proceedings Volumes*, **12** (1979), 319 – 324. DOI: 10.1016/S1474-6670(17)65615-5
110. M. Konstantinov, **P. Petkov**, N. Christov. Control of linear systems via the serial canonical form. *IFAC Proceedings Volumes*, **12** (1979), 331 - 334. DOI: 10.1016/S1474-6670(17)65828-2
111. M. Konstantinov, **P. Petkov**, N. Christov. The serial canonical form and synthesis of linear multivariable systems. *Podstawy Sterowania*, **9** (1979), 295-307. ISSN 0374-4094
112. M. Konstantinov, **P. Petkov**, N. Christov. Synthesis of linear multivariable systems with prescribed equivalent form. *Systems Science*, **5** (1979), 381-394. ISSN 0137-1223
113. M. Konstantinov, S. Patarinski, **P. Petkov**, N. Christov: Design of linear control systems with incomplete state information. *Automation and Remote Control*, **39** (1978), 1316-1325. ISSN 0005-1179 **IF: 0.591**
114. М. Константинов, С. Патарински, **П. Петков**, Н. Христов. К синтезу линейных управляемых систем при неполной информации о состоянии объекта. *Автоматика и Телемеханика*, **39** (1978), 9, 68-78. ISSN 0005-2310
115. M. Konstantinov, S. Patarinski, **P. Petkov**, N. Christov. Synthesis of suboptimal linear systems with output regulators. *Control and Cybernetics*, **6** (1977), 3-4, 75-85. ISSN 0324-8569
116. M. Konstantinov, S. Patarinski, **P. Petkov**, N. Christov. Pole assignment using output regulators and compensators – a unified approach. *Podstawy Sterowania*, **7** (1977), 3, 233-244. ISSN 0374-4094
117. M. Konstantinov, S. Patarinski, **P. Petkov**, N. Christov: Synthesis of linear systems with a quadratic criterion for structural limitations. *Automation and Remote Control*, **38** (1977), 5, 628-636. ISSN 0005-1179 **IF: 0.591**
118. М. Константинов, С. Патарински, **П. Петков**, Н. Христов. Синтез линейных систем с квадратичным критерием при структурных ограничениях. *Автоматика и Телемеханика*, **38** (1977), 5, 21-30. ISSN 0005-2310

119. М. Константинов, С. Патарински, **П. Петков**, Н. Христов. Structural properties of linear regulators in stationary control systems. *Kybernetika*, **13** (1977), 3, 200-210. ISSN 0024-5954 **IF: 0.664**

II. Статии, публикувани в рецензирани български издания (71)

120. Т. Slavov, J. Krlev, **П. Petkov**. Uncertain modelling and robust control of multivariable plants. *Comptes rendus de l'Academy Bulgare des Sciences*, Tom 72, № 8, 2019, 1095-1101. **IF: 0.409**
121. **П. Petkov**, М. Konstantinov. Perturbation analysis of the feedback control problem. *Comptes rendus de l'Academy Bulgare des Sciences*, Tom 71, № 2, 2018, 243-251. **IF: 0.409**
122. **П. Petkov**, М. Konstantinov. Perturbation analysis of linear control problems. *Comptes rendus de l'Academy Bulgare des Sciences*, Tom 70, № 6, 2017, 849-856. **IF: 0.409**
123. Т. Slavov, J. Krlev, **П. Petkov**. Linear quadratic control of a two-wheeled robot. *Comptes rendus de l'Academy Bulgare des Sciences*, Tom 67, № 8, 2014, 1153-1158. **IF: 0.409**
124. **П. Petkov**, Т. Slavov, Л. Mollov, J. Krlev. Implementation of robust control laws using DSP. *Comptes rendus de l'Academy Bulgare des Sciences*, Tom 67, № 1, 2014, 101-108. **IF: 0.409**
125. I. Popchev, М. Konstantinov, **П. Petkov**, V. Angelova. Condition number for the matrix equation $X + A^H X^{-1} A + B^H X^{-1} B = I$. *Comptes rendus de l'Academy Bulgare des Sciences*, Tom 64, 2011, 1679-1688. **IF: 0.409**
126. М. Konstantinov, **П. Petkov**, I. Popchev, V. Angelova. Perturbation bounds for the matrix equation $X^* \pm A^H X A = Q$. *Comptes rendus de l'Academy Bulgare des Sciences*, Tom 63, 2010, 1265-1272. **IF: 0.409**
127. М. Konstantinov, **П. Petkov**, I. Popchev, V. Angelova. Perturbation bounds for the matrix equation $C + \sum_{i=1}^r A_i X B_i + D X^* E = 0$. *Comptes rendus de l'Academy Bulgare des Sciences*, Tom 61, 2008, 1111-1120. **IF: 0.409**
128. Ц. Славов, Й. Кралев, Н. Николов, **П. Петков**. Идентификация и робастно управление на многомерни обекти. *Годишник на Технически университет-София*, т. 69, кн. 2, 2019, 371-380. ISSN 1311-0829
129. **П. Петков**, Ц. Славов, Й. Кралев. Проектиране на робастни вградени системи за управление с MATLAB® и Simulink®. *Годишник на Технически университет-София*, т. 68, кн. 2, 2018, 235-244. ISSN 1311-0829
130. Ц. Славов, Й. Кралев, **П. Петков**. Хардуерна симулация на ПИД регулатор за управление на система количка-махало. *Годишник на Технически университет-София*, т. 67, кн. 2, 2017, 233-242. ISSN 1311-0829
131. Т. Slavov, J. Krlev, **П. Petkov**. Design and implementation of cascade LQR controller for stabilization of two-wheeled robot. *Information Technologies and Control*, №1, Year IX, 2016, 35-46. DOI: 10.1515/itc-2016-0020
132. Ц. Славов, Й. Кралев, Н. Христов, **П. Петков**. Управление на двуколесен робот посредством линейно-квадратичен регулатор и H_∞ филтър. *Годишник на Технически университет-София*, т. 66, кн. 2, 2016, 275-284. ISSN 1311-0829
133. Ц. Славов, Й. Кралев, **П. Петков**. μ – управление на двуколесен робот. *Годишник на Технически университет-София*, т. 65, кн. 1, 2015, 327-336. ISSN 1311-0829.
134. Й. Кралев, Ц. Славов, **П. Петков**. Синтез и реализация на каскаден линейно квадратичен регулатор за управление на двуколесен робот. *Годишник на Технически университет-София*, т. 64, кн. 2, 2014, 153-162. ISSN 1311-0829

135. Ц. Славов, Й. Кралев, **П. Петков**. Идентификация на двуколесен робот като обект с неопределеност. *Годишник на Технически университет-София*, т. 64, № 1, 2014, 343-352. ISSN 1311-0829
136. Ц. Славов, Л. Моллов, Й. Кралев, **П. Петков**. μ -управление в реално време на аналогов модел с цифров сигнален контролер. *Годишник на Технически университет-София*, т. 63, 2013, 15-24. ISSN 1311-0829
137. Ц. Славов, Л. Моллов, Й. Кралев, **П. Петков**. Хардуерна симулация на система за робастно управление на хеликоптер. *Journal of the Technical University – Sofia, Plovdiv branch, “Fundamental Sciences and Applications” Vol. 19, Book 1, 2013, International Conference Engineering, Technologies and System TECHSYS 2013*, 267-274. ISSN 1310-8271
138. Х. Гендов, **П. Петков**. Робастно управление на четирироторен хеликоптер. *Journal of the Technical University – Sofia, Plovdiv branch, “Fundamental Sciences and Applications” Vol. 19, Book 1, 2013, International Conference Engineering, Technologies and System TECHSYS 2013*, 115-120. ISSN 1310-8271
139. G. Lehov, **P. Petkov**. Design of a collocated robust controller for a flexible-link manipulator. *Information, Communication and Control Systems and Technologies*, 1(2012), 52-56. ISSN 1314-7455
140. Т. Славов, Л. Моллов, **П. Петков**. Робастно управление в реално време на мощността на хидротурбина с цифров сигнален контролер. *Автоматика и Информатика*, **46** (2012), 5-6, 32-35. ISSN 0861-7562
141. Л. Моллов, Ц. Славов, **П. Петков**. Линейно-квадратично управление в реално време при непълна информация за състоянието с цифров сигнален контролер. *Годишник на Технически университет-София*, т. 62, 2012, 25-34. ISSN 1311-0829
142. Ц. Славов, Л. Моллов, **П. Петков**. Управление на хидротурбина посредством H_{∞} -регулатор с програмирано усилване. *Годишник на Технически университет-София*, т. 62, 2012, 15-24. ISSN 1311-0829
143. L. Mollov, **P. Petkov**. Embedded robust control of self-balancing two-wheeled robot. *Information Technologies and Control*, №4, Year IX, 2011, 23-31. ISSN 1312-2622
144. Л. Моллов, **П. Петков**. Вградени системи за управление. Състояние и проблеми. *Journal of the Technical University Sofia, branch Plovdiv, “Fundamental Sciences and Applications”, Vol. 16, 2011, Proceedings of the International Conference Engineering, Technologies and Systems TechSys 2011*, 233-240. ISSN 1310-8271
145. Ts. Slavov, **P. Petkov**. Strapdown inertial system based on improved MEMS error models. *Cybernetics and Information Technologies*, vol.11, 2011, 3-23. ISSN 1311-9702
146. A. Yonchev, M. Konstantinov, **P. Petkov**. Full perturbation analysis of the LMI-based continuous-time Linear Quadratic Regulator Problem. *Cybernetics and Information Technologies*, vol.11, 2011, 26-35. ISSN 1311-9702
147. **P. Petkov**, Ts. Slavov. Stochastic Modeling of MEMS Inertial Sensors. *Cybernetics and Information Technologies*, vol.10, 2010, 31-40. ISSN 1311-9702
148. A. Yonchev, M. Konstantinov, **P. Petkov**. Perturbation Analysis of the LMI-Based Continuous and Discrete-Time Quadratic Stability Problem. *Cybernetics and Information Technologies*, vol.10, 2010, 3-13. ISSN 1311-9702
149. М. Konstantinov, **P. Petkov**, I. Popchev, V. Angelova. On the sensitivity of the matrix equation $XA - AX = X^2$. *Cybernetics and Information Technologies*, vol. 8, 2008, 3-11. ISSN 1311-9702
150. К. Герасимов, **П. Петков**. Приложение на μ -анализа за оценка на робастната устойчивост на електронергийна система. *Енергетика*, 1-2, 2007, 18-27. ISSN 0324-1521

151. A. Yonchev, M. Konstantinov, **P. Petkov**. Linear sensitivity analysis of the LMI based discrete-time H_∞ synthesis problem. *Information Technologies and Control*, Year 4, No. 3-4, 2006, 8-11. ISSN 1312-2622
152. Г. Лехов, **П. Петков**. Робастно управление на манипулатор с еластично звено. *Научни трудове на Русенски университет "Ангел Кънчев"*, том 44, сер. 3.1 "Електротехника, електроника, автоматика", 2005, 155-166. ISSN 1311-3321
153. G. Lehov, **P. Petkov**. Uncertainty modeling and robust control of a flexible-link manipulator. *Information Technologies and Control*, Year 2, No. 3, 2004, 17-23. ISSN 1312-2622
154. **П. Петков**, Г. Лехов. μ -синтез на управляващо устройство на манипулатор с еластично звено. *Автоматика и Информатика*, 37(2003), 2, 32-36. ISSN 0861-7562
155. A.S. Yonchev, **P. Petkov**. Numerical comparison of methods for H_∞ optimization. *Годишник на УАСГ - София*, 42 (2002-2003), св. 2 Математика, 41-55. ISSN 1310-814X
156. **П. Петков**. Робастното управление – граници на приложимост. *Автоматика и Информатика*, 36 (2002), 4, 49-51. ISSN 0861-7562
157. M. Konstantinov, **P. Petkov**. The least squares method can be misleading. *Годишник на УАСГ - София*, 45 (2010-2012), св. 2 Математика, 17-24. ISSN 1310-814X
158. M. Konstantinov, V. Angelova, **P. Petkov**, I. Popchev. Comparison of perturbation bounds for the matrix equation $X = A_1 + A_2^H X^l A_2$. *Годишник на УАСГ - София*, 41 (2000-2001), св. 2 Математика, 75-81. ISSN 1310-814X
159. **П. Петков**, Д. Гу, М. Константинов. Синтез на робастна следяща система на дисково запамятаващо устройство. *Годишник на УАСГ - София*, 40 (1998-99), св. 2 Математика, 95-148. ISSN 1310-814X
160. И. Попчев, М. Константинов, **П. Петков**, Н. Христов, В. Ангелова. Пертурбационен анализ на матричното диференчно уравнение на Рикати. *Автоматика и Информатика*, 28 (1994), 2, 20-25. ISSN 0861-7562
161. В. Ангелова, М. Константинов, **П. Петков**, И. Попчев, Н. Христов. Анализ на чувствителността на матричното диференчно уравнение на Рикати. *Годишник на УАСГ - София*, 37 (1993-94), св. 2 Математика, 7-14. ISSN 1310-814X
162. **П. Петков**, Н. Христов, М. Константинов. Диалогова система SYSLAB за анализ и синтез на линейни многомерни системи. *Автоматика, Изчислителна техника и Автоматизирани системи*, 22 (1988), 11, 25-31.
163. **П. Петков**, Н. Христов, М. Константинов. Числени методи за матрични изчисления. *Автоматика, Изчислителна техника и Автоматизирани системи*, 21 (1987), 8/9, 50-83.
164. М. Константинов, **П. Петков**, Н. Христов. Анализ на чувствителността на непрекъснатото матрично алгебрично уравнение на Рикати. *Автоматика, Изчислителна техника и Автоматизирани системи*, 20(1986), 10, 8-12.
165. М. Константинов, **П. Петков**, Н. Христов. Обусловеност на задачата за синтез на линейни управляеми системи със зададени полюси. *Автоматика, Изчислителна техника и Автоматизирани системи*, 20 (1986), 4, 16-21.
166. **П. Петков**, Н. Христов, М. Константинов. Субоптимално управление на линейни нестационарни системи при непълна информация за състоянието. *Известия на ВМЕИ*, 40 (1986), 7, 7-15.
167. **П. Петков**, Н. Христов, М. Константинов. Пакет програми за анализ и синтез на линейни системи за управление. *Проблеми на техническата кибернетика и роботиката*, 21 (1985), 33-39.

168. М. Константинов, **П. Петков**, Н. Христов. Ортогонални инварианти и канонични форми на линейните стационарни системи. II. Ортогонални последователни канонични форми. *Техническа мисъл*, **22** (1985), 1, 9-15.
169. М. Константинов, **П. Петков**, Н. Христов. Ортогонални инварианти и канонични форми на линейните стационарни системи. I. Абстрактни и ортогонални инварианти. *Техническа мисъл*, **21** (1984), 4, 11-15.
170. **П. Петков**, Н. Христов, М. Константинов. Пакет програми за анализ и синтез на линейни системи за управление. V. Решаване на матричните алгебрични уравнения на Рикати. *Автоматика и Изчислителна техника*, **18** (1984), 5, 51-53.
171. **П. Петков**, Н. Христов, М. Константинов. Пакет програми за анализ и синтез на линейни системи за управление. IV. Синтез при зададени полюси. *Автоматика и Изчислителна техника*, **18** (1984), 1, 60-61.
172. **П. Петков**, Н. Христов, М. Константинов. Пакет програми за анализ и синтез на линейни системи за управление. III. Привеждане в ортогонална канонична форма. *Автоматика и Изчислителна техника*, **17** (1983), 6, 49-51.
173. **П. Петков**, Н. Христов, М. Константинов. Пакет програми за анализ и синтез на линейни системи за управление. II. Анализ на устойчивостта; решаване на алгебричните уравнения на Ляпунов. *Автоматика и Изчислителна техника*, **17** (1983), 4, 44-46.
174. **П. Петков**, Н. Христов, М. Константинов. Пакет програми за анализ и синтез на линейни системи за управление. I. Изчисляване на преходна матрица и дискретизация. *Автоматика и Изчислителна техника*, **17** (1983), 3, 54-56.
175. М. Константинов, **П. Петков**, Н. Христов. Канонични представяния на линейните системи относно ортогоналните трансформационни групи. *Автоматика и Изчислителна техника*, **16** (1982), 4, 17-23.
176. М. Константинов, **П. Петков**, Н. Христов. Синтез при зададени полюси с използване на каноничната форма на Шур. II. Ортогонална триангуларизация. *Автоматика и Изчислителна техника*, **15** (1981), 5, 16-20.
177. М. Константинов, **П. Петков**, Н. Христов. Синтез при зададени полюси с използване на каноничната форма на Шур. I. Унитарна триангуларизация. *Автоматика и Изчислителна техника*, **15** (1981), 4, 5-10.
178. **П. Петков**, Н. Христов, М. Константинов. Синтез при зададени полюси в линейните системи с използване на свойството взаимна наблюдаемост. *Известия на ВМЕИ*, **36** (1981), 21-25.
179. **П. Петков**, Н. Христов, М. Константинов. Взаимна наблюдаемост и синтез на дискретни системи при непълна информация за състоянието. *Известия на ВМЕИ*, **36** (1981), 7, 13-19.
180. М. Константинов, **П. Петков**, Н. Христов. Синтез на наблюдатели на състоянието със зададена достижима динамика. *Автоматика и Изчислителна техника*, **14** (1980), 2, 25-31.
181. М. Константинов, **П. Петков**, Н. Христов. Синтез на линейни системи с достижима еквивалентна форма. *Автоматика и Изчислителна техника*, **14** (1980), 1, 5-10.
182. М. Константинов, **П. Петков**, Н. Христов. Последователна канонична форма и синтез на линейни управляеми системи II. *Автоматика и Изчислителна техника*, **12** (1978), 5, 11-17.
183. М. Константинов, **П. Петков**, Н. Христов. Последователна канонична форма и синтез на линейни управляеми системи I. *Автоматика и Изчислителна техника*, **12** (1978), 4, 13-21.

184. М. Константинов, С. Патарински, **П. Петков**, Н. Христов. Алгоритми и програми за анализ и синтез на линейни управляеми системи. II. Синтез. *Автоматика и Изчислителна техника*, **II** (1977), 5, 14-25.
185. М. Константинов, С. Патарински, **П. Петков**, Н. Христов. Алгоритми и програми за анализ и синтез на линейни управляеми системи. I. Анализ. *Автоматика и Изчислителна техника*, **II** (1977), 4, 31-37.
186. М. Константинов, С. Патарински, **П. Петков**, Н. Христов. Субоптимално управление при линейно-квадратични задачи със закъснение и непълна информация за състоянието на обекта. *Автоматика и Изчислителна техника*, **II** (1977), 2, 9-15.
187. М. Константинов, С. Патарински, **П. Петков**, Н. Христов. Върху един закон за субоптимално управление на линейни системи при непълна информация за състоянието на обекта. *Автоматика и Изчислителна техника*, **10** (1976), 5, 16-22.
188. И. Томов, С. Патарински, Е. Хараланова, М. Иванова, **П. Петков**. Анализ и синтез на двуканална система с амплитудно-фазова модулация. *Известия на ВМЕИ*, **32**(1973), 141-152.
189. И. Томов, **П. Петков**, Д. Арnaudов, Т. Проичев, И. Ценов, М. Иванова. Въртящият се летателен апарат като обект на управление. *Известия на ВМЕИ*, **32**(1973), 129-140.
190. И. Томов, Т. Проичев, И. Ценов, **П. Петков**, Е. Хараланова, С. Патарински. Изследване на нелинейна САУ с амплитудна модулация с помощта на ЦЕИМ. *Известия на ВМЕИ*, **32**(1973), 117-128.

III. Монографии, издадени в чужбина (6)

191. M.M. Konstantinov, **P.H. Petkov**. *Perturbation Methods in Matrix Analysis and Control*. NOVA Science Publishers, Inc., New York, 2020. ISBN 978-1-53617-470-0.
192. **P.H. Petkov**, T.N. Slavov, J.K. Krlev. *Design of Ebedded Robust Control Systems using MATLAB[®]/Simulink[®]*. IET Control, Robotics and Sensor Series 113. The Institution of Engineering and Technology, London, 2018. XV+516 pp. ISBN 978-1-78561-330-2
193. D.-W. Gu, **P.H. Petkov**, M.M. Konstantinov. *Robust Control Design with MATLAB[®], Second Edition*. Springer, London 2013. XXI+468 pp. ISBN 978-1-4471-4681-0, ISBN 978-1-4471-4682-7 (eBook), DOI 10.1007/978-1-4471-4682-7
194. D.-W. Gu, **P.Hr. Petkov**, M.M. Konstantinov. *Robust Control Design with MATLAB[®]*. Springer, London 2005. XIV+389 pp. ISBN 1-85233-983-7 (*Превод на корейски език*. D.-W. Gu, **P.Hr. Petkov**, M.M. Konstantinov. **MATLAB/Simulink을 이용한 강인제어 시스템의 설계**, A-Jin Publishing Co., 2008. XI+407 pp. ISBN 978-89-5761-241-5).
195. M. Konstantinov, D.W. Gu, V. Mehrmann, **P. Petkov**. *Perturbation Theory for Matrix Equations*. North-Holland (Elsevier), Amsterdam 2003. XII+429 pp. ISBN 0-444-51315-9
196. **P. Petkov**, N. Christov, M. Konstantinov. *Computational Methods for Linear Control Systems*. Prentice Hall, Hemel Hempstead, UK 1991. XVII+504 pp. ISBN 0-13-161803-2

IV. Книги и монографии, издадени у нас (8)

197. **П. Петков**, М. Константинов. *Матрични изчисления (С примери от MATLAB®)*. Фастумпринт, С., 2016. 338 стр. ISBN 619722316-3
198. А. Йончев, М. Константинов, **П. Петков**. *Линейни матрични неравенства в теория на управлението*. “Деметра”, София 2005. 311 стр. ISBN 954-9526-32-1
199. М. Константинов, **П. Петков**. *Пертурбационен анализ в линейната алгебра и теория на управлението*. Студии на БИАП по математически науки, т. 6, София 2003. 312 стр. ISBN 954-9526-18-6
200. **П. Петков**, М. Константинов. *Робастни системи за управление. Анализ и синтез с MATLAB*. “ABC Техника”, София 2002. VIII+418 стр. ISBN 954-8873-51-6
201. **П. Петков**, Н. Христов. *Анализ и синтез на линейни системи за управление със SYSLAB*. “Техника”, София 1993. 216 стр. ISBN 954-03-0277-3
202. **П. Петков**, Н. Христов, М. Константинов. *Анализ и синтез на линейни многомерни системи. Сборник алгоритми и програми по проектиране на САУ*, кн. 3, “Техника”, София 1983. 180 стр.
203. И. Томов, Л. Гунчев, Т. Проичев, Е. Хараланова, М. Иванова, И. Ценов, **П. Петков**, С. Патарински, Б. Данев, Р. Радев. *Методи за анализ и синтез на системи за управление на летателни апарати*. Изд. ВМЕИ, София 1975. 98 стр.
204. И. Ценов, **П. Петков**. *Матрични методи за анализ и синтез на линейни системи за автоматично управление*. “Техника”, София 1981. 160 стр.

V. Доклади на конгреси, конференции и симпозиуми в чужбина (28)

205. М. Konstantinov, **P. Petkov**. Method of splitting operators in matrix analysis and control. *Proceedings of the 6th International Conference on Control and Optimization with Industrial Applications, 11-13 July 2018, Baku, Azerbaijan, vol. 1, pp. 16 – 18*.
206. **P. Petkov**. Robust control laws for embedded control systems. *Plenary paper, 3rd International Conference on Control and Optimization with Industrial Applications (COIA 2011), Bilkent University, Ankara, Turkey, August 22-24, 2011*.
207. О. Ognyanova, **P. Petkov**, Е. Haralanova, Т. Puleva. Robust control of a wind turbine. *Proceedings of the 7th Mediterranean Conference and Exhibition on Power Generation, Transmission, Distribution and Energy Conservation (MedPower 2010), 7-10 November 2010, Agia Napa, Cyprus, Paper No. MED10/178, pp. 1-5*.
208. F. Delebecque, **P. Petkov**. A Slicot/Scilab implementation of exact disturbance decoupling. *Proceedings of the 2004 IEEE International Symposium on Computer Aided Control System Design, Taipei, Taiwan, Sept. 2-4, 2004, IEEE, 2004, pp. 137-140*. ISBN 0-7803-8636-1
209. D.W. Gu, **P. Petkov**. Advanced robust control. *Invited talk, Workshop on Advanced Computational Tools for Computer-Aided Control Systems Design (CACSD 2001), Zentrum für Technomathematik, Universität Bremen, Germany, September 27-29, 2001*.
210. D. Gu, S. Lesecq, N. Christov, М. Konstantinov, **P. Petkov**, A. Barraud. On the conditioning of the generalized discrete-time Lyapunov and Riccati equations. *Proceedings of the European Control Conference, Porto, Portugal, September 04-07 2001, 2895-2897, CD-ROM*.
211. **P. Petkov**, D. Gu, М. Konstantinov. Robust control of triple inverted pendulum using μ -synthesis. *Invited talk, Proceedings of the 3rd NICONET Workshop on Numerical Software for Control Engineering, Université catholique de Louvain, Louvain-la-Neuve, Belgium, January 19, 2001, 83-89*.

212. V. Sima, **P.Hr. Petkov**, S. Van Huffel. Efficient and reliable algorithms for condition estimation of Lyapunov and Riccati equations. *Proceedings of the Conference on Mathematical Theory of Networks and Systems MTNS 2000, June 19-23, 2000, Perpignan, France.*
213. **P. Petkov**, D. Gu, M. Konstantinov, V. Mehrmann. Numerical solution of matrix Riccati equations. A comparison of six solvers. *Proceedings of the UK Automatic Control Conference, University of Cambridge, Cambridge, UK, 4-7 September 2000.*
214. M. Konstantinov, **P. Petkov**, N. Christov, V. Mehrmann, A. Barraud, S. Lesecq. Conditioning of the generalized Lyapunov and Riccati equations. *Proceedings of the 1999 American Control Conference, San Diego, CA 1999, 2253-2254.*
215. M. Konstantinov, **P. Petkov**, N. Christov. Conditioning of the output pole assignment problem. *Proceedings of the 3rd European Control Conference, September 5-8 1995, Rome, Italy. A. Isidori, S. Bittanti, E. Mosca, A. De Luca, M.D. Di Benedetto, G. Oriolo (Ed.), 3, 2072-2077.*
216. M. Konstantinov, **P. Petkov**, N. Christov. Conditioning of the continuous-time H_∞ optimisation problem. *Proceedings of the 3rd European Control Conference, September 5-8 1995, Rome, Italy. A. Isidori, S. Bittanti, E. Mosca, A. De Luca, M.D. Di Benedetto, G. Oriolo (Ed.), 1, 613-617.*
217. **P. Petkov**, N. Christov, M. Konstantinov. Perturbation controllability analysis of linear multivariable systems. *Preprints of the 12th IFAC World Congress, Sydney, Australia 1993, 2, 491-494.*
218. **P. Petkov**, N. Christov, M. Konstantinov. Numerical issues in the solution of matrix Riccati equations. *Proceedings of the 2nd European Control Conference, Groningen, Netherlands 1993, vol. 4, 2379-2384.*
219. **P. Petkov**, N. Christov, M. Konstantinov. Perturbation analysis of orthogonal canonical forms and pole assignment for single-input systems. *Proceedings of the 2nd European Control Conference, Groningen, Netherlands 1993, vol. 3, 1397-1400.*
220. **P. Petkov**, N. Christov, M. Konstantinov. A posteriori error analysis of the generalized Schur approach for solving the discrete matrix Riccati equation. *Preprints of the 5th IFAC/IMACS Symposium on Computer Aided Design of Control Systems, Swansea, UK, 1991, 178-181.*
221. **P. Petkov**, N. Christov, M. Konstantinov. A new approach to the perturbation analysis of linear control problems. *Preprints of the 11th IFAC World Congress, Tallinn, Estonia, August 13-17 1990. V. Utkin, Ü. Jaaksoo (Eds.), 2, 311-316.*
222. **P. Petkov**, N. Christov, M. Konstantinov. Algorithms to estimate the distance between a stable matrix and the nearest unstable one. *Proceedings of the American Control Conference, Atlanta GA 1988, 1508-1509.*
223. **P. Petkov**, N. Christov, M. Konstantinov. Computational methods for linear control systems – some open questions. *Proceedings of the 26th IEEE Conference on Decision and Control, Los Angeles, CA 1987, 1, 818-823.*
224. **P. Petkov**, N. Christov, M. Konstantinov. On the numerical solution of the continuous and discrete-time algebraic Riccati equations. *Proceedings of the IEEE CSS 3rd Symposium on Computer Aided Control System Design, Arlington, VA 1986, 114-119.*
225. M. Konstantinov, **P. Petkov**, N. Christov. Perturbation analysis of the continuous and discrete matrix Riccati equations. *Proceedings of the American Control Conference, Seattle, Washington 1986, 1, 636-639.*
226. M. Konstantinov, **P. Petkov**, N. Christov. On the theory of linear-quadratic optimization problem. *Proceedings of the 4th International Conference on System Engineering., Coventry, UK 1985, 108-113.*

227. **P. Petkov**, N. Christov, M. Konstantinov. A computational algorithm for pole assignment of linear multi-input systems. *Proceedings of the 23rd IEEE Conference on Decision and Control, Las Vegas, NE 1984*, 1770-1771.
228. **P. Petkov**, N. Christov, M. Konstantinov. Contributions to the synthesis of state observers. *Proceedings of the 6th International Congress on Cybernetics and Systems, Paris 1984*, 1, 389-394.
229. M. Konstantinov, **P. Petkov**, N. Christov. The associated algebraic matrix Riccati equation. *Proceedings of the 3rd International Conference on System Engineering, Wright State University, Dayton, OH 1984*, 530-537.
230. **P. Petkov**, N. Christov, M. Konstantinov. Numerically stable algorithm for pole assignment of linear time-invariant systems. *Supplement to the Proceedings of the 4th Polish-English Seminar on Real Time Process Control, Jablonna, Poland 1983*, 20-29.
231. **P. Petkov**, N. Christov, M. Konstantinov. A program package for computer-aided design of digital control systems. *Preprints of the 3rd IFAC/IFIP Symposium on Software for Computer Control, Madrid, Spain, 5-8 October 1982*. G. Ferrate, E.A. Puente (Eds.), 217-220.
232. M. Konstantinov, S. Patarinski, **P. Petkov**, N. Christov. Synthesis of linear control systems with prescribed dynamics. *Proceedings of the 1st International Conference on Mathematical Modelling, St. Louis, MI 1977*, 3, 1639-1648.

VI. Доклади на конгреси, конференции и симпозиуми у нас (55)

233. П. Петков, М. Константинов. Използване на формата на Вейр при численото определяне на жордановата форма на матрица. *Доклади на 51 Пролетна конференция на СМБ, Бургас, 7-12 април 2021*, 1001-1010.
234. T. Slavov, J. Kraleв, **P. Petkov**. Embedded LQG control of tank liquid level. *Трудове на международната конференция Автоматика и информатика'2018, 04-06.10.2018, София, стр. 35 – 38*.
235. **P. Petkov**, J. Kraleв, Ts. Slavov. Design and implementation of robust control laws. *Proceedings of the 29th European Conference on Modelling and Simulation ECMS 2015, Albena (Varna), Bulgaria, 26-29 May 2015*, 6-18.
236. **P. Petkov**, Ts. Slavov. Implementation of Digital Signal Processors in control systems. *Proceedings of the Third International Symposium on Radio Systems and Space Plasma, Sofia, Bulgaria, 28-29 August, 2013*, 37-41.
237. **P. Petkov**, Ts. Slavov. Robust control laws using DSP. Plenary talk, 4th International Conference on Control and Optimization with Industrial Applications (COIA 2013), Borovets, Bulgaria, July 10-12, 2013, 61-62.
238. Konstantin Gerasimov, Krum Gerasimov, **P. Petkov**. Tuning single channel PSS with active power input by H_∞ -design and μ -synthesis. *Proceedings of the Third International Congress "50th Anniversary Technical University of Varna", 4-6 October 2012, Varna*, 42-47.
239. Konstantin Gerasimov, **P. Petkov**, Krum Gerasimov. Using H_∞ synthesis for finding settings of single channel power system stabilizers of synchronous generators. *Proceedings of the XLVII International Scientific Conference on Information, Communication and Energy Systems and Technologies ICEST 2012, 28-30 June 2012, Veliko Tarnovo, Bulgaria*, 239-242.
240. Л. Моллов, **П. Петков**. Вградено робастно управление на двуколесен робот. *Трудове на международната конференция Автоматика и информатика'11, 03-07.10.2011, София, стр. В-177 – В-180*.

241. **П. Петков.** Робастни регулатори за вградени системи за управление. *Трудове на международната конференция Автоматика и информатика'11*, 03-07.10.2011, София, стр. А-13 – А-19.
242. М. Konstantinov, **P. Petkov.** Loss of accuracy in numerical computations. *Proceedings of the 40th Jubilee Spring Conference of UBM, Borovetz, April 5-9 2011*, 293-299.
243. Ц.Н. Славов, С.П. Антонов, **П.Х.Петков.** Инерциална навигационна система комбинирана със спътникови измервания. *Трудове на международната конференция Автоматика и информатика'10*, 03-7.10.2010, София, стр. II.339 – II.342.
244. Г. Лехов, **П. Петков.** Синтез на съсредоточено робастно управляващо устройство с две степени на свобода на манипулатор с еластично звено. *Трудове на международната конференция Автоматика и информатика'10*, 03-7.10.2010, София, стр. I.201 – I.204.
245. Г. Ружеков, Ст. Калинков, **П.Петков.** H_∞ управление на трансманипулатор. *Трудове на международната конференция Автоматика и информатика'09*, 29.09-4.10.2009, София, стр. VI-49-VI-52.
246. О. Огнянова, Е. Хараланова, **П.Петков.** Робастно управление на вятърна турбина. *Трудове на международната конференция Автоматика и информатика'09*, 29.09-4.10.2009, София, стр. VI-9-VI-12.
247. **П.Петков.** Приложение на робастни закони за управление в реално време. *Трудове на международната конференция Автоматика и информатика'07*, 3-6 октомври 2007, София, стр. IV-9-IV-12.
248. A.S. Yonchev, M.M. Konstantinov, **P.H. Petkov.** A new approach to the perturbation analysis for discrete H_∞ synthesis problems. *Proceedings of the 36th Spring Conference of UBM, Varna 2007*, 312-317.
249. A. Yonchev, M. Konstantinov, **P. Petkov.** Perturbation analysis of the LMI based H_∞ synthesis problem. *Finite Difference Methods. Theory and Applications. Proceedings of the Fourth International Conference FDM. T&A'06, Lozenets, Bulgaria, 26-29 August 2006*. I. Farago, P. Vabishchevich, L. Vulkov (Eds.), 338-344.
250. M.M. Konstantinov, **P.Hr. Petkov**, N.D. Christov. Sensitivity Analysis of Discrete-Time Kalman Filters. *Finite Difference Methods. Theory and Applications. Proceedings of the Fourth International Conference FDM. T&A'06, Lozenets, Bulgaria, 26-29 August 2006*. I. Farago, P. Vabishchevich, L. Vulkov (Eds.), 246-251.
251. D.D. Golcheva, **P.Hr. Petkov**, N.D. Christov. Numerical method for multiobjective optimization of linear discrete-time systems. *Finite Difference Methods. Theory and Applications. Proceedings of the Fourth International Conference FDM. T&A'06, Lozenets, Bulgaria, 26-29 August 2006*. I. Farago, P. Vabishchevich, L. Vulkov (Eds.), 185-190.
252. A. Yonchev, **P. Petkov.** Numerical comparison of methods for discrete-time the H_∞ optimization. *Сборник научни трудове на Националната конференция "Автоматика и Информатика. '05"*, София, 3-5 окт. 2005, 159-162.
253. V. Angelova, D. Gu, M. Konstantinov, **P. Petkov.** Perturbation bounds for general coupled matrix Riccati equations. *Proceedings of the 33rd Spring Conference of UBM, Borovets 2004*, 95-101.
254. M. Konstantinov, V. Mehrmann, **P. Petkov**, D. Gu. Perturbation theory for general matrix equations. *Invited paper, Applications of Mathematics in Engineering and Economics (AMEE 2004), 30th Jubilee International Conference, June 7-11, 2004, Sozopol*. M. Marinov, G. Venkov (Eds.), Softtrade, 2005, 36-72. ISBN 954-9725-98-7

255. Г. Лехов, **П. Петков**. Съсредоточено и разсредоточено робастно управление на манипулатор с еластично звено. *Сборник научни трудове на Националната конференция "Автоматика и Информатика '03"*, София, 2003, 2, 7-10.
256. **P. Petkov**, M. Konstantinov, N. Christov. Conditioning and error estimates in LQG design. *Proceedings of the International Conference "Automatics and Informatics '03"*, Sofia, 2003, 1, 167-170.
257. M. Konstantinov, **P. Petkov**, V. Mehrmann, D. Gu. On properties of perturbation bounds. *Proceedings of the 32nd Spring Conference of UBM, Sunny Beach 2003*, 269-274.
258. M. Konstantinov, **P. Petkov**. Perturbations of matrix decompositions. *60 Years of UACG, Jubilee Scientific Conference, UACG, Sofia, 2002*, 505-516.
259. M. Konstantinov, **P. Petkov**, V. Angelova. Sensitivity of general discrete algebraic Riccati equations. *Proceedings of the 28th Spring Conference of UBM, Montana 1999*, 128-136.
260. M. Konstantinov, **P. Petkov**. On Lyapunov operators. *Proceedings of the 27th Spring Conference of UBM, Pleven 1998*, 98-105.
261. M. Konstantinov, **P. Petkov**. Nonlocal perturbation bounds for the eigensystem of a matrix. *Proceedings of the 26th Spring Conference of UBM, Plovdiv 1997*, 145-149.
262. M. Konstantinov, **P. Petkov**, N. Christov. Conditioning of the H_∞ optimisation problem. *Доклади на Националната конференция с международно участие "Автоматика и Информатика. '96"*, София 1996, 100-103.
263. **P. Petkov**, N. Christov, M. Konstantinov. Optimal synthesis of linear multi-input systems with prescribed spectrum. *Proceedings of the 25th Spring Conference of UBM, Kazanlak 1996*, 141-148.
264. **P. Petkov**, N. Christov, M. Konstantinov. Solving high-order matrix Riccati equations with condition and accuracy estimates. *Сборник научни трудове на Националната конференция "Автоматика и Информатика '95"*, София 1995, 141-144.
265. M. Konstantinov, **P. Petkov**, N. Christov. Linear sensitivity analysis of the H_∞ optimisation. *Proceedings of the 24th Spring Conference of UBM, Svishtov 1995*, 209-217.
266. **П. Петков**, М. Константинов, Н. Христов. Числено устойчив метод за оптимален синтез със зададена собствена структура. *Сборник научни трудове на Националната конференция "Автоматика 94"*, София 1994, 71-74.
267. **P. Petkov**, N. Christov, M. Konstantinov. Conditioning of orthogonal canonical forms. *Proceedings of the International Conference of Mathematical Modelling and Scientific Computations, Sozopol, September 14-18, 1993. S.M. Markov (ed.), DATECS Publishing, 137-143. ISBN 954-613-001-X*
268. **P. Petkov**, N. Christov, M. Konstantinov. Sensitivity of orthogonal canonical forms for single-input systems. *Proceedings of the 22nd Spring Conference of UBM, Sofia 1993*, 66-73.
269. M. Konstantinov, **P. Petkov**, N. Christov. Conditioning of the discrete matrix Riccati equation. *Proceedings of the 21st Spring Conference of UBM, Sofia 1992*, 92-99.
270. **P. Petkov**, N. Christov, M. Konstantinov. Numerical properties of the generalized Schur approach for solving the discrete matrix Riccati equation. *Proceedings of the 18th Spring Conference of UBM, Albena 1989*, 452-457.
271. **P. Petkov**, M. Konstantinov, N. Christov. Algorithms for estimation of the stability measure of linear time-invariant systems. *Proceedings of the 17th Spring Conference of UBM, Sunny Beach 1988*, 345-347.

272. **P. Petkov**, N. Christov, M. Konstantinov. On the numerical properties of the Schur approach to solving the matrix Riccati equation. *Proceedings of the 16th Spring Conference of UBM, Sunny Beach 1987*, 522-525.
273. M. Konstantinov, **P. Petkov**, N. Christov. Perturbation analysis of matrix quadratic equations. *Proceedings of the 15th Spring Conference of UBM, Sunny Beach 1986*, 422-428.
274. К. Велев, М. Константинов, **П. Петков**, Н. Христов. Структурна идентификация на линейни многомерни системи. *Доклади на 4-а Национална конференция "Статистически методи в експерименталните изследвания и контрол на качеството"*, Варна 1986, 4, 114-122.
275. **P. Petkov**, N. Christov, M. Konstantinov. Numerical aspects of the reduction into orthogonal canonical form. In *"Problems of Complex Control Systems"*, *Proceedings of International Conference, Varna 1985*, 1, 101-107.
276. **P. Petkov**, M. Konstantinov, N. Christov. A survey of the computational algorithms for linear control systems. *Proceedings of the International Conference on Numerical Methods and Applications, Sofia 1984*, 489-500.
277. **P. Petkov**, N. Christov, M. Konstantinov. A computational algorithm for pole assignment of linear multi-input systems. *Proceedings of the International Conference on Numerical Methods and Applications, Sofia 1984*, 483-488.
278. **P. Petkov**, N. Christov, M. Konstantinov. Numerical solution of the continuous and discrete-time algebraic matrix Riccati equations. *Proceedings of the 13th Spring Conference of UBM, Sunny Beach 1984*, 415-424.
279. **P. Petkov**, N. Christov, M. Konstantinov. Program package for analysis and synthesis of discrete control systems. *Proceedings of the 12th Spring Conference of UBM, Sunny Beach 1983*, 222-226.
280. **P. Petkov**, M. Konstantinov, N. Christov. Pole assignment by orthogonal triangularization. *Proceedings of the 11th Spring Conference of UBM, Sunny Beach 1982*, 265-273.
281. M. Konstantinov, **P. Petkov**, N. Christov. Orthogonal invariants and canonical forms for linear control systems. *Proceedings of the 10th Spring Conference of UBM, Sunny Beach 1981*, 258-268.
282. **P. Petkov**, N. Christov, M. Konstantinov. Computer-aided spectrum allocation of linear systems. *Proceedings of the International Conference on Computer Based Scientific Research, Plovdiv 1984*, vol. 2, 569-571.
283. М. Константинов, С. Патарински, **П. Петков**, Н. Христов. Програмный пакет автоматизированного проектирования линейных систем управления. *Доклади на 9-а Пролетна конференция на СМБ, Слънчев бряг 1980*, 145-151.
284. М. Константинов, **П. Петков**, Н. Христов. Числени методи за анализ и синтез на линейни управляеми системи. *Доклади на 5-а Национална школа "Приложение на математиката в техниката и математически методи в информатиката"*, Варна 1979, 3-24.
285. **П. Петков**, Н. Христов, М. Анчев, В. Якимов, П. Радев. Синтез на оптимална многосвързана система за регулиране на парогенератор ОВ-650-040. *Енерго'78, Национална Конференция с международно участие "Топло- и ядреноенергийни проблеми на НРБ"*, Варна, 1978, 1, 1-9.
286. М. Константинов, С. Патарински, **П. Петков**, Н. Христов. Канонични представяния на линейни стационарни системи. *Доклади на 7-ма Пролетна конференция на СМБ, Слънчев бряг 1978*, 392-401.
287. **П. Петков**, С. Патарински. Изследване на система за стабилизация на въртящ се космически летателен апарат. *Доклади на Научна конференция, ВМЕИ, София, 1974*, 8, 148-159.

VII. Учебници и учебни пособия (6)

288. **П. Петков**, Г. Лехов, А. Марковски. *Ръководство по робастни системи за управление. Анализ и синтез с MATLAB®*. “ABC Техника”, София 2006. VII+302 стр. ISBN 954-8873-77-X
289. **П. Петков**, Г. Лехов. *Системи за управление I част. Робастни системи за управление*. Изд. на Русенския университет, Русе 2003. 197 стр. ISBN 954-712-220-7
290. **П. Петков**. *Многомерни системи за управление*. Изд. ВМЕИ, София 1997. 228 стр. ISBN 954-438-209-7
291. М. Константинов, **П. Петков**, Н. Христов. *Матрични пресмятания с диалоговата система SYSLAB*. Изд. ВИАС, София 1992. 113 стр.
292. Н. Наплатанов, И. Томов, Н. Маджаров, Л. Гунчев, И. Стойчев, **П. Петков**. *Въведение в теорията на управлението*. Изд. ВМЕИ, София 1987.
293. **П. Петков**. *Теория на автоматичното управление*, ч. 2. Изд. ВМЕИ, София 1987. 239 стр.

VIII. Дисертации (2)

294. **П. Петков**. *Числени проблеми в теорията на линейните системи за управление*. Автореферат на дисертация, представена за присъждане на научната степен “Доктор на техническите науки”, ТУ София 1993.
295. **П. Петков**. *Синтез на линейни управляеми системи при непълна информация за състоянието*. Автореферат на дисертация, представена за присъждане на научната степен “Кандидат на техническите науки”, ВМЕИ, София 1979.

IX. Научни отчети, публикувани в Европейската тематична мрежа NICONET (12)

296. Markovski, **P. Petkov**, D.-W. Gu, M.M. Konstantinov. *Fortran 77 routines for μ -synthesis and H_{∞} design*. SLICOT Working Note 2003-1, 2003. <http://www.icm.tu-bs.de/NICONET/>
297. D. Gu, M. Konstantinov, V. Mehrmann, **P. Petkov**, H. Xu. *DRCEXC – A Collection of Benchmark Examples for Robust Control Design of Continuous-Time Dynamical Systems. Version 1.0*. SLICOT Working Note 2002-8, 2002. <http://www.icm.tu-bs.de/NICONET/>
298. **P. Petkov**, D. Gu, M. Konstantinov. *μ -Synthesis of a Robust Triple Inverted Pendulum Control*. SLICOT Working Note 2001-1, 2001. <http://www.icm.tu-bs.de/NICONET/>
299. D. Gu, **P. Petkov**, M. Konstantinov. *On discrete H_{∞} Loop Shaping Design Procedure Routines*. SLICOT Working Note 2000-6, 2000. <http://www.icm.tu-bs.de/NICONET/>
300. D. Gu, **P. Petkov**, M. Konstantinov, V. Mehrmann. *Condition and Error Estimates in the Solution of Lyapunov and Riccati Equations*. SLICOT Working Note 2000-1, 2000. <http://www.icm.tu-bs.de/NICONET/>
301. D. Gu, **P. Petkov**, M. Konstantinov. *H_{∞} Loop Shaping Design Procedure Routines in SLICOT*. NICONET Rep. 1999-15, 1999. <http://www.icm.tu-bs.de/NICONET/>
302. D. Gu, **P. Petkov**, M. Konstantinov. *H_{∞} and H_2 Optimization Toolbox in SLICOT*. SLICOT Working Note 1999-12, 1999. <http://www.icm.tu-bs.de/NICONET/>
303. **P. Petkov**, M. Konstantinov, D. Gu, V. Mehrmann. *Numerical Solution of Matrix Riccati Equations – A Comparison of Six Solvers*. NICONET Rep. 99-10, Department of Electrical Eng., University of Leuven, 1999. <http://www.icm.tu-bs.de/NICONET/>

304. **P. Petkov**, D. Gu, M. Konstantinov. *FORTTRAN 77 Routines for H_∞ and H_2 Design of Discrete-Time Linear Control Systems*. NICONET Rep. 99-5, Department of Electrical Eng., University of Leuven, 1999. <http://www.icm.tu-bs.de/NICONET/>
305. D. Gu, **P. Petkov**, M. Konstantinov. *An Introduction to H_∞ Optimisation Designs*. NICONET Rep. 99-4, Department of Electrical Eng., University of Leuven, 1999. <http://www.icm.tu-bs.de/NICONET/>
306. **P. Petkov**, D. Gu, M. Konstantinov. *FORTTRAN 77 Routines for H_∞ and H_2 Design of Continuous-Time Linear Control Systems*. NICONET Rep. 98-8, Department of Electrical Eng., University of Leuven, 1998. <http://www.icm.tu-bs.de/NICONET/>
307. D. Gu, **P. Petkov**, M. Konstantinov. *Direct Formulae for the H_∞ Sub-Optimal Central Controller*. NICONET Rep. 98-7, Department of Electrical Eng., University of Leuven, 1998. <http://www.icm.tu-bs.de/NICONET/>

X. Научни отчети и препринти на чуждестранни университети (37)

308. V. Mehrmann, **P. Petkov**. *Evaluation of numerical methods for discrete-time H_∞ optimization*. Preprint 08-2005, Inst. Math., TU-Berlin, 2005.
309. N.J. Higham, M. Konstantinov, V. Mehrmann, **P. Petkov**. *Sensitivity of computational control problems*. Preprint 05/2003, Inst. Math., TU-Berlin, 2003. <http://www.math.tu-berlin.de/preprints>
310. M. Konstantinov, V. Mehrmann, **P. Petkov**, D. Gu. *A General Framework for the General Perturbation Theory of General Matrix Equations*. Preprint 760-02, Inst. Math., TU-Berlin, 2003.
311. D. Gu, M. Konstantinov, **P. Petkov**. *Perturbation Bounds for the Standard and Descriptor Continuous Matrix Riccati Equations*. Report LUED 02-03, Leicester Univ., UK, 2002.
312. M. Konstantinov, V. Angelova, **P. Petkov**, D. Gu, V. Tsachouridis. *Perturbation Analysis of Real Algebraic Continuous-Time Coupled Matrix Riccati Equations*. Report LUED 00-7, Leicester Univ., UK, 2000.
313. D. Gu, **P. Petkov**, M. Konstantinov. *On discrete H_∞ Loop Shaping Design Procedure Routines*. Report LUED 00-6, Leicester Univ., UK, 2000.
314. M. Konstantinov, V. Mehrmann, **P. Petkov**. *On Fractional Exponents in Perturbed Matrix Spectra of Defective Matrices*. Preprint SFB393/00-17, Fak. Math., TU Chemnitz, Germany, 2000.
315. D. Gu, **P. Petkov**, M. Konstantinov. *H_∞ and H_2 Optimisation Routines in SLICOT*. Report LUED 99-12, Leicester Univ., UK, 1999.
316. **P. Petkov**, D. Gu, M. Konstantinov. *Fortran 77 Routines for H_∞ and H_2 Design of Linear Discrete-Time Control Systems*. Report LUED 99-8, Leicester Univ., UK, 1999.
317. D. Gu, **P. Petkov**, M. Konstantinov. *An Introduction to H_∞ Optimization Designs*. Report LUED 99-7, Leicester Univ., UK 1999.
318. M. Konstantinov, V. Mehrmann, **P. Petkov**, D. Gu. *Structural Properties and Parametrizations of Lyapunov and Lyapunov-Like Operators*. Report LUED 99-6, Leicester Univ., UK, 1999.
319. M. Konstantinov, **P. Petkov**, D. Gu, V. Mehrmann. *Sensitivity of General Lyapunov Equations*. Report LUED 98-15, Leicester Univ., UK, 1998.
320. **P. Petkov**, D. Gu, M. Konstantinov. *Fortran 77 Routines for H_∞ and H_2 Design of Continuous-Time Linear Control Systems*. Report LUED 98-14, Leicester Univ., UK, 1998.
321. M. Konstantinov, **P. Petkov**, D. Gu. *Improved Perturbation Bounds for General Quadratic Matrix Equations*. Report LUED 98-13, Leicester Univ., UK, 1998.

322. M. Konstantinov, **P. Petkov**, V. Angelova, D. Gu. *Perturbation Analysis of Fractional Affine Matrix Equations*. Report LUED 98-12, Leicester Univ., UK, 1998.
323. D. Gu, **P. Petkov**, M. Konstantinov. *Direct Formulae for the H_∞ Sub-Optimal Central Controller*. Report LUED 98-10, Leicester Univ., UK, 1998.
324. M. Konstantinov, V. Mehrmann, **P. Petkov**. *Perturbation Analysis for the Hamiltonian Schur Form*. Preprint 98-17, Fak. Math., TU Chemnitz, 1998.
325. **P. Petkov**, M. Konstantinov, V. Mehrmann. *DGRSVX and DMSRIC. Fortran 77 Subroutines for Solving Continuous-Time Matrix Algebraic Riccati Equations with Condition and Accuracy Estimates*. Preprint SFB393/98-16, Fak. Math., TU Chemnitz, Germany, 1998.
326. M. Konstantinov, V. Mehrmann, **P. Petkov**. *On Properties of General Sylvester and Lyapunov Operators*. Preprint 98-12, Fak. Math., TU Chemnitz, 1998.
327. M. Konstantinov, **P. Petkov**, J. Kawelke, D. Gu, I. Postlethwaite. *Perturbation Analysis of the H_∞ Control Problem*. Report LUED 96-27, Leicester Univ., UK 1996.
328. M. Konstantinov, **P. Petkov**, J. Kawelke, D. Gu, I. Postlethwaite. *Perturbation Analysis of the H_∞ Control and Filtering Problems*. Report LUED 96-26, Leicester Univ., UK 1996.
329. M. Konstantinov, **P. Petkov**, D. Gu, I. Postlethwaite. *Perturbation Analysis in Finite Dimensional Spaces*. Report LUED 96-18, Leicester Univ., UK 1996.
330. **P. Petkov**, M. Konstantinov, D. Gu, I. Postlethwaite. *Numerical Issues in the Solution of Continuous-Time Matrix Algebraic Riccati Equations*. Report LUED 96-13, Leicester Univ., UK 1996.
331. M. Konstantinov, **P. Petkov**, J. Kawelke, A. Linnemann, D. Gu, I. Postlethwaite. *Perturbation Analysis of System Norms*. Report LUED 96-12, Leicester Univ., UK 1996.
332. **P. Petkov**, M. Konstantinov, D. Gu, I. Postlethwaite. *Optimal Pole Assignment Design of Linear Multi-Input Systems*. Report LUED 96-11, Leicester Univ., UK 1996.
333. M. Konstantinov, **P. Petkov**, D. Gu, I. Postlethwaite. *New Perturbation Bounds for the Eigenstructure of a Matrix with Pairwise Distinct Eigenvalues*. Report LUED 96-10, Leicester Univ., UK 1996.
334. **P. Petkov**, M. Konstantinov, D. Gu, I. Postlethwaite. *Optimal Eigenstructure Assignment of Linear Systems. Software and Applications*. Report LUED 95-11, Leicester Univ., UK 1995.
335. M. Konstantinov, **P. Petkov**, D. Gu, I. Postlethwaite. *Perturbation Techniques for Linear Control Problems*. Report LUED 95-7, Leicester Univ., UK 1995.
336. N. Christov, D. Gu, M. Konstantinov, **P. Petkov**, I. Postlethwaite. *Perturbation Bounds for the H_∞ Optimization Problem*. Report LUED 95-6, Leicester Univ., UK 1995.
337. **P. Petkov**, M. Konstantinov, D. Gu, I. Postlethwaite. *Solving Continuous-Time Matrix Algebraic Riccati Equations with Condition and Accuracy Estimates*. Report LUED 95-5, Leicester Univ., UK 1995.
338. M. Konstantinov, **P. Petkov**, D. Gu, I. Postlethwaite. *Perturbation Analysis of Orthogonal Canonical Forms*. Report LUED 95-4, Leicester Univ., UK 1995.
339. M. Konstantinov, **P. Petkov**, D. Gu, I. Postlethwaite. *Numerical Issues in Linear Control*. Report LUED 93-65, Leicester Univ., UK 1993.
340. **P. Petkov**, M. Konstantinov, D. Gu, I. Postlethwaite. *A Numerically Stable Method for Optimal Eigenstructure Assignment of Linear Multi-Input Systems*. Report LUED 93-64, Leicester Univ., UK, 1993.
341. M. Konstantinov, **P. Petkov**. *Two-Dimensional Measures and Perturbations Preserving Reachability*. Report LUED 93-62, Leicester Univ., UK, 1993.

342. M. Konstantinov, **P. Petkov**. *Conditioning of Linear State Feedback*. Report LUED 93-61, Leicester Univ., UK 1993.
343. **P.Hr. Petkov**, N.D. Christov. *Solving Lyapunov and Sylvester matrix equations with condition and accuracy estimates*. Report CCAE/TR-1993/002, Dept. Comput. Sci., University College Swansea, UK, 1993.
344. **P. Petkov**. *A computational algorithm for pole assignemnt of linear single-input systems*. Internal Report 81/2, Control Systems Research Group, School of Electronic Engineering and Computer Science, Kingston Polytechnic, Kingston-upon-Thames, UK, 1981.

XI. Научно-популярни статии (11)

345. **П. Петков**. Еволюция на понятието „устойчивост“ в естествознанието и техниката. *Техносфера*, 1(2020), 5-16. ISSN 1313-3861
346. В. Сгурев, **П. Петков**. Член-кореспондент Николай Наплатанов (1923 – 1993). *Списание на БАН, CXXXI (2018)*, 42 – 43. ISSN 0007-3989
347. **П. Петков**. Руските и съветските раработки в областта на астроинерциалната навигация. *Техносфера*, 4(2017), 30-36. ISSN 1313-3861
348. **П. Петков**. Развитие на инерциалните системи за навигация и управление. *Техносфера*, 2(2015), 21-33. ISSN 1313-3861
349. **П. Петков**. Автоматичното управление и информационните технологии. *Техносфера*, 3(2014), 47-58. ISSN 1313-3861
350. **П. Петков**. Раждането на автоматичното управление. *Техносфера*, 1(2008), 54-60. ISSN 1313-3861
351. **П. Петков**. Проблеми на управлението, свързани с изстрелването на първия изкуствен спътник на Земята. *Списание на БАН, CXX(2008)*, 93-102. ISSN 0007-3989
352. Живот, отдаден на науката. 150 години от рождението на академик А.М. Ляпунов. *Автоматика и Информатика*, 41(2007), 4, 76. ISSN 0861-7562
353. **П. Петков**. Раждането на автоматичното управление, ч. 2. *Автоматика и Информатика*, 40(2006), 4, 67-69. ISSN 0861-7562
354. **П. Петков**. Раждането на автоматичното управление, ч. 1. *Автоматика и Информатика*, 40(2006), 2, 58-60. ISSN 0861-7562
355. **П. Петков**. 16-ти Световен конгрес на IFAC. *Автоматика и Информатика*, 39(2005), 3, 7-8. ISSN 0861-7562