

SEZNAM VĚDECKÝCH A ODBORNÝCH PRACÍ

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MONOGRAFIE

- [1] Mlýnek, J.: *Zabezpečení obchodních informací*. Computer Press, Brno, 2007, 154 stran, ISBN 978-80-251-1511-4.
- [2] Petrů, M., Mlýnek, J., Martinec, T., Ryvolová, M.: *Vybrané postupy konstruování kompozitu využitelného dlouhými vlákny*. Technická univerzita v Liberci, 2019, 195 stran, ISBN: 978-80-7494-477-2.

ČASOPISY

- [3] Mlýnek, J., Knobloch, R.: *Model of Shell Metal Mould Heating in the Automotive Industry*. Applications of Mathematics, Volume 63 (2018), No. 2, 111-124. DOI 10.21136/AM.2018.0086-17.
- [4] Petrů, M., Mlýnek, J., Martinec T.: *Numerical Modelling for Optimization of Fibres Winding Process of Manufacturing Technology for the Non-Circular Aerospace Frames*. Manufacturing Technology (Journal for science, research and production), Volume 18 (2018), No. 1, pp. 90-98, DOI: 10.21062/ujep/59.2018/a/1213-2489/MT/18/1/90.
- [5] Knobloch, R., Mlýnek, J., Srb, R.: *The Classic Differential Evolution Algorithm and Its Convergence Properties*. Applications of Mathematics, Volume 62 (2017), No. 2, 197-208. DOI: 10.21136/AM.2017.027-16.
- [6] Petrů, M., Mlýnek, J., Martinec, T., Bronček, J.: *Mathematical modelling of fibre winding process for composite frames*. Komunikacie (Journal of electrical and electronic engineering, University of Zilina, Slovakia), Volume 18, Issue 4, 2016, 103-111.
- [7] Petrů, M., Martinec, T., Mlýnek, J.: *Numerical Model Description of Fibres Winding Process for New Technology of Winding Fibers on the Frames*. Manufacturing Technology (Journal for science, research and production), Volume 16 (2016), No. 4, pp. 778-785, ISSN 1213-2489.
- [8] Martinec, T., Mlýnek, J., Petrů, M.: *Calculation of the robot trajectory for the optimum directional orientation of fibre placement in the manufacture of composite profile frames*. Robotics and Computer-Integrated Manufacturing, Volume 25 (2015), pp. 42-54. ISSN: 0736-5845, DOI: 10.1016/j.rcim.2015.02.004
- [9] Mlýnek, J., Srb, R.: *The Process of Aluminium Moulds Warming in the Car Industry*. Journal of Automation, Mobile Robotics & Intelligent Systems (JAMRIS), Volume 6, No. (2012), Warsaw, Poland, pp. 47-50, ISSN 1897-8649.

- [10] Mlýnek, J.: *Informační bezpečnost*. Pokroky mat. fyz. a astronom. 51 (2006), No. 2, 89-98. CS-ISSN-0032-2423.
- [11] Křížek, M., Mlýnek, J.: *On the Preconditioned Biconjugate Gradients for Solution of Linear Complex Equations Arising from Finite Elements*. Banach Center publ. 29 (1994), pp.195 – 205.
- [12] Preiningerová, V., Mlýnek, J., Kahoun, V.: *Výpočet neustálených tepelných dějů v olejových transformátorech metodou náhradní tepelné sítě (Calculation of Non-stationary Heat Processes in Oil Transformers by Use of an Artificial Heat Network Method)*. Elektrotechnický obzor, 80 (1991), 199 – 209.
- [13] Mlýnek, J.: *Jaké místo zaujmají numerické metody v současné vědě?* Elektrotechnický obzor, 79 (1990), pp. 167 – 168.

KAPITOLY V KNIHÁCH

- [14] Mlýnek, J.: *Popis úlohy vedení tepla ve skořeponové formě*, str. 111 – 112.
Mlýnek, J., Srb, R.: *Model intenzity záření ve 3D*, str. 112 – 124.
Mlýnek, J., Srb, R.: Optimalizace pole intenzity záření prostřednictvím genetických algoritmů, 133- 149.
V knize kolektivu autorů: *Ohřevy radiací, teorie a průmyslová praxe*. Technická univerzita v Liberci, 2012, 162 stran, ISBN 978-80-7372-884-7.
- [15] Mlýnek, J., Petrů, M., Martinec, T.: Mathematical Modelling and Calculation of Suitable Robot Trajectory in Composite Frame Manufacturing, str. 183-210.
V knize kolektivu autorů: *Recent Trends in Fibrous Material Science*. Technical University of Liberec, Faculty of Textile Engineering, Liberec, September 2019, Editors: Mishra, R., Militky, J., Reviewer: Behera, B., K., ISBN: 978-80-7494-493-2.

ČLÁNKY V RECENZOVANÝCH SBORNÍCÍCH KONFERENCÍ

- [16] Mlýnek, J., Petrů, M., Martinec, T.: *Design of Composite Frames Used in Agricultural Machinery*. Proceedings of the 7th International Conference on Trends in Agricultural Engineering 2019, Herák, D. (Ed.), Czech University of Life Sciences Prague, Prague, September 2019, pp. 396-401, ISBN: 978-80-213-2953-9.
- [17] Mlýnek, J., Petrů, M., Martinec, T.: *Optimization of Industrial Robot Trajectory in Composite Production*. Proceedings of the 18th International Conference Mechatronics-Mechatronika 2018, Marga, D., Stefek, A., Brezina, T. (Eds.), Faculty of Mechanical Engineering, Brno University of Technology, December 2018, pp. 270-275, ISBN: 978-80-214-5543-6 (CD).

- [18] Mlýnek, J., Knobloch, R.: *The Model of Non-stationary Heat Conduction in a Metal Mould*. Proceedings of the 12th International Conference Mechatronics 2017, Recent Technological and Scientific Advances, Jablonski, R., Brezina, T. (Eds.), Faculty of Mechanical Engineering, Brno University of Technology, Brno, Czech Republic, September 2017, Springer, pp. 364-371, ISBN 978-3-319-65959-6, DOI: 10.1007/978-3-319-65960-2.
- [19] Mlýnek, J., Martinec, T., Petrů, M.: *Calculation of industrial robot trajectory in frame composite production*. Proceedings of the conference Programs and Algorithms of Numerical Mathematics 18, Institute of Mathematics of Academy of Science, Janov nad Nisou, Prague 2017, pp. 81-88. ISBN 978-80-85823-67-7.
- [20] Knobloch, R., Mlýnek, J., Srb, R.: *Convergence Rate of the Modified Differential Evolution Algorithm*. Proceedings of the 43rd International Conference Applications of Mathematics in Engineering and Economics 2017, published by the American Institute of Physics, Conf. Proc 1910, 030005-1-030005-8, <https://doi.org/10.1063/1.5013964>, published by AIP Publishing. 978-0-7354-1602-4.
- [21] Knobloch, R., Mlýnek, J., Srb, R.: *Improving convergence properties of a differential evolution algorithm*. Proceedings of the 42th International Conference Applications of Mathematics in Engineering and Economics (AMEE), Technical University Sofia, Sozopol, Bulgaria, 8-13 June 2016. ISBN: 978-0-7354-1337-5, DOI: 10.1063/1.4968451.
- [22] Petrů, M., Mlýnek, J., Martinec, T.: *Numerical model describing optimization of fibres winding process on open and closed frame*. Proc. Of the 5th Internat. Conf. on Mathematical Modelling in Physical Sciences, Athens, Greece, May 2016, Journal of Physics: Conference Series, Volume 738, Issue 1, 5 September 2016, Article number 012094, ISSN: 17426588, DOI: 10.1088/1742-6596/738/1/012094.
- [23] Martinec, T., Mlýnek, J., Petrů, M.: *Composite production and industrial robot trajectory calculation*. Proc. of the 12th Internat. Conf. on the theory of Machines and Mechanisms, September 2016, Liberec, Czech Republic, Mechanisms and Machine Science, Vol. 44, 2017, pp. 271-276. ISBN: 978-331944086-6, DOI: 10.1007/978-3-319-44087-3_35.
- [24] Mlýnek, J., Knobloch, R., Srb, R.: *Optimization of a Heat Radiation Intensity and Temperature Field on the Mould Surface*. Proc. of the 30th European Conference on Modelling and Simulation, pp. 425-431, May31-June03 2016, Regensburg, Germany, ISBN 987-0-9932440-2-5, DOI: 10.7148/2016-0425.
- [25] Mlýnek, J., Knobloch, R., Srb, R.: *Temperature Field Optimization on the Mould Surface*. Proceedings of the 11th International Conference Mechatronics 2015, Advanced Mechatronics Solutions, Jablonski, R., Brezina, T. (Eds.), Faculty of Mechatronics, Warsaw University of Technology, Warsaw, September 2015, Springer, pp. 225-230, ISBN 978-3-319-23921-7, DOI: 10.1007/978-3-319-23923-1_34.
- [26] Mlýnek, J., Knobloch, R., Srb, R.: *Use of differential evolution algorithm for the optimization of the heat radiation intensity*. Proceedings of the international

Conference Applications of Mathematics 2015, Institute of Mathematics, Czech Academy of Science, Prague, 18-21 November 2015, pp. 148-157. ISBN: 978-80-85823-65-3.

- [27] Mlýnek, J., Knobloch, R., Srb, R.: *Mathematical Model of the Metal Mould Surface Temperature Optimization*. Proceedings of the 41th International Conference Applications of Mathematics in Engineering and Economics (AMEE), Technical University Sofia, Sozopol, Bulgaria, 8-13 June 2015. ISBN: 978-0-7354-1337-5, DOI: 10.1063/1.4936696.
- [28] Mlýnek, J., Srb, R., Knobloch, R.: *The use of graphics card and nVidiaCUDA architecture in the optimization of the heat radiation intensity*. Proceedings of the conference Programs and Algorithms of Numerical Mathematics 17, , Institute of Mathematics of Academy of Science, Dolní Maxov, Prague 2015, pp. 150-155. ISBN 978-80-85823-64-6.
- [29] Mlýnek, J., Martinec, T.: *Mathematical Model of Composite Manufacture and Calculation of Robot Trajectory*. Proc. of the 16th Internat. Conf. Mechatronics – Mechatronika 2014, Faculty of Mechanical Engineering, Brno University of Technology, Brno, Czech Republic, 3-5 December, 2014, pp. 345-351, ISBN 978-80-214-4817-9.
- [30] Mlýnek, J., Srb, R.: *Differential Evolution and Heat Radiation Intensity Optimization*. Proc. of the 2014 International Conference on Mathematics and Computers in Sciences and Industry (MCSI 2014), Technical University Sofia, Varna, Bulgaria, 13-15 September, 2014, pp. 135-138, ISBN 978-1-4799 -4744-7.
- [31] Knobloch, R., Mlýnek, J.: *The Biconjugate Gradient Method in the Numerical Solution of Partial Differential Equations*. Proc. of the Internat. Conference Presentation of Mathematics'14 (ICPM'14), Technical University of Liberec, Liberec, Czech Republic, 25-26 September, 2014, pp. 65-69, ISBN 978-80-7494-108-5.
- [32] Mlýnek, J., Martinec, T., Srb, R.: *Heating of Mould in Manufacture of Artificial Leathers in Automotive Industry*. Proc. of the 10th Internat. Conf. Mechatronics 2013, Faculty of Mechanical Engineering, Brno University of Technology, Brno, Czech Republic, Springer, October 2013, pp. 119-126, ISBN 978-3-319-02293-2.
- [33] Mlýnek, J., Srb, R.: *Parallel programming and optimization of heat radiation intensity*. Proc. of the Internat. Conf. Applications of Mathematics 2013, Institute of Mathematics, Academy of Sciences of CR, Prague, May 2013, pp. 150-157, ISBN 978-80-85823-61-5.
- [34] Mlýnek, J., Srb, R.: *The optimization of heat radiation intensity*. Proc. Of the Internat. Conf. Programs and Algorithms of Numerical Mathematics 16 (PANM16), Institute of Mathematics, Academy of Sciences of CR, Horni Maxov, June 2012, pp. 142-148, ISBN 978-80-85823-62-2.
- [35] Královcová, J., Lukšan, L., Mlýnek, J.: *Heat exposure optimization applied to moulding process in the automotive industry*. Proc. of the Internat. Conf. Programs and Algorithms of Numerical Mathematics 16 (PANM16), Institute of Mathematics, Academy of Sciences of CR, Horni Maxov, June 2012, pp. 118-1123, ISBN 978-80-85823-62-2.
- [36] Mlýnek, J., Srb, R.: *The process of an optimized heat radiation intensity calculation on*

a mould surface. Proc. Of the 26th European Conference on Modelling and Simulation, pp. 461-467, May 2012, Koblenz, Germany, ISBN 978-0-9564944-4-3.

- [37] Mlýnek, J., Srb, R.: *Artificial leather Production in the Automotive Industry.* Proc. of the 9th Internat. Conference ELEKTRO 2012, Žilina – Rajecké Teplice, Slovakia, pp. 518-522, ISBN 978-1-4673-1178-6.
- [38] Mlýnek, J.: *Determination of Critical Information of a Business Company.* Proc. of the Internat. Conf. Presentation of Mathematics 2012, Liberec, June 2012, pp. 60-64, ISBN 978-80-7372-868-7.
- [39] Mlýnek, J., Srb, R.: *A Model of a Heat Radiation on a Mould Surface in the Car Industry.* Proc. of the Internat. Conf. on Electrical, Computer, Electronics and Communication Engineering 2011, WASET, Paris, France, November 2011, 6 pages, pISSN 2010-376X.
- [40] Srb, R., Mlýnek, J.: *Užití systému MATLAB při optimalizaci intenzity tepelného záření na povrchu formy.* Proc. of the Internat. Conf. Technical Computing Prague 2011, HUMUSOFT, Prague, Czech Republic, November 2011, 16 pages, ISBN 978-80-7080-794-1.
- [41] Mlýnek, J., Srb, R.: *Optimization of a Heat Radiation Intensity on a Mould Surface in the Car Industry.* Proc. of the 9th Internat. Conf. Mechatronics 2011, Faculty of Mechatronics, Warsaw University of Technology, Warsaw, Poland, Springer-Verlag Berlin, September 2011, 10 pages, ISBN 978-3-642-23243-5.
- [42] Mlýnek, J., Srb, R.: *Use of Parallel Programming during Optimization of Heat Radiation Intensity on a Mould Surface.* Proc. of the Internat. Conf. Presentation of Mathematics 2011, Liberec, October 2011, 101 – 106. ISBN 978-80-7372-773-4.
- [43] Srb, R., Mlýnek, J.: *Warming of Mould by Infra Heaters in the Car Industry.* Proc. of the 10th Internat. Workshop of Electronics, Control, Measurement and Signals, Faculty of Mechatronics, Technical University of Liberec, Czech Republic, June 2011, 5 pages, ISBN: 978-1-61284-395-7.
- [44] Mlýnek, J., Srb, R.: *Výpočet intenzity tepelného záření na povrchu formy v automobilovém průmyslu.* Proc. of the 12th Internat. Conf. Electric Power Engineering, Kouty nad Desnou, Czech Republic, May 2011, 4 pages, ISBN 978-80-248-2390-5.
- [45] Mlýnek, J.: *Klasifikace a zabezpečení informací.* Proc. of the 13th Internat. Conf. Internet, Competitiveness and Organizational Security, Thomas Bata University in Zlín, Zlín, Czech Republic, March 2011, 6 pages, ISBN 978-80-7454-012-7.
- [46] Mlýnek, J.: *The Use of the Box Method for the Solution of a Heat Conduction Problem in Electric Machines.* Proc. of the Internat. Conf. Presentation of Mathematics 2010, Liberec, October 2010, pp. 63 – 70, ISBN 978-80-7372-724-6.
- [47] Mlýnek, J.: *Critical Information and Business Continuity.* Proc. of the Internat. Conf. Internet, Competitiveness and Organisational security, Faculty of Applied Informatics, Tomas Bata University in Zlín, Zlín, Czech Republic, March 2010, pp. 282 – 286. ISBN 978-83-61645-16-0.
- [48] Mlýnek, J.: *Užití metody bikonjugovaných gradientů v komplexním oboru (Use of the Biconjugate Gradient Method in Complex Area).* Konference Matematika na

vysokých školách (Conference Mathematics at Universities), JČMF (Union of Czech Mathematicians and Physicists) in Prague and ČVUT v Prague, Herbertov, August 2009, pp. 42 – 45. ISBN 978-80-7372-578-5.

- [49] Mlýnek, J.: *Evaluation and Availability of Electronic Information*. Proc. of the Internat. Conf. Presentation of Mathematics 2009, Liberec, September 2009, 59 – 65. ISBN 978-80-7372-578-5.
- [50] Mlýnek, J.: *The Box Method and Some Error Estimation*. Proc. of the Internat. Conf. Programs and Algorithms of Numerical Mathematics 14, Institute of Mathematics, Academy of Sciences of CR, Horní Maxov, June 2008, pp. 150 – 156. ISBN 978-80-85823-55-4.
- [51] Mlýnek, J.: *Business Continuity Planning and Information Evaluation*. Proc. of the 26th Internat. Conf. Mathematical Methods in Economics 2008, Faculty of Economics, Technical University of Liberec, September 2008, pp. 363 – 368. ISBN 978-80-7372-387-3.
- [52] Mlýnek, J.: *Variational Formulation of the Heat Conduction Problem*. Proc. of the Internat. Conf. Presentation of Mathematics 2008, Liberec, September 2008, pp. 45 – 50. ISBN 978-80-7372-434-4.
- [53] Mlýnek, J.: *Výpočet oteplení elektrického stroje*. Konference matematika na vysokých školách, JČMF (Union of Czech Mathematicians and Physicists) in Prague and ČVUT in Prague, Herbertov, September 2007, pp. 71 – 73. ISBN 978-80-01-03773-7.
- [54] Mlýnek, J.: *Box Method Application in Electrical Engineering*. Proc. of the Internat. Conf. Presentation of Mathematics 2007, Liberec, September 2007, pp. 63 – 68. ISBN 978-80-7372-252-4.
- [55] Mlýnek, J.: *Ocenění a zabezpečení informací*. International Conference Liberec Economic Forum, Faculty of Economics TUL, Liberec, 2007, pp. 559 – 564. ISBN 978-80-7372-244-9.
- [56] Mlýnek, J.: *The Application of the Thermal Balance Method for Computation of Warming in Electric Machines*. Proc. of the Internat. Conf. Programs and Algorithms of Numerical Mathematics 13, Institute of Mathematics, Academy of Sciences of CR, Prague, May 2006, pp. 196 – 201. ISBN 80-85823-54-3.
- [57] Mlýnek, J.: *Method of Compensatory Thermal Networks of Electric Machines*. Proc. of the Internat. Conf. Presentation of Mathematics 2006, Liberec, September 2006, pp. 83 – 88. ISBN 80-7372-153-8.
- [58] Mlýnek, J.: *Securing of Business Information*. Proc. of the 23rd Internat. Conf. Mathematical Methods in Economics 2005, Gaudamus, University of Hradec Králové, September 2005, pp. 273 – 278. ISBN 80-7041-535-5.
- [59] Mlýnek, J.: *Evaluation of Business Information*. Proc. of the Internat. Conf. Presentation of Mathematics 2005, Liberec, September 2005, pp. 293 – 300. ISBN 80-7372-055-8.
- [60] Mlýnek, J.: *Rízení bezpečnosti informačního systému obchodní společnosti*. Proc. of the Conf. Trendy v oblasti bezpečnosti IS, Institute for International Research, Prague, October 2002, 10 pages.
- [61] Mlýnek, J.: *Klasifikace informací a vlastníci informací v obchodní organizaci*. Proc of the

5th Conf. Bezpečnost informací ve finančním sektoru (Information security in financial sector), New Management Conferences, Žilina, March 2002, 46 – 51. ISBN 80-85655-20-9.

- [62] Křížek, M., Mlýnek, J.: *On the Biconjugate Gradients Method for Solution of the System of Linear Algebraic Equations with Regular Sparse Matrix*. Proc. of the Conf. Programs and Algorithms of Numerical Mathematics 5, Institute of Mathematics, Academy of Sciences of the Czechoslovakia, Prague, 1990, pp. 76 – 94.

VÝZNAMNÉ TECHNICKÉ VÝZKUMNÉ ZPRÁVY

- [63] Mlýnek, J., Preiningerová, V.: *Návod na použití programu pro řešení neustálených tepelných dějů v olejových transformátorech*. Výzkumná zpráva, Výzkumný ústav silnoproudé elektrotechniky, Praha-Běchovice, 1990, 79 stran . (Ize předložit)
- [64] Preiningerová, V., Mlýnek, J.: *Řešení neustálených tepelných dějů v olejových transformátorech pomocí náhradní tepelné sítě – jednoduchá a zpřesněná verze*. Výzkumná zpráva, Výzkumný ústav silnoproudé elektrotechniky, Praha-Běchovice, 1989, 76 stran. (Ize předložit)
- [65] Mlýnek, J., Preiningerová, V.: *Metoda a program pro výpočet rozložení ztrát a oteplení ve stínění transformátoru*. Výzkumná zpráva, Výzkumný ústav silnoproudé elektrotechniky, Praha-Běchovice, 1988, 39 stran. (Ize předložit)
- [66] Mlýnek, J., Preiningerová, V.: *Metoda a program pro výpočet oteplení hliníkového stínění a magnetického stínění transformátoru*. Výzkumná zpráva, Výzkumný ústav silnoproudé elektrotechniky, Praha-Běchovice, 1985, 69stran. (Ize předložit)