

List of Publications

by Vladimir M. Veliov

Edited Books

170. J. Haunschmied, R. Kovacevic, W. Semmler, V.M. Veliov, Eds. *Dynamic economic problems with regime switches*. Springer series *Dynamic Modeling and Econometrics in Economics and Finance*, vol. 25, 2021.
169. J. Haunschmied, V.M. Veliov, and S. Wrzaczek, Eds. *Dynamic Games in Economics*. Springer series *Dynamic Modeling and Econometrics in Economics and Finance*, vol. 16, 2014.
168. E. Moser, W. Semmler, G. Tragler, and V.M. Veliov, Eds. *Dynamic Optimization in Environmental Economics*. Springer series *Dynamic Modeling and Econometrics in Economics and Finance*, vol. 15, 2014.
167. R.F. Hartl, U. Leopold-Wildburger, M. Rauner, G. Sorger, G. Tragler, V.M. Veliov, Eds.: *Special Issue in Honor of Gustav Feichtinger; in Buchreihe "Central European Journal of Operations Research"*, Buchreihen-Herausgeber: U. Leopold-Wildburger, R. Vetschera; Springer Verlag, 2010.
166. A.B. Kurzhanski and V.M. Veliov, Eds. *Modeling Techniques for Uncertain Systems*. Progress in Systems and Control Theory, **18**, Birghäuser, Boston, 1994.
165. A.B. Kurzhanski and V.M. Veliov, Eds., *Set-Valued Analysis and Differential Inclusions*. Progress in Systems and Control Theory, **16**, Birghäuser, Boston, 1993.

Journal Publications

164. A.D. Corella, N. Jork, and V.N. Veliov. On the solution stability of parabolic optimal control problems. To appear in *Applied Mathematics and Optimization*.
163. A.D. Corella, N. Jork, and V.N. Veliov. Solution stability of parabolic optimal control problems with fixed state-distribution of the controls To appear in *Serdica Math. Journal*.

162. N.P. Osmolovskii, V.M. Veliov. On the strong subregularity of the optimality mapping in an optimal control problem with pointwise inequality control constraints. To appear in *Applied Mathematics and Optimization*.
161. A.D. Corella, N. Jork, and V.N. Veliov. Stability in affine optimal control problems constrained by semilinear elliptic partial differential equations. *ESAIM: Control, Optimization and Calculus of Variations*, **28**(79), 2022.
160. G. Angelov, R. Kovacevic, N.I. Stilianakis, and V.M. Veliov. Optimal vaccination strategies using a distributed epidemiological model applied to COVID-19. *Central European Journal of Operations Research*, September, 2022.
<https://doi.org/10.1007/s10100-022-00819-z>
159. G. Angelov, A. Domnguez Corella, and V.M. Veliov. On the accuracy of the model predictive control method. *SIAM Journal of Control and Optimization*, **60**(2):221–245, 2022.
158. N.P. Osmolovskii, V.M. Veliov. On the Strong Metric Subregularity in Mathematical Programming. To appear in *Control and Cybernetics*, 2022. Available as Research Report 2021-04, ORCOS, TU Wien, 2021.
157. R. Kovacevic, N.I. Stilianakis, V. M. Veliov. A Distributed Optimal Control Epidemiological Model Applied to COVID-19 Pandemic. *SIAM J. Contr. Optim.*, **60**:221–245, 2022. <https://doi.org/10.1137/20M1373840>
156. N.P. Osmolovskii and V.N. Veliov. On the strong subregularity of the optimality mapping in mathematical programming and calculus of variations. *Journal of Mathematical Analysis and Applications*, **500**(1), August 1, 2021, doi.org/10.1016/j.jmaa.2021.125077.
155. A.D. Corella, M. Quincampoix, and V.M. Veliov. Strong bi-metric regularity in an optimal control problems. *Pure and Applied Functional Analysis*, **9**(6):1119–1137, 2021. Available as Research Report 2020-07, ORCOS, TU Wien, 2020.
154. A.L. Dontchev, I.V. Kolmanovsky, D. Liao-McPherson, M.M. Nicotra, and V.M. Veliov. Sensitivity-based warmstarting for constrained model predictive control. *IEEE Transactions on Automatic Control*, **65**(10):4288–4294, 2020.
DOI: 10.1109/TAC.2019.2954359.
153. M. Quincampoix, T. Scarinci, V.M. Veliov. On the metric regularity of affine optimal control problems. *Journal of Convex Analysis*, **27**(2), 2020.

152. S.M. Aseev, V.M. Veliov. Another view of the maximum principle for infinite-horizon optimal control problems in economics. *Russian Math. Surveys*, **74**(6):963–1011, 2019.
151. N.P. Osmolovskii, V.M. Veliov. Metric sub-regularity in optimal control of affine problems with free end state. *ESAIM: Control, Optimisation and Calculus of Variations*, **26**, No 47, 2020. DOI: <https://doi.org/10.1051/cocv/2019046> . Available as *Research Report* 2019-04, ORCOS, TU Wien, 2019.
150. A. L. Dontchev, I. V. Kolmanovsky, M. I. Krastanov, V. M. Veliov, and P. T. Vuong. Approximating optimal finite horizon feedback by model predictive control. *Systems&Control Letter*, **139**, 104666, 2020. Available as *Research Report* 2018-07, ORCOS, TU Wien, 2018.
149. E. Augeraud-Veron, R. Boucekkine, V.M. Veliov. Distributed optimal control models in environmental economics: a review. *Mathematical Modelling of Natural Phenomena*, **14**, paper No 106, 2019.
148. A. L. Dontchev, M. I. Krastanov, and V. M. Veliov. On the existence of Lipschitz continuous optimal feedback control. *Vietnam Journal of Mathematic*, **47**(3):579–597, 2019. <https://doi.org/10.1007/s10013-019-00347-5>.
147. A. L. Dontchev, I. V. Kolmanovsky, M. I. Krastanov, M. M. Nicotra, and V. M. Veliov. Lipschitz Stability in Discretized Optimal Control. *SIAM J. Contr. Optim.*, **57**(1):468–489, 2019.
146. V.M. Veliov and P.T. Vuong. Gradient methods on strongly convex feasible sets and optimal control of affine systems. *Applied Mathematics and Optimization*, 2018. DOI 10.1007/s00245-018-9528-3.
145. J. Preininger, T. Scarinci, and V.M. Veliov. Metric regularity properties in bang-bang type linear-quadratic optimal control problems. *Set-Valued and Variational Analysis*, **27**:381–404, 2019. DOI 10.1007/s11228-018-0488-1.
144. T. Scarinci and V.M. Veliov. Higher-Order Numerical Scheme for Linear Quadratic Problems with Bang-Bang Controls. *Computational Optimization and Applications*, **69**(2):403–422, 2018. DOI 10.1007/s10589-017-9948-z, 2017.
143. P. Grandits, R. M. Kovacevic, V. M. Veliov. Optimal control and the value of information for a stochastic epidemiological SIS-Model. (Submitted.) *Research Report* 2016-14, ORCOS, TU Wien, 2016.

142. A. Belyakov, A. Davydov, and V.M. Veliov. Optimal cyclic harvesting of a renewable resource. *Dokl. Math.*, **96**(2):472–474, 2017 (English version of [137]). <https://doi.org/10.1134/S1064562417050180>
141. N.P. Osmolovskii and V.M. Veliov. Optimal control of age-structured systems with mixed state-control constraints. *J. Math. Analysis and Appl.*, **455**:396–421, 2017.
140. R. Cibulka, A. L. Dontchev, M. Krastanov, and V. Veliov. Metrically Regular Differential Generalized Equations. *SIAM J. Control Optim.*, **56**(1):316–342, 2018.
139. A. Pietrus, T. Scarinci, and V.M. Veliov. High order discrete approximations to Mayer’s problems for linear systems. *SIAM J. Control Optim.*, **56**(1):102–119, 2018.
138. S. M. Aseev, M. I. Krastanov and V. M. Veliov Optimality conditions for discrete-time optimal control on infinite horizon. *Pure and Applied Functional Analysis*, **2**(3):395–409, 2017.
137. A. Belyakov, A. Davydov, and V.M. Veliov. Optimal cyclic harvesting of a renewable resource. *Proceedings of the USSR Academy of Sciences*, **476**(4):371–374, 2017 (in Russian).
136. R. Cibulka, A. L. Dontchev, J. Preininger, T. Roubal and V. Veliov. Kantorovich-type Theorems for Generalized Equations. *Journal of Convex Analysis*, **25**(2), 459–486, 2018.
135. R. Cibulka, A.L. Dontchev and V.M. Veliov. Lyusternik- Graves theorems for the sum of a Lipschitz function and a set-valued mapping. *SIAM J. Control Optim.*, **54**(6):3273–3296, 2016.
134. V.M. Veliov and A. Widder. Modelling and estimation of infectious diseases in a population with heterogeneous dynamic immunity. *Journal of Biological Dynamics*, **10**(1):457–476, 2016. (DOI: 10.1080/17513758.2016.1221474)
133. V.M. Veliov. Numerical Approximations in Optimal Control of a Class of Heterogeneous Systems. *Computers and Mathematics with Applications*, **70**(11): 2652–2660, 2015.
132. Ts. Tsachev, V.M. Veliov, and A. Widder. Set-membership estimations for the evolution of infectious diseases in heterogeneous populations. *J. Math. Biology*, **74**:1081–1106, 2017, DOI 10.1007/s00285-016-1050-0.

131. V.M. Veliov and A. Widder. Aggregation and asymptotic analysis of an SI-epidemic model for heterogeneous populations. *Mathematical Medicine and Biology*, **32**:1–24, 2015.
130. B. Skritek and V.M. Veliov. On the infinite-horizon optimal control of age-structured systems. *Journal of Optimization Theory and Appl.*, **167**:243–271, 2015.
129. S. Aseev and V.M. Veliov. Maximum principle for infinite-horizon optimal control problems under weak regularity assumptions. *Trudy Inst. Mat. i Mekh. UrO RAN*, **20**(3):41–57, 2014.
 Proceedings of the Steklov Institute of Mathematics, 2015, Vol. 291, Suppl. 1, pp. S22S39. Pleiades Publishing, Ltd., 2015.
128. A. Belyakov, A. Davydov, and V.M. Veliov. Optimal cyclic exploitation of renewable resources. *Journal of Dynamical and Control Systems*, **21**:475–494, 2015.
127. A. Belyakov, J.L. Haunschmied, and V.M. Veliov. Heterogeneous consumption in OLG model with horizontal innovations. *Portuguese Economic Journal*, **13**(3):167–193, 2014.
126. A. Davydov and V.M. Veliov. Heterogeneity and periodicity in dynamic optimization problems. (In Russian, English summary.) *Vestnik RFFI*, **81**(1):34–38, 2014.
125. A. Belyakov and V.M. Veliov. Constant versus periodic fishing: age structured optimal control approach. *Mathematical Modelling of Natural Phenomena*, **9**(4):20–38, 2014.
124. B. Skritek, T. Tsachev, and V.M. Veliov. Optimality conditions and the Hamiltonian for a distributed optimal control problem on controlled domain. *Applied Mathematics and Optimization*, **70**(1):141–164, 2014.
123. M. Quincampoix and V.M. Veliov. Metric regularity and stability of optimal control problems for linear systems. *SIAM J. Contr. Optim.*, **51**(5):4118–4137, 2013.
122. C. Simon, B. Skritek, and V.M. Veliov. Optimal immigration age-patterns in populations of fixed size. *J. Math. Anal. and Appl.*, **405**(1):71–89, 2013.
121. S. Aseev and V.M. Veliov. Needle Variations in Infinite-Horizon Optimal Control. In *Variational and Optimal Control Problems on Unbounded Domains, Contemporary Mathematics*, **619**:1–17, 2014.
120. A.L. Dontchev, M. Krastanov, R.T. Rockafellar, and V.M. Veliov. An Euler-Newton continuation method for tracking solution trajectories of parametric variational inequalities. *SIAM J. Control Optim.*, **51**(3):1823–1840, 2013.

119. T. Bréchet, C. Camacho, and V.M. Veliov. Model predictive control, the economy, and the issue of global warming. *Annals of Operations Research*, **220**:25–48, 2014. (DOI 10.1007/s10479-011-0881-8).
118. T. Bréche, T. Tsachev and V.M. Veliov. Markets for Emission Permits with Free Endowment: a Vintage Capital Analysis. *Optimal Control, Applications and Methods*, **33**(2):214–231, 2012 (DOI: 10.1002/oca.988).
117. A. Prskawetz, T. Tsachev and V.M. Veliov. Optimal education in an age-structured model under changing labor demand and supply. *Macroeconomic Dynamics*, **16**(2):159–183, 2012.
116. S. Aseev and V.M. Veliov. Maximum Principle for Problems with Dominating Discount. *Dynamics of Continuous, Discrete and Impulsive Systems, Series B*, **19**(1-2b):43–63, 2012.
115. G. Feichtinger, A. Krasovskii, A. Fuernkranz-Prskawetz, and V.M. Veliov. Optimal age-specific election policies in two-level organizations with fixed size. *Central European Journal of Operations Research*, **20**:649–677, 2012.
114. A. Belyakov, T. Tsachev and V.M. Veliov. Optimal control of heterogeneous systems with endogenous domain of heterogeneity. *Applied Mathematics and Optimization*, **64**:287–311, 2011.
113. F. J. Aragón Artacho, A. L. Dontchev, M. Gaydu, M. H. Geoffroy and V. M. Veliov. Metric regularity for Newton’s iteration. *SIAM J. Control Optim.*, **49**:339–362, 2011.
112. H. Dawid, ..., V.M. Veliov, F. Wirl. Gustav Feichtinger celebrates his 70th birthday. *Central European Journal of Operations Research*, **18**:437–451, 2010.
111. V.M. Veliov. On the Relationship Between Continuous- and Discrete-Time Control Systems. *Central European Journal of Operations Research*, **18**:511–523, 2010.
110. G. Feichtinger, A. Novak, and V.M. Veliov. Applying the Leitmann-Stalford Sufficient Conditions to Maximization Control Problems with Non-Concave Hamiltonian. *Applied Mathematics and Computation*, **217**:1017–1022, 2010.
109. A.L Dontchev and V.M. Veliov. Metric regularity under approximations. *Control and Cybernetics*, **38**(4):1283–1303 , 2009.
108. H. Dawid, G. Feichtinger, J.R. Goldstein, and V.M. Veliov. Keeping a Learned Society Young. *Demographic Research*, **20**(22):541–558, 2009.

107. A. Pietrus and V.M. Veliov. On the Discretization of Switched Linear Systems. *Systems & Control Letters*, **58**:395–399, 2009.
106. V.M. Veliov. Optimal Control of Heterogeneous Systems: Basic Theory. *J. Math. Anal. Appl.*, **346**:227–242, 2008.
105. C. Saglam and V.M. Veliov. Role of Endogenous Vintage Specific Depreciation on the Optimal Behavior of Firms. *International Journal of Economic Theory*, **4**(3):381–410, 2008.
104. E. Gasca-Leyva, J.M. Hernandez, and V.M. Veliov. Optimal Harvesting Time in a Size-Heterogeneous Population. *Ecological Modelling*, **210**(1–2):161–168, 2008.
103. G. Feichtinger, R.F. Hartl, P.M. Kort, and V.M. Veliov. Financially constrained capital investments: the effects of disembodied and embodied technological progress. *Journal of Mathematical Economics*, **44**:459–483, 2008.
102. G. Feichtinger and V.M. Veliov. On a Distributed Control Problem Arising in Dynamic Optimization of a Fixed-Size Population. *SIAM J. Optim.*, **18**(3):980–1003, 2007.
101. A. Prskawetz and V.M. Veliov. Age specific dynamic labor demand and human capital investment. *Journal of Economic Dynamics and Control*, **31**:3741–3777, 2007.
100. Almeder, C., Feichtinger, G., Sanderson, W., and Veliov, V. Prevention and medication of HIV/AIDS: The case of Botswana. *Central European J. Oper. Res.*, **15**(1):47–61, 2007.
99. J. Caulkins, G. Feichtinger, G. Tragler, and V.M. Veliov. Cycles of violence: a dynamic control analysis. *European J. Oper. Res.*, **181**(1):350–361, 2007.
98. G. Feichtinger, R.F. Hartl, P.M. Kort, and V.M. Veliov. Anticipation effects of technological progress on capital accumulation: a vintage capital approach. *J. Econom. Theory*, **126**:143–164, 2006.
97. G. Feichtinger, R.F. Hartl, P.M. Kort, and V.M. Veliov. Capital accumulation under technological progress and learning: a vintage capital approach. *European J. Oper. Res.*, **172**(1):293–310, 2006.
96. V.M. Veliov. Error analysis of discrete approximations to bang-bang optimal control problems: the linear case. *Control and Cybernetics*, **34**(3):967–982, 2005.

95. G. Feichtinger, R.F. Hartl, P.M. Kort, and V.M. Veliov. Environmental policy, the Porter hypothesis and the composition of capital. *Journal of Environmental Economics and Management*, **50**(2):434–446, 2005.
94. V.M. Veliov. On the effect of population heterogeneity on dynamics of epidemic diseases. *Journal of Mathematical Biology*, **51**:123–143, 2005.
93. M. Krastanov and V.M. Veliov. On the controllability of switching linear systems. *Automatica*, **41**(4):663–668, 2005.
92. M. Quincampoix and V.M. Veliov. Optimal control of uncertain systems with incomplete information for the disturbances. *SIAM J. Contr. Optim.*, **43**(4):1373–1399, 2005.
91. G. Feichtinger, A. Prskawetz, and V.M. Veliov. Age-structured optimal control in population economics. *Theoretical Population Biology*, **65**:373–387, 2004.
90. G. Feichtinger, Ts. Tsachev, and V.M. Veliov. Maximum principle for age and duration structured systems: a tool for optimal prevention and treatment of HIV. *Mathematical Population Studies*, **11**(1):3–28, 2004.
89. V.M. Veliov. Newton’s method for problems of optimal control of heterogeneous systems. *Optimization Methods and Software*, **18**(6):689–703, 2003.
88. G. Feichtinger, G. Tragler, and V.M. Veliov. Optimality conditions for age-structured control systems. *J. Math. Anal. Appl.*, **288**(1):47–68, 2003.
87. M. Quincampoix and V.M. Veliov. Solution tubes to differential inclusions within a collection of sets. *Control and Cybernetics*, **31**(3), 2002.
86. M. Quincampoix and V.M. Veliov. Optimal control in presence of unobservable uncertainties. *Comptes Rendus de l’Academie Bulgare des Sciences*, **55**(8):11–16, 2002.
85. R. Moitie, M. Quincampoix, and V.M. Veliov. Optimal control of discrete-time uncertain systems with imperfect measurement. *IEEE Trans. Automat. Control*, **47**(11):1909–1914, 2002.
84. A.L. Dontchev, W.W. Hager, and V.M. Veliov. Second-order Runge-Kutta approximations in control constrained optimal control, *SIAM J. Numerical Anal.*, **38**(1):202–226, 2000.
83. A.L. Dontchev, M.P. Polis, and V.M. Veliov. On the effect of neglecting sensor dynamics in parameter identification problems. *SIAM J. Control and Optim.*, **38**(4):1309–1321, 2000.

82. A.L. Dontchev, M.P. Polis, and V.M. Veliov. A dual method for parameter identification under deterministic uncertainty. *IEEE Trans. Automat. Control*, **45**(7):1341–1346, 2000.
81. A.L. Dontchev, W.W. Hager, K. Malanowski, and V.M. Veliov. On qualitative stability in optimization and optimal control. *Set-Valued Analysis*, **8**:31–50, 2000.
80. A.L. Dontchev, W.W. Hager, and V.M. Veliov. Uniform convergence and mesh independence of the Newton method in optimal control. *SIAM J. Control and Optim.*, **39**(3):961–980, 2000.
79. M. Quincampoix and V.M. Veliov. Open-loop viable control under uncertain initial state information. *Set-Valued Analysis*, **7**(1):55–87, 1999.
78. M. Quincampoix and V.M. Veliov. Control systems with constraints and uncertain initial conditions. *Pliska, Studia Mathematica Bulgarica*, **12**:1001–1014, 1998.
77. F. Lempio and V.M. Veliov. Discrete approximations of differential inclusions. *Mitteilungen der GAMM*, **21**(2):101–135, 1998.
76. F. Lempio and V.M. Veliov. Discrete approximations of differential inclusion. *Bayreuther Mathematische Schriften*, **54**:149–232, 1998.
75. V.M. Veliov. Stability-like properties for differential inclusions. *Set-Valued Analysis*, **5**(1):73–88, 1997.
74. V.M. Veliov. Convergence of the solution set of singularly perturbed differential inclusions. *Nonlinear Analysis, TMA*, **30**:5505–5514, 1997.
73. V.M. Veliov. Generalization of the Tikhonov theorem for singularly perturbed differential inclusions. *J. of Dynamical and Control Systems*, **3**(3):291–319, 1997.
72. V.M. Veliov. On the time-discretization of control systems. *SIAM J. Control Optim.*, **35**(5):1470–1486, 1997.
71. V.M. Veliov. On the Lipschitz continuity of the value function in optimal control. *J. Optimization Theory and Applications*, **94**(2):335–361, 1997.
70. V.M. Veliov. On the stabilization problem for differential inclusions. *Comptes Rendus de l'Academie Bulgare des Sciences*, **49**(9–10):51–54, 1996.
69. V.M. Veliov. Differential inclusions with stable subinclusions. *Nonlinear Analysis, TMA*, **23**(8):1027–1038, 1994.

68. V.M. Veliov. Computation of integrals of uncertain vector functions. *Interval Computations* (the present *Reliable Computing*), (4):143–153, 1993.
67. V.M. Veliov. Sufficient conditions for viability under imperfect measurement. *Set-Valued Analysis*, **1**:305–317, 1993.
66. B.D. Doitchinov and V.M. Veliov. Parametrisations of integrals of set-valued mappings and applications. *J. Math. Anal. and Appl.*, **179**(2):483–499, 1993.
65. M. Krastanov and V.M. Veliov. Local controllability of state constrained linear systems. *Acta Universitatis Lodzianensis, Folia Mathematica*, **5**:103–112, 1992.
64. V.M. Veliov. Second order discrete approximations to linear differential inclusions. *SIAM J. Numer. Anal.*, **29**(2):439–451, 1992.
63. D.D. Bainov, M.A. Hekimova, and V.M. Veliov. Asymptotic procedure for solving boundary value problems for singularly perturbed linear systems with impulses. *Bull. Inst. Math. Acad. Sinica*, **20**(3):211–229, 1992.
62. V.M. Veliov. Discrete Approximations to Integrals of Multivalued Mappings. *Comptes Rendus de l'Academie Bulgare des Sciences*, **42**(12):51–54, 1989.
61. V.M. Veliov. Second order discrete approximations to strongly convex differential inclusions. *Systems & Control Letters*, **13**:263–269, 1989.
60. D. Bainov, M. Hekimova, and V.M. Veliov. Asymptotic procedure for solving boundary value problems for singularly perturbed linear impulsive systems. *International J. of Theoretical Physics*, **28**(2):209–225, 1989.
59. V.M. Veliov. On the controllability of control constrained linear systems. *Mathematica Balkanica, New Series*, **2**(2–3):147–155, 1988.
58. D. Bainov, M. Hekimova, and V.M. Veliov. Boundary value problem for a singularly perturbed system of linear differential equations with impulses. *Proceedings of the Edinburgh Mathematical Society*, **31**:107–126, 1988.
57. V.M. Veliov. On the bang-bang principle for linear control systems. *Comptes Rendus de l'Academie Bulgare des Sciences*, **4**(2):31–33, 1987.
56. V.M. Veliov. On the convexity of integrals of multivalued mappings: applications in control theory. *J. on Optimization Theory and Applications*, **54**(3):541–563, 1987.

55. V.M. Veliov and A.L. Dontchev. Continuity of the family of trajectories of linear control systems with respect to singular perturbations. *Dokladi Acad. Nauk SSSR*, **293**(2):274–278, 1987. (In Russian.) English translation: *Soviet Math. Dokl.*, **35**(2):283–286, 1987.
54. V.M. Veliov and M. Krastanov. Controllability of piecewise linear systems. *System & Control Letters*, **7**: 335–341, 1986.
53. V.M. Veliov and A.L. Dontchev. Singular perturbations in differential inclusions—I. Convergence of the Trajectories. *University Annual – Appl. Math.*, **22**(4):9–21, 1986. (In Bulgarian.)
52. V.M. Veliov and A.L. Dontchev. Singular perturbations in differential inclusions—II. Continuity of the Solution Set. *University Annual – Appl. Math.*, **22**(4):23–33, 1986. (In Bulgarian.)
51. V.M. Veliov and A.L. Dontchev. Singular perturbations in differential inclusions—III. Continuity of the marginal function. *University Annual – Appl. Math.*, **22**(4):35–45, 1986. (In Bulgarian.)
50. M.G. Dmitriev and A.L. Dontchev and V.M. Veliov. A Regularized conditional gradient method applied to singularly perturbed optimal control systems. *Serdica, Bulg. Math. Publ.*, **11**:180–185, 1985.
49. A.L. Dontchev and V.M. Veliov. Singular perturbations in linear control systems with weakly coupled stable and unstable fast subsystems. *J. Math. Anal. and Appl.*, **110**(1):1–30, 1985.
48. V.M. Veliov. On the local properties of the Bellman’s function for nonlinear time-optimal control problems. *Serdica, Bulg. Math. Publ.*, **10**:68–77, 1984.
47. A.L. Dontchev and V.M. Veliov. On the behaviour of solutions of linear autonomous differential inclusions at infinity. *Comptes Rendus de l’Academie Bulgare des Sciences*, **36**(8):1021–1024, 1983.
46. A.L. Dontchev and V.M. Veliov. Singular perturbations in Mayer’s problem for linear systems. *SIAM J. Control and Optim.*, **21**(4):566–581, 1983.
45. A.L. Dontchev and V.M. Veliov. Singularly perturbed optimal control problems with fixed final state and constrained control. *Control and Cybernetics*, **11**(1–2):19–28, 1982.
44. T. Gičev and V.M. Veliov. On the effect of the control inertianess in time-optimal control problems. *Serdica, Bulg. Math. Publ.*, **5**:362–369, 1979. (In Russian.)

43. V.M. Veliov. Estimations of the influence of regular perturbations and the inertianess in linear time-optimal control problems. *Univ. Annual - Appl. Math.*, **15**(1):83–97, 1979. (In Russian.)

Papers in Books and Proceedings

42. H. Tulkens, K. Borissov, J. Eyckmans, S. Lambrecht, P. M. Picard, T. Tsachev, V. Veliov. A tribute to Thierry Brechet, an economist of the environment and of the public interest. LIDAM Discussion Paper CORE, 10, 2022.
41. A.D. Corella and V.M. Veliov. Hoelder Regularity in Bang-Bang Type Affine Optimal Control Problems. In *Large-Scale Scientific Computing*, (I. Lirkov and S. Margenov (Eds.)), Lecture Notes in Computer Science 13127, Springer, 2022. Available as Research Report 2021-03, ORCOS, TU Wien, 2021.
40. N.P. Osmolovskii, V.M. Veliov. On the regularity of Mayer-type affine optimal control problems. In *Large-Scale Scientific Computing*, **11958**, 2020. Available as Research Report 2019-07, ORCOS, TU Wien, 2019.
39. J. Preininger, T. Scarinci, and V.M. Veliov. Metric regularity properties in bang-bang type linear-quadratic optimal control problems. In *Large-Scale Scientific Computing*. Lecture Notes in Computer Science, **10665**:237–245, Springer, 2018. Available as Research Report 2017-04, ORCOS, TU Wien, 2017.
38. A.O. Belyakov and V.M. Veliov. On Optimal Harvesting in Age-Structured Populations. In *Dynamic perspectives on managerial decision making – essays in honor of Richard Hartl*, pp. 149–166. H. Dawid et al., Eds., Springer, 2016. (Also Research Report 2015-08, ORCOS, TU Wien, 2015).
37. A.L. Dontchev and V.M. Veliov. Regularity Properties of Mappings in Optimal Control. In *Systems Dynamics and Control Processes.*, pp. 35–41, Proc. Internat. Conf. dedicated to the 90-th anniversary of N.N. Krasovskii. Publisher: Institute of Mathematics and Mechanics, Ural Branch of the RAS, 2015. ((Research Report 2015-06, ORCOS, TU Wien, 2015).
36. V.M. Veliov. Relaxation of Euler-Type Discrete-Time Control System In *Large-Scale Scientific Computing*, I. Lirkov, S. Margenov, J. Wasniewski (Eds.), Lecture Notes in Computer Science, **9374**:134–141, Springer, 2015.
35. A.L. Dontchev, M.I. Krastanov, and V.M. Veliov. ω -limit sets for differential inclusions. In *Analysis and Geometry in Control Theory and its Applications*, P.

- Bettiol, P. Cannarsa, G. Colombo, M. Motta, F. Rampazzo (Eds.), Springer, 11, pp. 159–169, 2015. (Pesearch Report 2014-09, ORCOS, TU Wien, 2014.)
34. J. Haunschmied, A. Pietrus, and V.M. Veliov. The Euler Method for Linear Control Systems Revisited. In *Large-Scale Scientific Computing*, I. Lirkov, S. Margenov, J. Wasniewski (Eds.), Lecture Notes in Computer Science, **8353**:90–97, Springer, 2014.
 33. B. Skritek, T. Tsachev, and V.M. Veliov. Pontryagin’s type optimality conditions for a distributed control problem arising in endogenous growth theory. In *Large-Scale Scientific Computing*, I. Lirkov, S. Margenov, J. Wasniewski (Eds.), Lecture Notes in Computer Science, **8353**:143–151, Springer, 2014.
 32. T. Bréchet, C. Camacho, and V.M. Veliov. Adaptive Model-Predictive Climate Policies in a Multi-Country Setting. In *The Oxford Handbook of the Macroeconomics of Global Warming*, L. Bernard, W. Semmler (Eds.), pp. 114–138, University Press, 2015.
 31. S.M. Aseev and V.M. Veliov. Necessary optimality conditions for improper infinite-horizon control problems. In *Operations Research Proceedings 2011*, D. Klatte, H.-J. Lüthi, K. Schmedders (Eds.), pp. 21–26, Springer, 2012.
 30. M.I. Krastnaov and V.M. Veliov. High-order approximations of nonholonomic affine control systems. In *Large-Scale Scientific Computing*, I. Lirkov, S. Margenov, J. Wasniewski (Eds.), Lecture Notes in Computer Science, v. 5910, pp. 294–301, Springer, 2010.
 29. V.M. Veliov. The role of information pattern in the approximation of control systems. Proceedings of BG SIAM’09 - 4nd Annual Meeting of the Bulgarian Section of SIAM, Sofia, Dec. 20,21, 2009, pp.??—??. . . ., 2010.
 28. T. Bréchet, T. Tsachev and V.M. Veliov. Prices Versus Quantities in a Vintage Capital Model. *Dynamic Systems, Economic Growth, and the Environment*. Series: *Dynamic Modeling and Econometrics in Economics and Finance*, Vol. 12, (ISBN: 978-3-642-02131-2), J. Crespo Cuaresma, T. Palokangas, A. Tarasyev (Eds.), pp. 141–159, Springer, 2009.
 27. V.M. Veliov. On the numerical integration of systems with deterministic uncertainties. Proceedings of BG SIAM’07 - 2nd Annual Meeting of the Bulgarian Section of SIAM, Sofia, Dec. 20,21, 2007.
 26. V.M. Veliov. Numerical optimal control of size-structured systems. In *Numerical Analysis and Applied Mathematics*, T. Simos (Edt.), American Institute of Physics Conference Proceedings, v. 936, pp. 590–592, 2007.

25. O.C. Tarniceriu and V.M. Veliov. Control of size-structured systems. In I. Lirkov, S. Margenov, J. Wasniewski (Eds.), *Lecture Notes in Computer Science*, v. 3743, pp. 263–270, Springer, 2006.
24. V.M. Veliov. Approximations with error estimates for optimal control problems for linear systems. In *Large-Scale Scientific Computing: 5th International Conference, LSSC 2005*, Sozopol, Bulgaria, June 6-10, 2005, I. Lirkov, S. Margenov, J. Wasniewski (Eds.), *Lecture Notes in Computer Science*, v. 3743, pp. 263–270, Springer, 2006.
23. M. Quincampoix and V.M. Veliov. Sub-optimal control in presence of unobservable disturbances. In *Proceedings of the 44th IEEE Conference on Decision and Control, and the European Control Conference 2005*, Seville, Spain, Dec. 12–15, 2005, pp. 5877–5882.
22. K. Georgiev, S. Margenov, and V.M. Veliov. Emission control in single specie air pollution problems. In *Advances in Air Pollution Modeling for Environmental Security*, I. Fargo, K. Georgiev, and A. Havasi, Eds., NATO Science Series, IV Earth and Environmental Sciences, Vol. 54, Springer, 2005, pp. 219–228.
21. G. Feichtinger, A. Fuernkranz-Prskawetz, and Vladimir M. Veliov. Workshop on “Age-Structured Models in Population Dynamics and Economics”, Vienna Institute of Demography, Vienna, Oct. 27–28, 2003. *Vienna Yearbook of Population Research*, pp. 333–337, 2004.
20. G. Feichtinger, R.F. Hartl, P.M. Kort, and V.M. Veliov. Dynamic investment behavior taking into account aging of the capital good. In *Dynamical Systems and Control*, F. Udwardia et al., Eds., pp. 379–391, Chapman & Hall/CRC 2004.
19. M. Krastanov and V.M. Veliov. On the stabilizability of control constrained linear systems. In *Numerical Methods and Applications*, I. Dimov, I. Lirkov, S. Margenov, and Z. Zlatev, Eds., pp. 238–245, LNCS 2542, Springer, 2003.
18. M. Quincampoix and V.M. Veliov. Viability with a target: theory and applications. In *Applications of Mathematics in Engeneering*, B.I. Cheshankov and M.D. Todorov (Eds.), Proc. XXIII Summer School, Sozopol’97, pp. 47-54, Herron Press, Sofia, 1998.
17. V.M. Veliov. Attractiveness and invariance: the case of uncertain measurement. In *Modeling Techniques for Uncertain Systems*. A.B. Kurzhanski and V.M. Veliov, Eds. PSCT 18, pp. 277-288, Birkhäuser, Boston, 1994.
16. A.B. Kurzhanski and V.M. Veliov. Perturbation techniques for uncertain dynamics and control. *Proc. European Control Conference, Gröningen*, pp. 822–824, 1993.

15. V.M. Veliov. Funnel equations and regulation of uncertain systems. In *Set-Valued Analysis and Differential Inclusions*, A.B. Kurzhanski and V.M. Veliov, Eds., PSCT 16, pp. 183–199, Birkhäuser, Boston, 1993.
14. V.M. Veliov. Approximations of control/uncertain differential systems by means of discrete-time systems. In *The Second Colloquium on Differential Equations*. D. Bainov and V. Covachev, Eds., pp. 233–254, World Scientific Singapore, 1992.
13. V.M. Veliov. Parametric and functional uncertainties in dynamical systems: local and global relationship. In *Computer Arithmetic and Enclosure Methods*, L. Atanassova and J. Herzberger, Eds., Proc. of the Third Internat. IMACS-GAMM Symposium on Computer Arithmetic and Scientific Computing, Oldenburg, Germany, 1–4 October 1991, North-Holland, Amsterdam, 1992.
12. V.M. Veliov. On the discretisation of differential inclusions. *Proc. Conf. on Numerical Methods and Applications*, Publ. House of the Bulg. Acad. of Sci., Sofia, pp. 553–558, 1989.
11. A.L. Dontchev and V.M. Veliov. Singular perturbations in linear control systems with constraints. *Proc. of 25th Conf. on Decision and Control*, Athens, Greece, 1781–1783, Dec., 1986.
10. V.M. Veliov. Convergence rate of the solutions of singularly perturbed time-optimal control problems. *Mathematical Control Theory*, Banach Center Publications, v. **14**, pp. 611–623, Warsaw, 1985.
9. A.L. Dontchev and V.M. Veliov. Continuity of the marginal function of a singularly perturbed optimal control problem. *Proc. VII Konferencja szkoleniowa z teorii zagadnien ekstremalnych*, Uniwersytet Lodzki, Lodz, 1985.
8. A.L. Dontchev and V.M. Veliov. On the order reduction of linear optimal control system in critical cases. In *Systems and Optimization*, Lect. Notes in Control and Inf. Sci., v. **66**, pp. 61–73, 1985.
7. A.L. Dontchev and V.M. Veliov. Singular perturbation in linear differential inclusions - critical case. *Parametric Optimization and Approximation*. Birkhäuser, 1985.
6. R. Kaltinska, ..., V.M. Veliov. Applied program package IOPACK. *Seminarberichte*, 64, pp. 45–49, Humboldt-Universität, Berlin, 1984.
5. V.M. Veliov. A regularization by differentiable controls. *Jahrestagung Mathematische Optimierung*, pp. 161–162, 1983.

4. V.M. Veliov. Singular perturbations in the linear time-optimal control problem. *Proc. II Conf. on Differential Equations and Applications*, Rouse, Bulgaria, pp. 127–130, 1981.
3. V.M. Veliov and E.P. Milanov. Generalized derivatives of segment functions in \mathbf{R}^n . *Proc. X Spring Conf. of UBM*, Sunny Beach, Bulgaria, pp. 115–121, 1981. (In Bulgarian.)
2. V.M. Veliov. Estimations of the influence of the inertianess on the optimal control in linear time-optimal control problems. *Proc. IX Spring Conf. of UBM*, Sunny Beach, Bulgaria, pp. 121–127, 1980. (In Russian.)
1. V.M. Veliov. Linear time-optimal control problems with constraints on the derivative of the control. *Proc. VIII Spring Conf. of UBM*, Sunny Beach, Bulgaria, pp. 126–136, 1979. (In Bulgarian).