Schriftenverzeichnis

I. Monographie

[1] Convex variational problems. Linear, nearly linear and anisotropic growth conditions. Lecture Notes in Mathematics 1818, Springer, Berlin-Heidelberg-New York, 2003.

II. Wissenschaftliche Artikel (erschienen bzw. angenommen)

[2] On the Hausdorff dimension of n x m concentration sets. Asymp. Anal. 11 (1995), 169–184.

[3] On the free boundary of surfaces with bounded mean curvature: the non-perpendicular case. Manus. Math. 97 (1998), 389–406.

[4] (mit M. Fuchs) Regularity for dual solutions and for weak cluster points of minimizing sequences of variational problems with linear growth. Zap. Nauchn. Sem. St.-Petersburg Odtel. Math. Inst. Steklov (POMI) 259 (1999), 46–66; J. Math. Sciences 109 (2002), 1835–1850.

[5] (mit M. Fuchs) Obstacle problems with linear growth: Hölder regularity for the dual solution. Math. Nachr. 232 (2001), 5–27.

[6] A uniqueness theorem for the dual problem associated to a variational problem with linear growth. Zap. Nauchn. Sem. St.-Petersburg Odtel. Math. Inst. Steklov (POMI) 271 (2000), 83–91; J. Math. Sciences 115 (2003), 2747–2752.

[7] (mit M. Fuchs, G. Seregin) Local regularity of solutions of variational problems for the equilibrium configuration of an incompressible, multiphase elastic body. Nonlinear Diff. Equ. Appl. 8 (2001), 53–81.

[8] A remark on isolated singularities of surfaces with bounded mean curvature: the non-minimizing and non-perpendicular case. Archiv der Mathematik 75 (2000), 153–160.

[9] (mit M. Fuchs) Higher order variational inequalities with non-standard growth conditions in dimension two: plates with obstacles. Ann. Acad. Sci. Fenn. Math. 26 (2001), 509–518.

[10] (mit M. Fuchs) Partial regularity for variational integrals with (s, μ, q)-growth. Calc. Variations 13 (2001), 537–560.

[11] (mit M. Fuchs, V. Osmolovskii) The effect of a surface energy term on the distribution of phases in an elastic medium with a two-well potential. Math. Meth. Appl. Sciences 25 (2002) 149–178.

[12] A note on degenerate variational problems with linear growth. Z. Anal. Anw. 20 (2001), 589–598.

[13] (mit M. Fuchs, V. Osmolovskii) The effect of a penalty term involving higher order derivatives on the distribution of phases in an elastic medium with a two-well potential. Math. Meth. Appl. Sciences 25 (2002), 289–308.

[14] (mit M. Fuchs, G. Mingione) A priori gradient bounds and local $C^{1,\alpha}$-estimates for (double) obstacle problems under nonstandard growth conditions. Z. Anal. Anw. 20 (2001), 959–985.

[15] (mit M. Fuchs) Two-dimensional anisotropic variational problems. Calc. Variations. 16 (2003), 177–186.

[16] (mit M. Fuchs) Relaxation of convex variational problems with linear growth defined on classes of vector-valued functions. Algebra i Analiz 14 (2002), 26–45; St. Petersburg Math. J. 14 (2003), 19–33.

[17] A priori gradient estimates for bounded generalized solutions of a class of variational problems with linear growth. J. Convex Anal. 9 (2002), 117–137.

[18] (mit M. Fuchs) Elliptic variational problems with nonstandard growth. International Mathematical Series, Vol. 1, Nonlinear problems in mathematical physics and related topics I, in honor of Prof. O.A. Ladyzhenskaya. By Tamara Rozhkovskaya, Novosibirsk, Russia, March 2002 (in Russian), 49–62. By Kluwer/Plenum Publishers, June 2002 (in English), 53–66.

[19] (mit M. Fuchs) On a class of variational integrals with linear growth satisfying the condition of μ-ellipticity. Rendiconti di Matematica e delle sue applicazioni 22 (2002), 249–274.

[20] (mit M. Fuchs) Partial regularity for a class of anisotropic variational integrals with convex hull property. Asymp. Anal. 32 (2002), 293–315.

[21] (mit M. Fuchs) Convex variational problems with linear growth. In: Geometric analysis and nonlinear partial differential equations. By S. Hildebrandt and H. Karcher, Springer, Berlin-Heidelberg-New York, 2003, 327–344.

[22] (mit M. Fuchs) Interior regularity for free and constrained local minimizers of variational integrals under general growth and ellipticity conditions. Zap. Nauchn. Sem. St.-Petersburg Odtel. Math. Inst. Steklov (POMI) 288 (2002), 79–99; J. Math. Sciences 123 (2004), 4565–4576.

[23] (mit M. Fuchs) Variants of the Stokes problem: the case of anisotropic potentials. J. Math. Fluid Mech. 5 (2003), 364–402.

[24] Two-dimensional variational problems with linear growth. Manus. Math. 110 (2003), 325–342.

[25] (mit M. Fuchs) A regularity result for stationary electrorheological fluids in two dimensions. Math. Meth. Appl. Sciences 27 (2004), 1607–1617.

[26] (mit D. Apushkinskaya, M. Fuchs) Steady states of anisotropic generalized Newtonian fluids. J. Math. Fluid Mech. 7 (2005), 261–297.

[27] (mit M. Fuchs) Regularization of convex variational problems with applications to generalized Newtonian fluids. Archiv der Mathematik 84 (2005), 155–170.

[28] (mit M. Fuchs, X. Zhong) A lemma on the higher integrability of functions with applications to the regularity theory of two-dimensional generalized Newtonian fluids. Manus. Math 116 (2005), 135–156.

[29] (mit M. Fuchs) $C^{1,\alpha}$-solutions to non-autonomous anisotropic variational problems. Calc. Variations 24 (2005), 309–340.

[30] (mit M. Fuchs) Higher-order variational problems on two-dimensional domains. Ann. Acad. Sci. Fenn. Math. 31 (2006), 349–362.

[31] (mit M. Fuchs, X. Zhong) On strong solutions of the differential equations modeling the steady flow of certain incompressible generalized Newtonian fluids. Algebra i Analiz 18 (2006), 1–23; St. Petersburg Math. J. 18 (2007), 183–199.

[32] (mit S. Repin) Estimates for the deviation from exact solutions of variational problems with power growth functionals. Zap. Nauchn. Sem. St.-Petersburg Odtel. Math. Inst. Steklov (POMI) 336 (2006), 5–24; J. Math. Sciences 143 (2007), 2845–2856

[33] (mit M. Fuchs, X. Zhong) Variational integrals with a wide range of anisotropy. Algebra i Analiz 18 (2006), 46–71; St. Petersburg Math. J. 18 (2007), 717–736.

[34] (mit M. Fuchs) A short remark on energy functionals related to nonlinear Hencky materials. App. Math. E-Notes 7 (2007), 77–83.

[35] (mit M. Fuchs) Smoothness of weak solutions of the Ramberg/Osgood equations on plane domains. Z. Angew. Math. Mech. 87 (2007), 70–76.

[36] (mit M. Fuchs) Continuity properties of the stress tensor in the 3-dimensional Ramberg/Osgood model. J. Appl. Anal. 13 (2007), 209–233.

[37] (mit M. Fuchs, S. Repin) A posteriori error estimates for stationary slow flows of power-law fluids. J. Non-Newtonian Fluid Mech. 142 (2007), 112–122.

[38] (mit M. Fuchs) On the regularity of local minimizers of decomposable variational integrals on domains in $\mathbb{R}^2$. Comment. Math. Univ. Carolin. 48 (2007), 321–341.

[39] (mit M. Fuchs) Higher integrability of the gradient for vectorial minimizers of decomposable variational integrals. Manus. Math. 123 (2007), 269–283.

[40] (mit M. Fuchs, X. Zhong) A regularity theory for scalar local minimizers of splitting-type variational integrals. Ann. SNS Pisa, Serie V, Vol. VI, Fasc. 3 (2007), 385–404.

[41] (mit M. Fuchs, S. Repin) A functional type a posteriori error analysis for the Ramberg-Osgood model. Z. Angew. Math. Mech. 87 (2007), 860–876

[42] (mit M. Fuchs) Partial regularity for local minimizers of splitting-type variational integrals. Asymp. Anal. 55 (2007), 33–47.

[43] (mit M. Fuchs, S. Repin) Duality based a posteriori error estimates for higher order variational inequalities with power growth functionals. Ann. Acad. Sci. Fenn. Math. 33 (2008), 475–490.

[44] (mit M. Fuchs) Error estimates for obstacle problems of higher order. Zap. Nauchn. Sem. St.-Petersburg Odtel. Math. Inst. Steklov (POMI) 348 (2007), 5–18; J. Math. Sciences 152 (2008), 617–624

[45] (mit M. Fuchs) Variational integrals of splitting type: higher integrability under general growth conditions. Annali Math. Pura. Appl. 188 (2009), 467–496

[46] (mit M. Fuchs) A remark on the regularity of vector-valued mappings depending on two variables which minimize splitting-type variational integrals. Acta. Mat. Sci. 30 (2010), 963–967.

[47] (mit M. Fuchs, S. Repin) The elastic-plastic torsion problem: a posteriori error estimates for approximate solutions. Num. Funct. Anal. Opt. 30 (2009), 653–664.

[48] (mit M. Fuchs) Differentiability and higher integrability results for local minimizers of splitting type variational integrals in 2D with applications to nonlinear Hencky materials. Calc. Var. 37 (2010), 167–186.

[49] (mit D. Apushkinskaya, M. Fuchs) Interior gradient bounds for local minimizers of variational integrals under nonstandard growth conditions. Problems in Math. Anal. 43 (2009), 35-50; J. Math. Sciences 164 (2010), 345–363.

[50] (mit D. Apushkinskaya, M. Fuchs) On local generalized minimizers and the local stress tensor for variational problems with linear growth. Problems in Math. Anal. 44 (2010), 39-54; J. Math. Sciences 165 (2010), 42–59.

[51] (mit M. Fuchs) A geometric maximum principle for variational problems in spaces of vector valued functions of bounded variation. Zap. Nauchn. Sem. St.-Petersburg Odtel. Math. Inst. Steklov (POMI) 385 (2010), 5–17; J. Math. Sciences 178 (2011), 235–242.

[52] (mit M. Fuchs) A 2D-variant of a theorem of Uraltseva and Urdaletova for higher order variational problems. Nonlinear partial differential equations and related topics, AMS Transl. 229 (2010), 39–49.

[53] (mit M. Fuchs) Compact embeddings of the space of functions with bounded logarithmic deformation. Problems in Math. Anal. 51 (2010), 139–153; J. Math. Sciences 172 (2011), 165–183.

III. Eingereicht

[54] (mit M. Fuchs) A variational approach to the deconvolution of images based on different variants of the TV-regularization.

[55] (mit J. Naumann, J. Wolff) An approximation theorem for vector fields in $\mathbf{BD}_{\mathrm{div}}$.

[56] (mit M. Fuchs) On the exterior problem for the stationary Navier-Stokes Equations in twodimensional domains.

[57] (mit J. Naumann) On the existence of weak solutions to the equations of stationary motion of perfectly plastic fluids.

IV. PREPRINTS

(a) Preprint SFB256, Universität Bonn: [2], [4]–[5], [9]–[11], [13]–[16], [19]–[20].

(b) Preprint Max-Planck-Institut für Mathematik in den Naturwissenschaften, Leipzig: [7].

(c) Preprint Universität Parma: [14].

(d) Preprint Universität des Saarlandes: [10]–[54].

V.

(a) Diplomarbeit (Universität Bonn, Dezember 1990). Auswirkungen von Oszillationen und Konzentrationen auf den Grenzwert schwacher Lösungsfolgen der inkompressiblen Eulerschen Gleichungen. (Hildebrandt, Alt)

(b) Dissertation (Universität des Saarlandes, Juni 1997). Regularitätsaussagen für Flächen beschränkter mittlerer Krümmung, die ihre Stützfläche nicht orthogonal schneiden. (Grüter, Fuchs)

(c) Habilitationsschrift (Universität des Saarlandes, Dezember 2001). Convex variational problems with linear, nearly linear and/or anisotropic growth conditions. (Fuchs, Grüter, Acerbi, Seregin)