

Dr. Dominic Breit
Saarland University
Building E 2.4, room 435
66123 Saarbrücken

Publications

2007

- Regularitätsuntersuchungen für das Ramberg/Osgood-Modell in drei Dimensionen. Diploma thesis, Saarland University, Department of Mathematics.
(Fuchs, Bildhauer)

2008

- Schätzung zeitstetiger Modelle in der Finanzmarktökonometrie mittels EMM und GMM. Diploma thesis, Saarland University, Department of Economics.
(Friedmann, Klößner)

2009

- Regularitätssätze für Variationsprobleme mit anisotropen Wachstumsbedingungen. PhD thesis, Saarland University, Department of Mathematics.
(Fuchs, Bildhauer, Ural'tseva)

2010

- The partial regularity for minimizers of splitting type variational integrals under general growth conditions I. The autonomous case. Journal of Mathematical Sciences, Vol. 166, No. 3, 239-258.
- The partial regularity for minimizers of splitting type variational integrals under general growth conditions II. The nonautonomous case. Journal of Mathematical Sciences, Vol. 166, No. 3, 259-281.
- A note on splitting-type variational problems with subquadratic growth. Archiv der Mathematik 94, 467-476.

2011

- Joint work with M. Fuchs: The nonlinear Stokes problem with general potentials having superquadratic growth. Journal of Mathematical Fluid Mechanics 13, 371-385.
- Splitting-type variational problems with x -dependent exponents. Annales Academiæ Scientiarum Fennicæ Mathematica 36, 279-289.
- Joint work with B. De Maria, A. Passarelli di Napoli: Regularity for nonautonomous functionals with almost linear growth. Manuscripta Mathematica 136, 83-114.

- New regularity theorems for non-autonomous variational integrals with (p, q) -growth. Calculus of Variations and PDE's, DOI: 10.1007/s00526-011-0428-5.
- Joint work with B. Stroffolini, A. Verde: A general regularity theorem for functionals with φ -growth. Journal of Mathematical Analysis and Applications 383, 226-233.

2012

- Regularity theory for superquadratic energy functionals related to nonlinear Hencky materials in three dimensions. To appear in Journal of Applied Analysis 18.
(Preprint 255, Saarland University)
- Smoothness properties of solutions of the nonlinear Stokes problem with non-autonomous potentials. To appear in Bonner Mathematische Schriften.
(Preprint 246, Saarland University)
- Joint work with O. D. Schirra: Korn-type inequalities in Orlicz-Sobolev spaces involving the trace-free part of the symmetric gradient and applications to regularity theory. To appear in Zeitschrift für Analysis und ihre Anwendungen.
(Preprint 287, Saarland University)
- Joint work with A. Verde: Quasiconvex variational integrals in Orlicz-Sobolev spaces. To appear in Annali di Matematica Pura ed Applicata.
(OxPDE Technical Report 12/2011, University of Oxford)
- Joint work with L. Diening: Sharp conditions for Korn inequalities in Orlicz spaces. To appear in Journal of Mathematical Fluid Mechanics.
(Preprint 290, Saarland University)

Submitted

- Joint work with M. D. Groves: Three dimensional fully localised solitary gravity-capillary waves in fluid interfaces.
(Preprint 289, Saarland University)
- Joint work with L. Diening and M. Fuchs: Existence results for stationary flows of Prandtl-Eyring fluids in 2D by means of solenoidal Lipschitz truncation.
(OxPDE Technical Report , University of Oxford)

Conferences and talks

2008

- Regularitätsuntersuchungen für das Ramberg/Osgood-Modell in drei Dimensionen. Conference talk, Studierenden-Konferenz, DMV-Tagung, Erlangen-Germany (09/2008).

2009

- New regularity theorems for anisotropic variational integrals. Invited talk, Bonn-Germany (09/2009).

2010

- Anisotropic variational problems in fluid mechanics and nonlinear elasticity. Invited talk, Naples-Italy (03/2010).
- New regularity theorems for nonautonomous anisotropic variational integrals. Conference talk, 6th Singular days on Asymptotic Methods for PDEs, Berlin-Germany (04/2010).
- Anisotropic variational problems in fluid mechanics and nonlinear elasticity. Conference talk, The 8th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Dresden-Germany (05/2010).
- The nonlinear Stokes problem with general potentials. Invited talk, Bonn-Germany (06/2010).
- Oberwolfach Workshop Calculus of Variations, Oberwolfach-Germany (07/2010).
- Korn-type inequalities in Orlicz spaces. Invited talk, Munich-Germany (11/2010).

2011

- Sharp conditions for Korn inequalities in Orlicz spaces. Conference talk, British Applied Mathematics Colloquium, Birmingham-UK (04/2011).
- On stationary motions of Prandtl-Eyring fluids in 2D. Invited talk, Oxford-UK (05/2011).
- On stationary motions of Prandtl-Eyring fluids in 2D. Conference talk, IMA Conference on Nonlinearity and Coherent Structures, Reading-UK (07/2011).
- Evolutionary PDE's in perfectly plastic fluid theory. Conference talk, Equadiff 2011, Loughborough-UK (08/2011).