

ADVANCES IN CALCULUS OF VARIATIONS

MANAGING EDITORS

Frank Duzaar, *Erlangen-Nürnberg*
Juha Kinnunen, *Aalto*

EDITORIAL BOARD

Kari Astala, *Helsinki*
Tobias Colding, *Cambridge, MA*
Bernard Dacorogna, *Lausanne*
Gianni Dal Maso, *Trieste*
Emmanuele Di Benedetto, *Nashville*
Felix Finster, *Regensburg*
Irene Fonseca, *Pittsburgh*
Matthew Gursky, *Notre Dame*
Robert Hardt, *Houston*

Hitoshi Ishii, *Tokyo*
Jan Kristensen, *Oxford*
Juan Manfredi, *Pittsburgh*
Robert McCann, *Toronto*
Giuseppe Mingione, *Parma*
Frank Pacard, *Créteil*
David Preiss, *Warwick*
Tristan Rivière, *Zürich*
Reiner Schätzle, *Tübingen*

DE GRUYTER

ADVANCES IN CALCULUS OF VARIATIONS publishes high quality original research focusing on that part of calculus of variation and related applications which combines tools and methods from partial differential equations with geometrical techniques.

In particular the journal will include the following topics: existence and regularity for minimizers and critical points; variational methods for partial differential equations; geometrical aspects of calculus of variation: minimal surfaces, harmonic mappings, geometrically motivated flows, curvature equations, quasi-conformal mappings; applications of variational methods to non-linear elasticity, free boundary problems, general relativity; geometric measure theory.

ISSN 1864-8258 · e-ISSN 1864-8266 · CODEN ACVDAS

All information regarding notes for contributors, subscriptions, Open access, back volumes and orders is available online at www.degruyter.com/acv.

ABSTRACTED/INDEXED IN Celdes · CNKI Scholar (China National Knowledge Infrastructure) · CNPIEC · EBSCO: Academic Search; TOC Premier; Discovery Service · Elsevier: SCOPUS · Gale/Cengage: Academic One File · Google Scholar · J-Gate · Mathematical Reviews (MathSciNet) · Naviga (Softweco) · Primo Central (ExLibris) · ProQuest: Deep Indexing: Computing; Deep Indexing: Green Technology; Deep Indexing: Math & Statistics; Deep Indexing: Science Journals; Engineering Research Database; High Tech Research Database; Illustrata: Natural Sciences; Illustrata: Technology; Technology Research Database · ReadCube · SCImago (SJR) · Summon (Serials Solutions/ProQuest) · TDOne (TDNet) · Thomson Reuters: Current Contents/Physical, Chemical and Earth Sciences; Journal Citation Reports/Science Edition; Science Citation Index Expanded · Ulrich's Periodicals Directory/ulrichsweb · WorldCat (OCLC) · Zentralblatt Math

RESPONSIBLE EDITORS Frank Duzaar, Department Mathematik, Universität Erlangen-Nürnberg, Cauerstraße 11, 91058 Erlangen, Germany.
Email: frank.duzaar@fau.de

Juha Kinnunen, Department of Mathematics and Systems Analysis, School of Science, Aalto University, P.O. Box 11100, FI-00076 Aalto, Finland.
Tel.: + 358 50 430 5757
Email: juha.k.kinnunen@aalto.fi

JOURNAL MANAGER Theresa Haney, De Gruyter, Genthiner Straße 13, 10785 Berlin, Germany.
Tel.: +49 (0)30 260 05-375, Fax: +49 (0)30 260 05-250
Email: theresa.haney@degruyter.com

RESPONSIBLE FOR ADVERTISEMENTS Claudia Neumann, De Gruyter, Genthiner Straße 13, 10785 Berlin, Germany.
Tel.: +49 (0)30 260 05-226, Fax: +49 (0)30 260 05-264
Email: anzeigen@degruyter.com

© 2016 Walter de Gruyter GmbH, Berlin/Boston

TYPESETTING Dimler & Albroscheit, Münchenberg

PRINTING Franz X. Stückle Druck und Verlag e.K., Ettenheim
Printed in Germany



Offenlegung der Inhaber und Beteiligungsverhältnisse gem. § 7a Abs. 1 Ziff. 1, Abs. 2 Ziff. 3 des Berliner Pressegesetzes: Die Gesellschafter der Walter de Gruyter GmbH sind: Clara Cram Stiftung, Berlin; Cram, Gisela, Rentnerin, Berlin; Cram, Dr. Georg-Martin, Unternehmens-Systemberater, Stadtbergen; Cram, Maike, Berlin; Cram, Jens, Mannheim; Cram-Heydrich, Ingrid, Betriebsleiterin, Tuxpan / Michoacan (Mexiko); Cram-Heydrich, Sabina, Mexico DF (Mexiko); Cram, Silke, Wissenschaftlerin, Mexico DF (Mexiko); Cram, Björn, Aachen; Cram, Ella Anita, Rentnerin, Berlin; Cram, Berit, Greifswald; Cram-Gomez, Susanne, Mexico DF (Mexiko); Cram-Heydrich, Walter, Mexico DF (Mexiko); Cram-Heydrich, Kurt, Angestellter, Mexico DF (Mexiko); Duvenbeck, Brigitta, Oberstudienrätin i.R., Bad Homburg; Gädeke, Gudula, M.A., Atemtherapeutin/Lehrerin, Tübingen; Gädeke, Martin, Einzelunternehmer, Würzburg; Lubasch, Dr. Annette, Ärztin, Berlin; Schütz, Dr. Christa, Ärztin, Mannheim; Schütz, Sonja, Berlin; Schütz, Juliane, Berlin; Schütz, Antje, Berlin; Schütz, Valentin, Berlin; Seils, Dorothee, Apothekerin, Stuttgart; Seils, Gabriele, Journalistin, Berlin; Seils, Dr. Clara-Eugenie, Oberstudienrätin i.R., Reppenstedt; Seils, Christoph, Journalist, Berlin; Siebert, John-Walter, Pfarrer, Oberstenfeld; Walter de Gruyter Stiftung, Berlin.

Contents

Eero Ruosteenoja

Local regularity results for value functions of tug-of-war with noise and running payoff — 1

Andrea Marchese, Annalisa Massaccesi

The Steiner tree problem revisited through rectifiable G -currents — 19

Xin Yang Lu

More counterexamples to regularity for minimizers of the average-distance problem — 41

Yiannis Karagiorgos, Nikos Yannakakis

A Neumann problem involving the $p(x)$ -Laplacian with $p = \infty$ in a subdomain — 65

Miles Simon, Glen Wheeler

Some local estimates and a uniqueness result for the entire biharmonic heat equation — 77

