

ULISSE STEFANELLI, CURRICULUM VITAE

CONTACT

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Born September 19, 1975. Italian citizenship.

RESEARCH INTERESTS

Main research fields: Partial Differential Equations, Calculus of Variations, Continuum Thermo-mechanics.

Main keywords: Nonlinear PDEs and systems, Evolution equations, Variational techniques, Γ -convergence and relaxation, Approximation and discretization, Mathematical modeling of materials, Phase transformations in solids, Shape-memory alloys, Magnetic materials. Atomistic models, Crystallization.

POSITIONS

2013 - today *Professor*, University of Vienna, Chair of Applied Mathematics and Modeling.

2010 - today *Researcher Director*, IMATI - CNR (on leave from Aug. 2013).

2002 - 2010 *Senior Researcher*, IMATI - CNR.

2011 - 2012 *Friedrich Wilhelm Bessel Research* awardee (research fellow), WIAS Berlin.

2003 - 2013 *Professor* (temporary), University of Pavia.

2001 - 2002 *Researcher* (permanent), Istituto di Analisi Numerica - CNR.

EDUCATION

Ph.D. in *Mathematics and Scientific Computing* (advisor P. Colli), University of Pavia, 2003.

SAFI Advanced School, Institute for Advanced Study - IUSS, Pavia, 2002.

Laurea in Matematica, University of Pavia, 1998.

HONORS, AWARDS

- *Premio Vinti*, Unione Matematica Italiana, 2015.
- *Wolfgang Pauli Institute*, member.
- Secretary of the *Int. Society for the Interaction of Mechanics and Mathematics* (2013-2016).
- *Richard von Mises Prize*, GAMM, 2010.
- *Friedrich Wilhelm Bessel Research Award*, Alexander von Humboldt Foundation, 2009.
- *CNR 2005* prize, awarded 2009.
- *ERC Starting Grant*, 2008.
- *SIMAI 2004* prize (best PhD thesis in Applied Math in Italy).
- *SAFI - IUSS* prizes in 1999, 2000, and 2001.
- *Cinquini* prize 1998 (best diploma thesis in Math in Pavia).

INVITED LECTURES AND SEMINARS

Plenary lectures

- 6th GAMM-Workshop on the Analysis of Partial Differential Equations, Stuttgart, September 2018.
- XX Congresso della Unione Matematica Italiana, Siena, September 2015 (semi).
- *GAMM 81st Annual Scientific Conference*, Karlsruhe, March 2010.
Richard von Mises Prize lecture.
- *Free Boundary Problems: Theory and Applications*, Stockholm, June 2008.
- XVII Congresso della Unione Matematica Italiana, Milan, September 2003 (semi).

Invited Lectures (last five years)

- 71st Workshop on *Advances in Nonsmooth Analysis and Optimization*, Erice, Italy, June 2019.
- *Analysis of Evolutionary and Complex Systems*, Berlin, September 2018.
- Workshop on *Special Materials and Complex Systems*, Gargnano, Italy, June 2018.
- Conference *Games, Dynamics and Optimization*, Vienna, March 2018.
- CNR-INDAM Workshop on *Innovative Mathematical Models and Methods for Industrial Applications*, minicourse, Rome, May 2017.
- *Viscoelasticity and Dissipative Dynamics of Rods and Membranes*, Okinawa Institute of Science and Technology, Okinawa, March 2017.
- Analysis of Boundary Value Problems for PDEs, Pavia, February 2017.
- Miniworkshop *Mathematics of magnetoelastic materials*, Oberwolfach, November 2016.
- ERC Workshop *Modeling materials and fluids using variational methods*, WIAS, Berlin, February 2016.
- Miniworkshop *Variational and PDE problems in Applied Mathematics*, Pisa, February 2016.

- WPI Workshop *Multiscale transport of particles*, WPI Vienna, September 2015.
- Vienna PDE Day, TU Vienna, June 2015.
- Workshop *Trends in Non-Linear Analysis 2015*, SISSA, Trieste, July 2015.
- *Variational Methods for Evolution*, Oberwolfach, December 2014.
- Thematic program *Minimal energy point sets, lattices and designs*, Schrödinger Institute, Vienna, October 2014.
- Workshop *Entropy Methods, PDEs, Functional Inequalities, and Applications*, Banff International Research Station, Banff July 2014.
- Special session on *Nonlinear Evolution PDEs and Interfaces in Applied Sciences* in the *10th AIMS International Conference on Dynamical Systems and Differential Equations*, Madrid, July 2014.
- Special session on *Variational energy and entropy approaches in non-smooth thermo-mechanics* in the *10th AIMS International Conference on Dynamical Systems and Differential Equations*, Madrid, July 2014.
- International workshops on *Multi-Rate Processes and Hysteresis* and *Hysteresis and Slow-Fast Systems*, Berlin, April 2014.
- GSSI International Workshop *From Atomistic to Continuum Models in Materials Science*. L'Aquila, April 2014.

Seminars (last five years)

- *Graphene from Molecular Mechanics*, Politecnico di Milano, MOX Seminar Series, 2018.
- *A variational invitation to carbon geometries*, Mathematisches Kolloquium, Würzburg, 2016.
- *Carbon geometries as minimizers*, Institute of Science and Technology Austria, Klosterneuburg, 2016.
- *Carbon geometries as energy minimizers*, Analysis Seminar, Warwick, 2015.
- *Geometry optimization in carbon*, Colloquium, TU Graz, 2015.
- *Mathematics of crystallization*, ViCOM Colloquium, Vienna, 2014.
- *Finite to infinitesimal plasticity*, Joint Analysis Seminar Augsburg-München, 2014.

GRANTS

Speaker

- FWF Special Research Program F65 *Taming Complexity in Partial Differential Systems*, 2017-2021. 4M€.

Principal Investigator, Project-Part Leader

- FWF Special Research Program F65, Project-Part *Multiphysics in solids*, 2017-2021. 320K€.
- FWF Special Research Program F65, Project-Part *Coordination*, 2017-2021. 343K€
- FWF Doctoral School *Dissipation and dispersion in partial differential equations*, 2017-2021 (Speaker: A. Jüngel)
- WTZ-OeAD Cooperation Project with the Czech Republic *Thermomechanics of solids: modeling, analysis, and simulations*, 2016-2017. 7K€.
- WWTF Mathematics and.. *Variational modeling of carbon nanostructures*, 2015-2018. 540K€.
- FWF Stand-Alone Grant *Global variational methods for nonlinear evolution*, 2015-2018. 331K€.
- CNR - Japan Society for the Promotion of Science (JSPS) Grant *Innovative variational methods for evolution equations*, 2014-2015. 16K€.
- ERC Starting Grant *BioSMA: Mathematics for Shape Memory Technologies in Biomechanics*, 2008-2013. 700K€.
- CNR - Academy of Sciences of the Czech Republic (AV ČR) Grant *SMART-MATH: The Mathematics of Smart Materials: thermodynamics, analysis and applications*, 2010-2012. 10K€.
- CNR - Japan Society for the Promotion of Science (JSPS) Grant *Innovative variational methods for evolution PDEs*, 2012-2013. 16K€.

Co-principal investigator

- FWF-GAČR Joint International Project *Variational structures in the thermomechanics of solids*, 2016-2018. 109K€. Co-PI Martin Kružík, Prague.
- CENTRAL project *Analysis and Numerics of Partial Differential Equations* (Humboldt Universität zu Berlin, Charles University in Prague, University of Vienna). 2015-2018.
- FWF-Lise-Meitner fellowship: Edoardo Mainini, *Crystal ordering and dynamics of interacting particles*, 2015-2016.

PROFESSIONAL SERVICE

Advisory

- *Weierstraß-Institute for Applied Analysis and Stochastics*, Berlin, member of the Scientific Advisory Board (2015-2019)

Editorial boards

- *Transactions of Mathematics and its Applications*, associate editor (2016-present).
- *Advances in Mathematical Sciences and Applications*, associate editor (2016-present).
- *Mathematical Models and Methods in Applied Sciences*, associate editor (2014-present).
- *Discrete and Continuous Dynamical Systems - S*, associate editor (2008-present).
- *Differential Equations and Applications*, associate editor (2008-present).

Organization (last five years)

- Applied Analysis Section, GAMM, with P. Dondl, Vienna 18-22.02.2019.
- 1st International SFB Workshop on *Taming Complexity in Partial Differential Systems* with A. Arnold, A. Jüngel, J. Maas, P. A. Markowich, N. J. Mauser, C. Schmeiser, Vienna 25-27.02.2019.
- Workshop *Emergence of Structures in Particle Systems: Mechanics, Analysis, and Computation* with A. Braides, B. Schmidt, F. Theil, *Mathematisches Forschungsinstitut Oberwolfach*, Oberwolfach, 29.10-03.11.2018.
- INdAM Workshop *Trends on Applications of Mathematics to Mechanics*, with E. Rocca, L. Truskinovski, A. Visintin, Rome, 05-09.09.2016.
- Workshop on CENTRAL trends in analysis and numerics of PDEs, with I. Perugia, Vienna, 12.11.2015-13.11.2015.
- 1st CENTRAL school in analysis and numerics of PDEs, with I. Perugia, Vienna, 09.11.2015-12.11.2015.
- Thematic program *Nonlinear Flows*, with E. Feireisl, A. Jüngel, A. Mielke, G. Savaré, Erwin Schrödinger International Institute for Mathematical Physics, Vienna, 31.05.2016-15.07.2016.
- Thematic program *Crystals, Polymers, Materials*, Wolfgang-Pauli Institute, 2015.
- *STAMM14 - Symposium on Trends in Applications of Mathematics to Mechanics* with A. Miranville, L. Truskinovski, and A. Visintin, Poitiers, 08-11.09.2014.
- Special Session with G. Akagi on *Variational methods for evolution equations* within the *10th AIMS International Conference on Dynamical Systems and Differential Equations*, Madrid, 07-11.07.2014.
- ERC Workshop on *Energy/Entropy-Driven Systems and Applications* with A. Mielke and K. Götze, Berlin 9-11.10.2013.
- ERC Workshop on *Variational Views in Mechanics and Materials*, with G. Dal Maso, M.G. Mora, and M. Negri, Pavia, Italy, 24-26.06.2013.

TEACHING

Series of lectures in international schools and conferences

- *Variational modeling in finite plasticity*, INdAM Rome, 2017.
- Γ -convergence for rate-independent systems and linearization in finite plasticity, SISSA Trieste, 2015.
- *Minimization of configurational potentials and crystallization*, RWTH-AICES, Aachen, 2013.
- *MSMA modeling and analysis*, School Rate-independent evolutions and hysteresis, Milano, 2013.
- *The WIDE principle*, EVEQ2012: International Summer School on Evolution Equations, Prague, 2012
- TMR School on *Modeling, Control and Numerical Simulation of Smart Systems*, Pavia, 2003

PhD courses

- 2011-2012 *An energetic view at inelasticity*, IUSS - Institute for Advanced Study, Pavia
- 2006-2007 *Dissipative evolution in metric spaces*, Zürich Graduate School in Mathematics, ETH and Universität Zürich
- 2004-2005 *Evolution problems and hysteresis*, University of Pavia

Master courses and seminars

- 2016-2017 *Topics in Nonlinear Evolution*, Master Applied Math and Analysis, University of Vienna
Applied PDEs seminar, University of Vienna
Seminar *Beweisanalyse*, University of Vienna
- 2015-2016 Applied PDEs seminar, University of Vienna
- 2014-2015 Applied PDEs seminar, University of Vienna
- 2013-2014 *Nonlinear Evolution Equations*, Master Applied Math and Analysis, University of Vienna
Applied PDEs seminar, University of Vienna

Undergraduate teaching (last five years)

- 2016-2017 *Partielle Differentialgleichungen*, Bachelor Mathematics, University of Vienna.
Modellierung, Bachelor Mathematics, University of Vienna.
Seminar *Beweisanalyse*, Bachelor Mathematics, University of Vienna.
- 2015-2016 *Höhere Analysis und elementare Differentialgeometrie*, Bachelor Mathematics, Vienna.
- 2014-2015 *Einführung in die Analysis*, Bachelor Mathematics, University of Vienna.
Analysis, Bachelor Mathematik, Universität Wien

Postdocs

- 2017 Giuliano Lazzaroni.
Theme: *Discrete models*.
(presently Ricercatore RTDa, Università di Napoli Federico II)

- 2016 Riccardo Scala.
Theme: *Finite plasticity and damage*.
(presently Postdoc, University of Lisbon)
- 2015-2017 Elisa Davoli.
Theme: *Variational models in plasticity and fracture*.
(presently Universitatassistent at the University of Vienna)
- 2015-2017 Manuel Friedrich.
Theme: *Discrete models and evolution*.
(presently Junior Professor University of Munster)
- 2012-2016 Diego Grandi.
Theme: *Microstructures in shape-memory alloys*.
(presently Ricercatore at the University of Ferrara)
- 2012-2017 Paolo Piovano.
Theme: *Crystallization*.
(presently Universitatassistent at the University of Vienna)
- 2009-2011 Alice Fiaschi.
Theme: *Quasistatic evolution in a measure-theoretic frame*.
- 2010-2011 Edoardo Mainini.
Theme: *Carbon nanostructures*.
(presently Ricercatore at the University of Genova)
- 2011 Chiara Zanini.
Theme: *Magnetostrictive materials*.
(presently Ricercatore at the Politecnico of Turin)
- 2009-2010 Anne-Laure Bessoud.
Theme: *Magnetic shape-memory effect*.
- 2009-2011 Sergio Frigeri.
Theme: *Finite-strain shape-memory modeling*.
- Spring 2010 Matthias Liero.
Theme: *Elliptic regularization of hyperbolic problems*.
(presently Postdoc at WIAS, Berlin)

PUBLICATIONS

Volumes edited

- V6 E. Rocca, U. Stefanelli, L. Truskinovsky, A. Visintin. Trends in applications of Mathematics to Mechanics. Springer, 2018, to appear.
- V5 A. Miranville, U. Stefanelli, L. Truskinovsky, A. Visintin. Applications of Mathematics to Mechanics. *Discrete Contin. Dyn. Syst. Ser. S*, 10 (2017), 1.
- V4 G. Dal Maso, A. Mielke, U. Stefanelli. Rate-independent evolutions, *Discrete Contin. Dyn. Syst. Ser. S*, 6 (2013), 1.
- V3 Variational models for evolution. Abstracts from the workshop held December 4-10, 2011. Organized by Alexander Mielke, Felix Otto, Giuseppe Savaré and Ulisse Stefanelli. Oberwolfach Reports. Vol. 8, no. 4. Oberwolfach Rep. 8 (2011), no. 4, 3145-3216.
- V2 T. Roubíček, U. Stefanelli. Rate-independent evolutions and material modeling, *Pubblicazione IMATI - CNR 29PV10/27/0*, 2010.
- V1 A. Miranville, U. Stefanelli. Thermomechanics and phase change, *Discrete Contin. Dyn. Syst. Ser. S*, 4 (2011), no. 2.

Technical reports and preprints

113. E. Mainini, P. Piovano, B. Schmidt, U. Stefanelli. $N^{3/4}$ law in the cubic lattice. Submitted, (2018).
112. E. Davoli, T. Roubíček, U. Stefanelli. Dynamic perfect plasticity and damage in viscoelastic solids. Submitted, (2018).
111. D. Grandi, M. Kružík, E. Mainini, U. Stefanelli. A phase-field approach to Eulerian interfacial energies. Submitted, (2018). arXiv 1805.04569.
110. D. Melching, U. Stefanelli. Well-posedness of a one-dimensional nonlinear kinematic hardening model. Submitted, (2018).
109. B. Schmidt, M. Ortiz, U. Stefanelli. A variational approach to Navier-Stokes. Submitted, (2018).
108. M. Friedrich, U. Stefanelli. Ripples in graphene: a variational approach. Submitted, (2018).

107. M. Friedrich, E. Mainini, P. Piovano, U. Stefanelli.
[Characterization of optimal carbon nanotubes under stretching.](#) and validation of the Cauchy-Born rule.
 Submitted, (2017).
106. G. Lazzaroni, U. Stefanelli.
[Chain-like ground-states in three dimensions.](#)
 Submitted, (2017).
105. E. Davoli, U. Stefanelli.
[Dynamic perfect plasticity as convex minimization.](#)
 Submitted, (2016).

Papers in refereed journals or collections

To appear

104. U. Ludacka, M. R. A Monazam, C. Rentenberger, M. Friedrich, U. Stefanelli, J. C. Meyer, J. Kotakowski.
 In situ control over graphene ripples and strain in the electron microscope.
npj 2D Materials and Applications, to appear (2018).
103. T. Roubíček, U. Stefanelli.
 Thermodynamics of elastoplastic porous rocks at large strains towards earthquake modeling.
SIAM J. Appl. Math. (2018), to appear.
102. M. Friedrich, U. Stefanelli.
 Graphene ground states.
Z. Angew. Math. Phys. (2018), to appear.
101. M. Kružík, C. Mora-Corral, U. Stefanelli.
 Quasistatic elastoplasticity via Peridynamics: existence and localization, *Contin. Mech. Thermodyn.* (2018), to appear.
100. T. Roubíček, U. Stefanelli.
 Finite thermoelastoplasticity and creep under small elastic strains.
Math. Mech. Solids (2018), to appear.
99. R. Rossi, G. Savaré, A. Segatti, U. Stefanelli.
[Weighted Energy-Dissipation principle for gradient flows in metric spaces.](#)
J. Math. Pures Appl. (2018), to appear.
98. U. Stefanelli.
[Existence for dislocation-free finite plasticity](#)
ESAIM Control Optim. Calc. Var. to appear.

2018

97. G. Akagi, S. Melchionna, U. Stefanelli.
[Weighted Energy-Dissipation approach to doubly-nonlinear problems on the half line.](#)
J. Evol. Equ. 18 (2018), 49–74.

2017

96. G. Akagi, U. Stefanelli.
[Nondecreasing solutions to doubly-nonlinear equations.](#)
 Solvability, Regularity, Optimal Control of Boundary Value Problems for PDEs, Springer INdAM Ser.,
 no. 22, pp. 31-53, 2017.
95. U. Stefanelli.
[Stable carbon configurations.](#)
Boll. Unione Mat. Ital. 10 (2017), 335–354.
94. E. Mainini, H. Murakawa, P. Piovano, U. Stefanelli.
[Carbon-nanotube geometries as optimal configurations.](#)
Multiscale Model. Simul. 15-4 (2017), 1448–1471.
93. U. Stefanelli, D. Wachsmuth, G. Wachsmuth.
[Optimal control of a rate-independent evolution equation via viscous regularization.](#)
Discrete Contin. Dyn. Syst. Ser. S, 10 (2017), 1467–1485.
92. D. Grandi, U. Stefanelli.
[Existence and linearization for the Souza-Auricchio model at finite strains.](#)
Discrete Contin. Dyn. Syst. Ser. S, 10 (2017), 1257–1280.
91. E. Davoli, P. Piovano, U. Stefanelli.
[Sharp \$n^{3/4}\$ law for the minimizers of the edge-isoperimetric problem in the triangular lattice.](#)
J. Nonlin. Sci. 27 (2017), 627–660.
90. D. Grandi, U. Stefanelli.
[Finite plasticity in \$P^{\Gamma}P\$. Part I: constitutive model.](#)
Contin. Mech. Thermodyn. 29 (2017), 97–116.
89. D. Grandi, U. Stefanelli.
[Finite plasticity in \$P^{\Gamma}P\$. Part II: quasistatic evolution and linearization.](#)
SIAM J. Math. Anal. 49 (2017), 1356–1384.
88. E. Mainini, H. Murakawa, P. Piovano, U. Stefanelli.
[Carbon-nanotube geometries: analytical and numerical results.](#)
Discrete Contin. Dyn. Syst. Ser. S, 10 (2017), 141–160.
- 2016**
87. M. Friedrich, P. Piovano, U. Stefanelli.
[The geometry of \$C_{60}\$: a rigorous approach via Molecular Mechanics.](#)
SIAM J. Appl. Math. 76 (2016), 2009–2029.
86. F. Auricchio, E. Boatti, A. Reali, U. Stefanelli.
[Gradient structures for the thermomechanics of shape-memory materials.](#)
Comput. Methods Appl. Mech. Engrg. 299 (2016), 440–469.
85. E. Davoli, P. Piovano, U. Stefanelli.
[Wulff shape emergence in graphene.](#)
Math. Models Methods Appl. Sci. 26 (2016), 2277–2310.
84. G. Akagi, U. Stefanelli.
[A variational principle for gradient flows of nonconvex energies.](#)
J. Convex Anal., 23 (2016), 53–75.

2015

83. M. Kružík, U. Stefanelli, J. Zeman.
[Existence results for incompressible magnetoelasticity.](#)
Discrete Contin. Dyn. Syst., 35 (2015), 6:2615–2623.
82. D. Grandi, U. Stefanelli.
[The Souza-Auricchio model for shape-memory alloys.](#)
Discrete Contin. Dyn. Syst. Ser. S, 8 (2015), 4:727–743.
81. F. Auricchio, A.-L. Bessoud, A. Reali, U. Stefanelli.
[A phenomenological model for the magneto-mechanical response of single-crystal Magnetic Shape Memory Alloys.](#)
Eur. J. Mech. A Solids, 52 (2015), 1-11.
80. M. Kružík, U. Stefanelli, C. Zanini.
[Quasistatic evolution of magnetoelastic plates via dimension reduction.](#)
Discrete Contin. Dyn. Syst., 35 (2015), 12:5999–6013.

2014

79. D. Grandi, U. Stefanelli.
[A phenomenological model for microstructure-dependent inelasticity in shape-memory alloys.](#)
Meccanica, 49 (2014), 9:2265–2283.
78. E. Mainini, U. Stefanelli.
[Crystallization in carbon nanostructures.](#)
Comm. Math. Phys. 328 (2014), 2:545–571.
77. T. Roche, R. Rossi, U. Stefanelli.
[Stability results for doubly nonlinear differential inclusions by variational convergence.](#)
SIAM J. Control Optim. 52 (2014), 2:1071–1107.
76. G. Akagi, U. Stefanelli.
[Doubly nonlinear evolution equations as convex minimization.](#)
SIAM J. Math. Anal. 46 (2014), 3:1922–1945.
75. E. Mainini, P. Piovano, U. Stefanelli.
[Finite crystallization in the square lattice.](#)
Nonlinearity, 27 (2014), 717–737.
74. T. Roubíček, U. Stefanelli.
[Magnetic shape-memory alloys: thermomechanical modeling and analysis.](#)
Contin. Mech. Thermodyn. 26 (2014), 6:783–810.

2013

73. A. Mielke, U. Stefanelli.
[Linearized plasticity is the evolutionary \$\Gamma\$ -limit of finite plasticity.](#)
J. Eur. Math. Soc. (JEMS), 15 (2013), 3:923–948.
72. M. Eleuteri, L. Lussardi, U. Stefanelli.
[Thermal control of the Souza-Auricchio model for shape memory alloys.](#)
Discrete Contin. Dyn. Syst.-S, 6 (2013), 2:369–386. doi10.3934/dcdss.2013.6.369
71. A.-L. Bessoud, M. Kružík, U. Stefanelli.
[A macroscopic model for magnetic shape-memory single crystals.](#)
Z. Angew. Math. Phys., 64 (2013), 343–359.

70. D. Bucur, G. Buttazzo, U. Stefanelli.
[Shape flows for spectral optimization problems.](#)
Interfaces Free Bound., 14 (2013), 521–544.
69. M. Liero, U. Stefanelli.
[A new minimum principle for Lagrangian mechanics.](#)
J. Nonlinear Sci., 23 (2013), 2:179–204.
68. M. Liero, U. Stefanelli.
[Weighted Inertia-Dissipation-Energy functionals for semilinear equations.](#)
Boll. Unione Mat. Ital. (9), 6 (2013), 1:1–27.
67. G. Francfort, U. Stefanelli.
[Quasi-static evolution for the Armstrong-Frederick hardening-plasticity model.](#)
Appl. Math. Res. Express. AMRX, (2013) 2:297–344.

2012

66. S. Frigeri, U. Stefanelli.
[Existence and time-discretization for the finite-strain Souza-Auricchio constitutive model for shape-memory alloys.](#) *Contin. Mech. Thermodyn.*, 24 (2012), 1:63–77.
65. U. Stefanelli.
[Magnetic control of magnetic shape-memory crystals.](#)
Phys. B, 407 (2012), 1316–1321.
64. A. Fiaschi, D. Knees, U. Stefanelli.
[Young-measure quasi-static damage evolution.](#)
Arch. Ration. Mech. Anal., 203 (2012), 2:415–453.

2011

63. R. Rossi, G. Savaré, A. Segatti, U. Stefanelli.
[A variational principle for gradient flows in metric spaces.](#)
C. R. Math. Acad. Sci. Paris, 349 (2011), 1225–1228.
62. E. Spadaro, U. Stefanelli.
[A variational view at the time-dependent minimal surface equation.](#)
J. Evol. Equ., 11 (2011), 4:793–809.
61. A. Mielke, U. Stefanelli.
[Weighted energy-dissipation functionals for gradient flows.](#)
ESAIM Control Optim. Calc. Var., 17 (2011), 1:52–85.
60. F. Auricchio, A.-L. Bessoud, A. Reali, U. Stefanelli.
[A three-dimensional phenomenological model for Magnetic Shape Memory Alloys.](#)
GAMM-Mitt., 34 (2011), 1:90–96.
59. A.-L. Bessoud, U. Stefanelli.
[Magnetic Shape Memory Alloys: three-dimensional modeling and analysis.](#)
Math. Models Meth. Appl. Sci., 21 (2011), 5:1043–1069.
58. R. Rossi, A. Segatti, U. Stefanelli.
[Global attractors for gradient flows in metric spaces.](#)
J. Math. Pures Appl. (9), 95 (2011), 2:204–244.

57. P. Krejčí, U. Stefanelli.
Existence and non-existence for the full thermomechanical Souza-Auricchio model of shape memory wires. *Math. Mech. Solids*, 16 (2011), 4:349–365.
56. U. Stefanelli.
The De Giorgi conjecture on elliptic regularization.
Math. Models Meth. Appl. Sci., 21 (2011), 6:1377–1394.
55. M. Eleuteri, L. Lussardi, U. Stefanelli.
A rate-independent model for permanent inelastic effects in shape memory materials.
Netw. Heterog. Media, 6 (2011), 1:145–165.
54. G. Akagi, U. Stefanelli.
Weighted energy-dissipation functionals for doubly nonlinear evolution.
J. Funct. Anal., 260 (2011), 9:2541–2578.
53. S. Frigeri, P. Krejčí, U. Stefanelli.
Quasistatic isothermal evolution of shape memory alloys.
Math. Models Meth. Appl. Sci., 21 (2011), 12:2409–2432.
52. G. Akagi, U. Stefanelli.
Periodic solutions for doubly nonlinear evolution equations.
J. Differential Equations, 251 (2011), 1790–1812.

2010

51. P. Krejčí, U. Stefanelli.
Well-posedness of a thermo-mechanical model for shape memory alloys under tension.
M2AN Math. Model. Numer. Anal., 44 (2010), 6:1239–1253.
50. G. Akagi, U. Stefanelli.
A variational principle for doubly nonlinear evolution.
Appl. Math. Lett., 23 (2010), 9:1120–1124.
49. A. Mielke, L. Paoli, A. Petrov, U. Stefanelli.
Error estimates for space-time discretizations of a rate-independent variational inequality.
SIAM J. Numer. Anal., 48 (2010), 5:1625–1646.

2009

48. U. Stefanelli.
A variational characterization of rate-independent evolution.
Math. Nachr., 282 (2009), 11:1492–1512.
47. U. Stefanelli.
Some remarks on convergence and approximation for a class of hysteresis problems.
Istit. Lombardo Accad. Sci. Lett. Rend. A, 140 2006 (2009), 81–108.
46. U. Stefanelli.
The discrete Brezis-Ekeland principle.
J. Convex Anal., 16 (2009), 1:71–87.
45. U. Stefanelli, A. Visintin.
Some nonlinear evolution problems in mixed form.
Boll. Unione Mat. Ital. (9), 2 (2009), 303–320.

44. F. Auricchio, A. Reali, U. Stefanelli.
[A macroscopic 1D model for shape memory alloys including asymmetric behaviors and transformation-dependent elastic properties.](#) *Comput. Methods Appl. Mech. Engrg.*, 198 (2009), 1631–1637.

2008

43. A. Mielke, T. Roubíček, U. Stefanelli.
 [\$\Gamma\$ -limits and relaxations for rate-independent evolutionary problems.](#) *Calc. Var Partial Differential Equations*, 31 (2008), 3:387–416.
42. R. Rossi, A. Segatti, U. Stefanelli.
[Attractors for gradient flows of non convex functionals and applications.](#) *Arch. Ration. Mech. Anal.*, 187 (2008), 1:91-135.
41. N. Chemetov, M. Monteiro Marques, U. Stefanelli.
[Ordered non-convex quasi-variational sweeping processes.](#) *J. Convex Anal.*, 15 (2008), 2:201–214.
40. L. A. Caffarelli, U. Stefanelli.
[A counterexample to \$C^{2,1}\$ regularity for parabolic fully nonlinear equations.](#) *Comm. Partial Differential Equations*, 33 (2008), 7:1216–1234.
39. F. Auricchio, A. Mielke, U. Stefanelli.
[A rate-independent model for the isothermal quasi-static evolution of shape-memory materials.](#) *Math. Models Meth. Appl. Sci.*, 18 (2008), 1:125–164.
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