# VITO CRISMALE
Curriculum Vitae "ai fini della pubblicazione"

Place: PALAISEAU
Date: 09/10/2019

## Part I - General Information

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| Full Name | Vito Crismale |
| Birthdate | 15/07/1988 |
| Birthplace | Bari, Italy |
| Citizenship | Italian |

## Part II - Education

10/12-09/16 **PhD in Applied Mathematics**, SISSA Trieste (Italy), **cum laude**
Title of the thesis: *Some results on quasistatic evolution problems for unidirectional processes*
Advisors: Prof. G. Dal Maso and Dr. G. Lazzaroni
External referees: Prof. A. Mielke (WIAS Berlin) and Prof. U. Stefanelli (University of Vienna)

10/10-05/12 **M.Sc. in Mathematics (Laurea Magistrale in Matematica)**, Università degli Studi di Bari Aldo Moro, Bari (Italy), *Curriculum in Pure Mathematics*, **110/110 cum laude**
Title of the thesis: *Variational methods and soliton-type solutions for some field equations*
Advisors: Prof. D. Fortunato and Prof. L. Pisani
Field: *Nonlinear Analysis*

August 11 **Summer Courses - Perugia 2011**, Scuola Matematica Interuniversitaria (SMI), Functional Analysis (graduation mark A/A), Differential Equations in Mathematical Physics (graduation mark A/A)

10/07-07/10 **B.Sc. in Mathematics (Laurea Triennale in Matematica)**, Università degli Studi di Bari Aldo Moro, Bari (Italy), *Curriculum in Pure Mathematics*, **110/110 cum laude**
Title of the thesis: *On set-theoretic complete intersections*
Advisor: Prof. M. Barile
Field: *Commutative Algebra*

## Part III - Academic appointments

10/18-09/20 **Standard European Fellow Marie Skłodowska-Curie**, reference laboratory CMAP, École Polytechnique Palaiseau, Post-Doc

10/16-09/18 **Individual fellow FMJH, program *Mathématiques Ingénierie***, *Fondation Mathématique Jacques Hadamard*, reference laboratory CMAP, École Polytechnique Palaiseau, Post-Doc

10/12-09/16 **Doctoral scholarship**, SISSA Trieste, PhD student

## Part IV - Teaching experience

03/19-04/19 Practical excercises TP, *Algorithmes d'Optimisation*, 3rd year of BSc in Mathématiques et Interactions, et Double Licence, Université Paris Sud / Paris Saclay, Orsay, France (14h, French)

09/18-01/19 Course, exercise theoretical (TD) and numerical (TP), *Équations Différentielles Ordinaires*, 3rd year of BSc in Mathematics et Interactions, Université Paris Sud / Paris Saclay, Orsay, France (52,5 h, French)

09/17-01/18 Teaching assistant (TD) of the course *Mathématiques et Calcul*, 1st year of BSc in Mathematics, Université Paris 5 Descartes (72h, French)

09-10/17 Teaching assistant (TD) of the course *Linear Algebra and Optimisation*, 1st year of MSc Data Science for Business, École Polytechnique and HEC Paris (12h, English)

## Part V - Awards and honors (including seminars as invited speaker in congresses)

2011 **Eligible for INdAM National scholarship for Master Students in Mathematics**, 13th classified in Italy, Istituto Nazionale di Alta Matematica "F. Severi" (INdAM)

2007-2010 **INdAM National scholarship for Bachelor Students in Mathematics** for the year 2007-2008, maintained by merit for the following two years, Istituto Nazionale di Alta Matematica "F. Severi" (INdAM)

2010 **Honorable mention for best graduate in Mathematics**, Università degli Studi di Bari Aldo Moro, Bari

2017 **Qualification aux fonctions de Maître de Conférences, Sections 25 et 26** – Qualification for Assistant Professor in France in Pure and Applied Mathematics, 2016

**Invited speaker in the following congresses:**

19/11/19 Workshop *Recent Advances in Mechanics and Mathematics of Materials*, Rome

07/10/19 Journée de Rentrée du CMAP, École Polytechnique Palaiseau, France

15/09/19 XXIV Congress of AIMETA-*Associazione Italiana di Meccanica Teorica e Applicata*-Italian Association of Mechanics, Rome

03/09/19 XV Congress COMPLAS-*Conference on Computational Plasticity*, Barcelone, Spain - Invited section *Theory of Fracture, Crack propagation Criteria, and Crack Tracking Algorithms*, Organizers: Anna Pandolfi, Michael Ortiz

03/03/19 Workshop *Phase-Field Models of Fracture*, BIRS, Banff, Canada

05/02/19 XXVI Congresso Nazionale di Calcolo delle Variazioni, Levico Terme (TN), Italy

03/09/18 *Meeting on Applied Mathematics and Calculus of Variations*, University *La Sapienza*, Rome, Italy

21/03/18 GAMM 89th Annual Scientific Conference, Münich, Germany - Young Researchers' Mini Symposium YR5 *Variational Aspects of Multiscale Modelling in Materials Science*

05/09/17 XXIII Congress of AIMETA-*Associazione Italiana di Meccanica Teorica e Applicata*-Italian Association of Mechanics, Salerno, Italy - Mini Symposium 8

14/02/17 *Miniworkshop on dislocations, plasticity, and fracture*, SISSA, Trieste, Italy

21/07/16 7th European Congress of Mathematics, Berlin, Germany - Mini Symposium 16

04/07/16 11th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Orlando (FL), USA - Special Session 68

20/01/16 XXVI Congresso Nazionale di Calcolo delle Variazioni, Levico Terme (TN), Italy

## Part VI - Funding Information

10/18-09/20 Title: **BriCoFra**, *New ideas for the Variational Approach to Brittle and Cohesive Fracture*, Program: *H2020-MSCA-IF-2017, Action MSCA-IF-EF-ST (Standard EF), Project n.793018*, Grant value: **173076 €**, Principal Investigator (individual grant)

10/16-09/18 Title: *Evolutionary models for elastoplasticity coupled with damage*
Program: Investissement d'avenir project, reference ANR-11-LABX-0056-LMH, LabEx LMH
Grant value: **70000 €**, Principal Investigator (individual grant)

2016 Title: *Multiscale analysis of complex systems with variational methods*
Program: INdAM-GNAMPA Project 2016
Grant value: **3200 €**, Investigator (8 persons in total, coordinator Dr. G. Lazzaroni)

## Part VII - Research Activities

### Organisation of events

2019 Organisation, together with F. Iurlano and G. Orlando, of the Workshop *Calculus of Variations and Applications in Trani*, 28-31 October 2019, Trani (BT), Italy

2018 Organisation, together with G. Lazzaroni, of 2 minisimposia at *Congresso Nazionale 2018 SIMAI-Società Italiana di Matematica Applicata e Industriale*, 02-06 July 2018 Rome, Italy

### Research visits

09-12/12/18 University of Münster, Germany, invited by Prof. M. Friedrich

22-28/11/18 University of Pavia, Italy, invited by Prof. M. G. Mora

02-05/05/18 CMAF Lisbon, Portugal, invited by Prof. N. van Goethem

22-31/01/18 TUM München, Germany, invited by Prof. M. Cicalese

25-28/09/17 University of Brescia, Italy, invited by Prof. R. Rossi

06-10/03/17 University *La Sapienza* of Rome, Italy, invited by Prof. A. Garroni and Dr. R. Alessi

### Other invited talks

26/02/19 Séminaire Modélisation, Analyse et Calcul de l'Institut de Mathématiques de Toulouse, France

10/01/19 University of Brescia, Italy

27/11/18 University of Pavia, Italy

05/11/18 University of Naples, Italy

09/10/18 Séminaire de l'équipe ACSIOM, IMAG Montpellier, France

03/07/18  Congresso SIMAI, minisymposium 28, Rome, Italy

02/05/18  Seminar *Analysis and differential equations*, CMAF, Lisbon, Portugal

06/02/18  Séminaire de l'équipe EDP - IECL, Nancy, France

25/01/18  Münich-Augsburg Analysis Oberseminar - TUM, Münich, Germany

18/01/18  Séminaire de l'équipe Analyse Numérique et EDP - Université Paris Sud, Orsay, France

26/09/17  University of Brescia, Italy

06/03/17  University *La Sapienza*, Rome, Italy

30/01/17  Seminar for the *GdT Calcul des Variations* - University of Paris-Dauphine, France

26/10/15  Analysis Junior Seminars, SISSA, Trieste, Italy

03/09/15  Mathematical Colloquium, University of Bari, Italy

### Editorial activity

- Referee reviewer for Math. Models Methods Appl. Sci. (M3AS), Zeit. Angew. Math. Mech. (ZAMM), Math. Modelling Numer. Anal. (M2AN)

- Reviewer for Mathematical Reviews/MathSciNet

### Participation to congresses/schools (besides invited talk events, main ones)

29-31/10/18  Workshop *New developments in PDEs and related topics*, Università di Napoli, Naples

15-16/06/17  Workshop for G. Francfort's 60th birthday *From Solid Mechanics to Mathematical Analysis*, IHP Paris

2014-2017  Italian Congress on Calculus of Variations, *Convegno Nazionale di Calcolo delle Variazioni*, Levico Terme, (TN), Italy (Every year for one week in February, 4 editions)

2015-2018  Summer schools and meetings at University *La Sapienza*, Rome, organised by A. Garroni et al. (Every year for one week in June or September, 4 editions)

25-28/10/16  Workshop *Geometric Measure Theory, Shape Optimisation, and Free Boundaries*, SISSA, Trieste

19-23/09/16  Conference *A Mathematical Tribute to Ennio De Giorgi* on the occasion of the vigintennial of Ennio De Giorgi's departure, SNS, Pisa

02-05/15  Intensive Trimester *Variational Models for Plasticity and Dislocations*, SISSA, Trieste

10-14/02/14  Winter school on Calculus of Variations in Physics and Materials Science, Würzburg, Germany

### Part VIII - Summary of Scientific Achievements

| Product type | Number | Data Base | Start | End |
|---|---|---|---|---|
| Published Papers | 10 | SCOPUS (9) + WoS (1) | 2016 | 2019 |
| Papers accepted for publications | 2 | | 2018 | 2019 |
| Papers in (minor) revision | 2 | | 2019 | 2019 |
| Papers submitted | 2 | | 2019 | 2019 |

| **Total Impact Factor over Published Papers**: | 15.925 |
| **Total Impact Factor over Published + Accepted Papers**: | 19.035 |
| **Mean Impact Factor over Published Papers**: | 1.5925 |
| **Mean Impact Factor over Published + Accepted Papers**: | 1.58625 |

The Impact Factor is that provided from the database Journal Citation Reports of the Clarivate Analytics (cf. also the public databases `https://apps.clarivate.com/mjl-beta/journal-profile`, `https://scijournal.org/`, and informations on journals web sites)

| **Total citations (published papers)**: | 72 |
| **Average Citations per Product (published papers)**: | 7.2 |
| **Hirsch (H) index**: | 5 |
| **Normalized H index**: | 1.666 |

The academic seniority has been calculated equal to 3 following the indications for *numero di anni di attività accademica* in the Call.

## Part IX - Selected Publications

[1] V. Crismale, *Globally stable quasistatic evolution for a coupled elastoplastic–damage model*, **ESAIM Control Optim. Calc. Var. 22**, 883-912 (2016),
**Journal IF**: 1.540 , **Citations (SCOPUS)**: 15

[2] V. Crismale, G. Lazzaroni, *Viscous approximation of quasistatic evolutions for a coupled elastoplastic-damage model*, **Calc. Var. Partial Differ. Equ. 55 : Art. 17** (2016),
**Journal IF**: 1.532 , **Citations (SCOPUS)**: 20

[3] V. Crismale, *Globally stable quasistatic evolutions for strain gradient plasticity coupled with damage*, **Ann. Mat. Pura Appl. 196**, 641-685 (2017),
**Journal IF**: 1.066 , **Citations (SCOPUS)**: 9

[4] V. Crismale, G. Lazzaroni, *Quasistatic crack growth based on viscous approximation: a model with branching and kinking*, **Nonl. Diff. Eqns. Appl. (NoDEA) 24 : Art. 7** (2017),
**Journal IF**: 1.048 , **Citations (SCOPUS)**: 3

[5] V. Crismale, G. Lazzaroni, G. Orlando, *Cohesive fracture with irreversibility: quasistatic evolution for a model subject to fatigue*, **Math. Models Methods Appl. Sci. (M3AS), 28**, 1371-1412 (2018),
**Journal IF**: 3.127 , **Citations (SCOPUS)**: 10

[6] V. Crismale, G. Orlando, *A Reshetnyak-type lower semicontinuity result for linearised elasto-plasticity coupled with damage in $W^{1,n}$*, **Nonl. Diff. Eqns. Appl. (NoDEA) 25 : Art. 16** (2018),
**Journal IF**: 1.067 , **Citations (SCOPUS)**: 5

[7] A. Chambolle, V. Crismale, *A density result in $GSBD^p$ with applications to the approximation of brittle fracture energies*, **Arch. Ration. Mech. Anal. 232**, 1329-1378 (2019),
**Journal IF**: 2.186 , **Citations (SCOPUS)**: 9

[8] A. Chambolle, V. Crismale, *Compactness and lower semicontinuity in GSBD*, Accepted for publication on **J. Eur. Math. Soc. (JEMS)**, `https://www.ems-ph.org/journals/forthcoming.php?jrn=jems`,
**Journal IF**: 1.78 , **Citations**: N.A.

[9] V. Crismale, *On the approximation of SBD functions and some applications*, Accepted for publication on **SIAM J. Math. Anal.**,
**Journal IF**: 1.334 , **Citations**: N.A.

[**10**] R. Alessi, V. Crismale, G. Orlando, *Fatigue effects in elastic materials with variational damage models: A vanishing viscosity approach*, **J. Nonlinear Sci. 29**, 1041-1094 (2019),
**Journal IF**: 2.017 , **Citations (SCOPUS)**: 0

[**11**] V. Crismale, *Density in SBD and approximation of fracture energies*, **Atti Accad. Naz. Lincei Rend. Lincei Mat. Appl. 30**, 533-542 (2019),
**Journal IF**: 0.69 , **Citations (WoS)**: 0

[**12**] A. Chambolle, V. Crismale, *Existence of strong solutions to the Dirichlet problem for the Griffith energy*, **Calc. Var. Partial Differ. Equ. 58: Art. 136** (2019),
**Journal IF**: 1.652 , **Citations (WoS)**: 1

### Part X - Other Publications

[**13**] A. Chambolle, V. Crismale, *Phase-field approximation of some fracture energies*, In revision with minor modifications requested on **Adv. Calc. Var.**

[**14**] V. Crismale, G. Orlando, *A lower semicontinuity result for linearised elasto-plasticity coupled with damage in $W^{1,\gamma}$, $\gamma > 1$*, In revision with minor modifications requested on **Mathematics in Engineering**

[**15**] V. Crismale, R. Rossi, *Balanced viscosity solutions to a rate-independent coupled elasto-plastic damage system*, Preprint arXiv 1910.03692 (2019), Submitted

[**16**] V. Crismale, M. Friedrich, *Equilibrium configurations for epitaxially strained films and material voids in three-dimensional linear elasticity*, Preprint arXiv 1910.03845 (2019), Submitted