
CONTACTS

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ACADEMIC POSITIONS

Present Associate Professor
2026 Radboud University (NL)

2026 Assistant Professor
2020 Radboud University (NL)

2020 Research Associate
2018 Heriot-Watt University (UK)
Mentor: Dr. David Bourne

2018 Postdoctoral Associate
2015 Carnegie Mellon University (USA)
Mentor: Prof. Irene Fonseca

EDUCATION

2015 Ph.D. in Applied Mathematics, SISSA (Italy) [cum laude]
Advisor: Prof. Massimiliano Morini
Thesis: *On local and global minimizers of some non-convex variational problems*
Four-year fellowship by SISSA

2011 Master Degree in Mathematics, University of Trento (Italy) [cum laude]
Advisor: Prof. Francesco Serra Cassano
Thesis: *The Bernstein problem in the euclidean and sub-riemannian setting*
Two-year scholarship by Opera Universitaria of Trento
Money prize for academic merits "Premio di Merito" by Università di Trento

2008 Bachelor Degree in Mathematics, University of Trento (Italy) [cum laude]
Advisor: Prof. Gabriele H. Greco
Thesis: *The Banach-Tarski's paradox and admissible groups* (in Italian)
Three-year scholarship by Opera Universitaria of Trento

2005 High School Diploma, *Liceo Scientifico Galileo Galilei* - Verona (Italy)
Indirizzo Scientifico-Tecnologico
Thesis: *La sinfonia dei numeri primi* (*The symphony of primes*)

FUNDINGS

PERSONAL GRANTS

2025 NWO Open Competition-M1
Total €363k

2023 NWO Open Competition-M1
Total €315k

CO-APPLICANT

2026 Compositio Mathematica
Co-wrote with Flavian Iurlano, Emanuela Radici, Filippo Riva, and Matthias Ruf
Total €3k to support the workshop *Calculus of Variations and applications to reality*

2025 NDNS+ Special Activity Group
Co-wrote with Marcello Carioni, Yves van Gennip, José Iglesias, Marc Peletier, and Oliver Tse
Total €2k to support the for the activities of the CalcVarNL community

2023 NDNS+ Workshop funding
Co-wrote with Marcello Carioni and Yves van Gennip
Total €2.5k to support the conference *Calculus of Variations NL - 2023*

2022 NWO and NDNS+ Workshop funding
Co-wrote with Laura Scarabosio and Vanja Nikolić
Total €2.4k to support the conference *Nonlinear PDEs: From Analysis to Simulation*

2019 Edinburgh Mathematical Society and Glasgow Mathematical Journal Trust
Co-wrote with David Bourne
Total £4500 to support the conference *Optimal Transports and Optimal Patterns*

AWARDS

2025 Research in Residence at Fondations des Treilles, France
Project: Quasi-crystalline structures in Materials Science

2024 Research in Residence at CIRM, Luminy, France
Project: Phase separations in quasi-crystalline structures

2024 BIRS Research Team, Banff, Canada
Project: Novel effective theories of phase separation in quasi-crystals

2023 Member of the Radboud Young Academy
Selected as new member of the Radboud Young Academy

2024 Nominated for the Science Teaching Award

2023 WiNSt Teaching Award
Winner of the Education Award for 2022-2023

RESEARCH ACTIVITY

RESEARCH ARTICLES

Here you can find the articles of my research, in order of completion.
All manuscripts are available for free on my website.

- [28] R. Cristoferi, J. Deutsch, L. Pignatelli
Low regularity potentials in heterogeneous Cahn-Hilliard functionals
Submitted (2026)
- [27] R. Cristoferi, L. Pignatelli
Phase separation in multiply periodic materials with fine microstructures
Submitted (2025)
- [26] R. Cristoferi, D. van der Gulik
Optimal constant for the trace inequality in BV for domains with corners
Accepted on Involve (2026)
- [25] R. Cristoferi, L. D'Elia
First-order homogenization
Proc. of the Royal Society of Edinburgh. Section A: Mathematics, 35-1 (2026) - Open access
- [24] R. Cristoferi, G. Fissore, M. Morandotti
Geometrically constrained walls in three dimensions
Advances in Mathematical Sciences and Applications, 35-1 (2026)
- [23] R. Cristoferi, R. Ferreira, I. Fonseca, J. A. Iglesias
Monotonicity of the jump set and jump amplitudes in one-dimensional TV denoising
Journal of Nonlinear Science, 36-13 (2025)
- [22] M. Bonacini, R. Cristoferi, I. Topaloglu
A stability inequality for the planar lens partition
Proc. of the Royal Society of Edinburgh: Section A Mathematics, 34-1 (2025) - Open access

- [21] R. Cristoferi, G. Fissore
Two dimensional graph model for epitaxial crystal growth with adatoms
Advances in Calculus of Variations (2025) - Open access
- [20] R. Cristoferi, I. Fonseca, L. Genedi
Homogenization and phase separation with space dependent wells - The supercritical case
SIAM Journal of Mathematical Analysis, 57-2 (2025)
- [19] R. Cristoferi, M.G. Mora, L. Scardia
Shape optimisation for nonlocal anisotropic energies
Communications in Partial Differential Equations, 49-9, pp. 780-804 (2024)
- [18] M. Bonacini, R. Cristoferi, I. Topaloglu
Stability of the ball for attractive-repulsive energies
SIAM J. Math. Anal., 56-1, pp.588-615 (2024)
- [17] R. Cristoferi, I. Fonseca, L. Genedi
Homogenization and phase separation with space dependent wells - The subcritical case
Arch. Rational Mech. Anal., 247, Article number: 94 (2023) - Open access
- [16] M. Bonacini, R. Cristoferi
Area quasi-minimizing partitions with a graphical constraint: relaxation and two-dimensional partial regularity
Journal of Nonlinear Science, 32, Article Number: 93 (2022) - Open access
- [15] R. Cristoferi, I. Fonseca, R. Venkatraman
Phase separation in heterogeneous media
Special AWM volume *Research in the Mathematics of Materials Science* 31 (2022), pp 367-382
- [14] M. Bonacini, R. Cristoferi, I. Topaloglu
Riesz-type inequalities and overdetermined problems for triangles and quadrilaterals
The Journal of Geometric Analysis, 32, Article number: 48 (2022)
- [13] D. Bourne, R. Cristoferi
Asymptotic optimality of the triangular lattice for a class of optimal location problems
Comm. Math. Physics, 387-3, pp. 1549-1602 (2021)
- [12] R. Cristoferi, G. Gravina
On the relaxation of functionals with contact terms on non-smooth domains
Indiana University Mathematical Journal 72 (2021)
- [11] R. Cristoferi, G. Gravina
Sharp interface limit of a multi-phase transition model under non-isothermal conditions
Calc. Var. and Partial Differential Equations, 60, Article number: 142 (2021) - Open access

- [10] M. Bonacini, R. Cristoferi, I. Topaloglu
Minimality of polytopes in a nonlocal anisotropic isoperimetric problem
Nonlinear Analysis, 205 (2021)
- [9] R. Cristoferi
Exact solutions for the denoising problem of piecewise constant images in dimension one
Journal of Applied Analysis, 27-1, pp. 13-33 (2020) - Open access
- [8] M. Caroccia, R. Cristoferi
On the Gamma convergence of functionals defined over pairs of measures and energy-measures
Journal of Nonlinear Science, 30-4 (2020), pp. 1723-1769 - Open access
- [7] R. Cristoferi, M. Thorpe
Large data limit for a phase transition model with the p -Laplacian on point clouds
European J. Appl. Math. 31-2 (2020), pp. 185-231
- [6] R. Cristoferi, I. Fonseca, A. Hagerty, C. Popovici
A homogenization result in the gradient theory of phase transitions
Interf. Free Boundaries 21 (2019), pp. 367-408
- [5] R. Cristoferi, I. Fonseca
Piecewise constant reconstruction of damaged color images
ESAIM: COCV, 25-37, Published online, (2019)
- [4] M. Caroccia, R. Cristoferi, L. Dietrich
Equilibria configurations for epitaxial crystal growth with adatoms
Arch. Rational Mech. Anal. 230-3 (2018), pp. 785-838
- [3] R. Cristoferi
A second order local minimality criterion for the triple junction singularity of the Mumford-Shah functional
ESAIM: COCV 24-1 (2018), pp. 401-435
- [2] R. Cristoferi
On periodic critical points and local minimizers of the Ohta-Kawasaki functional
Nonlin. Anal. 168 (2018), pp. 81-109
- [1] M. Bonacini, R. Cristoferi
Local and global minimality results for a nonlocal isoperimetric problem on \mathbb{R}^N
SIAM J. Math. Anal. 46-4 (2014), pp. 2310-2349

REPORTS AND PROCEEDINGS

- [3] R. Cristoferi
Phase separation in heterogeneous media
Calculus of Variations. Oberwolfach Reports - Organized by: Lia Bronsard, László Székelyhidi, Yoshihiro Tonegawa, Tatiana Toro (2022)

- [2] R. Cristoferi
Clustering of Big Data: consistency of a nonlocal Ginzburg-Landau type model
Rendiconti del seminario matematico di Torino, 77-2 (2019), 7-31
- [1] M. Bonacini, R. Cristoferi
Local and global minimality results for a nonlocal isoperimetric problem on \mathbb{R}^N
Rendiconti Lincei - Matematica e Applicazioni 27-1 (2016), 37-50

REVIEW ARTICLES

- [1] M. Bonacini, R. Cristoferi, I. Topaloglu
Alexandrov's Soap Bubble Theorem for Polygons
Am. Math. Mon. 1–10 (2025)

- July 2026 Co-organizer with Leonardo Del Grande Josè Iglesias, of the workshop *Calculus of Variation NL - 2026* in Roermond
- June 2026 Co-organizer with Flaviana Iurlano, Emanuela Radici, Filippo Riva, and Matthias Ruf of the workshop *Calculus of Variation and Application to Reality* in Cortona
- March 2026 Organizer of the symposium *Optimal strategies* at Radboud University
- March 2026 Co-organizer with Janna van Hassen of the event *Mathematics for sustainability* at Radboud University
- November 2024 Co-organizer with Janna van Hassen of the event *Mathematics for sustainability* at Radboud University
- July 2023 Co-organizer with Marcello Carioni and Yves van Gennip of the workshop *Calculus of Variation NL - 2023* on Schiermonnikoog
- May 2022 Co-organizer with Marco Bonacini, Elisa Davoli and Marco Morandotti of the workshop *Beyond Elasticity: advances and research challenges* at CIRM Luminy
- March 2022 Co-organizer with Vanja Nikolić and Laura Scarabosio of the workshop *Nonlinear PDEs: From Analysis to Simulation* at Radboud University
- May 2021 Co-organizer with David Bourne of the mini-symposium *Geometric Optimization Problems in Materials Science* at the SIAM Conference on Mathematical Aspects of Materials Science (online)
- September 2019 Co-organizer with David Bourne of the conference *Optimal Transport and Optimal Patterns* at ICMS (Edinburgh), 2-5 September 2019
- July 2018 Co-organizer with Irene Fonseca and Giovanni Leoni of the minisymposium *Variational Methods in Material Sciences* at the SIAM Conference on Mathematical Aspects of Materials Science
- Spring 2017 Organizer of the CNA Working Group on *The use of variational techniques in the study of sequences of elliptic operators*
- 2013 - 2015 Ideator/Organizer of the AJS (Analysis Junior Seminars) at SISSA
 A series of weekly seminars in order to make each Ph.D./Postdoc student present her/his research to the Analysis area. This activity has been well appreciated by the students and will (hopefully!) continue over the years. The complete list of seminars is available at: <http://www.math.sissa.it/content/ajs-seminars>

2026 - present Board member of the Faculty of Science Honours Academy

2026 - present Member of the Mathematics Program Committee (OLC)

2023 - 2027 Member of the Radboud Young Academy

Organization of activities for young researchers, and participation in working group involved in the decision of university policies. I was the chair of the Interdisciplinary team and of the Internationalization team

2024 - 2026 Jury member for the IMAPP PhD Communication Award

2021 - Present Member of the Board of CalcVarNL

Organize activities aimed at increasing the national and international visibility of the researcher in Calculus of Variations in the Netherlands, fostering interaction among its members, and offering master courses at the national level, as well as PhD schools

2021 - 2026 Member of the PR Committee of the Mathematical Department

Organize activities aimed at increasing the visibility of the Math Department among future students and the general public

2020 - 2022 Member of the Advisory Board of the Mathematical Department

The Advisory Board is aimed at helping the Head of the Department with administrative duties

2021 - 2024 President of the SISSA Alumni Society

2018 - 2021 Vice-President of SISSA Alumni Society

The SISSA Alumni Society was founded in October 2018 by a small group of volunteers with the main idea of fostering the sense of community of the School by giving the possibility to the Alumni to connect with each other and thus to create a personal and professional network. Among ordinary administrative activities, I am the Editor-in-Chief of the Society Bulletin, and I co-organize with Matteo Casati and Carmen Falcone the series of webinars *Tales from the AfterSISSA*. Website of the Society: <https://alumni.sissa.it/>

2013 - 2015 Vice-President of the SISSA Club

SISSA Club is a student association that organizes extra-curricula activities with the purpose to offer a wide variety of occasions for SISSA students for meeting together in a non academic environment. Our directive board was able to strengthen the association, making it a fundamental part of SISSA social life. As Deputy Chairman I looked after the organization of the activities proposed for 2013-2015, collaborating with the Director, the administration, and SISSA Medialab

PHD STUDENTS

2025-2029 Christos Frysalis
 2023-2027 Luca Pignatelli
 2021-2025 Gabriele Fissore

MASTER STUDENTS

2025 Maaïke Maas, Rein Liefferink
 2024 Nathan Kruizinga
 2023 Thijs Maessen, Hymke ten Have

BACHELOR STUDENTS

2026 Jarno Keijer
 2024 Jasmijn van Tillo, Josien van den Tempel
 2023 Tom Hegeman, Devin van der Gulik

TEACHING ACTIVITY

Fall 2025 Analysis in several variables
 Radboud University - Bachelor Course

Fall 2025 Bachelor seminar
 Radboud University - Bachelor Course - Co-taught with Sep Thijssen

Spring 2025 Calculus of Variations
 Mastermath master course at Radboud University - Co-taught with Annika Bach (Tu Eindhoven)

Fall 2024 Analysis in several variables
 Radboud University - Bachelor Course

Fall 2024 Bachelor seminar
 Radboud University - Bachelor Course - Co-taught with Sep Thijssen

Spring 2024 Calculus of Variations
 Radboud University - Master Course

Fall 2023 Analysis 2
 Radboud University - Bachelor Course

Spring 2023 Calculus of Variations
 Co-taught with Stefanie Sonner
 Radboud University - Mastermath master Course

- Fall 2022 Analysis 2
Radboud University - Bachelor Course
- Fall 2021 Gamma Convergence
Radboud University - Master Course
- 2021-2022 Master Seminar
Co-taught with Magdalena Kedziorek
Radboud University - Master Course
- Fall 2021 Linear Algebra
Radboud University - Bachelor Course for Molecular Science Students
- Spring 2021 Optimal Transport
Radboud University - Master Course
- 2020-2021 Master Seminar
Co-taught with Magdalena Kedziorek
Radboud University - Master Course
- Fall 2018 MIGSAA Taster Project
Co-supervised with David Bourne
Project for first year MIGSAA Ph.D. students (Edinburgh) on optimal transport and applications
- Fall 2017 Differential Equations (21-260)
Carnegie Mellon University - undergraduate course
- Spring 2017 Introduction to PDEs (21-272)
Carnegie Mellon University - undergraduate course
- Spring 2016 Selected Topics in Analysis: Calculus of Variations (21-470)
Carnegie Mellon University - undergraduate course
- 2009 - 2010 Tutor for the courses of *Analysis I* and *Geometry I (Linear Algebra)* University of Trento
- 2008 - 2010 Classes held at Scientific High School Galileo Galilei - Verona
Series of lessons aimed at helping students in the need to catch up with math

COURSES AT SCHOOLS

- 6th-11th July 2025 *An outlook on phase separation in composite media*
CalcVarNL Workshop - Roermond - The Netherlands

- 8th May *Discreteness makes you think*
 2022 Singularities in discrete systems
 MFO - Oberwolfach - Germany
- 21st November *Nonlocal attractive-repulsive energies*
 2024 Jornadas de Análisis Geométrico en O'Higgins
 Online
- 11th July *Geometric models for phase separation in heterogeneous media*
 2024 Workshop of Calculus of Variations NL
 Dorpshuis - Schiermonikoog - The Netherlands
- 2nd April *Shape optimization for attractive-repulsive energies*
 2024 NDNS+ Session at the NMC
 Conference Center De Werelt - Lunteren - The Netherlands
- 1st February *Phase transitions in media with fine periodic microstructures*
 2024 Calculus of Variations in Siena
 University of Siena - Siena - Italy
- 12th October *Shape optimization for attractive-repulsive energies*
 2023 Colloquium Wilhelm Killing, Mathematik Münster
 University of Münster - Münster - Germany
- 26th June *Three questions on Riesz energies*
 2023 Emerging Trends in Variational Models of Materials
 CRM - Montréal - Canada
- 15th December *Phase separation in heterogeneous materials*
 2022 Seminar in PDE and Applications
 TU Delft - Delft - The Netherlands
- 15th August *Phase separation in heterogeneous media*
 2022 Calculus of Variations
 MFO - Oberwolfach - Germany
- 20th July *Nonlocal energies and polytopes*
 2022 Theoretical and Applied Aspects for Nonlocal Models
 BIRS - Banff - Canada
- 21st June *The effect of corners in the relaxation of functionals with bulk and boundary energies*
 2022 Conference on honour of Irene Fonseca's 65th birthday
 TU Wien - Vienna - Austria
- 28th January *Thin films of diblock copolymer*

- 2022 VCU Logic, Analysis and Physics Seminar
Virginia Commonwealth University - Online
- 19th January *Crystallization into the triangular lattice in the plane for a family of concave entropies*
2022 CASA Colloquium
TU Eindhoven - Online
- 20th May *On nonlocal energies in the class of polytopes*
2021 SIAM Conference on the Mathematical Aspects of Materials Science - Online
- 20th May *A variational model for epitaxial crystal growth with adatoms*
2021 SIAM Conference on the Mathematical Aspects of Materials Science - Online
- 26th April *Interaction between phase transition and homogenization in a model for liquid-liquid phase separation*
2021 Cardiff Analysis Seminar - Online
- 17th March *The effect of corners in the relaxation of functionals with boundary contact energy*
2021 Departmental seminar of the University of Jyväskylä - Online
- 17th October *Epitaxial growth with adatoms*
2019 Departmental seminar
University of Glasgow - Glasgow - UK
- 2nd September *Clustering of Big Data: consistency of a nonlocal Ginzburg-Landau type model*
2019 Optimal Transport and Optimal Patterns
ICMS - Edinburgh - UK
- 18th July *Equilibria configurations for epitaxial crystal growth with adatoms*
2019 ICIAM
Valencia - Spain
- 24th April *Clustering of Big Data: consistency of a nonlocal Ginzburg-Landau type model*
2019 British Applied Mathematics Colloquium
Institute for Mathematical Innovation - Bath - UK
- 9th April *Clustering of Big Data: consistency of a nonlocal Ginzburg-Landau type model*
2019 Analysis and applications: contributions from young researchers
Politecnico di Torino - Torino - Italy
- 1st April *Clustering of Big Data: consistency of a nonlocal Ginzburg-Landau type model*
2019 Annual meeting of the GAMM activity group
TUM Science and Study Center Raitenhaslach - Raitenhaslach - Germany
- 20th March *Clustering of Big Data: consistency of a nonlocal Ginzburg-Landau type model*
2019 Workshop on Calculus of Variations

University of Sussex - Brighton - UK

- 1st March 2019 *Clustering of Big Data: consistency of a nonlocal Ginzburg-Landau type model*
Departmental seminar
Cambridge University - Cambridge - UK
- 28th February 2019 *Equilibria configurations for epitaxial crystal growth with adatoms*
Departmental seminar
Cambridge University - Cambridge - UK
- 22nd February 2019 *On a liquid-liquid phase transitions model with small scale heterogeneities*
Departmental seminar
Durham University - Durham - UK
- 22nd October 2018 *On a liquid-liquid phase transitions model with small scale heterogeneities*
Departmental seminar
University of Sussex - Brighton - UK
- 9th July 2018 *Equilibria configurations for epitaxial crystal growth with adatoms*
SIAM Conference on Mathematical Aspects of Materials Science
Oregon Convention Center - Portland, Oregon - USA
- 21st May 2018 *Equilibria configurations for epitaxial crystal growth with adatoms*
Topics in the Calculus of Variations: Recent Advances and New Trends
BIRS - Banff, Alberta - Canada
- 25th July 2017 *Periodic critical points of the Ohta-Kawasaki functional*
Mathematical Congress of the Americas
Montréal - Canada
- 1st July 2016 *Periodic critical points of the Ohta-Kawasaki functional*
IMA Conference on Dynamical Systems, Differential Equations and Applications
Hyatt Regency - Orlando, Florida - USA
- 17th June 2016 *An isoperimetric problem with nonlocal repulsive interaction*
PIMS Workshop on Nonlocal Variational Problems and PDEs
University of British Columbia - Vancouver - Canada

- 5th February 2015 *Questioni di minimalità locale e globale per un problema isoperimetrico non locale su \mathbb{R}^N*
XXV National Meeting of Calculus of Variations
Hotel Bellavista - Levico Terme (TN) - Italy
- 31th July 2014 *Local and global minimality results for a nonlocal isoperimetric problem on \mathbb{R}^N*
Trends in Non-Linear Analysis 2014
Instituto Superior Técnico - Lisbon - Portugal
- 8th July 2014 *Local and global minimality results for a nonlocal isoperimetric problem on \mathbb{R}^N*
ERC School on Free Discontinuity Problems
Centro di ricerca matematica Ennio De Giorgi - Pisa - Italy

PRESENTATIONS

- 15th May 2024 *Geometric models for phase separation in heterogeneous media*
Ludwig Maximilian University - München - Germany
- 30th November 2023 *Crystallization into the triangular lattice in the plane for a family of concave entropies*
University of Twente - Twente - The Netherlands
- 24th October 2023 *Phase separation in heterogeneous media*
University of Vienna - Vienna - Austria
- 6th April 2023 *Optimality properties of polygons*
Aachen University - Germany
- 14th March 2023 *Optimality properties of polygons*
Séminaire d'Analyse - UC Louvain - Belgium
- 8th March 2023 *Optimality properties of polygons*
PDE seminar - Wien - Austria
- 3rd November 2022 *The effect of corners in the relaxation of functionals with bulk and boundary energies*
University of Trento - Trento - Italy
- 25th October 2022 *Phase separation in heterogeneous materials*
University of Pavia - Pavia - Italy
- 29th November 2021 *Variational methods for pattern formation in natural systems*
RICH monthly meeting - Online
- 15th September 2021 *The legend of the Namibian dragon and the saga of the nuclear pasta*
WiNSt opening of the Academic year - Radboud University - Nijmegen - NL
- 9th June 2021 *Consistency of clustering methods in semi-supervised learning*
AI Cafe of RU - Online

- 20th January 2021 *Analisi di un modello per la ricostruzione di immagini a colori danneggiate*
Presentazione del Gruppo UMI MIVA - Online
- 12th November 2020 *A quick tour in the Calculus of Variations*
Mathematics Online Lunch Seminar
Radboud University - Nijmegen - NL
- 24th April 2020 *Triangular: a seminar in three acts*
Analysis Virtual Seminars
Heriot-Watt & Edinburgh University - Edinburgh - UK
- 5th February 2020 *Epitaxial growth with adatoms*
WIAS - Berlin - Germany
- 21st November 2019 *Epitaxial growth with adatoms*
Carnegie Mellon University - Pittsburgh - USA
- 15th January 2019 *Clustering of Big Data: consistency of a nonlocal Ginzburg-Landau type model*
University of Parma - Parma - Italy
- 10th January 2019 *Equilibria configurations for epitaxial crystal growth with adatoms*
University of Pavia - Pavia - Italy
- 9th November 2018 *Epitaxial growth with adatoms*
Heriot-Watt University - Edinburgh - UK
- 9th June 2017 *Equilibria configurations for epitaxial crystal growth with adatoms*
University of Würzburg - Würzburg - Germany
- 17th February 2017 *On the denoising problem for piecewise constant images in dimension one*
Virginia Commonwealth University - Richmond, Virginia - USA
- 1st September 2015 *On local and global minimizers of two sharp Ohta-Kawasaki energies*
CNA seminars
Center for Nonlinear Analysis - Carnegie Mellon University - Pittsburgh - USA
- 27th March 2015 *Everything you always wanted to know about the Mumford-Shah functional
(but were afraid to ask)*
AJS seminars
SISSA - Trieste - Italy
- 21th March 2014 *Stability and minimality for a nonlocal isoperimetric problem*
AJS seminars
SISSA - Trieste - Italy

- 14th September Public lecture
- 2022 On 14 September 2022 I gave a public lecture titled The beauty and power of patterns and shapes where I guided the audience through a journey into the wonders of self-assembly in nature and the applications they inspired. The lecture was one of the events organized by the PR Committee of the Math Department for the cultural program in occasion of the Imaginary exhibition that Radboud University hosted from 3 to 23 September.
- 10th November Workshop on Turing Machine
- 2021 Every year, DESDA, the math student association of Radboud university, organizes a symposium, with seminars and activities with faculty. In 2021, I ran a workshop to make students discover the wonders and the power of the Turing Machine. Groups of students challenged themselves in solving problems with the language of the universal machine. The only tools allowed? Pen and toilet paper!
- 7th March CMU Science Jam
- 2018 In 2017 Carnegie Mellon University organized the first Science Jam event: an occasion to foster the interaction between researchers of different disciplines. Each participant had to present a piece of own research in a fun, friendly and fast-paced environment. It was a really good occasion to use Arlecchino to talk about homogenization
- 29th May Conference at Lyceum International Club of Firenze
- 2017 I had the honor and the pleasure to give a conference at the Lyceum International Club of Firenze titled *Il pennello di Galileo (Galileo's brush)*, about the role of Mathematics in scientific investigation, and how it can be used to recolor damaged images
- 4th April Interview for *OggiScienza*
- 2016 I was interviewed by Luisa Alessio for OggiScienza (italian online magazine about research) on how to use Mathematics, in particular the Calculus of Variations, in the treatment of images. The complete interview (in italian) can be found here: <https://oggiscienza.it/2016/04/04/matematica-immagine-modello-energia/>
- February 2015 Videos for the website *SISSA per la Scuola*
- Thanks to Lisa Zillio we made three videos that are now available on the site <http://medialab.sissa.it/sissaperlascuola/it>. The first two are presentations of myself for primary and high school students. In the third one, titled *Il migliore dei mondi possibili*, I give a general overview of the Calculus of Variations, talking about minimization problems, the least action principle and the Mumford-Shah functional in a language understandable by high school students
- 11th February Special day for high school students at SISSA
- 2015 Presentation of the seminar *Chi se ne importa della matematica. (Who cares about math?)*, about the role of mathematics in real life applications
- 26th - 28th Activity for the general public for *SISSA@TriesteNext*
- September 2014 Interactive activity for childrens about caustics and presentation of the seminar *Chi se ne importa della matematica. (Who cares about math?)*
- 13th June 2014 Activity for the general public for *SISSA in Festa*
- In collaboration with M. Casati we organized a workshop on caustics for adults and children

Jan - Apr 2014 Attended the *SISSA for school* training course in communication of science

A six days course for SISSA volunteers, organized by Simona Cerrato, on talking about science in different contexts. Courses held by N. Pitrelli, V. Daelli, P. Rodari, E.M. Balli and B. Markicevic. Last day was devoted to a trip to the House of Experiments in Ljubljana (Slovenia)

January 2014 Supplementary worksheets for a middle school textbook edited by Fabbri

Author on the behalf of SISSA Medialab of three fact sheets titled *The four colours theorem*, *Cantor and the infinity* and *The other mathematics* (about the ancient and medieval indian, chinese and arabian maths), that have been published on a teacher guide integrated in the textbook by Gilda Flaccavento Romano edited by Fabbri, Milano, 2014

2013 - 2015 Volunteer for *SISSA for School*

Several activities to present the word of academic research to elementary, middle and high school students

LANGUAGES

Italian Native
English Fluent
Dutch In progress

Last update: 16th April 2026