Luciano Marzufero

Curriculum Vitae et Studiorum

Current position

Feb. 2022 – ongoing	**Research fellow**, Mathematics, *University of Trento*.

Education

19th July, 2022	**Ph.D.** (with scholarship), Mathematics, XXXIV Cycle, *University of Trento*. Thesis title: *Some optimal visiting problems: from a single player to a mean-field type model.* Supervisor: Prof. Fabio Bagagiolo.
12th April, 2018	**Master of Science**, Mathematics (LM-40), *University of Camerino*. Grade: *summa cum laude*. Thesis title: *Soluzioni di viscosità dell'equazione dell'∞–Laplaciano.* Advisor: Prof. Cristina Giannotti.
22th July, 2015	**Bachelor's Degree**, Mathematics (L-35), *University of Camerino*. Grade: *summa cum laude*. Thesis title: *La funzione ζ di Riemann.* Advisor: Prof. Andrea Spiro.
5th July, 2012	**Scientific high school diploma**, *IIS Costanza Varano*. Grade: 88/100.

Teaching and other experiences

Sep. 2021 – Feb. 2022	**Teaching assistant**, Geometria A, *University of Trento*. Exercises lectures, Department of Mathematics, Trento.
Sep. 2020 – Feb. 2021	**Teaching assistant**, Geometria A, *University of Trento*. Exercises lectures, Department of Mathematics, Trento.
Sep. 2019 – Feb. 2020	**Teaching assistant**, Geometria A, *University of Trento*. Exercises lectures, Department of Mathematics, Trento.
Mar. 2018 – June 2018	**Teaching tutor**, Geometria 1, *University of Camerino*. Exercises lectures, Department of Mathematics, Physics, Camerino.
Oct. 2017 – June 2018	**Supporting tutor**, *University of Camerino*. Supporting activity to students, Department of Mathematics, Camerino.
Nov. 2014 – Feb. 2015	**Internship trainee**, Mathematics and Physics, *IIS Costanza Varano*.

Languages

Native language	**Italian**
Other languages	**English**, fluent

Computer skills and competences

Good knowledge	MATLAB, C, LaTeX, LINGO (*LINDO Systems Inc.*)

	Microsoft Office
	Windows, Linux
Fair knowledge	Java, JavaScript

Talks and Seminars

18th September, 2018	Invited seminar: "Viscosity solutions of the ∞–Laplace equation", *University of Trento*.
19th April, 2019	Seminar: "The first order Mean Field Game system: existence via fixed point", *Mean Field Games and Optimal Transport* Ph.D. course, *University of Trento*.
6th June, 2019	Seminar: "Analysis of finite dimensional models for 3D stochastic fluid dynamics", *Nonlinear infinite dimensional stochastic equations* Ph.D. course, *University of Trento*.
28th June, 2019	Seminar: "The continuity equation on metric measure spaces: part 2", *Geometric Measure Theory* Ph.D. and M.Sc. course, *University of Trento*.
27th March, 2020	Seminar: "An optimal visiting mean field game problem", *University of Trento*.
17th June, 2021	Invited seminar: "A hybrid control framework for an optimal visiting problem: from a single player to a crowd", *University of Verona* (online).
9th July, 2021	Contributed talk: "A hybrid control framework for an optimal visiting problem", *7th IFAC Conference on Analysis and Design of Hybrid Systems* (online).
26th October, 2021	Invited seminar: "Some problems in optimal visiting mean field games: continuity equation with sinks and switching representation on a network", *Polytechnic University of Turin*.
26th January, 2022	Invited seminar: "A hybrid control framework for an optimal visiting problem: from a single player to a crowd", *University of Padua* (online).
27th May, 2022	Contributed talk: "A time-dependent switching mean-field game on networks", *100 years Unione Matematica Italiana 800 years Università di Padova*.
14th July, 2022	Contributed talk: "A time-dependent switching mean-field game on networks", *15th Viennese Conference on Optimal Control and Dynamic Games*.
26th July, 2022	Contributed talk: "On a pursuit-evasion game between a single player and a population of agents", *19th International Symposium on Dynamic Games and Applications*.
30th November, 2022	Mini-communication: "On a time-dependent switching mean-field game on networks", *Controllo di Dinamiche e Flussi e Applicazioni socio-logistico-economiche*, *University of Trento*.

Short invited visits

25–28 October, 2021	**Polytechnic University of Turin**, Prof. Adriano Festa.

Participation to conferences, schools and workshops

14–16 January, 2019	Winter School on *Stochastic PDEs and Mean-Field Games*, Bologna.
10–14 June, 2019	Summer School on *Mean Field Games*, Fondazione CIME, Cetraro.
15–19 July, 2019	Conference *ICIAM 2019*, Valencia.
9–13 September, 2019	Conference *Mean Field Games and Related Topics – 5*, Levico Terme.
3–7 February, 2020	Conference *XXX Convegno Nazionale di Calcolo delle Variazioni*, Levico Terme.
18-19 June, 2020	Workshop *Two–days online workshop on Mean Field Games* (online).
7–9 July, 2021	Conference *7th IFAC Conference on Analysis and Design of Hybrid Systems* (online).

9–17 December, 2021	Workshops *Applications to Financial Engineering* and *Mathematical Advances in Mean Field Games*, Chicago.
23–27 May, 2022	Conference *100 years Unione Matematica Italiana 800 years Università di Padova*, Padua.
12–15 July, 2022	Conference *15th Viennese Conference on Optimal Control and Dynamic Games*, Vienna.
25–28 July, 2022	Conference *19th International Symposium on Dynamic Games and Applications*, Porto.
30 November – 2 December, 2022	Informal Scientific Meeting *Controllo di Dinamiche e Flussi e Applicazioni socio-logistico-economiche*, Trento
18–20 January, 2023	Workshop *First order problems on networks and applications*, Rome.

Published papers

1. F. Bagagiolo, A. Festa, L. Marzufero
   A hybrid control framework for an optimal visiting problem.
   IFAC-PapersOnLine **54**(5):241–246 (2021)
   DOI: http://dx.doi.org/10.1016/j.ifacol.2021.08.505

2. F. Bagagiolo, A. Festa, L. Marzufero
   The orienteering problem: a hybrid control formulation.
   IFAC-PapersOnLine **54**(5):175–180 (2021)
   DOI: http://dx.doi.org/10.1016/j.ifacol.2021.08.494

3. F. Bagagiolo, A. Festa, L. Marzufero
   Hybrid control for optimal visiting problems for a single player and for a crowd.
   Nonlinear Differential Equations and Applications **29**, 4 (2022)
   DOI: https://doi.org/10.1007/s00030-021-00737-0

4. F. Bagagiolo, L. Marzufero
   A time-dependent switching mean-field game on networks motivated by optimal visiting problems.
   Journal of Dynamics and Games (2022)
   DOI: http://dx.doi.org/10.3934/jdg.2022019

Preprints

1. F. Bagagiolo, R. Capuani, L. Marzufero
   A single player versus a mass population: a pursuit evasion-like game.
   2022.

2. F. Bagagiolo, E. Bertolazzi, L. Marzufero
   A numerical model for the construction of a non-woven fabric: from the fibers to the bonding case.
   2022.