Curriculum vitae di Cristina Pignotti

Name: Cristina Pignotti

Married, a daughter (2006).

Address: Dipartimento di Ingegneria e Scienze dell'Informazione e Matematica, Università dell'Aquila (DISIM), Italy.

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Positions

Full Professor, Università dell'Aquila, Italy, 2020–today.

Associate Professor, Università dell'Aquila, Italy, 2015–2020.

Research Associate, Università dell'Aquila, Italy, 2002–2015.

Fellowships and Research contracts

Post-doctoral research fellowship, Università di Roma "La Sapienza", April 2002 - December 2002.

INdAM Fellow, Università di Roma "Tor Vergata", June 2001 - March 2002.

Research Contract, Università di Roma "La Sapienza", February - May 2001.

Education

PhD in Mathematics: 2001, Università di Roma "Tor Vergata", Thesis title: "Optimal control problems with exit time: semiconcavity and applications", Advisor P. Cannarsa.

Laurea in Matematica cum laude: 1994, Università di Camerino, Italy.

High school diploma, Liceo Scientifico "B. Rosetti" di San Benedetto del Tronto (AP) (60/60).

Research Interests

Partial Differential Equations

Delay Equations

Control theory

Multiagent systems

PUBLICATIONS

Bibliometry: 727 total citations, H-Index=13 (source: MathSciNet, 9 June 2021)

[**1**] A. Paolucci, C. Pignotti,
"Exponential decay for semilinear wave equations with viscoelastic damping and delay feedback", preprint 2020, ArXiv:2009.07777, to appear on Mathematics of Control, Signals, and Systems.

[**2**] Y.-P. Choi, C. Pignotti,
"Exponential synchronization of Kuramoto oscillators with time delayed coupling", preprint 2019, ArXiv:1910.00980, to appear on Communications in Mathematical Sciences.

[**3**] S. Leonardi, F. Leonetti, C. Pignotti, E. Rocha, V. Staicu,
"Local boundedness for weak solutions to some quasilinear elliptic systems", Minimax Theory and its Applications, Vol. 6 (2021), n. 2, pp. 365–378.

[**4**] Y.-P. Choi, A. Paolucci, C. Pignotti,
"Consensus of the Hegselmann-Krause opinion formation model with time delay", Mathematical Methods in the Applied Sciences. 44 (2021), n.6, pp. 4560–4579.

[**5**] V. Komornik, C. Pignotti,
"Energy decay for evolution equations with delay feedbacks", preprint 2018, ArXiv:1807.06445, to appear on Mathematische Nachrichten.

[**6**] S. Nicaise, C. Pignotti,
"Asymptotic behavior of dispersive electtromagnetic waves in bounded domains", Z. Angew. Math. Phys. 71 (2020), n.3, Paper No. 76, 26 pp.

[**7**] S. Leonardi, F. Leonetti, C. Pignotti, E. Rocha, V. Staicu,
"Maximum principles for some quasilinear elliptic systems", Nonlinear Analysis, Vol. 194 (2020), Article number 111377.

[**8**] V. Komornik, C. Pignotti,
"Well-posedness and exponential decay estimates for a Korteweg-de Vries-Burgers equation with time-delay", Nonlinear Analysis, Vol. 191 (2020), Article number 111646.

[**9**] Y.-P. Choi, C. Pignotti,
"Emergent behavior of Cucker-Smale model with normalized weights and distributed time delays", Networks and Heterogeneous Media, Vol. 14 (2019), pp. 789-804.

[**10**] C. Pignotti, E. Trélat,
"Convergence to consensus of the general finite-dimensional Cucker-Smale model with time-varying delays", Communications in Mathematical Sciences, Vol. 16 (2018), n. 8, pp. 2053-2076.

[**11**] C. Pignotti, I. Reche Vallejo,
"Flocking estimates for the Cucker-Smale model with time lag and ierarchical leadership",

Journal of Mathematical Analysis and Applications, Vol. 464 (2018), pp. 1313–1332.

[12] S. Nicaise, C. Pignotti,
"Well-posedness and stability results for nonlinear abstract evolution equations with time delays",
Journal of Evolution Equations, Vol. 18 (2018), pp. 947–971.

[13] C. Pignotti,
"Stability results for second-order evolution equations with memory and switching time-delay",
Journal of Dynamics and Differential Equations, Vol. 29 (2017), pp. 1309–1324.

[14] G. Fusco, F. Leonetti, C. Pignotti,
"On the asymptotic behavior of symmetric solutions of the Allen-Cahn equation in unbounded domains in $\mathbb{R}^2$",
Discrete and Continuous Dynamical Systems, Vol 37 (2017), pp. 725-742.

[15] G. Fragnelli, C. Pignotti,
"Stability of solutions to nonlinear wave equations with switching time-delay",
Dynamics of Partial Differential Equations , Vol. 13 (2016), pp. 31-51.

[16] S. Nicaise, C. Pignotti,
"Stability of the wave equation with localized Kelvin-Voigt damping and boundary delay feedback",
Discrete and Continuous Dynamical Systems-S , Vol. 13 (2016), pp. 31-51.

[17] K. Ammari, S. Nicaise, C. Pignotti,
"Stability of abstract wave equation with delay and a Kelvin-Voigt damping",
Asymptotic Analysis, Vol. 95 (2015), pp. 21–38.

[18] S. Nicaise, C. Pignotti,
"Exponential stability of abstract evolution equations with time delay",
Journal of Evolution Equations, Vol. 15 (2015), pp. 107–129.

[19] S. Nicaise, C. Pignotti,
"Stability results for second-order evolution equations with switching time-delay",
Journal of Dynamics and Differential Equations, Vol. 26 (2014), pp. 781–803.

[20] S. Nicaise, C. Pignotti,
"Stabilization of second-order evolution equations with time delay",
Mathematics of Control, Signals and Systems, Vol. 26 (2014), pp. 563–58.

[21] K. Ammari, S. Nicaise, C. Pignotti,
"Stabilization by switching time-delay",
Asymptotic Analysis, Vol. 83 (2013), pp. 263–283.

[22] S. Nicaise, C. Pignotti,
"Asymptotic stability of second- order evolution equations with intermittent delay",
Advances in Differential Equations, Vol. 17 (2012), pp. 879–902.

[23] C. Pignotti,
"A note on stabilization of locally damped wave equations with time delay",

Systems & Control Letters, Vol. 61 (2012), pp. 92–97.

[**24**] S. Nicaise, C. Pignotti,
"Exponential stability of second order evolution equations with structural damping and dynamic boundary delay feedback",
IMA Journal of Mathematical Control and Information, Vol. 28 (2011), pp. 417–446.

[**25**] S. Nicaise, C. Pignotti,
"Interior feedback stabilization of wave equations with time dependent delay" ,
Electronic Journal of Differential Equations, Vol. 2011 (2011), n. 41, pp. 1–20.

[**26**] G. Fusco, F. Leonetti, C. Pignotti,
"A uniform estimate for positive solutions of semilinear elliptic equations",
Transactions of American Mathematical Society, Vol. 363 (2011), pp. 4285–4307.

[**27**] S. Nicaise, C. Pignotti, J. Valein,
"Exponential stability of the wave equation with boundary time-varying delay" ,
Discrete and Continuous Dynamical Systems-S, Vol. 4 (2011), n. 3, pp. 693–722.

[**28**] K. Ammari, S. Nicaise, C. Pignotti,
"Feedback boundary stabilization of wave equation with interior delay",
Systems and Control Letters, Vol. 59 (2010), pp. 623–628.

[**29**] S. Nicaise, C. Pignotti,
"Asymptotic analysis of a simple model of fluide-structure interaction",
Networks and Heterogeneous Media, Vol. 3 (2008), n. 4, pp. 787–813.

[**30**] S. Nicaise, C. Pignotti,
"Stabilization of the wave equation with boundary or internal distributed delay",
Differential and Integral Equations, Vol. 21 (2008), n. 9-10, pp. 935–958.

[**31**] G. Fusco, C. Pignotti,
"Estimates for fundamental solutions and spectral bounds for a class of Schrödinger operators",
Journal of Differential Equations, Vol. 244 (2008), n. 3, pp. 514–554.

[**32**] G. Freni, F. Gozzi, C. Pignotti,
"Optimal strategies in linear multisector models: Value function and optimality conditions",
Journal of Mathematical Economics, Vol. 44 (2008), n. 1, pp. 55–86.

[**33**] S. Nicaise, C. Pignotti,
"Energy decay rates for solutions of Maxwell's system with a memory boundary condition",
Collectanea Mathematica, Vol. 58 (2007), n. 3, pp. 327–342.

[**34**] S. Nicaise, C. Pignotti,
"Partially delayed stabilizing feedbacks for Maxwell's system",
Advances in Differential Equations, Vol. 12 (2007), n. 1, pp. 27–54.

[**35**] S. Nicaise, C. Pignotti,

"Stabilization of the wave equation with variable coefficients and boundary condition of memory type",
Asymptotic Analysis, Vol. 50 (2006), n. 1-2, pp. 31–67.

[**36**] S. Nicaise, C. Pignotti,
"Stability and instability results of the wave equation with a delay term in the boundary or internal feedbacks",
SIAM Journal on Control and Optimization, Vol. 45 (2006), n. 5, pp. 1561–1585.

[**37**] S. Nicaise, C. Pignotti,
"Internal and boundary observability estimates for heterogeneous Maxwell's system",
Applied Mathematics and Optimization, Vol. 54 (2006), n. 1, pp. 47–70.

[**38**] S. Nicaise, C. Pignotti,
"Internal stabilization of Maxwell's equations in heterogeneous media",
Abstract and Applied Analysis 2005, n. 7, pp. 791–811.

[**39**] C. Pignotti,
"Semiconcavity results for constrained optimal control problems in a half-space",
Journal of Mathematical Analysis and Applications, Vol. 305 (2005), pp. 197–218.

[**40**] F. Camilli, C. Pignotti,
"A relaxation result for a class of degenerate Hamilton-Jacobi equations",
Differential and Integral Equations, Vol. 18 (2005), pp. 419–430.

[**41**] S. Nicaise, C. Pignotti,
"Boundary stabilization of Maxwell's equations with space-time variable coefficients",
ESAIM Control Optimisation and Calculus of Variations, Vol. 9 (2003), pp. 563–578.

[**42**] C. Pignotti
"Rectifiability results for singular and conjugate points of optimal exit time problems",
Journal of Mathematical Analysis and Applications, Vol. 270 (2002), pp. 681–708.

[**43**] P. Cannarsa, C. Pignotti,
"Semiconcavity of the value function for an exit time problem with degenerate cost",
Le Matematiche, Vol. 55 - Suppl. 2 (2000), pp. 71–10.

[**44**] P. Cannarsa, C. Pignotti, C. Sinestrari,
"Semiconcavity for optimal control problems with exit time",
Discrete and Continuous Dynamical Systems, Vol. 6 (2000), pp. 975–997.

[**45**] C. Pignotti,
"Observability and controllability of Maxwell's equations",
Rendiconti di Matematica e Applicazioni, Serie VII, Vol. 19 (2000), pp. 523–546.

[**46**] L. Fatone, C. Pignotti, M. C. Recchioni, F. Zirilli,
"Time harmonic electromagnetic scattering from a bounded obstacle: an existence theorem and a computational method",
Journal of Mathematical Physics, Vol. 40 (1999), n. 10, pp. 4859–4887.

Referred proceedings and contributions to volumes

[**47**] C. Pignotti, I. Reche Vallejo,
"Asymptotic analysis of a Cucker-Smale system with leadership and distributed delay",
in Trends in Control Theory and Partial Differential Equations, Springer Indam Series,
Vol. 32 (2019), pp. 233-253.

[**48**] C. Pignotti,
"Stability results for abstract evolution equations with intermittent time-delay feedback",
In Solvability, Regularity, and Optimal Control of Boundary Value Problems for PDEs,
Springer Indam Series, Vol. 22 (2017), pp. 469–487.

[**49**] S. Nicaise and C. Pignotti,
" A note on the asymptotic stability of wave-type equations with switching time-delay",
In Evolution Equations:Long Time behavior and Control, London Mathematical Society
Lecture Note Series, Cambridge University Press, Vol. 439 (2017), pp. 137-150.

[**50**] F. Alabau-Boussouira, S. Nicaise, C. Pignotti,
"Exponential stability of the wave equation with memory and time delay"
New Prospects in Direct, Inverse and Control Problems for Evolution Equations, Springer
Indam Series, Vol. 10 (2014), pp. 1–22.

[**51**] S. Nicaise, C. Pignotti,
*"Exponential and polynomial stability estimates for the wave equation and Maxwell's
system with memory boundary conditions"*,
Functional Analysis and Evolution Equations. The Gunter Lumer Volume (2008),
pp. 515–530, Birkhauser Verlag.

[**52**] P. Cannarsa, C. Pignotti,
"Optimal control with state constraints: a semiconcavity result",
in "Proceedings of the 38th Conference on Decision and Control",
IEEE, New York (1999), pp. 436–441.

[**53**] L. Fatone, P. Maponi, C. Pignotti, F. Zirilli, Francesco,
"An inverse problem for the two-dimensional wave equation in a stratified medium", in
"Inverse problems, of wave propagation and diffraction (Aix-les-Bains, 1996)", Lecture
Notes in Phys., Vol. 486, pp. 263–274, Springer, Berlin (1997).

Preprints

[**54**] S. Nicaise, A. Paolucci, C. Pignotti,
*"Bifurcation analysis of a coupled system between a transport equation and an ordinary
differential equation with time delay"*, preprint 2020, ArXiv:2007.09014, submitted.

[**55**] A. Paolucci, C. Pignotti,

"On the control of the Hegselmann-Krause opinion formation model with time delay", preprint 2021, ArXiv:2105.14248, submitted.

Other Publications

[**56**] C. Pignotti,
" *Problemi di controllo ottimo con tempi di uscita: semiconcavità e applicazioni"*,
Bollettino UMI, Serie VIII, Vol. IV-A (2001), pp. 531–534 (Abstract Phd Thesis).

Research Visits

September 2019: "Professeur invité", Université Polytechnique Hauts-de-France, Valenciennes, Prof. S. Nicaise (1 week).

June 2017: Institut de Mathématiques de Jussieu, Université Pierre et Marie Curie (Paris 6), Prof. H. Frankowska (1 week).

May 2012: Mathematics Department, Université de Monastir, Prof. K. Ammari (1 week).

March 2011: Academy of Mathematics and System Sciences, Chinese Academy of Sciences, Beijing, Prof. X. Zhang (1 week).

May 2009: Mathematics Department, Université de Monastir, Prof. K. Ammari (1 week).

June 2008: Université de Valenciennes, France, Prof. S. Nicaise (1 week).

2005 : "Professeur invité", Université de Valenciennes, Prof. S. Nicaise (1 month May 2005 and 1 week December 2005).

December 2004: Université de Valenciennes, Prof. S. Nicaise (1 week).

October 1997: Institut de Recherche Mathèmatique Avancée, Université "Louis Pasteur" de Strasbourg, Prof. V. Komornik (1 week).

Invited talks

- *"Convergence to consensus of the Hegselmann-Krause model with time delay"*, Workshop "Controllability of PDEs in physics models and applied sciences", February 27-28, 2020, Tor Vergata, Rome.

- *"Stability estimates for a Korteweg-de Vries-Burgers equation with feedback delay"*, Workshop "Feedback Control", Special Semester Optimization, November 28-30, 2019, Ricam, Linz.

- *"Convergence to consensus of a Cucker-Smale model with time delay"*, Laboratoire de Mathématiques et leurs Applications, Université Polytechnique Hauts-de-France, September 12, 2019, Valenciennes.

- "*Abstract evolution equations with delay*", XXI Congresso UMI, Special Session "Problemi diretti e inversi per equazioni di evoluzione", September 2-7, 2019, Pavia.

- "*Convergence to consensus of a Cucker-Smale model with time delay*", First Joint Meeting Brazil-France in Mathematics, Special Session "Delay and functional differential equations and applications", July 15-19, 2019, Impa, Rio de Janeiro.

- "*Damped wave equation and time delay effects*" and "*Flocking estimates for a Cucker-Smale model with leadership and distributed delay*", SIAM CT 19, Special Session "Time delay system: overview and some new developments", June 19-21, 2019, Chengdu.

- "*Flocking estimates for a Cucker-Smale model with distributed time delay*", Workshop "Shape Optimization, control and inverse problems for PDEs", Indam Intensive Period, June 10-14, 2019, Napoli.

- "*Emergent behavior of a Cucker-Smale model with distributed time delay*", Workshop "Control Theory and Applications", March 28-29, 2019, GSSI, L'Aquila.

- "*Decay estimates for a Korteweg-de-Vries-Burgers equation with time delay*", IFIP TC 7, Invited Session "Qualitative Analysis and Control Theoretic Properties of Evolutionary Partial Differential Equations", July 23-27, 2018, Essen, Germania.

- "*Stability results for Korteweg-de-Vries-Burgers equations with delay*", SIMAI 2018, Invited Session "Control and inverse problems for evolution equations", Roma, July 2-6, 2018.

- "*Stability results for time delayed evolution equations*", Workshop "New trends in control of evolution systems", GSSI, L'Aquila, April 20-21, 2018.

- "*Flocking estimates for Cucker-Smale models with time delay*", Workshop "Paths in Mathematical Control Theory", Politecnico di Torino, February 26-27, 2018.

- "*Flocking results for the Cucker-Smale model with time delay and hierarchical leadership*", Workshop "1st DECOD -Delays and Constraints in Distributed Parameters Systems", Gif-sur-Yvette, France, November 22-24, 2017.

- "*Asymptotic stability of evolution equations with time delay*", Workshop "Recent advances in PDEs", Università Federico II, Napoli, July 12-14, 2017.

- "*Energy decay estimates for abstract evolution equations with time delay*", Workshop "New Trends in Control Theory and PDEs", INdAM, Roma, July 3-7, 2017.

- "*Flocking results for the Cucker-Smale model with time delay*", Workshop "Differential Equations and Applications", Bologna, Italy, May 22-26, 2017.

- "*A stability result for the wave equation with Kelvin-Voigt damping and delay feedback*", SIMAI 2016, Invited Session "Analysis and control of degenerate evolution equations", Milano, September 13-16, 2016.

- "*On the Cucker-Smale model with time delay*", First Joint Meeting Brazil-Italy in Mathematics, Invited Session "Control and asymptotic of Nonlinear PDE Dynamics", Rio De Janeiro, August 29-September 2, 2016.

- "*Exponential stability of abstract evolution equations with time delay feedback*", Work-

shop "Optimal Control for Evolutionary PDEs and Related Topics", Cortona, Italy, June 20-24, 2016.

- "*Stabilization of viscoelastic wave equations with time delay*", Workshop "Contrôle de EDP et Applications", CIRM, Luminy, Marseille, November 9-13, 2015.

- "*Stability of wave equation with Kelvin-Voigt damping and dynamic boundary delay feedback*", "27th IFIP Conference on System Modelling and Optimization", Invited Session "Well-posedness, control, and observability theories for partial differential equations", Sophia Antipolis, France, June 29-July 3, 2015.

- "*Stability results for the wave equation with intermittent damping*", "27th IFIP Conference on System Modelling and Optimization", Invited Session "Oscillation, Degeneracy and Controllability", Sophia Antipolis, France, June 29-July 3, 2015.

- "*Stability results for a class of second-order evolution equations with intermittent delay*", Workshop "Evolution Equations: long time behavior and control", Chambery, France, June 15-18, 2015.

- "*Exponential stability of damped evolution equations against small delay feedback*", Workshop "Control of Partial Differential Equations @GSSI", GSSI, L'Aquila, April 22-24, 2015.

- "*Exponential stability for abstract evolution equations with delay*", Workshop "PDE's, Inverse Problems and Control Theory 2014", Bologna, September 15-19, 2014.

- "*Asymptotic stability for a class of semilinear evolution equations with time delay*", "The 10th AIMS Conference on Dynamical Systems, Differential Equations and Applications", Invited Session "Analysis and control of nonlinear partial differential equation evolution systems", Madrid, July 7-11, 2014.

- "*Exponential stability for a viscoelastic wave equation with anti–damping/time delay*", "First Joint International Meeting RSME–SCM–SEMA–SIMAI–UMII", Invited Session "Control of PDE: Theory, Numerics, and Applications", Bilbao, Spain, June 30-July 4, 2014.

- "*Stabilization of second–order evolution equations with intermittent time–delay*", Workshop "Controllability and networks", Roma, May 26-28, 2014.

- "*Stability results for Second–Order Evolution Equations with Switching Time–Delay*", "IFIP TC 7 Conference on System Modelling and Optimization", Invited Session "Novel Directions in Control of Evolutionary PDE problems", Klagenfurt, Austria, September 8-13, 2013.

- "*Stabilization of second–order evolution equations with time delay*", Workshop "Differential Equations, Inverse Problems and Control Theory", Cortona, Italy, June 17-21, 2013.

- "*Asymptotic stability of second–order evolution equations with intermittent delay*", Workshop "PDEs, inverse problems and control theory", Bologna, July 16-20, 2012.

- "*Exponential stability of the wave equation with interior time delay*", Mathematics

Department, Université de Monastir, Tunisia, May 30, 2012.

- "*Stability results for wave equations with interior time delay*", "Conference of the European GDR Control of PDEs", Marseille, November 21-23, 2011.

- "*Feedback stabilization of wave equations with time delay*", Academy of Mathematics and System Sciences, Beijing, April 1, 2011.

- "*Exponential stability of the strongly damped wave equation with boundary feedback laws with delay*", Workshop "PDE's, semigroup theory and inverse problems", Bologna, September 1-4, 2010.

- "*Stabilità/instabilità dell'equazione delle onde con un termine di ritardo*", Politecnico di Torino, February 23, 2010.

- "*Feedback boundary stabilization of wave equations with interior delay*", "First workshop of the European Research Group project - Control of Partial Differential Equations", Institut Henri Poincaré, Paris, October 14-16, 2009.

- "*Existence and exponential estimate for positive solutions of a class of semilinear elliptic equations*", " Septièmes journées des equations aux derivées partielles Lille - Littoral - Valenciennes", Valenciennes, France, October 12-13, 2009.

- "*A uniform estimate for positive solutions of semilinear elliptic equations*", Workshop "Mathematical Challenges Motivated by Multi-Phase materials: Analytical, Stochastic and Discrete Aspects", Anogia, Creta, June 21-26, 2009.

- "*Exponential stability of Maxwell's equations with partially delayed feedbacks*", Mathematics Department, Université de Monastir, Tunisia, May 27, 2009.

- "*On a semilinear elliptic boundary value problem*", Workshop "Direct, Inverse and Control Problems for PDEs", Cortona, Italy, September 22–26, 2008.

- "*On a class of semilinear elliptic equations*", Workshop "Viscosity, metric and control theoretic methods in nonlinear PDEs", Roma, September 3–5, 2008.

- "*Stability results for Maxwell's equations with a delay term in the boundary or internal feedbacks*", Workshop "Direct, Inverse and Control Problems for PDEs", Roma, June 25–28, 2007.

- "*Stabilization of the wave equation with boundary condition of memory type*", Workshop "Nonlinear Partial Differential Equations and Applications", Cortona, Italy, June 19–24, 2006.

- "*Observability estimates for heterogeneous Maxwell's system*", Workshop "Inverse and Control Problems for PDEs", Roma, March 13–17, 2006.

- "*Stabilization of the wave equation with partially delayed feedbacks*", Workshop "Partial Differential Equations and Applications", Roma, March 1–3, 2006.

- "*Stabilization of the wave equation with variable coefficients and boundary condition of memory type*", CIRM Workshop "Evolution Equations and Applications", Luminy (France), October 24–28, 2005.

- "*Stabilization of Maxwell's equations in heterogeneous media*", "22° IFIP TC 7 Conference on System Modelling and Optimization", Invited Session "Analysis and optimization of systems modeled by PDEs", Torino, July 18–22, 2005.

- "*Semiconcavità della funzione valore per una classe di problemi di controllo ottimo*", Dipartimento di Matematica, Politecnico di Torino, March 27, 2002.

- "*Regolarità della funzione valore per problemi di controllo ottimo con tempi di uscita*", Università di Roma "La Sapienza", March 21, 2002.

- "*Some observability results for a system of Maxwell's equations*", Workshop "Control and Stabilization of PDEs", Cortona, Italy, May 21–26, 2001.

Other talks

- "*Semiconcavity for optimal control problems with state constraints*", Workshop "Control Systems: Theory, Numerics and Applications", Roma, March 30 – April 1, 2005.

- "*On the value function of an optimal control problem related to an economic model*", Workshop "Hamilton–Jacobi equations", Cortona, June 24–28, 2002.

- "*Semiconcavity for optimal control problems with exit time*", Workshop "Viscosity Solutions and Applications", Bressanone, July 3–5, 2000.

- "*Regularity properties for the value function of an optimal control problem*", Workshop "Mathematical Control Theory and Robotics", Sissa, Trieste, Italy, June 25–27, 2000.

- "*Controllo ottimo con vincoli di stato: un risultato di semiconcavità*", XVI UMI Conference, Naples, Italy, September 13–18, 1999.

- "*Semiconcavity of the value function for an optimal control problem with state constraints*", Workshop "Nonlinear Analysis and Control Theory", Porto, Portugal, June 21–25, 1999.

Editorial activity

- Editorial board: Evolution Equations and Control Theory, April 2018 - today.

- Editoriale board: DEA-Differential Equations and Applications (Ele-Math), January 2019 - today.

- Editorial board: Mathematics, March 2020 - today.

- Editorial board: Abstract and Applied Analysis, July 2012 - November 2019.

- Guest Editor, with P. Cannarsa, G. Floridia and R. Guglielmi, of the volume "Analysis, Control and Inverse Problems for PDEs", Minimax Theory and its Applications, Special Issue, 2021.

- Reviewer for Mathematical Reviews, 2006 - today.

- Referee for the journals:

Acta Applicandae Mathematicae;
Applicable Analysis;
Applied Mathematics and Computation;
Applied Mathematics Letters;
Applied Mathematics and Optimization;
Asymptotic Analysis;
Automatica;
Communication on Pure and Applied Analysis;
Discrete and Continuous Dynamical Systems–B;
Discrete and Continuous Dynamical Systems–S;
Electronic Journal of Differential Equations;
ESAIM: Control, Optimisation and Calculus of Variations;
IMA Journal of Mathematical Control and Information;
Journal of Differential Equations;
Journal of Dynamical and Control Systems;
Journal of Mathematical Analysis and Applications;
Journal of Mathematical Physics;
Kinetic and Related Models;
Mathematical Control and Related Fields;
Mathematical Methods in the Applied Sciences;
Networks and Heterogeneous Media;
Nonlinear Analysis TMA;
Nonlinear Differential Equations and Applications;
Nonlinearity;
Rendiconti del Circolo Matematico di Palermo;
Rendiconti dell'Istituto di Matematica dell'Università di Trieste;
Revista Matematica Complutense;
Ricerche di Matematica;
Systems and Control Letters;
Siam Journal on Control and Optimization;
Siam Journal on Mathematical Analysis;
Zeitschrift für angewandte Mathematik und Physik.

TEACHING ACTIVITY - L'AQUILA

A.A. 2020-21: Analisi Matematica A, Module 1 (6 CFU, Bachelor degree in Mathematics and Bachelor degree in Physics); Analisi Matematica A, Module 2 (1,5 CFU, Bachelor degree in Mathematics and Bachelor degree in Physics); Biomathematics (4,5 CFU, in English, MSc degree in Mathematics, MSc degree in Mathematical Engineering, International Master degree MathMods).

A.A. 2019-20: Analisi Matematica A, Module 1 (6 CFU, Bachelor degree in Mathematics and Bachelor degree in Physics); Analisi Matematica A, Module 2 (3 CFU, Bachelor

degree in Mathematics and Bachelor degree in Physics); Biomathematics (3 CFU, in English, MSc degree in Mathematics, MSc degree in Mathematical Engineering, International Master degree MathMods).

A.A. 2018-19: Analisi Matematica A, Module 1 (6 CFU, Bachelor degree in Mathematics and Bachelor degree in Physics); Analisi Matematica A, Module 2 (3 CFU, Bachelor degree in Mathematics and Bachelor degree in Physics); Biomathematics (3 CFU, in English, MSc degree in Mathematics, MSc degree in Mathematical Engineering, International Master degree MathMods).

A.A. 2017-18: Analisi Matematica A, Module 1 (6 CFU, Bachelor degree in Mathematics and Bachelor degree in Physics); Analisi Matematica A, Module 2 (3 CFU, Bachelor degree in Matemathics and Bachelor degree in Physics); Biomathematics (3 CFU, in English, MSc degree in Mathematics, MSc degree in Mathematical Engineering, International Master degree MathMods).

A.A. 2016-17: Analisi Matematica A, Module 1 (6 CFU, Bachelor degree in Mathematics and Bachelor degree in Physics); Matematica e Statistica (3 CFU, Bachelor degree in Biotechnology); Biomathematics (3 CFU, in English, MSc degree in Mathematics, MSc degree in Mathematical Engineering, International Master degree MathMods).

A.A. 2015-16: Analisi Matematica A, Module 1 (6 CFU, Bachelor degree in Mathematics and Bachelor degree in Physics); Matematica e Statistica (7 CFU, Bachelor degree in Biotechnology); Biomathematics (3 CFU, in English, MSc degree in Mathematics, MSc degree in Mathematical Engineering, International Master degree MathMods).

A.A. 2014-15: Analisi Matematica A, Module 1 (6 CFU, Bachelor degree in Mathematics and Bachelor degree in Physics); Analisi Matematica II (3 CFU, Bachelor Degree in Information Engineering).

A.A. 2013-14: Analisi Matematica A, Module 1 (6 CFU, Bachelor degree in Mathematics and Bachelor degree in Physics).

A.A. 2012-13: Analisi Matematica 3 (6 CFU, Bachelor degree in Mathematics and Bachelor degree in Physics); Analisi Superiore 1 (3 CFU, MSc degree in Mathematics).

A.A. 2011-12: Analisi Matematica 3 (6 CFU, Bachelor degree in Mathematics and Bachelor degree in Physics); Analisi Superiore 1 (3 CFU, MSc degree in Mathematics).

A.A. 2010-11: Analisi Matematica 3 (6 CFU, Bachelor degree in Mathematics), Analisi Superiore 1 (3 CFU, MSc degree in Mathematics).

A.A. 2009-10: Analisi Matematica 3 (6 CFU, Bachelor degree in Mathematics), Analisi Matematica 2 (Bachelor degree in Computer Science).

A.A. 2008-09: Analisi Matematica 1 (6 CFU, Bachelor degree in Physics), Analisi Superiore 1 (3 CFU, MSc degree in Mathematics).

A.A. 2007-08: Analisi Matematica 1 (Bachelor degree in Computer Science), Analisi Matematica 3 (Bachelor degree in Mathematics,).

A.A. 2006-07: Analisi Matematica 2 (Bachelor degree in Mathematics, Tutorial), Analisi

Matematica 2 (1 CFU, Bachelor degree in Computer Science).

A.A. 2005-06: Equazioni Differenziali Ordinarie (Bachelor degree in Mathematics, Tutorial), Analisi Matematica 2 (Bachelor degree in Computer Science).

A.A. 2004-05: Analisi Matematica 2 (Bachelor degree in Mathematics and Bachelor degree in Physics, Tutorial), Equazioni Differenziali Ordinarie (Bachelor degree in Mathematics, Tutorial).

A.A. 2003-04: Elementi di Matematica (Bachelor degree in Computer Science), Equazioni Differenziali Ordinarie (Bachelor degree in Mathematics, Tutorial).

A.A. 2002-03: Calcolo delle Probabilità (Bachelor degree in Computer Science).

SUPERVISION OF MSC THESES

- Ricci Maria Paola (correlatrice), "*Un modello per la dinamica dei materiali granulari*", MSc degree in Mathematics (Laurea Specialistica), A.A. 2011-12;

- Ranieri Tomeo Jessica, "*Effetti di ritardo in equazioni di diffusione con applicazioni biologiche*", MSc degree in Mathematics, A.A. 2014-15;

- Di Pirro Livia, "*Il modello di Cucker e Smale: comportamento asintotico e flocking*", MSc degree in Mathematics, A.A. 2015-16;

- Reche Vallejo Irene, "*Asymptotic analysis of Cucker-Smale models with time delay*", MSc in Mathematical Engineering, MathMods Program, A.A. 2016-17
(2 joint papers with Irene);

- Ruiz I Balet Domenec, "*Asymptotic Analysis and Control of Kinetic Cucker-Smale Models*", MSc in Mathematical Engineering, MathMods Program, A.A. 2016-17
(Domenec is now Phd student at Universidad Autonoma de Madrid under the supervision of E. Zuazua);

- Chernukha Yurii, "*Consensus for Cucker-Smale models with leadership*", MSc degree in Mathematics, InterMaths Program, A.A. 2017-18;

- Paolucci Alessandro, "*Mathematical models for flocking dynamics and opinion formation*", MSc degree in Mathematics, A.A. 2017-18
(Alessandro is now Phd student at University of L'Aquila under my supervision);

- Giulia Dezio, "*Asymptotic analysis of a Cucker-Smale model with singular interactions*", MSc degree in Mathematics, A.A. 2018-19;

- Aida Sarai Figueroa Alvarez, "*The Hegselmann-Krause opinion formation model and control*", MSc degree in Mathematical Engineering, MathMods Program, A.A. 2019-20.

SUPERVISION OF PHD STUDENTS

- Paolucci Alessandro, since November 2018 (2 joint papers, 2 joint preprint).

- Local organizing committee, with D. Amadori, M. Di Francesco, D. Donatelli, K. Engel, S. Fagioli, C. Lattanzio, F. Leonetti, M. Palombaro, M. Rosini, R. Sampalmieri, S. Spirito, of the workshop "The geometry of Banach spaces, random dynamical systems and differential equations", in memory of J. Myjak, November 22-23, 2019, L'Aquila.

- Organizing committee (with G. Floridia and R. Guglielmi) of the Workshop "Analysis, Control and Inverse Problems for PDEs", November 26-30, 2018, Università di Napoli Federico II (framed in the context of the "French-German-Italian Laboratoire International Associé" (COPDESC) in applied analysis).

- Organizing committee (with F. Bucci) of the workshop "Progetto Gnampa 2017 - Comportamento asintotico e controllo di equazioni di evoluzione non lineari", Università di Firenze, October 13, 2017.

- Member of the organizing committee of the workshop "One Day on PDEs @GSSI", May 20, 2015, GSSI, L'Aquila.

- Member of the organizing committee of the workshop "Viscosity, metric and control theoretic methods in nonlinear PDEs", Sptember 27 - October 1, 2004, Serapo, Gaeta, Italy.

- Member of the *Collegio dei Docenti* of the PhD program Matematica e Modelli, Università dell'Aquila, 2013-today.

- Member of the *Collegio dei Docenti* of the PhD program Mathematics, Università dell'Aquila, 2009-2013.

- Member of the Committee "Rapporti con il Territorio" of the DISIM Department, March 2017-today.

- Committee Lauree for Bachelor and MSc degrees in Mathematics, October 2015-today.

- Member of the committee Lauree for MSc degrees in Mathematical Engineering, October 2020-today.

- Member of the committee Orientamento of the CAD in Mathematical Engineering, 2020-today.

- Member of the committee Orientamento of the CdCS in Mathematics, from 2009 to 2012.

- Collaboration with the committee Orientamento of the CAD in Mathematics, since March 2018.

- Member of the CAD in Mathematics, in Mathematical Engineering and in Physics.

- Member of the committee for a position as Ricercatore RTD-A, Università di Roma "La Sapienza", March - April 2019.

- Member of the committee for a position as Ricercatore RTD-B, GSSI, L'Aquila, April 2017.

Other scientific activities and academic services

- Member of the center of excellence "Design methodologies of Embedded controllers, Wireless interconnect and Systems-on-chip" (DEWS), since March 2013.

- Member of the committee for a position as Ricercatore RTD-A, Università di L'Aquila, April - May 2020.

- Member of several committees for research contracts.

- Member of the committee for the admission to the PhD Program Matematica e Modelli, Università dell'Aquila, academic year 2015-16.

- Member of the committee for the admission to TFA, classe abil. A047 - Matematica, academic year 2014-15.

- Member of the committee for the admission to the PhD Program Matematica, Università dell'Aquila, academic year 2009-10.

- Member of the PhD defence committee of Dr. Fatima Al-Zahrà A. N. Aqel, Università dell'Aquila, September 2020.

- Member of the PhD defence committee of Dr. L. Romagnoli, Università dell'Aquila, April 2018.

- Referee of the PhD Thesis of Akram Ben Aissa (University of Monastir), 2015.

- Member of the board assigning Indam starting fellowships for undergraduate students in Mathematics, academic year 2005-06.

Funded projects (as PI)

- Coordinator of the national GNAMPA 2019 research project "Modelli alle derivate parziali per sistemi multi-agente", participants: F. Ceragioli, M. Cirant, C. Marchi, C. Mendico, A. Paolucci, A. Porretta, M. Ricciardi.

- Coordinator of the national GNAMPA 2018 research project "Analisi e controllo di modelli differenziali non lineari", partecipants: V. Basco, F. Bucci, P. Cannarsa, G. Floridia, R. Guglielmi, T. Scarinci, C. Urbani.

- Coordinator of the national GNAMPA 2017 research project "Comportamento asintotico e controllo di equazioni di evoluzione non lineari", partecipants: V. Basco, F. Bucci, P. Cannarsa, G. Floridia, G. Fragnelli, R. Guglielmi, T. Scarinci.

- Project GNAMPA 2020 "Buona positura, regolarità e controllo per alcune equazioni di evoluzione", participant, coordinator L. Caravenna;

- Project "French-German-Italian Laboratoire International Associé" (COPDESC) in applied analysis, participant, italian coordinator P. Cannarsa, since Jenuary 1, 2018 (4 years);

- Project "International Research Group Distributed Parameter Systems and Constraints" del CNRS, participant, local coordinator P. Pepe, since Jenuary 1, 2018 (4 years) .

- Project ICTP- Indam Research in pairs with K. Ammari (Monastir), June 2017;

- Project GNAMPA 2016 "Controllo, regolarità e viabilità per alcuni tipi di equazioni diffusive", participant, coordinator P. Cannarsa;

- Project GNAMPA 2015 "Analisi e controllo di equazioni a derivate parziali nonlineari", participant, coordinator G. Floridia;

- Project GNAMPA 2014 "Controllo moltiplicativo per modelli diffusivi nonlineari", participant, coordinator G. Floridia.

- Project "Metodi analitici e stocastici per lo studio di sistemi complessi" – Prin 2009, participant, coordinator L. Triolo;

- Project "Control of Partial Differential Equations- CNRS, INdAM and Université de Provence" – GDRE, 2010 (4 years + 4), participant, italian coordinator P. Cannarsa.

- Project "Metodi analitici e stocastici per lo studio di sistemi complessi" – Prin 2007, participant, coordinator E. Presutti.

- Strategic project INdAM 2005 "Traffic flows and optimization on complex networks", participant, coordinator B. Piccoli (2 years);

- Project "Metodi di viscosità e metrici per l'analisi di alcune equazioni alle derivate parziali di tipo completamente nonlineare" – Prin 2005, participant, coordinator I. Capuzzo Dolcetta;

- Project "Metodi di viscosità, metrici e di teoria del controllo in equazioni alle derivate parziali nonlineari" – Prin 2002, participant, coordinator I. Capuzzo Dolcetta.

L'Aquila, June 8, 2021   Cristina Pignotti