

CURRICULUM VITAE

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Current position

Assistant Professor

Personal data

Age/Birthday February 8th, 1972

Place of birth Genoa (Italy)

Nationality Italian

Education

Degree in Mathematics – University of Genoa in 1995

PhD in Mathematics – Universities of Genoa and Turin and Politecnico of Turin
in 2001

Language skills

English: very good reading, writing and verbal skills.

French: good reading, writing and verbal skills.

German: basic reading, writing and verbal skills (level A2/1).

Professional experience

- **September 2001 – July 2006** Post-doc position at the Department of Mathematics, University of Genova. Research topic: "Variable structure control for evolution equations".
- **September 2006 – January 2007** Research grant at the Department of

- Mathematics, University of Genova. Research topic: "Sliding mode control of infinite dimensional dynamical systems".
- **April 2007 – July 2007** Research grant at the Department of Mathematics, University of Genova. Research topic: "Sliding mode control of infinite dimensional dynamical systems".
 - **November 2007- May 2008** Research grant at the Department of Mathematics, University of Genova. Research topic: "Sliding mode control of infinite dimensional dynamical systems".
 - **May 2008 – August 2009** Permanent position as secondary school teacher in mathematics.
 - **April 2009 – August 2009** Post-doc position at the Institute of Automatic Control Engineering (LSR), Faculty of Electrical Engineering and Information Technology Technische Universität München (Germany).

Teaching experience

- "Mathematical Analysis 2" tutor for the degree course in Electrical Engineering at the University of Genova for the academic year 1998/1999.
Course topics: advanced calculus.
- "Health Economics" teaching fellow at the Faculty of Economics of the University of Genova - Polo di Imperia for the academic year 1999/2000.
Course topics: applied optimization and mathematical economics.
- "Mathematical Analysis 3" tutor for the degree courses in Electrical Engineering at the University of Genova for the academic year 1999/2000.
Course topics: ordinary and partial differential equations, numerical solution methods.
- Academic years 2005/2006 to 2008/2009: "Mathematical Analysis 1+ Geometry 1" teaching fellow for the degree courses in Mechanical Engineering and Nautical Engineering at Polo di La Spezia – Universities of Genova and Pisa.
Course topics: calculus, linear algebra, plane and space geometry.
- Academic year 2009/2010: "Mathematics I" lecturer for the Bachelor in Logistics and Production Engineering at the Free University of Bozen.
Course topics: calculus, linear algebra, plane and space geometry.

Publications

In refereed journals

- [1] L. Levaggi, A. Tabacco, "Wavelets on the interval and related topics", "Rendiconti del Seminario Matematico - Università e Politecnico di Torino", vol. 57, n. 2, 1999, pp. 123-159.
- [2] L. Levaggi, "Controllo a struttura variabile per equazioni di evoluzione in spazi di Banach", Bollettino UMI, "La Matematica nella Società e nella

Cultura", Serie VIII, Vol. IV-A, Dicembre 2001, pp. 475-478.

- [3] L. Levaggi, "Sliding modes in Banach spaces", "Differential and Integral Equations", Vol. 15, n. 2, February 2002, pp. 167-189.
- [4] L. Levaggi, "Infinite dimensional systems sliding motions", "European Journal of Control", Vol. 8, n. 6, 2002, pp. 508-516.
- [5] L. Levaggi, "High-gain feedback and sliding modes in infinite dimensional systems", "Control & Cybernetics", vol. 33, n. 1, 2004, pp. 33-50 .
- [6] L. Levaggi, E. Punta, "Analysis of a second-order sliding-mode algorithm in presence of input delays", "IEEE Transactions on Automatic Control", vol. 51, n. 8, August 2006, pp. 1325-1332.
- [7] L. Levaggi, S. Villa, "On the regularization of sliding modes", "SIAM Journal on Optimization", vol. 18, n. 3, 2007, pp. 878-894.

In collections

- [8] L. Levaggi, "Discontinuous control in Banach spaces", in "Systems, Control, Modeling and Optimization", edited by F. Ceragioli, A. Dontchev, H. Furuta, K. Marti e L. Pandolfi, IFIP Volume 202, pp. 227-236, Springer, Boston, 2006.
- [9] R. Levaggi, L. Levaggi, "Copayment strategies in a public health care system", in "Il finanziamento del settore pubblico", edited by G. Brosio e G. Muraro, pp. 217-236, Edizioni Franco Angeli, Milano, 2006.

Conference papers

- [10] L. Levaggi, "Infinite dimensional systems' sliding motions", in "Proceedings of the European Control Conference 2001", 2001, pp. 3789-3793. (Peer reviewed)
- [11] L. Levaggi, E. Punta, "Second order variable structure systems: behaviour under an unknown input delay", in "Proceedings of the European Control Conference ECC 2003", Cambridge (UK), September 2003. (Peer reviewed)
- [12] L. Levaggi, E. Punta, "Stabilization of a second order variable structure system with unknown input delay", in "Proceedings of the 4th IFAC Workshop on Time Delay Systems (TDS'03)", INRIA, Rocquencourt (France), September 2003. (Peer reviewed)
- [13] L. Levaggi, E. Punta, "On a second order discontinuous control system with delayed input", in "Proceedings of the 42th IEEE Conference on Decision and Control", vol. 4, Dic. 9-12, 2003, pp. 4062-4067. (Peer reviewed)

- [14] L. Levaggi, "Discontinuous feedback laws for infinite dimensional systems", in "Proceedings of Science", PoS(CSTNA2005)011, SISSA, Trieste.
- [15] L. Levaggi, E. Punta, "Variable structure control with unknown input delay and nonlinear dissipative disturbance", in "Proceedings of the 16th IFAC World Congress", Praha (Czech Republic), July 2005. (Peer reviewed)
- [16] L. Levaggi, "Variable structure control for parabolic evolution equations", in "Proceedings of the Joint 44th IEEE Conference on Decision and Control and European Control Conference ECC 2005", Sevilla (Spain), Dec. 12-15, 2005, pp. 1234-1239. (Peer reviewed)
- [17] L. Levaggi, S. Villa, "Approximability of sliding modes and regularization", in "Proceedings of the 2006 International Workshop on Variable Structure Systems", Alghero, Giugno 2006, pp. 166-171. (Peer reviewed)

Preprints and working papers

- [18] R. Levaggi, L. Levaggi, "Strategic costs and preferences revelation in the allocation of resources for medical treatments", SSRN Working Paper n. 545584, Giugno 2005 and submitted for publication in "International Journal of Health Care Finance and Economics".
- [19] R. Levaggi, L. Levaggi, "Optimal copayment strategies in a public health care system", SSRN Working Paper n. 734923, September 2005 (presented at the XVII Siep Conference, Pavia, September 2005).
- [20] R. Levaggi, L. Levaggi, "Resources allocation in the internal market for hospital care", presented at the National congress of AIES* "Individual and public choices in health care", Genova, November 2005.
- [21] R. Levaggi, L. Levaggi, "Regulation strategies for public service provision", SSRN Working Paper n. 932071, September 2006 (presented to the XVIII Siep* Conference, Pavia, September 2006).
- [22] R. Levaggi, L. Levaggi, "Welfare properties of restrictions to health care based on cost effectiveness", submitted to Health Economics.

Book chapters

- [23] L. Levaggi, Mathematics Appendix in "Economia pubblica", edited by A. Fossati, Edizioni Franco Angeli, 2002.

* Siep is the Italian Public Economics Society. AIES is Italian Health Economics Association.