Vitae of STEFANO BATTILOTTI

- 1962: born in Rome, Italy.

- 1987: laurea cum laude from the Università di Roma "La Sapienza" in Electronic Engineering.

-1988-1989: he works for Landis & Gir, a factory producing sensors for electrical measurements.

- 1989-1992: PHD degrees in System Engineering from the Università di Roma "La Sapienza".

-1993-1998: assistant professor with Dipartimento di Informatica e Sistemistica "Antonio Ruberti", Università di Roma "La Sapienza".

- 1998-2005: associate professor with Dipartimento di Informatica e Sistemistica "Antonio Ruberti", Università di Roma "La Sapienza".

- 2005-: Professor of Automatic Control with Dipartimento di Informatica e Sistemistica "Antonio Ruberti", Università di Roma "La Sapienza".

TEACHING ACTIVITY

- 1993-1994: Automatic Control - Diploma in Computer and System Engineering.

- 1997-1998: Automatic Control - Diploma in Electrical Engineering.

- 2000-2002: Automatic Control - Master degrees in Aerospace Engineering and Degree in Electrical Engineering.

- 2002-2005, 2006-2017: Automatic Control - Master degrees in Aerospace Engineering.

- 2017-: Control Systems - Master degrees in Aerospace Engineering.

- 2002-2003: Automatic Control II - Master degrees in System Engineering.

- 2005-2008: Guidance and Flight Control Systems - Master degrees in Aerospace Engineering.

- 1994-2000: Nonlinear Control - School in Mathematical Methods for the Analysis, Optimization and Control of Systems.

- 1998-2000: Nonlinear Control - Master degrees in Computer and System Engineering.

- 2001-2002: Nonlinear Control - PHD Degrees in System Engineering.

- 2000-2007: Stochastic Control - PHD Degrees in System Engineering.

- 2004-2007: Stochastic Systems - Master degrees in System Engineering.

- 2005-2008: Stochastic Control - Master degrees in System Engineering.

- 2005-2014: System Identification - Master degrees in System Engineering.

- 2014-2020: System Identification and Optimal Control - Master degrees in Control Engineering.

- 2020-: Optimal Control and Filtering - Master degrees in Control Engineering.

- 2021-2022: Advanced Methods in Control - Master degrees in Control Engineering.

- 2015: Homogeneous approximations and stabilization of nonlinear systems - Great Ideas in ICT - PhD Degrees in AUTOMATICA, BIOINGEGNERIA E RICERCA OPERATIVA (ABRO).

- 2016: Stochastic Systems - PhD Degrees in AUTOMATICA, BIOINGEGNERIA E RICERCA OPERATIVA (ABRO).

RESEARCH ACTIVITY

Participation to research programs

- 1992-1998: several MURST 40 % and ASI (Agenzia Spaziale Italiana) projects, among which the "Galileo Galilei" project.

- 1997-1998: Faculty project: "Robust stabilization of nonlinear systems with application to Eulero Lagrange systems".

- 1998-1999: Faculty project: "Disturbance attenuation for nonlinear systems with application to mechanical systems".

- 1999-2000: Faculty project: "Robust control of Hamiltonian systems".

- 2000-2001: Faculty project: "Stochastic control of Hamiltonian systems".

- 2001-2004: European Project on "Intelligent Fault Tolerant Control in Integrated Systems (IFATIS)".

- 2002-2003: Interfaculty project: "Systems for the orbital and set point control of satellites in formation".

- 2004-2006: National project (MURST 40 %) Control of complex systems through bio-inspired technologies.

- 2012-2014: Faculty project: Studio dei sistemi non lineari con ritardo: un approccio geometrico.

- 2013-2015: Faculty project: Studio del sistemi non lineari affetti da ritardo e problemi di disaccoppiamento

- 2014-2016: Faculty project: Sviluppo di metodologie di base per l'analisi dei sistemi non lineari a tempo continuo affetti da ritardo

- 2015-2018: National project (PRIN): COntrol of Networked sySTEms with appLication to interpLAnetary navigaTION (CONSTELLATION)

Coordination of research/mobility programs:

- 2001-2004: Bilateral program SOCRATES, HIGHER EDUCATION (ERASMUS), with the University Joseph Fourier of Grenoble.

- 2001-2004: Bilateral program SOCRATES, HIGHER EDUCATION (ERASMUS), with the Institut Politechnique di Grenoble (INPG).

- 2001-2002: Research program "VINCI" in the framework of Italian-French University (UIF) with the Institut National Polytechnique de Grenoble.

- 2001-2003: Faculty project: "Control strategies for nonlinear systems with noisy measurements".

- 2002-2004: Faculty project: "Fault detection with noisy measurements".

- 2003-2005: Faculty project: "Supervision and control strategies for switching systems".

- 2004-2006: Faculty project: Tecniche di controllo per sistemi non lineari con catene di Markov

- 2005-2007: Faculty project: Controllo di sistemi mobili con misure rumorose

- 2006-2008: Faculty project: Controllo di sistemi su canali rumorosi con ritardo

- 2007-2009: Faculty project: Stabilizzazione di sistemi non lineari con approssimazione lineare non controllabile/non osservabile e reazione dalle misure

- 2008-2010: Faculty project: Controllo remoto di sistemi su reti con ritardo e rumore

- 2009-2011: Faculty project: Problemi di sincronizzazione su reti

- 2010-2012: Faculty project: Consenso e sincronizzazione di reti di sistemi

- 2015-2017: Faculty project: Consenso in probabilita' su reti di agenti non lineari

- 2017-2019: Faculty project: Stima dello stato e rilevazione di guasti con ritardi

- 2020-2022: Faculty project: Progetto di sistemi su reti in presenza di rumori, ritardi e perdite di pacchetto

Research positions

- August 1990-March 1991: Visiting Faculty Research Assistant by the Systems Research Center, College Park, Maryland (US).

- Ottobre 2000: Visiting Professor by the Laboratoire des Signaux et des Systemes of the Ecole Superieur de Electricité, Gif-sur-Yvette, France.

Publications in international journals

- [62] F. Baldisseri, A. Wrona, D. Menegatti, A. Pietrabissa, S. Battilotti, C. Califano, A. Cristofaro, P. Di Giamberardino, F. Facchinei, L. Palagi, A. Giuseppi, F. Delli Priscoli, Deep Neural Network Regression to Assist Non-invasive Diagnosis of Portal Hypertension, Healthcare, 2023.

- [61] S. Battilotti, Design of observers with gain adaptation for systems with disturbances: an orbital symmetry-based approach, Automatica, 149, 2022, https://doi.org/10.1016/j.automatica.2022.110835.

- [60] S. Battilotti, Performance optimization via sequential processing for nonlinear state estimation of noisy systems, IEEE Transactions on Automatic Control, vol. 67, no. 6, pp. 2957-2972, 2022.

- [59] S. Battilotti, F. Cacace, M. d'Angelo, Consensus analysis of random subgraphs for distributed filtering with link failures, IEEE Transactions on Automatic Control, 2023.

-[58] S. Battilotti, F. Cacace, M. d'Angelo, Distributed optimal control of discrete-time linear systems over networks, IEEE Transactions on Control of Network Systems, 2023.

-[57] S. Battilotti, F. Cacace, C. Califano, M. d'Angelo, Leader following consensus with non-uniform large communication delays, IEEE Transactions on Control of Network Systems, 2023, DOI: 10.1109/TCNS.2023.3258625

-[56] S. Battilotti, F. Cacace, C. Califano, M. d'Angelo, Stochastic Leader-Following for Heterogeneous Linear Agents with Communications Delay, IEEE Transactions on Automatic Control, 2022, DOI: 10.1109/TAC.2022.3225133

-[55] S. Battilotti, Performance optimization via sequential processing for nonlinear state estimation of noisy systems, IEEE Transactions on Automatic Control, doi: 10.1109/TAC.2021.3095461, 2021.

-[54] S. Battilotti, F. Cacace, M. d'Angelo, A stability with optimality analysis of consensus-based distributed filters for discrete-time linear systems, Automatica, vol. 129, 2021.

-[53] S. Battilotti, F. Cacace, M. d'Angelo, Distributed infinite horizon optimal control of continuous time linear systems over network, S. Battilotti, F. Cacace, M. d'Angelo, International Journal of Robust and Nonlinear Control 31 (6), 2082-2096, 2021.

-[52] S. Battilotti, F. Cacace, M. d'Angelo, A. Germani, Asymptotically optimal consensus-based distributed filtering of continuous-time linear systems, Automatica, Automatica,, vol. 122, 2020.

-[51] S. Battilotti, M. d'Angelo, Stochastic output delay identification and filtering of discrete-time gaussian systems, Automatica, vol. 109, 2019.

-[50] S. Battilotti, M. Mekhail, Distributed estimation for nonlinear systems, Automatica, vol. 107, pp. 562-573, 2019.

-[49] S. Battilotti, Continuous and sampled-data stabilizers for nonlinear systems with input and measurement delays, IEEE Transactions on Automatic Control, DOI 10.1109/TAC.2019.2919127, 2019.

-[48] S. Battilotti, F. Cacace, A. Germani, M. d'Angelo, B Sinopoli, LQ non-Gaussian Regulator with Markovian Control, IEEE Control Systems Letters, vol. 3, no. 3, 2019.

-[47] S. Battilotti, Multilayer state predictors for nonlinear systems with time-varying measurement delays, SIAM Journal on Control and Optimization, vol. 57, no. 3, pp. 1541-1566, 2019.

-[46] S. Battilotti, C. Califano, Leader-following consensus for nonlinear agents with measurement feedback, Journal of Robust and Nonlinear Control, vol. 29, no. 6, pp. 1694-1718, 2019.

-[45] S. Battilotti, F. Cacace, M. d'Angelo, A. Germani, Distributed Kalman filtering over sensor network with unknown random link, IEEE Control Systems Letters, vol. 2, pp. 587-592, 2018.

-[44] S. Battilotti, F. Cacace, M. d'Angelo, A. Germani, The Polynomial approach to the LQ non-Gaussian regulator problem through output injection, IEEE Transactions on Automatic Control, vol. 64, no. 2, pp. 538-552, 2019.

-[43] S. Battilotti, Robust observer design under measurement noise with gain adaptation and saturated estimates, Automatica, vol. 81, pp. 75-86, 2017.

-[42] S. Battilotti, Stabilization via generalized homogeneous approximations, IEEE Transactions on Automatic Control, vol. 62, 7, 2017.

-[41] S. Battilotti, F. Cimorelli, F. Delli Priscoli, C. Gori Giorgi, S. Monaco, M. Panfili, Approaches for Future Internet Architecture Design and Quality of Experience (QoE) Control, WSEAS Transactions on Communications, vol. 14, pp. 62-73, 2015.

-[40] S. Battilotti, Nonlinear predictors for systems with bounded trajectories and delayed measurements, Automatica, vol. 59, pp. 127-138, 2015.

-[39] S. Battilotti, Incremental generalized homogeneity, observer design and semiglobal stabilization, Asian Journal of Control, vol. 16, 2, pp. 498-508, 2014.

-[38] S. Battilotti, Stabilization with filtered Lyapunov functions and feedback passivation, Asian Journal of Control, vol. 14, no. 4, pp. 924-935, 2012.

-[37] S. Battilotti, Observer design for nonlinear systems with Markov chain, Journal of Robust and Nonlinear Control, vol. 19, no. 14, pp. 1603-1631, 2009.

-[36] S. Battilotti, Control over a communication channel with random noise and delays, Automatica, vol. 44, pp. 348-360, 2008.

-[35] S. Battilotti, Filtered Lyapunov Functions and their Applications in the Stability Analysis of Nonlinear Systems, IEEE Transactions on Automatic Control, vol. 53, pp. 434-439, 2008.

-[34] S. Battilotti, Lyapunov-based design of iISS feedforward systems with uncertainty and noisy measurements, SIAM Journal on Control and Optimization, vol. 46, pp. 84-115, 2007.

-[33] S. Battilotti, C. Califano, A geometric approach to dynamic feedback linearization, Advances in Control Theory and Applications, Springer Verlag LNCIS Series, 2007.

-[32] S. Battilotti, A separation result for systems with feedback constraints, Systems and Control Letters, vol. 55, pp. 369-375, 2006.

-[31] S. Battilotti, Robust detectability from the measurements plus state feedback stabilization imply semiglobal stabilization from the measurements, IEEE Transactions on Automatic Control, vol. 51, pp. 1542-1548, 2006.

-[30] S. Battilotti, Stochastic stabilization of nonlinear systems in feedforward form with noisy outputs, IEEE Transactions on Automatic Control, vol. 50, pp. 1872- 1877, 2005.

-[29] S. Battilotti, A. De Santis, Dwell time controllers for stochastic systems with switching Markov chain, Automatica, vol. 41, pp. 923-934, 2005.

-[28] S. Battilotti, Control of linear systems with measurement nonlinearities, IEEE Transactions on Automatic Control, vol. 50, pp. 1872-1877, 2005.

-[27] S. Battilotti, C. Califano, A constructive condition for dynamic feedback linearization, Systems and Control Letters, vol. 52, pp. 329-338, 2004.

-[26] S. Battilotti, A. De Santis, Robust output feedback control of nonlinear stochastic systems using neural networks, IEEE Transactions on Neural Networks, vol. 14, pp. 1-14, 2003.

-[25] G. Besancon, S. Battilotti, L. Lanari, A new separation result for a class of quadratic-like systems with application to Euler-Lagrange models, Automatica, vol. 39, pp. 1085-1093, 2003.

-[24] S. Battilotti, A. De Santis, Stabilization in probability of nonlinear stochastic systems with guaranteed region of attraction and target set, IEEE Transactions on Automatic Control, vol. 48, pp. 1585-1599, 2003.

-[23] S. Battilotti, A. De Santis, Stabilization in probability of nonlinear stochastic systems with guaranteed cost, SIAM Journal on Control and Optimization, vol. 40, pp. 1938-1964, 2002.

-[22] S. Battilotti, A unifying framework for the semiglobal stabilization of nonlinear uncertain systems via measurement feedback, IEEE Transactions on Automatic Control, vol. 46, pp. 3-16, 2001.

-[21] S. Battilotti, Generalized dilations and the stabilization of uncertain systems via measurement feedback, Systems and Control Letters, vol. 43, pp. 95-100, 2001.

-[20] S. Battilotti, Separation results for semiglobal stabilization of nonlinear systems via measurement feedback, New Trends in Nonlinear Observer Design, H. Nijmeijer e T. Fossen ed., Springer Verlag LNCIS Series, pp. 183-207, 1999.

-[19] S. Battilotti, Robust stabilization of nonlinear systems with pointwise norm bounded uncertainties: a control Lyapunov function approach, IEEE Transactions on Automatic Control, vol. 44, pp. 1-15, 1999.

-[18] S. Battilotti, Noninteracting control via measurement feedback for nonlinear systems with relative degree, IEEE Transactions on Automatic Control, vol. 44, pp. 774-780, 1999.

-[17] S. Battilotti, Sufficient conditions for global output regulation of nonlinear interconnected systems, Automatica, vol. 35, pp. 829-835, 1999.

-[16] S. Battilotti, Robust output feedback stabilization via a small gain theorem, International Journal of Robust and Nonlinear Control, vol. 9, pp. 211-229, 1998.

-[15] S. Battilotti, L. Lanari, Adaptive disturbance attenuation with global stability for rigid and elastic joint robots, Automatica, vol. 33, pp. 239-245, 1997.

-[14] S. Battilotti, A note on reduced-order dynamic output feedback stabilizing controllers, Systems and Control Letters, vol. 30, pp. 71-81, 1997.

-[13] S. Battilotti, L.Lanari, R. Ortega, On the role of passivity and output injection in the output feedback stabilization problem: application to robot control, European Journal of Control, vol. 3, pp. 92-104, 1997.

-[12] S. Battilotti, Universal controllers for robust control problems, Mathematics of Control, Signals and Systems, vol. 10, pp. 188-202, 1997.

-[11] S. Battilotti, Global output regulation and disturbance attenuation via measurement feedback for a class of nonlinear systems, IEEE Transactions on Automatic Control, vol. 41, pp. 315-327, 1996.

-[10] S. Battilotti, Noninteraction and stability via invertible feedback laws and some existence conditions, SIAM Journal on Control and Optimization, vol. 33, pp. 107-125, 1995.

-[9] S. Battilotti, L. Lanari, Global set point control via link position measurement for flexible joint robots, Systems and Control Letters, vol. 25, pp. 21-29, 1995.

-[8] A.M. Nobili, etc.etc., S. Battilotti, etc. etc., "Galileo Galilei" : Flight experiment on the equivalence principle with field emission electric propulsion, Journal of the Astronautical Sciences, vol. 43, pp. 219-242, 1995.

-[7] S. Battilotti, Stabilization via dynamic output feedback of systems with output nonlinearities, Systems and Control Letters, vol. 23, pp. 411-419, 1994.

-[6] S. Battilotti, A sufficient condition for noninteracting control with stability via dynamic state-feedback: block-partitioned outputs, International Journal of Control, vol. 55, pp. 1141-1160, 1992.

-[5] S. Battilotti, Necessary conditions for nonlinear block noninteracting control with stability via dynamic state-feedback, Systems and Control Letters, vol. 19, pp. 481-491, 1992.

-[4] S. Battilotti, A sufficient condition for noninteracting control with stability via dynamic state-feedback, IEEE Transactions on Automatic Control, vol. 36, 1033-1045, 1991.

-[3] S. Battilotti, W.P. Dayawansa, Noninteracting control with stability for a class of nonlinear systems, Systems and Control Letters, vol. 27, pp. 327-338, 1991.

-[2] S. Battilotti, W.P.Dayawansa, Stabilization of globally noninteractive nonlinear systems via dynamic state-feedback, Journal of Mathematical Systems, Estimation and Control, vol. 1, pp. 441-463, 1991.

[1] S. Battilotti, G. Ulivi, An architecture for high performance control using digital signal processing chips, Control Systems Magazine, vol. 10, no.6, pp. 20-23, 1990.

Publications in Conference Proceedings

- [70] S. Battilotti, F. Cacace, M. d'Angelo, E. Della Corte, A. Germani Filtering of Systems with Heavy Tailed Noise: Application to 3D Target Tracking with Glint Noise, American Control Conference, 2022.

- [69] S. Battilotti, An orbital symmetry approach to observer design for systems with disturbances, Conference on Decision and Control, 2021.

- [68] S. Battilotti, M. d'Angelo, F. Cacace, A. Germani, Asymptotically Optimal Distributed Filtering of Continuous-Time Linear systems, IFAC Triennal World Conference, Berlin, July 2020.

- [67] S. Battilotti, Sequential processing and performance optimization in nonlinear state estimation, IFAC Triennal World Conference, Berlin, July 2020.

-[66] S. Battilotti, Sampled-data output feedback controllers for nonlinear systems with time-varying measurement and control delays , IFAC Triennal World Conference, Berlin, July 2020.

-[65] M. d'Angelo, S. Battilotti, F. Cacace, A. Germani, B. Sinopoli, LQ non-Gaussian Control with I/O packet losses, ACC 2020.

-[64] M. d'Angelo, S. Battilotti, F. Cacace, A. Germani, B. Sinopoli, Kalman-like Filtering with Intermittent Observations and non-Gaussian Noise, 8th IFAC Workshop on Distributed Estimation and Control in Networked Systems, Chicago, IL, USA, September 16-17, 2019.

-[63] S. Battilotti, M. D'Angelo, Delay-State Dynamics to Filtering Gaussian Systems with Markovian Delayed Measurements, European Control Conference, Napoli, Italy, June 25-28, 2019.

-[62] S. Battilotti, F. Cacace, M. D'Angelo, A. Germani, Cooperative Filtering with Absolute and Relative Measurements, IEEE Conference on Decision and Control, Miani (U.S.A), December 2018.

-[61] S. Battilotti, F. Cacace, M. D'Angelo, A. Germani, Distributed Kalman Filtering over Sensor Networks with Unknown Random Link Failures, IEEE Conference on Decision and Control, Miani (U.S.A), December 2018.

-[60] S. Battilotti, Robust observer design under measurement noise, 20th IFAC World Congress, Toulouse, France, 9-14 July 2017.

-[59] S. Battilotti, F. Cacace, M. D'Angelo, A. Germani, An Improved Approach to the LQ non-Gaussian Regulator Problem, 20th IFAC World Congress, Toulouse, France, 9-14 July 2017.

-[58] C. Califano, S. Battilotti, C. Moog, On the Geometric Interpretation of the Polynomial Lie Bracket for Nonlinear Time-Delay Systems, IEEE Conference on Decision and Control, Las Vegas (U.S.A), December 2016.

-[57] M. Mekhail, S. Battilotti, Distributed estimation for feedback-linearizable systems, ECC, Aalborg, Denmark, June 29 - July 1, 2016.

-[56] S. Battilotti, C. Califano, Semiglobal Leader-Following Consensus for generalized homogenous agents, ECC, Linz, 2015.

-[55] S. Battilotti, F. Cimorelli, R. Cusani, F. Delli Priscoli, C. Gori Giorgi, A. Pietrabissa, V. Suraci, L. Zuccaro, A Future Internet interface to control programmable networks, 23rd Mediterranean Conference on Control and Automation, 2015.

-[54] S. Battilotti, F. Delli Priscoli, C. Gori Giorgi, S. Monaco, L. Ricciardi Celsi, V. Suraci, A Q-Learning Based Approach to Quality of Experience Control in Cognitive Future Internet Networks, 23rd Mediterranean Conference on Control and Automation, 2015.

-[53] S. Battilotti, F. Facchinei, A. Giuseppi, G. Oddi, A. Pietrabissa, V. Suraci, Resource Management in Multi-Cloud Scenarios via Reinforcement Learning, 34th Chinese Control Conference, 2015.

-[51] S. Battilotti, C. Gori Giorgi, S. Monaco, M. Panfili, A. Pietrabissa, L. Ricciardi Celsi, V. Suraci, F. Delli Priscoli, A Multi-Agent Reinforcement Learning Based Approach to Quality of Experience Control in Future Internet Networks, 34th Chinese Control Conference, 2015.

-[50] Battilotti S., Canale S., Delli Priscoli F., Fogliati L., Gori Giorgi C., Lisi F., Monaco S., Ricciardi Celsi L., and Suraci V., A Dynamic Approach to Quality of Experience Control in Cognitive Future Internet Networks, Poster appearing in Proceedings of 2015 European Conference on Networks and Communications (EuCNC 2015), Paris, France, June 29-July 2, 2015.

-[49] S. Battilotti, Nonlinear predictors for systems with bounded trajectories and delayed measurements, IFAC World Congress, Cape Town, South Africa, 2014.

-[48] S. Battilotti, Generalized homogeneous approximations and the global stabilization of nopnlinear systems, IEEE Conference on Decision and Control, Los Angeles (U.S.A), 2014.

-[47] S. Battilotti, Generalized incremental homogeneity, incremental observability and global observer design, IEEE Conference on Decision and Control, Orlando (U.S.A), 2011.

-[46] S. Battilotti, Filtered Lyapunov functions and the stabilization of block feedforward systems, Triennal IFAC World Conference, Milano (Italy), 2011.

-[45] S. Battilotti, Incremental non-homogeneity of nonlinear systems, Triennal IFAC World Conference, Milano (Italy), 2011.

-[44] S. Battilotti, Constructive Lyapunov design of dynamic state feedback controllers, Conference on Decision and Control, 2008.

-[43] S. Battilotti, State estimation of nonlinear systems with Markov state reset, Conference on Decision and Control, 2008.

-[42] S. Battilotti, A new approach to the stabilization of nonlinear systems via partial measurement feedback: the adding one measurement tool, European Control Conference, Kos (Greece), 2007.

-[41] S. Battilotti, Filtered Lyapunov functions and their applications in the stability analysis of nonlinear systems, Conference on Decision and Control, San Diego (U.S.A), 2006.

-[40] S. Battilotti, Robust detectability from the measurements plus state feedback stabilization imply semiglobal stabilization from the measurements, Conference on Decision and Control, San Diego (U.S.A), 2006.

-[39] S. Battilotti, Control of stochastic feedforward systems with square integrable noise and appended dynamics, Conference on Decision and Control, San Diego (U.S.A), 2006.

-[38] S. Battilotti, C. Califano, Necessary and sufficient geometric conditions for dynamic feedback linearization of systems with two inputs, IFAC Triennal World Congress, 2005.

-[37] S. Battilotti, Measurement feedback controllers with constraints and their relation to the solution of Hamilton Jacobi inequalities, Conference on Decision and Control, Maui (U.S.A), 2003.

-[36] S. Battilotti, C. Califano, A geometric approach to dynamic feedback linearization, European Control Conference, Cambridge, 2003.

-[35] S. Battilotti, Stabilization of a class of time varying systems with control saturations and measurement noise with application to nonholonomic systems, Conference on Decision and Control, Maui (U.S.A), 2003.

-[34] G. Besancon, S. Battilotti, L. Lanari, A new separation result for a class of quadratic-like nonlinear systems with application to Eulero-Lagrange systems, Triennal IFAC World Conference, Barcellona (Spain), 2002.

-[33] S. Battilotti, Stochastic Stabilization of Nonlinear Systems in Feedforward Form with Noisy Outputs, 5th IFAC Symposium on Nonlinear Control Systems, St. Petersburg (Russia), 2001.

-[32] S. Battilotti, Lyapunov Design of Global Measurement Feedback Controllers for Nonlinear Systems, 5th IFAC Symposium on Nonlinear Control Systems, St. Petersburg (Russia), 2001.

-[31] S. Battilotti, New results on the global stabilization of nonlinear systems with lack of controllability/observability in the first approximation, Conference on Decision and Control, Orlando (U.S.A.), 2001.

-[30] S. Battilotti, A. De Santis, A new notion of stabilization in probability for nonlinear stochastic systems, Mathematical Theory of Network and Systems, Perpignan (France), 2000.

-[29] S. Battilotti, Semiglobal stabilization via measurement feedback for systems in triangular form, Conference on Decision and Control, Phoenix (U.S.A.), Dicembre 1999.

-[28] S. Battilotti, A general theorem on the semiglobal stabilization of nonlinear uncertain systems via measurement feedback, Nonlinear Control System Design Symposium, Enschede (Netherlands), 1998.

-[27] S. Battilotti, Semiglobal stabilization of uncertain block-feedforward systems via measurement feedback, Nonlinear Control System Design Symposium, Enschede (netherlands), 1998.

-[26] G. Besancon, S. Battilotti, L. Lanari, An example of disturbance attenuation via measurement feedback with global stability, COSY Workshop on Control of Nonlinear and Uncertain Systems, London (U.K.), 1998.

-[25] G. Besancon, S. Battilotti, L. Lanari, State transformation and global output feedback disturbance attenuation for a class of mechanical systems, IEEE Mediterranean Conference, Alghero (italy), 1998.

-[24] S. Battilotti, New results on the semiglobal stabilization of uncertain nonlinear systems via measurement feedback, IEEE Mediterranean Conference, Alghero (Italy), 1998.

-[23] G. Besancon, S. Battilotti, L. Lanari, On output tracking control with disturbance attenuation for Euler-Lagrange systems, Conference on Decision and Control, Tampa (U.S.A.), 1998.

-[22] S. Battilotti, On the role of connections in global nonlinear noninteracting control via static measurement feedback, Mathematical Theory of Networks and Systems, St. Louis (U.S.A.), 1996.

-[21] S. Battilotti, On state feedback, output injection and detectability in the stabilization of nonlinear interconnected systems, COSY Workshop on Control of Nonlinear and Uncertain Systems, Zurich (Switzerland), 1997.

-[20] S. Battilotti, Further results on global output feedback stabilization of nonlinear systems, European Control Conference, Bruxelles (Belgium), 1997.

-[19] S. Battilotti, Noninteraction via measurement feedback for nonlinear systems with relative degree, European Control Conference, Bruxelles (Belgium), 1997.

-[18] S. Battilotti, A sufficient condition for nonlinear disturbance decoupling with stability via measurement feedback, Conference on Decision and Control, San Diego (U.S.A.), 3509-3514, 1997.

-[17] S. Battilotti, L. Lanari, R. Ortega, A unified approach to global set point control for rigid and elastic joint robots, Triennal IFAC World Conference, San Francisco (U.S.A.), 1996.

-[16] S. Battilotti, Stabilization of nonlinear systems with norm bounded uncertainties, Triennal IFAC World Conference, San Francisco (U.S.A.), 1996.

-[15] S. Battilotti, L. Lanari, Tracking with disturbance attenuation for rigid robots, IEEE Conference on Robotics and Automation, Minneapolis (U.S.A.), 1996, 1578-1583.

-[14] S. Battilotti, New output feedback controllers for semiglobal stabilization of minimum phase nonlinear systems, European Control Conference, Rome (Italy), 1995, 3047-3051.

-[13] S. Battilotti, L. Lanari, Robust control of rigid robots: an H-infinity approach, European Control Conference, Rome (Italy), 1995, 3462-3467.

-[12] S. Battilotti, L. Lanari, On optimal controllers for elastic joint robots, IEEE Conference on Decision and Control, New Orleans (U.S.A.), 1995, 2818-2822.

-[11] S. Battilotti, L. Lanari, Adaptive disturbance attenuation for elastic joint robots, IEEE Conference on Decision and Control, New Orleans (U.S.A.), 1995, 2823- 2828.

-[10] S. Battilotti, Output feedback stabilization of nonlinear systems: tools and examples, 1st IFAC Workshop on New Trends in Design of Control Systems, Smolenice (Slovakia), 1994, 11-15.

-[9] S. Battilotti, Sufficient conditions for global robust stabilization via measurement feedback for some classes of nonlinear systems, IEEE Conference on Decision and Control, Orlando (U.S.A.), 1994, 808-813.

-[8] S. Battilotti, S. Di Gennaro, L. Lanari, Output feedback stabilization of a rigid spacecraft with unknown disturbances, IEEE Conference on Decision and Control, Orlando (U.S.A.), 1994, 916-920.

-[7] S. Battilotti, On geometric invariants in nonlinear noninteracting control, 2nd IFAC Workshop on System Structure and Control, Prague, 1992, 11-14.

-[6] S. Battilotti, Remarks on output feedback stabilization of a class of nonlinear systems, IEEE Conference on Decision and Control, San Antonio (U.S.A.), 1993, 1948-1953.

-[5] S. Battilotti, Further results on nonlinear noninteracting control with stability via dynamic state-feedback, Nonlinear Control System Design Symposium, Bordeaux (France), 1992, 118-123.

-[4] S. Battilotti, W.P. Dayawansa, Necessary and sufficient conditions for noninteracting control with stability for a class of nonlinear systems, American Control Conference, Boston (U.S.A.), 1991, 1108-1112.

-[3] S. Battilotti, W.P. Dayawansa, Some sufficient conditions for the semiglobal stabilization of globally noninteractive nonlinear systems via dynamic state-feedback, IEEE Conference on Decision and Control, Brighton (U.K.), 1991, 52-57.

-[2] S. Battilotti, A sufficient condition for noninteracting control with stability via dynamic state-feedback, IEEE Conference on Decision and Control, Honolulu (U.S.A.), 1990, 1276-1281.

-[1] S. Battilotti, G. Ulivi, A multimicro design for high performance control applications, 15th Annual Conference of the IEEE Industrial Electronics Society, Philadelphia (U.S.A.), 1989, 360-365.

Teaching Publications

- [5] S. Battilotti, Notes on Linear Control Systems, Editrice Esculapio, II ed., 2016.

- [4] S. Battilotti, Notes on Linear Control Systems, Editrice Esculapio, 2013.

- [3] C. Gori Giorgi, S. Monaco, S. Battilotti, S. Di Gennaro, Teoria dei Sistemi - Complementi ed esercizi, Editrice Universitaria di Roma, EuRoma ed., 1998.

- [2] S. Battilotti, S. Di Gennaro, Teoria dei Sistemi - Esercizi svolti d'esame, Editrice Universitaria di Roma, EuRoma ed., 1997.

- [1] S. Battilotti, Noninteracting control with stability for nonlinear systems, Lectures Notes in Control and Information Sciences, 196, Springer Verlag, 1994.

Contributions in invited sessions

- [4] S. Battilotti, A. De Santis, Stabilization in probability of nonlinear stochastic systems with guaranteed cost, in Advances on nonlinear output feedback design, Conference on Decision and Control, 2000.

- [3] S. Battilotti, A. De Santis, Stabilization in probability of nonlinear stochastic systems with guaranteed cost, in Advances on nonlinear output feedback design, Conference on Decision and Control, 2000.

- [2] S. Battilotti, Bounded controls, bounded output injection and the global stabilization of nonlinear interconnected systems via measurement feedback, in Advances in Lyapunov–based feedback design, Conference on Decision and Control, 1999.

- [1] S. Battilotti, More results on the semiglobal stabilization of uncertain nonlinear systems via measurement feedback, in Recent advances in nonlinear stabilization, Conference on Decision and Control, 1998. Book reviews:

- [1] Automatica: P. A. Cook, Nonlinear dynamical systems, second edition, Prentice Hall.