

SERGIO BITTANTI

A C T I V I T Y

The research activity focuses on control science. It materializes in

- (i) contributions to the program committees of conferences
- (ii) books writing
- (iii) publications in scientific journals
- (iv) communications at congresses and workshops
- (v) development of event report movies

as detailed in the sequel.

This report ends with the list of commendations.

CONTRIBUTION TO PROGRAM COMMITTEES OF INTERNATIONAL CONGRESSES

- IEEE 2016 Norbert Wiener in 21th Century, Melbourne, Australia.
- 1st IFAC Conference on Modelling, Identification and Control of Nonlinear Systems (MICNON 2015), Saint Petersburg, Russia.
- 17th IFAC Symposium on System Identification (SYSID 2015), Beijing, China.
- 10th World Congress on Intelligent Control and Automation (WCICA 2014), Shenyang, China.
- 2014 Chinese Control and Decision Conference (2014 CCDC), Changsha City, Hunan Province, China.
- 19th IFAC World Congress, Cape Town, South Africa , 2014.
- 9th World Congress on Intelligent Control and Automation (WCICA 2012), Beijing, China.
- 24th Chinese Control and Decision Conference (CCDC 2012), Taiyuan, China, 2012 (member of the International Advisory Committee - IAC).
- 19th Mediterranean Conference on Control and Automation (MED 2011), Corfu, Greece.
- 6th International Conference on Informatics in Control Automation and Robotics (ICINCO 2011), Milano, Italy.

- 7th World Congress on Intelligent Control and Automation (WCICA 2008), Chongqing, China, 2008.
- 10th ECC European Control Conference, Budapest, Hungary, 2009.
- 15th IFAC Symposium on System Identification, France, 2009.
- 17th IFAC World Congress, Seoul, Korea, July 6-11, 2008.
- 7th World Congress on Intelligent Control and Automation (WCICA), Chongqing, P. R. China June 25-27, 2008.
- IFAC Workshop on Information Technologies and Control Methods with Power Plants and Power Systems (ICPS07), Cluj-Napoca, Romania, July 9-11, 2007.
- Foundations of Systems Biology in Engineering Conference (FOSBE 2007), Conference offered by the CACHE organization to address the emerging challenges in the fields of Systems Biology, University of Stuttgart, Germany, September 9-12, 2007.
- 3rd IFAC Workshop on Periodic Control Systems St Petersburg, Russia, August 29-31, 2007.
- IFAC Workshop on Adaptation and Learning in Control and Signal Processing (ALCOSP) St Petersburg, Russia, August 29-31 2007.
- 7th ECC European Control Conference Koos, Greece, July 2-5 2007.
- IFAC Symposium on Automatic Control on Aerospace, Toulouse, France, June 25-29, 2007.
- IEEE Conference on Control Applications Munich, Germany, October 4-6, 2006.
- 14th IFAC Symposium on System Identification, Newcastle, Australia, March 29-31, 2006.
- IFAC Workshop DECOM-TT 2004 Bulgaria, 2004.
- 2nd IFAC Workshop on Periodic Control Systems Yokohama, Japan, August 30-September 2, 2004.
- IFAC Workshop on Adaptation and Learning in Control and Signal Processing (ALCOSP) Yokohama, Japan, August 30-September 2, 2004.
- IFAC Workshop on Advanced Fuzzy/Neural Control (AFNC'04) Oulu, Finland, September 16-17, 2004.
- IFAC International Conference on Intelligent Control and Signal Processing (ICONS 2003) Faro, Portugal, April 8-11 2003.

- 13th IFAC Symposium on System Identification Rotterdam, The Netherlands, August 27-29, 2003.
- 5th IFAC Symposium on Fault Detection, Supervision and Safety of Technical Processes Washington DC, USA, June 9-11, 2003.
- 6th European Control Conference, Cambridge, UK 2003.
- IFAC Workshop on Neuro-Fuzzy Control Valencia, Spain, 2002.
- IEEE Conference on Control Applications Glasgow, UK, 2002.
- The 33rd ISCIE International Symposium on Stochastic Systems Theory and its Applications (Advisory Committee) Ashikaga-City, Japan, 29, 30 October 2001.
- The 2nd Kansas Workshop on Stochastic Theory-Adaptive Control University Of Kansas, Mathematics Department Lawrence, Kansas, US, 18-20 October 2001.
- 5th European Control Conference, Porto, Portugal, September 2001.
- IFAC Workshop on Automatic systems for building infrastructure developing countries (Knowledge and Technology Transfer) Ohrid, Republic of Macedonia, May 21-23, 2001.
- Process Control '01 High Tatras, Slovak Republic
- 1st IFAC Workshop on Periodic Control Systems Cernobbio-Como, Italy, August 27, 28 2001.
- IFAC Workshop on Adaptation and Learning in Control and Signal Processing (ALCOSP) - Cernobbio-Como, Italia, August 29-31 2001.
- Mathematical Theory of Networks and Systems - 2000 Perpignan, France, 2000.
- Process Control and Instrumentation 2000 - Glasgow, UK, 2000.
- 6th St. Petersburg Symposium on Adaptive Systems Theory (SPAS'99) dedicated to the memory of Ya. Z. Tsypkin - St. Petersburg, Russia, 7-9September 1999.
- 4th European Control Conference - Karlsruhe, Germany, September 1999.
- IFAC Conference on Structure and Control (SSC), Bucharest, 1997.
- 11th IFAC Symposium on System Identification - Fukuoka, Japan, July 1997.
- 3rd European Control Conference - Roma, Italy, September 1995.

- 1st International Conference on Marine Transportation (International Scientific Advisory Committee) - Plymouth, September 1995.
- 3rd International Workshop on Non-smooth and Discontinuous Problems of Control and Optimization - St. Petersburg, Russia, June 26 - July 2 1995.
- 5th International Symposium on Software Reliability Engineering - Monterey, California, USA, November 1994.
- 10th IFAC Symposium on System Identification - Copenhagen, Denmark, July 1994.
- 2nd European Control Conference - Groningen, The Netherlands, July 1993.
- IEEE International Symposium on Software Reliability Engineering - Austin, Texas, USA, 1991.
- 1st European Control Conference Grenoble, France, July, 1991.
- Mathematical Theory of Networks and Systems Kobe, Japan, June 1991.

BOOKS AND PROCEEDINGS

- Bittanti S.: *Introduction to Automatica*. (in Italian) Zanichelli, 507 p., 2014.
- Bittanti S., A. Cenedese, S. Zampieri (ed.). *Proceedings of the 18th IFAC world congress*. Milano. 2478 papers by 5412 authors. Available in the web IFAC POL. 2011.
- Bittanti S., p. Colaneri : *Periodic Systems, Filtering and Control*. Springer, 424 p., 2008.
- Bittanti S. (ed.): *Control Science Evolution*. CNR (Consiglio Nazionale delle Ricerche - The National Research Council of Italy), 2008 (contributions by S. Barabaschi, S. Bittanti, G. C. Goodwin, H. Kimura, G. Marro; messages from Presidency of the Italian Republic, President of Lombardy Region; President of the National Research Council of Italy - CNR; Rector Magnificus of the Politecnico di Milano, President of the Accademia Nazionale dei Lincei - The National Academy of the Lynxes -, President of Istituto Lombardo Accademia di Scienze e Lettere - Lombard Institute Academy of Sciences and Letters-).
- Bittanti S., M. Gevers (eds.): *On the Dawn and Development of Control Science in the XX Century*. European Journal of Control, Special Issue, Vol 13, 2007 (contributions by K. J. Åström, R. Brockett, H.F. Chen, D. Cheng, A. Fossard, G. O. Guardabassi, A.B. Kurzhanski, D.Q. Mayne, and J.C. Willems).

- Bittanti S.: *Time Series and Random Processes*. (in Italian) Pitagora Editrice, Bologna, 65 p., 2005.
- Bittanti S.: *Model Identification and Adaptive Systems*. (in Italian) Pitagora Editrice, Bologna, 304 p. first edition 1990, last edition 2004.
- Bittanti S.: *Theory of Prediction and Filtering*. (in Italian) Pitagora Editrice, Bologna, 260 p., first edition 1990, last edition 2013.
- Bittanti S., P. Colaneri (eds.): *Robust Control Design*. Proceedings of the IFAC Symposium held in Milan, June 25-27, 2003. Elsevier, 600 p., 2004.
- Bittanti S (ed.): *Adaptation and Learning in Control and Signal Processing*. Proceedings of the IFAC Symposium held in Cernobbio-Como, August 29-31, 2001. Pergamon Press, 492 p., 2002.
- Bittanti S., P. Colaneri (eds.): *Periodic Control Systems. Proceedings of the IFAC Workshop held in Cernobbio-Como, August 27-28, 2001*. Pergamon Press, 255 p., 2002.
- Bittanti S., G. Picci (eds.): *Identification, Adaptation, Learning. - The Science of Learning Models from Data*. Springer-Verlag, Berlin, Computer and Systems Science Series, Vol. 153, 552 p., 1996, (contributions by p. Albertos, A. Benveniste, S. Bittanti, M. Campi, G. Cybenko, M. Deistler, B. Delyon, J. Friedman, P-Y. Glorennec, G. Gu, H. Hjalmarsson, A. Lindquist, L. Ljung, A. Juditsky, p. Khargonekar, H. Kimura, p. Kumar, J.M. Maciejowski, G. Picci, R. J. Ober, G. Pflug, p. Rapisarda, W. Scherrer, J. van Schuppen, J. Sjoberg, A.A. Stoorvogel, M. Vidyasagar, Q. Zhang). After the NATO ASI School *From Identification to Learning* held in Como August 22 - September 2, 1994.
- Bittanti S., A.J. Laub, J.C. Willems (eds.): *The Riccati Equation*. (contributions by G. Ammar, T. Basar, R. Bitmead, S. Bittanti, F. M. Callier, p. Colaneri, G. De Nicolao, M. Gevers, V. Kucera, p. Lancaster, A. J. Laub, C.F. Martin, L. Rodman, M. A. Shayman, H. L. Trentelman, J. L. Willems, J. C. Willems). Springer - Verlag, Berlin, Communications and Control Engineering Series, 338 p., 1991.
- Bittanti S. (ed.): *Count Riccati and the Early Days of the Riccati Equation*. (contributions by S. Bittanti, L. Euler, J. Liouville, J.F. Riccati). Pitagora Editrice, Bologna, 1989.
- Bittanti S. (ed.): *The Riccati Equation in Control, Systems, and Signals*. Pitagora Editrice Bologna, 183 p., 1989 (contributions by M. Bisiacco, H. Aboud-Kandir, R. Bitmead, S. Bittanti, A. Bunse-Gerstner, R. Bucy, R. S. Burns, R. Byers, F.M. Calleir, A. De Santis, C. de Souza, E. Fornasini, T. Geerts, A. Germani, M. Gevers, K. Glover, R. Gorez, V. Hernandez Garcia, G. Hewer, H. Hinrichsen, L. Ietto, L. Jodar, M. Krawczac, V. Kucera, p. Lancaster, A.J. Laub, E.B. Lee, A. Lindquist, C.F. Martin,

J.V. Medanic, V. Mehrmann, K. Mizukami, E. Mosca, J.B. Moore, E. Navarro, T. Nishimura, p. Nistri, S. Park, I.R. Petersen, G. Picci, A.J. Pritchard, F.R. Ramirez, A.C.M. Ran, L. Rodman, M.A. Shayman, L.M. Silverman, A. Pastor Soriano, J.L. Speyer, A.J. Telford, H.L. Trentelman, R.J. Veilette, S. Weiland, J.C. Willems, H.K. Wimmer). Proceedings of the IFAC/IEEE/SIAM Workshop on *the Riccati Equation in Control, Signals and Systems* held in Como, June 26-29, 1989.

- Bittanti S. (ed.): *Software Reliability Modelling and Identification*. (contributions by S. Bittanti, p. Bolzern, C. Ghezzi, B. Littlewood, A. Morzenti, J. Musa, M. Pezzé, E. Pedrotti, M. Pozzi, R. Scattolini). Springer-Verlag, Berlin, Lecture Notes in Computer Science, Vol. 341, 209 p. 1988.
- Bittanti S. (ed.): *Time Series and Linear Systems*. (contributions by S. Bittanti, D. Boley, M. Deistler, E.J. Hannan, M.J. McAleer, G. Picci, S. Pinzoni, J. Rissanen). Springer Verlag, Berlin, Lecture Notes in Control and Information Sciences, Vol. 86, 243 p. 1986.
- Bittanti S. (ed.): *Simulation-Identification-Control: the case of a heat exchanger*. (contributions by S. Bittanti, A. Bonati, G. Borsotti, V. Cammelli, G. Cardani, A. Cividini, L. Piroddi, F. Romeo, R. Scattolini). (in Italian) Pitagora Editrice Bologna, 187 p., 1985, second edition 1997.
- *Minimum Variance Stochastic Control*. (contributions by S. Bittanti, D.W. Clarke, R. Scattolini). CLUP, Milano, 76 p., 1982
- Bittanti S. (ed.): *Parametric Identification*. (in Italian) (contributions by S. Bittanti, R. Guidorzi, C. Manfredi, G. Picci, S. Pinzoni, G. Zappa). CLUP, Milano, 313 p., 1981
- Bittanti S., G. Guardabassi. (eds.): *Uncertain Systems*. (contributions by S. Bittanti, G. Fronza, M. Gatto, G. Guardabassi, A. Locatelli, C. Maffezzoni). (in Italian) CLUP, Milano, 388 p., 1976.
- Bittanti S., N. Schiavoni: *Modelling and Control*. (in Italian) CLUP, Milano, Vol. 1: 277 p. ; Vol. 2: 213 p., 1976.
- Bittanti S., G. Guardabassi: *Automatic Control - Exercises*. (in Italian) CLUP, Milano, 216 p., 1972.

REFEREED JOURNALS AND BOOK CHAPTERS

LIST OF JOURNALS

- AIAA Journal of Guidance, Control and Dynamics

- Automatica
- Automatika i Telemekanika (Russian Journal translated in English with the title Automation and Remote Control)
- Boletino Geologico y Minero
- Control Engineering Practice
- European Journal of Control
- IEE Proceedings on Control Theory and Applications
- IEEE Control Systems Magazine
- IEEE Journal on Oceanic Engineering
- IEEE Transactions on Automatic Control
- IEEE Transactions on Consumer Electronics
- IEEE Transactions on Control Systems Technology
- IEEE Transactions on Nuclear Science
- IEEE Transactions on Semiconductor Manufacturing
- IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control
- IEEE/ASME Transactions on Mechatronics
- Industrial and Engineering Chemistry Research
- Intelligent Automation and Soft Computing
- Intelligent Data Analysis
- International Journal of Adaptive Control and Signal Processing
- International Journal of Control
- International Journal on System Science
- Journal of Dynamical Systems, Measurement and Control (Transactions ASME)
- Journal of Fuel Cell Science and Technology
- Journal of Mathematical Systems, Estimation and Control
- Journal of Optimization Theory and Applications
- Journal of Passenger Cars - Mechanical Systems (SAE Transactions)
- Journal of Power Sources

- Journal of the Franklin Institute
- Laser and Particle Beams
- Medical Engineering and Physics
- Ricerche di Automatica
- SIAM Journal on Control and Optimization
- Systems and Control Letters

JOURNAL PAPERS

- Bittanti S.: James Clerk Maxwell, a precursor of system identification and control science. *International Journal of Control*, to appear, 2015 .
- Bittanti S.: Interview with John Westcott. *International Journal of Control*, to appear, 2015 .
doi: 10.1080/00207179.2015.1054438
- Lazzari R., C. Parma, A. De Marco, S. Bittanti: Enabling a flexible exchange of energy of a photo-voltaic plant with the grid by means of a controlled storage system. *International Journal of Control*, Special issue on Optimization and Control of Electrical Systems, Guest editors: L. Wang and J. Rodriguez; Vol. 88, n. 7, p. 1352-1364, 2015.
doi: 10.1080/00207179.2015.1025847.
- Bisone, L.; S. Bittanti, S. Canevese, A. De Marco, S. Garatti, M. Notaro, V. Prandoni: A post-combustion carbon capture process by amines supported on solid pellets - with estimation of kinetic parameters. *Industrial and Engineering Chemistry Research*, Vol. 54, p. 2743-2762, 2015.
- Bittanti S.: Valedictory. *European Journal of Control*, Vol. 19, n. 5, p. 339, 2013.
- Garatti S., S. Bittanti: A new paradigm for parameter estimation in system modeling. *International Journal of Adaptive Control and Signal Processing*, Vol. 27, n 8, p. 667-687, 2013.
- Bittanti S.: European Journal of Control in progress. *European Journal of Control*, Vol. 19, n. 4, p. 235, 2013.
- Bittanti S.: 18th IFAC World Congress: Final report. <http://www.ifac2011.org/chairman-addresses>, 2011.
- Farina M., L. Galleani, p. Tavella, S. Bittanti: A control theory approach to clock steering techniques. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, Vol. 57, p. 2257-2270, 2010.

- Garatti S., M.C. Campi, S. Bittanti: Iterative robust control: Speeding up improvement through iterations. *Systems and Control Letters*, Vol. 59, n. 2, p. 139-146, 2010.
- Farina M., S. Bittanti, p. Tavella, L. Galleani: Control of clock signals. *Journal of the Franklin Institute*, Vol. 346, n. 5, p. 449-469, 2009.
- Farina M., S. Bittanti: An observer for mass-action chemical reaction networks. *European Journal of Control*, Vol. 15, n. 5, p. 578-593, 2009.
- Bittanti S.: A Century of Control Science - a Mid Term Reflection. *In Control Science Evolution*. S. Bittanti (ed.). Consiglio Nazionale delle Ricerche, p. 25-90, 2008 (second edition 2009).
- Bittanti S., M. C. Campi, M. Prandini: How Many experiments are needed to adapt?. *In Modeling, estimation and control: Festschrift in honor of Giorgio Picci on the occasion of his sixty-fifth birthday*. A. Chiuso, A. Ferrante, S. Pinzoni (Eds.). Lecture Notes in Control and Information Sciences. Springer-Verlag, Berlin, 2007.
- Marengoni C., F. Canova, D. Batani, R. Benocci, M. Librizzi, V. Narayanan, M. Gomareschi, G. Lucchini, A. Kilpio, E. Shashkov, I. Stuchebukhovich, V. Vovchenko, V. Chernomyrdin, I. Krasuyk, T. Hall, S. Bittanti: Mode-locking optimization with a real-time feedback system in a Nd:yttrium lithium fluoride laser cavity. *Review of Scientific Instruments*, p. 1-8, 2007.
- Bittanti S., M. Gevers: Prelude to eight essays on control science in the XX-th century. *European Journal of Control*, Vol. 13, n. 1, p. 5-6, 2007.
- Bittanti, S. Canevese, A. De Marco, A. Errigo, G. Giuffrida, V. Prandoni: Molten carbonate fuel cell dynamical modelling. *Journal of Fuel Cell Science and Technology*, Vol. 4, n. 3, p. 283-293, 2007.
- Garatti S., S. Bittanti, D. Liberati, C. Maffezzoli: An unsupervised clustering approach for disease classification based on DNA microarrays data. *Intelligent Data Analysis*, Vol. 11, n. 2, p. 175-188, 2007.
- Bittanti S. M. Campi: Adaptive control of linear time invariant systems: the “bet on the best” principle. *Communications in Information and Systems*. Vol. 6, n. 4, p. 299-320, 2006.
- Bittanti, S. Canevese, A. De Marco, A. Errigo, V. Prandoni: Molten carbonate fuel cell electrochemistry modelling. *Journal of Power Sources*, Vol. 160, n.2, p. 846-851, 2006.
- Garatti S., M. C. Campi, S. Bittanti: The asymptotic model quality assessment for instrumental variable identification revisited. *Systems and Control Letters*, Vol. 55, n. 6, p. 494-500, 2006.

- Savaresi S. M., M. Tanelli, F. Taroni, F. Previdi, S. Bittanti: Analysis and design of an automatic motion-inverter. *IEEE/ASME Transactions on Mechatronics*, Vol. 11, n. 3, p. 346-357, 2006.
- Previdi F., M. Ferrarin, S. M. Savaresi, S. Bittanti: Closed loop control of FES supported standing up and sitting down using Virtual Reference Feedback Tuning. *Control Engineering Practice*, Vol. 13, n. 9, p. 1173-1182, 2005.
- Canova F., C. Marengoni, M. Librizzi, G. Lucchini, D. Batani, A. Kilpio, E. Shashkov, I. Stuchebrukhov, V. Vovchenko, V. Chernomyrdin, I. Krasuyk, T. Hall, S. Bittanti: Development of the 10 TW 'ATTILA' Nd laser system. *Radiation effects and defects in solids*. Vol. 160, p. 669-675, 2005.:
- Liberati D., S. Garatti, S. Bittanti.: Unsupervised mining of genes classifying Leukaemia. *Encyclopaedia of Data Warehousing and Mining* (J. Wang ed), Idea Book, Hershey, PA (USA), p. 1155-1159, 2005.
- Savaresi S.M., S. Bittanti, M. Montiglio.: Identification of semi-physical and black-box non-linear models: the case of MR-dampers for vehicles control. *Automatica*, Vol. 41, p. 113-117, 2005.
- Savaresi S.M., E. Silani, S. Bittanti.: Acceleration-driven-damper (ADD): an optimal control algorithm for comfort-oriented semi-active suspensions. *ASME Transactions on Dynamic Systems, Measurement and Control*, Vol. 127, p. 218-229, 2005.
- Previdi F., M. Ferrarin, S. M. Savaresi, S. Bittanti: Gain scheduling control of functional electrical stimulation for assisted standing up and sitting down in paraplegia: a simulation study. *International Journal of Adaptive Control and Signal Processing*, Vol. 17, p. 327-338, 2004.
- Silani E., S. M. Savaresi, S. Bittanti, D. Fisher, R.Isermann: Managing Information redundancy for the design of fault-tolerant slow-active controlled suspension. *Tire Technology International*, p. 128-133, 2004.
- Savaresi S.M., S. Garatti, S. Bittanti, L. La Brocca: On the relationship between the user DB and the web-log file of a large virtual community: a data-mining approach. *Intelligent Data Analysis*, Vol.8, n.6, p. 579-600, 2004. .
- Garatti S., M. C. Campi, S. Bittanti: Assessing the quality of identified models through the asymptotic theory - When is the result reliable? *Automatica*, Vol. 40, n. 8, p. 1319-1332, 2004.
- Savaresi S.M., F. Previdi, A. Dester, S. Bittanti, A. Ruggeri: Modeling, identification, and analysis of limit-cycling pitch and heave dynamics in a ROV. *IEEE Journal of Oceanic Engineering*, Vol. 29, n. 2, p. 407-417, 2004.

- Belli P., S. Bittanti, A De Marco: On the origin of torsional vibrations in hot rolling mills, and a possible remedy. *Journal of Dynamic Systems, Measurement and Control*, Vol. 126, n, 4, p. 811-823, 2004.
- Savaresi S. M., F. Taroni, F. Previdi, S. Bittanti: Control system design on a power-split CVT for high-power agricultural tractors. *IEEE/ASME Transactions on Mechatronics*, Vol. 9, n, 3, p. 569-579, 2004.
- Silani E., S.M. Savaresi, S. Bittanti, A. Visconti, F. Farachi: The concept of performance-oriented yaw-control systems: vehicle model and analysis. *SAE Transactions, Journal of Passenger Cars - Mechanical Systems*, Vol. year 2002, p. 1808-1818, 2003.
- Savaresi S., S. Bittanti, H. C. So: Closed-form unbiased frequency estimation of a noisy sinusoid using notch filters. *IEEE Transactions on Automatic Control*, Vol. 48, n, 7, p. 1285-1292, 2003.
- Savaresi S.M., F. Taroni, F. Previdi, S. Bittanti: On the Design and Tuning of the Controllers in a Power-Split CVT for Agricultural Tractors. *Proceedings of the Institution of Mechanical Engineers. Part D, Journal of Automobile Engineering*, Vol. 217, n, 8, p. 745-759, 2003.
- Bittanti S., F. Dall'Orto, A. Di Carlo, S. M. Savaresi: Notch filtering and multirate control for radial tracking in high-speed DVD-players. *IEEE Transactions on Consumer Electronics*, Vol. 48, n.1, p. 56-62, 2002.
- Batani D., S. Biava, S. Bittanti, F. Previdi: A cellular automaton model of laser-plasma interactions. *Laser and Particle Beams*, Vol. 19, p. 631-642, 2002.
- Quaglini V., F. Previdi, R. Contro, S. Bittanti: A discrete-time nonlinear Wiener model for the relaxation of soft biological tissues. *Medical Engineering and Physics*, Vol. 24, n, 1, p. 9-19, 2002.
- Bittanti S., F. Cuzzola: Generalized active control of vibrations in helicopters. *AIAA Journal of Guidance, Control and Dynamics*, Vol. 25, n, 2, p. 340-351, 2002.
- Bittanti S., F. Cuzzola: Periodic active control of vibrations in helicopters: a gain-scheduled multi-objective approach. *Control Engineering Practice*, Vol.10, n, 10, p. 1043-1057, 2002.
- Lovera M., E. De Marchi, S. Bittanti: Periodic attitude control techniques for small satellites with magnetic actuators, *IEEE Transactions on Control Systems Technology*, Vol. 10, n, 1, p. 90-95, 2002.
- Bittanti S., A. De Marco, G. Poncia, W. Prandoni: Identification of a model for the thermo-acoustic instabilities in a Rijke tube. *IEEE Transactions on Control Systems Technology*, Vol. 10, n, 4, p. 490-502, 2002.

- Bittanti S.: Data analysis for model building and signal estimation - Guidelines, paradigms and methods, in *Proceedings of the International School of Physics "Enrico Fermi"*. Course CXLVI, T.J. Quinn, S. Leschiutta and p. Tavella eds., p. 689-714, IOS Press, Amsterdam, 2001.
- Bittanti S.: Periodic Control: Theory and applications, The Sunahara Lecture, in *Stochastic Systems Theory and Applications*, T. Katayama (ed), 2001.
- Poncia G., S. Bittanti: Multivariable model predictive control of a thermal power plant with built-in classical regulation. *International Journal of Control*, Vol. 74, n 11, p. 1118-1130, 2001.
- Bittanti S., F. Cuzzola: A mixed H₂/H_{inf} approach for stabilization and accurate trajectory tracking of unicycle-like vehicle. *International Journal of Control*, Vol. 74, n. 9, p. 880-888, 2001.
- Bittanti S., F. Cuzzola: Continuous time periodic H_{inf} filtering via LMI. *European Journal of Control*, Vol. 7, n. 1, p. 2-16, 2001.
- Bittanti S., F. A. Cuzzola: An LMI approach to periodic unbiased filtering. *Systems and Control Letters*, Vol. 42. No. 1, p. 21-35, 2001.
- Bittanti S., F. A. Cuzzola, F. Lorito, G. Poncia;. Compensation of nonlinearities in a current transformer for the reconstruction of the primary current. *IEEE Transactions on Control System Technology*, Vol. 9, N. 4, p. 565 -573, 2001.
- Bittanti S.: Yakov Z. Tsypkin, a life in feedback - Foreword. *International Journal of Adaptive Control and Signal Processing*, Vol. 15, p. 93-95, 2001.
- Bittanti S., M. C. Campi: Persistence of excitation properties for time-varying auto-regressive systems. *SIAM Journal on Control and Optimization*, Vol. 39, n. 1, p. 133-140, 2000.
- Bittanti S., S. M. Savaresi; On the parametrisation and design of an extended Kalman filter frequency tracker. *IEEE Transactions on Automatic Control*, Vol. 45, n. 9, p. 1718-1724, 2000.
- Bertin D., S. Bittanti, S. M. Savaresi: Decoupled cushion control in ride control systems for air cushion catamarans. *Control Engineering Practice*, Vol. 8, n. 2, p. 191-203, 2000.
- Bittanti S., P. Colaneri: Invariant representations of discrete-time periodic systems. *Automatica*, Vol. 36, n. 12, p. 1777-1793, 2000.
- Bittanti S., M. Lovera: Bootstrap-based estimates of uncertainty in subspace identification methods. *Automatica*, Vol. 36, n. 11, p. 1605-1615, 2000.

- Bittanti S., P. Bolzern, M. Campi, A. De Marco, G. Poncia, W. Prandoni: A model of a bubbling fluidised bed combustor oriented to char mass estimation. *IEEE Transactions on Control Systems Technology*, Vol. 8, n. 2, p. 247-256, 2000.
- Bittanti S., L. Piroddi: Steady-state off-set error rejection in neural network-based control systems. *Intelligent Automation and Soft Computing*, Vol. 6, n. 2, p. 147-157, 2000.
- Arcara P., S. Bittanti, M. Lovera: Periodic control of helicopter rotors for attenuation of vibrations in forward flight. *IEEE Transactions on Control Systems Technology*, Vol. 8, n. 6, p. 883-894, 2000.
- Bittanti S., E. Gatti, G. Ripamonti, S. M. Savaresi: Poles Identification of an analog filter for nuclear spectroscopy via subspace-based techniques. *IEEE Transactions on Control System Technology*, Vol. 8, n. 1, p. 127-137, 2000.
- Bittanti S., P. Colaneri: Periodic Control. *John Wiley Encyclopedia of Electrical and Electronic Engineering*, Vol. 16, p. 240-253, John Wiley and sons, J. Webster ed., 1999.
- Bertogalli, V., S. Bittanti, M. Lovera: Simulation and identification of helicopter rotor dynamics using a general purpose multibody code. *Journal of the Franklin Institute*, Vol. 336, p. 783-797, 1999.
- Bittanti S., P. Colaneri, M.F.Mongiovi: From singular to non-singular filtering of periodic systems: filling the gap with the spectral interactor matrix. *IEEE Transactions on Automatic Control*, AC-44, p. 222-227, 1999.
- Prandini M., S. Bittanti, M.C. Campi: A penalized identification criterion for securing controllability in adaptive control. *Journal of Mathematical Systems, Estimation, and Control*, Abstract in vol. 8, p. 491-494, Full paper electronic access code: 29460, 1998.
- Aved'yan E., S. Bittanti, Ya. Z. Tsypkin: Kalman estimation with Brownian disturbances. *Journal of the Franklin Institute*, Vol. 335B, n. 7, p. 1195-1205, 1998.
- Bittanti, S., M. Lovera, L. Moiraghi: Application of non normal process capability indices to semiconductor quality control. *IEEE Transactions on Semiconductor Manufacturing*, Vol. 11, n. 2, p. 296-303, 1998.
- Bittanti S., S. M. Savaresi: Hierarchically structured neural networks: a way to shape a magma of neurons. *Journal of the Franklin Institute*, Vol. 335B, No. 5, p. 929-950, 1998.

- Bertin D., S. Bittanti, S. M. Savaresi: A Neural-network simulator for the 3-lobes stern seal of a S.E.S.. *Intelligent Automation and Soft Computing*, Vol. 3, n. 4, p. 331-344, 1997.
- Bittanti S., M. Campi, S. M. Savaresi: Unbiased estimation of a sinusoid in noise via adapted notch filters. *Automatica*, Vol.33, p. 209-215, 1997.
- Bittanti S., E. Gatti, G. Ripamonti, S. M. Savaresi: High accuracy fit of the poles of spectroscopy amplifiers designed for mixed analog-digital filtering. *IEEE Transactions on Nuclear Science*, Vol. 44, n. 2, p. 125-133, 1997.
- Bittanti S., L. Piroddi: Neural implementation of GMV control schemes based on affine input-output models. *IEE Proceedings on Control Theory and Applications*, Vol 144, n. 6, p. 521-530, 1997.
- Bittanti S., L. Piroddi: Nonlinear identification and control of a heat exchanger: a neural network approach. *Journal of the Franklin Institute*, Vol. 334B, No. 1, p. 135-153, 1997.
- Bittanti S., P. Colaneri, M.F.Mongiovi': Singular filtering via spectral interactor matrix. *IEEE Transactions on Automatic Control*, Vol. 40, p. 1492-1497, 1996.
- Bittanti, S., M. Lovera: On the zero dynamics of helicopter rotor loads. *European Journal of Control*, Vol. 2, N. 1, p., 57-68, 1996.
- Bittanti S., M. Campi: Least squares based self-tuning control systems, in *Identification, Adaptation, Learning - The Science of Learning Models from Data* (S. Bittanti and G. Picci eds.), p. 339-365, Springer-Verlag NATO ASI Series - Computer and Systems Sciences 1996.
- Bittanti S., F. Lorito, S. Strada: An LQ approach to active control of vibrations in helicopters. *ASME Transactions on Dynamic Systems, Measurement and Control*, Vol. 118, n. 3, 482-488, 1996.
- Bittanti S., L. Moiraghi: Active control of vibrations in helicopters via pole assignment techniques. *IEEE Transactions on Control Systems Technology*, Vol. 2, p. 343-351, 1994.
- Bittanti S., G. De Nicolao: Review of the book "The autonomous linear quadratic control problem" by V.M. Mehrmann. *Automatica*, Vol. 30, p. 555-556, 1994.
- Bittanti S., L. Piroddi: A GMV technique for nonlinear control with neural networks. *IEE Proceedings Part D*, Vol. 141, n. 2, p. 57-69, 1994.
- Bittanti S., P. Bolzern, G. De Nicolao, L. Piroddi, Representation, prediction and identification of cyclostationary processes - a state-space approach, in *Cyclostationarity in Communications and Signal Processing*, W.A. Gardner ed., IEEE press, p. 267-294, 1994.

- Bittanti S., M. Campi: Bounded error identification of time-varying parameters by RLS techniques. *IEEE Transactions on Automatic Control*, Vol. 39, n. 5, p. 1106-1110, 1994.
- Bittanti S., G. De Nicolao: Spectral factorization of linear periodic systems with application to the optimal prediction of periodic ARMA models. *Automatica*, Vol. 29, p. 517-522, 1993.
- Bittanti S., M. Campi: Some notes on self-tuning controllers based on least squares and modified least squares: a comprehensive approach. *Technical Cybernetics*, Vol. 6, p. 48-54, (in Russian) 1992.
- Bittanti S., P. Bolzern, G. De Nicolao: Comments on "Stabilizability and detectability of discrete-time time varying systems". *IEEE Transactions on Automatic Control*, Vol. 37, n. 8, p. 1274, 1275, 1992.
- Bittanti S., M. Campi, F. Lorito: Effective identification algorithms for adaptive control. *International Journal of Adaptive Control and Signal Processing* (Special issue on Adaptive and Expert Control), Vol. 6, p. 3-18, 1992.
- Bittanti S.: PSICO Today. In *Models, Systems and Feedback*, In honour of Professor A. Ruberti 65th birthday, A. Isidori and J. Tarn eds., Birkhauser Boston, 1992.
- Bittanti S., P. Colaneri, G. De Nicolao: The periodic Riccati equation. in *The Riccati Equation*, S. Bittanti, A.J. Laub, J.C. Willems eds., Springer-Verlag, 1991.
- Bittanti S., M. Campi: Adaptive RLS algorithms under stochastic excitation - strong consistency analysis. *Systems and Control Letters*, Vol. 17, p. 3-9, 1991.
- Bittanti S., M. Campi: Adaptive RLS algorithms under stochastic excitation - L2 convergence analysis. *IEEE Transaction on Automatic Control*, Vol. 36, 8, p. 963-968, 1991.
- Bittanti S., M. Campi: Mean square convergence of an adaptive RLS algorithm with stochastic excitation. in *Advances in Adaptive Control*, K. S. Narendra, R. Ortega, p. Dorato eds. IEEE Press, New York, 1991.
- Bittanti S., G. De Nicolao: Markovian representations of cyclostationary processes. In *Statistical Theory of Identification and Adaptive Control*, L. Gerencser and p. E. Caines eds., Lecture Notes in Control and Information Sciences, 161, p. 31-47, Springer-Verlag, Berlin, 1991.
- Bittanti S., M. Campi: Some remarks on multivariable adaptive control with least-squares parameter estimates. In *Modelling, Estimation and Control of Systems with Uncertainty*, G. Di Masi, A. Gombani, A. Kurzhanski eds., Birkhauser, Boston, p. 40-57, 1991.

- Bittanti S., D.B. Hernandez, G. Zerbi: The simple pendulum and the periodic LQG control problem. *Journal of the Franklin Institute*, Vol. 328, 2/3, p. 299-316, 1991.
- Scattolini R., S. Bittanti: On the choice of the horizon in long-range predictive control - some simple criteria. *Automatica*, Vol. 26, 5, p. 915-918, 1990.
- Bittanti S., P. Colaneri, G. De Nicolao: An algebraic Riccati equation for the discrete-time periodic prediction problem. *Systems and Control Letters*, 14, p. 71-79, 1990.
- Bittanti S., P. Bolzern, M. Campi.: Recursive least-squares identification algorithms with incomplete excitation: convergence analysis and application to adaptive control. *IEEE Transactions on Automatic Control*, Vol. AC-35, p. 1371-1374, 12, 1990.
- Bittanti S., P. Bolzern, M. Campi: Convergence and exponential convergence of identification algorithms with directional forgetting. *Automatica*, Vol.26, 5, p. 929-933, 1990.
- Bittanti S., P. Bolzern, M. Campi: Exponential convergence of a modified directional forgetting identification algorithm. *Systems and Control Letters*, 14, p. 131-137, 1990.
- Bittanti S., P. Bolzern, M. Campi: A counterexample to the exponential convergence of the directional forgetting algorithm. *International Journal of Adaptive Control and Signal Processing*, Vol. 4., p. 237-244, 1990.
- Bittanti S., P. Colaneri: A monotonicity result for the periodic Riccati equation. In *Robust Control of Linear Systems and Nonlinear Control*, M.A. Kaashoeck, J.H. van Schuppen, A.C.M. Ran eds., Birkhauser, Boston, p. 83-96, 1990 and *9th Int. Symp. on Mathematical Theory of Networks and Systems*, Amsterdam, 1989.
- Bittanti S., P. Colaneri, G. De Nicolao: A note on the maximal solution of the periodic Riccati equation. *IEEE Transactions on Automatic Control*, Vol. AC-34, 12, p. 1316-1320, 1989.
- Bittanti S., P. Bolzern, M. Campi: Adaptive identification via prediction-error directional forgetting factor: convergence analysis. *International Journal of Control*, Vol. 50, N. 6, p. 2407-1422, 1989.
- Bittanti S., P. Bolzern, R. Scattolini: An introduction to software reliability modelling. In *Software Reliability Modelling and Identification*, Lectures Notes in Computer Science, S. Bittanti ed., Springer-Verlag, Berlin, p. 43-67, 1988.

- Bittanti S., P. Bolzern, E. Pedrotti, M. Pozzi, R. Scattolini: A flexible modelling approach for software reliability growth. In *Software Reliability Modelling and Identification*, Lecture Notes in Computer Science, Bittanti S. ed., Springer-Verlag, Berlin, Vol. 341, p. 101-141, 1988.
- Bittanti S., P. Colaneri, G. De Nicolao: The difference periodic Riccati equation for the periodic prediction problem. *IEEE Transactions on Automatic Control*. Vol. AC-33, n. 8, p. 706-713, 1988.
- Bittanti S.: The periodic prediction problem for cyclostationary processes. In *Modelling, Robustness & Sensitivity Reduction in Control Systems*, R. Curtain ed., p. 239-250, Springer-Verlag, 1987.
- Bittanti S., P. Colaneri: Some remarks on the nonstandard periodic Riccati equation. In *Analysis and Control of Nonlinear Systems*, C.I. Byrnes, C.F. Martin, R.E. Saeks eds., North Holland, p. 517-526, 1988, and 8th Int. Symp. on Mathematical Theory of Networks and Systems, Phoenix (USA), 1987.
- Bittanti S., P. Bolzern, P. Colaneri, G. Guardabassi: Comments to “Controllability, stabilizability and matrix Riccati equation”, by H. Kano and T. Nishimura and to “On solution of the periodic Riccati equations for periodic systems, by R.S. Bucy and E.C. Bekir”. *IEEE Transactions on Automatic Control*, Vol. AC-32, p. 270-272, 1987.
- Bittanti S., D. Boley: Numerical problems in linear system theory. In *Time Series and Linear Systems*, Lecture Notes in Control and Information Science, Vol. 86, S. Bittanti ed., Springer-Verlag, Berlin, p. 183-221, 1986.
- Bittanti S.: Deterministic and stochastic linear periodic systems. In *Time Series and Linear Systems*, Lecture Notes in Control and Information Science, Vol. 86, S. Bittanti ed., Springer-Verlag, Berlin, p. 141-182, 1986.
- Bittanti S., P. Colaneri, G. De Nicolao: Discrete-time linear periodic systems: a note on the reachability and controllability interval length. *Systems and Control Letters*, Vol. 8, p. 75-79, 1986.
- Bittanti S., P. Colaneri: Lyapunov and Riccati equations: periodic inertia theorems. *IEEE Transactions on Automatic Control*, Vol. AC-31, n.7, p. 659-662, 1986.
- Bittanti S., P. Colaneri, G. Guardabassi: Analysis of the periodic Lyapunov and Riccati equations via canonical decomposition. *SIAM Journal on Control and Optimization*, Vol. 24, n. 6, p. 1138-1150, 1986.
- Bittanti S., P. Bolzern: On the structure theory of discrete-time linear systems. *International Journal of System Science*, Vol. 17, 1, p. 33-47, 1986.

- Bittanti S., P. Bolzern: Stabilizability and detectability of linear periodic systems - Addendum. *Systems and Control Letters*, 7, p. 73-74, 1986.
- Bittanti S., P. Bolzern, P. Colaneri: Inertia theorems for Lyapunov and Riccati equations - an updated view. In *Linear Algebra in Signals, Systems and Control*, B.N. Datta, C.R. Johnson, M.A. Kaashoek, R.J. Plemmons, E.D. Sontag eds., SIAM Publications, Philadelphia, p. 11-31, 1988 and SIAM Conference on Linear Algebra in Signals, Systems and Control , Boston, 1986.
- Bittanti S., P. Colaneri, G. De Nicolao: Two techniques for the solution of the discrete-time periodic Riccati equation. In *Linear Algebra in Signals, Systems and Control*, B. N. Datta, C. R. Johnson, M.A. Kaashoek, R.J. Plemmons, E.D. Sontag eds., SIAM Publications, Philadelphia, p. 315-332, 1988 and SIAM Conference on Linear Algebra in Signals, Systems and Control, Boston (USA), 1986.
- Bittanti S., P. Colaneri: Extended inertia theorems for Lyapunov and Riccati equations. In *Frequency Domain and State Space Methods for Linear Systems*, C.I. Byrnes e A. Lindquist eds, p. 519-532, 1986, North-Holland, 1986, and 7th International Symposium on the Mathematical Theory of Network and Systems, Stockholm (Sweden), 1985.
- Bertin D., S. Bittanti, P. Bolzern: A prediction-error directional forgetting technique for recursive estimation. *Systems Sciences*, Vol. 11, 2, p. 33-40, 1985 (and 4th International Conference on Systems Engineering, Coventry, p. 7-14, 1985).
- Bittanti S., P. Bolzern: Stabilizability and detectability of linear periodic systems. *Systems and Control Letters*, Vol. 6, n. 2, p. 141-146, 1985.
- Bittanti S., R. Scattolini: Multivariable self-tuning control: a model following approach. *International Journal of Control*, Vol. 42, n. 5, p. 1035-1048, 1985.
- Bittanti S., P. Bolzern, P. Colaneri: The extended periodic Lyapunov Lemma. *Automatica*, Vol. 21, n.5, p. 603-606, 1985.
- Bittanti S., G. Maier, A. Nappi: Inverse problems in structural elastoplasticity: a Kalman filter approach. In *Plasticity Today*. A. Sawczuk e C. Bianchi eds., p. 311-329, Elsevier Appl. Sci. Publ, 1985.
- Bittanti S., P. Bolzern: On the structure theory of discrete-time linear systems. *International Journal of Systems Science*, Vol. 17, n.1, p. 33-48, 1985.
- Bittanti S., P. Bolzern: Discrete-time linear periodic systems: Gramian and modal criteria for reachability and controllability. *International Journal of Control*, Vol. 41, n. 4, p. 909-929, 1985.

- Bittanti S., P. Bolzern: Reachability and controllability of periodic discrete-time linear systems. *IEEE Transactions on Automatic Control*, Vol. AC-30, n.4, p. 399-402, 1985.
- Bittanti S., F. Romeo, R. Scattolini: Stochastic identification and digital control of a heat exchanger: a simulation test case. *Journal of the Franklin Institute*, Vol. 318, n.1, p. 29-57, 1984.
- Bittanti S., P. Colaneri, G. Guardabassi: H-controllability and observability of linear periodic systems. *SIAM Journal on Control and Optimization*, Vol. 22, n.6, p. 889-894, 1984.
- Bittanti S., P. Colaneri, G. Guardabassi: Periodic solutions of periodic Riccati equations. *IEEE Transactions on Automatic Control*, Vol. AC-29, n.7, p. 665-668, 1984.
- Bittanti S., F. Romeo, R. Scattolini: Stochastic modelling of energy dispersion in topping systems. In *Numerical Methods in Thermal Problems*, R.W. Lewis, J.A. Johnson e W.R. Smith eds., p. 1094-1106, Pineridge Press, 1983.
- Bittanti S.: Is the prediction error of a regression model white?. *Journal of the Franklin Institute*, Vol. 315, n.4, p. 239-247, 1983.
- Bittanti S., R. Scattolini: Optimal Stochastic control of a liquid-saturated steam heat exchanger. in *Time Series Analysis - Theory and Practice 2*, O.D. Anderson ed., p. 203-231, North-Holland, 1982.
- Bittanti S.: Local identifiability of time-invariant linear systems by periodic test signals. *Automatica*, Vol.18, n. 2, p. 215-229, 1982.
- Bittanti S.: Periodic-Mean-Value Processes: estimation oriented information analysis. In *Analysis and Optimization of Stochastic Systems*, O.L.R. Jacobs, M.H.A. Davis, M.A.H. Dempster, C.J. Harris e p. C. Parks eds., p. 477-491, Academic Press, 1980.
- Bittanti S., G. Guardabassi, C. Maffezzoni, L. Silverman: Periodic systems: controllability and the matrix Riccati equation. *SIAM Journal on Control and Optimization*, Vol. 16, n.1, p. 37-41, 1978.
- Bittanti S., G. Fronza, G. Guardabassi: Optimal steady state versus periodic operation of discrete processes. *Journal of Optimization Theory and Applications*, Vol. 18, n. 4, p. 521-537, 1976.
- Bittanti S., C. Maffezzoni: Structural properties of the Hamiltonian system in periodic optimization. *Automatika i Telemekhanika*, n.9, p. 5-14, 1975 (in Russian; English translation in *Automation and Remote Control*, Vol. 36, n.6, Part 1, p. 877, h. 8, 1975).

- Bittanti S., G. Fronza, G. Guardabassi: Necessary conditions for a discrete periodic optimization problem. *Automatika I Telemekhanika*, n.10, p. 69-77, 1974 (in Russian; English translation in *Automation and Remote Control*, Vol.35, n.10, Part 1, p. 1600, 1607, 1974).
- Bittanti S., A. Locatelli, C. Maffezzoni: Second variation methods in periodic optimization. *Journal of Optimization Theory and Applications*, Vol. 14, n.1, p. 31-50, 1974.
- Bittanti S., G. Fronza, G. Guardabassi: Periodic control: a frequency domain approach. *IEEE Transactions on Automatic Control*, Vol. AC-18, n.1, p. 33-39, 1973.
- Bittanti S., G. Fronza, G. Guardabassi: Periodic optimization of linear systems under power control constraints. *Automatica*, Vol. 9, p. 269-272, 1973.
- Bittanti S., G. Fronza, G. Guardabassi: Periodic optimization of linear systems. In *Topics in Periodic Optimization*, A. Marzollo ed., Vol. 2, p. 213-233, Springer Verlag, 1972.
- Bittanti S., A. Locatelli, C. Maffezzoni: Periodic optimization under small perturbations. In *Topics in Periodic Optimization*, A. Marzollo ed., Vol.2, p. 183-213, Springer Verlag, 1972.
- Bittanti S., G. Fronza, G. Guardabassi: Optimal steady-state versus periodic operation in discrete systems. In *Topics in Periodic Optimization*, A. Marzollo ed., Vol. 1, p. 133-159, Springer-Verlag, 1972.
- Bittanti S., G. Fronza, G. Guardabassi: Optimality conditions for discrete periodic optimization problems. In *Topics in Periodic Optimization*, A. Marzollo ed., Vol. 1, p. 113-133, Springer Verlag, 1972.
- Bittanti S., G. Fronza, G. Guardabassi, C. Maffezzoni: A maximum principle for periodic optimization. *Ricerche di Automatica*, Vol. 3, n.2, p. 170-180, 1972.

INTERNATIONAL CONFERENCES - IFAC (Conferences organized under the aegis of International Federation of Automatic Control)

- Bisone L., S. Bittanti, S. Canevese, A. De Marco, S. Garatti, M. Notaro, V. Prandoni: Modeling and Parameter Identification for CO₂ Post-Combustion Capture by Amines Supported on Solid Sorbents. *19th IFAC World Congress*, Cape Town (South Africa), 2014.

- Bittanti S., L. Bolzani, S. Canevese, A. De Marco, F. Drago, P. Pinacci: Hydrogen separation via palladium membrane. *19th IFAC World Congress*, Cape Town (South Africa), 2014.
- Formentin S., S. Bittanti: An insight into noise covariance estimation for Kalman Filter design. *19th IFAC World Congress*, Cape Town (South Africa), 2014.
- Bittanti S., L. Bolzani, S. Canevese, A. De Marco, F. Drago, P. Pinacci: Modelling for a Palladium Membrane Water-Gas Shift Reactor. *2nd IFAC Workshop on Convergence of Information Technologies and Control Methods with Power Systems (ICPS '13)*, Cluj-Napoca, Romania, 2013.
- Bittanti S., L. Calloni, A. De Marco, M. Notaro, V. Prandoni, A. Valsecchi: A process for CO₂ post combustion capture based on amine supported on solid pellets. *8th IFAC Symposium on Advanced Control of Chemical Processes - IFAC ADCHEM*, Singapore, 2012.
- Bittanti S., S. Canevese, V. Casamassima, A. De Marco, M. Rapizza: Multivariable H_∞ Loop-Shaping Control for a PWR Nuclear Power Plant. *8th Power Plant and Power System Control Symposium - PP&PSC*, Toulouse (France), 2012.
- Dardanelli A., S. Corbetta, I. Boniolo, S. M. Savaresi, S. Bittanti: Model-Based Kalman Filtering Approaches for Frequency Tracking. *IFAC Workshop on Adaptation and Learning in Control and Signal Processing - IFAC ALCOSP 2010*, Antalya (Turkey), 2010.
- Bittanti S., P. Colaneri: Deconvolution of discrete-time periodic systems. *4th IFAC Workshop on Periodic Control Systems - PSYCO 2010*, Antalya (Turkey), 2010.
- Bittanti S., L. Calloni, A. De Marco, V. Prandoni, F. Zamponi: Pressurized oxy-coal mild combustion for clean-coal technology. *IFAC Conference on Control Methodologies and Technology for Energy Efficiency*, Vilamoura, Portugal, 2010.
- Bittanti S., L. Calloni, S. Canevese, A. De Marco, V. Prandoni: A clean-Coal control technology application study: modelling and control issues for a coal gasifier. *7th IFAC Symposium on Advanced Control of Chemical Processes - IFAC ADCHEM*, Koç University's campus (Turkey), paper 224, 2009.
- Boniolo I, S.M. Savaresi, M. Prandini, G. Borghi, B. Garavelli, S. Bittanti: Performance analysis of a digital compass for the heading estimation in nautical application. *15th IFAC Symposium on System Identification - IFAC SYSID 2009*, p. 1399-1404, Saint-Malo (France), 2009.

- Garatti S., S. Bittanti: Parameter estimation in the Pacejka's tyre model through the TS method. *15th IFAC Symposium on System Identification - IFAC SYSID 2009*, p. 1304-1309, Saint-Malo (France), 2009.
- Bittanti S., S. Garatti: Estimation of grey-box model parameters via artificial data generation: a two stage approach. *17th IFAC World Congress*, p. 11409-11414, Seoul (Korea), 2008.
- Bittanti S., S. Canevese, De Marco, V. Prandoni, D. Serrau: Towards clean-coal control technologies: modelling conversion of carbon oxide into hydrogen by a shift reactor. *17th IFAC World Congress*, p. 10963-109170, Seoul (Korea), 2008.
- Bittanti S., A. De Marco, V. Prandoni: Power plants modelling for process control towards clean technology. *IFAC Workshop on Convergence of Information Technologies and Control Methods with Power Plants and Power Systems*. Cluj-Napoca (Rumania), 2007.
- Tanelli M., S.M. Savaresi, M. Pioltelli, M. Bianchessi, D. Sirtori, S. Bittanti: Performance Evaluation and Dynamic Analysis of MEMS Accelerometers for High Precision Pointing Devices. *4th IFAC Symposium on Mechatronic Systems*, Heidelberg (Germany), 2006.
- S. Bittanti, S. Garatti, D. Liberati: From DNA microarrays to disease classification: an unsupervised clustering approach. *16th IFAC World Congress*, Prague (The Czech Republic), 2005.
- Bittanti S., M. Canevese, A. De Marco, G. Moretti, V. Prandoni: Molten Carbonate Fuel Cell Modelling. *16th IFAC World Congress*, Prague (The Czech Republic), 2005.
- Bittanti S., A. De Marco, M. Farina, S. Spelta: Modeling and simulation of a Dish Stirling solar engine. *16th IFAC World Congress*, Prague (The Czech Republic), 2005.
- S. Bittanti; M. Ferrarin; F. Previdi; S. Savaresi: PID control design for rehabilitation by quasi-isometric training in paraplegia: a simulation study. *16th IFAC World Congress*, Prague (The Czech Republic), 2005.
- Savaresi S., M. Tanelli, C. Cantoni, D. Charalambakis, F. Previdi, S. Bittanti: Slip-deceleration control in anti-lock braking systems. *16th IFAC World Congress*, Prague (The Czech Republic), 2005.
- Bittanti S., P. Colaneri: The odd world of periodic polynomials. *16th IFAC World Congress*, Prague (The Czech Republic), 2005.
- Savaresi S.M., E. Silani, S. Bittanti: Semi-active suspensions: an optimal control strategy for a quarter-car model. *1th IFAC Symposium on Advances in Automotive Control*, Salerno (Italy), p. 572-577.

- Bittanti S., S. Savaresi, M. Montiglio: Neural network model of a magneto-rheological damper. *2nd IFAC Workshop on Advanced Fuzzy/Neural Control*, Oulu (Finland), p. 55- 60, 2004.
- Bittanti S., M. Montiglio, S. Savaresi: Non-linear models of magneto-rheological dampers for semi-active control of vehicle dynamics. *6th IFAC Symposium of Nonlinear Control Systems - IFAC NOLCOS*, Stuttgart (Germany) 2004.
- Bittanti S., M. Campi, S. Garatti: Some critical implementation issues in iterative robust control design". *IFAC Workshop on Adaptation and Learning in Control and Signal Processing - IFAC ALCOSP*, Yokohama (Japan), p. 55- 60, 2004.
- Bittanti S., P. Colaneri: Periodic polynomials in the analysis of periodic control systems. *2th IFAC Workshop on Periodic Control Systems - IFAC PSYCO*, Yokohama (Japan), p. 243- 248, 2004.
- Bittanti S., E. De Marchi, M. Giranzani, M. Lovera, B. Lübke-Ossenbeck, E. Silani: A novel algorithm for fully autonomous star identification, *13th IFAC Symposium on System Identification - IFAC SYSID*, Rotterdam (The Netherlands), 2003.
- Silani E., S. M. Savaresi, S. Bittanti, A. Visconti, F. Farachi: A subspace-based identification approach for the analysis of road vehicles yaw dynamics around steering pad conditions", *13th IFAC Symposium on System Identification - IFAC SYSID*, Rotterdam (The Netherlands), p. 277-282, 2003.
- Savaresi S.M., Bittanti S., So H.C.: Closed-form frequency estimation using second-order notch filters. *13th IFAC Symposium on System Identification - IFAC SYSID*, Rotterdam, The Netherlands, p. 1143-1148, 2003.
- Savaresi S.M., Previdi F., Dester A., Bittanti S., Ruggeri A.: Analysis of Pitch and Heave Dynamics in a ROV. *1st IFAC Conference on Guidance and Control of Underwater Vehicles - IFAC GCUV*, Newport, South Wales (UK), p. 191-196, 2003.
- Previdi F., M. Ferrarin, S. M. Savaresi, S. Bittanti: Closed loop control of a FES supported standing up and sitting down using virtual reference feedback tuning: a simulation study. *5th IFAC Symposium on Modelling and Control in Biomedical Systems*, Melbourne (Australia), p. 393-398, 2003.
- Bittanti, S., M. Campi, M. Prandini: An iterative controller design scheme based on average robust control. *16th IFAC World Congress*, Barcelona (Spain), 2002

- Bittanti, S., P. Colaneri: Companion forms and cyclic matrices for discrete time periodic systems. *16th IFAC World Congress*, Barcelona (Spain), 2002.
- Belli p., S. Bittanti, M. Carandente, A. De Marco, S. Piana: A feedback interpretation of vibrations in hot rolling mills. *16th IFAC World Congress*, Barcelona (Spain), 2002.
- Silani S., S. M. Savaresi, S. Bittanti, A. Visconti, F. Farachi: A vehicle model for the design of performance - oriented yaw control systems. *16th IFAC World Congress*, Barcelona (Spain), 2002.
- Bittanti, S., M. Campi. M. Prandini: Penalized identification for self-tuning control - an overview. *Workshop on Adaptation and Learning in Control and Signal Processing - IFAC ALCOSP*. Cernobbio-Como, (Italy), 2001.
- Bittanti S., P. Colaneri: Stabilization of periodic systems: overview and advances. *1st IFAC Workshop on Periodic Control Systems - IFAC PSYCO*, Cernobbio-Como (Italy), 2001.
- Bertin D., S. Bittanti, S. Meroni, S. M. Savaresi: Dynamic positioning of a "single-thruster" vessel by feedback linearization. *5th IFAC Conference on Maneuvering and Control of Marine Crafts*, Aalborg (Denmark), p. 281-286, 2000.
- Savaresi S.M., D. Bertin, S. Bittanti: Non-linear design of an igv-fan servo system for surface effect ships. *IFAC Conference on Control in Transportation Systems*, Braunschweig (Germany), p. 626-631, 2000.
- Bittanti S., A. De Marco, G. Fittipaldi, S. Malloggi, W. Prandoni, L. Spinelli: Modelling the nitrogen oxides reduction in selective catalytic reactors and identification of the kinetic parameters. *IFAC Symposium on Advanced Control of Chemical Processes - IFAC ADCHEM*, Pisa (Italy), p. 1031-1036, 2000.
- Bittanti S., P. Colaneri, V. Kucera: Robust polynomial assignment for uncertain periodic discrete-time systems. *3rd IFAC Workshop on Robust Control*, Prague (The Czech Republic), 2000.
- Bittanti S., F. Cuzzola, G. Corbetta: An H-inf procedure for the reconstruction of the primary current in industrial transformers. *3rd IFAC Workshop on Robust Control Design - IFAC ROCOND*, Prague (The Czech Republic), 2000.
- Bittanti S., F. Cuzzola: A mixed H2/H approach for stabilisation and trajectory tracking of unicycle-like vehicles. *3th IFAC Workshop on Robust Control Design - IFAC ROCOND*, Prague (The Czech Republic), 2000.

- Bittanti S., F. Cuzzola, Unbiased robust H filtering by means of LMI optimisation. *3th IFAC Workshop on Robust Control Design - IFAC ROCOND*, Prague (The Czech Republic), 2000.
- Previdi F., S. Bittanti: Identification of nonlinear models of artificial stimulation of the quadriceps muscle. *4th IFAC Symposium on Modelling and Control in Biomedical Systems*, p. 83-89, Karlsburg/Greifswald (Germany), 2000.
- Batani D., S. Bittanti, A. Masini, F. Previdi: Measurement and characterization of cellular metabolic activity by CO₂ production monitoring, soft X-ray irradiation and advanced spectral analysis. *4th IFAC Symposium on Modelling and Control in Biomedical Systems*, p. 269-274, Karlsburg/Greifswald (Germany), 2000.
- Abbati p., S. Bittanti, F. Previdi: Forcing pulsatile behaviour in semiconductor lasers by periodic control. *14th IFAC World Congress*, Beijing, (China), 1999.
- Bittanti S., P. Colaneri: An LMI characterization of the class of stabilizing controllers for periodic discrete-time systems, *14th IFAC World Congress*, Beijing (China), 1999.
- Bittanti S., M. Lovera: Periodic LQG/H control of helicopter rotors for attenuation of vibrations in forward flight, *14th IFAC World Congress*, Beijing (China), 1999.
- Baldini G., S. Bittanti, A. De Marco, F. Longhi, G. Poncia, W. Prandoni, D. Vettorello: Modelling the nonlinear dynamics of combustion instabilities in gas turbines. *14th IFAC World Congress*, Beijing (China), 1999.
- Bertin D, S. Bittanti, S. Savaresi: The decoupled cushion control in ride control systems for air cushion catamarans. *IFAC Workshop on Control Applications in Marine Systems - IFAC CAMS*, Fukuoka (Japan), 1998.
- Arcara P., S. Bittanti, M. Lovera: Identification of linear models for a flexible structure. *4th IFAC Conference on System Structure and Control*, Bucharest (Rumania), 1997.
- Bittanti S., M. Campi: Least squares identification of time-varying parameters: issues and trends. *11th IFAC Symposium on System Identification - IFAC SYSID*, Kitakyushu (Japan), 1997.
- Bittanti S., M. Lovera: Identification of linear models for a hovering helicopter rotor. *11th IFAC Symposium on System Identification - IFAC SYSID*, Kitakyushu (Japan), 1997.

- Bittanti S., E. Gatti, G. Ripamonti, S. M. Savaresi: An application of subspace system identification techniques to nuclear spectroscopy. *11th IFAC Symposium on System Identification - IFAC SYSID*, Kitakyushu (Japan), 1997.
- Bittanti, S., A. Franchini, M. Lovera, R. Manigrasso, Adaptive control of raw material mix in cement plants. *IFAC Conference on Control of Industrial Systems*, Belfort, (France), 1997.
- Belli, P., S. Bittanti, p. Bolzern, M. Campi, A. De Marco, A. Ferretti, S. Malloggi, W. Prandoni, A control system for nitrogen oxides pollution abatement by SCR (Selective Catalytic Reduction). *13th IFAC World Congress*, San Francisco (USA), vol.O, p. 13-18, 1996.
- Bittanti S., P. Bolzern, M. Campi, A. De Marco, R. Panseri, G. Poncia, W. Prandoni, A model of a bubbling fluidized bed combustor for the estimation of the char mass via extended Kalman filter. *13th IFAC World Congress*, San Francisco (USA), p. 67-72, 1996.
- Bittanti S., Brasca C., Corsi S., Guardabassi G., Pozzi M., Savaresi S.M. (1996). Approximate linearization of a nonlinear plant: the case of a synchronous generator working in under-excitation condition. *13th IFAC World Congress*, San Francisco, (USA), Vol.7d, p. 175-180, 1996.
- Bittanti S., M. Campi, Do self-tuning control systems tune?. *13th IFAC World Congress*, San Francisco (USA), p. 115-120, 1996.
- Bertin D., S. Bittanti, S. M. Savaresi: A neural network simulator for the 3-lobes stern seal of a S.E.S. *IFAC Workshop on Maritime Transportation*, Plymouth (UK), 1995.
- Bittanti S.: Adaptive control: from nonlinear to linear. *IFAC Symposium on Nonlinear Control Systems Design - IFAC NOLCOS*, Lake Tahoe (USA), 1995.
- Bittanti S., G. Pavesi, M. Rugarli, S. Savaresi: Compensating the tracking error of a mobile robot by on-line tuning of a neural network. *2th IFAC Conference on Intelligent Autonomous Vehicles*, Helsinki (Finland), 1995.
- Bittanti S., M. Campi: Self-optimality of adaptive systems based on the certainty equivalence principle. *5th IFAC Symposium on Adaptive Systems in Control and Signal Processing - IFAC ALCOSP*, Budapest (Hungary), 1995.
- Bittanti S., M. Campi, S. Savaresi: Unbiased estimation of a sinusoid in noise via notch filters. *5th IFAC Symposium on Adaptive Systems in Control and Signal Processing - IFAC ALCOSP*, Budapest (Hungary), 1995.

- Bittanti S., M. Lovera: A discrete time model for rotor dynamics. *10th IFAC Symposium on System Identification - IFAC SYSID*, Copenhagen (Denmark), 1994.
- Bardelli R., S. Bittanti, p. Bolzern, M. Campi, E. Carugati, A. De Marco, L. Piroddi, W. Prandoni: Application of the Extended Kalman Filter to the estimation of the char mass in a fluidized bed combustor. *10th IFAC Symposium on System Identification - IFAC SYSID*, Copenhagen (Denmark), 1994.
- Bittanti S., P. Colaneri, S. Strada: Towards robust control of periodic systems via an LQG/LTR strategy. *12th IFAC World Congress*, Sydney (Australia), Vol. 8, p. 149-1522, 1993.
- Bittanti S., P. Bolzern, p. Colaneri, P. Delrio, G. De Nicolao, F. Lorito, A. Russo, S. Strada: Identification of a helicopter dynamic model for active control of vibrations. *9th IFAC Symposium on Identification and System Parameter Estimation*. Budapest (Hungary), 1991.
- Bittanti S., G. De Nicolao: Periodic ARMA models: prediction and minimum -phase condition. *11th IFAC World Congress*, Tallin (Estonia), Vol. 6, p. 200-206, 1990.
- Bittanti S.: The periodic Riccati equation: a miscellanea of classical and recent results. *IFAC/IEEE/SIAM Workshop on the Riccati Equation in Control, Systems, and Signals*, Como (Italy), 1989.
- Bittanti S., P. Bolzern, R. Scattolini: Parameter identification for software reliability growth models. *8th IFAC Symposium on Identification and System Parameter Estimation*. Beijing (China), p. 1970-1975, 1988.
- Bittanti S., R. Cori, F. Parravicini, R. Scattolini: Adaptive control of a PWR steam generator by generalized predictive techniques. *2nd IFAC Workshop on Modelling and Control of Electric Power Plants*, Philadelphia (USA), p. 20-25, 1986.
- Bittanti S., R. Cori, F. Pretolani: Analysis of a PWR steam generator control system. *2nd IFAC Workshop on Modelling and Control of Electric Power Plants*, Philadelphia (USA), p. 9-14, 1986.
- Bertin D., S. Bittanti., P. Bolzern: Tracking of non stationary systems by means of different prediction-error directional forgetting techniques. *2nd IFAC Workshop on Adaptive Systems in Control and Signal Processing - IFAC ALCOSP*, p. 91-97, Lund (Sweden), 1986.
- Aloisi P., D. Bertin, S. Bittanti, R. Scattolini: Self-tuning control of a binary distillation column-a simulation test case. *IFAC Workshop on Adaptive Control of Chemical Processes - IFAC ADCHEM*, Frankfurt (Germany), p. 149-154, 1985.

- Bittanti S., R. Cori, F. Pretolani, L. Rassin, D. Roncaglioni: Identification of a pressurized water reactor steam generator by state space multivariable models. *IFAC Conference on Control Science and Technology for Developments*, Beijing (China), 1985.
- Bittanti S., P. Bolzern, G. Guardabassi: Some critical issues concerning the state-representation of time-varying ARMA models. *7th IFAC Symposium on Identification and System Parameter Estimation*, York (UK), p. 1479-1484, 1985.
- Bittanti S., R. Scattolini: A self-tuning algorithm for multivariable control. *7th IFAC Symposium on Identification and System Parameter Estimation*, p. 323-329, York, (UK), 1985.
- Bittanti S., P. Bolzern, P. Colaneri: Stability analysis of linear periodic systems via the Lyapunov equation. *9th IFAC World Congress*, Budapest (Hungary), p. 169-173, 1984.
- Bittanti S., D.W. Clarke, F. Romeo, R. Scattolini: Self-tuning control of a liquid saturated steam heat exchanger. *IFAC/IFIP Symposium on Real-Time Digital Control Applications*, Guadalajara (Mexico), p. 631-639, 1983.
- Bittanti S., A. Cividini, R. Scattolini: Identification of a liquid-saturated steam heat exchanger. *6th IFAC Symposium on Identification and System Parameter Estimation*, Washington D.C.(U.S.A)., p. 168-174, 1982.
- Bittanti S., G. Guardabassi: Optimal cyclo-stationary control: a parameter optimization frequency domain approach. *8th IFAC World Congress*, Munich (Germany), p. VI-191-205, 1981.
- Bittanti S.: New conditions for parameters identifiability of linear time-invariant systems. *5th IFAC Symposium on Identification and System Parameter Estimation*, Darmstadt (Germany) p. 697-203, 1979.
- Bittanti S., G. Guardabassi: Optimal process cycling for parameters identification. *4th IFAC Symposium on Identification and System Parameter Estimation*, Tblisi, USSR, p. 586-591, 1976.

INTERNATIONAL CONFERENCES - IEEE (Conferences organized under the aegis of Institute of Electrical and Electronic Engineers)

- Bittanti S., R. Lazzari, A. De Marco, C. Ferrari: Control strategy and simulation of a PV generator including energy storage. *IEEE International Conference on Renewable Energy Research and Applications - IEEE ICRERA*. Madrid (Spain), p. 237-242, 2013.

- Bittanti S., V. Casamassima, A. De Marco, A. Guagliardi, B. Karaj: A study for the control system of a hybrid solar - gas turbine power plant. *IEEE 4th International Conference on Power Engineering and Electrical Drives* - IEEE POWERENG. Istanbul (Turkey), 2013.
- Bittanti S., L. Calloni, A. De Marco, F. Zamponi: Development of a model for the simulation of a clean-coal pressurized oxy-combustion plant. *IEEE International Conference on Computational Technologies in Electrical and Electronics Engineering* - IEEE SIBIRCON, Irkutsk Listvyanka (Russia), 2010.
- Bittanti S., M.C. Campi, M. Prandini: Adaptation and the effort needed to adapt. *48th Conference on Decision and Control* - IEEE CDC, Shanghai (P.R. China), p. 5733-5737, 2009.
- Bittanti S., S. Garatti: Revisiting the basic issue of parameter estimation in system identification - a new approach for multi-value estimation. *47th Conference on Decision and Control* - IEEE CDC, Cancun (Mexico), 2008.
- Farina M., R. Findeisen, E. Bullinger, S. Bittanti, F. Allgöwer, p. Wellstead: Results towards identifiability properties of biochemical reaction networks. *45th Conference on Decision and Control* - IEEE CDC, San Diego (USA), 2006.
- Bittanti S., M. Campi, S. Garatti: Introducing robustness in iterative control. *44th Conference on Decision and Control - IEEE CDC & 8th European Control Conference - ECC*, Seville (Spain) (see also the list of EUCA Conferences), 2005.
- Savaresi S.M., E. Silani, S. Bittanti, N. Porciani: On performance evaluation methods and control strategies for semi-active suspension systems. *42nd Conference on Decision and Control* - IEEE CDC, Maui, Hawaii, USA, p. 2264-2269, 2003.
- Bittanti S., S. Corsi, M. Pozzi, M. Zaramella: The power plant voltage/reactive power regulator with an adaptive control solution. *IEEE Conference on Power Tech*, Bologna (Italy), 2003.
- Bittanti S., M. Campi, S. Garatti: New results on the asymptotic theory of system identification for the assessment of the quality of estimated models. *41st Conference on Decision and Control* - IEEE CDC, Las Vegas (USA), 4705-4710, 2002.
- Bittanti S., F. Dell'Orto, A. Di Carlo, S. M. Savaresi: Radial tracking in high-speed DVD players (an application of notch filtering and multirate control). *40th Conference on Decision and Control* - IEEE CDC, Orlando (USA), 2001.

- Bittanti S., M. Campi, L. Guo: Persistence of excitation properties for the identification of time-varying systems. *39th Conference on Decision and Control - IEEE CDC*, Sydney (Australia), 2000.
- Bittanti S., S. M. Savaresi: Safe estimation of sinusoids in noise. *38th Conference on Decision and Control - IEEE CDC*, Phoenix, Arizona (USA), 1999.
- Arcara, p., S. Bittanti, M. Lovera: Active control of vibrations in helicopters by periodic optimal control. *IEEE-ASME Conference on Control Applications*, Hartford, Connecticut (USA), p. 730-735, 1997.
- Bertin D., S. Bittanti S., S. M. Savaresi: Control of the wave induced vibrations in air cushion catamarans. *IEEE-ASME Conference on Control Applications*, Hartford (USA), p. 749-54, 1997.
- Bittanti S.: History and prehistory of the Riccati equation. *35th Conference on Decision and Control - IEEE CDC*, Kobe (Japan), session on *The origin of Calculus of Variations and Optimal Control*, 1996.
- Bittanti S., M. Campi, M. Prandini: Self-tuning control based on penalized least squares identification techniques. *35th Conference on Decision and Control - IEEE CDC*, Kobe (Japan), p. 62-63, 1996.
- Bittanti S., M.C. Campi, M. Prandini: Self-tuning control based on penalized least squares identification techniques. *35th Conference on Decision and Control - IEEE CDC*, Kobe (Japan), p. 62-63, 1996.
- Bittanti S., P. Colaneri: The spectral interactor matrix for discrete-time periodic systems. *34th Conference on Decision and Control - IEEE CDC*, New Orleans (USA), 1995.
- Bittanti S., P. Colaneri, M. F. Mongiovì: The spectral interactor matrix for the singular Riccati equation. *33rd Conference on Decision and Control - IEEE CDC*, Orlando (USA), p. 2165-2169, 1994.
- Bittanti S., M. Campi: Least squares identification of autoregressive models with time-varying parameters. *33rd Conference on Decision and Control - IEEE CDC*, Orlando (USA), 1994.
- Bittanti S., M. Campi: A fake information matrix approach to the analysis of finite memory RLS identification techniques. *32nd Conference on Decision and Control - IEEE CDC*, S. Antonio (USA), p. 2026-2031, 1993.
- Bittanti S., G. De Nicolao: A note on the periodic Riccati equation and innovations representations of cyclostationary processes. *31st Conference on Decision and Control - IEEE CDC*, Tucson (USA), 1992.
- Bittanti S., M. Campi: Tuning the forgetting factor in RLS identification algorithms. *30th Conference on Decision and Control - IEEE CDC*, Brighton (UK), 1991.

- Bittanti S., P. Colaneri, G. De Nicolao: Periodic regulator with incomplete and noisy measurements. *29th Conference on Decision and Control - IEEE CDC*, Honolulu (USA), 1990.
- Bittanti S., M. Campi: Mean square convergence of an adaptive RLS algorithm with stochastic excitation. *28th Conference on Decision and Control - IEEE CDC*, Tampa (USA), p. 1946-1951, 1989.
- Bittanti S., P. Bolzern, M. Campi, E. Coletti: Deterministic convergence analysis of RLS estimation with directional forgetting factors. *27th Conference on Decision and Control - IEEE CDC*, p. 1530-1531, Austin (USA), 1988.
- Bittanti S., P. Colaneri, G. De Nicolao: The periodic Riccati equation: existence of a periodic positive semi-definite solution. *26th Conference on Decision and Control - IEEE CDC*, Los Angeles (USA), p. 293-294, 1987.
- Bittanti S., P. Colaneri, G. De Nicolao: Analysis of the discrete-time periodic Riccati equation by a Kleinman procedure. *25th Conference on Decision and Control - IEEE CDC*, Athens (Greece), p. 1444-1450, 1986.
- Bittanti S., G. Guardabassi: Optimal periodic control and periodic systems analysis. *25th Conference on Decision and Control - IEEE CDC*, Athens (Greece), p. 1417-1423, 1986.
- Bittanti S., P. Colaneri, G. Guardabassi: Periodic Riccati equation: a decomposition approach. *24th Conference on Decision and Control - IEEE CDC*, Fort Lauderdale (USA), p. 1713-1719, 1985.
- Bittanti S., P. Bolzern: Canonical decomposition of discrete-time linear systems. *23rd Conference on Decision and Control - IEEE CDC*, Las Vegas (USA), p. 1737-1738, 1984.
- Bittanti S., P. Bolzern, p. Colaneri, G. Guardabassi: H and K-controllability of linear periodic systems. *22nd Conference on Decision and Control - IEEE CDC*, San Antonio (USA), p. 1376-1379, 1983.
- Bittanti S., G. Guardabassi: Optimal cyclostationarity control: the LQG approach. *20th Conference on Decision and Control - IEEE CDC*, San Diego (USA), p. 166-167, 1981.
- Bittanti S.: On optimal experiment design for parameters estimation of dynamic systems under periodic operation. *16th Conference on Decision and Control - IEEE CDC*, New Orleans (USA), p. 1126-1132, 1977.
- Bittanti S., G. Fronza, G. Guardabassi: Periodic control of discrete processes. *IEEE International Conference on Cybernetics and Society*, Washington D.C. (USA), p. 264-269, 1972.

INTERNATIONAL CONFERENCES - EUCA (Conferences organized under the aegis of European Control Association)

- Cortinovis A., M. Zavadelli, M. Mercangoz, D. Pareschi, A. De Marco, S. Bittanti: On-line adaptation of performance maps for centrifugal gas compressors. *14th European Control Conference - ECC*, Strasburg (France), 2014.
- Paparella F., L. F. Domínguez, A. Cortinovis, M. Mercangoz, D. Pareschi, S. Bittanti: Load sharing optimization of parallel compressors. *13th European Control Conference - ECC*, Zürich (Switzerland), 2013.
- Bittanti S., M. Campi, S. Garatti: Introducing robustness in iterative control. *44th Conference on Decision and Control. & 8th Conference on Decision and Control*. Seville (Spain) (see in the list of IEEE Conferences), 2005.
- Savaresi S.M., F. Taroni, F. Previdi, S. Bittanti: Controllers tuning in a power-split continuously variable transmission. *7th European Control Conference*, Cambridge, UK, paper n.102, p. 1-6, 2003.
- Bittanti S. F. Cuzzola: Robust generalised H_2 smoothing with unbiasedness. *5th European Control Conference - ECC*, Porto (Portugal), 2001.
- Bittanti S. F. Cuzzola: Robust generalised H_2 filtering - The finite horizon case. *5th European Control Conference - ECC*, Porto (Portugal), 2001.
- Previdi F., V. Quaglino, S. Bittanti, R. Contro: Black-box characterization of soft connective biological tissues. *5th European Control Conference - ECC*, Porto (Portugal), 2001.
- Valtolina E., S.M. Savaresi, S. Bittanti, A. Visconti, A. Longhi: A Coordinate approach for the control of road vehicles. *5th European Control Conference - ECC*, Porto (Portugal), 2001.
- Baldini G., S. Bittanti, A. De Marco, F. Longhi, G. Poncia, W. Prandoni, D. Vettorello: A dynamic model of moving flames for the analysis and control of combustion instabilities. *4th European Control Conference - ECC*, Karlsruhe (Germany) 1999.
- Bittanti S. G. Poncia, E. Ragaini: A nonlinear model for the estimation of the primary current in industrial transformers. *4th European Control Conference - ECC*, Karlsruhe (Germany), 1999.
- Bittanti S. F. Cuzzola, M. Lovera, N. Lussana: An LPV-LMI approach to generalized active control of vibrations in helicopters. *4th European Control Conference - ECC*, Karlsruhe, (Germany), 1999.

- Bittanti S., P. Colaneri, M.F. Mongiovi': On the singular periodic Riccati equation: theoretical results and an application to a prediction problem. *3rd European Control Conference - ECC*, Brussels (Belgium) 1997.
- Bittanti S., p. Colaneri: Cheap control of discrete-time periodic systems. *2nd European Control Conference - ECC*, Groningen (The Netherlands), p. 338-341, 1993.
- Bittanti S., L. Moiraghi: A pole assignment technique for sinusoidal disturbance rejection with guaranteed low frequency non-interaction. *2nd European Control Conference - ECC*, Groningen (The Netherlands), 1993.
- Bittanti S., L. Piroddi: A neural network approach to generalized minimum variance control of nonlinear systems. *2nd European Control Conference - ECC*, Groningen (The Netherlands), 1993.
- Bittanti S., p. Bolzern, G. De Nicolao, L. Piroddi, D. Purassanta: A minimum prediction error algorithm for estimation of periodic ARMA models. *1st European Control Conference - ECC*, Grenoble (France), 1991.

Further Conferences

- Bittanti S., S. Garatti: A model identification approach to the analysis of the Kobe earthquake time series. *International Work Conference on Time Series Analysis - ITISE*, Granada (Spain), 2014.
- Bittanti S., S. Garatti: System Identification and Control: a fruitful cooperation over half a century, and more. *31st Chinese Control Conference - 31st CCC*. Hefei (P.R. China). Invited plenary lecture presented by S. Bittanti. 2012.
- Bittanti S., S. Garatti: Identification and control: the two inseparable friends collaboration for the success of automation problems over more than five decades. *Mediterranean Conference on Control and Automation - MED*. Barcelona (Spain). Invited plenary lecture presented by S. Bittanti. 2012.
- Bittanti S., A. De Marco, L. Fenzi, M. Notaro, V. Prandoni: Modelling and identification for carbon dioxide post-combustion capture by amines supported on solid sorbents. *9th Annual Conference on Carbon Capture and Sequestration*, Pittsburgh-Pennsylvania (USA), 2010.
- Bittanti S., A. De Marco, M. Giannatempo, V. Prandoni: A dynamic model of an absorption chiller for air conditioning. *International Conference on Renewable Energies and Power Quality - ICREPQ*, Granada (Spain), 2010.

- Bittanti S., L. Garatti: Parameter estimation via artificial data generation with the "two-stage" approach. *7th World Congress on Intelligent Control and Automation - WCICA*, p. 5605-5610, Chongqing (P.R. China), 2008.
- Mazzocchi L., C. Zagano, M. Farina, S. Bittanti: Optimization of ammonia injection in DeNO_x SCR systems. *3rd International Conference on Clean Coal Technologies for Our Future*, Cagliari (Italy), 2007.
- Farina M., E. Bullinger, R. Findeisen, S. Bittanti: An observability based strategy for parameter identification in systems biology. *Foundations of Systems in Engineering Conference - FOSBE*, Stuttgart (Germany), 2007.
- Ascari A., S. Bittanti, S. Canevese: On the dynamics of the square root nonlinearity. *17th International Symposium on Mathematical Theory of Networks and Systems - MTNS*. Kyoto (Japan). 2006.
- Bittanti S., S. Canevese. A. De Marco, A. Errigo, V. Prandoni: Molten Carbonate Fuel Cell electrochemistry modelling. *7th International Symposium on Molten Salts Chemistry & Technology*. Toulouse (France), p. 485-488. 2005.
- Savaresi S.M., M. Tanelli, S. Bittanti, A. Mangili, F. Taroni, F. Previdi: Control of power-shuttle motion-inverter. *American Control Conference - ACC*, Portland (USA), 2005.
- Musardo C., B. Staccia, S. Bittanti, Y. Guezennec, L. Guzzella, G. Rizzoni: Predictive control for hybrid electric vehicles energy management. *FISITA 2004 World Automotive Congress*, Barcelona, Spain. 2004.
- Silani E, S.M., Daniel Fischer, S. Savaresi, E. Kaus, R. Iserman, S. Bittanti: Fault-tolerant filtering in active vehicle suspensions. *FISITA 2004 World Automotive Congress*, Barcelona, Spain, 2004.
- Valsecchi L., p. Apollonio, M. Molina, M. Olivier, F. Bernelli Zazzera, F. Chignoli, M. Lovera, S. Bittanti: Design and testing of an active damping system for the reduction of vibrations induced by a rotating device on the ISS. *54th International Astronautical congress*, Bremen (Germany), 2003.
- Savaresi S.M., S. Garatti, S. Bittanti, L. La Brocca: Data-Mining of a large virtual community: relationships between the users DB and the web-log file. *3rd SIAM International Conference on Data Mining*, S. Francisco, CA, USA, p. 299-303, 2003.
- Bittanti S.: Model identification and data analysis: a survey of recent trends and results. MACSI (Mathematics, Computing and Simulation for Industry) network Workshop on *Parameter Identification in Structural and Materials Engineering*, Milan (Italy), November 2002.

- Savaresi S. M., D. Booley, S. Bittanti, G. Gazzaniga: Cluster selection in divisive clustering algorithms. *2nd SIAM International Conference on Data Mining*. Arlington (USA), 2002.
- Bittanti S., M. Bottinelli, A. De Marco, M. Facchetti, W. Prandoni: Performance assessment of the control system of once-through boilers. *13th Conference Process Control*, Strbske Pleso (Slovakia), 2001.
- Bittanti S.: Periodic Control: Theory and applications. *Stochastic Systems Theory and Applications*, T. Katayama (ed), p. 1-8. Invited plenary lecture - The Sunahara Lecture, Tottori (Japan), 2001.
- Bittanti S.: Dynamic modelling from data. International School of Physics *Enrico Fermi*, Varenna (Italy), (the contribution appears in a book published in 2001 by IOS Press, Amsterdam, see : Refereed journals and publications in books). 2000.
- D.Batani, S.Biava, S.Bittanti, F.Previdi: A cellular automaton model of laser-plasma interactions. *Symposium on Mathematical Theory of Networks and Systems - MTNS*, Perpignan (France), 2000.
- Previdi F., S. Bittanti: Some considerations on nonlinear models of artificial stimulation of the quadriceps muscle. *Symposium on Mathematical Theory of Networks and Systems - MTNS*, Perpignan (France), 2000.
- Bittanti S.: Some considerations on the identification of unstable systems, *Asian Control Conference*, Shanghai (China), p. 1253-1258. 2000.
- Bittanti S.: 30 years of Periodic Control - from analysis to design. *Asian Control Conference*, Shanghai (China), p. 2496-2501. 2000.
- Bittanti S., S. M. Savaresi: Frequency tracking via extended Kalman filter: parameter design. *American Control Conference*, Chicago (USA), 2000.
- Bittanti S.: Advances in periodic control. *Workshop on the Control of Uncertain Systems*, Hong Kong (China), 1999.
- Bittanti, S., M. Lovera: Assessing model uncertainty in subspace identification methods: a simulation study. *Symposium on Mathematical Theory of Networks and Systems - MTNS*, Padova (Italy), 1998.
- M. Lovera, A. Falchetti, S. Bittanti On the estimation of the A matrix in subspace model identification. *Symposium on Mathematical Theory of Networks and Systems - MTNS*, Padova (Italy), 1998.
- Prandini M., M. Campi, S. Bittanti, The stabilizability issue in least squares estimation: a penalized approach. *Symposium on Mathematical Theory of Networks and Systems - MTNS*, Padova (Italy), 1998.

- Bittanti, S., D. Cervi, M. Lovera: Application of subspace methods to the identification of helicopter flight mechanics. *IMACS Multi-conference on Computational Engineering in Systems Applications*, Lille (France), 1996.
- Bertin D., Bittanti S., Savaresi S.: Coordinated control of IGV and valve in a ride control system for S.E.S. *International Conference on High Speed Marine Vehicles HSMV*, Napoli (Italy), p. 8.3-8.14, 1997.
- S. Bittanti: Problems of active control of vibrations, *Int. Workshop on Structural Damage Assessment using Advanced Signal Processing Procedures*, Pescara (Italy), 1995.
- Bittanti S., M. Lovera: A frequency domain approach to rotor state estimation for identification and control. *20th European Rotorcraft Forum*, Amsterdam (The Netherlands), 1994.
- Bittanti S., F. Lorito, S. Strada: An LQG disturbance modelling approach to active control of vibrations in helicopters. *19th European Rotorcraft Forum*, Cernobbio (Italy), 1993.
- S. Bittanti, L. Piroddi: Minimum Variance control of a class of nonlinear plants with neural networks. *IEE 3rd Int. Conf. on Artificial Neural Networks*, Brighton (UK), p. 168-171, 1993.
- Bittanti S.: GRC theorem revisited. *Workshop on New Perspectives in Modelling and Identification with Applications*, Stockholm (Sweden), 1993.
- Bittanti S., F. Lorito, L. Moiraghi, S. Strada: Active control of vibrations in helicopters: from HHC to optimal control. *18th European Rotorcraft Forum*, Avignon (France), 1992.
- Bittanti S., M. Campi: Some remarks on self-tuners based on LMS and RLS techniques a unified approach. *5th Leningrad Symposium on Adaptive Systems Theory and Expert Control*, Leningrad (USSR), invited lecture 1991.
- Bittanti S.: Adaptive identification and control by RLS schemes. *IIA-SA Workshop on Modelling and Control of Systems*, Sopron (Hungary), 1990.
- Bittanti S., P. Bolzern, R. Scattolini: Software reliability models - an introduction. *COMPEURO*, Bruxelles (Belgium), Invited tutorial presentation, 1988.
- Bittanti S., D.B. Hernandez, G. Zerbi: PENDULUM - The simple pendulum swing control via optimal periodic control theory. *12th IMACS World Congress*, Paris (France) 1988.
- Bittanti S., P. Bolzern: DIESIS - An interactive package for signal processing and system identification. *12th IMACS World Congress*, Paris (France), 1988.

- Bittanti S., D.W. Clarke, R. Scattolini: MAC: a multipurpose adaptive controller for real time digital regulation. *BIAS - Controllo dei processi industriali*, Milano (Italy), p. 311, 318, 1987.
- Bittanti S., P. Bolzern, C. Ghezzi, R. Scattolini: A proposal for a new software reliability model and its preliminary assessment. *3-me Colloque Exposition de Genie Logiciel*, Versailles (France), p. 229-240, 1986.
- Bittanti S., P. Colaneri, G. De Nicolao: Reachability and controllability subspaces of discrete-time linear periodic systems. *Workshop on Linear and Nonlinear Mathematical Control Theory*, Torino (Italy), 1986.
- Bittanti S., P. Bolzern, G. Guardabassi: State representation of VARMA models. *2nd German-Italian Symposium on the Applications of Mathematics in Technology*, Lambrecht (Germany), invited presentation, 1986.
- Bittanti S., D.B. Hernandez: The periodic control problem and the simple pendulum. *2nd German-Italian Symposium on the Applications of Mathematics in Technology*, Lambrecht (Germany), invited presentation, 1986.
- Bittanti S., P. Bolzern: Can the Kalman canonical decomposition be performed for a discrete-time linear periodic systems? *Congresso Latino-Americano de Automatica*, Campina Grande (Brazil), p. 449-254, 1984.
- Bittanti S., P. Bolzern: Four equivalent notions of stabilizability of periodic linear systems. *American Control Conference*, San Diego (USA), p. 1321-1324, 1984.
- Bittanti S., G. Guardabassi: Large scale problem analysis: a unified framework for large scale systems techniques. *XXIII Jurema Conference*, Zagreb (Jugoslavia), p. 273-286, 1978.

FESTSCHRIFTS

- Bittanti S., M. C. Campi, M. Prandini: How many experiments are needed to adapt? *Giorgio Picci's Festschrift*, Venice (Italy), October 2007.
- Bittanti S.: From diophantine equation to engineering application: whether control. *Symposium in honor of the 60th birthday of Vladimir Kucera*, Prague (The Czech Republic), November 24, 2003.
- Bittanti S.: PSICO Today. *in Models, Systems and Feedback - A. Isidori and J. Tarn eds. Birkhauser Boston, 1992. - Proceedings of the Symposium in honour of the 65th birthday of Antonio Ruberti*, Capri (Italy), June 1992.

- Bittanti S.: Recent results on the analysis of RLS algorithms. *Symposium on R.E. Kalman and the birth of mathematical system theory, in honour of the 60th birthday of R.E. Kalman*, Villa Mondragone, Frascati, Italy, 1990.

MOVIES

- Interview with John Wetscott. Imperial College, London (UK), 2011, available at the YouTube Channel of IFAC
<https://www.youtube.com/watch?v=g6HGbQ16oyE>.
- 18th IFAC World Congress video synthesis. 2011, available at the YouTube Channel of IFAC
<https://www.youtube.com/watch?v=HxwhFvEA17k>
- Professor Giorgio Quazza commemoration. 2003, available at the YouTube Channel of IFAC
<https://www.youtube.com/watch?v=LUgtIW1iFy0>

SERGIO BITTANTI C O M M E N D A T I O N S

- Permanent Member of the Academy of Milan (*Istituto Lombardo - Accademia di Scienze e Lettere*), 2014
- Presidential Medal of the President of the Italian Republic for his leadership in the promotion and organization of the 18th IFAC World Congress held in Milano, 2011
- Ambassador of the City of Milan, 2011
- Corresponding Member of the Academy of Bologna (*Accademia delle Scienze dell'Istituto di Bologna*), 2008
- Outstanding Service Award of the International Federation of Automatic Control - IFAC, 2008
- Fellow of the International Federation of Automatic Control - IFAC, 2008
- Honorary Professor of the University of Cluj-Napoca, Romania, 2007
- Fellow of the Institute of Electrical and Electronic Engineers - IEEE, 2001
- Philip Morris Award for adaptive control system for attenuation of vibrations in helicopters, 1993
- Huesped distinguido de la Ciudad de Guadalajara - Mexico, 1983

CONTRIBUTION TO PROGRAM COMMITTEES OF INTERNATIONAL CONGRESSES	1
BOOKS AND PROCEEDINGS	4
REFEREED JOURNALS AND BOOK CHAPTERS	6
LIST OF JOURNALS	6
JOURNAL PAPERS	8
INTERNATIONAL CONFERENCES - IFAC (Conferences organized under the aegis of International Federation of Automatic Control)	20
INTERNATIONAL CONFERENCES - IEEE (Conferences organized under the aegis of Institute of Electrical and Electronic Engineers)	28
INTERNATIONAL CONFERENCES - EUCA (Conferences organized under the aegis of EUropean Control Association)	32
Further Conferences	33
FESTSCHRIFTS	37
MOVIES	38