Thomas Parisini – Curriculum Vitae

Name: Thomas Parisini –

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Born: Genova (Italy), September 18, 1963.

Contents

1. A Glimpse on the Rèsumè

Thomas Parisini received the "Laurea" degree (Cum Laude and printing honours) in Electronic Engineering from the University of Genoa in 1988 and the Ph.D. degree in Electronic Engineering and Computer Science in 1993. He was with Politecnico di Milano, as Associate Professor and since 2001 he is Professor and Danieli Endowed Chair of Automation Engineering with University of Trieste. During 2009-2012, Thomas Parisini was Deputy Rector of University of Trieste. He authored or co-authored over 280 research papers in archival journals, book chapters, and international conference proceedings. His research interests include neural-network approximations for optimal control and filtering problems, fault diagnosis for nonlinear and distributed systems, fault-tolerant control of large-scale systems, estimation and adaptive suppression of periodical disturbances in control systems, and nonlinear networked model predictive control systems. Among several awards, he is a co-recipient of the 2014 Outstanding Paper Award of the IFAC Journal of Process Control, of the 2004 Outstanding Paper Award of the IEEE Trans. on Neural Networks, and a recipient of the 2007 IEEE Distinguished Member Award. He is involved as Project Leader in several projects funded by the European Union, by the Italian Ministry for Research, and he is currently leading major consultancy projects with the Danieli Group (world-leader in steel-making plants). Thomas Parisini is currently the Vice-President for Publications Activities of the IEEE Control Systems Society, Editor of Automatica, and he was the Editor-in-Chief of the IEEE Transactions on Control Systems Technology. He is the Chair of the IFAC Technical Committee 6.4 "Fault Detection, Supervision & Safety of Techn. Processes-SAFEPROCESS. He is the Chair of the EUCA Conference Editorial Board and was the Chair of the IEEE Control Systems Society Conference Editorial Board, the Chair of the Technical Committee on Intelligent Control and a Distinguished Lecturer of the IEEE Control Systems Society. He was an elected member of the Board of Governors of the IEEE Control Systems Society and of the European Union Control Association (EUCA) and a member of the board of evaluators of the 7th Framework ICT Research Program of the European Union. Thomas Parisini is currently serving as an Associate Editor of Int. J. of Control and served as Associate Editor of Automatica, the IEEE Trans. on Automatic Control and IEEE Trans. on Neural Networks. He was involved in the organization and in the technical program committees of several international conferences. In particular, he was the Program Chair of the 2008 IEEE Conference on Decision and Control and the General Co-Chair of the 2013 IEEE Conference on Decision and Control.

Thomas Parisini is a Fellow of the IEEE and of the IFAC.

2. Detailed Biographical Notes

- Deputy Rector for Business Relations of University of Trieste (2009 - 2012).
- Full Professor and Danieli Endowed Chair of Automation Engineering with the Dept. of Electrical, Electronic and Computer Engineering, DEEI–University of Trieste, Italy (2001 - present).
- Associate Professor with the Dept. of Electronics and Information, Politecnico di Milano, Italy (1998 - 2001).
- Assistant Professor with the Department of Electrical, Electronic and Computer Engineering, DEEI–University of Trieste, Italy (1995 - 1998).
- Postdoctoral researcher with DIST–University of Genova, Italy (1994 - 1995).
- Elsag–Bailey funded scholarship on the topic: "Neural networks for the adaptive control of a section of a power plant" (September 2003 - December 2003)
- Ph.D. degree in Electronic Engineering and Computer Science (September 1993).
- Visiting student in the Department of Brain and Cognitive Science and in the Artificial Intelligence Laboratory, M.I.T., Cambridge, USA (1992).
- "Laurea" (M.S. Degree) in Electronic Engineering from the University of Genoa, December 21, 1988, with full marks (110/110), "Summa cum laude", and printing honours.

3. Awards and Academic Recognitions

- Fellow of the IEEE.
- Fellow of IFAC.
- Distinguished Member of the IEEE.
- Distinguished Lecturer of the IEEE.
- 2014 Outstanding Paper Award of the IFAC Journal of Process Control.
- 2004 Outstanding Paper Award of the IEEE Trans. on Neural Networks.
- Member of the Board of Governors of the *IEEE Control Systems Society* (appointed 1999, 2002; elected 2007).
- Plenary speaker at the *2016 IEEE SysTol Conference*, Barcelona, Spain, 2016.
- Semi-plenary speaker at the *2011 IEEE Conference on Decision and Control*, Orlando, FL, USA, 2011.
- Plenary speaker at the *2013 IEEE Mediterranean Control Conference*, Chania, Greece, 2013
- Plenary speaker at the *2006 IEEE Joint Conference on Control Applications, Computer-Aided Control Systems Design, and Intelligent Control*, Munich, 2006.
- 2014 Outstanding Paper Award of the *IFAC Journal of Process Control*.
- 2004 Outstanding Paper Award of the *IEEE Transactions on Neural Networks*.
- Finalist of the "Best Student Paper Award", at the *American Control Conference*, Baltimore, MD 1994.

– "1993 Eduardo Caianiello Award" for the best Italian PhD dissertation on Neural Networks.

4. Professional Activities and Services

Among several professional activities in the context of scientific organizations, the most important ones have been carried out to serve the IEEE Control Systems Society and the IFAC. In this regard, it is worth noting that T. Parisini is currently Vice-President for Publications Activities of the IEEE Control Systems Society and is Editor for Control Applications of Automatica. Moreover, during 2009-2016 he was the Editor in Chief of the *IEEE Transactions on Control Systems Technology*, he is the current Chair of the IFAC Technical Committee 6.4 "Fault Detection, Supervision & Safety of Techn. Processes-SAFEPROCESS, he was Associate Editor of Automatica, he served as Electronic Publications Chair of the 2011 IFAC World Congress, he was the General Co-Chair of the *52th IEEE Conference on Decision and Control*, held in Florence, Italy, 2013.

Prof. Parisini also has a strong involvement in projects evaluation activities of the European Commission.

In the following, the main professional activities and services are listed.

4.1 Editorial Boards and Activities

– Editor of *Automatica* (2017 - present)
– Editor in Chief of the *IEEE Transactions on Control Systems Technology* (2009-2016).
– Associate Editor of *Automatica* (2000 - 2007).
– Associate Editor of the *IEEE Trans. on Automatic Control* (1999 - 2002).
– Associate Editor of the *IEEE Trans. on Neural Networks* (1999 - 2001).
– Chair of the *Conference Editorial Board* of the *European Control Association* (2013-present).
– Chair of the *Conference Editorial Board* of the *IEEE Control Systems Society* (2003-2009).
– Associate Editor of the *Int. Journal of Control* (1998 - present).
– Subject Editor for Fault Diagnosis and Intelligent Control of the *Int. Journal of Robust and Nonlinear Control* (2005 - 2008).
– Subject Editor for Intelligent Control of the *Int. Journal of Adaptive Control and Signal Processing* (1997 - 2005).
– Member of the *Conference Editorial Board* of the *IEEE Control Systems Society* (1997 - 1998).
– Guest Editor of the Special Issue on "Neural Networks for Feedback Control" in the *IEEE Transactions on Neural Networks*, vol. 18, n. 4, 2007.
– Guest Editor of the Special Issue on "Adaptive Learning Systems in Communication Networks" in the *IEEE Transactions on Neural Networks*, vol. 16, n. 5, 2005.
– Guest Editor of the Special Issue on "Fault Detection and Isolation" in the *International Journal of Adaptive Control and Signal Processing*, vol. 14, n. 7, 2000.

- Guest Editor of the Special Issue on "Neural network feedback control with guaranteed stability" in the *International Journal of Control*, vol. 70, n. 3, 1998.
- Member of the Program Committes of major international conferences including several venues of the *IEEE Conference on Decision and Control*, the *IEEE Conference on Control Applications*, the *IEEE Int. Symposium on Intelligent Control*, and the *IFAC Symposium on Fault Detection, Supervision and Safety for Technical Processes "SAFEPROCESS"* among others.

4.2 Evaluation Panels and Boards

- Member of the Italian Board for Professorial Habilitation.
- Member of the board of evaluators of the 7th Framework ICT Research Program of the European Union.
- External member of the Administration Council of University of Trieste.

4.3 Technical Committees

- *Chair* of the *IFAC Technical Committee on Fault Detection, Supervision & Safety of Technical Processes - SAFEPROCESS* (2014 - present).
- *Chair* of the *Technical Committee on Intelligent Control* of the *IEEE Control Systems Society* (2000 - 2003).
- Member of the *IFAC Technical Committee on Fault Detection and Supervision of Technical Processes* (2000 - present).

4.4 Conference Organization Activities

- General Co-Chair of the *2018 IEEE Conference on Control Technology and Applications*, Copenhagen, Denmark, 2018.
- Program Chair of *2018 European Control Conference*, Limassol, Cyprus, 2018.
- General Co-Chair of the *52th IEEE Conference on Decision and Control*, Florence, Italy, 2013.
- Program Chair of *47th IEEE Conference on Decision and Control*, Cancun, Mexico, 2008.
- Electronic Publications Chair of the 2011 IFAC World Congress.
- Program Chair of the *Joint IEEE Mediterranean Control Conference and IEEE Int. Symposium on Intelligent Control*, Limassol, Cyprus, 2005.
- Program Vice-Chair for Short Papers and for Poster/Interactive Papers of *42th IEEE Conference on Decision and Control*, Maoui, Hawai, 2003.
- Program Chair of the *IEEE Int. Symposium on Intelligent Control*, Mexico City, Mexico, 2001.
- Publicity Chair of the *IEEE Int. Conference on Control Applications*, Anchorage, Alaska, 2000.
- Publicity Chair of the *IEEE Int. Symposium on Intelligent Control*, Boston, MA, 1999.
- Publicity Chair of the *Joint IEEE Int. Symp. on Intelligent Control (ISIC), Int. Symp. on Computational Intelligence in Robotics and Automation (CIRA), and Int. Symp. on Intelligent Systems and Semiotics (ISAS)*, Gaithersburg, MD, September 1998.

– Publications and Local Arrangements Chair of the *IEEE Conference on Control Applications*, Trieste, September 1998.

5. Main Research Grants

5.1 European Union funded contracts

– ARTEMIS JTI "CESAR" (2009 - 2011; funding €280.800)
– HPRN-CT-2000-00046 (2000 - 2003; funding: €150.000);
– HPRN-CT-2000-00110 (2000 - 2003; funding: €150.000)
– MAS3-CT98-0188 (1998 - 2001; funding: €53.000)
– MAS2-CT92-0015 (1992 - 1995; funding: €180.000)
– MAS2-CT92-0022 (1992 - 1995; funding: €220.000)
– Esprit 26880 (2000 - 2003; funding €20.000).

5.2 Main industry funded contracts

– "Increased Functionality Energy-autonomous Sensor Networks for self-monitoring Industrial Environments" (funded by ABB (Switzerland); grant: $ 120.000. Period 2014-2016.
– "New methods for modeling and control of steel-making plants: phase 3" (funded by Danieli Automation (Italy); grant: €250.000. Period: 2016-2020).
– "New methods for modeling and control of steel-making plants: phase 2" (funded by Danieli Automation (Italy); grant: €580.000. Period: 2009-2015).
– "Modeling and sensor-less control of magnetic-induction cooking systems" (funded by Electrolux Group (Italy); grant €80.000. period 2010-2011).
– "Robotics in the Steel Industry" (funded by Danieli Automation (Italy); grant: €200.000. Period: 2008-2009).
– "New methods for modeling and control of steel-making plants: phase 1" (funded by Danieli Automation (Italy); grant: €240.000. Period: 2007-2009).
– "Modelling and control of plants producing large cast iron sewer pipes" (funded by Duferco Group (Italy); grant: €120.000. Period: 2005-2007).
– "Next generation automation systems for the steel industry" (endowment funded by Danieli Officine Meccaniche S.p.A. (Italy); grant: €480.000. Period: 2001-2006).
– "Adaptive control of thermal power plants" (funded by Elsag-Baily Hartmann and Braun, now ABB (Italy); grant: €50.000. Period 1994-1995).

5.3 Main national and regional funded contracts

– "Methods and algorithms for diagnosis and fault-tolerant control of autonomous distributed networked systems" (funded by the Italian Ministry for University and Research; grant: €55.000. Period: 2004-2005).

– "Neural networks, learning and data-driven techniques for fault diagnosis and fault-tolerant control of nonlinear uncertain systems " (funded by the Italian Ministry for University and Research; grant: €65.000. Period: 2001-2002).
– "Modelling and control of electrical arc furnaces" (funded by Regione Friuli Venezia Giulia; grant: €60.000. Period 2009-2010).
– "Quality control of hot steel strips by visual smart sensors and learning techniques" (funded by Regione Friuli Venezia Giulia; grant: €45.000. Period 2009-2010).

6. List of publications

In the following, the list of publications is reported (national and not-refereed publications are not listed).

Books

[B1] R. Zoppoli, M. Sanguineti, T. Parisini. *Neural Approximations for Optimal Control and Decision*. Communications and Control Engineering Series, Springer Verlag, London, 2017 (to appear).

International Journals

[SJ1] F. Boem, Y. Zhou, C. Fischione, T. Parisini, "Distributed Pareto-Optimal State Estimation Using Sensor Networks," *Automatica*, 2018 (to appear).

[J2] F. Boem, S. Riverso, G. Ferrari-Trecate, T. Parisini, "Plug-and-Play Fault Fault Detection and Isolation for Large-Scale Nonlinear Systems with Stochastic Uncertainties," *IEEE Trans. on Automatic Control*, 2018 (to appear).

[J3] P. Li, G. Pin, T. Parisini, G. Fedele, "Deadbeat Source Localization from Range-only Measurements: a Robust Kernel-based Approach," *IEEE Trans. on Control Systems Technology*, 2018 (to appear).

[J4] B. Chen, G. Pin, W. M. Ng, P. Li, T. Parisini, S. Y. Hui, "Online Detection of Fundamental and Inter-harmonics in AC Mains for Parallel Operation of Multiple Grid-Connected Power Converters," *IEEE Trans. on Power Electronics*, 2018 (to appear).

[J5] G. Anagnostou, F. Boem, S. Kuenzel, B. Pal, T. Parisini, "Observer-based Anomaly Detection of Synchronous Generators for Power Systems Monitoring," *IEEE Trans. on Power Systems*, 2018 (to appear).

[J6] P. Ascencio, A. Astolfi, T. Parisini, "Backstepping PDE Design: A Convex Optimization Approach," *IEEE Trans. on Automatic Control*, 2018 (to appear).

[J7] B. Chen, G. Pin, W. M. Ng, C. K. Lee, S.Y.R. Hui, T. Parisini, "An Adaptive Observer-based Robust Estimator of Multi-sinusoidal Signals," *IEEE Trans. on Automatic Control*, 2018 (to appear).

[J8] M. Khalili, X. Zhang, M. M. Polycarpou, T. Parisini, Y. Cao, "Distributed Adaptive Fault-Tolerant Control of Uncertain Multi-Agent Systems," *Automatica*, vol. 87, pp. 142-151, 2018.

[J9] G. Fedele, L. D'Alfonso, G. Pin, T. Parisini, "Volterra's kernels-based finite-time parameters estimation of the Chua system," *Applied Mathematics and Computation*, vol. 318, pp. 121-130, 2018.

[J10] G. Pin, B. Chen, T. Parisini, "Robust Finite-Time Estimation of Biased Sinusoidal Signals: A Volterra Operators Approach," *Automatica*, vol. 77, pp. 120-132, 2017.

[J11] B. Chen, G. Pin, W. M. Ng, T. Parisini, S.Y.R. Hui, "A Fast-Convergent Modulation Integral Observer for Online Detection of the Fundamental and Harmonics in Active Power Filters," *IEEE Trans. on Power Electronics*, vol. 32, n. 4, pp. 2596-2607, 2017.

[J12] F. Boem, R. M. G. Ferrari, C. Keliris, T. Parisini, M. M. Polycarpou, "A Distributed Networked Approach for Fault Detection of Large-scale Systems," *IEEE Trans. on Automatic Control*, vol. 62, n. 1, pp. 18-33, 2017.

[J13] S. Riverso, F. Boem, G. Ferrari-Trecate, T. Parisini, "Plug-and-play Fault Detection and Control-reconfiguration for a Class of Nonlinear Large-scale Constrained Systems," *IEEE Trans. on Automatic Control*, vol. 61, n. 12, pp. 3963-3978, 2016.

[J14] C. Keliris, M. M. Polycarpou, T. Parisini, "A Unified Fault Diagnosis Approach Utilizing Filtering and Adaptive Approximation for Process and Sensor Faults in a Class of Continuous-Time Nonlinear Systems," *IEEE Trans. on Neural Networks and Learning Systems*, vol. 28, n. 4, pp. 988-1004, 2017.

[J15] S. Riverso, F. Boem, G. Ferrari-Trecate, T. Parisini, "Plug-and-play Fault Detection and Control-reconfiguration for a Class of Nonlinear Large-scale Constrained Systems," *IEEE Trans. on Automatic Control*, 2016 (to appear).

[J16] C. Keliris, M. M. Polycarpou, T. Parisini, "A Unified Fault Diagnosis Approach Utilizing Filtering and Adaptive Approximation for Process and Sensor Faults in a Class of Continuous-Time Nonlinear Systems," *IEEE Trans. on Neural Networks and Learning Systems*, 2016 (to appear).

[J17] J. Yin, D. Lin, T. Parisini, S. Y. R. Hui, "Front End Monitoring of the Mutual Inductance and Load Resistance in a Series-Series Compensated Wireless Power Transfer System," *IEEE Trans. on Power Electronics*, vol. 31, n. 10, pp. 7339-7352, 2016.

[J18] J. Yin, D. Lin, C. K. Lee, T. Parisini, S. Y. R. Hui "Front-end Monitoring of Multiple Loads in Wireless Power Transfer Systems Without Wireless Communication Systems," *IEEE Trans. on Power Electronics*, vol. 31, n. 3, pp. 2510-2517, 2016.

[J19] G. Pin, A. Assalone, M. Lovera, T. Parisini, "Non-Asymptotic Kernel-based Parametric Estimation of Continuous-time Linear Systems," *IEEE Trans. on Automatic Control*, vol. 61, n. 2, pp. 360-373, 2016.

[J20] B. Chen, G. Pin, W. M. Ng, S.Y.R. Hui, T. Parisini, "A Parallel Prefiltering Approach for the Identification of a Biased Sinusoid Signal: Theory and Experiments," *Int. J. of Adaptive Control and Signal Processing*, vol. 29, pp. 1591-1608, 2015.

[J21] C. Keliris, M. M. Polycarpou, T. Parisini, "A Robust Nonlinear Observer-based Approach for Distributed Fault Detection of Input-Output Interconnected Systems," *Automatica*, vol.53, pp. 408-415, 2015.

[J22] C. Keliris, M. M. Polycarpou, T. Parisini, "Distributed Fault Diagnosis for Process and Sensor Faults in a Class of Interconnected Input-Output Nonlinear Discrete-Time Systems," *Int. Journal of Control*, vol. 8, pp. 1472-1489, 2015.

[J23] B. Chen, G. Pin, W. M. Ng, C. K. Lee, S.Y.R. Hui, T. Parisini, "An Adaptive Observer-based Switched Methodology for the Identification of a Perturbed Sinusoidal Signal: Theory and Experiments," *IEEE Trans. on Signal Processing*, vol. 62, pp. 6355-6365, 2014.

[J24] Q. Zhang, X. Zhang, M. M. Polycarpou, T. Parisini, "Distributed Sensor Fault Detection and Isolation for Multimachine Power Systems", *International Journal of Robust and Nonlinear Control*, vol. 24, pp. 1403-1430, 2014.

[J25] G. Pin, T. Parisini, "Robust Minimum-Time Control of Nonlinear Discrete-Time Dynamical Systems with Non-Robustly Controllable Target Sets," *IEEE Trans. on Automatic Control*, vol. 59, n. 4, pp. 863-875, 2014.

[J26] G. Pin, B. Chen, T. Parisini, M. Bodson, "Robust Sinusoid Identification with Structured and Unstructured Measurement Uncertainties", *IEEE Trans. on Automatic Control*, vol. 59, n. 6, pp. 1588-1593, 2014.

[J27] F. Boem, R. M. G. Ferrari, T. Parisini, M. M. Polycarpou, "Distributed Fault Diagnosis for Continuous-Time Nonlinear Systems: the Input-Output case", *Annual Reviews in Control*, vol. 37, pp. 163-169, 2013.

[J28] G. Pin, M. Filippo, F. A. Pellegrino, G. Fenu, T. Parisini, "Approximate Model Predictive Control Laws for Constrained Nonlinear Discrete-Time Systems: Analysis and Off-line Design", *International Journal of Control*, vol. 86, n. 5, pp. 804-820, 2013.

[J29] C. Keliris, M. M. Polycarpou, T. Parisini, "A Distributed Fault Detection Filtering Approach for a Class of Interconnected Continuous-Time Nonlinear Systems," *IEEE Trans. on Automatic Control*, vol. 58, n. 8, pp. 2032-2047, 2013.

[J30] G. Pin, V. Francesconi, F.A. Cuzzola, T. Parisini, "Adaptive Task-Space Metal Strip-Flatness Control in cold Multi-roll Mill Stands," *Journal of Process Control*, vol. 23, n. 2, pp. 108-119, 2013.

[J31] R. M. G. Ferrari, T. Parisini, M. M. Polycarpou, "Distributed Fault Detection and Isolation of Large-scale Discrete-time Nonlinear Systems: an Adaptive Approximation Approach," *IEEE Trans. on Automatic Control*, vol. 57, n. 2, pp. 275-290, 2012.

[J32] F. Boem, R. M. G. Ferrari, T. Parisini, "Distributed Fault Detection and Isolation of Continuous-Time Nonlinear Systems," *European Journal of Control*, vol. 5-6, pp. 603-620, 2011.

[J33] G. Pin, T. Parisini, "Networked Predictive Control of Uncertain Constrained Nonlinear Systems: Recursive Feasibility and Input-to-State Stability Analysis," *IEEE Trans. on Automatic Control*, vol. 56, pp. 72-87, 2011.

[J34] X. Zhang, M. M. Polycarpou, T. Parisini, "Adaptive Fault Diagnosis and Fault-Tolerant Control of MIMO Nonlinear Uncertain Systems," *Int. Journal of Control*, vol. 83, n. 5, pp. 1054-1080, 2010.

[J35] T. Parisini, "Editorial Control Systems Technology: Towards a Systems-of-Systems Perspective?" *IEEE Trans. on Control Systems Technology*, vol. 18, n. 2, pp. 249-250, 2010.

[J36] X. Zhang, M. M. Polycarpou, T. Parisini, "Fault Diagnosis of a Class of Nonlinear Uncertain Systems With Lipschitz Nonlinearities Using Adaptive Estimation," *Automatica*, vol. 46, pp. 290-299, 2010.

[J37] F. Blanchini, T. Parisini, F. A. Pellegrino, G. Pin, "High-Gain Adaptive Control: a Derivative-Based Approach," *IEEE Trans. on Automatic Control*, vol. 54, pp. 2164-2169, 2009.

[J38] D. Casagrande, A. Astolfi, T. Parisini, "Stabilization of a Class of Non-holonomic Systems by Means of Saturated Switching Control Laws," *IEEE Trans. on Automatic Control*, vol. 54, pp. 1881-1886, 2009.

[J39] G. Pin, D. M. Raimondo, L. Magni, T. Parisini, "Robust Model Predictive Control of Nonlinear Systems with Bounded and State-Dependent Uncertainties," *IEEE Trans. on Automatic Control*, vol. 54, pp. 1681-1687, 2009.

[J40] R. Selmic, M. M. Polycarpou, T. Parisini, "Actuator Fault Detection in Nonlinear Uncertain Systems Using Neural On-line Approximation Models," *European Journal of Control*, vol. 1, pp. 29-44, 2009.

[J41] R. Ferrari, T. Parisini, M. M. Polycarpou, "Distributed Fault Diagnosis with Overlapping Decompositions: an Adaptive Approximation Approach," *IEEE Trans. on Automatic Control*, vol. 54, pp. 794-799, 2009.

[J42] X. Zhang, M. M. Polycarpou, T. Parisini, "Design and Analysis of a Fault Isolation Scheme for a Class of Uncertain Nonlinear Systems," *Annual Reviews in Control*, vol. 32, pp. 107, 121, 2008.

[J43] D. Casagrande, A. Astolfi, T. Parisini, "Global Asymptotic Stabilization of the Attitude and of the Angular Rates of an Underactuated Non-symmetric Rigid Body," *Automatica*, vol. 44, pp. 1781-1789, 2008.

[J44] E. Franco, L. Magni, T. Parisini, M. M. Polycarpou, D. Raimondo, "Cooperative Constrained Control of Distributed Agents with Nonlinear Dynamics and Delayed Information Exchange: a Stabilizing Receding-horizon Approach," *IEEE Trans. on Automatic Control*, vol. 53, n. 1, pp. 324-338, 2008.

[J45] A. Papadimitropoulos, G. Rovithakis, T. Parisini, "Fault Detection in Mechanical Systems with Friction Phenomena: an On–line Neural Approximation Approach," *IEEE Trans. Neural Networks*, vol. 18, n. 4, pp. 1067-1082, 2007.

[J46] L. Scardovi, M. Baglietto, T. Parisini, "Active Estimation of Nonlinear Systems: a Neural Approach," *IEEE Trans. on Neural Networks*, vol. 18, n. 4, pp. 1172-1184, 2007.

[J47] F.L. Lewis, J. Huang, T. Parisini, D.V. Prokhorov, D.C. Wunsch, "Editorial: Special Issue on Neural Networks for Feedback Control Systems", *IEEE Trans. on Neural Networks*, vol. 18, n. 4, pp. 969-972, 2007.

[J48] E. Franco, T. Parisini, M. Polycarpou, "Design and Stability Analysis of Cooperative Receding–Horizon Control of Linear Discrete–Time Agents," *International Journal of Robust and Nonlinear Control*, vol. 17, n. 10-11, pp. 982-1001, 2007.

[J49] R. Furlan, F. A. Cuzzola, T. Parisini, "Friction Compensation in the interstand looper of Hot Strip Mills: a Sliding Mode Control Approach," *IFAC Journal Control Engineering Practice*, vol. 16, n. 2, pp. 214-224, 2008.

[J50] P. F. Culverhouse, R. Williams, B. Simpson, C. Gallienne, B. Reguera, M. Cabrini, T. Parisini, Y. Pazos, H. Wang, L. Escalera, A. Morono, M. Hensey, J. SIlke, A. Pellegrini, D. Thomas, D. James, MA Longa, S. Kennedy, S. Fonda-Umani, F.A. Pellegrino, G. Del Punta, "HAB Buoy: a New Instrument for in situ Monitoring and Early Warning of Harmful Algal Bloom Events," *African Journal of Marine Science*, vol. 28, n. 2, pp. 245-250, 2006.

[J51] F. Previdi, T. Parisini, "Model–free Actuator Fault Detection Using a Spectral Estimation Approach: the case of the DAMADICS Benchmark Problem," *IFAC Journal Control Engineering Practice*, vol. 14, n. 6, pp. 635-644, 2006.

[J52] A.G. Parlos, T. Parisini, M. Baglietto, A.F. Atiya, K. Claffy, "Editorial: Introduction to the Special Issue on Adaptive Learning Systems in Communication Networks", *IEEE Trans. on Neural Networks*, vol. 16, n. 5, pp. 1013-1018, 2005.

[J53] X. Zhang, T. Parisini, M. M. Polycarpou, "Sensor Bias Fault Isolation in a Class of Nonlinear Systems," *IEEE Trans. on Automatic Control*, vol. 50, n. 3, pp. 370–376, 2005.

[J54] K. Patan, T. Parisini, "Identification of Neural Dynamic Models for Fault Detection and Isolation: the Case of a Real Sugar Evaporation Process," *IFAC Journal of Process Control*, vol. 15, n. 1, pp. 67-79, 2005.

[J55] X. Zhang, T. Parisini, M. M. Polycarpou, "Adaptive Fault-tolerant Control of Nonlinear Uncertain Systems: an Information–based Diagnostic Approach," *IEEE Trans. on Automatic Control*, vol. 49, pp. 1259-1274, 2004.

[J56] R. Zoppoli, M. Sanguineti, T. Parisini, "Approximating Networks and Extended Ritz Method for the Solution of Functional Optimization Problems," *Journal of Optimization Theory and Applications*, vol. 112, n. 2, pp. 403–439, 2002.

[J57] X. Zhang, M. Polycarpou, T. Parisini, "A Robust Detection and Isolation Scheme for Abrupt and Incipient Faults in Nonlinear Systems," *IEEE Trans. on Automatic Control*, vol. 47, pp. 576-593, 2002.

[J58] P. F. Culverhouse, V. Herry, R. Ellis, R. Williams, B. Reguera, S. Gonzales-Gil, S. Fonda, M. Cabrini, T. Parisini, "Dinoflagellate Categorisation by Artificial Neural Network," *Sea Technology*, vol. 43, n. 12, pp. 39-46, 2002.

[J59] A. Alessandri, T. Parisini, R. Zoppoli, "Sliding–window Neural State Estimation in a Power Plant Heater Line", *Int. Journal of Adaptive Control and Signal Processing*, vol. 15, pp. 815-836, 2001.

[J60] M. Baglietto, T. Parisini, R. Zoppoli, "Distributed–information Neural Control: the Case of Dynamic Routing in Traffic Networks," *IEEE Trans. on Neural Networks*, vol. 12, n. 3, pp. 485-582, 2001.

[J61] A. Di Febbraro, T. Parisini, S. Sacone, R. Zoppoli, "Neural Approximations for Feedback Optimal Control of Freeway Systems", *IEEE Trans. on Vehicular Technology*, vol. 50, n. 1, pp. 302-313, 2001.

[J62] M. Baglietto, T. Parisini, R. Zoppoli, "Numerical Solutions to the Witsenhausen Counterexample by Approximating Networks," *IEEE Trans. on Automatic Control*, vol. 46, n. 9, pp. 1471-1477, 2001.

[J63] T. Parisini, S. Sacone, "Stable Hybrid Control Based on Discrete-event Automata and Receding–horizon Neural Regulators" *Automatica*, vol. 37, n. 8, pp. 1279-1292, 2001.

[J64] F. Previdi, T. Parisini, "Model-free Fault Detection: a Spectral Estimation Approach Based on Coherency Functions," *International Journal of Control*, vol. 74, n. 11, pp. 1107-1117, 2001.

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