Publications
of
Paolo Fiorini

A. Journal Papers

[A1] G. Buja and P. Fiorini, *Controllo con microprocessore dei convertitori statici di energia elettrica*, Automazione e Strumentazione, April 1979, Vol. 27, N. 4, pp. 269-274.

[A2] U. De Monte, P. Fiorini and others, *A Software Structure for Appliance Control*, Euromicro Journal, N. 6, pp. 17-19, 1980.

[A3] G. Buja and P. Fiorini, *Microcomputer Control of PWM Inverters*, IEEE Transactions on Industrial Electronics, Vol. IE-29, N. 2, August 1982, pp. 212-216.

[A4] P. Fiorini, *A Versatile Hand for Manipulators*, IEEE Control Systems Magazine, Vol. 8, N. 5, October 1988, pp. 20-24.

[A5] H. Das and P. Fiorini, *Integrated Tools for Teleoperated Satellite Repair*, Automation in Construction, Vol. 2, N. 1, pp. 81-89, Elsevier Science Publisher, Amsterdam, The Netherlands, 1993.

[A6] P. Fiorini, A. Giancaspro, S. Losito and G. Pasquariello, *Neural Networks for the Segmentation of Teleoperation Tasks*, PRESENCE, Teleoperators and Virtual Environments, Vol. 2, N. 1, pp. 1-13, MIT Press, 1993.

[A7] P. Fiorini, A. Bejczy and P. Schenker, *Integrated Interface for Advanced Teleoperation*, IEEE Control System Magazine, Vol. 13, N. 5, October 1993.

[A8] P. Fiorini and Z. Shiller, *Time Optimal Motion Planning in Dynamic Environments*, The International Journal of Applied Mathematics and Computer Science, June 1997.

[A9] P. Fiorini, H. Seraji and M. Long *A PC-Based Configuration Controller for Dexterous Arms* IEEE Robotics and Automation Magazine, Fall 1997.

[A10] R. Oboe and P. Fiorini *A Design and Control Environment for Internet-Based Telerobotics*, The International Journal of Robotics Research, May 1998.

[A11] P. Fiorini and Z. Shiller, *Motion Planning in Dynamic Environments using Velocity Obstacles*, The International Journal of Robotics Research, July 1998.

B. Conference Papers

[B1] G. Buja and P. Fiorini, *L'impiego dei microprocessori per il controllo dei sistemi di azionamento elettrico*, BIAS 1978, Milano (Italy), Vol. 1, October 1978.

[B2] G. Buja and P. Fiorini, *A Microcomputer Based Quasi Continuous Output controller for PWM Inverters*, IEEE International Conference on Industrial Electronics, Philadelphia, PA, March 1980, pp.107-111.

[B3] G. Buja, P. Fiorini, and others, *Improving the Performance of Microcomputer Based Controllers for PWM Inverters*, 8th Powercom, Dallas, TX, April 1982, pp. E1-3:1,E1-3:8.

[B4] P. Fiorini and A. Stubberud, *Models and Controls for Manipulators*, Robotic Intelligence and Productivity Conference, Wayne State University, Detroit MI, November 1983, pp. 164-171.

[B5] P. Fiorini, *Microprocessor Torque Control of Small Motors*, Abstracts of the International Workshop on Microprocessor Control of Small Motors, University of Padova, Padova Italy, July 1986.

[B6] P. Fiorini, B. Hannaford, B. Jau, E. Kan and A. Bejczy, *Hand Trigger System for Bi-lateral Gripping Control in Teleoperation*, IEEE International Conference on Robotics and Automation, Raleigh, NC, March 1987, pp. 586-592.

[B7] P. Fiorini, *A Smart Hand for Manipulators*, IEEE Industrial Electronics Conference, Cambridge, MA, November 1987, pp. 572-580.

[B8] B. Hannaford and P. Fiorini, *A Detailed Model of Bilateral Teleoperation*, IEEE International Conference on Systems, Man and Cybernetics, Beijin, China, August 1988, Vol. 2, pp. 117-122.

[B9] P. Fiorini and A. Inselberg, *Parallel Coordinates : a New Representation for Robotics*, Proceedings of the NATO Advanced Research Workshop on Redundant Manipulators, Salò (Italy), June 27 - July 1 1988.

[B10] P. Fiorini and J. Chang, A Procedure Concept for Local Reflex Control of Grasping, NASA Conference on Space Telerobotics, Pasadena, CA, January 31 - February 2 1989, Vol. 4, pp. 81-90.

[B11] P. Fiorini and J. Chang, *Autonomous Organization of Grasping Tasks*, SPIE Symposia on Aerospace Sensing, Artificial Intelligence VII, Orlando, FL, March 27- 31 1989, pp. 591-602.

[B12] P. Fiorini and A. Inselberg, *Configuration Space Representation in Parallel Coordinates*, IEEE International Conference on Robotics and Automation, Scottsdale AZ, May 14 - 19 1989, pp. 1215- 1220.

[B13] P. Fiorini, *Task Dependent Control of Electric Motors*, IEEE Workshop on Microprocessor Control of Electric Motors, Trieste (Italy), July 3 - 4 1989, pp. A6-1,A6-18.

[B14] P. Fiorini, *Task-Driven Teleoperation Design for Servicing*, Satellite Services System Working Group, Meeting N.25, Pasadena, CA, November 6 1990.

[B15] D. McAffee and P. Fiorini, *Hand Controllers Design Requirements and Performance Issues in Telerobotics*, Fifth International Conference on Advanced Robotics (ICAR'91), Pisa (Italy), June 20-22 1991.

[B16] P. Fiorini, H. Das, H. Zak and A. Bejczy, *Teleoperated Repair in Space: A System for Baseline Testing*, International Advanced Robotics Programme (IARP), The First Workshop on Robotics in Space, Pisa (Italy), June 17-18 1991.

[B17] P. Fiorini and A. Giancaspro, *A Procedure for the Frequency Analysis of Telerobotics Tasks Data*, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS'92), Raleigh, NC, July 7-10 1992, pp. 873-880.

[B18] P. Fiorini, A. Giancaspro, S. Losito and G. Pasquariello, *Neural Networks for Off-Line Segmentation of Teleoperation Tasks*, International Symposium on Intelligent Control (ISIC-1992), Glasgow, UK, August 11-13 1992.

[B19] P. Fiorini, H. Das and S. Lee, *Man-Machine Cooperation in Advanced Teleoperation*, 6th Annual Space Operation, Application and Research Symposium (SOAR'92), Houston, TX, August 4-6 1992.

[B20] P. Fiorini, A. Bejczy and P. Schenker, *Integrated Interface for Advanced Teleoperation*, IEEE International Conference on Systems, Man and Cybernetics (SMC'92), Chigago, IL, October 18-21 1992.

[B21] P. Fiorini, A. Giancaspro, S. Losito and G. Pasquariello, *Real-Time Classification of Teleoperation Data with a Neural Network*, 31st IEEE Conference on Decision and Control (CDC'92), Tucson, AZ, December 16-18 1992.

[B22] H. Das and P. Fiorini, *Integrated Tools for Teleoperation*, International Symposium on Robotics and Manufacturing, Santa Fè, NM, November 11-13 1992.

[B23] P. Fiorini and Z. Shiller, *Motion Planning in Dynamic Environemnts Using the Relative Velocity Paradigm*, IEEE International Conference on Robotics and Automation, Atalanta GA, May 7-10 1993.

[B24] A.K. Bejczy, P. Fiorini, W. Kim and P. Schenker, *Toward Integrated Operator Interface for Advanced teleoperation under Time-Delay*, IEEE/RSJ/GI International Conference on Intelligent Robots and Systems, Munich (Germany), September 12-16, 1994.

[B25] W. Kim, P. Fiorini and H. Seraji, *Commercialization of JPL Virtual Reality Calibration and Redundant Manipulator Control Technologies*, 3rd International Symposium on Artificial Intelligence, Robotics, and Automation in Space (i-SAIRAS'94), Pasadena (CA), October 18-20, 1994, pp. 23-26.

[B26] P. Fiorini and Z. Shiller, *Motion Planning in Dynamic Environments*, 7th International Symposium of Robotics Research, Munich (Germany), October 1995.

[B27] P. Fiorini and Z. Shiller, *Autonomous Negotiation of Freeway Traffic*, SPIE Symposium, Pittsburg (PA), October 1995.

[B28] P. Fiorini and Z. Shiller, *Time Optimal Trajectory Planning in Dynamic Environments*, 1996 IEEE International Conference of Robotics and Automation, Minneapolis (MN), April 1996.

[B29] P. Fiorini, H. Seraji and M. Long, *A PC-Based Controller for Dexterous Arms*, 1996 IEEE International Conference of Robotics and Automation, Minneapolis (MN) April 1996.

[B30] P. Fiorini, K. Ali and H. Seraji *Health Care Robotics: a Progress Report*, 1997 IEEE International Conference of Robotics and Automation, Albuquerque (NM), April 1997.

[B31] P. Fiorini and R. Oboe, *Internet Based Telerobotics: Problems and Approaches*, 1997 International Conference on Advanced Robotics (ICAR'97), Monterey (CA), July 1997.

[B32] R. Oboe and P. Fiorini, *Issues on Internet-Based Teleoperation*, 5th IFAC Symposium on Robot Control (Syroco'97), Nantes (France), September 1997.

[B33] C.Casadei and P. Fiorini and others, *A PC-based Workstation for Robotic Discectomy*, submitteed to 1998 IEEE International Conference on Robotics and Automation, Leuven, Belgium.

[B34] R. Oboe and P. Fiorini, *Control of Telerobots with Variable Communication Delay*, submitteed to 1998 IEEE International Conference on Robotics and Automation, Leuven, Belgium.

C. Technical Reports

[C1] P. Fiorini, *Sensori Esterni per la manipolazione*, Atti dell'Agenzia Spaziale Italiana, 1989, A.S.I., viale Regina Margherita, 202, Roma (Italy), pp. 1-46.

[C2] P. Fiorini, *Sensori Finalizzati al Task*, Atti dell'Agenzia Spaziale Italiana, 1989, A.S.I., viale Regina Margherita, 202, Roma (Italy), pp. 1-19.

[C3] H. Stone and P. Fiorini, *Analisi della Fusione Sensoriale*, Atti dell'Agenzia Spaziale Italiana, 1989, A.S.I., viale Regina Margherita, 202, Roma, (Italy), pp. 1-58.

[C4] P. Fiorini and W. Zimmerman, *Code ST Evolution Planning for Advanced Development: Robotic Technology Assessment and Trade-off Methodology*, Jet Propulsion Laboratory working paper, 1988.

[C5] H. Das, H. Zak, P. Fiorini, D. Diner, W. Kim and P. Lee, *Solar Maximum Satellite Repair Demonstration with the JPL Advanced Teleoperation System: First Phase Tasks and Experiments*, Jet Propulsion Laboratory, California Institute of Technology, JPL D-9112, November 5 1991.

[C6] D. Diner, Z. Szakaly, H. Das and P. Fiorini, *The Eight Degree-of-Freedom Bilateral Force Reflecting JPL Teleoperation System*, Jet Propulsion Laboratory, California Institute of Technology, JPL D-9853, June 26 1992.

[C7] P. Fiorini, *Robotic Motion Planning among Moving Obstacles*, PhD Dissertation, Ucla, University Dissertations 1995.

D. NASA Tech Briefs

[D1] P. Fiorini and J. Chang, *Architecture for Intelligent Control of Robotic tasks*, Vol. 15, N. 8, April 1991, pp. 28-29.

[D2] P. Fiorini and J. Chang, *More About Architecture for Intelligent Robotic Control*, Vol. 16, N. 6, June 1992, pp. 40-41.

[D3] M. Drews, P. Fiorini et al. *Telerobotics/EVA Joint Analysis System.*

[D4] P. Fiorini, H. Das, H. Zak and A.K. Bejczy, *Teleoperated Repair in Space, a System for Baseline Testing*, Vol. 17, N. 5, pp. 43-44.

[D5] P. Fiorini and A. Giancaspro, *A Procedure for the Frequency Analysis of Telerobotic Task Data*, Vol. 18, N. 3, March 1994, pg. 120.

[D6] P. Fiorini, A. Giancaspro, S. Losito and G. Pasquariello, *Real Time Classification of Teleoperation Data with a Neural Network*, Vol. 18, N. 4, April 1994, pg 78.

[D7] P. Fiorini and Z. Shiller, *Motion Planning using Velocity Obstacles*, Vol. 19, N. 4, April 1995.

[D8] P. Fiorini, H. Seraji and M. Long, *A PC Based Controller for Dexterous Arms.*

[D9] P. Fiorini and Z. Shiller, *Optimal Trajectory Planning in Dynamic Environments.*