

ANDREA BONARINI

List of Publications - November, 2011

Papers published on international journals

1. Bonarini, A., Gallo, M. C., and Guida, M. (1989). KRF: a methodological framework for representing knowledge. *Computers and Artificial Intelligence*, 8 (2), 113-130.
2. Bonarini, A., Gallo, M. C., and Guida, M. (1991). GEKATOO: a general knowledge acquisition tool, *Computers and Artificial Intelligence*, 10 (3), 265-276.
3. Bonarini, A., Maniezzo, V. (1991). Integrating qualitative and quantitative modeling, *International Journal of Expert Systems: Research and Applications*, 4 (1), 51-70.
4. Bonarini, A., Maniezzo, V. (1991). Integrating Expert Systems and Decision support Systems: principles and practice, *Knowledge-Based Systems*, 4 (3), 172-176.
5. Bonarini, A., Cappelletti, E., and Corrao, A. (1992). Network-based management of subjective judgements: a proposal accepting cyclic dependencies. *IEEE Transactions on Systems, Man, and Cybernetics*, 22 (5), 1008-1023.
6. Bonarini, A., Filippi V. (1993). Designing a tool supporting the development of ITS in different domains: the DOCET experience, *Interactive Learning Environments*, 3 (2), 131-149.
7. Fishwick, P. A., Narayanan, N. H., Sticklen J., and Bonarini, A. (1994). A multi-model approach to reasoning and simulation. *IEEE Transactions on Systems, Man, and Cybernetics*, 24 (10), 1433-1449.
8. Bonarini, A., Bontempi, G. (1994). A qualitative simulation approach for fuzzy dynamical models. *ACM Transactions on Modeling and Computer Simulation (TOMACS)*. 4 (4), 285-313.
9. Bonarini A. (1996) Fuzzy modeling and reasoning: introduction and applications. *Cahiers du Centre Européen de Géodynamique et de Séismologie*. Luxembourg. 12, 57-66.
10. Bonarini, A., and Basso, F. (1997) Learning to coordinate fuzzy behaviors for autonomous agents. *International Journal of Approximate Reasoning*. Special issue on "Genetic Fuzzy Systems for Control and Robotics", F. Herrera (Ed.), 17 (4), 409-432.
11. Bonarini, A. (1997) Anytime learning and adaptation of fuzzy logic behaviors. *Adaptive Behavior Journal*, Special issue on "Complete agent learning in complex environments", M. Mataric (Ed.), 5 (3-4), 281-315.
12. Bonarini, A. and Sassaroli P. (1997) Uncertainty and Approximation in Multi-model Diagnosis. *Information Sciences*. 103(1-4). 187-210.

13. Bonarini, A. and Sassaroli P. (1997) Opportunistic multi-model diagnosis with imperfect model. *Information Sciences*. 103(1-4). 161-186.
14. Bonarini A., Aliverti, P., Lucioni, M. (2000). An omnidirectional sensor for fast tracking for mobile robots. *IEEE Transactions on Instrumentation and Measurement*. 49(3). 509-512. (revised version of IS37)
15. Bonarini A., Bonacina C., Matteucci M. (2001). An approach to the design of reinforcement functions in real world, agent-based applications. *IEEE Transactions on Systems, Man, and Cybernetics – Part B*, 31(3). 288-301.
16. Bonarini A., Trianni V. (2001). Learning Fuzzy Classifier Systems for Multi-Agent Coordination. *Information Sciences*, 136(1-4). 215-239.
17. Lima P., Bonarini A., Machado C., Marchese F. M., Marques C., Ribeiro F., Sorrenti D. G., (2001), Omnidirectional catadioptric vision for soccer robots. *International Journal of Robotics and Autonomous Systems*, 36(2-3), 87-102, (invited paper).
18. Bonarini A. (2001), Evolutionary learning, reinforcement learning, and fuzzy rules for knowledge acquisition in agent-based systems. *Proceedings of the IEEE*. 89(9), pp. 1334-1346, (invited paper).
19. Bonarini A., Invernizzi G., Labella T. H., Matteucci M. (2003), An architecture to coordinate fuzzy behaviors to control an autonomous robot. *Fuzzy sets and systems*. 134(1), pp. 101-115.
20. Asada M., Obst O., Polani D., Browning B., Bonarini A., Fujta M., T. Christaller, Takahashi T., Tadokoro S., Sklar E., Kaminka G. A., Eguchi A., Johnson J., Riley P., Hanek R., Schmitt T., Buck S., Beetz M. (2003) *An Overview of RoboCup 2002 Fukuoka/Busan*, AI Magazine, Fall, pp. 21-40, (invited paper).
21. Bonarini, A., Matteucci, M. and Restelli, M. (2006) Concepts and Fuzzy Models for Behavior-Based Robotics, *International Journal of Approximate Reasoning*. 41, pp.110-127
22. Bonarini A., Matteucci M. Restelli M. (2007). Learning fuzzy classifier systems: architecture and exploration issues. *International Journal of Artificial Intelligence Tools*. vol. 16(2), pp. 269-289 ISSN: 0218-2130. doi:[10.1142/S021821300700331X](https://doi.org/10.1142/S021821300700331X).
23. Bonarini A., Matteucci M., Restelli M. (2007). Problems and solutions for anchoring in multi-robot applications. *Journal of Intelligent and Fuzzy Systems*. Vol. 18(3), pp. 245-254.
24. Bonarini A., Lazaric A., Montrone F., Restelli M. (2009). Reinforcement distribution in fuzzy Q-learning. *Fuzzy Sets and Systems*. Vol. 160, pp. 1420-1443. doi:10.1016/j.fss.2008.11.026
25. Jesús Alcalá-Fdez, Nicolò Flugy Papé, Andrea Bonarini, and Francisco Herrera (2010). Analysis of the Effectiveness of the Genetic Algorithms based on Extraction of Association Rules. *Fundamenta Informaticae* 98(1), pp. 1-14, doi:10.3233/FI-2009-201.

26. A. Aliverti, C. Frigo, G. Andreoni, G. Baroni, A. Bonarini, P. Cerveri, M. Crivellini, R. Dellacà, G. Ferrigno, M. Galli, and others (2011). Functional Evaluation and Rehabilitation Engineering, *IEEE PULSE*, pp. 24- 34, 2.

Patents

1. Belmonte I., Bianchi M., Bona B., Bonarini A., Carlone L., Girlando D., Mangone A., Matteucci M. (2009) *Apparato di illuminazione robotizzato e metodo di comando*. Patent # IT.EI.09.027.A.
2. Belmonte I., Bianchi M., Bona B., Bonarini A., Carlone L., Girlando D., Mangone A., Matteucci M.(2010). *ROBOTIZED LIGHTING APPARATUS AND CONTROL METHOD*. I. Belmonte, M. Bianchi, B. Bona, A. Bonarini, L. Carlone, D. Girlando, A. Mangone, M. Matteucci. PCT/IB2010/001454.

Edited Books

1. Bonarini A., Mancini D., Masulli F., Petrosino A. (Eds.) (1996). *New trends in fuzzy logic*, World Scientific Press, Singapore.
2. Bonarini A., Grassi A., Pisaneschi G., Ravizza G. G. (Eds.). (2002) *Cybugs: possono le macchine pensare?*, Silvana Editoriale, Cinisello Balsamo, I.
3. Bonarini A., Masulli F., Pasi G. (Eds.) (2003). *Soft Computing Applications*, Springer Verlag, Berlin, D.
4. Polani, D.; Browning, B.; Bonarini, A.; Yoshida, K. (Eds.). (2004) *RoboCup 2003: Robot Soccer World Cup VII*, Lecture Notes in Computer Science Subseries: Lecture Notes in Artificial Intelligence, Vol. 3020, Springer Verlag, Berlin, D.

Edited Congress Proceedings

1. Groen, F., Amato, N., Bonarini, A., Yoshida, E. (Eds.) (2004) *Proceedings of the 8th Conference on Intelligent Autonomous Systems (IAS-8)*, IOS Press, Amsterdam, NL.Polani, D.; Browning, B.; Bonarini, A.; Yoshida, K. (Eds.). (2004)

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1. Bonarini, A. (1993). Modeling issues in multimedial car-driver interaction, In Maybury M. (Ed.), *Intelligent Multi-Media Interfaces*, MIT Press, Cambridge, MA, 353-371.
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7. Nardi, D., Adorni, G., Bonarini, A., Chella, A., Clemente, G., Pagello, E., and Piaggio, M., (2000) ART – Azzurra Robot Team. In M. Veloso, E. Pagello, M. Asada (Eds.), *Robocup99 – Robot Soccer World Cup III*, Springer Verlag, Berlin, D. 695 - 698.
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10. Bonarini, A., Invernizzi G., Marchese F. M., Matteucci, M. Restelli, and Sorrenti D.G., (2001) Fun2Mas: the Milan Robocup Team. In A. Birk, S. Coradeschi, S. Takodoro (Eds.) *RoboCup 2001--Robot Soccer World Cup V*, Lecture Notes in Computer Science, Volume 2377, Springer Verlag, Berlin, D.
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13. Burkhard, H-D., Asada M, Bonarini A., Jacoff A., Nardi D., Riedmiller M., Sammut C., Sklar E., Veloso M. (2004) RoboCup: Yesterday, Today, and Tomorrow Workshop of the Executive Committee in Blaubeuren, In Polani, D.; Browning, B.; Bonarini, A.; Yoshida, K. (Eds.). *RoboCup 2003: Robot Soccer World Cup VII*, Lecture Notes in Computer Science, Volume 3020, Springer Verlag, Berlin, D, 15-34.

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19. Bonarini A., Lazaric A., Restelli M. (2007) Reinforcement learning in complex environments through multiple adaptive partitions. In R. Basili and M. T. Paziienza (Eds.) *AI*IA 2007: Artificial Intelligence and Human-oriented Computing*. Lecture Notes on Artificial Intelligence 4733, Springer Verlag, Berlin, D, 531-542.
20. Blatt R., Bonarini A., Calabrò E., Della Torre M., Matteucci M. , Pastorino U.. (2007) Fuzzy K-NN Lung Cancer Identification by an Electronic Nose. In "Applications of Fuzzy Sets Theory", LNAI4578, 261–268, Springer-Verlag, Berlin, isbn 978-3-540-73399-7.
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23. Bonarini A., (2012) Cooperative Robotics In Robocup Soccer Is Not Just Playing a Game. In Kernbach S. (Ed.) *Handbook of Collective Robotics*. CRC press, Singapore.

Edited special issues of national journals

1. Bonarini, A., (1998). Special issue on Intelligenza Artificiale e Logica Fuzzy. *AI*IA Notizie*, 11(2).

Papers published on national journals

1. Bonarini, A., Borghi, G., Caironi, P. V., Colombetti, M., Dorigo, M., Marchese, F. (1996). Machine Learning for autonomous robotic agents. *AI*IA Notizie*. 9(4), 16 - 20.
2. Bonarini, A., Zaraga F., Pedretti M., Ramella C. (1997). Forno di invecchiamento per profilati di alluminio con controllo fuzzy. *Automazione e Strumentazione*. 45(1), 129 - 134.
3. Bonarini A., Sassaroli P. (1997). Uncertainty, approximation, and time in multi-model diagnosis. *AI*IA Notizie*. 10(3), 8 - 12.
4. Bonarini, A., (1998). Intelligenza artificiale e sistemi fuzzy. A. Bonarini (Ed.) Special issue on "Intelligenza Artificiale e Logica Fuzzy." *AI*IA Notizie*, 11(2), 2 - 8.
5. Bonarini, A., (2000). Fare ricerca divertendosi con i robot calciatori. *AEI*, 87(5), 33 - 39.
6. Bonarini, A., (2003). Sistemi Fuzzy. *Mondo Digitale*, 1 (1), 3 - 14.
7. Bonarini, A., (2003). From Human-machine Interaction to Learning Fuzzy Systems and Autonomous Agents *AI*IA Notizie*, 16(3), 70 - 72.
8. Bonarini A., (2009). Gare di robot come strumento per la formazione tecnico-scientifica. *Tecnologie Didattiche*, TD47, n.2. Edizioni Menabò, Ortona, I. 38 - 44.
9. Bonarini A., Chiocciariello A., Giordano E., Miglino O., (2010) Giochiamo con i robot. *Tecnologie Didattiche*, TD47, n.2. Edizioni Menabò, Ortona, I.38 - 44.
10. L. Mussone, M. Matteucci, A. Bonarini, M. Bassani (2010). Ricostruzione delle traiettorie veicolari nelle intersezioni a rotatoria con tecniche di elaborazione delle immagini. *STRADE & AUTOSTRADE*, pp. 2- 8, n. 3.

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1. Bonarini, A., Brioschi, F., Colombetti, M., Garzotto, F., Ghezzi, L., Gini, G., Guida, G., Morzenti, A., Muscettola, N., and Somalvico, M. (1985). Man-machine interaction and inferential architecture for financial planning, *Proceedings of the ESPRIT WEEK*, CEC - ITTF, Brussels, B, Unnumbered pages.
2. Bonarini, A., Brioschi, F., Colombetti, M., Garzotto, F., Ghezzi, L., Gini, G., Guida, G., and Somalvico, M. (1986). A knowledge-based system architecture for cooperative interactive problem solving: an application to financial advice giving,, *ESPRIT '85: a status report of continuing work*, North-Holland, Amsterdam, NL, 825-844. (Revised version of [IS1])

3. Bonarini, A. (1987). User modeling in person-machine communication: a computational approach, Proceedings of the Machine et Resaux Intelligentes Conference (MARI-87), CESTA, Paris, F. 377-382.
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6. Bonarini, A., Maniezzo, V. (1991). Extending Quantitative Models with Constraint-based Simulation, Proceedings of the First European Workshop on Qualitative Reasoning about Physical Systems, Genova, Italy, 1 13.
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9. Bonarini, A. (1991). Uncertainty components: issues and a proposal for their integrated management in expert systems, Proceedings of the World Congress on Expert Systems, Pergamon Press, New York, 1833-1842.
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14. Bonarini, A., Sassaroli P. (1992). *Opportunistic Multimodel-Based Diagnosis: using all the knowledge we have*, in Scarl, E. (Ed.) Proceedings of the Third International Workshop on Principles of Diagnosis (DX-92), Boeing Research, Seattle, WA, 205-211.
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16. Bersini, H., Nordvik, J.-P., and Bonarini, A., 1993. *A simple direct adaptive fuzzy controller derived from its neural equivalent*, Proceedings of the Second International IEEE Conference on Fuzzy Systems (Fuzz IEEE-93) , IEEE Computer Society Press, Los Alamitos, CA, 345, 350.
17. Bonarini, A. (1993). *ELF: learning incomplete fuzzy rule sets for an autonomous robot*, Proceedings of the First European Congress on Intelligent Technologies and Soft Computing (EUFIT '93), ELITE Foundation, Aachen, D, 69-75.
18. Tomada, L., Bonarini, A., and Gelforte, L. (1993). *Exploiting fuzzy logic for sedimentary units description and automatic classification*, Proceedings of the European Conference on Computers and Artificial Intelligence for Petroleum Industry (EUROCAIPEP 93), PSTI, Aberdeen, UK, 1 8.
19. Bonarini, A. (1994). *Some methodological issues about designing autonomous agents which learn their behaviors: the ELF experience*. In Trappl, R. (Ed.) *Cybernetics and Systems Research '94* (Proceedings of the 12th European Meeting of Cybernetics and Systems Research), World Scientific Publishing, Singapore. 1435-1442.
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24. Bonarini, A., Danieli, A., and Danieli, M. (1994). Adaptive Fuzzy Model-Following Control: A Robotic Manipulator Application. Proceedings of the Second European Congress on Intelligent Technologies and Soft Computing (EUFIT '94), ELITE Foundation, Aachen, D, 13-18.
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