

**GIANLUCA  
BALDASSARRE:  
CURRICULUM VITAE,  
EUROPEAN FORMAT**



**Rome, 01/10/2009**

**PERSONAL INFORMATION**

First name	<b>GIANLUCA</b>
Family name	<b>BALDASSARRE</b>
Address	<b>VIA LEIBNIZ 12 H/11, 00137 ROMA</b>
Affiliation	<b>ISTITUTO DI SCIENZE E TECNOLOGIE DELLA COGNIZIONE, CONSIGLIO NAZIONALE DELLE RICERCHE (ISTC-CNR), VIA SAN MARTINO DELLA BATTAGLIA 44, 00185 ROMA, ITALY</b>
Telefono	<b>06 44 595 231</b>
Fax	<b>06 44 595 243</b>
E-mail	<b>gianluca.baldassarre@istc.cnr.it</b>
Web	<b><a href="http://laral.istc.cnr.it/baldassarre">http://laral.istc.cnr.it/baldassarre</a></b>
Nationality	<b>ITALIAN</b>
Birth date	<b>21<sup>ST</sup> FEBRUARY 1969</b>
Condition	<b>MARRIED</b>

**UNDERGRADUATE AND  
GRADUATE STUDIES**

- |                        |   |
|------------------------|---|
| • Date                 | 10/1998 – 10/2001   |
| • Institute            | Department of Computer Science, University of Essex, Colchester (UK)  |
| • Degree               | PhD in Computer Science (Congregation: 03/04/2003)  |
| • Main topics of study | Robotics, programming in C++, computational models of behaviour, neural networks, reinforcement learning, planning, autonomous robotics |
| • Thesis title         | Planning with neural networks and reinforcement learning  |
| • Supervisor           | Prof. Jim Doran   |
| • Date                 | 11/1997 – 09/1998   |
| • Institute            | Istituto di Scienze e Tecnologie della Cognizione, Consiglio Nazionale delle Ricerca, Roma  |
| • Position             | Research Assistant  |
| • Research topic       | Neural networks, selective attention, agent-based models of cultural evolution  |
| • Supervisor           | Prof. Domenico Parisi   |
| • Date                 | 11/1996 – 06/1997   |
| • Institute            | Facoltà di Psicologia, Università di Roma "La Sapienza", Roma   |
| • Degree               | Master in Cognitive Psychology and Neural Networks (Diploma: 23/02/1998)  |
| • Main topics of study | Cognitive psychology, neuroscience, neural networks, eye-hand coordination  |
| • Thesis title         | Eye-hand coordination with reinforcement learning   |
| • Supervisors          | Prof. Eliano Pessa, Prof. Lucia Zanello   |

- Date 11/1988 – 04/1997
- Institute Facoltà di Economia e Commercio, Università di Roma "La Sapienza", Roma
- Degree BA and MA in Economics (Degree: 16/04/1997)
- Main topics of study Mathematics, Statistics, Econometrics, Microeconomics, Macroeconomics, Accounting, Management, Law (Additional courses: Philosophy of Science, Logics, Psychology, Neural Nets)
- Thesis title Neural networks and genetic algorithms for the simulation of bounded rationality simulation models: An Application to the Study of Oligopolistic Markets
- Supervisors Prof. Mario Baldassarri, Prof. Giovanni Dosi, Prof. Eliano Pessa
- Final mark 110/110 cum laude
  
- Date 09/1983 – 07/1988
- Institute Scientific Liceum "Cavour", Rome
- Degree Diploma of secondary school
- Main topics of study Mathematics, Geometry, Biology, Astronomy, Physics, Latin, Literature, English
- Final mark 55/60

## RESEARCH EXPERIENCES

- Date 01/01/2009 – 30/04/2013
- Institute Istituto di Scienze e Tecnologie della Cognizione, Consiglio Nazionale delle Ricerche, Roma
- Position Researcher, Coordinator of project, Team Leader of ISTC-CNR within the European Integrated Project "IM-CLeVeR – Intrinsically Motivated Cumulative Learning in Versatile Robots"
- Research Topics Computational-neuroscience and robotic models of cumulative learning, hierarchical organisation of actions, intrinsic and extrinsic motivations, eye-hand coordination (brain: amygdala, hippocampus, prefrontal cortex, basal ganglia, premotor/motor cortex, neuromodulators)
- Project Coordinator Dr. Tom Ziemke
  
- Date 01/01/2006 – 12/12/2009
- Institute Istituto di Scienze e Tecnologie della Cognizione, Consiglio Nazionale delle Ricerche, Roma
- Position Researcher, Team Leader of ISTC-CNR within the European Integrated Project "ICEA - Integrating Cognition, Emotion and Autonomy"
- Research Topics Neural-network and robotic models of brain (amygdala, basal ganglia, neuromodulators, motor cortex), classical and instrumental conditioning, motivation and emotion, action hierarchies, spatial navigation and eye-hand coordination.
- Project Coordinator Dr. Tom Ziemke
  
- Date 02/03/2005 – 01/03/2006
- Institute Istituto di Scienze e Tecnologie della Cognizione, Consiglio Nazionale delle Ricerche, Roma
- Position Researcher, Team Leader for ISTC-CNR within the STREPS Project "MindRACES – from Reactive to Anticipatory Cognitive Embodied Systems"
- Research topics Eye-hand coordination, anticipation, reinforcement learning, bottom-up and top-down attention control
- Project Coordinator Prof. Cristiano Castelfranchi / Dr. Rino Falcone
  
- Date 02/03/2004– 01/03/2005
- Institute Istituto di Scienze e Tecnologie della Cognizione, Consiglio Nazionale delle Ricerche, Roma
- Position Researcher, European Integrated Project "ECAgents – Embodied Communicating Agents"
- Research topics Collective robotics, self-organisation, neural networks, genetic algorithms
- Project coordinator Stefano Nolfi / Domenico Parisi
  
- Date 01/11/2001 – 01/03/2004
- Institute Istituto di Scienze e Tecnologie della Cognizione, Consiglio Nazionale delle Ricerche, Roma
- Position Research Assistant, European Project STREPS "SWARM- BOTS"
- Research topics Collective robotics, self-organisation, neural networks, genetic algorithms
- Project Coordinator Stefano Nolfi / Domenico Parisi

## TEACHING EXPERIENCES

- Date 11/2001 – 07/2003
  - Institute Facoltà di Psicologia, Seconda Università di Napoli, Caserta
  - Position Professor with temporary contract
  - Teaching topics Computer Science for Psychologists (including Neural Network Models).
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- Date 10/1999 – 10/2001
  - Institute Department of Computer Science, University of Essex, Colchester UK
  - Position Teaching Assistant for Undergraduate and Graduate Master students
  - Teaching courses CC 181 Introduction to Artificial Intelligence (Course director: Dr. Paul Scott)  
CC 262 Robot programming (Course director: Dr. Husheng Hu)  
CC 362 Mobile robotics (Course director: Dr. Husheng Hu)  
CC 462 Behaviour-based robotics (Course director: Dr. Dong Bin)

## EUROPEAN PROJECTS

- Date 10/1998 – 10/2001
  - Role of Candidate in the Project
    - Coordinator
    - Team Leader
  - Project Acronym IM-CLeVeR
  - Project Full Title Intrinsically Motivated Cumulative Learning Versatile Robots
  - Research Themes Computational models of intrinsic and extrinsic motivations underlying cumulative learning in monkeys, children, adults and autonomous robots
  - Funding Institution European Commission (for European Union)
  - Source of funding Seventh Framework Program  
Work Programme Theme 3: ICT – Information and Communication Technology  
Call identifier: FP7-ICT-2007-3 Challenge 2: Cognitive Systems, Interaction, Robotics  
Objective: ICT-2007.2.2 Cognitive Systems, Interaction and Robotics
  - Type of Project IP – Integrated Project
    - Contract no. 231722
    - Total budget 7,726,783
  - Total Requested Budget 5,899,884
    - CNR Budget 1,681,479
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- Date 01/2006 – 12/2009
  - Role of Candidate in the Project
    - Team Leader
  - Project Acronym ICEA
  - Project Full Title Integrating Cognition, Emotion and Autonomy
  - Research Themes Computational models of emotional and motivational processes underlying autonomy and learning in rats and autonomous robots
  - Funding Institution European Commission (for European Union)
  - Source of funding Sixth Framework Program  
Strategic Objective: IST-2004-2.4.8 Cognitive Systems
  - Type of Project IP – Integrated Project
    - Contract no. 027819
    - Total budget 8,080,675 euros
  - Total Requested Budget 5,800,000 euros
    - CNR Budget 634,533 euros
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- Date 10/2004 – 09/2007
  - Role of Candidate in the Project
    - Team Leader
  - Project Acronym MindRACES
  - Project Full Title From Reactive to Anticipatory Cognitive Embodied Systems
  - Research Themes Computational and cognitive models of anticipatory mechanisms in organisms and robots
  - Funding Institution European Commission (for European Union)

• Source of funding	Sixth Framework Program
	Strategic Objective: IST-2002-2.3.2.4 Cognitive systems
• Type of Project	STREP – Specific Targeted Research Project
• Contract no.	027819
• Total budget	3,150,000 euros
• Total Requested Budget	2,200,000 euros
• CNR Budget (Candidate Research)	120,000 euros

## BURSARIES AND PRIZES

• Date	10/1998 – 10/2001
• Bursary	3-year bursary covering all costs of PhD
• Institute	Department of Computer Science, University of Essex, Colchester, UK
• Date	1998
• Prize	Angelo Costa Prize for the 5 Best Theses in Economics of Year 1997
• Institute	RPE – Rivista di Politica Economica, Roma

## SCIENTIFIC INTERESTS

(INTER)DISCIPLINARY CONTEXT	• Computational embodied neuroscience, psychology, neuroscience, developmental robotics, artificial life, machine learning
COMPLEX SYSTEMS	• Non-linear dynamical systems, self-organisation, emergence, information theory, entropy
COMPUTATIONAL MODELS	• Neural networks (feed-forward, recurrent, dynamical; firing-rate neurons, leaky neurons)
	• Reinforcement learning (actor-critic)
	• Unsupervised learning (Kohonen-like)
	• Supervised learning (Hebb based)
	• Genetic algorithms (as models of evolution)
BRAIN (ANATOMY AND PHYSIOLOGY)	• Visual cortex, visual ventral-cortical pathways (e.g., inferotemporal cortex) and visual dorsal-cortical pathways (e.g., parietal cortex)
	• Supplementary premotor cortex, premotor cortex, motor cortex, muscles, dynamics and kinematics of limbs
	• Hypothalamus, amygdala, basal ganglia, hippocampus, orbitofrontal cortex, medial prefrontal cortex, dorsal prefrontal cortex, anterior cingulate cortex; neuromodulators, dopamine, norepinephrine (noradrenaline), serotonin (5-HT), acetylcholine, opioids
BEHAVIOUR	• Eye-arm-hand coordination, reaching, grasping, action hierarchy and compositionality, motor babbling, learning of affordances, eye-control, active vision, attention
	• Child development of sensorimotor skills, curiosity-driven learning, novelty detection, focussing on zone of proximal development
	• Motivation, affective regulation of body brain learning and behaviour, classical conditioning, instrumental conditioning, second-order conditioning, devaluation, PIT
NON-ORTHODOX ECONOMICS	• Neuro-economics, behavioural economics, agent-based simulations, policy making, market economy, efficiency, GDP distribution, cooperative and competitive behaviours, human nature, well-being, happiness

## PROFESSIONAL EXPERIENCE

• Date	04/1996 – 03/1997
• Employer	Non-profit organisation 'ELIS – Education, Work, Instruction and Sport', Roma
• Position	Civil service operator
• Main activities	Preparation of material for professional courses. Preparation of European projects

## KNOWLEDGE AND SKILLS

FIRST LANGUAGE ITALIAN

FOREIGN LANGUAGE ENGLISH

<ul style="list-style-type: none"> <li>• Reading</li> <li>• Writing</li> <li>• Oral</li> <li>• Certificate</li> <li>• Experiences abroad</li> </ul>	<p>Excellent</p> <p>Excellent</p> <p>Excellent</p> <p>Toefl, November 1997, score 610/668</p> <ul style="list-style-type: none"> <li>• 3 years in UK in University Environment for the PhD accomplishment (1998-2001)</li> <li>• 6 months in USA in family environment (1987, 1988, 1991)</li> </ul>
COMPUTER SCIENCE	<ul style="list-style-type: none"> <li>• Excellent general programming capabilities</li> <li>• Good knowledge of C, C++, Matlab</li> <li>• Good knowledge of Microsoft Word and Excell</li> <li>• User knowledge of Windows OS and Linux Ubuntu</li> </ul>
RESEARCH SUPERVISION (MASTER, PHD AND POSTDOCS)	<ul style="list-style-type: none"> <li>• 2006-today: Supervision, within ICEA and MindRACES of: <ul style="list-style-type: none"> <li>- 3 Master students (2 completed)</li> <li>- 4 PhD students (1 completed)</li> <li>- 1 postdoc</li> </ul> </li> </ul>
GROUP WORK SKILLS	Excellent capabilities of working in group, acquired with the preparation and implementation of various European Projects
EDITORIAL ACTIVITIES	Referee of: <ul style="list-style-type: none"> <li>• Artificial Life</li> <li>• Adaptive Behavior</li> <li>• Journal of Autonomous Robots</li> <li>• IJEE Transactions on Neural Networks</li> <li>• IJEE Transactions on Evolutionary Computation</li> <li>• Quarterly Journal of Cognitive Science</li> <li>• Sistemi Intelligenti</li> </ul>
ORGANISATION AND PROCEEDINGS EDITOR OF NATIONAL AND INTERNATIONAL CONFERENCES	<ul style="list-style-type: none"> <li>• 26/01/2008: "The Fourth Workshop on Anticipatory Behavior in Adaptive Learning Systems (ABIALS2008)", Munich, Germany.</li> <li>• 13-15/09/2006: "Terzo Workshop Italiano di Vita Artificiale (WIVA2006)", Istituto di Scienze e Tecnologie della Cognizione - Consiglio Nazionale delle Ricerche, Roma, Italia.</li> <li>• 30/09/2006: "The Third Workshop on Adaptive Behavior in Anticipatory Learning Systems (ABIALS2006)", Consiglio Nazionale delle Ricerche, Roma, Italia.</li> <li>• 25-29/09/2006 "From Animals to Animats 9 – Ninth International Conference on Simulation of Adaptive Behavior (SAB2006)" Consiglio Nazionale delle Ricerche, Roma, Italia.</li> </ul>
INVITED TALKS	<ul style="list-style-type: none"> <li>• 13/05/2008: Università Campus Bio-Medico, Roma: "Computational Embodied Neuroscience: metodo ed esemplificazione con modelli di esperimenti di devaluation nei ratti".</li> <li>• 20/12/2005: Università di Trieste, Dipartimento di Psicologia, Trieste: "Un modello basato su reti neurali ed apprendimento per rinforzo di pulcini che imparano a localizzare il centro di arene chiuse".</li> </ul>
MANUAL AND ARTISTIC SKILLS	<ul style="list-style-type: none"> <li>• 4 years of piano, 3 years of guitar</li> <li>• Excellent capabilities in technical drawing, good capabilities in artistic drawing</li> <li>• Excellent manual capabilities to work wood and iron</li> </ul>
MILITARY SERVICE	04/1996 – 03/1997: Civil Service in non-profit organisation "ELIS – Education, Work, Instruction and Sport", Roma
DRIVING LICENCE	Italian 'Patente B'

Gianluca Baldassarre

# Publications (until 01/01/2009)

## Theses (Italian and English)

1. Baldassarre G. (1997). *Reti neurali ed algoritmi genetici per i modelli simulativi di teoria della razionalità limitata - Applicazioni ai mercati oligopolistici*. Tesi di Laurea. Roma: Facolta' di Economia e Commercio, Universita' di Roma "La Sapienza".
2. Baldassarre G. (1997). *Apprendimento per rinforzo e coordinazione sensomotoria*. Tesi del Corso di Perfezionamento in Psicologia Cognitiva e Reti Neurali, edizione 1996-1997. Roma: Facolta' di Psicologia, Universita' di Roma "La Sapienza".
3. Baldassarre G. (2002). *Planning with Neural Networks and Reinforcement Learning*. PhD Thesis. Colchester - UK: Computer Science Department, University of Essex.

## Edited Books (English)

4. Nolfi S., Baldassarre G., Calabretta R., Hallam J., Marocco D., Meyer J-A., Miglino O., Parisi D. (Eds.) (2006). *From Animals to Animats 9: Proceedings of the Ninth International Conference on the Simulation of Adaptive Behavior (SAB-2006)*. Berlin: Springer Verlag.
5. Butz M. V., Sigaud O., Pezzulo G., Baldassarre G. (Eds.) (2006). *Proceedings of the Third Workshop on Anticipatory Behavior in Adaptive Learning Systems*. Rome: Istituto di Scienze e Tecnologie della Cognizione, Consiglio Nazionale delle Ricerche (ISTC-CNR).
6. Butz M., Sigaud O., Pezzulo G., Baldassarre G. (eds.) (2007). *Anticipatory Behavior in Adaptive Learning Systems: From Brains to Individual and Social Behavior*. LNAI 4520, Subseries State-of-the-art survey. Berlin: Springer Verlag.

## Book Chapters (English)

7. Baldassarre G. (2003). Forward and bidirectional planning based on reinforcement learning and neural networks in a simulated robot. In Butz M., Sigaud O., Gérard P. (eds.), *Adaptive Behaviour in Anticipatory Learning Systems*, pp. 179-200. Berlin: Springer Verlag.
8. Nolfi S., Baldassarre G., Marocco D. (2003). The importance of viewing cognition as the result of emergent processes occurring at different time scales. In Murase K., Asakura T. (eds.), *Dynamic Systems Approach for Embodiment and Sociality, International Series on Advanced Intelligence*, V. 6. Magill-Australia: Advanced Knowledge International Press.
9. Baldassarre G. (2008). Self-Organization as Phase Transition in Decentralized Groups of Robots: A Study Based on Boltzmann Entropy. In Prokopenko Mikhail (ed.), *Advances in Applied Self-Organizing Systems*, pp. 127-146. Berlin: Springer-Verlag.
10. Pezzulo G., Baldassarre G., Butz M. V., Cristiano C., Hoffmann J. (2007). From actions to goals and vice-versa: theoretical analysis and models of the ideomotor principle and TOTE. In Butz M.V., Sigaud O., Pezzulo G., Baldassarre G. (eds.), *Anticipatory Behavior in Adaptive Learning Systems: From Brains to Individual and Social Behavior*, pp. 73-93. Berlin: Springer-Verlag.
11. Butz M., Sigaud O., Pezzulo G., Baldassarre G. (2007). Anticipations, brains, individual and social behavior: an introduction to anticipatory systems. In Butz M.V., Sigaud O., Pezzulo G., Baldassarre G. (eds.), *Anticipations, brains, individual and social behavior: an introduction to anticipatory systems*, pp. 1-18. Berlin: Springer-Verlag.
12. Zappacosta S., Nolfi S., Baldassarre G. (2007). A testbed for neural-network models capable of integrating information in time. In Butz M.V., Sigaud O., Pezzulo G., Baldassarre G. (eds.), *Anticipatory Behavior in Adaptive Learning Systems: From Brains to Individual and Social Behavior*, pp. 189-217. Berlin: Springer-Verlag.
13. Ognibene D., Balkenius C., Baldassarre G. (2008). A reinforcement-learning model of top-down attention based on a potential-action map. In Pezzulo Giovanni, Butz V. Martin, Castelfranchi Cristiano, Falcone Rino (eds.), *The Challenge of Anticipation – A Unifying Framework for the Analysis and Design of Artificial Cognitive Systems*, pp. 161-184. LNAI 5225. Berlin: Springer-Verlag.

## International Journals (English)

14. Baldassarre G. (1997). Neural networks and genetic algorithms for the simulation models of bounded rationality theory - An application to oligopolistic markets. *Rivista di Politica Economica*. V. 12, pp. 107-146.

15. Baldassarre G. (2001). Cultural evolution of 'guiding criteria' and behaviour in a population of neural-network agents. *Journal of Memetics - Evolutionary Models of Information Transmission*. Vol. 4, On-line Journal.
16. Baldassarre G. (2002). A modular neural-network model of the basal ganglia's role in learning and selecting motor behaviours. *Journal of Cognitive Systems Research*. Vol. 3, pp. 5-13.
17. Baldassarre G., Nolfi S., Parisi D. (2003). Evolving mobile robots able to display collective behaviour. *Artificial Life*. Vol. 9, pp. 255-267.
18. Dorigo M., Trianni V., Sahin E., Gross R., Labella T.H., Baldassarre G., Nolfi S., Deneubourg J.-L., Mondada F., Floreano D., Gambardella L.M. (2004). Evolving self-organizing behaviors for a swarmbot. *Autonomous Robots*, vol. 17, pp. 223-245.
19. Baldassarre, G., Parisi, D., Nolfi, S. (2006). Distributed coordination of simulated robots based on self-organization. *Artificial Life*, Vol. 12 (No. 3), pp. 289-311.
20. Mannella F., Baldassarre G. (2007). A neural-network reinforcement-learning model of domestic chicks that learn to localise the centre of closed arenas. *Philosophical Transactions of the Royal Society B – Biological Sciences*. Vol. 362 (No. 1479), pp. 383-401.
21. Baldassarre G., Trianni V., Bonani M., Mondada F., Dorigo M., Nolfi S. (2007). Self-organised coordinated motion in groups of physically connected robots. *IEEE Transactions in Systems, Man and Cybernetics – Part B Cybernetics*. Vol. 37 (No. 1), pp. 224-239.

### **Refereed Articles in International Conference Proceedings (English)**

22. Baldassarre G. (1996). Simulations of oligopolistic markets with artificial agents: Decision procedures as emergent properties of adaptive learning. In Pessa E., Penna P., Montesanto A. (eds.), *Proceedings of the Third European Congress on Systems Science*, pp. 175-179. Roma: Edizioni Kappa.
23. Baldassarre G., Parisi D. (1999). Individual learning, noise and selection in cultural evolution – A study through artificial life simulations. In Dautenhahn K., Nehaniv C. (eds.), *Proceedings of the Symposium on Imitation in Animals and Artifacts (Hold within AISB-1999)*, pp. 32-37. Brighton: The Society for the Study of Artificial Intelligence and Simulation of Behaviour.
24. Baldassarre G. (2000). Needs and motivations as mechanisms of learning and control of behaviour: Interference problems with multiple tasks. In Trappl R. (ed.), *Cybernetics and Systems 2000 - Proceedings of the Fifteenth European Meeting on Cybernetics and Systems Research*, pp. 677-682. Vienna: Austrian Society for Cybernetic Studies.
25. Baldassarre G., Parisi D. (2000). Classical and instrumental conditioning: From laboratory phenomena to integrated mechanisms for adaptation. In Meyer J.-A., Berthoz A., Floreano D., Roitblat H., Wilson S.W. (eds.), *From Animals to Animats 6: Proceedings of the Sixth International Conference on the Simulation of Adaptive Behaviour (SAB-2000), Supplement Volume*, pp. 131-139. Honolulu: International Society for Adaptive Behaviour.
26. Baldassarre G. (2001). A Modular neural-network model of the basal ganglia's role in learning and selecting motor behaviours. In Altmann E.M., Cleermans A., Schunn C.D., Gray W.D. (eds.), *Proceedings of the Fourth International Conference on Cognitive Modeling (ICCM-2001)*, pp. 37-42. Mahwah – NJ: Lawrence Erlbaum.
27. Baldassarre G. (2001). Coarse Planning for Landmark Navigation in a Neural-Network Reinforcement Learning Robot. *Proceedings of the International Conference on Intelligent Robots and Systems (IROS-2001)*. IEEE.
28. Baldassarre G. (2001). A Planning Modular Neural-Network Robot for Asynchronous Multi-Goal Navigation Tasks. In Arras K.O., Baerveldt A.-J., Balkenius C., Burgard W., Siegart R. (eds.), *Proceedings of the 2001 Fourth European Workshop on Advanced Mobile Robots (EUROBOT-2001)*, pp. 223-230. Lund – Sweden: Lund University Cognitive Studies.
29. Baldassarre G. (2002). A biologically plausible model of human planning based on neural networks and Dyna-PI models. In Butz M., Sigaud O., Gérard P. (eds.), *Proceedings of the Workshop on Adaptive Behaviour in Anticipatory Learning Systems (ABiALS-2002, hold within SAB-2002)*, pp. 40-60. Wurzburg: University of Wurzburg.
30. Baldassarre G., Nolfi S., Parisi D. (2002). Evolving mobile robots able to display collective behaviour. In Hemelrijk C. K. (ed.), *International Workshop on Self-Organisation and Evolution of Social Behaviour*, pp. 11-22. Zurich: Swiss Federal Institute of Technology.
31. Nolfi S., Baldassarre G., Marrocco D. (2002). The importance of viewing cognition as the result of emergent processes occurring at different time scales. In Asakura T., Murase K. (eds.), *Proceedings of the Third International Symposium on Human and Artificial Intelligent Systems – Dynamic Systems Approach for Embodiment and Sociality*, pp. 63-76. Fukui, Japan: Fukui University.
32. Baldassarre G., Nolfi S., Parisi D. (2003). Evolution of collective behaviour in a team of physically linked robots. In Raidl G., Guillot A., Meyer J.-A. (eds.), *Applications of Evolutionary Computing - Proceedings of the Second European Workshop on Evolutionary Robotics (EvoROB-2003, hold within EvoWorkshops-2003)*, pp. 581-592. Berlin: Springer Verlag.

33. Baldassarre G., Parisi D., Nolfi S. (2004). Coordination and behavior integration in cooperating simulated robots. In S. Schaal, A. Ijspeert, A. Billard, S. Vijayakumar, J. Hallam and J-A. Meyer (Eds.), *From Animals to Animats 8: Proceedings of the Eighth International Conference on the Simulation of Adaptive Behavior (SAB-2004)*, pp. 385-394. Cambridge, MA: The MIT Press.
34. Dorigo M., Tuci E., Gross R., Trianni V., Labella T. H., Nouyan S., Ampatzis C., Deneubourg J.-L., Baldassarre G., Nolfi S., Mondada F., Floreano D., Gambardella L. M. (2004). The SWARM-BOTS project. In Sahin E., Spears W. M. (eds.), *Proceedings of the First International Workshop on Swarm Robotics*. Lecture Notes in Computer Science. Germany, Berlin: Springer Verlag.
35. Baldassarre G., Parisi D., Nolfi S. (to appear). Measuring coordination as entropy decrease in groups of linked simulated robots. In Minai A., Bar-Yam Y. (eds.), *Proceedings of the Fifth International Conference on Complex Systems (ICCS2004)*. Berlin, Springer Verlag.
36. Ognibene D., Mannella F., Pezzulo G., Baldassarre G. (2006). Integrating reinforcement-learning, accumulator models, and motor-primitives to study action selection and reaching in monkeys. In Fum D., Del Missier F., Stocco A. (eds.), *Proceedings of the Seventh International Conference on Cognitive Modeling (ICCM2006)*. Trieste, Edizioni Goliardiche.
37. Ognibene D., Rega A., Baldassarre G. (2006). A model of reaching integrating continuous reinforcement learning, accumulator models, and direct inverse modelling. In Nolfi S., Baldassarre G., Calabretta R., Hallam J., Marocco D., Meyer J.-A., Miglino O., Parisi D.(Eds.), *From Animals to Animats 9: Proceedings of the Ninth International Conference on the Simulation of Adaptive Behavior (SAB-2006)*, pp. 381-393. Berlin: Springer Verlag.
38. Pezzulo G., Baldassarre G., Butz M. V., Castelfranchi C., Hoffmann J. (2006). *An Analysis of the Ideomotor Principle and TOTE*. Butz M. V., Sigaud O., Pezzulo G., Baldassarre G. (Eds.), *Proceedings of the Third Workshop on Anticipatory Behavior in Adaptive Learning Systems* (In electronic format). Rome: Istituto di Scienze e Tecnologie della Cognizione, Consiglio Nazionale delle Ricerche (ISTC-CNR).
39. Cecconi F., Caligiore D., Baldassarre G., Parisi D. (in press). Interacting networks as models of cultural change. *Computational Methods for Modeling and Learning in Social and Human Sciences*.
40. Schembri M., Mirolli M., Baldassarre G. (2007). Evolving internal reinforcers for an intrinsically motivated reinforcement-learning robot. Demiris Y., Scassellati B., Mareschal D. (eds.). *The 6th IEEE International Conference on Development and Learning (ICDL2007)*. IEEE Catalog Number: 07EX1740C, ISBN: 1-4244-1116-5, Library of Congress: 2007922394, pp. 282-287. London: Imperial College.
41. Caligiore D., Parisi D., Baldassarre G. (2007). Towards an integrated biomimetic model of reaching. Demiris Y., Scassellati B., Mareschal D. (eds.). *The 6th IEEE International Conference on Development and Learning (ICDL2007)*. IEEE Catalog Number: 07EX1740C, ISBN: 1-4244-1116-5, Library of Congress: 2007922394, pp. 241-246. London: Imperial College.
42. Herbot O., Ognibene O., Butz M.V., Baldassarre G. (2007). Learning to select targets within targets in reaching tasks. Demiris Yiannis, Scassellati Brian, Mareschal Denis (eds.) *The 6th IEEE International Conference on Development and Learning (ICDL2007)*. IEEE Catalog Number: 07EX1740C, ISBN: 1-4244-1116-5, Library of Congress: 2007922394, pp. 7-12. London: Imperial College.
43. Schembri M., Mirolli M., Baldassarre G. (2007). Evolving childhood's length and learning parameters in an intrinsically motivated reinforcement learning robot. In Berthouze Luc, Dhristiopher G. Prince, Littman Michael, Kozima Hideki, Balkenius Christian (eds.), *Proceedings of the Seventh International Conference on Epigenetic Robotics (EpiRob2007)*, pp. 141-148. Lund, Sweden: Lund University Cognitive Studies.
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