

ANGELO CANGELOSI, PhD

Born 26 June 1967 in Alcamo (Italy), Married with 2 daughters

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1. ACADEMIC QUALIFICATIONS

- 1993-97 *Ph.D. in Psychology and Cognitive Science*, University of Genoa
 1986-91 *Laurea(Msc) in Experimental Psychology*, University of Rome "La Sapienza" (110/110 *cum laude*)
 1998 *UK Accreditation for Teaching in Higher Education (TLHE-SEDA Certificate)*
 1997-01 *Full Member of the Italian Psychological Association (Professional Body)*

2. CURRENT POSITION AND EMPLOYER

2006- *Professor of Artificial Intelligence and Cognition*
 School of Computing and Mathematics, University of Plymouth (UK)

Main duties (full details and lists in sections 7 and 8)

- *Research*: Director of the "CRNS: Centre for Robotics and Neural Systems"; and Leader of "Adaptive Behaviour & Cognition Lab"
- *Senior management*: RAE/REF coordinator for Computer Science and Informatics¹
- *Teaching*: BSc/MSc modules in Artificial Intelligence and Cognitive Robotics

3. EMPLOYMENT HISTORY

- 1997- *Previous positions at the University of Plymouth*
 Reader (2004 – 2006)
 Principal Lecturer (2002 – 2004)
 Senior Lecturer (1998 – 2002)
 Lecturer (1997 – 1998)
- 2004-06 *Adjunct Researcher*, Institute of Cognitive Science & Technology, CNR National Research Council Rome
- 1996 *Visiting Scholar at the University of Southampton*, Cognitive Science Centre (Prof. S. Harnad)
- 1994-95 *Visiting Scholar at the University of California at San Diego*, Center for Research in Language (Prof. J. Elman), and Centre for Behavioural Neurobiology (Prof. W. Kristan)
- 1993-97 *Teaching assistant* for courses of Cognitive Science and of General, Cognitive and Developmental Psychology (University of Genoa and University of Siena)
- 1992-97 *Research Collaborator*, Institute of Psychology, Italian National Research Council
- 1992-94 *Research Assistant at the Laboratory of Information Technologies*, Alenia-Finmeccanica, Rome

4. SUMMARY OF PUBLICATIONS (full list in Publications section)

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|---|----|
| Books | 4 |
| Journal publications | 50 |
| Refereed Conf. proceedings + Book chapters | 78 |
| Published abstracts of conference presentations | 71 |
| Submitted papers + Technical reports | 5 |

5. SUMMARY OF RESEARCH GRANTS (full list below)

| | | |
|--|--------------|-------------|
| Principal Investigator: UK Research Councils | £ 2,467,780 | (4 grants) |
| Principal Investigator: EU FP7 | € 11,378,200 | (4 grants) |
| Principal Investigator: USA Air Force Lab | \$ 253,780 | (3 grants) |
| Co-Investigator: UK Research Councils | £ 294,358 | (2 grants) |
| Co-Investigator: EU FP7 | € 8,400,000 | (1 grant) |
| Other grants as Principal Investigator | £ 123,000 | (16 grants) |

¹ RAE2008 Computer Science results in Plymouth: 4* 25% (world-leading), 3* 50% (international excellence), 2* 25%

5a. RESEARCH GRANTS AND AWARDS

- 2012-15 *UK EPSRC-BBSRC, £1,600,000 (£1,200,000 at Plymouth)* “BABEL: Bio-inspired Architecture for Brain Embodied Language”. A. Cangelosi PI and project coordinator, T. Wennekers and S. Denam co-I, S. Furber (Manchester), F. Pulvermuller (MRC Cambridge and Free University Berlin). With ARM, HONDA HRI and TMSUK Japan as industrial advisors.
- 2012-15 *EU FP7 – EU FP7 – ICT Cognitive Systems & Robotics, €77,410 at Plymouth (€3,880,000 whole project)* “Poeticon++: Robots need Language”. A. Cangelosi PI, K. Pastra (CSRI Greece, Project Coordinator), Y. Aloimonos (U. Maryland., USA), L. Fadiga and G. Metta (IIT, Italy), J. Santos-Victor (IST, Portugal).
- 2011-15 *EU FP7 – ICT Challenge 5 Wellbeing, €57,960 at Plymouth (€6,200,000 whole project)* “RobotEra: Advanced Robotic systems and intelligent environments for the ageing population”. A. Cangelosi PI, T. Belpaeme co-I, P. Dario (SSSA Italy, Project Coordinator), A. Saffiotti (Orebro U., Sweden), Zhang (Hamburg U., Germany), 4 industrial partners (Italy, Germany), three user partners (Italy, Sweden).
- 2010 *US Air Force Lab, European Office of Aerospace Research and Development (EOARD), \$58,775.* Organisation of the Interdisciplinary Workshop on Socio-Cultural Phenomena in Linguistic Communication, Plymouth (Principal Investigator)
- 2009-13 *EU FP7 Marie Curie Initial Training Network, €3,492,830 (€32,473 at Plymouth)* “RobotDoc: Robotics for Development of Cognition). A. Cangelosi PI-Coordinator, R. Pfeifer (Zurich), C. von Hofsten (Uppsala), G. Sagerer, (Bielefeld), T. Ziemke (Skovde), G. Metta (IIT Genoa), S. Wermter (Sunderland), F. Becchi (Telerobot). Associate Partners: B. Scassellati (Yale USA), J. Tani (RIKEN), J. Lee (NTUST Taiwan), C. Goerick (HONDA), P. Robinson (BARA British Robot and Automation Association)
- 2008-12 *EU FP7 – ICT Cognitive Systems & Robotics, €6,250,000 (€1,626,250 at Plymouth)* Integrating Project “ITALK: Integration and Transfer of Action and Language Knowledge in Robots”. A. Cangelosi PI-Coordinator coordinator, T. Belpaeme (Plymouth), C. Nehaniv & K. Dautenhahn (Hertfordshire), S. Nolfi (CNR Rome), G. Metta & G. Sandini (IIT Genoa), G. Sagerer, B. Wrede & K. Rohlfing (Bielefeld), K. Fischer (Univ. Southern Denmark), J. Tani (RIKEN) and D. Roy (MIT).
- 2010-14 *EU FP7 – ICT Cognitive Systems & Robotics, €3,400,000 (€1,400,000 at Plymouth)* Integrating Project “ALIZ-E: Adaptive Strategies for Sustainable Long-Term Social Interaction”. Co-investigator (T. Belpame PI). With DFKI Germany, Vrije Universiteit Brussel, Netherlands Organization for Applied Scientific Research, Imperial College, University of Hertfordshire, San Raffaele Hospital Milan, CNR Padoa, Gostai, France.
- 2009-10 *European Space Agency, €24,466.* ARIADNA Project “Evolution in robotic islands: Optimising the design of autonomous robot controllers for navigation and exploration of unknown environments”. PI.
- 2009-12 *CONACyT Mexican Government, £50,000.* PhD Bursary for Salomon Ramirez-Contla for project on active vision in humanoid robots. PI.
- 2008-11 *RCUK Cognitive Systems Foresight, £809,132 (£507,722 at Plymouth)* “VALUE: Vision, Action, and Language Unified by Embodiment”. PI-Coordinator (with R. Ellis, Psychology Plymouth, and M. Fisher, Dundee). Funding from EPSRC, ESRC, and BBSRC.
- 2008 Award to the University of Plymouth of *Apple ARTS Programme, \$30,000.* (A. Cangelosi, Leader of University bid). Subsequently, award of 2008 ARTS grant to D. Marocco (Cangelosi as co-applicant) for project: “P-ARTS: Plymouth Advanced Robot Training Suite”
- 2007-10 *US Air Force Lab, European Office of Aerospace Research and Development (EOARD), \$149,446.* “Communication and distributed control in multi-agent systems” (Principal Investigator)
- 2005-06 *US Air Force Lab, European Office of Aerospace Research and Development (EOARD), \$45,559,* “Integrating language and cognition in autonomous systems”. (PI)
- 2003-05 *EPSRC, £141,752* “Computational modelling of quantifiers: The relative influence of scalar and contextual factors” (with Coventry and Newstead) Evaluated “Tending to Outstanding” (4 out of 5)
- 2004-06 *DTI Knowledge Transfer Partnerships, £100,000,* Liquid Cargo Management Limited. (with P. Robinson, G. Bugmann) (grant awarded but not started)
- 2003-04 *EPSRC Novel Computation Cluster “SEEDS: Scalable, Evolvable, Emergent, Developmental Systems” (£60,000 - PI Dr. J. Miller, York University)*
- 2003 *Italian Ministry of Education and University, €167,000* Anti “brain-drain” grant for returning to Italian academia (“Rientro dei Cervelli”) (grant awarded but not accepted)

- 2001-03 *EPSRC, £152,606* "A psychologically plausible model for the acquisition of spatial terms" (with K. Coventry), Evaluated "Tending to Outstanding" (4 out of 5)
- 2000-03 *EPSRC, £47,417* "Multi-agent systems for modelling language evolution" (PI), Evaluated "Tending to Outstanding" (4 out of 5)
- 2000-01 *Wellcome Trust SciArt Grant, £10,000* "STI: Search for Terrestrial Intelligence" (with M. Phillips)
- 1998-01 *Nuffield Foundation Award for New Lecturers, £3,000* "Language evolution in neural networks" (PI)

5b. OTHER GRANTS (TRAVEL, CONFERENCE, VISITS)

- 2009 *Nuffield Foundation, Undergraduate Research Bursary for M. Butel, £1,080* (PI)
- 2006-09 *US Air Force Lab, European Office of Aerospace Research and Development (EOARD), \$11,719*, Travel grants for Fusion2006, KIMAS2007, IJCNN09 Conferences (PI) (3 grants)
- 2006-08 *euCognition Action Network, €21,300*. Grants for students/staff exchange visits (PI) (5 grants)
- 2006 *euCognition Action Network, €2,800*. Organisation of External Symbol Grounding Workshop (PI)
- 2006-09 *British Academy of Engineering, £1200*. Travel grant (PI) (two grants)
- 2005 *US Air Force Lab, European Office of Aerospace Research and Development (EOARD), \$2643*, Travel grant for Keynote Speaker participation to KIMAS05 conference
- 2005 *Foundation Rosselli* (Turin) and Italian Society for Cognitive Science, *€1750*, Support for organisation of 6th International Conference on the Evolution of Language (PI)
- 2004 *BBSRC, EPSRC & British Academy, £11,240*, Support for organisation of 9th Neural Computation and Psychology Conference (PI). EPSRC evaluation "Outstanding" (5 out of 5).

6. PEER ESTEEM INDICATORS

Management of Scientific Journals:

- 2008- *Editor-in-Chief*, "Interaction Studies" (John Benjamin Publishing)
- 2011- *Associate Editor*, "TopiCS in Cognitive Science" (CSS)
- 2011- *Associate Editor*, "IEEE Transactions in Autonomous Mental Development" (IEEE)
- 2011- *Associate Editor*, "International Journal of Signs and Semiotic Systems" (IGI Global)
- 2010- *Associate Editor*, "Cognitive Systems Research" (Elsevier)
- 2007- *Associate Editor*, "Connection Science" (Taylor & Francis)
- 2007- *Associate Editor*, "Frontiers in Neurorobotics" (Frontiers in Neuroscience Foundation)
- 2011- *Editorial Board Member*, "Advances in Artificial Neural Systems" (Hindawi)
- 2006- *Editorial Board Member*, "Journal of Neurolinguistics" (Elsevier)
- 2009- *Editorial Board Member*, "Paladyn. Journal of Behavioral Robotics" (Versita-Springer)
- 2006- *Editorial Consultant Member*, "International Journal of Advanced Robotic Systems"
- 2003-07 *Editorial Board Member*, "Interaction Studies" (John Benjamin Publishing)
- 2006-07 *Editorial Board Member*, "Connection Science" (Taylor & Francis)
- 2006 *Guest Editor*, "Mind and Society" (Springer) – special issue
- 2005 *Guest Editor*, "Connection Science" (Taylor & Francis) – special issue

Management for Scientific Publishers:

- 2010- *Editor*, Book Series on "Advances in Interaction Studies" (John Benjamin Publishing)
- 2011- *Editorial Board Member*, Books Series of Italian Journal of Philosophy of Language (Quaderni di RIFL)
- 2006- *Scientific Advisory Board Member*, Polimetrica Scientific Publishing

International Conference Organisation (Chair):

- 2013 *General co-Chair*, IEEE ICDL-EPIROB 2013 Conference, Frankfurt, August 2013
- 2012 *Conference Co-Chair*, Postgraduate Conference on Developmental Robotics and Development of Cognition, Lausanne, September 2012
- 2012 *Organising Chair*, EU Parliament workshop on "European Research Leadership in Robotics" Brussels Altiero Spinelli Parliament Building, March 2012
- 2011 *Special Session Chair*, WCCI 2012 Joint Workshop on Bio-Inspired Developmental Mechanisms, Brisbane, June 2011
- 2011 *General Chair*, IEEE ICDL-EPIROB 2011 Conference, Frankfurt, 24-27 August 2011
- 2011 *Workshop Chair*, Spring School on Interdisciplinary Methods in Cognitive Robotics, Budapest, May 2-4

- 2010 *Workshop Chair*, SCL2010: Interdisciplinary Workshop on Society, Culture & Language, Plymouth, November 11-13
- 2010 *Conference Co-organiser*, EVOLANG-2010, 8th International Conference on the Evolution of Language (Netherlands, 2010)
- 2009 *Workshop Chair*, Workshop on Cognitive Modelling with Neural Network and Dynamic Logic, KIMAS-2009, St. Louis MA, October 11 2009)
- 2008 *Workshop Chair*, International Workshop on Integration of Action and Language Knowledge in Robots (Rome, September 22-24 2008)
- 2008 *Conference Co-organiser*, EVOLANG-2008, 7th International Conference on the Evolution of Language (Barcelona, March 11-15 2008)
- 2007 *Special Session Organiser*, KIMAS2007, Special Session on “Modeling Language” (Boston, May 3)
- 2006 *Conference Chair*, EVOLANG6, 6th International Conference on the Evolution of Language (Rome, 12-15 April 2008)
- 2006 *Special Session Chair*, IJCNN2006 – Special Session on “Modeling the Evolution and Acquisition of Language” (Vancouver, 21 July 2006)
- 2006 *Workshop Co-organiser*, International Workshop on External Symbol Grounding (Plymouth, 3-4 July)
- 2005 *Symposium Chair*, 2nd International Workshop on the Emergence and Evolution of Linguistic Communication – an AISB05 Symposium (Hertfordshire, April 2005)
- 2004 *Conference Chair*, 9th Neural Computation and Psychology Workshop (Plymouth, Sept. 2004)

Programme/Scientific Committees in International Conferences:

- 2012 ICANN2012, International Conference on Artificial Neural Networks (Lausanne, September 2012)
- 2012 ASE/IEEE SocialComp2012, Fourth IEEE International Conference on Social Computing (Amsterdam, September 2012)
- 2012 ESLP 2012: Embodied and Situated Language Processing Conference (Newcastle, August 2012)
- 2011 NaBIC2011, Third World Congress on Nature and Biologically Inspired Computing (Salamanca, October 2011)
- 2011 SocialComp2011, Third IEEE International Conference on Social Computing (Boston, October 2011)
- 2011 IEEE CEC 2011, IEEE Congress on Evolutionary Computation (New Orleans, June 2011)
- 2011 GECCO'11, Genetic and Evolutionary Computation Conference, Generative and Developmental Systems Track (Dublin, July 2011)
- 2011 ECAL'11, Satellite Workshop AAALe Alife Approaches to Artificial Language Evolution (Paris, August 2011)
- 2011 IJCAI2011 Workshop in “AI in Space: Intelligence beyond planet Earth” (Barcelona, July 2011)
- 2011 RO-MAN 2011: 20th IEEE International Symposium on Robot and Human Interaction Communication (Atlanta, August 2011)
- 2011 CogSci2011: Cognitive Science Society Annual Meeting (Boston, July 2011)
- 2011 IEEE ALIFE 2011: Third IEEE Symposium on Artificial Life (Paris, April 2011)
- 2011 IEEE Symposium on Computational Intelligence, Cognitive Algorithms, Mind, and Brain, (CCMB), (Paris, April 2011)
- 2010 EpiRob 2010: Tenth International Conference on Epigenetic Robotics (Lund, 5-7 November 2009)
- 2010 ICMLA'10: Ninth International Conference on Machine Learning and Applications (Washington, December 2010)
- 2010 IEEE International Conference on Development and Learning, 2010 (Michigan, August 2010)
- 2010 IEEE IJCNN 2010: International Joint Conference on Neural Networks (Barcelona, July 2010)
- 2010 IEEE CEC 2010: IEEE Congress on Evolutionary Computation (Barcelona, July 2010)
- 2010 SAB2010: The 11th Intl. Conference on the Simulation of Adaptive Behavior (Paris, August 2010)
- 2010 GECCO'10, Genetic and Evolutionary Computation Conference, Generative and Developmental Systems Track (Oregon, July 2010)
- 2009 EpiRob 2009: Ninth International Conference on Epigenetic Robotics (Venice, November 2009)
- 2009 CEC-09 Conference on Evolutionary Computation, Evolutionary Robotics Session (Norway, May 2009)
- 2009 ECAL'09, Workshop on Organisation, Cooperation and Emergence in Social Learning Agents, 10th European Conference on Artificial Life (Budapest, September 2009)
- 2009 IEEE-ALife'09, IEEE Symposium on Artificial Life (Nashville, March 2009)
- 2009 ICEC 2009 – International Conference on Evolutionary Computation (Madeira, October 2009)
- 2008 GECCO'08, Genetic and Evolutionary Computation Conference, Artificial Life, Evolutionary Robotics, Adaptive Behavior and Evolvable Hardware Track (Atlanta, July 2008)
- 2008 WCCI08, IEEE World Congress on Computational Intelligence, (Honk Kong, June 2008)

- 2008 SBIA2008 - ADAPCOG2008: Workshop on Modelling Adaptive and Cognitive Systems, Brazilian Artificial Intelligence Conference (Bahia Brazil, October 2008)
- 2008 AKRR'08 International Conference on Adaptive Knowledge Representation and Reasoning - Symposium on Adaptive Models of Knowledge, Language and Cognition (Finland, September 2008)
- 2008 SAB2008, 10th International Conference on the Simulation of Adaptive Behavior (Osaka, July 2008)
- 2008 European Graduate Student Workshop on Evolutionary Computation (Naples, March 2008)
- 2008 WIVACE 2008, Italian Workshop on Artificial Life and Evolutionary Computation (Venice, Sept. 2008)
- 2007 International Workshop on "What it means to communicate" (Portugal, September 2007)
- 2007 IEEE-ALife'07, IEEE Symposium on Artificial Life (Hawaii, April 2007)
- 2007 ICDL'07, 6th International Conference on Development and Learning (London, July 2007)
- 2007 ECM_MAI 2007: Extending Computational Cognitive Modelling to Issue of Multi-Agent Interaction, ICAI'07 special session (Las Vegas, June 2007)
- 2007 ECAL 2007, European Conference on Artificial Life 2007, Workshop: "Social Learning in Embodied Agents" (Portugal, September 2007)
- 2007 ACAL 2007, 3rd Australian Conference on Artificial Life (Gold Cost Australia, December 2007)
- 2007 WIVACE 2007, Italian Workshop on Artificial Life and Evolutionary Computation (Sicily, Sept. 2007)
- 2007 GECCO'07, Genetic and Evolutionary Computation Conference, Generative and Developmental Systems track (London, July 2007)
- 2007 CIDM 2007: IEEE Symposium on Computational Intelligence and Data Mining (Hawaii, April 2007)
- 2006 ICDL'06, 5th International Conference on Development and Learning (Indiana, May 2006)
- 2006 1st International Workshop on Multi-objective Cybernetics, IEEE-ICCC Conference (Helsinki, Aug. '06)
- 2006 SAB'06, 9th International Conference on the Simulation of Adaptive Behavior (Rome, Sept. 2006)
- 2006 EELC3, 3rd International Workshop on the Emergence and Evolution of Linguistic Communication (Rome, October 2006)
- 2006 KES2006, 10th International Conference on Knowledge Based & Intelligent Information & Engineering Systems (Bournemouth, October 2006)
- 2006 AISC-06, Annual Meeting of the Italian Cognitive Science Association
- 2005 COGSCI'05, 27th Annual Meeting of the Cognitive Science Society (Stresa, July 2005)
- 2005 IJCAI 2005, 19th International Joint Conference on Artificial Intelligence - International and Interdisciplinary Workshop on "Modeling natural action selection" (Edinburgh, July 2005)
- 2005 AKRR'05 International Conference on Adaptive Knowledge Representation and Reasoning - Symposium on Adaptive Models of Knowledge, Language and Cognition (Finland, June 2005)
- 2005 GECCO-05 Genetic and Evolutionary Computation Conference, SEEDS Workshop (Washington, June04)
- 2005 International Workshop "Toward Social Mechanisms of an Android Science (SMAS)" - (Stresa, July '05)
- 2005 2nd Italian Workshop on Artificial Life (Rome 2005)
- 2004 ALIFE IX International Conference on Artificial Life (Boston, September 2004)
- 2004 EVOLANG5, 5th International Conference on the Evolution of Language (Leipzig, March 2004)
- 2004 GECCO-04 Genetic and Evolutionary Computation Conference, WORLD Workshop (Seattle, June 2004)
- 2003 1st Italian Workshop on Artificial Life (Cosenza 2003)
- 2003 ECAL03 European Conference on Artificial Life (Dortmund, September 2003)
- 2002 EVOLANG4, 4th International Conference on the Evolution of Language (Boston, March 2002)
- 2002 ALIFE VIII International Conference on Artificial Life (Sydney, December 2002)
- 2000 GECCO-2000 Genetic and Evolutionary Computation Conference (Las Vegas, July 2000)
- 2000 ALIFE VII International Conference on Artificial Life (Portland 2000)
- 1999 ECAL99 European Conference on Artificial Life (Losanne, September 1999)
- 1999 GECCO-99 Genetic and Evolutionary Computation Conference (Orlando, July 1999)

Referee for international journals

- 1997- *Behavioral and Brain Sciences, Cognitive Science, Artificial Intelligence, PLoS ONE, Connection Science, Adaptive Behavior, Artificial Life, Brain & Language, Trends in Cognitive Science, IEEE Transactions in Evolutionary Computation, IEEE Transactions on Systems Man and Cybernetics B, IEEE Transaction on Robotics, Autonomous Robots, Evolutionary Computation, Neural Networks, European Physical Journal B, Genetic Programming and Evolvable Machines, Neurocomputing, Evolutionary Intelligence, Circuits Systems and Signal Processing, Neural Processing Letters, Cognitive Systems Research, Reviews for Life Sciences, Physics of Life Reviews, ACM Crossroad, Giornale Italiano di Psicologia, Rivista di Psicologia*

Referee for international conferences

- 2007 IWANN'2007: 9th International Work-Conference on Artificial Neural Networks (San Sebastian)
- 2006 COGSCI06 - 28th Annual Meeting of the Cognitive Science Society (Vancouver)
- 2005 IJCAI05 - International Joint Conf. on Artificial Intelligence (Edinburgh)
- 2004 ICCM04 International Conference on Cognitive Modelling (Pittsburgh)
- 1998-02 ICANN International Conf. on Artificial Neural Networks (1998, 2000, 2002)
- 2000-02 IJCNN International Joint Conference on Neural Networks (2000, 2002)

Referee for research grants

- 2011- *MRC* Medical Research Council
- 2009- *BBSRC* Biology and Biotechnology Sciences Research Council
- 2009- *NERC* Natural Environment Research Council (Technology Review Pool)
- 2008 *United Arab Emirates Research Grants*
- 2008 *Croatian Ministry of Education* (Unity through knowledge Fund)
- 2006 *Dutch Research Council* (Technology Foundation STW)
- 2007- *ESF European Science Foundation*
- 2005- *NSF-USA National Science Foundation*
- 2005- *Project evaluator* for European Commission ICT Projects
- 2003- *The Nuffield Foundation*
- 2002- *EPSRC* Engineering and Physical Sciences Research Council (also Large Grant Panel, 2008)
- 2002- *ESRC* Economic and Social Research Council (also Large Grant Panel member in 2007-08)

Keynote/Invited Speaker to International conferences/workshops:

- 2012 Keynote Speaker, PPSN-2012, 12th International Conference on Parallel Problem Solving From Nature, Taormina, 1-5 September 2012
- 2012 Invited Speaker, Cognitive Reading Workshop, Lund, 3-5 March 2012
- 2011 Keynote speaker, HRI-2011, the 6th ACM/IEEE International Conference on Human-Robot Interaction, Lausanne, 6-9 March 2011
- 2011 IET Lecture (Institute of Engineering and Technology), Plymouth, 1 November 2011
- 2010 Keynote speaker, NAIS-2010 Norwegian Artificial Intelligence Symposium, Norway, 22 November 2010
- 2010 Keynote speaker, EpiRob-2010, the 10th International Conference on Epigenetic Robotics, Sweden, 5-7 November 2010
- 2010 Invited Speaker, Research Leadership Course, Northumbria University at Newcastle, 10 June 2010
- 2010 Invited Speaker, IET Humanoid Robotics Symposium, London, 8 March 2010
- 2009 POETICON Workshop on Grounding, Athens, 5 December 2009
- 2009 IET Lecture (Institute of Engineering and Technology), Plymouth, 18 October 2009
- 2009 Keynote speaker, Annual Meeting of the Brazilian Cognitive Society, Campinas Brazil, 2-4 September 2009
- 2009 Keynote speaker, VC Research and Enterprise Conference, University of Plymouth, 29 April 2009
- 2008 CITEC Anniversary Workshop, University of Bielefeld, November 19 2008
- 2008 UK NanoForum2008, University of Bristol, October 29-30 2008
- 2008 Doctoral Programme, Lecture Series on AI and Robotics, Hanse-WissenschaftsKolleg, Delmenhorst Germany, October 6-7 2008
- 2008 Summer Institute of "Mind & Society", Montreal June 27-July 6 2008
- 2007 ICCS07 7th International Conf. on Complex Systems, Special Session on "Language and Complexity", Boston
- 2006 Science Festival, Workshop on "Language Acquisition in Robots and Children", Genoa
- 2006 Workshop on Language and Cognition, planning meeting for research priorities in the EU Framework VII (IST-Cognitive Systems) (Luxemburg)
- 2005 Keynote Speaker, IEEE International Conference on Integration of Knowledge Intensive Multi-Agent Systems: KIMAS'05 (Boston)
- 2005 Summer School on Neural Network Models of Perception, Action and Embodied Knowledge, University of Bologna
- 2005 Conference on Cognitive Dynamics and the Language Sciences (Cambridge)
- 2005 CiE2005 Conference on Computability in Europe, Special Session on "Epistemology and Methodology of Computing" (Amsterdam)
- 2003 Symposium on Evolvability, Genetics & Development in Natural and Constructed Systems (Hertfordshire, UK)
- 2003 International Workshop on Learning and Concept Formation (Lund, Sweden)

- 2002 TENNET XIII: Annual Meeting of Theoretical and Experimental Neuropsychology (Montreal)
- 2002 International Workshop on Language and Motor Integration (Edinburgh)
- 2002 ESF Workshop on the Neurobiology of Communication (Cambridge)
- 2000 International Workshop on Evolutionary Computation and Cognitive Science (Melbourne)
- 1997 International Workshop on the Evolution of Syntax (Budapest)
- 1997 Workshop on Models of Learning (Pavia)

Invited Speaker for seminars:

- UK: Bath University, Birmingham University, Edinburgh University, De Montfort University, Manchester University, Middlesex University London, Sheffield University, Southampton University, Sussex University, Surrey University, Sunderland University
- Overseas: Harvard University, MIT Massachusetts Institute of Technology, Rutgers University Newark, University of California at San Diego, The Norwegian University of Science and Technology (NTNU Trondheim), RUG University of Groningen, Taiwan National University of Science and Technology (TNUST Taipei), Università di Genova, Università di Pavia, Università di Modena e Reggio Emilia, Università della Calabria, Università di Palermo, Istituto Psicologia CNR Rome

Academic collaborations:

Prof. D. Parisi and S. Nolfi (CNR), Prof. S. Harnad (Southampton and UQAM Canada), Dr. Rob Ellis (Psychology, Plymouth), Dr. Leonid Perlovsky (Harvard University and USAF Labs, Hanscom Massachusetts), Prof. G. Sandini and G. Metta (Italian Institute of Technology, Genoa), Prof. Fernando Fontanari (University of San Paolo, Brazil), Prof. A. Greco (Genoa). See also ITALK and RobotDOc project partners.

Past collaborations: Prof. J. Elman and Prof. W. Kristan (UCSD). Prof. S. Newstead (Plymouth), Prof. Kenny Coventry (Northumberland University)

Industrial collaborations:

SciSys UK, Ordnance Survey UK (Research & Innovation Division, Southampton); Telerobot SpA Italy, Honda Research Institute Europe, Germany; BARA British Automation & Robot Association, TMSUK Japan, ARM Ltd

PhD External Examinations:

- 2012 Exeter University
- 2012 Middlesex University
- 2011 Bielefeld University, Germany
- 2011 De Montfort University
- 2010 University of Hertfordshire (PhD transfer)
- 2008 Queensland University, Australia
- 2008 University of York
- 2007 King's College London,
- 2007 University of Southampton
- 2006 University of York
- 2006 University of Hertfordshire
- 2006 University of Manchester
- 2006 University of Siena, Italy (5 PhD students)
- 2005 VUB Free University Brussels, Belgium
- 2005 Norwegian University of Science and Technology at Trondheim, Norway
- 2005 University of Eastern Piedmont at Vercelli, Italy (3 PhD students)
- 2003 University of Sussex
- 2003 University of Paisley
- 1999- University of Plymouth (Internal Examiner, 4 students)

Miscellaneous

- 2006- Member of *IEEE CIS Task Force on the Mind and Brain*, IEEE Computational Intelligence Society, Neural Network Technical Committee
- 2007- Management Committee Member, Autonomous Systems Network (SBAC Society of British Aerospace Companies)
- 2006 Inclusion in the 23rd (2006) Edition of *Who's Who in the World*
- 2006 Inclusion in the *Cambridge Blue Book* (2nd edition), International Biographical Centre
- 2006- Member of euCognition/EUCogII (FP6-FP7 Coordinated Actions): <http://www.eucognition.org/>

2004-06 Member of Society for Artificial Intelligence and Simulation of Behaviour (AISB)

Media Coverage

- 2011 *ERCIM News*, 84, European Research Consortium for Informatics and Mathematics. Article on "Evolving Autonomous Mars Rovers" by A. Cangelosi, D. Izzo, K. Ampatzis (January 2011)
- 2009 *ITV News* on Schools Robot Competition (27/11/2009)
- 2009 Quotation of my interview at the article on the iCub robot in the journal *Nature*.
- 2008 *Wide coverage of ITALK project launch* in UK media (e.g. BBC News, Telegraph, Times) and international media.
- 2006 *Italian RAI Radio 3*, live interview on Talking Robots research, 30/10/06
- 2006 *BBC Radio Devon*, live interview on Talking Robots research, 31/8/06
- 2006 *New Scientist* magazine on-line, "Virtual bots teach each other using wordplay", 2/8/2006, article by Tom Simonite
- 2005 *AISB Quarterly*, "Conference Report on the 9th Neural Computation and Psychology Conference: Modelling Language, Cognition and Action". Article by Cangelosi A., Bugmann G., Borisyuk R.
- 2003 *Flash Informatique*, EPFL Lausanne magazine, "Le Martien, les champignons et les réseaux de neurones", pp. 15-20 (spécial été: Hippocrate, le gène et la puce). Article by M. Coulmance
- 2002 *Careers Adviser Magazine*, The Independent Newspaper, "Computing meets neuroscience: The UK prepares for new challenges ahead", 6(4), p. 26, article by A. Cangelosi and M. Denham.

7. RESEARCH SUPERVISION AND RESEARCH MANAGEMENT/LEADERSHIP

Research Administration/Management

- 2005- *School Coordinator* for RAE2008 submission (UOA23 Computer Science & Informatics)
- 2010- *Elected Faculty Representative* in University Research and Innovation Committee
- 2005- *School Representative* in Faculty Research Committee
- 2004- *Member of School Research Committee*

Line Manager of Research Fellows / Lecturers:

- 2009- *Dr Anthony Morse*: FP7 ITALK project
- 2008-10 *Dr Zoran Macura*: EPSRC VALUE project
- 2007-12 *Dr Davide Marocco*: FP7 ITALK project
- 2003-05 *Dr. Rohana Rajapakse*: EPSRC grant on connectionist modelling of quantifiers
- 2001-03 *Dr Dan Joyce*: EPSRC grant on connectionist modelling of spatial language

Current PhD Students (7+4):

- 2011- *First supervisor*: Kristsana Seepanomwan (PhD on cognitive robotics)
- 2010- *First supervisor*: Francesca Stramandinoli (PhD on developmental robotics)
- 2010- *First supervisor*: Marek Rucinski (PhD on developmental robotics)
- 2008- *First supervisor*: Martin Peniak (PhD on cognitive robotics and language)
- 2007- *First supervisor*: Fabio Ruini (PhD on distributed control for UAV agent models)
- 2007- *First supervisor*: Martin Beck (PhD on morphology and neural network)
- 2005- *First supervisor*: Gianluca Massera (PhD on evolutionary robotics)
- 2005- *First supervisor*: Mariagiovanna Mazzapioda (PhD on morphology in ALife systems)
- 2011- *Second supervisor*: Riccardo De Benedictis (PhD on planning and scheduling)
- 2010- *Second supervisor*: Vieri Giuliano Santucci (PhD on embodied computational neuroscience)
- 2010- *Second supervisor*: Salomon Martinez-Contla (PhD on humanoid robotics)
- 2010- *Second supervisor*: Tomassino Ferrauto (PhD on evolutionary robotics)

PhD Completions (9):

- 2009 *First supervisor* Dr Vadim Tikhanoff (now at Italian Institute of Technology, Genoa)
- 2009 *First supervisor*: Dr Eduardo Coutinho (now at University of Geneva)
- 2009 *Second supervisor* Dr Dan Livingstone (now at University of Plymouth)
- 2009 *Second supervisor*: Dr Michele Burigo (now at Bielefeld University)
- 2006 *First co-supervisor*: Dr Isabella La Rovere
- 2004 *First supervisor*: Dr Richard Holden
- 2004 *First supervisor*: Dr Davide Marocco (now at University of Plymouth)
- 2004 *co-supervisor*: Dr Rohanna Rajapakse (now at Goss Interactive Ltd)
- 2000 *co-supervisor*: Dr Georgios Banavas (now at Greece Finance Ministry)

Affiliations to other Institutions:

- 2009- *External Faculty Member, CITEC Centre for Excellence Cognitive Technologies, University of Bielefeld*
- 2009- *PhD Programme in Psychology, University of Genoa*
- 2007- *Cognitive Neuroscience Institute, UQAM University of Quebec at Montreal*
- 2004-06 *Robotics and Artificial Life Lab, Institute of Cognitive Sciences and Technology, CNR Rome*
- 2001-03 *Plymouth Institute of Neuroscience (PION), University of Plymouth*

8. TEACHING AND ACADEMIC MANAGEMENT/LEADERSHIP

Teaching Administration/Management

- 2008-10 *Subject Group co-Chair for Artificial Intelligence (AINT) teaching in the School of Computing and Mathematics (Leader of AINT group, 2003-2008)*
- 2006- *Member of School Executive*
- 2010- *Member of University Research & Innovation Committee*
- 2009- *Member of Faculty Research Strategy Committee*
- 2003-06 *Member of School Teaching Management Group*
- 1998- *Member of various BSc/MSc Programme Committees (BSc Hons Computer Science, Computing Informatics, Computing, MediaLab Arts, Digital Arts & technology, Multimedia Computing, MSc Interactive Intelligent Systems)*
- 2000-03 *Admission Tutor for the BSc (Hons) Computing and Informatics, BSc (Hons) Computing and Neuroscience, BSc Computing*

External Examiner (Programmes)

- 2007-08 *MSc Intelligent Systems, University of Sunderland*

Course Development and Validation

- 2002- *Member of the Faculty Scrutiny Panel for approval/review of undergraduate and postgraduate programmes*
- 2001-02 *Chairman of the Programme Planning Committee for the BSc (Hons) Computing and Neuroscience*
- 2000-03 *Member of the Programme Planning Committee for the MSc Digital Futures, MSc Interactive Intelligent Systems, BSc (Hons) Computer Science*

Other University services

- 2005 *Member of University Review Panel for Athena-SWARM Charter Status (Silver) Application to support women's career in science, engineering and technology*

University Teaching: Module Leader

- 2010- *Computational Intelligence (year 2)*
- 2005- *Evolutionary Computation and Artificial Life (year 3)*
- 1999- *Introduction to Artificial Intelligence (year 2)*
- 1998-09 *Artificial Intelligence for Interactive Media (year 2)*
- 1998-04 *Cognition and Interaction (year 3)*
- 1999-02 *Advanced Evolutionary and Adaptive Computation (MSc)*

University Teaching: Modules shared with colleagues

- 2007- *Computer Science Workshop (year 1)*
- 2005- *Interactive Intelligent Systems Workshop (MSc)*
- 2005- *Alternative Computing Paradigms (year 2)*
- 1997- *Multimedia Entertainment Systems (year 3)*
- 1997-99 *Multimedia Workshop II (year 1)*
- 1997-98 *Design for Virtual Reality (year 3)*
- 1993-97 *General Psychology (University of Genoa)*
- 1993-97 *Developmental Psychology (University of Genoa)*
- 1993-97 *Cognitive Science (University of Siena)*

Project/Thesis Supervisions

- 1997- *MSc projects for: MSc Robotics, MSc Computer Applications (previously also for MSc Computational Intelligence, MSc Interactive Intelligent Systems)*

1997- Final year projects for all BSc (Hons) Computing programmes (previously also for BSc Hons MediaLab Arts, BSc Hons Digital Arts & Technology, BSc Hons Computing Informatics, BSc Hons Multimedia Computing)

Teaching in other Academic Institutions

2005 Introduction to Neural Networks, *Master in Cognitive Science*, University of Genoa

2004 Introduction to Programming, *MSc/Laurea in Arts, Music and Performance – Multimedia Specialisation (DAMS)*, University of Calabria

2004 Introduction to Neural Networks, *PhD in Artificial Intelligence*, University of Calabria

PUBLICATIONS OF ANGELO CANGELOSI

BOOKS

1. Lyon C., Nehaniv C.L., Cangelosi A. (Eds.) (2007). *Emergence of Communication and Language*. London: Springer.
2. Cangelosi A., Smith A, Smith K. (Eds.) (2006). *Evolution of Language: Proceedings of the 6th International Conference on the Evolution of Language*. Singapore: World Scientific.
3. Cangelosi A., Bugmann G. & Borisyuk R. (Eds.) (2005). *Modelling Language, Cognition and Action: Proceedings of the 9th Neural Computation and Psychology Workshop*. (Neural Processing Series, vol. 16). Singapore: World Scientific.
4. Cangelosi A. & Parisi D. (Eds.) (2002). *Simulating the Evolution of Language*. London: Springer².

JOURNALS

5. Goslin J., Dixon T., Fischer M., Cangelosi A., Ellis R. (in press). Electrophysiological examination of embodiment in vision and action. *Psychological Science*
6. Apel J.K., Revie R., Cangelosi A., Ellis R., Goslin J., Fischer M.H. (2011). Attention deployment during memorizing and executing complex instructions. *Experimental Brain Research*, 214(2), 249-259
7. Tikhanoff V., Cangelosi A., Metta G. (2011). Language understanding in humanoid robots: iCub simulation experiments. *IEEE Transactions on Autonomous Mental Development*, 3(1), 17-29.
8. Pezzulo G., Barsalou L.W., Cangelosi A., Fischer M.H., McRae K. and Spivey M. (2011). The mechanics of embodiment: A dialogue on embodiment and computational modelling. *Frontiers in Psychology*, 2(5), 1-21
9. Coutinho E, Cangelosi A. (in press). Musical emotions: predicting second-by-second subjective feelings of emotion from psycho-physiological measurements. *Emotion*
10. Fontanari J. F., Cangelosi A. (2011). Cross-situational and supervised learning in the emergence of communication. *Interaction Studies*, 12(1), 119-133
11. Cangelosi A. (2011). Solutions and open challenges for the symbol grounding problem. *International Journal of Signs and Semiotic Systems*. 1, 49-54, (55-79 commentaries and reply)
12. Morse A.F., de Greeff J., Belpaeme T., Cangelosi A. (2010). Epigenetic robotics architecture (ERA). *IEEE Transactions on Autonomous Mental Development*, 2(4), 325-339.
13. Coventry K.R., Cangelosi A., Newstead S.N., Bugmann D. (2010). Talking about quantities in space: Vague quantifiers, context and similarity. *Language and Cognition*, 2(2), 221-241
14. Cangelosi A., Metta G., Sagerer G., Nolfi S., Nehaniv C.L., Fischer K., Tani J., Belpaeme B., Sandini G., Fadiga L., Wrede B., Rohlfing K., Tuci E., Dautenhahn K., Saunders J., Zeschel A. (2010). Integration of action and language knowledge: A roadmap for developmental robotics. *IEEE Transactions on Autonomous Mental Development*, 2(3), 167-195.
15. Cangelosi A. (2010). Grounding language in action and perception: From cognitive agents to humanoid robots. *Physics of Life Reviews*, 7(2), 139-151,
16. Marocco D., Cangelosi A., Fischer K., Belpaeme T. (2010). Grounding action words in the sensorimotor interaction with the world: Experiments with a simulated iCub humanoid robot. *Frontiers in Neurobotics*, 4:7,
17. Coventry K.R, Lynott L., Cangelosi A., Monrouxe L., Joyce D., Richardson D.C. (2010). Spatial language, visual attention, and perceptual simulation. *Brain and Language*, 112, 202–213
18. Cangelosi A. (2010). Connectionist modelling of music emotions: Commentary on Perlovsky. *Physics of Life Reviews*, 7, 37-38.
19. Cangelosi A. (2010). The symbol grounding problems has been solved: Or maybe not? *Autonomous Mental Development Newsletter*, 7(1): 2-10. (online version) (target column with commentaries)
20. Fontanari J.F., Tikhanoff V., Cangelosi A., Ilinc R. & Perlovsky L. (2009). Cross-situational learning of object-word mapping using Neural Modeling Fields. *Neural Networks*, 22: 579-585
21. Borisyuk R., Kazanovich Y., Chik D., Tikhanoff V. & Cangelosi A. (2009). A neural model of selective attention and object segmentation in the visual scene: An approach based on partial synchronization and star-like architecture of connections. *Neural Networks*. 22:707-719.

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22. Ruini F., Cangelosi A. (2009). Extending the evolutionary robotics approach to flying machines: an application to MAV teams. *Neural Networks*, 22: 812-821
23. Coutinho E., Cangelosi A. (2009). The use of spatio-connectionist models in psycho-physiological studies of musical emotions. *Music Perception*, 27(1): 1-15
24. Cangelosi A. (2008). Studying the evolution of language: A multi-methodological enterprise. *Mind and Society* (guest editor of Special Issue)
25. Massera G., Cangelosi A., Nolfi S. (2007). Evolution of prehension ability in an anthropomorphic neurobotic arm. *Frontiers in Neurobotics*, 1(4).
26. Cangelosi A, Tikhonoff V., Fontanari J.F., Hourdakakis E. (2007). Integrating language and cognition: A cognitive robotics approach. *IEEE Computational Intelligence Magazine*, 2(3), 65-70
27. Cangelosi A. (2007). Adaptive agent modeling of distributed language: Investigations on the effects of cultural variation and internal action representations *Language Studies*, 29, 633-649
28. Cangelosi A, Riga T (2006). An embodied model for sensorimotor grounding and grounding transfer: Experiments with epigenetic robots, *Cognitive Science*, 30(4), 673-689.
29. Cangelosi A. (2006). The grounding and sharing of symbols. *Pragmatics and Cognition*, 14(2), 275-285
30. Cangelosi A. (2005). The emergence of language: Neural and adaptive agent models. *Connection Science*, 17(3-4), 185-190 (guest editor of Special Issue)
31. Cangelosi A. (2005). Evolving cognitive systems: Adaptive behaviour and cognition research at the University of Plymouth. *Cognitive Processing*, 6, 202-207
32. Cangelosi A., Parisi D. (2004). The processing of verbs and nouns in neural networks: Insights from synthetic brain imaging. *Brain and Language*, 89(2), 401-408
33. Greco A., Cangelosi A. & Riga T. (2004). The grounding of symbols through the experience with the world: A connectionist approach. *Sistemi Intelligenti*, 16 (3), 457-478 (in Italian)
34. Marocco D., Cangelosi A., Nolfi S. (2003). The emergence of communication in evolutionary robots. *Philosophical Transactions of the Royal Society London: A*, 361: 2397-2421
35. Cangelosi A. (2003). Grounding language in sensorimotor and cognitive categories. *AISB Quarterly*, 115: 5,8
36. Cangelosi A. (2003). Neural network models of category learning and language. *Brain and Cognition*, 53 (2): 106-107.
37. Munroe S., Cangelosi A. (2002). Learning and the evolution of language: The role of cultural variation and learning costs in the Baldwin effect. *Artificial Life*, 8(4): 311-339
38. Parisi D., Cangelosi A., Falcetta I. (2002). Verbs, nouns and simulated language games. *Italian Journal of Linguistics*, 14(1): 99-114
39. Cangelosi A. (2002). Language Evolution in Apes and Autonomous Agents: A commentary. *Behavioral and Brain Sciences*, 25(5): 622-623
40. Cangelosi A. (2001). Evolution of communication and language using signals, symbols and words. *IEEE Transactions on Evolutionary Computation*. 5(2), 93-101
41. Cangelosi A. & Harnad S. (2000). The adaptive advantage of symbolic theft over sensorimotor toil: Grounding language in perceptual categories. *Evolution of Communication*, 4(1), 117-142
42. Cangelosi A., Greco A. & Harnad S. (2000). From robotic toil to symbolic theft: Grounding transfer from entry-level to higher-level categories. *Connection Science*, 12(2), 143-162
43. Greco A., Cangelosi A. (1999). Language and the acquisition of implicit and explicit knowledge: a pilot study using neural networks. *Cognitive Systems*, 5(2), 148-165.
44. Cangelosi A., & Parisi D. (1998). The emergence of a "language" in an evolving population of neural networks. *Connection Science*, 10(2), 83-97
45. Cangelosi A., & Parisi D. (1998). Concepts in artificial organisms. A commentary on Millikan. *Behavioral and Brain Sciences*, 21(1), 68-69
46. Cangelosi A. (1998). Language simulation and evolution in an ecological context. *Sistemi Intelligenti*, 10(3), 409-442 (in Italian)
47. Cangelosi A., & Parisi D. (1998). Experimental models vs computational models: The case study of *Caenorhabditis elegans*. *Giornale Italiano di Psicologia*, 25(3), 627-649 (in Italian).
48. Cangelosi A., & Parisi D. (1997). A neural network model of *Caenorhabditis Elegans*: The circuit of touch sensitivity. *Neural Processing Letters*, 6, 91-98.

49. Meloni D., Mura A., Nucci F., Cangelosi A., & Ligorio M.B. (1996). Virtual ECHO: An interface for a simulated environment. *SIGCHI Bulletin (ACM)*, 28(3), 97-101.
50. Cangelosi A. (1996). The role of development in connectionist models. *Giornale Italiano di Psicologia*, 23, 777-800. (in Italian)
51. Cangelosi A., Parisi D., & Nolfi S. (1994). Cell division and migration in a 'genotype' for neural networks. *Network: Computation in Neural Systems*, 5(4), 497-515.
52. Meloni D. & Cangelosi A. (1993). An example of intelligent tutoring systems in electrotechnics. *GOLEM: Newsletter of Education and Training Technologies*, 5, March 1993, 11-14 (in Italian)
53. Cangelosi A., Ligorio M.B., Meloni D., & Mura A. (1993). Learning by visiting a virtual environment: Virtual ECHO. *GOLEM: Newsletter of Education and Training Technologies*, 5, December 1993, 8-14. (in Italian)

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54. Cangelosi A. (in press). Language Processing. In M. Arbib & J. Bonaiuto (Eds.), *From Brain to Function via Computational Neuroscience*. Cambridge MA: MIT Press
55. Hauert S., Leven S., Varga M., Ruini F., Zufferey J-C., Cangelosi A., Floreano D. (in press). Reynolds flocking in reality with fixed-wing robots: communication range vs. maximum turning rate. *Proceedings of IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS-2011)*, San Francisco.
56. Morse A.F., Baxter P., Belpaeme T., Smith L.B., Cangelosi A. (in press). The power of words. *Proceedings of IEEE ICDL-EpiRob 2011, Joint International Conference on Development and Learning and the International Conference on Epigenetic Robotics*, Frankfurt
57. Larcombe C., Morse A.F., Cangelosi A. (in press) Learning to react to abstractions: Accumulating adaptations in a humanoid embodiment. *Proceedings of IEEE ICDL-EpiRob 2011, Joint International Conference on Development and Learning and the International Conference on Epigenetic Robotics*, Frankfurt
58. Peniak M., Morse A., Larcombe C., Ramirez-Contla S., Cangelosi A. (in press). Aquila: An open-source GPU-accelerated toolkit for cognitive and neuro-robotics research. *Proceedings of IJCNN-2011 International Joint Conference on Neural Networks*, San Jose.
59. Di Nuovo A., Marocco D., Di Nuovo S., Cangelosi A. (in press). A neural network model for spatial mental imagery investigation: A study with the humanoid robot platform iCub. *Proceedings of IJCNN-2011 International Joint Conference on Neural Networks*, San Jose.
60. Stramandinoli F., Cangelosi A., Marocco D. (in press). Towards the grounding of abstract words: A neural network model for cognitive robots. *Proceedings of IJCNN-2011 International Joint Conference on Neural Networks*, San Jose.
61. Cangelosi A. (in press). Cognitive modelling with multi-agent systems. In Seel N.M (Ed.), *Encyclopaedia of the Sciences of Learning*. Springer
62. Metta G., Cangelosi A. (in press). Cognitive robotics. In Seel N.M (Ed.), *Encyclopaedia of the Sciences of Learning*. Springer
63. Rucinski M., Cangelosi A., Belpaeme T. (2011). An embodied developmental robotic model of interactions between numbers and space. In L. Carlson, C. Hoelscher, T.F. Shipley (Eds.), *Expanding the Space of Cognitive Science: Proceedings of the 23rd Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society, pp. 237-242
64. Morse A., Belpaeme T., Cangelosi A., Floccia C. (2011). Modeling U-shaped performance curves in ongoing development. In L. Carlson, C. Hoelscher, T.F. Shipley (Eds.), *Expanding the Space of Cognitive Science: Proceedings of the 23rd Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society, pp. 3034-39
65. Cangelosi A. (in press). Robotics and embodied agents modelling of the evolution of language. In M. Tallerman (Ed.), *Oxford Handbook of Language Evolution*, Oxford University Press.
66. Morse A.F., Belpaeme T., Cangelosi A., Smith L.B. (2010). Thinking with your body: Modelling spatial biases in categorization using a real humanoid robot. *Proceedings of 2010 Annual Meeting of the Cognitive Science Society*. Portland., pp 1362-1368
67. Peniak M., Bentley B., Marocco B., Cangelosi A., Ampatzis C., Izzo D., Biscani F. (2010). An evolutionary approach to designing autonomous planetary rovers. In *TAROS 2010: Proceedings of Towards Autonomous Robotic Systems 2010*. University of Plymouth, 198-204

68. Ruini F., Cangelosi A. (2010). An incremental approach to the evolutionary design of autonomous controllers for micro-unmanned aerial vehicles In *TAROS 2010: Proceedings of Towards Autonomous Robotic Systems 2010*. University of Plymouth, 239-246
69. Ruini F., Cangelosi A. (2010). An evolutionary robotics 3D model for autonomous MAVs navigation, Target tracking and group coordination. *Proceedings of IJCNN2010 International Joint Conference on Neural Networks*, Barcelona, July 2010.
70. Peniak M., Bentley B., Marocco D., Cangelosi A., Ampatzis C., Izzo D., Biscani F. (2010). An island-model framework for evolving neuro-controllers for planetary rover control. *Proceedings of IJCNN2010 International Joint Conference on Neural Networks*, Barcelona, July 2010.
71. Coutinho, E. & Cangelosi, A. (2010). A neural network model for the prediction of musical emotions. In S. Nefti-Meziani & J.G. Grey (Ed.). *Advances in Cognitive Systems*, pp. 331-368.
72. Macura Z., Cangelosi A., Ellis R., Bugmann D., Fischer M.H. & Myachykov A. (2009). A cognitive robotic model of grasping. *Proceedings of the Ninth International Conference on Epigenetic Robotics*, Venice, November 12-14 2009
73. Peniak M., Marocco D., Ramirez-Contla S. & Cangelosi A. (2009). Co-evolving controller and sensing abilities in a simulated Mars Rover explorer. *IJCAI-2009, Special Workshop on Artificial Intelligence and Space Research*. Los Angeles, July 2009
74. Fontanari J.F., Tikhanoff V., Cangelosi A., Perlovsky L. (2009). A cross-situational algorithm for learning a lexicon using neural modeling fields. *IJCNN: 2009 International Joint Conference on Neural Networks, Vols 1- 6*, pp. 1455-1462
75. Ruini F., Cangelosi A., Zetule F. (2009). Individual and cooperative tasks performed by autonomous MAV teams driven by embodied neural networks controllers. *IJCNN: 2009 International Joint Conference on Neural Networks, Vols 1- 6*, pp. 859-866
76. Mazzapioda M., Cangelosi A. & Nolfi S. (2009). Co-evolving morphology and control: A distributed approach. *CEC-2009 Conference on Evolutionary Computation*, Trondheim, Norway. Best paper award.
77. Peniak M., Marocco D. & Cangelosi A. (2009). Co-evolving controller and sensing abilities in a simulated Mars Rover explorer. *CEC-2009 Conference on Evolutionary Computation*, Trondheim, Norway.
78. Courtney P., Michel O., Cangelosi A., Tikhanoff V., Metta G., Natale L., Nori F., & Kernbach S. (2009). Cognitive systems platforms using open source. In: R. Madhavan, E. Tunstel & E. Messina. *Performance Evaluation and Benchmarking of Intelligent Systems*, Springer.
79. Cangelosi A. (2008). The grounding and sharing of symbols. In I.E. Dror & S. Harnad (Eds.), *Cognition Distributed*. Amsterdam, John Benjamins, pp.83-92 (reprint of paper from *Pragmatics and Cognition*, 2006)
80. Peniak M., Cangelosi A. & Marocco D. (2008). Autonomous robot Exploration of unknown terrain: A preliminary model of Mars Rover robot. *Proceedings of 10th ESA Workshop on Advanced Space Technologies for Robotics and Automation (ASTRA 2008)*, 11-13 November 2008, Noordwijk, The Netherlands
81. Tikhanoff V, Cangelosi A., Fitzpatrick P., Metta G., Natale L., Nori F. (2008). An open-source simulator for cognitive robotics research: The prototype of the iCub humanoid robot simulator. In R. Madhavan & E.R. Messina (Eds.), *Proceedings of IEEE Workshop on Performance Metrics for Intelligent Systems Workshop (PerMIS'08)*. Washington, D.C.
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83. Tikhanoff V., Cangelosi A., Fontanari J.F. & Perlovsky L.I (2007). Scaling up of action repertoire in linguistic cognitive agents. In H. Hexmoor & C. Thompson (Eds.), *Proceedings of 2007 International Conference on Integration of Knowledge Intensive Multi-Agent Systems (KIMAS'07)*. IEEE Press, pp.162-167
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85. Tikhanoff V., Fontanari J.F., Cangelosi A. & Perlovsky L.I. (2006). Language and cognition integration through modeling field theory: Category formation for symbol grounding. In S. Kollias, A. Stafylopatis, W. Duch & E. Oja (Eds.), *Artificial Neural Networks - ICANN 2006. 16th International Conference. Proceedings (Part I) (LNCS 4131)*, Springer-Verlag, Berlin, pp. 376-85

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87. Nehaniv C.L., Lyon C. & Cangelosi A. (2006). Current work and open problems: A road-map for research into the emergence of communication and language. In Lyon C., Nehaniv C.L., Cangelosi A. (Eds.), *Emergence of Communication and Language*. London: Springer, pp. 1-27
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92. Coventry K.R., Cangelosi A., Newstead S., Bacon A., Rajapakse R. (2005), Grounding natural language quantifiers in visual attention. *Proceedings of the XXVII Annual meeting of the Cognitive Science Society*, Stresa.
93. Rajapakse R.K., Cangelosi A., Coventry K.R., Newstead S., Bacon A. (2005), Connectionist modeling of linguistic quantifiers. In W. Duch, J. Kacprzyk, E. Oja & S. Zadrozny (Eds.) *Artificial Neural Networks: Formal Models and Their Applications - ICANN 2005. 15th International Conference on Artificial Neural Networks (Part II) (LNCS 3697)*. Berlin Heidelberg: Springer, pp. 679-684
94. Stuart L., Marocco D., Cangelosi A. (2005). Information Visualization for Knowledge Extraction in Neural Networks. In W. Duch, J. Kacprzyk, E. Oja & S. Zadrozny (Eds.) *Artificial Neural Networks: Formal Models and Their Applications - ICANN 2005. 15th International Conference on Artificial Neural Networks (Part II) (LNCS 3697)*. Berlin Heidelberg: Springer, pp. 515-520
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