

## 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)*  
 2011- *Fellow*, British Computer Society

### 2. CURRENT POSITION AND EMPLOYER

- 2006- *Professor of Artificial Intelligence and Cognition*  
 School of Computing and Mathematics, Plymouth University (UK)
- Main duties (full details in sections 7 and 8)
- *Research*: Director of the "CRNS: Centre for Robotics and Neural Systems"; and Leader of "ABC Adaptive Behaviour & Cognition" Lab
  - *Senior management*: School Research Lead; REF coordinator for Computer Science UoA11
  - *Teaching*: BSc/MSc modules in Artificial Intelligence and Cognitive Robotics
- 2010- *Consultant, Scisys Ltd (Space and Defence industry)*

### 3. EMPLOYMENT HISTORY

- 1997- *Previous positions at Plymouth University*  
 Reader (2004 – 2006)  
 Principal Lecturer (2002 – 2004)  
 Senior Lecturer (1998 – 2002)  
 Lecturer (1997 – 1998)
- 2015-7 *Visiting Professor*, Messina University, Italy (2015), Waseda University, Japan (2016); Sassari University, Italy (2017)
- 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)

Books	8
Journal publications	83
Refereed Conf. proceedings + Book chapters	121
Published abstracts of conference presentations	86
Journal Special Issues (guest editor)	7

### 5. SUMMARY OF RESEARCH GRANTS (full list below)

Principal Investigator: UK Research Councils	£ 2,467,780	(4 grants)
Principal Investigator: EU FP7-H2020	€ 14,905,945	(11 grants)
Principal Investigator: USA Air Force Lab	\$ 808,780	(5 grants)
Co-Investigator: UK Research Councils	£ 294,358	(2 grants)
Co-Investigator: EU FP7	€ 12,477,315	(2 grants)
Co-Investigator: ERDF	£ 1,736,140	(1 grant)
Other grants as Principal Investigator	£ 216,176	(17 grants)

### 5a. RESEARCH GRANTS AND AWARDS

- 2016-19 *EU H2020 Marie Skłodowska-Curie EID European Industrial Doctorate*, **€1,345,614 (€819,863** at Plymouth University) “APRIL: Applications of Personal Robotics for Interaction and Learning”. A. Cangelosi as Coordinator/PI. With T Belpaeme and T Dahl (co-I) and N Hemion and R Gelin as PI of the industrial partner Aldebaran Robotics. Includes 6 associate academic/industry partners (Asada at Osaka U., Dario at SSSA Pisa, Hafner at Humboldt U., Sanna at San Raffaele Hospital, Bleis at Metralab GmbH, Spranger at SONY Japan)
- 2017-20 *Honda European Graduate Network*, **£93,176**, “DeCIFER: Developmental Collaborative Intelligence For Embodied Robots”. A. Cangelosi PI, G. Goerick (Honda HRI) Co-I.
- 2017-20 *European Regional Development Fund – Cornwall Converge*, **£1,736,140** “EPIC: E-health Productivity and Innovation in Cornwall and the Isles of Scilly”. A. Cangelosi co-PI. With R Jones as PI-Coordinator, T Dahl, T Belpaeme etc., with Creative England and 10 strategic partners/stakeholders.
- 2017-19 *EU H2020 ICT RIA*, **€439,215** “MoveCare: Multiple-actors Virtual Empathic Caregiver for the Elder”. A. Cangelosi PI, R Jones Co-I. With A Borghese (Milan University) as coordinator, and 12 other academic, industry and user partners.
- 2016-19 *EU H2020 Marie Skłodowska-Curie ETN*, **€546,573** “DCOMM: Deictic Communication”. A. Cangelosi PI. With K Coventry (U. East Anglia) as ETN coordinator, and 8 other partners.
- 2016-18 *EU FP7 Marie Curie Intra European Fellowship*, **€183,454** “CAREER-AID: Controlled Autonomous Robot for Early diagnosis and Rehabilitation of Autism and Intellectual Disability”. A. Cangelosi PI, Daniela Conti as Fellow (grant awarded but transferred to Sheffield Hallam University).
- 2015-18 *EU H2020 Marie Skłodowska-Curie ETN*, **€546,573** “SECURE: Safety Enables Cooperation in Uncertain Robotic Environments”. A. Cangelosi PI. With S Wermtter (Hamburg) as ETN coordinator, G Metta (IIT), K Dautenhahn (Hertfordshire), B Graf (Fraunhofer IPA), F Becchi (Telerobotlabs).
- 2014-18 *US Air Force Office of Science and Research, European Office of Aerospace Research and Development (AFSOR-EOARD)*, **\$555,000**. “THRIVE: Trust in Human-Robot Interaction Via Embodiment” (Principal Investigator). A Cangelosi PI.
- 2014-16 *EU FP7 Marie Curie Intra European Fellowship*, **€231,283** “DeCoRo: Developmental Context-driven Robot learning”. A. Cangelosi PI, Martin Stoelen as Fellow.
- 2013-15 *EU FP7 Marie Curie Intra European Fellowship*, **€221,606** “ORATOR: Integrating Object Recognition and ActiOn for action sentence production and comprehension in a developmental humanoid Robot”. A. Cangelosi PI, C. Floccia and A. Cattani Co-Is, Beata Grzyb as Fellow.
- 2013-17 *EU FP7 Marie Curie Innovative Doctoral Program*, **€4,077,315** “COGNOVO: Cognitive Innovation”. A. Cangelosi Co-I (PI S. Denham, with Co-Is T Belpaeme, R Borisyuk, T Wennekers et al.)
- 2012-15 *UK EPSRC-BBSRC*, **£1,671,050 (€1,202,384** 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 (Free University Berlin). With ARM, HONDA HRI and TMSUK Japan as industrial advisors.
- 2012-15 *EU FP7 – EU FP7 – ICT Cognitive Systems & Robotics*, **€777,410** 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), G. Sandini, L. Fadiga and G. Metta (IIT, Italy), J. Santos-Victor (IST, Portugal).
- 2011-15 *EU FP7 – ICT Challenge 5 Wellbeing*, **€857,960** 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).
- 2010-14 *EU FP7 – ICT Cognitive Systems & Robotics*, **€8,400,000 (€1,376,860** 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.

- 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 (€832,473 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).
- 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.
- 2009-13 *CONACyT Mexican Government*, **£60,000**. 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 6<sup>th</sup> International Conference on the Evolution of Language (PI)

2004 BBSRC, EPSRC & British Academy, £11,240, Support for organisation of 9<sup>th</sup> Neural Computation and Psychology Conference (PI). EPSRC evaluation "Outstanding" (5 out of 5).

## 6. RESEARCH SUPERVISION AND RESEARCH MANAGEMENT/LEADERSHIP

### Research Administration/Management

2016- School Research Lead, School of Computing, Electronics and Mathematics  
 2008- Director, Centre for Robotics and Neural Systems (CRNS)  
 2005- School Coordinator for RAE/REF submissions (UoA Computer Science & Informatics)  
 2015- Member of Faculty Research Committee  
 2015- Member of Faculty Strategy Group  
 2013- Member of Steering Committee, Cognition Institute  
 2000- Leader of Adaptive Behaviour & Cognition Lab (currently 15 PhD students and 8 postdocs)  
 2010-14 Elected Faculty Representative in University Research and Innovation Committee  
 2005-13 School Representative in Faculty Research Committee  
 2004- Member of School Research Committee and Member of School Executive

### Line Manager of Research Fellows / Lecturers:

2017-20 Dr Mriganka Miswas: H2020 MoveCare project  
 2016-17 Dr Daniel Hernandez: EPSRC BABEL project  
 2015 Dr Junpei Zhong: FP7 POETICON++ project  
 2014-16 Dr Martin Stoelen: Marie Curie Fellow (FP7 DeCoRo project)  
 2014 Dr Sao Mai Nguyen: FP7 POETICON++ project  
 2014-15 Dr Ning Wang: FP7 ROBOT-ERA project  
 2013-15 Dr Beata Gryzb: Marie Curie Fellow (FP7 ORATOR and POETICON++ projects)  
 2012-16 Dr Samantha Adams: EPSRC BABEL project  
 2012-15 Dr Frank Broz, FP7 ROBOT-ERA project  
 2012-15 Dr Alessandro Di Nuovo, FP7 ROBOT-ERA project  
 2012-14 Dr Anna-Lisa Vollmer: Marie Curie Fellow (FP7 RobotDoc ITN project)  
 2009-15 Dr Anthony Morse: FP7 ITALK and POETICON++ projects  
 2012 Dr Fabio Ruini: EPSRC VALUE project  
 2008-10 Dr Zoran Macura: EPSRC VALUE project  
 2007-12 Dr Davide Marocco: FP7 ITALK project (lecturer)  
 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 (11+13):

2017- First supervisor: Samuele Vinanzi (PhD on human-robot collaborative intelligence)  
 2016- First supervisor: Marta Romeo (PhD on robot companion for the elderly)  
 2016- First supervisor: Leszek Pecyna (PhD on number cognition in robots)  
 2016- First supervisor: Gabriella Pizzuto (ESR PhD cognitive robotics)  
 2016- First supervisor: Baris Serhan (ESR PhD cognitive robotics)  
 2016- First supervisor: Alexandre Antunes (ESR - PhD on cognitive and personal robotics)  
 2015- First supervisor: Frederico Belmeonte Klein (PhD on cognitive robotics and HRI)  
 2015- First supervisor: Massimiliano Patacchiola (PhD on cognitive robotics and HRI)  
 2015- First supervisor: Debora Zanatto (PhD on HRI)  
 2013- First supervisor: Ricardo De Azambuja (PhD on neurorobotics)  
 2013- First supervisor: Christopher Bishop (PhD on AI and space research) part-time  
 2016- Second supervisor: Chris Wallbridge (ESR PhD on social robotics)  
 2016- Second supervisor: Pontus Loviken (ESR PhD on personal robotics)  
 2016- Second supervisor: Virginia Fernandez De Tejada (PhD on agriculture robotics)  
 2016- Second supervisor: François Foerster (ESR - PhD on cognitive neuroscience and robotics)  
 2016- Second supervisor: Mohamed Abdulla (ESR - PhD on cognitive neuroscience and robotics)  
 2014- Second supervisor: Paolo Pagliuca (PhD on cognitive robotics)  
 2014- Second supervisor: Jônata Tyska Carvalho (PhD on cognitive robotics)  
 2014- Second supervisor: Thomas Colin (PhD on creativity and curiosity in cognitive robotics)  
 2012- Second supervisor: Valerio Sperati (PhD on cognitive robotics)

- 2011- *Second supervisor:* Riccardo De Benedictis (PhD on planning and scheduling)  
 2017- *Third supervisor:* Birgitte Aga (PhD on digital arts)  
 2016- *Third supervisor:* Mina Marmpena (ESR - PhD on cognitive and personal robotics)  
 2014- *Fourth supervisor:* Ilaria Torre (PhD on cognitive psychology)

**PhD Completions (9+13):**

- 2017 *Second supervisor:* Dr James Kennedy (Disney Research)  
 2017 *Second supervisor:* Dr Tomassino Ferrauto (PhD on evolutionary robotics)  
 2017 *Second supervisor:* Dr Giovanni Siri Carmantini (Bragi )  
 2016 *First supervisor:* Dr Kristsana Seepanomwan (Silpakorn University, Thailand)  
 2014 *First supervisor:* Dr Martin Peniak (Cortexica, Imperial College Spin-off)  
 2014 *First supervisor:* Dr Francesca Stramandinoli (IIT Genoa)  
 2010- *First supervisor:* Dr Marek Rucinski (Airbus UK)  
 2013 *First supervisor:* Dr Fabio Ruini (Cybercrime R&D Consultant)  
 2009 *First supervisor:* Dr Vadim Tikhonoff (Italian Institute of Technology, Genoa)  
 2009 *First supervisor:* Dr Eduardo Coutinho (Liverpool University)  
 2004 *First supervisor:* Dr Richard Holden  
 2004 *First supervisor:* Dr Davide Marocco (University of Naples Federico II)  
 2016 *Second supervisor:* Dr Vieri Giuliano Santucci (CNR Rome)  
 2015 *Third supervisor:* Dr Alex Smith (Bristol Robotics Lab)  
 2014 *Second supervisor:* Dr Salomon Martinez-Contla  
 2013 *Second supervisor:* Dr Dan Livingstone (University of Plymouth)  
 2012 *Second supervisor:* Dr Gianluca Massera (ISTC CNR Rome)  
 2012 *Second supervisor:* Dr Mariagiovanna Mazzapioda (University of Rome)  
 2009 *Second supervisor:* Dr Peter Bleys  
 2009 *Second supervisor:* Dr Michele Burigo (Bielefeld University)  
 2006 *Co-supervisor:* Dr Isabella La Rovere  
 2004 *Co-supervisor:* Dr Rohanna Rajapakse (Goss Interactive Ltd)  
 2000 *Co-supervisor:* Dr Georgios Banavas (Greece Finance Ministry)

**Affiliations to other Institutions:**

- 2017 *Visiting Professor:* Sassari University, Italy  
 2016 *Visiting Professor:* Waseda University, Japan  
 2015 *Visiting Professor:* Messina University, Italy  
 2009- *External Faculty Member, CITEC Centre for Excellence Cognitive Technologies, Bielefeld University*  
 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*

**PhD External Examinations (40+ students):**

New Bulgairan University (2017); Czech Technical University (2017); Birkbeck College London (2017), Waseda University (2017), Aristotle University Thessaloniki (2016), SSSA Pisa (2015), Queensland University Australia (2015), King College London (2015), METU Ankara (2015), Padoa University (3 students, 2015), ENSTA ParisTech (2014), Imperial College London (2014), INRIA-Bordeaux University (2014); Genoa University and Italian Institute of Technology, Italy (2014; 6 students); Catania University, Italy (2014; 6 students); Humboldt University Berlin (2013), University of Hertfordshire (2013, 2015, 2016), Universitat Jaume I, Spain (2013), Orebro University, Sweden (2013), Exeter University (2012), Middlesex University (2012), Bielefeld University, Germany (2011), De Montfort University (2011), Queensland University, Australia (2008), York University (2008), King's College London (2007), University of Southampton (2007), York University (2006), University of Hertfordshire (2006), University of Manchester (2006), University of Siena, Italy (5 PhD students, 2006), 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, 2005), University of Sussex (2003), University of Paisley (2003).

University of Plymouth (Internal Examiner, 10+ students, since 1999)

**Service and Management in Research Societies**

- 2014-15 Member of Nominations Committee, IEEE CIS  
 2014 Member of Awards Committee, IEEE CIS

2012-13 *Chair*, Autonomous Mental Developmental Technical Committee, IEEE CIS

2013- Member of the UK Computing Research Committee

#### **Miscellaneous**

2011 Member of BARA-AFR Academic Forum Robotics, British Automation and Robotics Association

2007 Management Committee Member, Autonomous Systems Network (SBAC Society of British Aerospace Companies)

2006 Inclusion in the 23<sup>rd</sup> (2006) Edition of *Who's Who in the World*

2006 Inclusion in the *Cambridge Blue Book* (2<sup>nd</sup> edition), International Biographical Centre

2006-12 Member of euCognition/EUCogII-EUCogIII (FP6-FP7 Coordinated Actions)

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

## **7. 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

2010-14 *Member* of University Research & Innovation Committee

2009-13 *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 and validations)**

2014 *BSc Computing for Robotics*, Oxford Brookes University

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**

2015- Computational Intelligence (year 3)

2015- Applied Artificial Intelligence (year 3)

2015 Theory of Computation and Artificial Intelligence (year 2)

2010-15 Computational Intelligence (year 2)

2005-15 Evolutionary Computation and Artificial Life (year 3)

1999-15 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**

2015- Intelligent Systems (year 1, Plymouth+ Option)

2015- Interactive Intelligent Systems (MSc)

2007-15 Computer Science Workshop (year 1)

2005-15 Interactive Intelligent Systems Workshop (MSc)

2005-12 Alternative Computing Paradigms (year 2)

1997-11 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**

- 2017 *Developmental Robotics and Cognitive Modelling*, University of Sassari
- 2015 Federica.unina.it MOOC, *Developmental Robotics*
- 2017 *Developmental Robotics and Cognitive Modelling*, University of Messina
- 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

**8. PEER ESTEEM INDICATORS**

**Management of Scientific Journals:**

- 2008- *Editor-in-Chief*, “Interaction Studies” (John Benjamin Publishing)
- 2015 *Editor-in-Chief*, “IEEE Transactions in Autonomous Mental Development” (IEEE)
- 2016- *Associate Editor*, “IEEE Transactions in Cognitive and Developmental Systems” (IEEE)
- 2014- *Associate Editor*, “IEEE Computational Intelligence Magazine” (IEEE)
- 2014- *Associate Editor*, “Artificial Intelligence Review” (Springer)
- 2012-14 *Associate Editor*, “TopiCS in Cognitive Science” (CSS)
- 2011-14 *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 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)
- 2009- *Editorial Advisor*, “Neurorobotics Magazine” (Dahlitz Media)
- 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)
- 2017 *Guest Editor*, “ACM Transactions on Interactive Intelligent Systems” (ACM)
- 2017 *Guest Editor*, “Frontiers in Neurorobotics” (Frontiers)
- 2013 *Guest Editor*, “Paladyn. Journal of Behavioral Robotics” (Versita-Springer)
- 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)

**International Conference and Workshop Organisation/Chair:**

- 2018 *General Co-Chair*, IEEE ICDL-EPIROB 2018 Conference, Tokyo, September 2018
- 2017 *Bridging Chair*, IEEE ICDL-EPIROB 2017 Conference, Lisbon, September 2017
- 2017 *Special Session Co-Chair*, IJCNN 2017 Session on Cognition and Development, Anchorage, May 17
- 2016 *Honorary Chair*, HM2016 10<sup>th</sup> International Workshop on Hybrid Metaheuristics, Plymouth, 8-10 June 2016

- 2016 *Special Session Co-Chair*, 2015 WCCI Session on Mind, Brain, and Cognitive Algorithms, Cape Town, December 2015
- 2015 *Symposium Co-Chair*, 2015 IEEE SSCI Symposium on Computational Intelligence, Cognitive Algorithms, Mind, and Brain (CCMB), Cape Town, December 2015
- 2015 *Workshop Co-Organiser*, BMVA 2015 Session on Context Aware Cognitive Systems, London, 17 July 2015
- 2015 *Special Session Co-Chair*, IJCNN 2015 Session on Cognition and Development, Ireland, July 2015
- 2014 *Symposium Co-Chair*, 2014 IEEE SSCI Symposium on Computational Intelligence, Cognitive Algorithms, Mind, and Brain (CCMB), Orlando, December 2014
- 2014 *Invited Session Co-Chair*, Advances in Intelligent Control for Cognitive Robotics, 2014 IEEE Multi-conference on Systems and Control, Antibes, October 2014
- 2014 *Workshop Co-Chair*, RO-MAN 2014: 23<sup>rd</sup> IEEE International Symposium on Robot and Human Interaction Communication (Edinburgh, August 2014)
- 2014 *Workshop Co-Chair*, Neurobiologically Inspired Robotics Workshop, ICRA2014: International Conference on Robotics and Automation (June 2014, Hong Kong)
- 2014 *Special Session Co-Chair*, IJCNN 2014 Session on Mind, Brain, Development and Cognitive Algorithms, Beijing, July 2014
- 2013 *General Co-Chair*, IEEE ICDL-EPIROB 2013 Conference, Osaka, 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 Co-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, 7<sup>th</sup> 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, 6<sup>th</sup> 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*, 2<sup>nd</sup> International Workshop on the Emergence and Evolution of Linguistic Communication – an AISB05 Symposium (Hertfordshire, April 2005)
- 2004 *Conference Chair*, 9<sup>th</sup> Neural Computation and Psychology Workshop (Plymouth, Sept. 2004)

**Keynote/Invited Speaker to International conferences/workshops:**

- 2017 Invited Speaker, London Showcase Event on E-Health. London, October 2017
- 2017 Invited Speaker, Intrinsically Motivated Open-ended Learning Workshop. Rome, October 2017
- 2017 Keynote Speaker, Rimadesio SpA, Milan, October 2017
- 2017 Invited Speaker, CITEC Summer School, Bielefeld, September 2017
- 2017 Invited Speaker, Congress of the Italian Psychology Association, Catania, September 2017
- 2017 Chief Guest, Conference on Energy and Power Systems, Madurai India, April 2017
- 2017 Invited Speaker, Workshop on Mind and Brain, Pavia, February 2017
- 2016 Invited Speaker, JSSR2016 2nd Joint UAE Symposium on Social Robotics. United Arab Emirates University, November 2016
- 2016 Invited Speaker, IROS 2016 International Workshop on Bio-inspired social robot learning in home scenarios. South Korea, October 2016



- 2016 Invited Speaker, Workshop on New technologies and the Value of Psychology (CNR-AIP). Rome, September 2016
- 2016 Keynote Speaker (IET Lecture), TAROS-16: 17th Towards Autonomous Robotic Systems Conference. Sheffield, 29 June 2016
- 2016 Keynote Speaker, MODELACT Conference on Action, Language and Cognition, Rome, 6 June 2016
- 2016 Keynote Speaker, SETN 2016: 9th Hellenic Conference on Artificial Intelligence. Thessaloniki, 18 May 2016
- 2016 Invited Speaker, Google, Workshop on Natural Language Understanding, London, 17 May 2016
- 2015 Keynote Speaker, IEEE ICTAI 2015, 27<sup>th</sup> International Conference on Tools for Artificial Intelligence, Vietri sul Mare, 9-11 November 2015
- 2015 Keynote Speaker, AISC2015 Italian Association of Cognitive Science Conference, Genoa, December 2015
- 2015 Invited Speaker, Symposium on Action, Language and Space, International Conference on Spatial Cognition: Space and Situated Cognition (ICSC 2015), Rome, September 2014
- 2015 Invited Speaker, ICAR2015 Workshop on Robot Learning, Istanbul, 31 July 2015
- 2015 Invited Speaker, ICRA 2015 Workshop on Cognitive Robotics as Interdisciplinary Science, Seattle, 30 May 2015
- 2015 Invited Speaker, Workshop on Robot Learning, Padova, April 2015
- 2014 Invited Speaker, ShanghAI lecture series, 20 November 2014 (shanghailectures.org)
- 2014 Keynote Speaker, BMVA British Machine Vision Association Workshop on "Vision for language and manipulation", London 11 July 2014
- 2014 Invited Speaker, ICRA2014 3<sup>rd</sup> iCub and Friends Workshop, Hong Kong, 5 June 2014
- 2014 Invited Speaker, ICRA2014 Neurobiologically Inspired Robotics Workshop, Hong Kong, 5 June 2014
- 2014 Invited Speaker, ROBOFORUM, Moscow, 17-18 May 2014
- 2014 Keynote Speaker, AISC2014 Midterm Conference of the Italian Association of Cognitive Science , Enna, 22 April 2015
- 2014 Keynote Speaker, Third International Symposium on New Frontiers in Human-Robot Interaction, AISB-50 Convention, London 3-4 April 2014
- 2014 Keynote Speaker, HRI 2014 Workshop on Cognitive Architectures for Human-Robot Interaction, Bielefeld, 3 March 2014
- 2013 Keynote Speaker, IROS 2013 International Workshop on Developmental Social Robotics (DevSoR, Tokyo, 7 November 2013
- 2013 Invited Speaker, Shonan Meeting on Social Cognitive Robotics, Japan, 10-14 November 2013
- 2013 Invited Speaker, ShanghAI lecture series, 31 October 2013 (shanghailectures.org)
- 2013 Invited Speaker, eXperience Summer School, Majorca, 3 October 2013
- 2013 Keynote Speaker, AVSP2013, 12th International Conference on Auditory-Visual Speech Processing, Annecy, France, August 29-September 1, 2013
- 2013 Keynote Speaker, SMLC-2013, Synthetic Modeling of Life and Cognition Workshop, Bergamo, 12-14 September 2013
- 2013 Invited Speaker, Bilingual Mind & Bilingual machine Summer School, Plymouth, 24-28 June 2013
- 2013 Invited Speaker, ICRA 2013 Workshop on Bootstrapping Structural Knowledge from Sensory-motor Experience Karlsruhe, Germany, May 6, 2013
- 2012 Keynote Speaker, AGI-2012, 5th Artificial General Intelligence Conference, Oxford, 8-9 Dec 2012
- 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 6<sup>th</sup> 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 10<sup>th</sup> 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 7<sup>th</sup> 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)

**Programme/Scientific Committees in International Conferences:**

- 2017 IEEE ALIFE 2017: Sixth IEEE Symposium on Artificial Life (Hawaii, December 2017)
- 2017 CLiC-it 2017: Fourth Italian Conference on Computational Linguistics (Rome, December 2017)
- 2017 ICANN2017: 26<sup>th</sup> International Conference on Artificial Neural Networks (Sassari, September 2017)
- 2017 MOD 2017 (3rd International Conference on Machine learning, Optimization & Big Data (Volterra, September 2017)
- 2017 ECAL2017, 14th European Conference on Artificial Life (Lyon, September 2017)
- 2017 WIVACE2017: Italian Workshop on Artificial Life and Evolutionary Computation (Venice, Sept 2017)
- 2017 GLU2017: Grounding Language Understanding (Sweden, August 2017)
- 2017 CogSci2017: Cognitive Science Society Annual Meeting (London, July 2017)
- 2017 INTERSPEECH'17, Workshop on Grounding Language Learning (Stockholm, August 2017)
- 2017 GECCO'17, Genetic and Evolutionary Computation Conference, Complex Systems (Berlin, July 2017)
- 2017 ICINCO 2017 - 14th International Conference on Informatics in Control, Automation and Robotics (Madrid, July 2017)
- 2017 IEEE IJCNN 2017: International Joint Conference on Neural Networks (Anchorage, May 2017)
- 2017 IEEE Conference on Robotic Computing: Workshop on Cognitive Robotics and Computational Creativity (Taiwan, April 2017)
- 2017 HRI 2017: 2017 Human-Robot Interaction Pioneers Workshop (Vienna, March 2017)
- 2017 First IEEE International Conference on Robotic Computing (Taiwan, April 2017)
- 2016 ICMV2016: The 9th International Conference on Machine Vision (Nice, November 2017)
- 2016 Computational Linguistics for Linguistic Complexity Workshop (CL4LC) at COLING2016 (Osaka, Dec 2016)
- 2016 ICDL-EpiRob'16, IEEE International Conference on Development and Learning and Epigenetic Robotics (Paris, September 2016)
- 2016 GECCO'16, Genetic and Evolutionary Computation Conference (Denver, July 2016)
- 2016 SAB2016: The 14<sup>th</sup> Intl. Conference on the Simulation of Adaptive Behavior (Wales, August 2016)

- 2016 AIC2016: International Workshop on Artificial Intelligence and Cognition, (New York, July 2016)
- 2016 ICINCO 2016 - 13th International Conference on Informatics in Control, Automation and Robotics (Lisbon, July 2016)
- 2016 ALIFE XV: 15<sup>th</sup> International Conference on Synthesis and Simulation of Living Systems (Cancun, July 2016)
- 2016 HSI2016, 9th International Conference on Human System Interaction (Portsmouth, July 2016)
- 2016 Neuroinformatics 2016 Conference (Moscow, April 2016)
- 2015 ICTAI2015: IEEE 27<sup>th</sup> International Conference on Tools for Artificial Intelligence (Vietri, Nov 2015)
- 2015 TAROS2015: 16th Towards Autonomous Robotic Systems Conference (Liverpool, September 2015)
- 2015 AIC2015: International Workshop on Artificial Intelligence and Cognition, (Turin, September 2015)
- 2015 Protolang4, 16th Towards Autonomous Robotic Systems Conference (Liverpool, September 2015)
- 2015 WIVACE2015: Italian Workshop on Artificial Life and Evolutionary Computation (Bari, Sept 2015)
- 2015 ICSR2015, International Conference on Social Robotics (Paris, October 2015)
- 2015 ICAR2015, International Conference on Advanced Robotics (Area Chair) (Istanbul, July 2015)
- 2015 GECCO'15, Genetic and Evolutionary Computation Conference, Generative and Developmental Systems Track (Madrid, July 2015)
- 2015 IEEE CEC 2015, IEEE International Conference on Evolutionary Computation (Sendai, May 2015)
- 2014 SocialCom2014, 7<sup>th</sup> IEEE International Conference on Social Computing and Networking (Sydney, Dec 2014)
- 2014 ICDL-EpiRob2014: IEEE International Conference on Development and Learning and Epigenetic Robotics (Genoa, October 2014)
- 2014 ICSR2014: Workshop on Attention for Social Intelligence, International Conference on Social Robotics (Sydney, October 2014)
- 2014 AIC2014: International Workshop on Artificial Intelligence and Cognition, (Turin, November 2014)
- 2014 ICANN2014: 24<sup>th</sup> International Conference on Artificial Neural Networks (Hamburg, September 2014)
- 2014 SAB2014: The 13<sup>th</sup> Intl. Conference on the Simulation of Adaptive Behavior (Spain, July 2014)
- 2014 WIVACE2014: Italian Workshop on Artificial Life and Evolutionary Computation (Italy, May 2014)
- 2014 SocialCom2014, The Sixth ASE International Conference on Social Computing (Stanford, May 2014)
- 2014 GECCO'14, Genetic and Evolutionary Computation Conference, Generative and Developmental Systems Track (Vancouver, July 2014)
- 2014 CogSci2014: Cognitive Science Society Annual Meeting (Quebec City, July 2014)
- 2014 IEEE CEC 2014, IEEE International Conference on Evolutionary Computation (Beijing, July 2014)
- 2014 ALIFE 14: 14<sup>th</sup> International Conference on Artificial Life (New York City, July 2014)
- 2013 NaBIC2013, 5<sup>th</sup> World Congress on Nature and Biologically Inspired Computing (Fargo, August 13)
- 2013 SMLC 2013, Synthetic Modeling of Life and Cognition Workshop (Bergamo, September 2013)
- 2013 SocialCom2013, IEEE International Conference on Social Computing (Washington DC, Sept 2013)
- 2013 RO-MAN 2013: 22<sup>nd</sup> IEEE International Symposium on Robot and Human Interaction Communication (Korea, August 2013)
- 2013 ECAL2013, 12th European Conference on Artificial Life (Taormina Italy, September 2013)
- 2013 IEEE CEC 2013, IEEE International Conference on Fuzzy Systems (Hyberanad India, July 2013)
- 2013 GECCO'13, Genetic and Evolutionary Computation Conference, Generative and Developmental Systems Track (Amsterdam, July 2013)
- 2013 CogSci2013: Cognitive Science Society Annual Meeting (Berlin, August 2013)
- 2012 SAB2012: The 12<sup>th</sup> Intl. Conference on the Simulation of Adaptive Behavior (Denmark, August 2012) (also for SAB Workshop on Artificial Mental Imagery in Cognitive Systems and Robotics)
- 2012 ECTA 2012, International Conference on Evolutionary Computation Theory and Applications, (Barcelona, October 2012)
- 2012 2012 ASE/IEEE International Conference on Social Informatics (Washington D.C., 2012)
- 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)
- 2012 CogSci2012: Cognitive Science Society Annual Meeting (Sapporo, 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 AAALife 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: 20<sup>th</sup> 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 11<sup>th</sup> 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, 10<sup>th</sup> 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, 10<sup>th</sup> 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, 3<sup>rd</sup> 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 1<sup>st</sup> International Workshop on Multi-objective Cybernetics, IEEE-ICCC Conference (Helsinki, Aug. '06)
- 2006 SAB'06, 9<sup>th</sup> International Conference on the Simulation of Adaptive Behavior (Rome, Sept. 2006)
- 2006 EELC3, 3<sup>rd</sup> International Workshop on the Emergence and Evolution of Linguistic Communication (Rome, October 2006)
- 2006 KES2006, 10<sup>th</sup> 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, 27<sup>th</sup> Annual Meeting of the Cognitive Science Society (Stresa, July 2005)

- 2005 IJCAI 2005, 19<sup>th</sup> 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, June 04)
- 2005 International Workshop "Toward Social Mechanisms of an Android Science (SMAS)" - (Stresa, July '05)
- 2005 2<sup>nd</sup> Italian Workshop on Artificial Life (Rome 2005)
- 2004 ALIFE IX International Conference on Artificial Life (Boston, September 2004)
- 2004 EVOLANG5, 5<sup>th</sup> International Conference on the Evolution of Language (Leipzig, March 2004)
- 2004 GECCO-04 Genetic and Evolutionary Computation Conference, WORLD Workshop (Seattle, June 2004)
- 2003 1<sup>st</sup> Italian Workshop on Artificial Life (Cosenza 2003)
- 2003 ECAL03 European Conference on Artificial Life (Dortmund, September 2003)
- 2002 EVOLANG4, 4<sup>th</sup> 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 research grants**

- 2015 CHIST-ERA (ANR) Panel Member, Human Language Understanding call
- 2014 New Zealand Ministry of Business, Innovation & Employment, 2014 Science Investment Round
- 2013 WWTF Vienna Science and Technology Fund (Austria)
- 2013 NIHR-CCF National Institute for Health Research Central Commissioning Facility (UK)
- 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 trough knowledge Fund)
- 2006 Dutch Research Council (Technology Foundation STW)
- 2007- ESF European Science Foundation (College of Reviewer)
- 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; Engineering Panel member 2014, 2016)
- 2002- ESRC Economic and Social Research Council (also Large Grant Panel member in 2007-08)

**Invited Speaker for seminars:**

- UK: Bath University, Birkbeck College, Birmingham University, Edinburgh University, De Montfort University, Glasgow University, Heriot Watt University, Manchester University, Middlesex University, Sheffield University, Southampton University, Sussex University, Surrey University, Sunderland University, York University; ARM Cambridge
- Overseas: Stanford University, Harvard University, MIT Massachusetts Institute of Technology, Osaka University, Waseda University, Rutgers University Newark, University of Maryland College Park, 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), Orebro University, Skovde University, Bilgi University Istanbul, METU Ankara, Universidad Autónoma del Estado de Morelos, Universita' di Genova, Universita' di Pavia,

Universita' di Modena e Reggio Emilia, Universita' della Calabria, Universita' di Palermo, Universita' di Catania, ISTC-CNR Rome, Universita' di Enna Kore, University Naples Federico II, Sassari University, Messina University, Salento University Lecce, Bari University, Cagliari University, Siena University

**Industrial collaborations:**

SoftBank/Aldebaran Robotics, SciSys UK; Telerobot SpA Italy, Honda Research Institute Europe, Germany; BARA British Automation & Robot Association, TMSUK Japan

**Media Coverage (partial list)**

- 2016 iCub experiments featured in PBS Documentary "The Brain, by David Eagleman" and in "The Genius of Goerge Boole".
- 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.

## PUBLICATIONS OF ANGELO CANGELOSI

### BOOKS

1. Cangelosi A., Di Nuovo S. (2017). [\*La mente Simulata \(The Simulated Mind\)\*](#). Fireze: Giunti (ebook).
2. Blesa M.J., Blum C., Cangelosi A., Cutello V., Di Nuovo A., Pavone M., Talbi E. (Eds.) (2016). *Hybrid Metaheuristics: Proceedings of 10<sup>th</sup> International Workshop, HM 2016 (Lecture Notes in Computer Science 9668)*, Springer International Publishing Switzerland
3. **Cangelosi A., Schlesinger M. (2015). [\*Developmental Robotics: From Babies to Robots\*](#). Cambridge, MA: MIT Press<sup>1 2</sup>**
4. Di Nuovo S, Cangelosi A (Eds) (2015). [\*Vita Naturale, Vita Artificiale \(Natural Life, Artificial Life\)\*](#). Milano, Franco Angeli.
5. Lyon C., Nehaniv C.L., Cangelosi A. (Eds.) (2007). [\*Emergence of Communication and Language\*](#). London: Springer.
6. Cangelosi A., Smith A, Smith K. (Eds.) (2006). [\*The Evolution of Language: Proceedings of the 6<sup>th</sup> International Conference on the Evolution of Language\*](#). Singapore: World Scientific.
7. Cangelosi A., Bugmann G. & Borisyuk R. (Eds.) (2005). [\*Modelling Language, Cognition and Action: Proceedings of the 9<sup>th</sup> Neural Computation and Psychology Workshop\*](#). (Neural Processing Series, vol. 16). Singapore: World Scientific.
8. **Cangelosi A. & Parisi D. (Eds.) (2002). [\*Simulating the Evolution of Language\*](#). London: Springer<sup>3</sup>.**

### JOURNALS

9. Grzyb B., Cattani A., Cangelosi A., Floccia C. (2017). Decreased attention to object size information in scale errors performers. *Infant Behavior and Development*, [10.1016/j.infbeh.2017.03.001](#)
10. Jamone L., Ugur E., Cangelosi A., Fadiga L., Bernardino A., Piater J., Santos-Victor J. (2017). Affordances in psychology, neuroscience and robotics: A survey. *IEEE Transactions on Cognitive and Developmental Systems*. [10.1109/TCDS.2016.2594134](#)
11. Li C., Yang C., Wan J., Annamalai A.S.K., Cangelosi A. (2017). Teleoperation control of Baxter robot using Kalman filter-based sensor fusion. *Systems Science and Control Engineering*, 5(1). [10.1080/21642583.2017.1300109](#)
12. Colin T.R., T Belpaeme, A Cangelosi, N Hemion (2017). Hierarchical reinforcement learning as creative problem solving. *Robotics and Autonomous Systems*, 86, 196-206. [10.1016/j.robot.2016.08.021](#), 86: 196–206
13. Cangelosi A., Invitto S. (2017). New technologies for human robot interaction and neuroprosthetics. *IEEE Consumer Electronics Magazine*.
14. Stramandinoli F., Marocco D., Cangelosi A. (2017). Making sense of words: A robotic model for language abstraction. *Autonomous Robots*. 41(2): 367-383. [10.1007/s10514-016-9587-8](#)
15. Lyon C., Nehaniv C.L., Saunders J., Belpaeme T., Bisio A., Fischer K., Foerster F., Lehmann H., Metta G., Mohan V., Morse A., Nolfi S., Nori F., Rohlfsing K., Sciutti A., Tani J., Tuci E., Wrede B. Zeschel A., Cangelosi A. (2016). Embodied language learning and cognitive bootstrapping: Methods and design principles. *International Journal of Autonomous Robotic Systems*, Vol 13, Issue 3, [10.5772/63462](#)
16. Morse A, Cangelosi A (2016). Why are there developmental stages in language learning? A developmental robotics model of language development. *Cognitive Science*, [10.1111/cogs.12390](#)
17. Twomey K.E., Morse A.F., Cangelosi A., Horst J. (2016). Children's referent selection and word learning: Insights from a developmental robotic system. *Interaction Studies*, 17:1, pp. 101–127 [10.1075/is.17.1.05two](#)
18. Conti D., Di Nuovo A., Cangelosi A., Di Nuovo S. (2016). Lateral specialization in unilateral spatial neglect: A cognitive robotics model. *Cognitive Processing*, 13(3): 321–328 [10.1007/s10339-016-0761-X](#)

<sup>1</sup> Also published in Chinese (China Machine Press/Huazhang Graphics & Information Co. Ltd) and in Japanese (Fukumura Shuppan Inc.)

<sup>2</sup> Book review by L. Meeden in *Genetic Programming and Evolvable Machine* journal, 2015

<sup>3</sup> Book review by A. Wray in *Journal of Linguistics*, 39: 395-400, 2003

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