

# Dimitri Ognibene - Curriculum Vitae

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CONTACT INFORMATION  
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*ORCID ID:* 0000-0002-9454-680X  
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RESEARCH & TEACHING INTERESTS  
Artificial Intelligence, Machine Learning, Computational Neuroscience, Robotics and Human-Machine Interaction

GENERAL QUALITY INDICATORS OF SCIENTIFIC RESEARCH

	Google Scholar	Scopus
citations	911	448
h-index	15	11
i10-index	18	NA

EDUCATION  
**University of Genoa**, Genoa, Italy  
**PhD. in Robotics**, May 2009

- Thesis title:* Ecological Adaptive Perception from a Neuro-Robotic perspective: theory, architecture and experiments
- Supervisors:* Prof. Giulio Sandini, Dr. Stefano Nolfi, Dr. Gianluca Baldassarre

**University of Palermo**, Palermo, Italy  
**Laurea Degree in Information Engineering** (Italian equivalent of joint BA and MA); Final mark: 110/110 with full honours, Nov 2004

- Thesis Title:* Study of Algorithms and Techniques for Speech Recognition And Conversational Systems ('Studio di Algoritmi e Tecniche per il Riconoscimento Vocale e i Sistemi Conversazionali')
- Supervisors:* Prof. Giuseppe Gaglio, Prof. Antonio Gentile

CURRENT POSITION  
**University of Milano-Bicocca**, Milan, Italy  
October 2020 till now  
*Role:* **Associate Professor** in the Department of Psychology  
*Topics:* Human Machine Interaction; Augmented Reality; Artificial intelligence; Robotics; Cognitive neuroscience; Cognitive Behavior and Learning; Social Perception; Brain Functional Connectivity Dynamics

PREVIOUS POSITIONS  
**University of Essex**, Colchester, United Kingdom  
October 2017 till October 2020  
*Role:* **Lecturer in Computer Science and Artificial Intelligence** in the Department of Computer Science and Electronic Engineering  
*Topics:* Artificial intelligence; Robotics; Cognitive neuroscience; Cognitive Behavior and Learning; Social Perception; Brain Functional Connectivity Dynamics  
*Duties and Responsibilities:* I am supervisor of two modules:

- CE218 Computer Game Programming, an UG second year module where the students for the first time face a medium scale development project and test their skills in Java and OOP, They also learn basics of code optimization and AI. In particular I added RL and Evolutionary Robotics

2. CE881 Mobile and Social application programming, a master level module where I cover design and development, touching the many different frameworks and platforms available for Android.

I'm in charge of managing the faculty HPC-GPU cluster for the school.

I am Second Year Manager. Duties involve: dealing with several requests and appeals of the students, monitoring the student teaching and coursework load, ensuring the quality of the curriculum, lectures and feedback.

I'm supervising six third year UG students in their final project and two master students, as well as four PhD students based in Essex and I'm external co-supervisor of 2 student based Italy (UniCt and IMT). With these students and other collaborators I bring on my research on Artificial Intelligence and in particular Robotics, Machine Learning and Computational Neuroscience.

I'm also PI for Essex of the Courage project funded by Volkswagen Foundation. The project aims to enable teenager to deal safely and constructively with social media by creating an intelligent artificial companion. Our group deals with creating probabilistic models of Users' beliefs dynamics and developing new recommendation and governance algorithms that will make social media safer.

I'm Co-PI of the project POTION, where I'm in charge of the Neuroscientific and Computational aspects of the project.

I've organized several tutorials (ICVS2019,etc), Special Session Co-Organiser, and presented several invited talks (Geneva Biocampus, BT Adastral Park, etc). I'm area chair for VISAPP, Ass Editor for 2 Frontiers topics, and PC for some main conference, eg: NeurIPS, AAI, IJCAI

### **Universitat Pompeu Fabra**, Barcelona, Spain

Feb 2015 till October 2017

*Role:* **UPFellow Marie Curie COFUND Fellowship** with Prof. Hector Geffner and Prof. Gustavo Deco

*Project:* Embodied Bounded Rational Agents (UPFellow University Pompeu Fabra and FP7 Marie Curie Actions COFUND Grants Programme)

*Topics:* Artificial intelligence; Robotics; Cognitive neuroscience; Cognitive Behavior and Learning; Social Perception; Brain Functional Connectivity Dynamics

*Duties and Responsibilities:* The UPFellowship I received allows me to work on my personal research topics related to machine learning, neuroscience and human robot interaction I am extending my previous work on social perception developing robotic systems and computational models relevant for neuroscience I am also experimentally testing the validity of my models in collaboration with different groups of the department I am working on novel models of learning and planning I lead my grant writing for EU projects and participate to others I also assist teaching the probability course with 5 groups of students of different size (10 -35) I supervised master student and propose master students research topic

### **King's College London**, London, UK

**Jan 2014 to Jan 2015**

*Role:* Postdoctoral Research Associate with Dr. Thrishantha Nanayakkara in the Centre for Robotics Research

*Project:* Darwin (FP7 ICT STREP)

*Topics:* Visual attention for learning by observation

*Duties and Responsibilities:* Writing proposals for new grants. Design and development of a probabilistic model for visual attention and precision manipulation in the context of the FP7 Darwin project. Extending active perception methodologies to soft robots and tactile sensors. Provide support and tutorials on Bayesian and machine learning methods to the other members of the laboratory.

**Imperial College London**, London, UK

**Jun 2011 to Dec 2013**

*Role:* Postdoctoral Research Associate with Dr. Yiannis Demiris in the Personal Robotics Laboratory

*Project:* EFAA (FP7 ICT STREP)

*Topics:* Visual attention and timing control on humanoid robots

*Duties and Responsibilities:* Actively contributing with the scientific and strategic direction of the project. Preparing deliverables. Organising the collaboration with other partners also forms part of my duties. Co-tutoring undergraduates and co-supervising a Ph.D. student.

Design and development of a probabilistic model for visual attention in dynamic and social contexts. I published several papers on this work (IJCAI (2013), Bioinspiration & Biomimetics (2013), Living Machines (2013), Perception (2013)) and disseminated it in different conferences and invited talks.

**Institute of Sciences and Technologies of Cognition, National Research Council**, Rome, Italy

**May 2009 - Jun 2011**

*Role:* Research Associate (Post Doc) with Dr. Giovanni Pezzulo

*Project:* HUMANOBS (FP7 ICT STREP)

*Topics:* Development of probabilistic models for an adaptive social agent that integrates active perception and motor control

*Duties and Responsibilities:* Contributing to the scientific and strategic direction of the project. Designing the software architecture of a massively parallel online cognitive agent, which integrates machine learning with software engineering, in close collaboration with the coordinator and main designer of the project, Eric Nivel from Reykjavík University. Writing project deliverables.

**Mar 2006 - Apr 2009**

*Role:* Research Assistant (Ph.D. student) with Dr. Gianluca Baldassarre and Dr. Stefano Nolfi in the **Laboratory of Autonomous Robotics and Artificial Life**

*Project:* Mindraces (FP6 IST STREP) and ICEA (FP7 ICT IP)

*Topics:* Biologically inspired models for adaptive control of motion and perception

*Duties and Responsibilities:* Developing a bio-inspired neurobotic controller integrating learning, attention and motor control. Writing scientific articles presented in international conferences (SAB 2008, SAB 2010, ICDL 2010, ICDL2007) and invited talks.

**University Of Massachussets Amherst**, Amherst, MA, USA

**Oct - Dec 2010** *Role:* Visiting Researcher with Prof. Shlomo Zilberstein in the **Resource Bounded Reasoning Lab (RBRLAB)**. *Project:* A bounded rationality approach to the development of cognitive robots - funded by EuCOG. *Topics:* Bounded Rationality, Continual Planning.

**Reykjavík University**, Reykjavík, Iceland

**Jun - Jul 2009** *Role:* Visiting Researcher with Prof. Kristinn R. Thórisson. *Project:* HUMANOBS - FP7 *Topics:* Bounded Rationality, Human Computer Interface, Massively Parallel Architectures.

GRANT  
EVALUATION

**2020** External member of the Selection Board for “Digitization Initiative of the Zurich Universitie” (DIZH) Fellowship of the Zurich University of Applied Sciences (ZHAW)

**2016** Project proposal reviewer in PRIN 2017 for Italian Ministry of University and Research

TEACHING,  
SUPERVISING, &  
TUTORING  
EXPERIENCE

**2019** Supervisor the PhD of the student Francesco Lomonaco working on “Modelling Beliefs Dynamics of Social Media Users with Machine Learning Methodologies” at the School of Computer Science and Electronic Engineering, University of Essex

**2019** Co-Supervisor with Dr. Vishwanatham Mohan, Dr. Silvia Rigato and Dr. Maria Laura Filippetti of the PhD student Francesca Bianco working on “Being in the Other’s Shoes - Social Cognition in Babies and Robots” at the School of Computer Science and Electronic Engineering, University of Essex

**2018** Co-Supervisor with Dr. Tom Foulsham of the PhD student Carmelo Calafiore working on “Are You Looking at Me? Transferring Social Skills from Humans to Robots” at the Department of Psychology, University of Essex

**2019** Co-Supervisor with Dr. Givoanni Maria Farinella of the PhD student Giuseppe Puglisi working on “Context Aware Proactive Robotic Assistants for Care Homes” at the Dipartimento di Informatica, Università di Catania

**2018** Co-Supervisor with Dr. Vishwanatham Mohan of the PhD student Penelope Roberts working on “Context Aware Proactive Robotic Assistants for Care Homes” at the School of Computer Science and Electronic Engineering, University of Essex

**2018** Lecturer of Computer Game Programming (70 students UG) and Mobile and Social Application Development (30 students MS) in the School of Computer Science and Electronic Engineering, University of Essex

**2018** Two hours tutorial on Adaptive Perception for Human-Robot Interaction, University of Essex, 10th Computer Science and Electronic Engineering Conference, IEEE, 19th September

**2018** Two hours tutorial on Adaptive Perception for Human-Robot Interaction, University of Catania, 4th April

**2016** Assistant Lecturer in the Probability and Stochastic Processes course. Responsible for five second year groups of 10 to 35 students. Practice and seminary classes for a total of 46 hrs of teaching in the Computer Science Degree at Universitat Pompeu Fabra, Barcelona, Spain.

**2013** Tutoring a first year student group at Imperial College London in the Electrical and Electromechanical Engineering Department under the supervision of Dr. Yiannis Demiris

**Jul 2013** Tutorial on *Probabilistic methods for active perception of dynamic events*, at ‘Veni Vidi Vici 2013, iCub Summer School’, Sestri Levante, Italy, Sep 2013

**Jun 2013** Tutorial on *Probabilistic methods for active perception of dynamic events*, at Personal Robotics Laboratory, Imperial College London, UK

**Feb 2013** Tutorial on *Reinforcement learning algorithms for active perception*, at Personal Robotics Laboratory, Imperial College London, UK

**Mar - Oct 2012** Co-Supervisor a Ph.D. student, *Nicola Catenacci Volpi*, from IMT Institute for Advanced Studies, Lucca, Italy, who was visiting Imperial College London, on the topic of **Adaptive Attentive Cognitive Systems**

**Dec 2005** 2 days tutorial on *Distributed Adaptive Architectures*, at Institute of Sciences and Technologies of Cognition (ISTC), National Research Council (CNR), Rome, Italy

## GRANTS

€360,000 *funder*: VolkswagenStiftung, *Artificial Intelligence and the Society of the Future* call, project *COURAGE: A Social Media Companion Safeguarding and Educating Students*. Principal Investigator (PI) for Essex.

€650,000 *funder*: European Commission, H2020-FETPROACT-2018-01 project *POTION* ‘Promoting social interaction through emotional body odours’. CO-PI with Dr Luca Citi and Dr Tom Foulsham. Lead on brain function modelling

£60,000 *funder*: University of Essex interdisciplinary PhD funding call, project *Are you looking at me? Transferring social skills from humans to robots*. CO-PI with Dr Luca Citi and Dr Tom Foulsham.

£60,000 *funder*: University of Essex interdisciplinary PhD funding call, project *Being In Each Others Shoes*. CO-PI with Dr Vishwanathan Mohan, Dr Silvia Rigato, and Dr Maria Laura Filippetti

€150,000 *funder*: University Pompeu Fabra and FP7 Marie Curie Actions COFUND Programme. **UPFellows Research Grant** awarded on 1 winner over more than one hundred participants

£2000 *funder*: Vision and Language Network, UK, Jul 2013. Co-investigating with KyuHwa Lee, Dr. Tae-Kyun Kim and Dr. Yiannis Demiris, for the production of a **dataset on multiple simultaneous structured activities**

\$1000 *funder*: University of Rochester, NY, USA, Jun 2012. Travel Fellowship to participate at the 28th Center for Visual Science (CVS) Symposium on Computational Foundations of Perception and Action, presenting the work **Towards Active Events Perception**

€2880 *funder*: EUCogII, Sep 2010. Grant to support a faculty exchange with Prof. Shlomo Zilberstein’s Resource Bounded Reasoning Lab (RBRLAB) in UMass Amherst on the research project **A bounded rationality approach to the development of cognitive robots**

INVITED TALKS & PRESENTATIONS *Adaptive Vision for Human Robot Collaboration* at the Riken Online Round Table about “What is the role of next generation of cognitive robotics?” 21 December 2021, online, Tokyo, Japan

**Keynote** *Adaptive Vision for Human Robot Collaboration* at Fourth IEEE International Conference on Image Processing, Applications and Systems (IPAS 2020) 9-11 December 2020, Genova, Italy

*Active Vision Insights For Mixed Reality Design*, as part of CAIVARS20 – “Cognitive Aspects of Interaction in Virtual and Augmented Reality Systems” organized with ISMAR2020 - “IEEE International Symposium on Mixed and Augmented Reality”, online due to Covid19, 09-13 November 2020

*Probabilistic Collaborative Robotics*, at Department of Mathematics and Informatics, University of Catania, Catania, Italy, April 22th, 2020

*Adaptive Vision for Human Robot Collaboration*, at Perceptual computing and Human Sensing Lab at Computer Science Department, University Statale di Milano on Dec 09, 2019

*Explore Reinforcement Learning applications in Fraud Management with AWS*, as part of RELIANCE 2019 – International Summer School on Big Data and Analytics for Fraud Detection, Florianópolis –SC – Brazil, on 16-19 September 2019

*Active Vision for Human-Robot Interaction*, Thought Leadership’ series, event organized jointly by Innovation Martlesham, Tommy Flowers Institute and British Telecom, Adastral Park’s Auditorium, Ipswich, UK, on June 20th, 2019

*Active Vision for Human-Robot Interaction*, Campus Biotech, Université de Genève, Switzerland, on May 23rd, 2019

*Information gain influence on eye moments during action observation: preliminary experimental results*, at the Theoretical Neurobiology Group, Wellcome Centre for Human Neuroimaging, Institute of Neurology , London, UK, May 7th, 2019

*Active Vision for Human-Robot Interaction*, at the Institute of Sciences and Technologies of Cognition, National Research Council, Rome, Italy, April 5th, 2019

*Adaptive Perception for Human-Robot Interaction*, at Department of Mathematics and Informatics, University of Catania, Catania, Italy, April 17th, 2019

*Adaptive Perception for Human-Robot Interaction*, as part of the tutorial on ‘Cognitive Aspects of Interaction in Virtual and Augmented Reality Systems (CAIVARS)’ during the 17th IEEE International Symposium on Mixed and Augmented Reality (ISMAR 2018), MOC Events Center in Munich (Germany), on October 16-20, 2018

*Adaptive Perception for Human-Robot Interaction*, Prince of Songkla University (PSU), Hat Yai, Thailand. 5th June 2018

*Adaptive Perception for Human-Robot Interaction*, as part of the tutorial on ‘Active Vision and Human Robot Collaboration’ during the 19th International Conference on Image Analysis and Processing (ICIAP 2017), Catania (Italy), 17th September 2017

*Exploration and Active Perception in Artificial and Biological Agents*, at Department of Mathematics and Informatics, University of Catania, Catania, Italy, Jun 2017

*Exploration and Active Perception in Artificial and Biological Agents*, at School of Medicine and Surgery, University of Palermo, Italy, Jun 2017

*Robotic models of active perception*, at 7<sup>th</sup> International Symposium on Attention in Cognitive Systems. Bielefeld, Germany, Dec 2014

*Artificial Models of Active Perception in Humanoid Robots*, at Department of Experimental Biomedicine and Clinical Neuroscience of the University of Palermo, Italy, Jul 2014

*Structure Learning, Robotics and Autism*, at Karl Friston’s Group, Functional Imaging Laboratory, Wellcome Trust Centre for Neuroimaging, UCL, London, UK, Apr 2014

*Attention and Behaviour*, at Faisal Lab, Bioengineering Department, Imperial College London, London, UK, Sep 2013

*Attentional Perception of Action and Hierarchies in the Brain*, at Karl Friston’s Group, Functional Imaging Laboratory, Wellcome Trust Centre for Neuroimaging, UCL, London, UK, Sep2013

*Active Event Perception on a Humanoid Robot*, at Dr. Nanayakkara’s Group, Centre for Robotics Research, King’s College, London, UK, Sep 2013

*Attention and Behaviour*, at Marc Toussaint's Machine Learning and Robotics Laboratory, University of Stuttgart, Germany, Aug 2013

*Toward Active Recognition of Events*, at ISACS 2013 (Intl. Symposium on Attention in Cognitive Systems), Beijing, China, Aug 2013

*Developmental trajectory of a neurobotic model: the role of attention and representations*, at Gatsby Unit, UCL, London, UK, Mar 2013

*Ecological Adaptive Perception*, at Jun Tani's Laboratory, Riken Institute, Tokyo, Japan, Jul 2010

SUMMER SCHOOLS *Cognitive Science and Machine Learning Summer School (organized by MIT & UCL)*, Pula, Italy, May 2010

*FIAS Summer School, Theoretical Neuroscience and Complex Systems*, Frankfurt, Germany, Aug 2007

*5th European Neuro-IT and Neuroengineering School-Cognition & Action*, Hanse-Wissenschaftskolleg (HWK), Delmenhorst, Germany, Jul 2007

*VVV 2006 RobotCub Summer School*, Ventimiglia, Italy, Jul 2006

*4th European School of Neuro-IT and Neuroengineering Dynamics, Computation and Learning in Neural Systems*, Genoa, Italy, Jun 2006

*Veni Vidi Vici 2013, iCub Summer School*, Sestri Levante, Italy, Sep 2013

*The Barcelona Cognition, Brain and Technology Summer School*, Barcelona, Spain, Sep 2012

*The Barcelona Cognition, Brain and Technology Summer School*, Barcelona, Spain, Sep 2011

ACADEMIC  
SERVICE

**Associate Editor** at Paladyn, Journal of Behavioral Robotics, DE GRUYTER;

**Guest Associate Editor** in Frontiers in Neurorobotics

**Guest Associate Editor** in Frontiers in Cognitive Neuroscience

**Review Editor** Bionics and Biomimetics section of Frontiers in Bioengineering and Biotechnology

**Review Editor** in Computational Intelligence, part of the journal(s) Frontiers in Robotics and AI

**Handling Editor** in Cognitive Processing - International Quarterly of Cognitive Science

**Guest Editor** for 'Human Friendly Robotics' in Applied Science Journal, MDPI, October 2018

**Poster and Demo Co-Chair:** Human Agent Interaction (HAI) 2016, Singapore, Singapore, October 2016

**Area Chair:**

16th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications (VISAPP2021), Valletta, Malta, 9-10 February 2021, online conference

15th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications (VISAPP2020), Valletta, Malta, 27-29 February 2020

**Tutorial Organiser:**

Active Vision and Human Robot Collaboration Tutorial at ICIAP 2017, Catania, Italy, September 2017

Active Vision and Human Robot Collaboration Tutorial at ICVS 2019, Thessaloniki, Greece, 23-25 Sept 2019

**Workshop Organizer**

Active Vision and perception in Human(-Robot) Collaboration (AVHRC 2020) at the 29th IEEE International Conference on Robot & Human Interactive Communication (Ro-Man2020), 31 AUG - 04 SEPT, 2020, Naples, Italy

**Special Session Co-Organiser:**

Beyond Traditional Sensing for Intelligent Transportation at the 23rd IEEE International Conference on Intelligent Transportation Systems, September 20-23, 2020, Rhodes, Greece

Beyond Traditional Sensing for Intelligent Transportation at the 22nd IEEE International Conference on Intelligent Transportation Systems, October 27-30, 2019, NZ

Beyond Traditional Sensing for Intelligent Transportation at the 21st IEEE International Conference on Intelligent Transportation Systems, November 4-7, 2018, Maui, Hawaii, USA

Towards Human-Robot Collaboration: Enabling Technologies, Interfaces, Learning and Interaction at the 9th Asia-Pacific Signal and Information Processing Association Annual Conference (APSIPA ASC 2017), Kuala Lumpur, Malaysia, Dec 2017

**Summer/Winter School Organiser:**

Building the New Everything: Human Factors and Virtual Reality, 2021

**Conferences Program Committee:**

ECAI 2014, ICAART 2015, ICNC 2014, ISACS 2015, IJCAI 2017, IJCAI 2016, IJCAI 2013, ACVR 2017, IJCAI 2018, AAAI2019, IJCAI2019, ICANN2019, NeurIPS 2019, ICCV-EPIC, AAAI2020. . .

**Reviewer:**

**Conferences:** IJCAI, ICAPS, SAB, ICDL, IROS, ICRA, EPIROB, ECAL, ECAI, ROMAN, HUMANOIDS

**Journals:** 'Artificial Intelligence', 'IEEE Transactions on Pattern Analysis and Machine Intelligence', 'International Journal of Social Robotics', 'International Journal of Advanced Robotic Systems', 'Adaptive Behaviour', 'Connection Science', 'Computer Vision and Image Understanding', 'Frontiers in Psychology', 'Neuropsychologia', 'Cognitive Systems Research', 'Robotics and Autonomous Systems', 'IEEE Robotics and Automation Letters' and 'Paladyn, Journal of Behavioral Robotics', 'Pattern Recognition, Network: Computation in Neural Systems

ACADEMIC  
CAREER  
DEVELOPMENT  
COURSES

**Planning and Managing Research**, Imperial College Postdoc Development Centre, Nov 2011

**Preparing Successful Research Funding Applications**, Imperial College Postdoc Development Centre, Jun 2012

**Recruitment and Selection**, University of Essex, Sept 2019

MEMBERSHIP

Member of *EUCog - European Network for the Advancement of Artificial Cognitive Systems, Interaction and Robotics*, 2006 to present

Member of *Italian Register of Professional Engineers*, 2005 to present

PROGRAMMING  
AND SOFTWARE  
SKILLS

**Operating Systems:** Linux (Ubuntu, Slackware, Debian), Windows XP, Mac OS-X



**Programming Languages:** C++, Java, Prolog, Lisp, Assembly, UML, Matlab, Mathematica, Python

**Tools:** QtCreator, Latex, Office suite, Blender 3D, Netbeans, Eclipse, MySQL

SOFTWARE  
DEVELOPMENT  
EXPERIENCE

**2011 - 2013** Co-developer in EFAA project, <http://efaa.upf.edu/project>, *Biomimetic Architecture for Situated Social Intelligence Systems* for the iCub Robot Platform, <http://www.icub.org/>. Main contribution: a parallel probabilistic social attention controller. Most active developer according to [www.ohloh.net](http://www.ohloh.net) metrics. Language: *C++*

**2009 - 2011** Co-developer of Humanobs, <http://www.humanobs.org/>, a self-rewriting massively parallel cognitive social agent architecture. Main Contribution: Agent intelligence models, planning and resource allocations. Language: *C++*, *custom parallel LISP*

**2009** Development of Bayesian controllers for a real time control of a pong simulator, using *Matlab* and *C++* for distributed controller

**2009** Development of a simulation platform for distributed real time controllers, integrating *Blender* with *YARP* and *Matlab*, using *Python*

**2006 - 2008** Development and testing of a parallel robotic eye-hand control architecture based on neural networks which integrates reinforcement learning and acquisition of population-coded, goal-directed actions. Language used: *JAVA*

**2006** Co-developer of the Open Source Project XORM (<http://xorm.sourceforge.net>), which allows to map abstract classes and interfaces to RDBMS entities like table rows. Language used: *JAVA*

**2004 - 2006** Co-developer of Akira, [www.akira-project.net](http://www.akira-project.net), an open-source distributed parallel cognitive architecture using Fuzzy Cognitive Maps. Main contribution: added support for meta-programming and visualization **Awarded First** in the *First Italian Open Source Contest*. Language: *C++*

**2003** Development of FIC-U-BOT, a robot controller winner of the 2003 edition of the Capture the Flag Tournament (based on *TeamBots*), the final exam of the Robotics course. Language: *JAVA*

**2002** Development of a robust mobile agent community support system based on IBM's Aglet technology. Language used: *JAVA*

**2002** Development of a Software Agenda with Natural Language input. Language used: *C++*, *UML*.

**1993 - 1996** Development of a platform video game on 80286 VGA system. Language used: *Turbo Pascal*, *Assembly*

## Dimitri Ognibene - Publications

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- SUBMITTED / IN PREPARATION    Geffner, H., **Ognibene, D.**    “*Intention Aware Scalable Planning and Active Perception*”, in preparation
- Gigliotta, O., **Ognibene, D.**    “*Evolution of active perception of goal-oriented actions*”, in preparation
- Catenacci Volpi, N., Polani, Daniel **Ognibene, D.**    “*Proactive Empowerment for Behaviour Switching in Continuous Dynamic Hierarchical POMDP* ”, in preparation
- Ognibene, D.**, Demiris, Y.    “*Active Vision for Social Event Recognition on a Humanoid Robot: Information Gain Maximization with Partial Observability and an Unknown Number of Objects*”, in preparation
- Ognibene, D.**, Demiris, Y.    “*Integrating Intention Recognition Paradigms in a Embodied Hierarchical Bayesian Architecture*”, in preparation
- Ognibene, D.**, Rossi, T.    “*Active Computational Resource Allocation for Planning in Infinite Markov Decision Processes*”, in preparation
- JOURNAL PUBLICATIONS    **Ognibene, D.**, Fiore, V. G., Gu, X.    “*Addiction beyond pharmacological effects: the role of environment complexity and bounded rationality*”, 2019, Neural Networks, <https://doi.org/10.1016/j.neunet.2019.04.022>
- Ognibene, D.**, Giglia, P., Marchegiani, L., Rudrauf, D.    “*Implicit Perception Simplicity and Explicit Perception Complexity in Sensorimotor Communication. Comment on ‘The body talks: Sensorimotor communication and its brain and kinematic signatures’ by G. Pezzulo et al.*”, 2019, Physic of Lifes Reviews, [doi.org/10.1016/j.pprev.2019.01.017](https://doi.org/10.1016/j.pprev.2019.01.017)
- Giglia, P. **Ognibene, D.**    “*CHANGING PERSPECTIVE ON PERCEPTION PHYSIOLOGY: CAN YOU REALLY SEE WHAT IS HAPPENING?*”, 2018, Euromediterranean Biomedical Journal
- Fiore, V. G., **Ognibene, D.**, Adinoff, B., Gu, X.    “*A Multilevel Computational Characterization of Endophenotypes in Addiction*”, 2018, eNeuro
- Lee, K., **Ognibene, D.**, Chang, H.J., Kim, T.K., Demiris, Y.    “*STARE: Spatio-Temporal Attention RElocation for Multiple Structured Activities Detection*”, 2015, IEEE Transactions on Image Processing
- Ognibene, D.**, Giglia D.    “*Use of hierarchical Bayesian framework in MTS studies to model different causes and novel possible forms of acquired MTS*”, Cognitive Neuroscience, 6 (2-3), 144-145, 2015
- Friston, K., Rigoli, F., **Ognibene, D.**, Mathys, C., Fitzgerald, T., Pezzulo, G.    “*Active inference and epistemic value*”, Cognitive Neuroscience, 2015
- Ognibene, D.**, Baldassarre, G.    “*Ecological Active Vision: Four Bio-Inspired Principles to Integrate Bottom-Up and Adaptive Top-Down Attention Tested With a Simple Camera-Arm Robot*”, accepted, IEEE Transactions in Autonomous Mental Development
- Nivel, E., Thórisson, K.R., **Ognibene, D.**, Steunebrink, B., Dindo, H., Pezzulo, G., Rodriguez, M., Corbato, C., Schmidhuber, J., Sanz, R., Helgason, H.P., Chella, A.    “*AUTONOMOUS ACQUISITION OF NATURAL SITUATED COMMUNICATION*”, accepted

**Ognibene, D.**, Chinellato, E., Sarabia, M., Demiris, Y. “*Contextual action recognition and target localization with active allocation of attention on a humanoid robot*”, *Bioinspiration & Biomimetics* 8(3), 2013

Pezzulo, G., **Ognibene, D.** “*Proactive Action Preparation: Seeing Action Preparation as a Continuous and Proactive Process*”, *Motor Control* 16(3):386-424, 2012

Petit, M., Lallec, S., Boucher, J., Pointeau, G., Cheminade, P., **Ognibene, D.**, Chinellato, E., Pattacini, U., Gori, I., Martinez-Hernandez, U., Barron-Gonzalez, H., Inderbitzin, M., Luvizotto, A., Vouloutsi, V., Demiris, Y., Metta, G., Dominey, P. “*The Coordinating Role of Language in Real-Time Multi-Modal Learning of Cooperative Tasks*”, *IEEE Transactions on Autonomous Mental Development*, 5(1):3-17, 2013

Ferro, M., **Ognibene, D.**, Pezzulo, G., Pirelli, V. “*Reading as active sensing: a computational model of gaze planning during word recognition*”, *Frontiers in Neurorobotics* 4(6), 2010

CONFERENCE  
PUBLICATIONS

Ferdowsi, S. **Ognibene, D.**, Foulsham, T., Abolghasemi, V., Li, W. and Citi, L. “*Human Chemosignals Modulate Interactions Between Social and Emotional Brain Areas*” BIBE 2020 The 20th IEEE International Conference on BioInformatics And BioEngineering Virtual Conference, October 26-28, 2020 USA

Bianco, F. and **Ognibene, D.** “*From Psychological Intention Recognition Theories to Adaptive Theory of Mind for Robots: Computational Models*”, HRI '20: Companion of the 2020 ACM/IEEE International Conference on Human-Robot Interaction, March 2020

La Grassa, R., Gallo, I., Calefati, A., **Ognibene, D.** “*A Classification Methodology based on Subspace Graphs Learning*”, *Digital Image Computing: Techniques and Applications (DICTA)*, 2019

**Ognibene, D.**, Mirante, L., Marchegiani, L. “*Proactive intention recognition for joint human-robot search and rescue missions through Monte-Carlo Planning in POMDP environments*”, *Proceedings of the 11th International Conference on Social Robotics (ICSR 2019)*, Madrid, Spain, November 26-29, 2019

Bianco, F. and **Ognibene, D.** “*Transferring Adaptive Theory of Mind to Social Robots: insights from developmental psychology to robotics*”, *Proceedings of the 11th International Conference on Social Robotics (ICSR 2019)*, Madrid, Spain, November 26-29, 2019

Bianco, F. and **Ognibene, D.** “*Functional advantages of an adaptive Theory of Mind for robotics: a review of current architectures*” *Proceedings of the 11th Computer Science and Electronic Engineering (CEECE)*, Colchester, UK, Sep 18-20, 2019

La Grassa, R., Gallo, I., Calefati, A., **Ognibene, D.** “*Binary Classification using Pairs of Minimum Spanning Trees or N-ary Trees*” *Proceedings of CAIP 2019 : Computer Analysis of Images and Patterns*, Salerno, Italy, Sep 2-5, 2019

Catenacci Volpi, N., Wu, Y., **Ognibene, D.** “*Towards Event-Based MCTS for Autonomous Cars*”, *Proceeding of the 9th Asia-Pacific Signal and Information Processing Association Annual Conference (APSIPA ASC 2017)*, Kuala Lumpur, Malaysia, Dec 2017

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