

P A T R I Z I A M A R T I

Patrizia Marti is Assistant Professor at the Communication Science Department of the University of Siena, Italy, where she has taught from 1996 Human Computer Interaction and Educational Technologies. Her academic experience includes teaching from 1997 to 2001 in Cognitive Ergonomics at the Industrial Design Department, Polytechnic, Milan, Italy, in 2000 in Systems and Communication Technologies at the Communication Science Department of IULM, Libera Università di Lingue e Comunicazione, Milano, and in 2001 Foundations of Interactive Media at the Department of Computer Science, University of Limerick, Ireland.

She is co-founder of Deep Blue s.r.l.(www.dblue.it), a research and consulting company based in Rome whose area of activity is the analysis, design and evaluation of interactive complex systems, with particular focus on the interactions, integration and allocation of functions between the human, procedural and equipment components of the systems.

She got the *laurea* degree in Philosophy in 1997 at the University of Rome, "La Sapienza", Italy. Her post doctoral experience includes fellowships at the Center for Research in Language, University of California San Diego, USA in 1990 and 1995.

After the degree she worked from 1988 till 1989 as Research Assistant at the National Research Council (CNR), where she was involved in the national project "Human-Computer Interaction". From 1989 till 1991 she was consultant for IBM Svenska Aktiebolag, Nordic Laboratorier (Lidingö, Sweden). From 1990 till 1996 she worked at the Information Technology Lab, ALENIA (Rome, Italy) as human factors expert for designing and evaluating air traffic control systems.

She has a consolidate experience in participatory design in different fields like education, health care, museums, air traffic management. She is currently responsible for the University of Siena of following projects in the area of interactive system design:

PalCom (IP 002057 – www.palcom.dk) is an integrated project in EU's 6th Framework Programme under the proactive initiative The Disappearing Computer in Future and Emerging Technologies (FET), part of the Information Society Technologies. The duration of the project is 48 months (01.01.2004 - 31.12.2007). The project aims to research and develop a new perspective on ambient computing denoted palpable computing. Palpable denotes that systems are capable of being noticed and mentally apprehended. Palpable systems support people in understanding what is going on at the level they choose. Palpable systems support control and choice by people. Often the default mode is to suggest courses of action rather than acting automatically. Application domains of the palpable technologies are: Surgical rehabilitation, IT support for accidents, Neonatal rehabilitation, Cognitive and physical rehabilitation of children with different kind of disabilities (Down syndrome, autism, Angelman syndrome etc..).

I-Artefacts (Intelligent Artefacts) is a Danish National Research Council research project performed by the University of Southern Denmark (Adaptronics Group) in collaboration with the University of Siena. The project develops physical building blocks that provide end-users with a straightforward technique to design of new artefacts. In this interdisciplinary project, we develop new robotic systems (concepts, set-ups, hardware, and software) based on analysis of the use of robotic systems by children.

Paro – A joint project conducted by the University of Siena, Italy, in collaboration with AIST (Advanced Industrial Science and Technology research), Tsukuba, Japan.

The project experimented a baby seal robot named Paro, for the treatment of young patients with various cognitive disabilities (Down syndrome, Autism, Angelman syndrome, Sensory-motor coordination etc.) and elderly affected by dementia.

Multisensory room – National project sponsored by the Home Care Albesani. The project aims to design a multisensory room for the treatment of elderly patients affected by dementia. IT solutions will span from interactive tools to ambient technologies (sensors, location aware systems, smell and sound technologies).

She published about 100 articles on national and international journals, conference proceedings and books.

Recent publications in the area of interactive systems design include:

- Marti, P. The contagion of emotions. In Bagnara, S. Crampton Smith, G.(eds.) *Theories and Practice of Interaction Design*, New Jersey: Lawrence Erlbaum Associates Inc., 2006.
- Marti, P. O'Hare, G. O'Grady, M. Zancanaro, M. Not, E. Bianchi A. O'Donnell, M. Serving Visitor Communities: A Mediated Experience of the Arts. In P. Purcell "Networked Neighbourhoods: the online community in context". Springer Verlag, UK, 2006, 393-418.
- Marti, P, Lund, H.H. Bacigalupo, M. Giusti, L. Mennecozzi, C. "Blending Senses: A Multi-sensory Environment for the treatment of Dementia Affected Subjects", *Journal of Gerontechnology*, in press.
- Lund, H.H. Marti, P. Designing Manipulative Technologies for Children with Different Abilities *Artificial Life & Robotics*, vol.9, n°4, pp 175-187, 2005, ISSN: 1433-5298 (Paper) 1614-7456 (Online)
- Marti, P. L'Interazione Uomo-Robot. *Ergonomia*, 1-8, n°2/2005, ISSN11237651.
- Marti, P. Lund, H. H. "Emotional Constructions in Ambient Intelligence Environments". *Intelligenza Artificiale*, 1:1, 22-27, 2004, ISSN 1724-8035.
- Marti, P. Palma, V., Pollini, A. Rullo, A. Shibata, T. My Gym Robot, Proceedings of AISB05 International Symposium on robot companions: hard problems and open challenges in human-robot interaction, April 2005.
- Marti, P., Pollini, A., Rullo, A. & Shibata T. (2005) Engaging with artificial pet In Marmaras, N., Kontogiannis, T. & Nathanael, D. Proceedings of the Annual Conference of the European Association of Cognitive Ergonomics, EACE 2005. Chania, Crete, 29 Sept - 1 Oct 2005, pag. 99- 106.
- Marti, P. Giusti, L., Pollini, A. Rullo, A. Experiencing the flow: design issues in human-robot interaction In: Bailly, G., Crowley J.L., and Privat G., Proceedings of SoC-EUSAI 2005, Joint conference on Smart Objects & Ambient Intelligence. Grenoble, France 12-14 October 2005, pages 69-74.
- Marti, P. Lund, H. H. Rullo, A, Nielsen, J. Playing with emotions, Proceedings of XII European Conference on Cognitive Ergonomics, ECCE12, D.J. Reed, G. Baxter, M. Blythe (eds.) York, September 2004.
- Marti, P. Lund, H. H. Novel Tangible Interfaces for Physical Manipulation, Conceptual Constructions and Action Composition. Proceedings of IMG04 (Intelligent Manipulation and Grasping), ISBN 88 900 426-1-3, Grafica KC s.n.c. – Genova, Italy, June 2004, pp 66-71.
- Lund, H.H., Marti, P., Palma, V. Educational Robotics: Manipulative Technologies for Cognitive Rehabilitation. Proceedings of the Ninth international symposium On Artificial life and robotics (AROB 9th '04) January 28 - 30, 2004, Oita, JAPAN. **BEST PAPER AWARD**
- Marti, P. Lund, H.H. Scaling ambient intelligence: compositional devices. In P. Remagnino, G.L. Foresti and T.Ellis. *Ambient Intelligence*, Kluwer, 2004.
- Lund, H.H., Marti, P. Physical and Conceptual Constructions in Advanced Learning Environments. *Interaction Studies*, 5:2, 269-299, 2004.
- Decortis, F., Marti, P., Moderini, C., Rizzo, A., Rutgers, J., Thursfield, P. Usages et conception d'instruments actifs pour la créativité narrative, *Les Cahiers du numérique*, pp127-147, 2003.
- Fusai, C; Saudelli, B. Marti, P. Decortis, F. Rizzo, A., Media composition and narrative performance at school. *Journal of Computer Assisted Learning*, **19**, 2003.
- Rizzo, A., Marti, P., Decortis F., Rutgers, J., and Thursfield P. (2003). Building Narrative Experiences for Children through Real Time Media Manipulation: POGO world In. Mark A. Blythe, Andrew F. Monk, Kees Overbeeke and Peter C. Wright (eds.), *Funology: From Usability to Enjoyment*,. Nederland: Kluwer Academic Publishers. pp. 1—12
- Rizzo, A. Marti, P. Decortis, F., Moderini, C., Rutgers, J. The design of POGO story world, In Hollnagen E. *Handbook of Cognitive Task Design*. Mahwah, NJ: Lawrence Erlbaum, 2003. pp.577-602.