



# Smart Spaces

Gioco e apprendimento per bambini con disabilità

**3 dicembre 2015 - Politecnico di Milano**  
Sala Conferenze del Dipartimento di Elettronica, Informazione e Bioingegneria (Edificio 20 - Piano Terra) - Via Ponzio 34/5, Milano

On the International Day of Persons with Disability Fondazione Politecnico di Milano in cooperation with the "L'Abilità Onlus" association and with the Department of Electronics, Information and Bioengineering of Politecnico di Milano is pleased to invite you to an interchange of ideas on the potential of "smart spaces" technologies to improve psycho-motorial, social and communication abilities of children with disabilities. The event is organised in the framework of the P3S (Playful Supervised Smart Spaces) project, co-funded by EIT Digital - European Institute of Innovation and Technology. It will be an opportunity to present the global approach of the project and the characteristics of the "smart room" built by P3S and set up at the "Centro Diurno di L'Abilità Onlus". Participants will be engaged, through an "interactive workshop", in the analysis and discussion of case studies and future perspectives.

## PROGRAM

● **Ore 13.30 - REGISTRATION**

● **Ore 14.00 - WELCOME**

*Donatella Sciuto, Prorettore Vicario - Politecnico di Milano*

● **Ore 14.15 - TALKS**

**EIT Digital: tecnologia e impresa per la qualità della vita**  
*Paolo Magni, Business Developer - EIT Digital*

**Il progetto P3S: design e tecnologia**  
*Franca Garzotto, Docente Dipartimento di Elettronica, Informazione e Bioingegneria - Politecnico di Milano e Coordinatore P3S*

**La stanza magica P3S per l'apprendimento dei bambini con disabilità**  
*Carlo Riva, Direttore - L'Abilità Onlus*

**Servizi cloud per il monitoraggio della attività terapeutiche di bambini con disabilità**  
*Giovanna Sacchi, Ricercatrice - Telecom Italia | TIM, WHITE (Wellbeing and Health Innovative Technologies) Joint Open Lab*

● **Ore 15.30 - COFFEE BREAK**

(During the break examples of P3S technology will be demonstrated)

● **Ore 16.00 - WORKSHOP "SMART SPACES PER BAMBINI CON DISABILITÀ"**

Collaborative working session involving the participants, coordinated by the P3S team of L'Abilità Onlus and Politecnico di Milano. Together we will discuss how "smart spaces" and "smart objects" can meet the needs of children with disability and how P3S technology can play in a therapeutic or rehabilitation program.

● **Ore 17.00 - CONCLUSIONS**

*Manuela Pizzagalli, Responsabile Progetti di Innovazione - Fondazione Politecnico di Milano*

The language of the event is Italian.

Participation is free but for organization reasons online registration is required: <http://j.mp/eventop3s>.

Further information about P3S can be found on the web: <http://i3lab.elet.polimi.it/projects/p3s>



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## P3S (Playful Supervised Smart Spaces)

The aim of P3S is to design and develop innovative interactive technologies for children with different types of disability, and to evaluate them on the field at therapeutic or rehabilitation centers. P3S transforms physical spaces into interactive multisensory ambients (“smart rooms”) where children can interact with “smart objects” through manipulation and body movements. Smart objects are items of every day life such as lights and toys that are enriched with digital technology (sensors and actuators) to enable them to sense manipulation, movement, or position change, and to react by triggering luminous effects, sound, or vibration.

P3S smart objects are integrated with engaging multimedia contents immersed in the physical space and presented using light effects on a “luminous carpet” and animations (games and stories) on displays and projections on the floor, the ceiling, or the wall. P3S smart rooms can be customized by kids’ caregivers to create play experiences that promote relaxation, fun, and learning that are personalized to the specific needs of each single child.

Attention and engagement levels during the activities in the smart room can be monitored using a wearable devise that gather EEG signals of children. Such information, together with additional behavioral data associated to kids’ interactions can be stored on the cloud and analyzed remotely using a set of online services developed by the project.

P3S technology is under evaluation at 2 rehabilitation centers: Centro Diurno di L’abilità Onlus (Italy) and SAM Foundation (The Netherlands).

Project Partners include the Department of Electronics, Information and Bioengineering of Politecnico di Milano (supervisor), Fondazione Politecnico di Milano, Telecom Italia, ST Microelectronics, IBT Solutions, Philips, IMEC.



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