

Casa Paganini – InfoMus International Research Centre

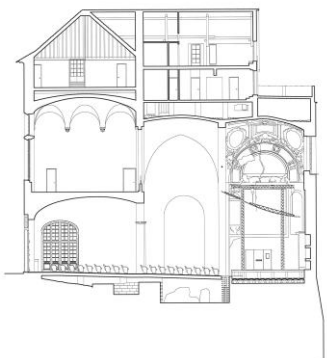
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casa/Paganini
infoMUS

www.casapaganini.org
www.infomus.org

Fin dalla sua nascita, nel 1984, InfoMus Lab si è configurato come centro di incontro tra ricerca tecnologica e sperimentazione artistica. Nel 2005, attraverso il progetto “InfoMus” concordato tra l’Ateneo genovese, Regione Liguria, Provincia e Comune di Genova, InfoMus Lab ha dato vita a “Casa Paganini - InfoMus”, centro di eccellenza internazionale che coniuga ricerca scientifico-tecnologica applicata alla musica, cultura e arti performative con produzione artistica, didattica e alta formazione. La sinergia tra i metodi, gli strumenti e le esperienze specifiche provenienti dalla ricerca scientifico-tecnologica e la sperimentazione artistica costituiscono l’humus ideale sia per la ricerca avanzata (modelli computazionali di emozioni ed espressività, tecniche e tecnologie innovative per interazione uomo-macchina, networked user-centric media), sia per la progettazione e lo sviluppo di sistemi multimediali distribuiti real-time, di interfacce uomo-macchina intelligenti, di strumenti e interfacce multimediali per terapia e riabilitazione, di strumenti di analisi e previsioni di ascolto televisivo. I diversi scenari possono convergere sulla ricerca artistica nei diversi ambiti della musica, della danza, del teatro e del settore museale. Prodotti realizzati con queste premesse attengono quindi all’industria musicale, ai nuovi media, alle performance musicali e teatrali, alla danza, all’intrattenimento, alla fruizione museale, ai parchi tematici e tecnologici, alla riabilitazione cognitiva e motoria. Analogamente, dall’incontro tra informatica, multimedialità, interfacce uomo-macchina da una parte, arti performative, museografia e nuovi media dall’altra, scaturiscono i progetti di ricerca di base, applicativa o pre-industriale, di cui Casa Paganini - InfoMus è promotore, gestore, o partner. Casa Paganini - InfoMus infatti si caratterizza per una ricca compagine di collaborazioni nazionali e internazionali di elevato profilo scientifico e culturale



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InfoMus Lab, founded in 1984 at DIST-University of Genoa, carries out scientific research and systems development on innovative multimedia and multimodal human-computer interfaces in performing art, museum, audience and spectators interfaces, therapy and rehabilitation. A main research focus is on the understanding and exploitation of non-verbal expressive and social behavior. Cross-fertilisation of scientific, humanistic, and artistic theories characterize the research methodology. From 1997 to 2004 InfoMus Lab had a contract with the Genoa Opera House - Teatro Carlo Felice which included a lab site at the theatre and joint activities.

Since 2005, InfoMus Lab has its new premises in the recently restored monumental building of S.Maria delle Grazie La Nuova - Casa Paganini. The International Research Centre Casa Paganini – InfoMus aims at cross-fertilizing scientific and technological research with humanistic and artistic research, develops multimedia systems and platforms (e.g., HARP, EyesWeb) and applications (e.g., VideoBrain, Sibilla), and participates in artistic productions where systems and research results are applied and validated. Research explores the relationships between music, science and emerging technologies: a mission that recalls Niccolò Paganini's spirit of experimentation. From the artistic viewpoint, new perspectives in contemporary music, in multimedia and digital luthery are among the main purposes of the Centre. Casa Paganini - InfoMus studies new directions in scientific and technological research to improve quality of life (e.g., independent living, therapy and rehabilitation, leisure, sport, edutainment), to develop novel industrial applications and services (e.g., innovative interfaces and multimedia applications in various industry fields), to cultural heritage (e.g., museography, support cultural heritage by means of novel user-centric media technologies).



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Research Projects

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Since its beginnings in 1984, **InfoMus Lab** carries out scientific research and systems development on innovative multimedia, multimodal human-computer interfaces and networked media. With these skills and relationships, Casa Paganini - InfoMus participates now, for more than 15 years, in international projects funded by the European Union in the context of the framework programmes for technological innovation, often with coordinating role or team leader.

The Centre was partner of the EU supported and promoted Network of Excellences **Enactive** and **Humaine**. Moreover, as a natural path of the international success, **Enactive** has given rise to a not-for-profit association called **European Institute on Enactive System**, to coordinate, extend and integrate the activities in the area of Enactive Systems. The University of Genoa, with Casa Paganini - InfoMus, is founding member.

The EU projects where Casa Paganini – InfoMus is partner or coordinator are listed below:

EU Projects, 7th Framework Program:

- ICT FET SIEMPRE, Coordinator: Casa Paganini - InfoMus (STREP, 2010-2012): develop novel research theoretical and methodological frameworks, computational models, and algorithms for the analysis of creative communication within groups of people. Research focuses on ensemble musical performance and audience experience, and focuses on techniques for measuring creative social interaction in an ecologically valid framework: empathy, entrainment, co-creation, emotional contagion.
- ICT I-SEARCH (STREP, 2010-2012): Novel search engines based on non-verbal multimodal content. Coordinator: Centre for Research and Technology Hellas CERTH; Partners: Casa Paganini – InfoMus, GOOGLE Ireland Ltd, JCP-Consult, INRIA, Engineering SpA, Exalead, Erfurt University of Applied Sciences, Accademia Nazionale di Santa Cecilia, EasternGraphics GmbH
- ICT SAME, Coordinator: Casa Paganini - InfoMus (STREP, 2008-2010): Mobile Active Music Listening: Development of new interactive systems, context-aware, for active listening of recorded music (2008-2010). Partners: Nokia Research Centre; KTH (Stockholm); Universitat Pompeu Fabra (Barcelona); IRCAM (Paris). /.

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... EU Projects 7th Framework Programme (cont'd)

- ICT CAPSIL (Coordination Action, 2008-2010):
Independent living: Monitoring elderly patients to anticipate diagnosis of cognitive and motoric decline -
Project coordinator: INTEL.
- Culture 2007 CoMeDiA (2008-2010): Networked performance. Project coordinator: Ircam (Paris).

EU IST-ICT Projects, 6th Framework Programme:

- IST Project TAI-CHI (STREP, 2004- 2006):
Tangible Acoustic Interfaces for Computer-Human Interaction.
- ENACTIVE: (EU Network of Excellence 2004 – 2007), Enactive Multimodal Interfaces.
- HUMAINE (EU Network of Excellence, 2004– 2007), Human-Machine Interaction network, on computational models of emotion and multimodal interfaces.
- ConGAS (COST Action, April 2003 - March 2007), Gesture CONTROLled Audio Systems.
- S2S^2 (Coordinated Action, June 2004 - May 2007) Sound to Sense - Sense to Sound, coordinate and build a research roadmap for the Sound and Music Computing discipline and industry sector.
- U-CREATE (UE CRAFT Project) Creative Authoring Tools for Edutainment Applications, development end technology transfer to PMI of multimedia tools based on EyesWeb.

EU-IST Projects, before 2003:

- IST Project MEGA: Multisensory Expressive Gesture Applications (STREP, 2000- 2003).
Project coordinator: InfoMus Lab.
- TMR Network MOSART: Music Orchestration Systems in Algorithmic Research and Technology, 2000-2003).
- IST Project MEDIATE: Multisensory Environment Design for an Interface between Autistic and Typical Expressiveness (2003).
- IST Project CARE HERE: Creating Aesthetically Resonant Environments for the Handicapped, Elderly and Rehabilitation, (2002).
- Esprit Project MIAMI: Multimodal Interaction for Advanced Multimedia Interfaces (1994-1997).

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Industry Partnerships (excerpt, 2009)

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- Contract and license to **INTEL** of the software platform EyesWeb (conceived, designed, and developed by InfoMus Lab: www.eyesweb.org): EyesWeb is adopted by INTEL as standard for their hardware products for “independent living”.
- Contract with **SUGAR Srl** music industry, feasibility studies on active music listening products.
- Contracts with **SIPRA SpA** media advertising industry, for prediction of TV audience based on KANSEI technology (2000-2008).
- Contract with Palazzo Ducale – Fondazione per la Cultura, Genova (2009-2010), development of the permanent installation *Viaggiatori di Sguardo*.
- Contracts with theatres, museums, and science centers in Italy and abroad.

Casa Paganini – InfoMus, Auditorium

