

Ana Huerta Carrillo

Birth: 10 - 02 - 1981

Nationality: Spanish

E-mail: ana.huerta@gmail.com

Group: Speech Technology Group

Departament: Electronic Engineering at ETSIT

University: Technical University of Madrid

EDUCATION

(1999): Honors list in high school.

(1999-2005): Signal Processing Specialty (Image, Audio and Speech) Telecommunication engineering. Technical University of Madrid.

(2005): Currently doing the Master Project:

Title: **"Visual Environment for Designing Gestures using a 3D Avatar"**.

Supervisor: Rubén San-Segundo.

Speech Technology Group. Dept. Electronic Engineering. UPM.

MUSIC:

Currently: MASTER OF MUSIC (Speciality PIANO). Music Professional Conservatory of Madrid.

(1989-2004): BACHELOR OF MUSIC (Speciality PIANO). Music Professional Conservatory of Móstoles and Music Professional Conservatory of Getafe.

(1992-1997): Elemental studies of percussion and accordion. Music Elemental School of Fuenlabrada.

LANGUAGES:

ENGLISH: Advanced level: reading, writing and speaking.

FRENCH: Intermediate level: reading, writing and speaking.

COMPUTING SKILLS:

OPERATIVE SYSTEMS: Linux, Windows98/NT/2000/XP

PROGRAMMING LANGUAGES: C, C++, Java.

TOOLS: Matlab, Maple, Office97/2000, Microsoft Project, Khoros (Cantata), Microsoft Visual Studio, 3DSMax, Toon3D, OpenGL, Lightwave, Cool3D, Voacap (tool for HF communications).

PUBLICATIONS

I have contributed to the followings publications:

- **"Proposing a Speech to Gesture Translation Architecture for Spanish Deaf-mute People"**.

R. San-Segundo, et al. Submitted to the Journal of Visual Languages and Computing.

- **"Generating Gestures from Speech"** R. San-Segundo, et al. Proc. of the International Conference on Spoken Language Processing (ICSLP'2004). Isla Jeju (corea). October 4-8, 2004. (ISSN: 1225-441x).

PROFESSIONAL EXPERIENCE

VODAFONE (2001- 2005): Mobile phone seller for the Vodafone company.

OTHERS:

(1997-1999): Collaborating Volunteer in the MYDIAN association: aid of disable children.

(2003-2005): Experience working as a music teacher.

PREFERRED PROJECTS AND SKILLS TO OFFER

1. Biologically-driven musical instrument

Skills to offer for this project:

- High experience in music: bachelor level and currently studying the master level.
- Knowledge of artificial simulation of human senses.
- C and C++ programming.
- 3D graphics programming with OpenGL.
- Experience characterizing kinematics of 3-D human movements.

2. Multimodal Caricatural Mirror

Skills to offer for this project:

- Knowledge of artificial simulation of human senses.
- C and C++ programming.
- 3D graphics programming with OpenGL.
- Knowledge of 3D programs: 3DS max, Lightwave and Cool3D.

- Experience characterizing kinematics of 3-D human movements.

3. A Multimodal (Gesture+Speech) Interface for 3D Model Search and Retrieval Integrated in a Virtual Assembly Application

Skills to offer for this project:

- Knowledge of artificial simulation of human senses.
- C and C++ programming.
- 3D graphics programming with OpenGL.
- Knowledge of 3D programs: 3DS max, Lightwave and Cool3D.
- Experience characterizing kinematics of 3-D human movements.

BRIEF SUPERVISOR CV: Rubén San Segundo

Rubén San-Segundo received his MSEE degree from Technical University of Madrid in 1997, and Ph.D. degrees from the same university in 2002. Ruben visited *The Center of Spoken Language Research* (CSLR) at the University of Colorado (Boulder), as visiting student. During these stays, he worked in the DARPA Communicator project. From Sep. 2001 through Feb. 2003, Rubén worked at the Speech Technology Group of the Telefónica I+D. During this period, he worked in confidence estimation for speech recognition, acoustic modelling of speech, and he was involved in the design of several services considering these technologies. Ruben has collaborated in the definition of proposals for new research projects.

Currently, Rubén is professor at the department of Electronic Engineering at ETSIT of UPM and he is member of the Speech Technology Group (GTH).

BRIEF MASTER PROJECT DESCRIPTION

Title: Visual Environment for Designing Gestures using a 3D Avatar.

Author: Ana Huerta Carrillo

Supervisor: Prof. Rubén San Segundo Hernández

Speech technology Group (GTH). Dept. Electronic Engineering at ETSIT

Description: The project consists of the implementation of an environment to create and develop animations with virtual 3D avatars. We have considered two main utilities: the first one is to define and create avatar positions, and the last one is to generate animations from the defined positions.

The system is used in two ways, as an independent system or as a part of another complex system.

- As a part of a complex system: Our system will be able to play animations, from the data provided by a complex system: natural Language to gesture sequence translator. The avatar represents the gestures belonging to the Spanish Sign Language.
- As an independent system: providing a visual environment to design avatar animations in a easy way. It will include the definition of high level parameters for describing hand and arm movements. It will ready for speech therapists.