Jordi Hidalgo
Audio DSP Engineer

 Bern (Switzerland)   *www.jordihidalgo.com*   *jordi.hidalgo.gomez@gmail.com*

PROFESSIONAL
EXPERIENCE

Phonak Communications   **Murten, Switzerland**
DSP Software Engineer   *January 2015 - Present*

- Focused on the development of the next generation 2.4 GHz wireless chip for all **Sonova** group companies.
- Audio chain management: multi-protocol sample rate conversion, gain control, adaptation and handling of speech/music codecs (G722, SBC, CVSD, OPUS...).
- Design, implementation and verification of real time audio DSP algorithms.
- Implementation based on a DSP fixed-point processor.
- DSP & μC low level drivers development, integration and testing.

Phonak   **Stäfa, Switzerland**
DSP Software Engineer   *October 2013 - December 2014*

- Development of a multi-band impulse noise cancellation algorithm.
- Design, implementation and verification of a time domain filter-bank and the corresponding sub-band transient attenuation strategy.
- Implementation based on a multi-core DSP fixed-point processor.
- Model Based design for simulation, evaluation and code generation.
- Software/code optimization techniques for the dedicated DSP Compiler.

Phonak   **Stäfa, Switzerland**
DSP Software Engineer intern   *March 2013 - October 2013*

- Design and implementation of an autonomous audio quality verification system to identify artifacts, distortions and also erroneous hearing instrument behavior.
- Investigation and audio analysis based on psychoacoustic measures.
- Applied Machine Learning techniques for feature selection and classification.

Yamaha Corporation   **Hamamatsu, Japan**
DSP Software Engineer intern   *September 2012 - December 2012*

- Improved several aspects of a source separation algorithm for singing voice.
- Extracted and analyzed melodic information relevant for the pitch estimation step of the main algorithm.
- Optimized a Dynamic Time Warping algorithm for MIDI2Audio alignment.

Barcelona Digital Technology Center   **Barcelona, Spain**
Mobility engineer intern   *December 2010 - June 2011*

- Collaborated with the Mobility R&D team on traffic safety related projects.
- Improved and evaluated algorithms (network simulator NS-2) for ad-hoc mobile networks in vehicular environments (VANET).

EDUCATION

Pompeu Fabra University (UPF), Barcelona, Spain
- **M.Sc.,Sound and Music Computing**   *2011 - 2012*
- **M.Sc.,Telecommunications Engineering**   *2009 - 2011*

Autonomous University of Barcelona (UAB), Barcelona, Spain
- **B.Sc.,Telecommunications Engineering, Electronic Systems** *2005 - 2009*

SKILLS

Programming: C(standard & embedded) and C++, MATLAB & Simulink, Python.

Tools: Eclipse, Git, Gitlab, SVN, Redmine, Polarion, Buildbot CI.

Others Languages and Software: Assembler, LaTeX, Java, JavaScript, PHP, HTML, Weka, Pure Data, Arduino, Super Collider, CadSoft EAGLE, Processing.

LANGUAGES

Spanish (Native)
Catalan (Native)
English (Professional working proficiency)
French (Limited working proficiency)
German (Elementary proficiency).

MAIN AREAS OF INTEREST

Audio Digital Signal Processing, Cochlear Implants (Part of my Master Thesis research), Hearing Aids, Music and Sound Perception and Cognition, Psychoacoustics, Auditory modeling, Real Time Interaction, Music Information Retrieval, Internet Music Services, Embedded Audio ...

Other activities and hobbies: Music, Electronics, DIY Projects, Record collecting, Analog/Digital Synthesizers building, Amateur guitar player, Cooking, Traveling, Cinema, Reading...

EXTRACURRICULAR ACTIVITIES

Municipal Conservatory of Music of Barcelona,
Barcelona, Spain Music theory, Initiation level Course   *November 2011 - May 2012*

Participated in:
Music Tech Fest London   *May 2012*
Mostra Sonora i Visual. Convent de Sant Agustí, Barcelona   *June 2012*
Music Hack Day Barcelona   *June 2012 & June 2014*