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Héctor Delgado, PhD

Education

- 2012-2015 PhD Program in Electrical and Telecommunication Engineering
Speech and Language Technologies Group
Department of Telecommunication and Systems Engineering
Autonomous University of Barcelona (UAB)
Thesis title: Fast Cross-Session Speaker Diarization
Thesis defended the 15th of September 2015, with excellent *cum laude* grade.
- 2008-2009 Master in Multimedia Technologies
Autonomous University of Barcelona (UAB)
Master thesis title: Video Segmentation using Speaker Recognition
- 2001-2008 Computer Science Engineering
University of Seville.
Final project title: System for Automatic Metadata Extraction from Court Videos

Professional/ research experience

- Nov. 2015 – present Post-doctoral position at EURECOM education and research institute. Participation in the Horizon 2020 OCTAVE project, researching on automatic speaker verification and anti-spoofing. Participation in the ANR (national French research agency) ODESSA, investigating the integration of recent advances in speaker recognition into speaker diarization technology for security applications. Participation in the NIST Speaker Recognition Evaluation 2016 under the consortium I4U. Participation in the Albayzin 2016 speaker diarization evaluation. Teaching in Master's program courses and laboratory sessions.
- Sep. 2013 – Dec. 2013 3-month pre-doctoral research stay at CERI-LIA, University of Avignon, Avignon, France. Research on fast speaker diarization based on binary keys.
- 2009 – 2014 R+D Engineer at the Center for Ambient Intelligence and Accessibility of Catalonia (CAIAC), at the Autonomous University of Barcelona (UAB). Participation in R+D projects related to speech processing. Development of dialogue systems for TV applications. Development of a Catalan language speech-to-text transcription system for live subtitling (respeaking system). Development of an automatic metadata extraction system from audiovisual content using Automatic Speech Recognition (ASR), speaker recognition and speaker diarization.

Awards & Grants

- 2016 Best paper award in “Odyssey, the Speaker and Language Recognition Workshop”, to the paper *A new feature for automatic speaker verification anti-spoofing: constant Q cepstral coefficients*.
- 2015 ISCA grant for attending Interspeech 2015.

2014 ISCA grant for attending Interspeech 2014.
2012 – 2015 FI-DGR 3-year pre-doctoral grant by AGAUR (Catalan research and grants agency).

Skills & Activities

Research interests Speaker recognition, speaker diarization, speaker recognition anti-spoofing, speech processing, automatic speech recognition, speech and language processing, accessibility, speaker diarization, speech acoustics, speech technologies

Languages English, Spanish, Catalan

Skills C, C++, Java, Windows, Linux, Shell scripting, Matlab, HTK, Alize, Latex

Book Chapters

Anna Vilaro, Marta Miquel-Iriarte, Pilar Orero, Hector Delgado, Javier Serrano: *Entitling: A way forward for accessibility*. Eye tracking in audiovisual translation., 1 edited by Elisa Perego, 01/ 2012: chapter Entitling: A way forward for accessibility;

Journal Publications

Diego Castán, David Tavaréz, Paula Lopez-Otero, Javier Franco-Pedroso, Héctor Delgado, Eva Navas, Laura Docio-Fernández, Daniel Ramos, Javier Serrano, Alfonso Ortega, Eduardo Lleida: *Albayzín-2014 evaluation: audio segmentation and classification in broadcast news domains*. EURASIP Journal on Audio Speech and Music Processing 12/ 2015; 2015(1). DOI:10.1186/ s13636-015-0076-3

Héctor Delgado, Xavier Anguera, Corinne Fredouille, Javier Serrano: *Fast Single- and Cross-Show Speaker Diarization Using Binary Key Speaker Modeling*. IEEE Transactions on Audio Speech and Language Processing 12/ 2015; 23(12). DOI:10.1109/ TASLP.2015.2479043

Héctor Delgado, Anna Matamala, Javier Serrano: *Speaker diarization and speech recognition in the semi-automatization of audio description: An exploratory study on future possibilities?*. 06/ 2015; 35(2). DOI:10.5007/ 2175-7968.2015v35n2p308

Conference Proceedings

Héctor Delgado, Massimiliano Todisco, Md Sahidullah, Achintya K Sarkar, Nicholas Evans, Tomi Kinnunen, Zheng-Hua Tan: *Further Optimisations of Constant Q Cepstral Processing for Integrated Utterance and Text-dependent Speaker Verification*. 2016 IEEE Spoken Language Technology Workshop (SLT); 12/ 2016

Massimiliano Todisco, Héctor Delgado, Nicholas Evans: *Articulation Rate Filtering of CQCC Features for Automatic Speaker Verification*. Interspeech 2016, San Francisco, USA; 09/ 2016

Tomi Kinnunen, Md. Sahidullah, Ivan Kukanov, Héctor Delgado, Massimiliano Todisco, Achintya Kr. Sarkar, Nicolai Bæk Thomsen, V. Hautamaki, Nicholas Evans, Z.-H. Tan: *Utterance Verification for Text-Dependent Speaker Recognition: A Comparative Assessment Using the RedDots Corpus*. Interspeech 2016; 09/ 2016

- Md Sahidullah, Hector Delgado, Massimiliano Todisco, Hong Yu, Tomi Kinnunen, Nicholas Evans, Zheng-Hua Tan: *Integrated Spoofing Countermeasures and Automatic Speaker Verification: An Evaluation on ASVspoof 2015*. Interspeech 2016, San Francisco; 09/ 2016
- Giovanni Soldi, Massimiliano Todisco, Héctor Delgado, Christophe Beaugéant, Nicholas Evans: *Semi-supervised On-line Speaker Diarization for Meeting Data with Incremental Maximum A-posteriori Adaptation*. Odyssey 2016; 06/ 2016
- Massimiliano Todisco, Héctor Delgado, Nicholas Evans: *A New Feature for Automatic Speaker Verification Anti-Spoofing: Constant Q Cepstral Coefficients*. Odyssey 2016 - The Speaker and Language Recognition Workshop, Bilbao, Spain; 06/ 2016
- Héctor Delgado, Xavier Anguera, Corinne Fredouille, Javier Serrano: *Novel Clustering Selection Criterion for Fast Binary Key Speaker Diarization*. INTERSPEECH 2015, 16th Annual Conference of the International Speech Communication Association, Dresden, Germany; 09/ 2015
- Héctor Delgado, Xavier Anguera, Corinne Fredouille, Javier Serrano: *Improved binary key speaker diarization system*. 23rd European Signal Processing Conference, EUSIPCO 2015, Nice, France; 09/ 2015
- Héctor Delgado, Javier Serrano: *Albayzin 2014 Evaluation: TES-UAB Audio Segmentation System*. IberSPEECH 2014 "VIII Jornadas en Tecnologías del Habla" and "IV Iberian SLTech Workshop", Las Palmas de Gran Canaria, Spain; 11/ 2014
- Héctor Delgado, Xavier Anguera, Corinne Fredouille, Javier Serrano: *Global Speaker Clustering towards Optimal Stopping Criterion in Binary Key Speaker Diarization*. IberSpeech'2014 "VIII Jornadas en Tecnología del Habla" and "IV Iberian SLTech Workshop", Las Palmas de Gran Canaria, Spain; 11/ 2014
- Héctor Delgado, Corinne Fredouille, Javier Serrano: *Towards a complete Binary Key System for the Speaker Diarization Task*. Interspeech'2014, Singapore; 09/ 2014
- Héctor Delgado, Aitor Rodriguez-Alsina, Antoni Gurguá, Enric Martí, Javier Serrano, Jordi Carrabina: *Enhancing Accessibility through Speech Technologies on AAL Telemedicine Services for iTV*. Ambient Intelligence - Second International Joint Conference on AmI 2011, Amsterdam, The Netherlands, November 16-18, 2011. Proceedings; 11/ 2011
- Héctor Delgado, Javier Serrano, Jordi Carrabina: *Albayzin Evaluation: Audio Segmentation System at CEPHIS-UAB*. FALA 2010: "VI Jornadas en Tecnología del Habla" and II Iberian SLTech Workshop; 11/ 2010
- Héctor Delgado, Javier Serrano, Jordi Carrabina: *Automatic Metadata Extraction from Spoken Content using Speech and Speaker Recognition Techniques*. FALA 2010: "VI Jornadas en Tecnología del Habla" and II Iberian SLTech Workshop; 11/ 2010