

Alberto Abad

Curriculum Vitæ 2021

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🔗 GoogleScholar (cit. 1519; h-index 19)

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Reviewer for international journals	26
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Profile

Alberto Abad is an Assistant Professor at the Department of Computer Science and Engineering (DEI) of Instituto Superior Técnico (IST) and researcher at INESC-ID. He is the coordinator of the Human Language Technologies laboratory at INESC-ID and the executive coordinator of the scientific area of Programming Methodology and Technology at DEI. He is also an IEEE Senior member, an ACM member, an ISCA member, and an Associated Editor for the IEEE/ACM Transactions on Audio, Speech and Language Processing journal. Alberto Abad has developed his research career in the area of human language technologies for more than 15 years. His research interests include robust speech recognition, speaker and language characterization, applied machine learning, health-care applications, and privacy-preserving speech processing. During these years, Alberto Abad has co-authored over 100 peer-reviewed publications in top-tier conferences and scientific journals of the field. He has been Principal Investigator of FCT funded project VITHEA and INESC-ID representative in the DIRHA European project, Biovisuallanguage CMU-Portugal project, and TAPAS ITN. He has also been team member in various Spanish and Portuguese national and international projects, and team leader in international technological evaluation challenges achieving excellent results. He has supervised and co-supervised more than 25 M.Sc. thesis and 1 Ph.D. thesis (+4 on-going) and lectured in courses at both Technical University of Catalonia (UPC) and IST on a variety of topics, including signal processing, machine learning, programming principles, object oriented programming and compilers. Alberto Abad has been actively involved in research community activities, including conference organization, and closely collaborated with local industry and start-up companies.

Education

- 2003–2007 **Technical University of Catalonia (UPC)**, *Ph.D.*, Department of Signal Theory and Communications.
Thesis: *A multi-microphone approach to speech processing in a smart-room environment*, June 2007, Barcelona (Spain)
Advisor: Prof. Javier HERNANDO
- 1997–2002 **Technical University of Catalonia (UPC)**, *M.Sc.*, Telecommunication Engineer of the Technical Superior Telecommunication Engineering School of Barcelona.
Thesis: *Implementación de un sistema automático de información meteorológica por teléfono*, September 2003, Barcelona (Spain)
Advisor: Prof. Javier HERNANDO

Research and Teaching experience

- 2015–present **Assistant Professor**, *Instituto Superior Técnico*, Department of Computer Science and Engineering (DEI), Tenure since 2020.
Ref.: José Carlos MONTEIRO +351 213 100 283 · jcm@inesc.pt
- 2013–present **Researcher**, *INESC-ID Lisboa*, Human Language Technologies Laboratory.
Ref.: Isabel M. TRANCOSO +351 213 100 268 · isabel.trancoso@inesc-id.pt
- 2018 **Researcher Associate**, *University of Edinburgh*, Centre for Speech Technology Research (CSTR), Sabbatical leave.
Ref.: Steve RENALS +44 131 650 4589 · s.renals@ed.ac.uk
- 2013–2015 **Invited Professor**, *Instituto Superior Técnico*, Department of Electrical and Computer Engineering, Temporary contract.
Ref.: Luis Miguel SILVEIRA +351 213 100 337 · lms@inesc-id.pt
- 2008–2013 **Researcher (FCT program Ciência 2007)**, *INESC-ID Lisboa*, Human Language Technologies Laboratory, Funded by FCT program Ciência 2007.
Ref.: Isabel M. TRANCOSO +351 213 100 268 · isabel.trancoso@inesc-id.pt

- 2007–2008 **Post-doc Researcher**, *INESC-ID Lisboa*, Human Language Technologies Laboratory, Post-doc in national project.
Ref.: João Paulo NETO +351 213 100 315 · joao.neto@voiceinteraction.pt
- 2004–2006 **Teaching Assistant**, *Technical University of Catalonia*, Telecommunication Engineering School of Barcelona.
Ref.: Alba PAGÈS · alba.pages@upc.es
- 2002–2006 **Early Stage Researcher**, *Technical University of Catalonia*, Department of Signal Theory and Communications, FI (Training Researchers) Catalan Government grant for Ph.D. studies.
Ref.: Climent NADEU +34 93 401 64 38 · climent.nadeu@upc.edu
- 2001–2002 **Junior Researcher**, *Technical University of Catalonia*, Department of Signal Theory and Communications, Collaboration grant in national project.
Ref.: Javier HERNANDO +34 93 401 64 33 · javier.hernando@upc.edu

Teaching

Accreditations

AQU **Accreditation of Collaborating Lecturer** from the AGÈNCIA PER A LA QUALITAT DEL SISTEMA UNIVERSITARI DE CATALUNYA, <http://www.aqu.cat/>, December 2005

Pedagogical contents

Training Workshops **Speech Processing and Machine Learning (Workshop Organization)**
Lecture videos available at: <https://www.tapas-etn-eu.org/events/te2>

Lecture notes **Fundamentos da Programação (Jupyter Notebooks & Slides)**
<https://fenix.tecnico.ulisboa.pt/homepage/ist90700/fp-slides>

Compiladores (Course slides)
<https://fenix.tecnico.ulisboa.pt/homepage/ist90700/compiladores>

Processamento de Fala (Course slides)
<https://fenix.tecnico.ulisboa.pt/homepage/ist90700/pf-lectures-material>

Teaching activity

Responsible in curricular units

COMP 2020–present **Compiladores (Lecturer and responsible)**, *Licenciatura em Engenharia Informática e de Computadores*, Instituto Superior Técnico.
Academic years (Teaching Quality, QUC): 2020/21 (9/9) and 2021/22 (NA)
Ref.: Nuno MAMEDE · nuno.mamede@inesc-id.pt

FP 2018–present **Fundamentos da Programação (Lecturer and responsible)**, *Licenciatura em Engenharia Informática e de Computadores and Licenciatura em Engenharia de Telecomunicações e Informática*, Instituto Superior Técnico.
Academic years (Teaching Quality, QUC): 2018/19 (7.9/9), 2019/20 (8.75/9), 2020/21 (8.75/9) and 2021/22 (NA)
Ref.: Nuno MAMEDE · nuno.mamede@inesc-id.pt

Lecturer in curricular units

COMP 2016–2020 **Compiladores (Lecturer)**, *Licenciatura em Engenharia Informática e de Computadores*, Instituto Superior Técnico.
Academic years (Teaching Quality, QUC): 2016/17 (8.9/9), 2018/19 (9/9), 2019/20 (8.9/9)
Ref.: David MATOS · david.matos@inesc-id.pt

- SAPF **Advanced Spoken Language Processing Seminar (Lecturer)**, *Ph.D. Programme in Electrical and Computer Engineering (PDEEC)*, Instituto Superior Técnico.
2019–2020
Academic years: 2019/20
Ref.: Isabel M. TRANCOSO · isabel.trancoso@inesc-id.pt
- FP **Fundamentos da Programação (Lecturer)**, *Licenciatura em Engenharia Informática e de Computadores and Licenciatura em Engenharia de Telecomunicações e Informática*, Instituto Superior Técnico.
2017–2018
Academic years (Teaching Quality, QUC): 2017/18 (8.4/9)
Ref.: Rui MARANHÃO · rui.maranhao@tecnico.ulisboa.pt
- PO **Programação com Objectos (Lecturer)**, *Licenciatura em Engenharia Informática e de Computadores and Licenciatura em Engenharia de Telecomunicações e Informática*, Instituto Superior Técnico.
2015–2017
Academic years (Teaching Quality, QUC): 2015/16 (8.5/9) and 2016/17(8.75/9)
Ref.: David MATOS · david.matos@inesc-id.pt
- PF **Processamento de Fala (Lecturer)**, *Mestrado Integrado em Engenharia Electrotécnica e de Computadores*, Instituto Superior Técnico.
2015–2016
Academic years (Teaching Quality, QUC): 2015/16 (8.1/9)
Ref.: Isabel M. TRANCOSO · isabel.trancoso@inesc-id.pt
- ACOMP **Arquitectura de Computadores (Lecturer)**, *Mestrado Integrado em Engenharia Electrotécnica e de Computadores*, Instituto Superior Técnico.
2013–2015
Academic years (Teaching Quality, QUC): 2013/14 (8.5/9) and 2014/15 (8.4/9)
Ref.: Nuno HORTA · nuno.horta@lx.it.pt
- LC2 **Laboratory of Communications II (Lecturer)**, *Telecommunication Engineering*, Telecommunication Engineering School of Barcelona, Technical University of Catalonia.
2004–2006
Academic years: 2004/05 and 2005/06
Ref.: Alba PÀGÈS · alba.pages@upc.esu

Collaborating/Invited Lecturer in curricular units

- NLP **Natural Language Processing (Invited Lecturer)**, *Mestrado em Engenharia Informática e de Computadores*, Instituto Superior Técnico.
2016–2021
Academic years: 2016/17, 2017-18, 2018/19, 2019/20 and 2020/21
Ref.: Luisa COEUR · luisa.coheur@inesc-id.pt
- BioTech **Molecular Biomarkers and Technologies (Invited Lecturer)**, *Ph.D. Course*, Faculty of Pharmacy, University of Lisbon.
2020–2021
Academic years: 2020/21
Ref.: Cecília RODRIGUES · cmprodrigues@ff.ulisboa.pt
- PF **Processamento de Fala (Collaborating Lecturer)**, *Mestrado Integrado em Engenharia Electrotécnica e de Computadores*, Instituto Superior Técnico.
2011–2021
Academic years: 2011/12, 2012/13, 2016/17, 2018/19, 2019/20, 2020/21
Ref.: Isabel M. TRANCOSO · isabel.trancoso@inesc-id.pt
- RT **Research Topics (Invited Lecturer)**, *Ph.D. Program Computer Science and Engineering (PDEIC)*, Instituto Superior Técnico.
2019–2020
Academic years: 2019/20
Ref.: João DIAS · joao.dias@gaips.inesc-id.pt
- BioSys **Sistemas de Biometria (Invited Lecturer)**, *Ph.D. Programme in Electrical and Computer Engineering (PDEEC)*, Instituto Superior Técnico.
2013–2016
Academic years: 2013/14, 2015/16
Ref.: Ana FRED · afred@lx.it.pt

CSF **Ciber Segurança Forense (Invited Lecturer)**, *Mestrado Bolonha em Engenharia de Telecomunicações e Informática*, Instituto Superior Técnico.

Academic years: 2013/14

Ref.: Ana FRED · carlos.ribeiro@tecnico.ulisboa.pt

PCL **Processamento Computacional da Língua (Invited Lecturer)**, *Mestrado em Engenharia de Telecomunicações e Informática*, ISCTE - Instituto Universitário de Lisboa.

Academic years: 2013/14

Ref.: Fernando BATISTA · fernando.bastista@iscte.pt

SLT&A **Speech and Language Technology and Applications (Invited Lecturer)**, *Ph.D. Course*, Department of Signal Theory and Communications, Technical University of Catalonia (UPC).

Academic years: 2004/05, 2005/06

Ref.: Climent NADEU · climent.nadeu@upc.edu

Innovation

FP MEPP **Restructuring for new IST Teaching model (MEPP)**, *Fundamentos da Programação*, Licenciatura em Engenharia Informática e de Computadores and Licenciatura em Engenharia de Telecomunicações e Informática, Instituto Superior Técnico.

Restructuring included downsizing from 7.5 to 6 ECTS, redefinition of the syllabus, reorganization of the teaching materials and modification of the grading system towards a 100% continuous evaluation without a final exam.

FP Notebooks **Integrated content presentation and coding based on Jupyter notebooks and RISE**, *Fundamentos da Programação*, Licenciatura em Engenharia Informática e de Computadores and Licenciatura em Engenharia de Telecomunicações e Informática, Instituto Superior Técnico.

More dynamic and pedagogic theoretical lessons thanks to teaching materials based on Jupyter notebooks and RISE, allowing for contents presentation, code writing and code execution in a single integrative environment.

FP students **Participation of students in contents creation and presentation**, *Fundamentos da Programação*, Licenciatura em Engenharia Informática e de Computadores and Licenciatura em Engenharia de Telecomunicações e Informática, Instituto Superior Técnico.

Presentations about advanced topics, project solutions, GUI development, and personal projects from volunteer students during the last week of classes.

PF challenge **Speech pattern classification lab assignment**, *Processamento de Fala*, Mestrado Integrado em Engenharia Electrotécnica e de Computadores, Instituto Superior Técnico.

Responsible for the two first editions. Students are asked to develop a system for a specific speech classification task, submit their predictions for a blind test set and describe the proposed system. The two first editions were about gender and emotion recognition. This lab assignment is currently the longest one among 5 labs, and since 2017/18 has been designed with the active participation of Ph.D. students as TAs.

Student guidance and supervision

Ph.D. students (5)

On-going Francisco Teixeira, “*Speaker privacy in paralinguistics, diarization and speech recognition tasks*”, co-advised by I. Trancoso and B. Raj, Instituto Superior Técnico, 2019-present.

Catarina Botelho, “*Speech as a biomarker for speech affecting diseases*”, co-advised by I. Trancoso and T. Schultz, Instituto Superior Técnico, 2019-present.

Thomas Rolland, “*Contributions to speech processing for children with speech disorders*”, Instituto Superior Técnico, 2018-present.

Mariana Julião, “*Prosody assessment for computer assisted therapy and language learning*”, co-advised by Prof H. Moniz, Instituto Superior Técnico, 2018-present.

- 2019 Annamaria Pompili, “*Speech and language technologies applied to diagnostics and therapy of brain diseases*”, co-advised by Prof I.P Martins, Instituto Superior Técnico, December 2019.

M.Sc. students (28)

- On-going Rodrigo Borges Pessoa de Sousa, “*Bio-marcadores obtidos da análise da fala para suporte da identificação do onset e tipo da Psicose em Português*”, M.Sc. thesis. Instituto Superior Técnico, 2021–Present
- Ana Margarida Catarino Ferro, “*Study of respiratory diseases based on automatic speech and other human-made sound analysis*”, M.Sc. thesis. Instituto Superior Técnico, 2021–Present
- Matilde Maria Silva Peixoto, “*Speech as a health biomarker*”, M.Sc. thesis. Instituto Superior Técnico, 2020–Present
- Alexandre Simão Pereira Faria, “*Using Natural Language Processing to Find Bugs in Java Source Code*”, M.Sc. thesis. Instituto Superior Técnico, 2020–Present
- 2021 Maria Gomes Simas Beato Forjó, “*Contributions towards the possible identification of psychosis through speech processing in Portuguese*”, M.Sc. thesis. Instituto Superior Técnico, November 2021
- Artur Oliveira Fortunato, “*Explaining Parkinson’s Disease Computational Diagnostic based on Speech Analysis*”, M.Sc. thesis. Instituto Superior Técnico, November 2021
- António Moura Sarmiento de Magalhães Vieira, “*Biomarkers of sleep disorders*”, M.Sc. thesis. Instituto Superior Técnico, November 2021
- Pedro Fortunato Pereira da Fonseca Esteves, “*Transfer Learning for Low-Resource Automatic Speech Recognition*”, M.Sc. thesis. Instituto Superior Técnico, July 2021
- João Diogo Pereira da Silva Dionísio Botelho, “*Automatic Nativeness Assessment*”, M.Sc. thesis. Instituto Superior Técnico, January 2021
- Matilde Huberty Nogueira Ramos, “*Speech and Language Technologies Applied to the Therapy of Reading Disabilities*”, M.Sc. thesis. Instituto Superior Técnico, January 2021
- Carlos Manuel Ferreira Carvalho, “*TRIBUS: An end-to-end automatic speech recognition system in Portuguese*”, M.Sc. thesis. Instituto Superior Técnico, January 2021
- Rui Orlando Magalhães Ribeiro, “*Domain Adaptation for Neural Generative-Based Dialogue Systems*”, M.Sc. thesis. Instituto Superior Técnico, January 2021
- 2020 Francisco Machado Duarte, “*IntelliComment. An IDE Plugin to Improve Java Source Code Using Comments*”, M.Sc. thesis. Instituto Superior Técnico, September 2020
- 2019 Guilherme Jorge de Lemos Marques, “*VITHEA: Development of a Mobile Application for Remote Speech Therapy*”, M.Sc. thesis. Instituto Superior Técnico, December 2019
- Pedro Teles, “*Surdez na 3a idade*”, M.Sc. thesis. Instituto Superior Técnico, July 2019
- 2018 Maria Catarina Tavares Botelho, “*Speech as a biomarker for sleep disorders and sleep deprivation*”, M.Sc. thesis. Instituto Superior Técnico, November 2018
- Francisco Oliveira, “*Jogos multi-jogador de estimulação cognitiva*”, M.Sc. thesis. Instituto Superior Técnico, November 2018
- Pedro Rafael Barriga Negra Ascensão, “*Discourse analysis for mental health monitoring*”, M.Sc. thesis. Instituto Superior Técnico, October 2018
- Francisco Saraiva Sepúlveda Teixeira, “*Privacy in Paralinguistic Tasks*”, M.Sc. thesis. Instituto Superior Técnico, September 2018

- Vera Korchevnyuk, “*Acoustic Localization for Assistive Robots*”, M.Sc. thesis. Instituto Superior Técnico, May 2018
- 2017 Miguel Angelo Rodrigues Dias, “*Privacy preserving speech mining*”, M.Sc. thesis. Instituto Superior Técnico, November 2017
- 2015 Gonçalo Nuno de Costa Carito, “*Privacy enhanced speech recognition*”, M.Sc. thesis. Instituto Superior Técnico, October 2015
- 2014 José Miguel Caldeira e Matos, “*Reconhecimento robusto de fala com redes de microfones em ambientes domésticos multi-sala*”, M.Sc. thesis. Instituto Superior Técnico, November 2014
- Cristiana Filipa Lopes Amorim, “*Automatic tool for screening of cognitive impairments*”, M.Sc. thesis. Instituto Superior Técnico, June 2014
- Maria Joana Ribeiro Folgado Correia, “*Anti-spoofing: Speaker Verification vs. Voice Conversion*”, M.Sc. thesis. Instituto Superior Técnico, May 2014
- 2013 Annamaria Pompili, “*New features for on-line aphasia therapy*”, M.Sc. thesis. Instituto Superior Técnico, November 2013
- 2010 Oscar Koller, “*Automatic Speech Recognition and Identification of African Portuguese*”, M.Sc. Thesis. Berlin University of Technology, June 2010
- 2005 Sergio Prats, “*Techniques for localization of sound sources with microphone arrays*”, M.Sc. Thesis. Telecommunication Engineering School of Barcelona, February 2005

Undergraduate students (1)

- 2011 Annamaria Pompili, “*VITHEA: Terapeuta Virtual para o tratamento da Afasia*”, Graduation thesis. Rome University of Tor Vergata, April 2011

Awards and merits

- Students **Second award at the Fraunhofer Portugal Challenge 2014** to the M.Sc. thesis by Anna Pompili “*Speech and language technologies for aphasia therapy*”, http://www.challenge.fraunhofer.pt/en/the_challenge/previous-editions.html, Porto, Portugal, 2014
- Teaching **Diploma of teaching excellence**, Compiladores (LEIC-A), Instituto Superior Técnico, 2018-2019
- Performance Evaluation **Excellent**, Avaliação de Desempenho dos Docentes 2016-2018 (RADIST), Instituto Superior Técnico, 2019
- Excellent**, Avaliação de Desempenho dos Docentes 2013-2015 (RADIST), Instituto Superior Técnico, 2016

Research

Scientific publications

Edited Books (2)

- 2018 Aline Villavicencio, Viviane Moreira, Alberto Abad, Helena Caseli, Pablo Gamallo, Carlos Ramisch, Hugo Gonçalo Oliveira, and Gustavo Henrique Paetzold. *Computational Processing of the Portuguese Language: 13th International Conference, PROPOR 2018*. Number 11122 in Lecture Notes in Artificial Intelligence. Springer International Publish, September 2018.

- 2016 Alberto Abad, Alfonso Ortega, António J. S. Teixeira, Carmen García-Mateo, Carlos D. Martínez-Hinarejos, Fernando Perdigão, Fernando Batista, and Nuno J. Mamede, editors. *Advances in Speech and Language Technologies for Iberian Languages - Third International Conference, IberSPEECH 2016, Lisbon, Portugal, November 23-25, 2016, Proceedings*, volume 10077 of *Lecture Notes in Computer Science*. Springer International Publish, 2016.

Book Chapters (2)

- 2021 Francisco Teixeira, Alberto Abad, Isabel Trancoso, and Bhiksha Raj. Privacy in paralinguistic and extralinguistic tasks for health applications. In Carmen García-Mateo and Gérard Chollet, editors, *Voice Biometrics: Technology, Trust and Security*. The Institution of Engineering and Technology (IET), October 2021.
- 2013 Alberto Abad. The L2F broadcast news transcription system. In Jose Luis Benitez-Ortúzar, Maria Del Carmen; Perez-Cordoba, editor, *Applications of Speech Technologies. Talks and contributions presented at the summer course: Applications of Speech Technologies*, pages 73–131. Ed. Universidad de Granada, 2013.

International peer-reviewed journals (8)

- 2020 Anna Pompili, Alberto Abad, David Martins de Matos, and Isabel Pavão Martins. Pragmatic Aspects of Discourse Production for the Automatic Identification of Alzheimer’s Disease. *IEEE Journal of Selected Topics in Signal Processing*, 14(2):261–271, 2020. • Google Citations (GC): 8 • Rank: SCI(Q1)
- Sofia Cavaco, Isabel Guimarães, Mariana Ascensão, Alberto Abad, Ivo Anjos, Francisco Oliveira, Sofia Martins, Nuno Marques, Maxine Eskénazi, João Magalhães, and Margarida Grilo. The BioVisualSpeech Corpus of Words with Sibilants for Speech Therapy Games Development. *Information*, 11(10):470, 2020. • GC: 1 • Rank: SCI(Q3)
- 2019 Andreas Nautsch, Abelino Jiménez, Amos Treiber, Jascha Kolberg, Catherine Jasserand, Els Kindt, Héctor Delgado, Massimiliano Todisco, Mohamed Amine Hmani, Aymen Mtibaa, Mohammed Ahmed Abdelraheem, Alberto Abad, Francisco Teixeira, Driss Matrouf, Marta Gomez-Barrero, Dijana Petrovska-Delacrétaz, Gérard Chollet, Nicholas W. D. Evans, and Christoph Busch. Preserving privacy in speaker and speech characterisation. *Computer Speech and Language*, 58:441–480, 2019. • GC: 51 • Rank: SCI(Q2)
- 2018 Javier Tejedor, Doroteo Torre Toledano, Paula Lopez-Otero, Laura Docío Fernández, Jorge Proença, Fernando Perdigão, Fernando García-Granada, Emilio Sanchis, Anna Pompili, and Alberto Abad. ALBAYZIN query-by-example spoken term detection 2016 evaluation. *EURASIP Journal on Audio, Speech and Music Processing*, 2018:2, 2018. • GC: 5 • Rank: SCI(Q3)
- 2013 Ramón Fernandez Astudillo, Dorothea Kolossa, Alberto Abad, Steffen Zeiler, Rahim Saeidi, Pejman Mowlae, João Paulo da Silva Neto, and Rainer Martin. Integration of beamforming and uncertainty-of-observation techniques for robust ASR in multi-source environments. *Computer Speech and Language*, 27(3):837–850, 2013. • GC: 19 • Rank: SCI(Q2)
- Alberto Abad, Anna Pompili, Ângela Costa, Isabel Trancoso, José G. Fonseca, Gabriela Leal, Luisa Farrajota, and Isabel P. Martins. Automatic word naming recognition for an on-line aphasia treatment system. *Computer Speech and Language*, 27(6):1235–1248, 2013. • GC: 72 • Rank: SCI(Q2)
- 2006 Luis Villarejo, Javier Hernando, Núria Castell, Jaume Padrell, and Alberto Abad. Architecture and dialogue design for a voice operated information system. *Applied Intelligence*, 24(3):253–261, 2006. • GC: 3 • Rank: SCI(Q2)

- 2005 Jan Anguita, Javier Hernando, and Alberto Abad. Improved jacobian adaptation for robust speaker verification. *IEICE Transactions on Information and Systems*, 88-D(7):1767–1770, 2005. • GC: 2 • Rank: SCI(Q3)

[International peer-reviewed conferences and workshops \(95\)](#)

- 2021 Rubén Solera Ureña, Catarina Botelho, Francisco Teixeira, Thomas Rolland, Alberto Abad, and Isabel Trancoso. Transfer learning-based cough representations for automatic detection of COVID-19. In *Interspeech 2021*. ISCA, August 2021. • Google Citations (GC): 0 • Rank: CORE(A)

Catarina Botelho, Alberto Abad, Tanja Schultz, and Isabel Trancoso. Visual speech for obstructive sleep apnea detection. In *Interspeech 2021*. ISCA, August 2021. • GC: 0 • Rank: CORE(A)

Ali Shahin Shamsabadi, Francisco Teixeira, Alberto Abad, Bhiksha Raj, Andrea Cavallaro, and Isabel Trancoso. FoolHD: Fooling Speaker Identification by Highly Imperceptible Adversarial Disturbances. In *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, June 2021. • GC: 2 • Rank: CORE(B)

Rui Ribeiro, Alberto Abad, and José David Aguas Lopes. Domain adaptation in dialogue systems using transfer and meta-learning. In *IberSPEECH 2020*, March 2021. • GC: 0

Carlos Carvalho and Alberto Abad. TRIBUS: An end-to-end automatic speech recognition system for european portuguese. In *IberSPEECH 2020*, March 2021. • GC: 0

João Botelho, Alberto Abad, Rui Correia, and João Freitas. Nativeness assessment for crowdsourced speech collections. In *IberSPEECH 2020*, March 2021. • GC: 0

- 2020 Anna Maria Pompili, Rubén Solera Ureña, Alberto Abad, Rita Cardoso, Isabel Guimarães, Margherita Fabbri, Isabel P Martins, and Joaquim Ferreira. Assessment of Parkinson's Disease Medication State through Automatic Speech Analysis. In *Interspeech 2020*. ISCA, October 2020. • GC: 3 • Rank: CORE(A)

Anna Maria Pompili, Thomas Rolland, and Alberto Abad. The INESC-ID multi-modal system for the ADRess 2020 challenge. In *Interspeech 2020*. ISCA, October 2020. • GC: 15 • Rank: CORE(A)

John Mendonça, Francisco Teixeira, Isabel Trancoso, and Alberto Abad. Analyzing Breath Signals for the Interspeech 2020 ComParE Challenge. In *Interspeech 2020*. ISCA, October 2020. • GC: 4 • Rank: CORE(A)

Mariana Julião, Alberto Abad, and Helena Moniz. Exploring Text and Audio Embeddings for Multi-Dimension Elderly Emotion Recognition. In *Interspeech 2020*. ISCA, October 2020. • GC: 0 • Rank: CORE(A)

Catarina Botelho, Lorenz Diener, Dennis Küster, Kevin Scheck, Shahin Amiriparian, Björn W Schuller, Tanja Schultz, Alberto Abad, and Isabel Trancoso. Toward silent paralinguistics: Speech-to-EMG—retrieving articulatory muscle activity from speech. In *Interspeech 2020*. ISCA, October 2020. • GC: 4 • Rank: CORE(A)

Alberto Abad, Peter Bell, Andrea Carmantini, and Steve Renais. Cross lingual transfer learning for zero-resource domain adaptation. In *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, May 2020. • GC: 7 • Rank: CORE(B)

Anna Maria Pompili, Alberto Abad, Isabel Trancoso, José Fonseca, and Isabel P Martins. Evaluation and extensions of an automatic speech therapy platform. In *International Conference on Computational Processing of the Portuguese Language (PROPOR)*. Springer, March 2020. • GC: 1

- Mariana Julião, Alberto Abad, and Helena Moniz. Comparison of heterogeneous feature sets for intonation verification. In *International Conference on Computational Processing of the Portuguese Language (PROPOR)*. Springer, March 2020. • GC: 0
- Margarida Grilo, Isabel Guimarães, Mariana Ascensão, Alberto Abad, Ivo Anjos, João Magalhães, and Sofia Cavaco. The BioVisualSpeech European Portuguese Sibilants Corpus. In *International Conference on Computational Processing of the Portuguese Language (PROPOR)*. Springer, March 2020. • GC: 5
- Francisco Luís Campos Pais de Oliveira, Alberto Abad, and Isabel Trancoso. A Multiplayer Voice-Enabled Game Platform for the Elderly. In *International Conference on Computational Processing of the Portuguese Language (PROPOR)*. Springer, March 2020. • GC: 0
- 2019 Carlos Mendes, Alberto Abad, João Paulo da Silva Neto, and Isabel Trancoso. Recognition of latin american spanish using multi-task learning. In *Interspeech 2019*. ISCA, September 2019. • GC: 0 • Rank: CORE(A)
- Francisco Teixeira, Alberto Abad, and Isabel Trancoso. Privacy-preserving paralinguistic tasks. In *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, May 2019. • GC: 6 • Rank: CORE(B)
- Chang-I Lai, Alberto Abad, Korin Richmond, Junichi Yamagishi, Najim Dehak, and Simon King. Attentive filtering networks for audio replay attack detection. In *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, May 2019. • GC: 50 • Rank: CORE(B)
- Catarina Botelho, Isabel Trancoso, Alberto Abad, and Teresa Paiva. Speech as a biomarker for obstructive sleep apnea detection. In *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, May 2019. • GC: 11 • Rank: CORE(B)
- 2018 Francisco Teixeira, Alberto Abad, and Isabel Trancoso. Patient privacy in paralinguistic tasks. In *Interspeech 2018*. ISCA, September 2018. • GC: 6 • Rank: CORE(A)
- Miguel Ângelo Rodrigues Dias, Alberto Abad, and Isabel Trancoso. Exploring hashing and cryptonet based approaches for privacy-preserving speech emotion recognition. In *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, April 2018. • GC: 21 • Rank: CORE(B)
- Anna Maria Pompili, Alberto Abad, David Martins de Matos, and Isabel Pavão Martins. Topic coherence analysis for the classification of alzheimer's disease. In *IberSPEECH 2018*. ISCA, November 2018. • GC: 5
- 2017 Fábio Natanael Kepler, Ramon Fernandez Astudillo, and Alberto Abad. Fusion of Simple Models for Native Language Identification. In *12th Workshop on Innovative Use of NLP for Building Educational Applications*. Association for Computational Linguistics (ACL), September 2017. • GC: 3 • Rank: CORE(A*)
- Paula Lopez-Otero, Laura Docio-Fernandez, Alberto Abad, and Carmen Garcia-Mateo. Depression detection using automatic transcriptions of de-identified speech. In *Interspeech 2017*, August 2017. • GC: 12 • Rank: CORE(A)
- Anna Maria Pompili, Alberto Abad, Paolo Romano, Isabel P. Martins, Rita Cardoso, Helena Santos, Joana Carvalho, Isabel Guimeraes, and Joaquim J Ferreira. Automatic Detection of Parkinson's Disease: An Experimental Analysis of Common Speech Production Tasks Used for Diagnosis. In *International Conference on Text Speech and Dialogue (TSD)*, September 2017. • GC: 18

- 2016 Alberto Abad, Eugénio Ribeiro, Fábio Natanael Kepler, Ramon Fernandez Astudillo, and Isabel Trancoso. Exploiting Phone Log-Likelihood Ratio Features for the Detection of the Native Language of Non-Native English Speakers. In *Interspeech 2016*, September 2016. • GC: 21 • Rank: CORE(A)
- José Matos, Alberto Abad, and António Joaquim Serralheiro. The DIRHA portuguese corpus: A comparison of home automation command detection and recognition in simulated and real data. In *LREC*. European Language Resources Association (ELRA), May 2016. • GC: 0 • Rank: CORE(C)
- José Lopes, Arodami Chorianopoulou, Elisavet Palogiannidi, Helena Moniz, Alberto Abad, Katerina Louka, Elias Iosif, and Alexandros Potamianos. The spedal datasets: datasets for spoken dialogue systems analytics. In *LREC*. European Language Resources Association (ELRA), May 2016. • GC: 10 • Rank: CORE(C)
- Fernando Batista, Pedro dos Santos Lopes Curto, Isabel Trancoso, Alberto Abad, Jaime Rodrigues Ferreira, Eugénio Ribeiro, Helena Moniz, David Martins de Matos, and Ricardo Ribeiro. SPA: Web-based platform for easy access to speech processing modules. In *LREC*. European Language Resources Association (ELRA), May 2016. • GC: 4 • Rank: CORE(C)
- Alessio Brutti and Alberto Abad. Multi-channel i-vector combination for robust speaker verification in multi-room domestic environments. In *Odyssey 2016: The Speaker and Language Recognition Workshop*, June 2016. • GC: 2
- 2015 Eugénio Ribeiro, Jaime Rodrigues Ferreira, Julia Olcoz, Alberto Abad, Helena Moniz, Fernando Batista, and Isabel Trancoso. Combining multiple approaches to predict the degree of nativeness. In *Interspeech 2015*, September 2015. • GC: 9 • Rank: CORE(A)
- Maria Joana Ribeiro Folgado Correia, Alessio Brutti, and Alberto Abad. Multi-channel speaker verification based on total variability modelling. In *Interspeech 2015*. ISCA, September 2015. • GC: 1 • Rank: CORE(A)
- José Lopes, Giampiero Salvi, Gabriel Skantze, Alberto Abad, Joakim Gustafson, Fernando Batista, Raveesh Meena, and Isabel Trancoso. Detecting repetitions in spoken dialogue systems using phonetic distances. In *Interspeech 2015*. ISCA, September 2015. • GC: 11 • Rank: CORE(A)
- Panagiotis Giannoulis, Alessio Brutti, Marco Matassoni, Alberto Abad, Athanasios Katsamanis, José Matos, Gerasimos Potamianos, and Petros Maragos. Multi-room speech activity detection using a distributed microphone network in domestic environments. In *EUSIPCO*, September 2015. • GC: 18 • Rank: CORE(B)
- José Portêlo, Alberto Abad, Bhiksha Raj, and Isabel Trancoso. Privacy-preserving query-by-Example speech search. In *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, April 2015. • GC: 5 • Rank: CORE(B)
- Helena Moniz, Anna Maria Pompili, Fernando Batista, Isabel Trancoso, Alberto Abad, and Cristiana Filipa Lopes Amorim. Automatic Recognition of Prosodic Patterns in Semantic Verbal Fluency Tests - an Animal Naming Task for Edutainment Applications. In *International Congress of Phonetic Sciences (ICPhS 2015)*, August 2015. • GC: 2
- Anna Maria Pompili, Cristiana Filipa Lopes Amorim, Alberto Abad, and Isabel Trancoso. Speech and language technologies for the automatic monitoring and training of cognitive functions. In *Workshop on Speech and Language Processing for Assistive Technologies (SLPAT)*, September 2015. • GC: 5
- Lionel Fontan, Thomas Pellegrini, Julia Olcoz, and Alberto Abad. Predicting disordered speech comprehensibility from goodness of pronunciation scores. In *Workshop on Speech and Language Processing for Assistive Technologies (SLPAT)*, September 2015. • GC: 8

- 2014 Ramon Fernandez Astudillo, Alberto Abad, and Isabel Trancoso. Accounting for the Residual Uncertainty of Multi-Layer Perceptron Based Features. In *International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, May 2014. • GC: 13 • Rank: CORE(B)
- José Portêlo, Bhiksha Raj, Alberto Abad, and Isabel Trancoso. Privacy-preserving speaker verification using garbled GMMs. In *EUSIPCO 2014*. EURASIP, September 2014. • GC: 12 • Rank: CORE(B)
- Luca Cristoforetti, Mirco Ravanelli, Maurizio Omologo, Alessandro Sosi, Alberto Abad, Martin Hagsmueller, and Petros Maragos. The DIRHA simulated corpus. In *LREC2014*, May 2014. • GC: 87 • Rank: CORE(C)
- José Portêlo, Bhiksha Raj, Alberto Abad, and Isabel Trancoso. Privacy-Preserving Speaker Verification using Secure Binary Embeddings. In *MIPRO 2014*. IEEE, May 2014. • GC: 4
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- Annika Hämäläinen, Hyongsil Cho, Sara Candeias, Thomas Pellegrini, Alberto Abad, Michael Tjalve, Isabel Trancoso, and Miguel Sales Dias. Automatically recognising european portuguese children's speech: Pronunciation patterns revealed by an analysis of ASR errors. In *PROPOR 2014*, October 2014. • GC: 5
- Annika Hämäläinen, Sara Candeias, Hyongsil Cho, Hugo Meinedo, Alberto Abad, Thomas Pellegrini, Michael Tjalve, Isabel Trancoso, and Miguel Sales Dias. Correlating ASR errors with developmental changes in speech production: A study of 3-10-year-old european portuguese children's speech. In *WOCCI 2014 – Workshop on Child Computer Interaction*, September 2014. • GC: 17
- Maria Joana Ribeiro Folgado Correia, Alberto Abad, and Isabel Trancoso. Exploiting magnitude and phase spectral information for converted speech detection. In *Spoken Language Technology Workshop (SLT) 2014*, December 2014. • GC: 0
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- 2012 Alberto Abad, Anna Maria Pompili, Angela Costa, and Isabel Trancoso. Automatic word naming recognition for treatment and assessment of aphasia. In *Interspeech 2012*. ISCA, September 2012. • GC: 23 • Rank: CORE(A)
- Luis Javier Rodríguez-Fuentes, Mikel Penagarikano, Amparo Varona, Mireia Diez, Germán Bordel, Alberto Abad, David Martínez, Jesus Villalba, Alfonso Ortega, and Eduardo Lleida. The BLZ submission to the NIST 2011 LRE: Data collection, system development and performance. In *Interspeech 2012*. ISCA, September 2012. • GC: 15 • Rank: CORE(A)
- Ramon Fernandez Astudillo, Alberto Abad, and João Paulo da Silva Neto. Uncertainty driven compensation of multi-stream MLP acoustic models for robust ASR. In *Interspeech 2012*. ISCA, September 2012. • GC: 0 • Rank: CORE(A)
- Ramon Fernandez Astudillo, Alberto Abad, and João Paulo da Silva Neto. Integration of beamforming and automatic speech recognition through propagation of the wiener posterior. In *International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, May 2012. • GC: 10 • Rank: CORE(B)
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- Alberto Abad and Ramon Fernandez Astudillo. The L2F spoken web search system for mediaeval 2012. In *Mediaeval 2012 Workshop*, October 2012. • GC: 0
- 2011 Alberto Abad, Jordi Luque, and Isabel Trancoso. Parallel transformation network features for speaker recognition. In *International Conference on Acoustics, Speech and Signal Processing (ICASSP)*. IEEE, May 2011. • GC: 8 • Rank: CORE(B)
- José Lopes, Isabel Trancoso, and Alberto Abad. A nativeness classifier for TED talks. In *International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, May 2011. • GC: 19 • Rank: CORE(B)
- José Portêlo, Bhiksha Raj, Alberto Abad, and Isabel Trancoso. On the Implementation of a Secure Musical Database Matching. In *EUSIPCO 2011*. EURASIP, August 2011. • GC: 2 • Rank: CORE(B)
- Luis Javier Rodríguez-Fuentes, Mikel Penagarikano, Amparo Varona, Mirieia Díez, Germán Bordel, David Martínez, Jesús Villalba, Antonio Miguel, Alfonso Ortega, Eduardo Lleida, Alberto Abad, Oscar Koller, Isabel Trancoso, Paula Lopez-Otero, Laura Docio-Fernandez, Carmen Garcia-Mateo, Rahim Saeidi, Mehdi Soufifar, Tomi Kinnunen, Torbjørn Svendsen, and Pasi Frãnti. Multi-site heterogeneous system fusions for the Albayzin 2010 language recognition evaluation. In *IEEE Automatic Speech Recognition and Understanding Workshop (ASRU)*, December 2011. • GC: 15 • Rank: CORE(C)
- Anna Pompili, Alberto Abad, Isabel Trancoso, José Fonseca, Isabel P. Martins, Gabriela Leal, and Luisa Farrajota. An on-line system for remote treatment of aphasia. In *Second Workshop on Speech and Language Processing for Assistive Technologies (SLPAT)*, July 2011. • GC: 15
- Dorothea Kolossa, Ramon Fernandez Astudillo, Alberto Abad, Steffen Zeiler, Rahim Saeidi, Pejman Mowlae, João Paulo da Silva Neto, and Rainer Martin. CHIME challenge: Approaches to robustness using beamforming and uncertainty-of-Observation techniques. In *CHIME Workshop: International Workshop on Machine Listening in Multisource Environments*, September 2011. • GC: 27
- 2010 Alberto Abad and Isabel Trancoso. Speaker recognition experiments using connectionist transformation network features. In *Interspeech 2010*. ISCA, September 2010. • GC: 4 • Rank: CORE(A)

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- Oscar Koller, Alberto Abad, and Isabel Trancoso. Exploiting variety-dependent phones in portuguese variety identification. In *Odyssey 2010 The Speaker and Language Recognition Workshop*, June 2010. • GC: 10
- Alberto Abad and Jordi Luque. Connectionist transformation network features for speaker recognition. In *Odyssey 2010 The Speaker and Language Recognition Workshop*, June 2010. • GC: 6
- Hugo Meinedo, Alberto Abad, Thomas Pellegrini, Isabel Trancoso, and João Paulo da Silva Neto. The L2F broadcast news speech recognition system. In *Fala2010*, November 2010. • GC: 58
- Alberto Abad and Isabel Trancoso. Post-evaluation analysis and improvements with the L2F language verification system submitted to NIST LRE 2009. In *Fala2010*, November 2010. • GC: 0
- Helena Moniz, Fernando Batista, Hugo Meinedo, Alberto Abad, Isabel Trancoso, Ana Isabel Mata da Silva, and Nuno J. Mamede. Prosodically-based automatic segmentation and punctuation. In *Speech Prosody 2010*. ISCA, May 2010. • GC: 13
- 2009 Isabel Trancoso, Thomas Pellegrini, José Portêlo, Hugo Meinedo, Miguel Bugalho, Alberto Abad, and João Paulo da Silva Neto. Audio contributions to semantic video search. In *2009 IEEE International Conference on Multimedia and Expo (ICME 2009)*. IEEE, June 2009. • GC: 14 • Rank: CORE(A)
- Miguel Bugalho, José Portêlo, Isabel Trancoso, Thomas Pellegrini, and Alberto Abad. Detecting audio events for semantic video search. In *Interspeech 2009*. ISCA, September 2009. • GC: 52 • Rank: CORE(A)
- Alberto Abad, Isabel Trancoso, Nelson Neto, and Maria do Céu Guerreiro Viana Ribeiro. Porting an European Portuguese Broadcast News Recognition System to Brazilian Portuguese. In *Interspeech 2009*. ISCA, September 2009. • GC: 17 • Rank: CORE(A)
- José Portêlo, Miguel Bugalho, Isabel Trancoso, João Paulo da Silva Neto, Alberto Abad, and António Joaquim Serralheiro. Non-speech audio event detection. In *International Conference on Acoustics, Speech and Signal Processing (ICASSP)*. IEEE, April 2009. • GC: 117 • Rank: CORE(B)
- Thomas Pellegrini, Jose Portelo, Isabel Trancoso, Alberto Abad, and Miguel Bugalho. Hierarchical clustering experiments for application to audio event detection. In *SPECOM*, June 2009. • GC: 6
- Rui Martins, Isabel Trancoso, Alberto Abad, and Hugo Meinedo. Detection of childrens voices. In *I Iberian SL Tech 2009*, September 2009. • GC: 7
- 2008 Carlos Segura, Alberto Abad, Javier Hernando, and Climent Nadeu. Speaker orientation estimation based on hybridation of GCC-PHAT and HLBR. In *Interspeech 2008*, September 2008. • GC: 11 • Rank: CORE(A)
- Alberto Abad and João Paulo da Silva Neto. Incorporating acoustical modelling of phone transitions in an hybrid ANN/HMM speech recognizer. In *Interspeech 2008*, September 2008. • GC: 30 • Rank: CORE(A)

- Alberto Abad and João Paulo da Silva Neto. Automatic classification and transcription of telephone speech in radio broadcast data. In *International Conference on Computational Processing of Portuguese Language (PROPOR 2008)*, September 2008. • GC: 17
- 2007 Alberto Abad, Carlos Segura, Climent Nadeu, and Javier Hernando. Audio-based approaches to head orientation estimation in a smart-room. In *Interspeech 2007*, August 2007. • GC: 24 • Rank: CORE(A)
- C. Segura, C. Canton-Ferrer, A. Abad, J.R. Casas, and J. Hernando. Multimodal head orientation towards attention tracking in smartrooms. In *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 2007. • GC: 21 • Rank: CORE(B)
- Carlos Segura, Alberto Abad, Javier Hernando, and Climent Nadeu. Multispeaker localization and tracking in intelligent environments. In *International Evaluation Workshops CLEAR 2007 and RT 2007*, volume 4625, 01 2007. • GC: 17
- 2006 Alberto Abad, Carlos Segura, Dusan Macho, Javier Hernando, and Climent Nadeu. Audio person tracking in a smart-room environment. In *Interspeech 2006*. ISCA, 2006. • GC: 16 • Rank: CORE(A)
- Alberto Abad, Cristian Canton-Ferrer, Carlos Segura, José Luis Landabaso, Dusan Macho, Josep R. Casas, Javier Hernando, Montse Pardàs, and Climent Nadeu. UPC audio, video and multimodal person tracking systems in the clear evaluation campaign. In Rainer Stiefelhagen and John S. Garofolo, editors, *Multimodal Technologies for Perception of Humans, First International Evaluation Workshop on Classification of Events, Activities and Relationships, CLEAR*, Lecture Notes in Computer Science. Springer, 2006. • GC: 16
- 2005 Alberto Abad, Dusan Macho, Carlos Segura, Javier Hernando, and Climent Nadeu. Effect of head orientation on the speaker localization performance in smart-room environment. In *Interspeech 2005*. ISCA, 2005. • GC: 15 • Rank: CORE(A)
- Dusan Macho, Jaume Padrell, Alberto Abad, Climent Nadeu, Javier Hernando, John W. McDonough, Matthias Wölfel, Ulrich Klee, Maurizio Omologo, Alessio Brutti, Piergiorgio Svaizer, Gerasimos Potamianos, and Stephen M. Chu. Automatic speech activity detection, source localization, and speech recognition on the chil seminar corpus. In *IEEE International Conference on Multimedia and Expo (ICME)*, 2005. • GC: 43 • Rank: CORE(A)
- Dusan Macho, Jaume Padrell, Alberto Abad, Climent Nadeu, John W. McDonough, Ulrich Klee, Matthias Wölfel, Maurizio Omologo, Alessio Brutti, Piergiorgio Svaizer, Gerasimos Potamianos, and Stephen M. Chu. First Experiments of Automatic Speech Activity Detection, Source Localization and Speech Recognition in the CHIL Project. In *Workshop for Hands-Free Speech Communication and Microphone Arrays*, 2005. • GC: 8
- 2004 Alberto Abad and Javier Hernando. Speech enhancement and recognition by integrating adaptive beamforming and wiener filtering. In *Interspeech 2004*. ISCA, 2004. • GC: 6 • Rank: CORE(A)
- Jan Anguita, Javier Hernando, and Alberto Abad. Jacobian adaptation with improved noise reference for speaker verification. In *Interspeech 2004*. ISCA, 2004. • GC: 2 • Rank: CORE(A)
- Alberto Abad and Javier Hernando. Integrated adaptive beamforming and wiener filtering for a robust microphone array. In *IEEE Sensor Array and Multichannel Signal Processing Workshop (SAM), Sitges (Spain)*, 2004. • GC: 3
- 2003 Alberto Abad, Climent Nadeu, Javier Hernando, and Jaume Padrell. Jacobian adaptation based on the frequency-filtered spectral energies. In *Interspeech 2003*. ISCA, 2003. • GC: 12 • Rank: CORE(A)

Coordination of and participation in scientific projects

Coordination

- TAPAS Training Network on Automatic Processing of Pathological Speech,**
2017–2022 *EU project H2020-MSCA-ITN-2017*, <https://www.tapas-etn-eu.org>.
The main objective of the ITN TAPAS is to train young researchers equipped with skills lying at the cross-section of speech processing, clinical practice and industry.
Dates: from 01/11/2017 to 31/10/2022
Funding: Total: ~ 3.9M€. INESC-ID: ~ 240K€
Main researcher: Dr. Mathew Magimai Doss
Role: INESC-ID principal investigator
- BVS BioVisualSpeech, FCT CMU|Portugal CMUP-ERI/TIC/0033/2014,**
2016–2021 <http://novasearch.org/biovisualspeech/>.
The goal of the BioVisualSpeech project is to develop an interactive platform for speech therapy integrating both automatic speech analysis and visual bio-feedback.
Dates: from 01/04/2016 to 31/03/2020
Funding: Total: 340K€. INESC-ID: ~ 89K€
Main researcher: Sofia Cavaco
Role: INESC-ID principal investigator
- DIRHA Distant-speech Interaction for Robust Home Applications,**
2012–2014 *EU project: FP7-ICT-2011-7 (288121)*, <http://dirha.fbk.eu>.
The DIRHA project addresses the development of voice-enabled automated home environments based on distant-speech interaction in different languages.
Dates: from 01/01/2012 to 31/12/2014
Funding: Total: 3.45M€; INESC-ID: ~464K€
Main researcher: Maurizio Omologo
Role: INESC-ID principal investigator
- VITHEA Virtual Therapist for Aphasia treatment,**
2010–2013 *FCT project: RIPD/ADA/109646/2009*, <http://www.vithea.org>.
The goal of the VITHEA project was the development of a software program for the treatment of aphasic patients incorporating recent advances of speech and language technology.
Dates: from 01/06/2010 to 31/5/2013
Funding: Total: 58K€. INESC-ID: ~ 52K€
Main researcher: Alberto Abad
Role: Principal Investigator

Participation

- PRIVADIA Privacy-Preserving Speaker Diarization, FCT CMU|Portugal,**
2021–2022 <https://privadia.hlt.inesc-id.pt>.
Main researcher: Isabel Trancoso
Role: Research on speaker diarization.
- U4V Unbabel for Video, National project PT2020,**
2019–2021 <https://www.inesc-id.pt/projects/IP02060/>.
Main researcher: Fernando Batista
Role: Responsible for speech alignment and ASR components.
- RAGE Realising an Applied Gaming Eco-system, EU project: H2020-ICT-2014-1/644187,**
2015–2019 <https://cordis.europa.eu/project/id/644187/>.
Main researcher: Wim Westera
Role: Responsible for the deployment of speech technology assets.
- IC1206 De-Identification for Privacy Protection in Multimedia Content,**
2013–2017 *COST Action IC1206*, <https://www.cost.eu/actions/IC1206/>.
Main researcher: Slobodan Ribaric
Role: Action member.

- SPEDIAL **Spoken Dialogue Analytics**, *EU project: FP7-ICT-2013-SME-DCA/611396*,
2013–2015 <https://cordis.europa.eu/project/id/611396/>.
Main researcher: Alexandros Potamianos
Role: Responsible for speech analysis components: gender, age and noise.
- SUSPECT **SecUre SPEeCh Technologies**, *FCT project*,
2012–2015 [https://www.hlt.inesc-id.pt/w/SUSPECT_\(SecUre_SPEeCh_Technologies\)](https://www.hlt.inesc-id.pt/w/SUSPECT_(SecUre_SPEeCh_Technologies)).
Main researcher: Isabel M. Trancoso
Role: Research on speaker recognition technology and development of novel privacy preserving approaches for speaker verification.
- FalaComigo **Enhance the Cultural Tourism through the Interaction with Virtual Characters**, *QREN project*.
2010–2013
Main researcher: Luisa Coheur
Role: Multi-lingual automatic speech recognition.
- EUTV **EUTV Adaptive Channels in Europe**, *EU project*,
2010–2012 <https://cordis.europa.eu/project/id/262428/>.
Main researcher: Georgios Ioannidis
Role: Language identification research and development.
- PT-STAR **Speech Translation Advanced Research to and from Portuguese**,
2008–2010 *FCT CMU | Portugal project*, [https://www.hlt.inesc-id.pt/wiki/index.php/PT-STAR_\(Speech_Translation_Advanced_Research_to_and_from_Portuguese\)](https://www.hlt.inesc-id.pt/wiki/index.php/PT-STAR_(Speech_Translation_Advanced_Research_to_and_from_Portuguese)).
Main researcher: Luísa Coheur
Task: Large vocabulary speech to text research and development.
- LIREC **Living with Robots and Interactive Companions**, *EU project*,
2008–2012 <https://cordis.europa.eu/project/id/215554/>.
Main researcher: Peter McOwan
Role: Robust automatic speech recognition.
- I-DASH **The Investigator's Dashboard**, *EU project*,
2008–2010 [https://www.hlt.inesc-id.pt/wiki/index.php/I-Dash_\(The_Investigator's_Dashboard\)](https://www.hlt.inesc-id.pt/wiki/index.php/I-Dash_(The_Investigator's_Dashboard)).
Main researcher: Marcel Worring
Role: Contributions to automatic age detection.
- POSTPORT **Porting Speech Technologies to other Varieties of Portuguese**, *FCT project*,
2008–2010 [https://www.hlt.inesc-id.pt/w/PoSTPort_\(Porting_Speech_Technologies_to_other_varieties_of_Portuguese\)](https://www.hlt.inesc-id.pt/w/PoSTPort_(Porting_Speech_Technologies_to_other_varieties_of_Portuguese)).
Main researcher: Isabel M. Trancoso
Role: Speech recognition for Brazilian and African Portuguese.
- VIDIVIDEO **Interactive semantic video search with a large thesaurus of machine learned audio-visual concepts**, *EU project*, [https://www.hlt.inesc-id.pt/wiki/index.php/Vidi-Video_\(Interactive_semantic_video_search_with_a_large_thesaurus_of_machine_learned_audio-visual_concepts\)](https://www.hlt.inesc-id.pt/wiki/index.php/Vidi-Video_(Interactive_semantic_video_search_with_a_large_thesaurus_of_machine_learned_audio-visual_concepts)).
2007–2010
Main researcher: Arnold Smeulders
Role: Speech recognition and acoustic meta-annotation.
- TECNOVOZ **Tecnologias de Reconhecimento e Síntese de Voz**,
2006–2008 *Ministério da Economia e da Inovação, Programa Prime (Ref: PMDT Nº 03/165)*.
Main researcher: João P. Neto
Role: Hired as Post-doc researcher. Responsible for telephone speech recognition.
- CHIL **Computers In the Human Interaction Loop**, *EU project*,
2004–2007 <https://www.talp.upc.edu/project-detail/470/CHIL%20>.
Main researcher: Alexander Waibel
Role: Responsible for the Speaker Tracking task at UPC.

- ALIADO **Speech Technologies for a Personal Assistant**, *Spanish National project*.
 2002–2005 Main researcher: José B. Mariño
 Role: Research on robust speech processing.
- FAME **Facilitating Agents in Multicultural Exchange**, *EU project*.
 2001–2005 Main researcher: Climent Nadeu
 Role: Research and development of robust ASR systems.
- ATTEMPS-3 **Incorporating oral interfaces to aT Temps**, *I+D contract*.
 2004–2004 Main researcher: Javier Hernando
 Role: Responsible for the design and development of new features.
- ATTEMPS **Meteorological information by telephone**, *I+D contract*.
 2001–2002 Main Javier Hernando
 Role: Hired as Junior researcher. Development of an automatic telephone operated system.

Creation and reinforcement of laboratory infrastructures

- INESC-ID **INESC-ID multi-microphone rooms (MMR)**.
 MMR Responsible for the design, acquisition, installation and configuration of INESC-ID multi-room multi-microphone recording set-up build in the context of the activities of the DIRHA project. The current configuration is deployed in two different rooms and it includes 3 Focusrite OctoPre MKII Dynamic stages for microphone amplification and A/D & D/A conversion, 1 RME HDSPe RayDAT soundcard, 20 SHURE MX391/O boundary microphones, 2 close-talking Shure WH30TQG microphones with wireless equipment and 2 Tannoy Reveal 601A (active) loudspeakers.
 This equipment is used for data collection of distant microphone interactions in realistic environments.

Scientific activity development

Participation in scientific management units

- 2021–Present **Member**, *LUM LIS*, Lisbon Unit for Learning and Intelligent Systems, Instituto Superior Técnico.
<https://lumlis.tecnico.ulisboa.pt/index.html>
- 2020–Present **Coordinator**, *Human Language Technologies research unit*, INESC-ID.
<https://www.inesc-id.pt/research-areas/human-language-technologies/>
- 2020–Present **Coordinating Committee Member**, *Scientific Council of INESC-ID Lisboa (CCIL)*, INESC-ID.
<https://www.inesc-id.pt/about-us/organization/>
- 2020 **Vice-Coordinator**, *Human Language Technologies research unit*, INESC-ID.
<https://www.inesc-id.pt/research-areas/human-language-technologies/>
- 2013–Present **Member**, *Scientific Council of INESC-ID Lisboa (CCIL)*, INESC-ID.
<https://www.inesc-id.pt/about-us/organization/>

Participation in International evaluation campaigns and challenges

Alberto Abad led the participation of INESC-ID in the international evaluation campaigns discriminated below, having achieved the top results in many of them. Although the rules of such campaigns do not allow the publication of the ranking results, this participation strongly contributed to placing the INESC-ID team among the top research groups worldwide in these fields. Likewise, Alberto Abad also participated with great success in the Albayzin's campaigns, targeting the Spanish/Portuguese languages, and in ComParE challenges. The INESC-ID team led by Alberto Abad won the ComParE 2016 - Native Language Sub-Challenge

Paralinguistic ComParE 2021 - COVID-19 Cough Sub-challenge, Brno, Czech Republic, Sep 2021

- recognition ComParE 2020 - Elderly Emotion Sub-Challenge, Brno, Shanghai, China, Sep 2020
- ComParE 2020 - Breathing Sub-challenge, Shanghai, China, Sep 2020
- ADReSS 2020 - Alzheimers Dementia Recognition through Spontaneous Speech, Shanghai, China, Sep 2020
- Language ComParE 2016 - Native Language Sub-Challenge, San Francisco, US, Sep 2016
- recognition ComParE 2015 - Degree of Nateness Sub-Challenge, Dresden, Germany, Sep 2015
- Albayzin 2012 - Language recognition evaluation, Madrid, Spain, Nov 2012
- NIST LRE 2011 - Language recognition evaluation, Atlanta, US, Dec 2011
- Albayzin 2010 - Language recognition evaluation, Vigo, Spain, Nov 2010
- NIST LRE 2009 - Language recognition evaluation, Baltimore, US, Jun 2009
- Albayzin 2008 - Language recognition evaluation, Bilbao, Spain, Nov 2008
- Speaker ICB 2013 - Competition on speaker recognition in mobile environment using the MOBIO
- recognition database - Madrid, Spain, June 2013
- NIST SRE 2010 - Speaker recognition evaluation - Brno, Czech Republic, Jun 2010
- Spoken Term Albayzin 2016 - Query-by-Example Spoken Term Detection evaluation, Lisbon, Portugal,
- detection Nov 2016
- MediaEval2013 - Spoken web search evaluation, Barcelona, Spain, Oct 2013
- MediaEval2012 - Spoken web search evaluation, Pisa, Italy, Oct 2012
- Robust ASR PascalCHIME2011 - Machine Listening in Multisource Environments -Florence, Italy, Sep
- 2012
- 3D Speaker EVALITA 2014 - Speech Activity detection and Speaker LOfalization in DOMestic environ-
- tracking and ments (SASLODOM)- Pisa, Italy, December 2014
- segmentation CLEAR 2007 Person tracking - Baltimore, MD, US, May 2007
- CLEAR 2006 Person tracking - Southampton, UK, April 2006

Short Term Scientific Missions supervision

- 2017 Paula Lopez Otero (University of Vigo, Spain), *“Research on Depression Detection on De-Identified Speech”*, February 2017
- 2014 Julia Olcoz Martínez (Universidad de Zaragoza, Spain), *“Research on confidence measures for detetion of automatic speech recognition errors”*, August-December 2014
- 2011 Girmaw Abebe (Trento University, Italy), *“Acoustic keyword spotting experiments with AUDIMUS for the development of the word verification module of the VITHEA system”*, July-October 2011
- 2010 Jordi Luque Serrano (Technical University of Catalonia (UPC), Spain), *“Development of the joint system for the NIST SRE 2010”*, October 2009 - March 2010

Research grants supervision

- 2021 Carlos Carvalho, *BioVisualSpeech project*. Speech Analysis, 2021-present
- 2020 Francisco Oliveira, *BioVisualSpeech project*. Game development, 2019-2020
- Anna Pompili, *BioVisualSpeech project*. Speech Analysis, 2019-2020
- 2019 Catarina Botelho, *BioVisualSpeech project*. Speech analysis, 2019
- Cátia Pedrosa, *BioVisualSpeech project*. Data annotation, 2018-2019
- 2018 Mauro Sansana, *BioVisualSpeech project*. ASR development, 2016-2018
- 2015 Miguel Matos, *RAGE project*. ASR research and development, 2015

- 2014 Miguel Matos, *DIRHA project*. Showcase development, HW/SW support, 2012-2014
 Joana Correia, *DIRHA project*. Speaker recognition, 2014
 Annamaria Pompili, *VITHEA project*. Platform development, 2010-2014
- 2013 Justyna Kosmala, *DIRHA project*. Speaker recognition, 2012-2013
- 2012 Sofia Clérigo, *VITHEA project*. Therapy exercises, 2012
 Pedro Alves, *VITHEA project*. Platform development, 2012
- 2011 Girmaw Abebe, *VITHEA project*. Keyword spotting experiments, 2011

Recognition by the international scientific community

Recognition awarded by scientific societies

IEEE **IEEE Senior member**, 2021

Editorial activities in international journals

Editor **Associate Editor** of IEEE/ACM Transactions on Audio, Speech and Language Processing · <https://signalprocessingsociety.org/publications-resources/ieeeacm-transactions-audio-speech-and-language-processing/editorial-board> · Rank: SCI(Q1), h-index: 56 · 2020-present

Coordination and participation in programme committees of scientific events

Committee chair Publication chair of IEEE SLT 2022, Doha, Qatar, January 2023
<https://slt2022.org>

Technical co-chair of IberSPEECH'2020, Valladolid, Spain, March 2021
<https://iberspeech2020.eca-simm.uva.es>

Technical co-chair of PROPOR'2018, Canela, Brazil, Sept 2018
<http://www.inf.ufrgs.br/propor-2018/>

Technical co-chair of IberSPEECH'2018, Barcelona, Spain, Nov 2018
<http://iberspeech2018.talp.cat>

General chair of IberSPEECH'2016, Lisbon, Portugal, Nov 2016
<http://iberspeech2016.inesc-id.pt>

Demos Chair at Iberspeech 2012, Madrid, Spain, Nov 2012
<http://iberspeech2012.ii.uam.es/>

Demos Chair at PROPOR 2012, Coimbra, Portugal, Apr 2012
<http://www.propor2012.org/>

Special session Co-organizer of “Acoustic Scene Analysis in Domestic Environments” at EUSIPCO 2014, Lisboa, Portugal, Sept 2014
<http://www.eusipco2014.org/program/special-sessions/>

Participation as invited speaker in scientific workshops

Meetings and conferences Alberto Abad, “Speech Processig @ LUM LIS”, Presentation at Workshop Deloitte-LumLis, 2021

Alberto Abad, “Towards the use of speech as a health biomarker”, Invited talk at Reunião Serviço de Psiquiatria of Centro Hospitalar Lisboa Ocidental (CHLO), 2021

Alberto Abad, “Cross lingual transfer learning for zero-resource domain adaptation”, Invited talk at IBM Watson Research Seminar Series, 2020

Alberto Abad, “Children’s speech: development, pathologies and processing”, Invited talk at TAPAS Training Event 1: Speech Pathologies and Therapies, 2018

Alberto Abad, "Speech and language technologies applied to therapy and screening of language and cognitive disorders", Invited talk at Traitement automatique de la parole pathologique et applications cliniques, 2016.

Alberto Abad, Isabel Trancoso, "Speech and language technologies applied to therapy and diagnosis", Invited talk at XI Encontro da Engenharia Biomédica 2013, Instituto Superior Técnico, University of Lisbon, November 2013

Meetings and conferences(as co-author) Isabel Trancoso, Francisco Teixeira, Maria Joana Ribeiro Folgado Correia, Maria Catarina Tavares Botelho, Alberto Abad, Bhiksha Raj, "Profiling speech for clinical applications", In (Keynote paper) SPECOM - 22nd International Conference on Speech and Computer, St. Petersburg, Russia, October 2020

Isabel Trancoso, Maria Joana Ribeiro Folgado Correia, Francisco Teixeira, Maria Catarina Tavares Botelho, Alberto Abad, Bhiksha Raj, "Speech - a health biomarker", In (Keynote paper) PROPOR, Évora, Portugal, March 2020

Isabel Trancoso, Maria Joana Ribeiro Folgado Correia, Francisco Teixeira, Alberto Abad, Maria Catarina Tavares Botelho, Bhiksha Raj, "Speech as a (private?) biomarker for speech affecting diseases", Keynote at ICIEA 2019 - The 14th IEEE Conference on Industrial Electronics and Applications, IEEE, Xi'an, China, June 2019

Isabel Trancoso, Maria Joana Ribeiro Folgado Correia, Francisco Teixeira, Bhiksha Raj, Alberto Abad, "Speech Analytics for Medical Applications", Keynote at TSD 2018

Isabel Trancoso, Maria Joana Ribeiro Folgado Correia, Francisco Teixeira, Alberto Abad, "Analysing Speech for Clinical Applications", Keynote at SLSP 2018

Vania Mendonça, Annamaria Pompili, Ruben Santos, Isabel Trancoso, Luisa Coheur, Alberto Abad, "E-inclusão no L2F: As tecnologias da língua ao serviço da saúde", Invited talk at VII Linguistics, Language Development and Impairment, 2016

Isabel Trancoso, Alberto Abad, Luísa Coheur, Annamaria Pompili, Cristiana Amorim, Vânia Mendonça, "Virtual Therapists", Keynote at CLEF2016, Évora, Portugal, 2016

Annamaria Pompili, Alberto Abad, Isabel Trancoso e João P. Carvalho, "Beyond VITHEA: speech technologies to improve cognitive functionality", Invited talk at V Linguistics, Language Development and Impairment, 2015

Isabel Trancoso, Alberto Abad and Thomas Pellegrini, "Speech Technologies Applied to eHealth and eLearning", In Oriental COCOSDA 2012 (Keynote), IEEE, Macau (China), December 2012

Summer Schools Alberto Abad, "The L2F Broadcast News Speech Recognition System", In TH:A - Applications of Speech Technologies (Summer School), RTTH, Almuñecar (Spain), June 2011

Awards and merits

Publications **Best Paper award** at PROPOR2020 to "Grilo et al., The Biovisualspeech European Portuguese sibilants corpus", <https://propor.di.uevora.pt>, Évora, Portugal, 2020

Challenges **Winner of the INTERSPEECH 2016 Computational Paralinguistics Challenge** - Native Language Sub-Challenge with the system described in "Abad et al., Exploiting Phone Log-Likelihood Ratio Features for the Detection of the Native Language of Non-Native English Speakers", <http://emotion-research.net/sigs/speech-sig/is16-compare>, San Francisco, US, 2016

Projects **Award in the category of Applied Research** at the "IV Gala da Inclusão" for the work in the VITHEA project, <http://observatorio-lp.sapo.pt/pt/ligacoes/tecnologias-da-lingua/noticias-tec-lingua/iv-gala-da-inclusao>, Leiria, Portugal, 2013

First prize for VITHEA as the best Service at Conferências saúdeCUF2013 in the area of MobileHealth , <http://conferenciassaudecuf.com/2013/home/>, Estoril, Portugal, 2013

Second best demo award for VITHEA at Iberspeech 2012 <http://iberspeech2012.iia.uam.es/> Madrid, Spain, 2012

Performance Evaluation **Excellent (FCT Integrated researcher)**, Avaliação de Desempenho dos Investigadores 2016-2018 (RADINESC-ID), INESC-ID, 2019

Technology and knowledge transfer

Scientific and technological disclosure publications

Demonstration and system description papers

- 2016 Anna Maria Pompili and Alberto Abad. The L2F query-by-Example spoken term detection system for the ALBAYZIN 2016. In *Albayzin Evaluation - IberSPEECH 2016*, November 2016.
- 2014 Alberto Abad, José Matos, Hugo Meinedo, Ramon Fernandez Astudillo, and Isabel Trancoso. The L2F system for the EVALITA-2014 speech activity detection challenge in domestic environments. In *International Workshop EVALITA 2014*, December 2014.
- 2013 Pedro Fialho, Luísa Coheur, Sérgio dos Santos Lopes Curto, Pedro Miguel Abrunhosa Cláudio, Angela Costa, Alberto Abad, Hugo Meinedo, and Isabel Trancoso. Meet Edgar, a tutoring agent at Monserrate. In *ACL, Proceedings of the 51st Annual Meeting of the Association for Computational Linguistics: System Demonstrations*, August 2013.
- 2012 Anna Maria Pompili, Pedro Fialho, and Alberto Abad. VITHEA: On-line word naming therapy in portuguese for aphasic patients exploiting automatic speech recognition. In *Proceedings of IberSPEECH*, November 2012.
- Anna Maria Pompili and Alberto Abad. VITHEA: On-line therapy for aphasic patients exploiting automatic speech recognition. In *Propor 2012 - Special demo session*, April 2012.
- Alberto Abad. The L2F language recognition system for albayzin 2012 evaluation. In *Proceedings of IberSPEECH*, November 2012.
- 2011 Luis Javier Rodríguez-Fuentes, Mikel Penagarikano, Amparo Varona, Mireia Díez, Germán Bordel, Alberto Abad, David Martínez, Jesús Villalba, Alfonso Ortega, and Eduardo Lleida. The BLZ systems for the 2011 NIST language recognition evaluation. In *The 2011 NIST Language Recognition evaluation (LRE11) Workshop*, December 2011.
- Alberto Abad. The L2F language recognition system for NIST LRE 2011. In *The 2011 NIST Language Recognition evaluation (LRE11) Workshop, Atlanta, US, December 2011*, December 2011.
- 2010 Alberto Abad, Jordi Luque, Isabel Trancoso, and Javier Hernando. The L2F - UPC speaker recognition system for NIST SRE 2010. In *The 2010 NIST Speaker Recognition evaluation (SRE2010) Workshop, Brno, Czech Republic*, June 2010.
- Alberto Abad, Oscar Koller, and Isabel Trancoso. The L2F language verification systems for albayzin-2010 evaluation. In *Fala2010, Vigo, Spain*, November 2010.
- 2009 Alberto Abad and Isabel Trancoso. The L2F language verification system for NIST LRE 2009. In *The 2009 NIST Language Recognition evaluation (LRE09) Workshop*, June 2009.
- 2008 Alberto Abad and Isabel Trancoso. The L2F language verification systems for albayzin-08 evaluation. In *V Jornadas en Tecnología del Habla*, November 2008.

National meetings and conferences

- 2017 Sónia Reis, Anna Maria Pompili, Alberto Abad, and Jorge Baptista. O provérbio como estímulo num terapeuta virtual. In *VI Simpósio Mundial de Estudos sobre o Português (SIMELP)*, 2017.
- 2013 Alberto Abad, Anna Pompili, Isabel Trancoso, José Fonseca, and Isabel Pavão Martins. VITHEA: virtual therapist for aphasia treatment. In *XVII Edition of Conferências SAÚDE-CUF, Lisboa (Portugal)*, 2013.
- 2012 José Fonseca, Alberto Abad, Gabriela Leal, Luisa Farrajota, Anna Pompili, Isabel Trancoso, and Isabel Pavão Martins. VITHEA: sistema online para tratamento da nomeação oral na afasia. In *VI Congresso Português do AVC da Sociedade Portuguesa de AVC (Poster presentation), Porto (Portugal)*, 2012.
- 2011 José Fonseca, Alberto Abad, Gabriela Leal, Luisa Farrajota, Anna Pompili, Isabel Trancoso, and Isabel Pavão Martins. Sistema online para o tratamento da afasia. In *Encontro dos Técnicos de Diagnóstico e Terapêutica, Lisboa (Portugal)*, 2011.
- 2006 Carlos Segura, Alberto Abad, Climent Nadeu, and Javier Hernando. Multimodal person tracking in a smart-room environment. In *Proc. IV Jornadas en Tecnología del Habla, Zaragoza (Spain)*, 2006.
- 2004 Jan Anguita, Javier Hernando, Alberto Abad, Climent Nadeu, and Jaume Pradell. Verificación robusta del locutor mediante adaptación jacobiana. In *Proc. III Jornadas en Tecnología del Habla, Valencia (Spain)*, 2004.

Rendering of services and consulting

TalkDesk **TalkDesk Consultant**

2021–present Consulting sub-contract to support TalkDesk in the development of in-house automatic speech recognition systems, since 2021.
Ref.: Pedro ANDRADE pedro.andrade@talkdesk.com

UNBABEL **UNBABEL partnership**

2019–present Team member for technical consultancy services, research and development of translation enrichment models and implementation of an automatic speech transcription enrichment module, since 2019.
Ref.: João GRAÇA joao@unbabel.com

ViaVerde **ViaVerde Consultant**

2019 Consulting sub-contract to support ViaVerde Servicos, S.A. in the development and assessment of a new product that incorporates human language technologies during 2019.
Ref.: Ana Claudia OLIVEIRA ana.mariano.oliveira@brisa.pt

Other **VoiceInteraction collaboration**

Research results during Alberto Abad period at INESC-ID had a very relevant impact in the INESC-ID spin-off company, VoiceInteraction S.A. This close cooperation has led to the improvement of existing products, like ASR thanks to context-dependent modelling, and to the development of new ones, like keyword spotting and speaker/language identification modules.

Ref.: João Paulo NETO joao.neto@voiceinteraction.pt

ELSA and DefinedCrowd collaboration

Collaboration with local start-ups ELSA (<https://elsaspeak.com/en/>) and DefinedCrowd (<https://www.definedcrowd.com>) by means of students co-supervision and data sharing.
Ref.: Xavier ANGUERA xavier@elsanow.io & João FREITAS joao@definedcrowd.com

Production of engineering prototypes

VITHEA prototypes

Alberto Abad lead the development of the VITHEA system. This service was used by therapists from 4 hospitals of the Lisbon area and many other independent therapists and patients. The success of this product has raised the interest of one of the leading health private groups in Portugal and of other public hospitals to adapt the service to new diseases, such as autism, dyslexia, and language development in children. Some of these efforts are currently on-going.

Scientific and technological disclosure events to society

- Expos **Expo LOUCAMENTE** Pavilhão do Conhecimento, Centro Ciência Viva, Lisboa, 2015/16
<https://www.pavconhecimento.pt/3076/loucamente>
Description: Responsible for HLT fixed installation
- Demos **Encontro Ciência 2019** Centro de Congressos de Lisboa, Lisboa, 2019
Description: Responsible for HLT prototype demonstrations
- Noite Europeia dos Investigadores 2017** Centro Ciência Viva, Lisboa, 2017
Description: Responsible for HLT prototype demonstrations
- Noite Europeia dos Investigadores 2015** Museu Nacional História Natural e Ciência (MUHNAC-Universidade de Lisboa), Lisboa, 2015
Description: Responsible for HLT prototype demonstrations
- ICT 2015 (Innovate, Connect, Transform)** Centro de Congressos, Lisboa, 2015
Description: Responsible for HLT prototype demonstrations 2015

Management activities within the university

Participation in university bodies, department and research units

- 2021–Present **Member**, *LUM LIS*, Lisbon Unit for Learning and Intelligent Systems, Instituto Superior Técnico.
<https://lumlis.tecnico.ulisboa.pt/index.html>
- 2020–Present **Coordinator**, *Human Language Technologies research unit*, INESC-ID.
<https://www.inesc-id.pt/research-areas/human-language-technologies/>
- 2021–Present **Executive Coordinator**, *Programming Methodology and Technology scientific area*, Department of Computer Science and Engineering (DEI), Instituto Superior Técnico.
<https://dei.tecnico.ulisboa.pt/sobre-o-departamento/areas-cientificas/ac-metodologia-e-tecnologias-de-programacao>
- 2020–Present **Coordinating Committee**, *Scientific Council of INESC-ID Lisboa (CCIL)*, INESC-ID.
<https://www.inesc-id.pt/about-us/organization/>
- 2021–Present **Member**, *Coordinating Committee for 3rd Study Cycle (CC3C)*, Department of Computer Science and Engineering (DEI), Instituto Superior Técnico.
<https://dei.tecnico.ulisboa.pt/en/about/management-bodies/coordinating-committee-for-the-3rd-cycle>
- 2020 **Vice-Coordinator**, *Human Language Technologies research unit*, INESC-ID.
<https://www.inesc-id.pt/research-areas/human-language-technologies/>
- 2013–Present **Member**, *Scientific Council of INESC-ID Lisboa (CCIL)*, INESC-ID.
<https://www.inesc-id.pt/about-us/organization/>

Temporary duties and tasks

Participation in Ph.D. juries

- 2021 Maria Joana Ribeiro Folgado Correia, “In-the-wild detection of speech affecting diseases”, Ph.D. Thesis, Carnegie Mellon University & Instituto Superior Técnico, University of Lisbon, 2021
- 2020 Carlos Daniel Cipriano Ferreira, “Functional mapping of the inner speech brain-related areas - From syllable to sentence”, Ph.D. Thesis, Departamento de Ciências da Saúde, Universidade de Aveiro, 2020
- Vera Cabarrão, “Entrainment in European Portuguese”, Ph.D. Thesis, Faculdade de Letras, Universidad de Lisboa, 2020
- 2019 Igor Odriozola Sustaeta, “Speech recognition based strategies for on-line Computer Assisted Language Learning (CALL) systems in Basque”, Ph.D. Thesis, Universidad del País Vasco, 2019
- 2017 Iván López Espejo, “Robust Speech Recognition on Intelligent Mobile Devices with Dual-Microphone”, Ph.D. Thesis, Universidad de Granada, 2017
- Shahab Jalalvand, “Automatic Speech Recognition Quality Estimation”, Ph.D. Thesis, Università degli Studi di Trento, 2017
- 2016 Cristina Maritza Guerrero Flores, “Information Fusion Approaches for Distant Speech Recognition in a Multi-Room Setting”, Ph.D. Thesis, Università degli Studi di Trento, 2016
- 2015 José Miguel Ladeira Portêlo, “Privacy-Preserving Frameworks for Speech Mining”, Ph.D. thesis, Instituto Superior Técnico, University of Lisbon, 2015
- Mireia Diez Sánchez, “Frame-Level Features Conveying Phonetic Information for Language and Speaker Recognition”, Ph.D. thesis, University of the Basque Country, 2015
- Paula López Otero, “Improved Strategies for Speaker Segmentation and Emotional State Detection”, Ph.D. thesis, Universidad de Vigo, 2015
- 2014 Marcos Santos Pérez, “Análisis y Optimización de Agentes Conversacionales 3D para Sistemas Empotrados”, Ph.D. thesis, Universidad de Málaga, 2014
- 2013 Martin Wolf, “Channel Selection and Reverberation-Robust Automatic Speech Recognition”, Ph.D. thesis, Technical University of Catalonia, 2013

Participation in Ph.D. juries (as external reviewer)

- 2020 Xabier Sarasola Aramendia, “Application of signing synthesis techniques to bertsoaritzara”, Ph.D. thesis, University of the Basque Country, 2020
- 2017 Domingo López Oller, “Estimation and reconstruction techniques for robust speech transmissions”, Ph.D. Thesis, Universidad de Granada, 2017
- 2015 David Martínez González, “Subspace Gaussian Mixture Models for Language Identification and Dysarthric Speech Intelligibility Assessment”, Ph.D. thesis, Universidad de Zaragoza, 2015
- Héctor Delgado Flores, “Fast Cross-Session Speaker Diarization”, Ph.D. thesis, Universitat Autònoma de Barcelona, 2015

Participation in M.Sc. juries (only other universities)

- 2021 William de Barros da Costa, “Deploying a Speech Therapy Game using a Deep Neural Network Sibilant Consonant Classifier”, M.Sc. thesis, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, 2021

João Manuel Alves Mourão de Sá, “Reconhecimento de fala em português de Portugal num contexto com poucos recursos”, M.Sc. thesis, Faculdade de Ciências, Universidade de Porto, 2021

2020 Manuel Alejandro De Oliveira Da Costa, “Computational approaches to study speech communication in groups”, M.Sc. thesis, Universidade de Aveiro, 2020

2016 Mariana de Oliveira Diogo, “Robust scoring of voice exercises in a serious game for speech therapy”, M.Sc. thesis, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, 2016

[Reviewer for international journals](#)

SCI(Q1) IEEE/ACM Transactions On Audio, Speech, And Language Processing [h-index: 56]

IEEE Signal Processing Letters, IEEE [h-index: 138]

Speech Communication, Elsevier [h-index: 106]

Computer Speech and Language, Elsevier [h-index: 71]

Artificial Intelligence, Elsevier [h-index: 154]

SCI(Q2) Computers and Electrical Engineering, Elsevier [h-index: 64]

Signal, Image and Video Processing, Springer-Verlag- NY, USA [h-index: 42]

SCI(Q3) EURASIP Journal on Audio, Speech, and Music Processing, Springer [h-index: 29]

[Reviewer for international scientific events](#)

CORE(A*) IJCAI-PRICAI, International Joint Conference on Artificial Intelligence and Pacific Rim International Conference on Artificial Intelligence, 2020

CORE(A) Interspeech, ISCA, 2008–Present

CORE(B) ICASSP: IEEE International Conference on Acoustics, Speech and Signal Processing, 2009–Present

EUSIPCO, European Association for Signal Processing, 2011–2020

CORE(C) ASRU: IEEE Automatic Speech Recognition and Understanding Workshop, 2011-2019

Other SLT: IEEE Spoken Language Technology Workshop, 2010–2016

Odyssey: The Speaker and Language Recognition Workshop, 2016-2020

PROPOR: International Conference on Computational Processing of Portuguese, 2012-2020

IberSpeech: Joint Spanish Thematic Network on Speech Technology and Iberian SLTech, 2012-2020

[Evaluator for scientific projects](#)

International Agence Nationale de la Recherche (ANR), France, 2015

National Fundação para a Ciência e Tecnologia (FCT), Portugal, 2011