

<b>CV date</b>	19/02/2021
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## Part A. PERSONAL INFORMATION

First and Family name	José Andrés González López		
ID number	14626803-E	Age	38
Researcher codes	WoS Researcher ID	AAA-8130-2019	
	SCOPUS Author ID	57210179376	
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### A.1. Current position

Institution	Universidad de Granada		
Dpt. / Centre	Teoría de la Señal, Telemática y Comunicaciones / Escuela Técnica Superior de Ingeniería Informática		
Address	ETS de Ingenierías de Informática y Telecomunicación, C./ Periodista Daniel Saucedo Aranda, s/n, 18071, Granada		
Phone number	(+34) 653205804	E-mail	<a href="mailto:joseangl@ugr.es">joseangl@ugr.es</a>
Current position	Juan de la Cierva – Incorporación Fellow	From	May-2019
Key words	Clinical applications of speech technology, Noise robust-speech recognition, Deep learning, Speech processing		

### A.2. Education

Bachelor/Master/PhD	University	Year
PhD thesis	University of Granada	2013
Diploma de Estudios Avanzados (DEA)	University of Granada	2008
BSc Informatics Engineering	University of Granada	2007
BSc Technical Engineering in Computer Systems	University of Granada	2004

### A.3. JCR articles, h Index, thesis supervised...

- Total times cited: 429 (Google Scholar), 182 (WoS)
- Average number of times cited/year over the last 5 years: 70 (Google Scholar), 27 (WoS)
- Total publications in JCR: 1 (D1), 7 (Q1), 7 (Q2), 2 (Q3)
- H index: 12 (Google Scholar), 8 (WoS)
- Student supervision: 2 PhD students (ongoing) and 4 Master students

## Part B. CV SUMMARY (max. 3500 characters, including spaces)

I obtained the BSc in Informatics Engineering from the University of Granada (UGR) in 2006 and, after two years working at the Department of Signal Theory, Telematics and Communications as a research assistant, I started my PhD studies in 2008 in the same department after being awarded with an FPU scholarship. In 2013 I defended my PhD thesis which addressed the problem of acoustic noise in automatic speech recognition systems. The thesis obtained the highest score (Sobresaliente Cum Laude) and was awarded with the international mention. During my PhD I had the opportunity to carry out 2 research stays in the UK with a total duration of 8 months. After the PhD, I was awarded with a postdoctoral fellowship at the University of Granada. Later, in June 2013, I joined the Department of Computer Science of the University of Sheffield (UK) as a Postdoctoral Research Associate. This period was very enriching for my professional career as I had the opportunity to address the problem of restoring the ability to speak to those people who have lost their voice as a result of laryngeal cancer. At the end of 2017 I joined the University of Malaga as a Lecturer where I stayed until May 2019, when I returned to the University of Granada after being awarded with a Juan de la Cierva - Incorporación fellowship.

My scientific production consists of 24 journal publications (17 in JCR-indexed journals, 8 of them in Q1, 7 in Q2 and 6 as the main author), 50 contributions to world-renowned national and international conferences in the areas of speech and signal processing (including IEEE ICASSP, Interspeech and Iberspeech), 10 book chapters, and 1 international patent. I have



participated in 17 research projects, of which 6 are UK national projects, being the Principal Investigator of 4 of them. In these projects I have actively contributed to the development of speech analysis and synthesis technologies. During my career I have received several research awards, including 4 best paper awards (AVIOS'2007, Eusipco'2014, Biosignals'2015, Biodevices'2108) and 2 best journal article awards, in 2011 and 2020, granted by the Spanish Red Temática en Tecnologías del Habla. I routinely serve as a peer reviewer for the best journals and conferences in my area, as well as serving as evaluator for project proposals and fellowships, including the Agencia Estatal de Investigación (AEI). Through my career I have actively invested time into disseminating and communicating my research to the public and the media.

I also have ample teaching experience with more than 820 hours taught in different courses in the areas of computer science and telecommunications at the Universities of Granada, Málaga and Sheffield. Likewise, I have supervised 7 final year projects, 7 Master students, and 1 PhD student. I have collaborated in 4 teaching innovation projects and have taught in other foreign universities through the Erasmus+ programme.

## Part C. RELEVANT MERITS

### C.1. Publications

- 1 Gómez-Alanis, A. et al. (5/2) (2020). *On joint optimization of automatic speaker verification and anti-spoofing in the embedding space*. IEEE Transactions on Information Forensics & Security, 16:1579-1593. IF: 6.012, Ranking: D1.
- 2 **Gonzalez, J.A.** et al. (5/1) (2020). *Silent speech interfaces for speech restoration: A review*. IEEE Access, 8:177995-178021. IF: 3.745, Ranking: Q1.
- 3 Gómez-Alanis, A.; **Gonzalez, J.A.**; Peinado, A (2020). *A Kernel density estimation based loss function and its application to ASV-spoofing detection*. IEEE Access, 8:108530-108543. IF: 3.745, Ranking: Q1.
- 4 Gómez-Alanis, A.; et al. (4/3) (2019). *A gated recurrent convolutional neural network for robust spoofing detection*. IEEE/ACM Transactions on Audio, Speech, and Language Processing, 27(12):1985-1999. IF: 3.39, Ranking: Q1.
- 5 Ma, N.; **Gonzalez, J.A.**; Brown, G.J. (2018). *Robust binaural localisation of a target sound source by combining spectral source models and deep neural networks*. IEEE/ACM Transactions on Audio, Speech, and Language Processing, 26(11):2122-2131. IF: 3.531, Ranking: Q1.
- 6 Martín-Doñas; et al. (4/3) (2018). *A deep learning loss function based on the perceptual evaluation of the speech quality*. IEEE Signal Processing Letters, 25(11):1680-1684. IF: 3.268, Ranking: Q2.
- 7 **Gonzalez, J.A.**; et al. (8/1) (2017). *Direct speech reconstruction from articulatory sensor data by machine learning*. IEEE-ACM Transactions on Audio, Speech, and Language Processing, 25(12):2362-2374. IF: 2.950, Ranking: Q1.
- 8 **Gonzalez, J.A.**; et al. (5/1) (2017). *Spectral reconstruction and noise model estimation based on a masking model for noise-robust speech recognition*. Circuits, Systems, and Signal Processing, 36(9): 3731-3760. IF: 1.998, Ranking: Q2.
- 9 Gilbert, J.M. et al. (7/2) (2017). *Restoring speech following total removal of the larynx by a learned transformation from sensor data to acoustics*. JASA Express Letters, 141(3): EL307. IF: 1.605, Ranking: Q3.
- 10 **Gonzalez, J.A.** et al. (7/1) (2016). *A silent speech system based on permanent magnet articulography and direct synthesis*. Computer Speech and Language, 39:67-87. IF: 1.900, Ranking: Q2.

### C.2. Research projects and grants

#### As Principal Investigator:

- 1 Aplicaciones clínicas de la neurociencia: Localizando las áreas del lenguaje en pacientes epilépticos y restaurando el habla a personas paralizadas. Proyectos de I+D+i del programa operativo FEDER Andalucía 2014-2020, **Universidad de Granada**. 139.800€ (requested). Under evaluation.



- 2 Voice restoration with brain computer interfaces. Ref.: PID2019-108040RA-C22. Proyectos I+D+i 2019, **Ministerio de Ciencia e Innovación**. 06/2020-05/2023, 49.852 €
- 3 Silent Speech: restoring the power of speech to people whose larynx has been removed. White Rose Collaboration Fund, **White Rose Consortium (UK)**, 01/02/2016-31/01/2018. £9.800.
- 4 Experiments with a 'silent speech' system for voice restoration. SURE scheme, **University of Sheffield (UK)**, 01/01/2017-30/12/2017, £1.215.
- 5 Seeing your voice: speech synthesis from MRI images of the vocal tract. SURE scheme, **University of Sheffield (UK)**, 1/01/2016-31/12/2016, £1.080.

#### **As a member of the research team:**

- 6 Nuevas aproximaciones conexionistas integradas para procesado de señal. Ref.: TEC2016-80141-P, Proyectos de I+D, **Ministerio de Economía y Competitividad**. 2017-19, 53.300 €
- 7 Speech rehabilitation from articulator movement. Ref.: II-LB-0814-20007, Invention for innovation (I4I), **National Institute for Health Research (UK)**, 2016-18, £655.678.
- 8 Digital speech recovery from articulator movement. Ref.: II-AR-0410-12027, Invention for innovation (I4I), **National Institute for Health Research (UK)**, 2013-16, £800,000.

#### **C.4. Patents**

Green, P.D.; **Gonzalez, J.A.**; Moore, R.K.; Gilbert, J.M. Speech synthesis from detected speech articulator movement. Pub. No.: US 20170263237A1, Pub. Date: 14/09/2017.

#### **C.5. Awards**

##### **Fellowships/scholarships:**

- 1 **Juan de la Cierva – Incorporación fellowship** (Ref.: IJCI-2017-32926). Ministerio de Economía, Industria y Competitividad. University of Granada. May-2019 to May-2021.
- 2 **Contrato Puente postdoctoral fellowship**. Plan propio de investigación, Universidad de Granada. University of Granada. March-2013 to June-2013.
- 3 **Formación de Profesorado Universitario (FPU) scholarship** (Ref.: AP2007-00350). Ministerio de Educación. University of Granada. Aug-2008 to July-2012.

##### **Research awards:**

- 4 Best journal paper award. **Red Temática en Tecnologías del Habla**, 2020. Paper: "A gated recurrent convolutional neural network for robust spoofing detection".
- 5 Best paper award. **XXXI Congreso Internacional AELFA-IF**, 2018. Paper: "A real-time speech system for voice restoration after total laryngectomy".
- 6 Best paper award. **11<sup>th</sup> International Conference on Biomedical Electronics and Devices (BioDevices)**, 2018. Paper: "A wearable silent speech interface based on magnetic sensors with motion-artefact removal".
- 7 Best paper award. **8<sup>th</sup> International Conference on Bio-inspired Systems and Signal Processing (BioSignals)**, 2015. Paper: "A user-centric design of permanent magnetic articulography based assistive speech technology".
- 8 Best student paper award. **22<sup>nd</sup> European Signal Processing Conference (Eusipco)**, 2014. Paper: "Feature enhancement for robust speech recognition on smartphones with dual-microphone".
- 9 Best journal paper award. **Red Temática en Tecnologías del Habla**, 2011. Paper: "Feature extraction based on pitch-synchronous averaging for robust speech recognition".
- 10 Best student speech application. **AVIOS (Applied Voice Input/Output Society)**, 2008. Awarded application: "Speech-enabled geo-yellow pages".

#### **C.6. Mobility**

##### **Research stays:**

- 1 Cognitive Systems Lab, **University of Bremen (Germany)**. Erasmus+ staff mobility programme. 10/07/2018 to 14/07/2018.
- 2 Dept. of Computer Science, **University of Sheffield (UK)**. Postdoctoral research contract. June-2013 to October-2017.
- 3 Dept. of Computer Science, **University of Sheffield (UK)**. Predoctoral FPU short stays programme. 01/09/2011 to 18/12/2011.



- 4 Dept. of Computer Science, **University of Sheffield (UK)**. Predoctoral FPU short stays programme. 23/08/2010 to 18/12/2010.

#### **Teaching mobility:**

- 5 Dept. of Computer Science, **University of Sheffield (UK)**. Erasmus+ staff mobility programme. 18/06/2018 to 22/16/2018.

#### **C.7. Teaching experience**

- 1 **University of Granada**. Taught different modules in the BSc Telecommunications Technology Engineering. 325 hours. 2010 – present.
- 2 **University of Malaga**. Taught different modules in the following degrees: BA Tourism, BSc Informatics Engineering, BSc Electrical Engineering, BSc Software Engineering, BSc Computer Engineering, BSc Electronic, Robotic and Mechatronic Engineering. 466 hours. 2017 – 2019.
- 3 **University of Sheffield**. Module: Human Centred Systems Design. 32 hours. 2013 – 2017.

#### **C.8. Student supervision**

- 1 Undergraduate students: 6 (completed) and 1 (ongoing).
- 2 Master students: 4 (completed) and 3 (ongoing).
- 3 PhD students: 1 (ongoing).

#### **C.9. Keynotes and invited talks**

- 1 Silent speech interfaces for speech restoration: Current status and future challenges. **Keynote at ESSV'2019 conference**. Dresden, Germany. 2019.
- 2 Silent speech: Reconstructing speech from articulator movement data by machine learning. **Plenary speaker at RTTH Summer school 2017**. Technical University of Valencia. 2017. 2017.
- 3 **Other invited talks**: University of Granada (2017-2019 at different Master degrees), University of Bremen (2018), University of York (2016), University of Jaen (2013).

#### **C.10. Evaluation activities**

- 1 Evaluator for the Agencia Estatal de Investigación (AEI) since 2020.
- 2 External evaluator for the standard grant projects of the Czech Science Foundation since 2018.
- 3 External evaluator for the Marie Skłodowska-Curie COFUND Fellowship scheme (EDGE). Trinity College Dublin. 2016.
- 4 Reviewer of more than 40 international articles in JCR-indexed journals, including IEEE Signal Process. Mag., IEEE J. Biomed. Health Inform., IEEE-ACM Trans. Audio Speech Lang., and Speech Comm.
- 5 Reviewer of more than 5 international conferences, including IEEE ICASSP, Interspeech.

#### **C.11. Professional accreditations**

In possession of the following **ANECA accreditations**: Profesor Titular de Universidad (2020), Profesor Contratado Doctor (2015), Profesor de Universidad Privada (2014), and Profesor Ayudante Doctor (2013).

#### **C.12. Memberships of scientific societies, scientific and program committees**

- 1 Member of the editorial board of MDPI Applied Sciences (IF: 2.474).
- 2 Member of the technical programme committees of IEEE ICASSP, Interspeech and Iberspeech.
- 3 Member of the IEEE Signal Processing society and the Spanish Red Temática en Tecnologías del Habla.
- 4 Guest editor of the special issue “Applications of Speech and Language Technologies in Healthcare”. MDPI Applied Sciences, 2021.
- 5 Co-organizer of the special session “*Novel paradigms for direct synthesis based on speech-related biosignals*” at Interspeech'2018.