

## 1. CONTACT INFORMATION

Name: Nogueira Vázquez, Waldo Prof. Dr.-Ing  
 Address: Hunaeustrasse, 1. 30177, Hannover  
 Date/Place of birth: 12<sup>th</sup> July 1978, Barcelona (Spain)  
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 web: [https://vianna.uber.space/01\\_workgroups/nogueira.html](https://vianna.uber.space/01_workgroups/nogueira.html)



## 2. SHORT BIOGRAPHY

Waldo Nogueira received has a degree in Telecommunications Engineering from the Technical University of Catalonia (UPC) in 2003. He wrote his diploma thesis as an Erasmus student at the Leibniz University of Hannover (LUH). He pursued his PhD degree at the Laboratory of Information Technology of the LUH. His research is focused on novel diagnostics and treatments for hearing loss based on the fundamental understanding of interaction mechanisms between the electrically and acoustically stimulated auditory system. He uses methods based on electrophysiology, psychoacoustics, computational models and signal processing. He has conducted research in the clinic, academia and industry. He created the Auditory Prosthetic Group (tenured W2-professor) of the cluster of excellence Hearing4all and the Hannover Medical School (MHH) where he conducts research on auditory implants such as the cochlear implant, auditory nerve implant and auditory midbrain implant. He is also an affiliated professor at the Institute of Information Processing (TNT) of the LUH. His teaching experience covers courses on clinical audiology, psychoacoustics, speech and neural signal processing. **In 2022, Waldo Nogueira received an ERC consolidator grant for the project READIHEAR through the Life Science panel. In 2024, he was awarded an ATRAE grant for the project NEUROHEAR from the Agencia Estatal de Investigación in Spain to attract talent. He will be hired part time (10%) through the ATRAE program waiting for consolidation.**

## 3. PROFESSIONAL EXPERIENCE

Start - End	Center and Position
2019 - ...	<b>W2 Tenured Professor</b> at Hannover Medical School (MHH; Germany) <ul style="list-style-type: none"> <li>Group Leader: Auditory Prosthetic Group</li> </ul>
2013 - 2019	<b>W1 Tenure-Track Professor</b> at Hannover Medical School (MHH; Germany) <ul style="list-style-type: none"> <li>Group Leader: Auditory Prosthetic Group</li> </ul>
2014 - ...	<b>Affiliated Professor</b> at Institute of Information Processing (LUH; Germany)
2011- 2013	<b>Post-Doc</b> Visiting Professor at Pompeu Fabra University, Music Technology Group <ul style="list-style-type: none"> <li>Research on signal processing for cochlear implants</li> </ul>
2011 - 2013	<b>Consultant/Freelancer</b> for Jacoti SA and Advanced Bionics GmbH <ul style="list-style-type: none"> <li>Real time audio signal processing for mobile devices</li> </ul>
2009 - 2011	<b>Principal Research Engineer</b> at Advanced Bionics, Sonova Group (Germany) <ul style="list-style-type: none"> <li>Design and development of cochlear implants</li> </ul>
2008 - 2009	<b>Research Engineer</b> at Advanced Bionics NV (Belgium and California, USA) <ul style="list-style-type: none"> <li>Development of research and embedded software for cochlear implants</li> </ul>
2003 - 2007	<b>Research Assistant</b> , Leibniz University of Hannover (Germany) <ul style="list-style-type: none"> <li>Research activities related to audio, psychoacoustics in patients, medical implants</li> </ul>

## 4. EDUCATION AND RESEARCH

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### Doctorate Program PhD (Dr.-Ing)

Start – End	Topic and Center
2003 - 2008	“Design and evaluation of signal processing strategies based on psychoacoustic masking and current steering for cochlear implants”, Information Technology Laboratory, Leibniz University of Hanover (LUH; Germany). Supervised by: Prof. Jörn Ostermann and Prof. Bernd Edler

### Master Degree in Electrical Engineering (Dipl.-Ing)

Start – End	Topic and Center
1996 - 2003	Telecommunications Engineering, Technical University of Catalonia (UPC; Spain)
2003 - 2003	Master Thesis: Envelope estimation of audio signals based on predictive techniques in frequency domain (LUH; Germany). Supervised by: Prof. Bernd Edler.

### Previous Scientific Activities

Start – End	Topic and Center
2002 - 2003	Research scholarship at the Applied Physics Department (UPC; Spain)
2003 - 2003	Researcher at Laboratory of Information Technology (LUH; Germany)

### Other Education Activities

Start – End	Topic and Center
2022 - ...	Accreditation as “Recerca Anvancada” (Full Professor) (Agència per a la Qualitat del Sistema Universitari de Catalunya; AQU, Catalonia; Spain)
2010 - 2010	Project Management Professional (PMP) (Industrie und Handelskammer; Germany)

## 5. PRIZES AND SCHOLARSHIPS

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- 2023: Elected chair of the CIAP 2023, the most important research forum on auditory implants, through a rigorous election process election by the members of this research community.
- 2023: Teaching price of Università degli Studi di Milano (UniMi), Milan, Italy.
- 2022: Clarity Challenge speech prediction price for original algorithm (with Franklin Alvarez).
- 2021: Clarity Challenge speech enhancement price for original algorithm (with Tom Gajeci).
- 2020: Association for Research in Otolaryngology Travel Award 2020.
- 2016: Association for Research in Otolaryngology Travel Award 2016.
- 2013: Post-Doctoral Grant Marie Curie IEF: MuSiProCI identifier FP7-PEOPLE-2012-IEF, Signal processing for the improvement of music perception in cochlear implant users, 173.370,60 Euro (Declined).
- 2013: Best algorithm at the IEEE AASP Challenge (with Gerard Roma and Perfecto Herrera).
- 2003: Erasmus Scholarship 2003 mobility grant Leibniz University Hannover.

## 6. ORGANIZATION OF EVENTS/CONFERENCES

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- 2024: Scientific committee member of the CI 2024, Gran Canaria, Spain. Organization of two panel sessions on “Future Hearing Technologies” and “AI for auditory implants”.
- 2023: Chair with Deborah Vickers (University of Cambridge) of the conference on implantable auditory prostheses (CIAP), 2023, Lake Tahoe, California, USA.
- 2022: Chair of the virtual conference for computational audiology (VCCA).
- 2021: Steering committee member of the CIAP, Lake Tahoe, California, USA.
- 2020: Special Session: “Neural Signal Processing for Hearing”, IEEE ICASSP, Barcelona.
- 2019: Special Session: “The Hearing Device of the future” at the IEEE EMBC, Berlin, Germany.
- 2017: Organizing committee member of Inner Ear Biology, 2017, Hannover, Germany.
- 2017: Special session “Neural Prosthetics”, International BMT Conference, Hannover, Germany.
- 2012-2017: Chair of “Music for CIs, Barcelona-Hannover, 1.0, 2.0, 3.0”: 2012, 2015, 2017.

## 7. ALL ONGOING AND SUBMITTED GRANTS AND FUNDING OF THE PI

### Research grants with public funding

<i>Project Title</i>	<i>Funding source</i>	<i>Amount (Euros)</i>	<i>Period</i>	<i>Role</i>	<i>Status</i>
ReadiHear: Rehabilitation and Diagnosis of Hearing Loss based on Electric Acoustic Interaction	ERC-Consolidator Grant	1,99 M€	Dec-2022 Dec-2027	Principal Investigator	Ongoing
Neuro-Hear: Neuromodulation to augment and rehabilitate hearing loss	AEI ATRAE ATR2023-145064	980.875 €	Oct-2024 Sep-2027	Principal Investigator	Start 1.10.2024
RebiHear: Restoring Binaural Hearing through Individualized Wireless Sound Coding Strategies for Cochlear Implant Users	DFG (Individual Grant)	617.400 €	Oct-2022 Sep-2025	Principal Investigator	Ongoing
Safety Integrated and Infection Reactive Implants: Surrogate-model for monitoring of implants	DFG Sonderforschungsgebiete (SFB), SIRII	200.000 €	Oct-2021 Sept-2025	Principal Investigator of a subproject	Ongoing
Development and translation of an intracranial nerve implant	US National Institute of Health (NIH)	11,9 M€	Sep-2018 Jul-2020	Co-Investigator (PI: Prof H. Lim)	Ongoing
Music4u: Personalization of deep learning models to improve music of CIs	DFG (Individual Grant)	313.431 €	Sep-2021 Aug-2024	Principal Investigator	Ongoing
Coding of electric stimulation patterns for binaural signal proc. in CI (BiNoM)	DFG	512.000 €	Jan 2018 Jan 2021	Principal Investigator	Finished
Characterization of the electrode-nerve interface for electro-acoustic stim. in CIs	DFG (Individual Grant)	257.000 €	Apr-2018 Apr-2021	Principal Investigator	Finished
musIC 3.0	Hörregion-Hann	16.000 €	Dec-2017 Jun-2017	Principal Investigator	Finished

### Research grants with industrial funding

<i>Project Title</i>	<i>Funding source</i>	<i>Amount (Euros)</i>	<i>Period</i>	<i>Role of the PI</i>	<i>Status</i>
Cochlear Implant Computational Model	Cochlear Ltd.	30.000 €	Feb-2024 Jun-2024	Principal Investigator	Ongoing
MTALK	Oticon Medical	80.000 €	Feb-2022 May-2024	Principal Investigator	Ongoing
DeepFS4	MED-EL GmbH	30.000 €	Mar-2024 Aug-2024	Principal Investigator	Ongoing
Electric Acoustic Stim. Clinical Evaluation	MED-EL GmbH	204.000 €	2016-2018	Principal Investigator	Finished
musIC 2.0	MED-EL GmbH	10.000 €	Aug-2013 Feb-2014	Principal Investigator	Finished

## 8. SUPERVISION OF STUDENTS

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### PhD Main Supervisor:

- 2017 - 2021 Marina Imsiecke, MHH, Germany, Main Supervisor (finalized).
- 2017 - 2023 Florian Langner, MHH, Germany, Main Supervisor (finalized).
- 2015 - 2023 Benjamin Krüger, Leibniz University Hannover, Germany, Main Supervisor (finalized).
- 2018 - 2021 Juan Pablo Marcoleta, MHH, Germany, Co-Supervisor with Prof T. Doll (finalized).
- 2018 - 2023 Tomas Gajecski, MHH, Germany, Main Supervisor (finalized).
- 2019 - 2024 Daniel Kipping, MHH, Germany, Main Supervisor (finalized).
- 2019 - Sina Tahmasebi, MHH, Germany, Main Supervisor (ongoing).
- 2020 - Nina Aldag, MHH, Germany, Main Supervisor (ongoing).
- 2021 - Jonas Althoff, MHH, Germany, Main Supervisor (ongoing).
- 2021 - Hanna Dolhopiatenko, MHH, Germany, Main Supervisor (ongoing).
- 2022 - Patrick Fiedler, MHH, Germany, Main Supervisor (ongoing).
- 2023 - Yixuan Zhang, MHH, Germany, Main Supervisor (ongoing).

### Member of the PhD Committee of:

- 2023, Johannes Gauer, TU Bochum, Germany. Main supervisor: Rainer Martin
- 2023, Schott Aker, DTU, Denmark. Main supervisor: Torsten Dau
- 2023, Maruthurkkara Subramannian, McQuarie, Australia. Main supervisor: Mridula Sharma, PhD.
- 2023, Randy Kalkman, University of Leiden, Netherlands. Main supervisor: Prof. J. Frijns.
- 2021, Dietmar Wohlbauer, University of Zürich. Switzerland. Main supervisor: Prof. N. Dillier.
- 2019, Attila Frater. University College London, UK. Main supervisor: Dr. T. Marquardt.
- 2019, Sebastian Ausili. Radboud Uni. Nijmegen, Netherlands. Main supervisor: Prof. A.J. v.Opstal.
- 2019, Saskia M. Wachter. Trinity College Dublin, Ireland, March. Main supervisor: Prof. R. Reilly.
- 2018, Bettina Büssing. Dr. rer. biol. hum., MHH, Germany Main supervisor: Prof. Martin Ptok.
- 2017, Patricia Pérez González. Doctor of Philosophy, Universidad de Salamanca, Spain, July. Main supervisor: Prof. Enrique Lopez-Poveda.
- 2013, Bastian Welke. Dr. rer. biol. hum., MHH. Main Supervisor: Prof. Dr.-Ing. Christof Hurschler.

### Directed Master Thesis:

- 2024, Robert Hart, Msc. Candidate, Leibniz University Hannover (Germany).
- 2023, Yixuan Zhang, Msc. Candidate, Leibniz University Hannover (Germany).
- 2022, Yixi Zhang, Msc. Candidate, Leibniz University Hannover (Germany).
- 2021, Hanna Dolhopiatenko, Msc. Candidate, Leibniz University Hannover (Germany).
- 2021, Jonas Athoff, Msc. Candidate, Leibniz University Hannover (Germany).
- 2021, Nourhan Baghat, MSc. Candidate, Leibniz University Hannover (Germany).
- 2021, Costanza Bruni, MSc. Candidate, Università delgi studi di Milano (Italy).
- 2020, Nina Aldag, Msc. Candidate, Leibniz University Hannover (Germany).
- 2019, Sina Tamahsebi, Msc. Candidate, Leibniz University Hannover (Germany).
- 2019, Yijun Wang, Msc. Candidate, Leibniz University Hannover (Germany).
- 2019, Franklin Alvarez, Msc. Candidate, agreement with University Pompeu Fabra (Spain).
- 2016, Giulio Cosatti, Msc. Candidate, agreement with University Rome3 (Italy).
- 2016, Tomas Gajecski, Msc. Candidate, agreement with University Pompeu Fabra (Spain).
- 2015, Jordi Pons, Msc. Candidate, agreement with University Pompeu Fabra (Spain).
- 2012, Jordi Hidalgo, Msc. Candidate, University Pompeu Fabra (Spain).
- 2006, Luis Perez, Msc. Candidate, Leibniz University Hannover (Germany).
- 2006, Luis Dorda, Msc. Candidate, Leibniz University Hannover (Germany).
- 2005, Christian Hamman, Msc. Candidate, Leibniz University Hannover (Germany).
- 2004, Andreas Giese, Msc. Candidate, Leibniz University Hannover (Germany).
- 2003, Amparo Albalate, Msc. Candidate, Leibniz University Hannover (Germany).

### Directed Bachelor Thesis:

- 2024, Yusi Xi, Bsc. Candidate, Leibniz University of Hannover (Germany).
- 2024, Sonja Taupadel, Bsc. Candidate, University of Lübeck (Germany).

- 2024, Anne Großkopf, Bsc. Candidate, Leibniz University Hannover (Germany).
- 2022, Yixuan Zhang, Bsc. Candidate, Leibniz University Hannover (Germany).
- 2018, Marina Bujosa, Bsc. Candidate, agreement with University Pompeu Fabra (Spain).
- 2018, Maria Egger, Bsc. Candidate, agreement with FH Vienna (Austria).
- 2017, Piotr Androlojk, Msc. Candidate, Leibniz University Hannover (Germany).
- 2016, Torben Fiedler, BSc., Bsc. Candidate at University Bremehaven (Germany).
- 2014, Marta Lopez, Bsc. Candidate, agreement with University Pompeu Fabra (Spain)
- 2006, Bodo Winter, Bsc. Candidate, Leibniz University Hannover (Germany).

### Hosted Erasmus+ Students/Internships:

- 2023, Giorgio Bigliani Project, University of Turin, Italy, Erasmus+ in Medicine (3 months).
- 2018, Hanna Dolhopyatenko, HiWi, Leibniz University Hannover (3 months).
- 2017, Mayra Windeler, Voluntary research year, Hannover Medical School (1 year).
- 2016, Guillem Canizares, University Pompeu Fabra, Barcelona, Spain, Erasmus+ (3 months).
- 2016, Nicolas Perez, University Pompeu Fabra, Barcelona, Spain, Erasmus+ (3 months).
- 2015, Xavier Salleras<sup>2</sup>, Project: musIC 2.0 App, Erasmus+, (3 months).
- 2015, Ariadna Mas, Project: Music Signal Processing for CIs, Erasmus+ (3 months).
- 2014, Xavier Salleras<sup>1</sup>, Project: Ultra Low Power, Erasmus+ (3 months).
- 2014, Aina Lopez, Project: Data Logging, Erasmus+ (3 months).
- 2014, Xavier de la Fuente, Project: Music Processing for Cochlear Implants, Erasmus+ (3 months).
- 2013, Marcel Farrés, Project: Individual Model of a Cochlear Implant, Erasmus+ (3 months).

## 9. REVIEWER ACTIVITIES

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- 2024 – Evaluator Natural Sciences and Engineering Research Council of Canada
- 2023-2024 – Evaluator RNID - National hearing loss charity, UK.
- Since 2021 – Evaluator of the German Research Foundation (DFG), Germany.
- Since 2022 – Guest Editor Plos Computational Biology.
- Since 2021 – Editorial Board Member of the Journal Audito.
- Since 2018 – Evaluator of Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO, Belgium.
- 2018 – Evaluator of the Grant Agency Czech Republic.
- Since 2013 – Reviewer of Scientific Journals. Among others: Nature communications, Ear and Hearing, Journal of the Acoustical Society of America, Hearing Research, Applied Acoustics, IEEE Transactions on Neural Engineering, IEEE Transactions on Audio and Speech, Language and Signal Processing.

## 10. MEMBERSHIPS OF SCIENTIFIC SOCIETIES

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- Since 2021 – Member of AEDA, Spanish Audiological Society.
- Since 2016 – Member of DGA, Deutsche Gesellschaft für Audiologie.
- Since 2013 – Member of the IEEE Signal Processing Society IEEE Medicine and Biology Society.
- Since 2013 – Member of the Acoustical Society of America.
- Since 2013 – Member of the Association for Research in Otolaryngology, Member of the spARO steering committee since 2016, Member of the International committee since 2016.
- Since 2005 – Committee member of the Audio Engineering Society - Hearing and Hearing Loss.

## 11. MAJOR COLLABORATIONS

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**Prof. Hubert Lim**, University of Minnesota, USA, Design of central auditory implants; **Prof. Colette McKay**, Bionics Institute, Australia, Psychophysics with novel auditory implants; **Prof. Julie Arenberg**, Harvard Medical School, USA, Electrophysiology with auditory implants; **Prof. David M. Landsberger**, Department of Otolaryngology-Head and Neck Surgery, New York University School of Medicine, USA, Psychophysics; **Prof. Enrique Lopez-Poveda**, University of Salamanca, Spain, Computational Modelling; **Prof. Jörn Ostermann**, Institute of Signal Processing, Leibniz University Hannover, Germany, Signal Processing; **Prof. Thomas Lenarz**, Department of Otorhinolaryngology, Hannover Medical School, Germany, Otorhinolaryngology; **Prof. Andreas Büchner**, Department of Otorhinolaryngology, Hannover Medical School, Germany, Clinical Research. **Prof. Yang-Soo Yoon** (Baylor University, Texas, USA, Audiology), Audiology.

## 12. TEACHING

### List of courses given at the UVic, Hannover Medical School and Leibniz University Hannover (LUH) since 2015

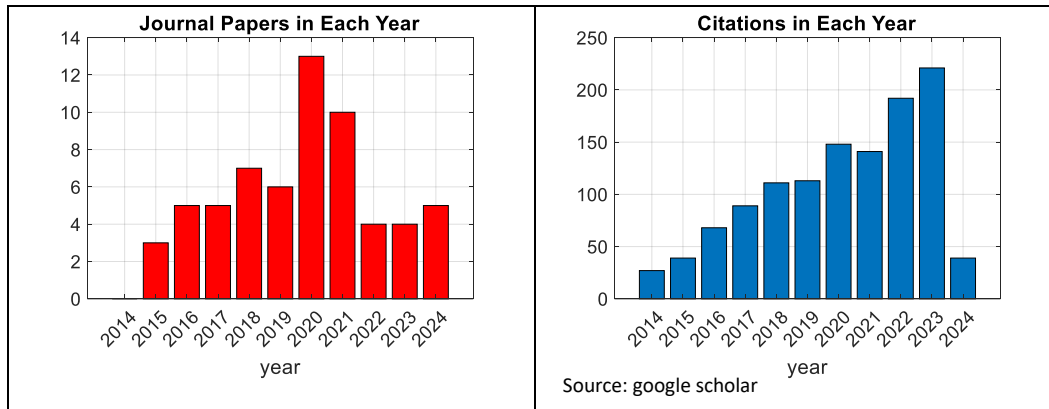
<i>Name of Course</i>	<i>University</i>	<i>Students Level</i>	<i>Hours</i>	<i>Period</i>
Acoustic Instrumentation I	Universitat de Vic	Bsc. Audiology (online)	38h	Feb 2024-May 2024
Audio Speech Processing	LUH	Bsc/Msc Engineering	38 h	Sep 2023-Feb 2024
Audio Speech Processing	LUH	Bsc/Msc Engineering	38 h	Sep 2022-Feb 2023
Audio Speech Processing	LUH	Bsc/Msc Engineering	38 h	Sep 2021-Feb 2022
3D Audio	LUH	Bsc/Msc Engineering	38 h	April 2021-July 2022
Audio Speech Processing	LUH	Bsc/Msc Engineering	38 h	Sep 2020-Feb 2021
3D Audio	LUH	Bsc/Msc Engineering	38 h	April 2020-July 2021
Audio Speech Processing	LUH	Bsc/Msc Engineering	38 h	Sep 2019-Feb 2020
3D Audio	LUH	Bsc/Msc Engineering	38 h	April 2020-July 2021
Audio Speech Processing	LUH	Bsc/Msc Engineering	38 h	Sep 2018-Feb 2019
3D Audio	LUH	Bsc/Msc Engineering	38 h	April 2018-July 2019
Sound Coding Strat. and Signal Proc. Methods for CIs and Hearing Aids	MHH "Hearing4all"	PhD Academy , Degree Medicine	15 h	2015
Neural Signal Processing	MHH	PhD Academy	15 h	2017
Audio Signal Processing for Cochlear Implants and Hearing Aids in Python	MHH "Hearing4all"	PhD Academy, Degree Medicine	15 h	2018
Audio and Speech Signal Processing	LUH	Bsc/Msc Engineering	38 h	Sep 2017-Feb 2018
Audio and Speech Signal Processing	LUH	Bsc/Msc Engineering	38 h	Sep 2016-Feb 2017
Audio and Speech Signal Processing	LUH	Bsc/Msc Engineering	38 h	Sep 2015-Feb 2016

### List of courses given at the Universitat Pompeu Fabra (UPF) 2011-2013

<i>Name of Course</i>	<i>University</i>	<i>Students Level</i>	<i>Hours</i>	<i>Period</i>
Digital Data Transmission	UPF	Bsc/Msc Engineering	32 h	2012-2013
Speech Processing	UPF	Bsc/Msc Engineering	16 h	2012-2013
Voice and Audio Encoding Systems Systems	UPF	Bsc/Msc Engineering	22 h	2012-2013
3D Audio	UPF	Bsc/Msc Engineering	22 h	2012-2013
Digital Data Transmission,	UPF	Bsc Telematics Engineering	32 h	2011-2012
Speech Processing	UPF	Bsc/Msc Engineering	13 h	2011-2012
Voice and Audio Encoding Systems Systems	UPF	Bsc/Msc Engineering	38 h	2011-2012
3D Audio	UPF	Bsc/Msc Engineering	26 h	2011-2012

### 13. PUBLICATION RECORD

I am author of 87 publications, including 60 publications in indexed peer-reviewed journals (4 under review). From the 60 journal publications, **53 as main author (first or last author)**. I have also published 3 book chapters, 15 peer-reviewed conference papers and 9 patent applications. My work has been widely recognized in the field of hearing research and audio signal processing with 1410 citations according to google scholar (h-index:21). During 4 years I worked in the industry were I focused on patent applications.



#### Peer-Reviewed Journal Publications

[60p] Aldag, N., **Nogueira, W.** (2024). The Contribution of Psychoacoustic and Electroencephalographic Measures of Amplitude Modulation Depth and Frequency to Speech Recognition in Cochlear Implant Users, Submitted to Nature scientific reports (Under Review).

[59p] Althoff, J., Gajecki, J., **Nogueira, W.** (2024). Remixing Preferences for Instrumental Classical Music of Bilateral Cochlear Implant Users. Submitted to Trends in Hearing (Under Review).

[58p] Kipping, D., Zhang, Y., **Nogueira, W.** (2024). A Computational Model of the Electrically or Acoustically Evoked Compound Action Potential in Cochlear Implant Users with Residual Hearing <https://doi.org/10.48550/arXiv.2402.07673>, submitted to IEEE Transactions in Biomedical Engineering (Under Review).

[57p] Thormählen, T., Krüger, B., **Nogueira, W.** (2024). Automatic Localization of Cochlear-Implant-Electrodes using Cone Beam Computed Tomography Images, <https://www.researchsquare.com/article/rs-3931821/v1.pdf?c=1707528955000>, submitted to Journal of Biomedical Science (Under Review).

[56p] Gajecki, T., **Nogueira, W.** (2024). A Fused Deep Denoising Sound Coding Strategy for Bilateral Cochlear Implants. IEEE Transactions on Biomedical Engineering (Accepted).

[55p] Gajecki, T., **Nogueira, W.** (2023). Deep Latent Fusion Layers for Binaural Speech Enhancement, in IEEE/ACM Transactions on Audio, Speech, and Language Processing, 31, 3127-3138.

[54p] Dolhopiatenko, H., **Nogueira, W.** (2023). Selective attention decoding in bimodal cochlear implant users. *Front Neurosci.* 11;16:1057605.

[53p] Gajecki T, Zhang Y, **Nogueira W.** (2023) A Deep Denoising Sound Coding Strategy for Cochlear Implants. *IEEE Trans Biomed Eng.* 2023 Sep;70(9):2700-2709.

[52p] Alvarez F., Kipping, D., **Nogueira, W.** (2023). A computational model to simulate spectral modulation and speech perception experiments of cochlear implant users, *Front. Neuroinform.* [https://doi.org/ 10.3389/fninf.2023.934472](https://doi.org/10.3389/fninf.2023.934472)

[51p] **Nogueira, W.**, Dolhopiatenko, H. (2022). Predicting Speech Intelligibility from a Selective Attention Decoding Paradigm in Cochlear Implant Users. *J. Neural Eng.*

[50p] Aldag, N., Büchner, B., Lenarz, T., **Nogueira, W.** (2022). Towards Decoding Selective Attention Through Cochlear Implant Electrodes as Sensors in Subjects with Contralateral Acoustic Hearing. *J. Neural Eng.* 19 016023.

[49p] Kipping, D., **Nogueira, W.** (2022). A computational model of a single auditory nerve fiber for electric-acoustic stimulation (Under Review). *Journal of the Association for Research in Otolaryngology (JARO)*, 23(6):835-858.

[48p] Tahmasebi, S., Segovia-Martinez, M., **Nogueira, W.** (2022). Optimization of Sound Coding Strategies to Make Singing Music More Accessible for Cochlear Implant Users (Under Review). Submitted to *Trends in Hearing* in 11/2021.

[47p] Kludt, E., **Nogueira, W.**, Lenarz, T., Büchner, A. (2021). A sound coding strategy based on a temporal masking model for cochlear implants *PlosOne* 8;16(1):e0244433. doi: 10.1371/journal.pone.0244433.

[46p] Hinrichs, R., Gajecki, T., Ostermann, J., **Nogueira, W.** (2021). A subjective and objective evaluation of a codec for the electrical stimulation patterns of cochlear implants, *The Journal of the Acoustical Society of America.* 149, 1324.

[45p] Imsiecke, M., Büchner, A., Lenarz, T., **Nogueira, W.** (2021). Amplitude Growth Functions of Auditory Nerve Responses to Electric Pulse Stimulation with Varied Interphase Gaps in Cochlear Implant Users with Ipsilateral Residual Hearing. *Trends Hear.* 25:23312165211014137. doi: 10.1177/23312165211014137. PMID: 34181493; PMCID: PMC8243142.

[44p] Langner, F., Arenberg, J. G., Büchner, A., **Nogueira, W.** (2021). Assessing the relationship between neural health measures and speech performance with simultaneous electric stimulation in cochlear implant listeners. *PLoS One.* 13;16(12):e0261295. doi: 10.1371/journal.pone.0261295. PMID: 34898654; PMCID: PMC8668108.

[43p] **Nogueira, W.**, Boghdady, N. E., Langner, F., Gaudrain, E., Başkent, D. (2021). Effect of Channel Interaction on Vocal Cue Perception in Cochlear Implant Users. *Trends Hear.* 25:23312165211030166. doi: 10.1177/23312165211030166. PMID: 34461780; PMCID: PMC8411629.

[42p] Sharma, S., **Nogueira, W.**, van Opstal, A. J., Chalupper, J., Mens, L. H. M., van Wanrooij, M. M. (2021). Amount of Frequency Compression in Bimodal Cochlear Implant Users Is a Poor Predictor for Audibility and Spatial Hearing. *J Speech Lang Hear Res.* 13; 64(12):5000-5013.

[41p] El Boghdady, N., Gaudrain, E., Baskent, D., **Nogueira, W.** (2021). Effect of spectral contrast enhancement on speech-on-speech intelligibility and voice cue sensitivity in cochlear implant users. *Ear and Hearing*, 42,2: 271-289.

[40p] Krüger, B., Büchner, A., **Nogueira, W.** (2021). Phantom Stimulation for Cochlear Implant Users with Residual Low-Frequency Hearing. *Ear and Hearing*. doi: 10.1097/AUD.0000000000001121. Epub ahead of print. PMID: 34593687.

[39p] Gajecki, T., **Nogueira, W.** (2021). The Effect of Synchronized Linked Band Selection on Speech Intelligibility of Bilateral Cochlear Implant Users, *Hearing Research*, 396:108051.

[38p] Kipping, D., Krüger, B., **Nogueira, W.** (2020). The role of electroneural versus electrophonic stimulation on psychoacoustic electric-acoustic masking in cochlear implant users with residual hearing, *Hearing Research*, 395, 108036, <https://doi.org/10.1016/j.heares.2020.108036>.

[37p] Gajecki, T., **Nogueira, W.** (2020). Effect of Synchronized Linked Band Selection on Speech Intelligibility of Bilateral Cochlear Implant Users, *Hearing Research*, 396.

[36p] Tahmasebi, S., Gajecki, T., **Nogueira, W.** (2020). Design and evaluation of a real-time audio source separation algorithm to remix music for cochlear implant users. *Frontiers Neuroscience*, 14, doi: 10.3389/fnins.2020.00434.

[35p] Langner, F., McKay, C. M., Büchner, A., **Nogueira, W.** (2020). Perception and prediction of loudness in sound coding strategies using simultaneous electric stimulation, *Hearing Research*, 398, <https://doi.org/10.1016/j.heares.2020.108091>.

[34p] Langner, F., Büchner, A., **Nogueira, W.** (2020). Evaluation of an adaptive dynamic compensation system in Cochlear Implant listeners, *Trends in Hearing*, doi:10.1177/2331216520970349.

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## 14. PARTICIPATION IN INTERNATIONAL CONFERENCES (10 OF THE MOST RELEVANT)

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## 15. LANGUAGES

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- English C1, German C1, Spanish C1, Catalan C1
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