Tecniospring INDUSTRY

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Vacancy Profile (max. 2 pages length)

Project Title Electro-acoustics Research and Innovation for Audio Wearables

About Us

Brief presentation of your company/Tecnio Centre, specifying your sector of activity, research infrastructure, research expertise in the field and in technology transfer activities and the conditions you offer (maximum 2,000 characters).

Creative Hub is creating a new category of smart open-ear audio AI devices within the framework of Wearable Sound, pioneer in Europe. We are a technological startup, specialized in the research and development of a revolutionary audio modular sound tech ecosystem in terms of adaptability for audio devices.

Our focus is the transformation of headphones into an element of interaction for different conventional situations of interest to the general public and for certain specific niches such as micro mobility and remote working. This new product category called "Neckphone" adapts to the user´s different needs in the moments of leisure, work or commuting among others, through an ad-hoc HW and SW system design.

The different setups of the first Neckphones, forerunner in the world, are: headphone mode with high-end sound quality; neckphone mode, with the advantages of a non-invasive sound device that rests on the user's neck and allows them to interact with their environment while enjoying the utilities it offers; loudspeaker mode, which presents the most convenient way to amplify the sound of mobile devices.

Our will is to promote audio technological and sustainable solutions through the circular economy for micro mobility and remote working. The development of innovative features and applications will allow a subscription model with recurrency and conversion to purchase in the company. The proposed solution will be the seed for a new range of smart and only legal "headsets" that integrate software for use primarily focused on urban micromobility.

You will be part of a passionate engineering team as a leading role in researching new electro-acoustic systems for this new audio device category. New ways of consuming audio require new HW systems and acoustic design over which we can deploy an outstanding acoustic user experience. You will be working for 2 years and growing inside an innovation environment with the option of incorporating you in the team.

Researcher's profile

Description of the researcher requirements. Do not include the Tecniospring eligibility criteria in this section, but rather describe the minimum education required, the preferred areas of expertise, the experience, the minimum language requirements, etc. (maximum 1,000 characters).

We are looking for a creative applied researcher who can innovate and create new HW architectures and acoustic systems that can fit and enhance the user experience in this new audio product category.

- 5+ years of experience in acoustics/electronics or PhD in the field of application.
- Master in Acoustics / Electrical Engineering / Computer Science or similar.
- Experience in prototypes validation, acoustic benchmarking and fluency with the use of audio lab tools for R&D (B&K, Head Acoustics, Audio Precision, Grass).
- Proficiency in transducers and acoustics. Experience with Klippel equipment TS parameters characterization.
- Experience with acoustic simulation tools such as Ansys/Comsol or similar.
- Hands on mechanical design with CAD tools (Creo, SolidWorks, Solid Edge) for 3D design and fast prototyping.
- Experience with audio digital and analog electronic design, components, PCB design (schematics & layout) are a plus.
- Passionate about audio technology and electronics.

ACCIÓ Generalitat de Catalunya Government of Catalonia

This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 801342

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Project Abstract:

Brief description of the project objectives and expected results. Remember to define the tasks that will be developed by the researcher (maximum 2,000 characters).

This project pursues research and innovation through the creation of proofs of concept for innovative designs that can enable the deployment of high value applications on top of it, and improve the overall sound experience. Let's rethink together the Hardware and Mechanical support for the new audio wearable devices we will use in the coming future.

This project requires a very creative vision of how the audio can be listened through new audio wearables at the same time that requires outstanding research and innovation skills in the field of electro-acoustics, mechanical design, hardware and acoustics.

Although this project is oriented towards HW and Acoustic design, that won´t limit the exploration of certain HW solutions which are SW dependent.

Incoming ☑ Outgoing+Return ☐

Sector:

Food Industries ☐ Industrial Systems ☑ Chemistry, Energy and Resources ☐ Design Industries ☐

Sustainable Mobility ☑ Health and Life Sciences ☐ Culture and Experience-based Industries ☐

Technology:

Photonics ☐ Biotech ☐ ICT ☐

Nanotechnology ☐ Advanced Materials ☑ Advanced Manufacturing ☑

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