04/03/2021

PhD candidate

Where to apply

Application Deadline: 31/03/2021 23:59 - Europe/Brussels

Contact Details

Where to send your application.

COMPANY
Leiden University

WEBSITE
https://www.academictransfer.com/298397/phd-candidate/apply/#apply

Hiring/Funding Organisation/Institute

ORGANISATION/COMPANY
Leiden University

COUNTRY
Netherlands

ORGANISATION TYPE
Higher Education Institute

CITY
Leiden

WEBSITE
http://www.universiteitleiden.nl/

POSTAL CODE
2311 EZ

STREET

Rapenburg 70

ORGANISATION/COMPANY
Leiden University

LOCATION
Netherlands › Leiden

RESEARCH FIELD
Physics

TYPE OF CONTRACT
Temporary

RESEARCHER PROFILE
First Stage Researcher (R1)

APPLICATION DEADLINE
31/03/2021 23:59 - Europe/Brussels

OFFER DESCRIPTION

Over 5% of the world's population suffers from hearing loss. Today, for deaf and severely hearing impaired people, cochlear implants (CIs) are the standard treatment. However, CIs have a limitation in properly transmitting detailed temporal information from the sound to the auditory nerve. This manifests itself in difficulties with speech understanding with background noise, tonal languages, directional hearing and music perception. TEMPORAL is a joint project with the Leiden University Medical Centre (LUMC) that aims to develop improved speech coding strategies for the CI speech processor that better transmits temporal information to the auditory nerve. To do this, a combination of three techniques will be used: computer modeling, artificial intelligence (AI), and patient-centered research. These new speech coding strategies will lead to improved perception in the difficult listening situations.

Key responsibilities
You will focus on using state-of-the-art Machine Learning techniques for tuning configurable parameters of the CIs to better approximate the spike trains that normally transmit the information to the brain. You will use nonlinear optimization through evolutionary algorithms and develop suitable loss functions for spike trains and noise handling. Appropriate machine learning and cross-validation techniques will be developed in this research too, for assuring generalizability of the results.

During the project, you are expected to write the research articles that together will form the basis of a thesis to attain a PhD degree (dr.) at Leiden University. The PhD student will participate in the education and supervision program of the Leiden Graduate School of Science.

An official EU website

More Information

ADDITIONAL INFORMATION

Benefits

We offer a full-time temporary position for initially one year. After a positive evaluation of the progress of the thesis, personal capabilities and compatibility the appointment will be extended by a further three years. Salary range from € 2.325,- to € 2.975,- gross per month (pay scale P in accordance with the Collective Labour Agreement for Dutch Universities).
Leiden University offers an attractive benefits package with additional holiday (8%) and end-of-year bonuses (8.3 %), training and career development and sabbatical leave. Our individual choices model gives you some freedom to assemble your own set of terms and conditions. Candidates from outside the Netherlands may be eligible for a substantial tax break.
All our PhD students are embedded in the Leiden University Graduate School of Science. Our graduate school offers several PhD training courses at three levels: professional courses, skills training and personal effectiveness. In addition, advanced courses to deepen scientific knowledge are offered by the research school.
Diversity
Leiden University is strongly committed to diversity within its community and especially welcomes applications from members of underrepresented groups.

Selection process

You can apply for this PhD position **no later than March 31th, 2021**. Your application should include pdf-versions of a Curriculum Vitae, a Letter of Motivation, and an MSc diploma with transcripts (courses + grades).
To apply for this vacancy, please send an email to jobs@liacs.leidenuniv.nl. When applying, please use the following subject: “vacancy number – your name”.

Additional comments

Additional information about the PhD position can be obtained from the member of the supervision team, Anna Kononova, email a.kononova@liacs.leidenuniv.nl

Web site for additional job details

https://www.academictransfer.com/298397/

REQUIREMENTS

Offer Requirements

Additional Information

Specific Requirements

A MSc or equivalent degree in *Computer Science, Computer Engineering*, *Artificial Intelligence* or a similar field;

Expertise through your field of study in particular in machine learning, evolutionary computation, nonlinear optimization, multiple criteria optimization, simulation, deep learning, and audio data analysis;

Excitement about working in an interdisciplinary team with clinical experts and medical device experts;

Excellent proficiency with Python and C++; Matlab will also be useful;

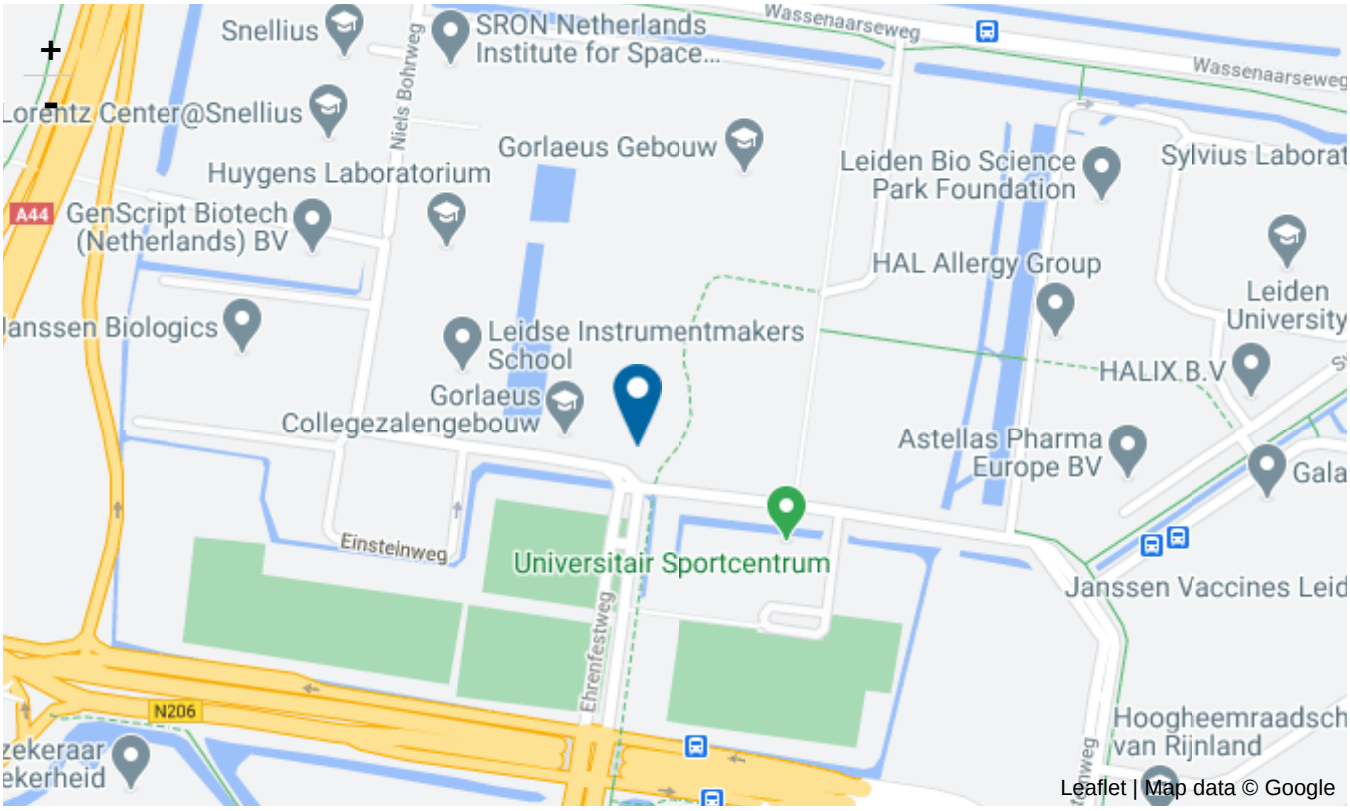
Excellent communication skills and interest in the interdisciplinary character of the project and the required ability to communication between computer science and the medical side as well as the medical device production company;

Creative thinking and highly motivated;

Excellent proficiency in the English language.

An official EU website

Map Information



Job Work Location Personal Assistance locations

WORK LOCATION(S)

1 position(s) available at
Leiden University
Netherlands
Leiden
2311 BD
Einsteinweg 55

EURAXESS offer ID: 613829

Posting organisation offer ID: 298397

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