Tampere University

Doctoral Researcher
(speech and language technology, cognitive science)

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Speech and Cognition research group (SPECOG) is part of Computing Sciences Unit of Tampere University within the Faculty of Information Technology and Communication Sciences. SPECOG focuses on interdisciplinary research at the intersection of speech technology and cognitive sciences. We apply advanced signal processing and machine learning methods to computational modeling of human language learning and perception and study how human-like information processing principles can be applied in autonomous next-generation artificial intelligence (AI) systems. The group also conducts research and development in speech and language technology and in medical signal processing and machine learning. SPECOG collaborates with several internationally leading research groups within and across disciplinary boundaries, including joint research with computer scientists, psychologists, brain researchers, and linguists. The group is also closely affiliated with audio and machine vision research groups of Tampere University.

More information on SPECOG: http://www.cs.tut.fi/sgn/specog/index.html

Job description

We are inviting applications for the position of a doctoral researcher (doctoral student) in the areas of speech and language technology and cognitive science. The work will be conducted as a member of the SPECOG research group led by Asst. Prof. Okko Räsänen. We are looking for candidates who are interested in human and/or machine language processing, and who are willing to contribute to our highly cross-disciplinary research efforts in understanding language learning in humans and autonomous computational systems. Our current focus is on machine learning algorithms for unsupervised language learning from purely acoustic or audiovisual data (sometimes also known as *zero-resource speech processing*). However, we also consider candidates with interest towards complementary areas of speech and language technology.

In this position, the candidate is expected to:

1) carry out research on a mutually agreed topic
2) complete a doctoral degree, including mandatory course studies for a D.Sc. (tech.) degree
3) participate to doctoral program
4) be available for assisting tasks in teaching and research group activities (max. 15% of working time)

Requirements

The candidate should hold a master's degree in language technology, computer science, electrical engineering, mathematics, cognitive science, or other relevant technical area. Candidates who have already completed their master's studies but are graduating during 2019 may also apply. Exceptional master's students of Tampere University, who are close to graduation, can be also considered for the position. In this case, the candidate is first employed as a Research Assistant to carry out a master's thesis project (6 months) on the topic and, upon a successful thesis project, with the possibility to continue to doctoral studies.

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A successful candidate has experience from signal processing and/or machine learning (e.g., deep learning), ideally from the context of speech technology. Applicants with a background in natural language processing (NLP) or cognitive science are also considered. Experience or interests in linguistics, neuroscience, or statistics are considered as an advantage but not required. Good command of programming (Python, Matlab, R, C++ or similar) and English skills are required.

Potential candidates must be capable of carrying out independent research work but are also good team players. Previous experience from research such as research internships or other research projects are considered as a significant advantage.

We offer

The position will be filled for a fixed-term period of two years with a view for extension. A trial period of 6 months is applied to all new employees. **The position start in January 2020** or as soon as possible with a negotiable exact starting date. Target completion time for doctoral studies is 4 years.

We offer a starting salary of 2300 € for a starting doctoral researcher with later increases based on demonstrated progress through scientific publications and acquired study credits. In addition, the position comes with extensive benefits such as occupational healthcare, excellent sports facilities, flexible working hours, and several restaurants and cafés on the campus with staff discounts. Traveling costs and daily allowances related to presenting peer-reviewed work in major international conferences is also normally covered.

How to apply

Send your application through the online portal at https://tuni.rekrytointi.com/paikat/?o=A_A&jid=299

We will accept applications until **15th of November 2019 at 23.59 (GMT+3)**. We reserve the opportunity to recruit the candidate through other channels or to decide to not to fill the position in case a suitable candidate is not found during the process.

The application should contain the following documents (all in .**pdf** format):

- A free-form letter of motivation for the position in question (max. 1 page)
- Complete CV with contact information and a list of publications (if any)
- A copy of master's degree certificate
- English language certificate of proficiency (for non-native and non-Finnish applicants)

Please name all the documents as ***surname_CV.pdf***, ***surname_list_of_publications.pdf*** … etc. Only the applications sent through the university application portal and containing the requested attachments in the instructed format will be considered in the recruitment process.

The most promising candidates will be interviewed in person or via Skype before the final decision.

For more information about the position, please contact Assistant Professor Okko Räsänen (*firstname.surname@tuni.fi*; no umlauts) by email.

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About the research environment

Finland is among the most stable, free and safe countries in the world, based on prominent ratings by various agencies. It is also ranked as one of the top countries as far as social progress is concerned. Tampere is counted among the major academic hubs in the Nordic countries and offers a dynamic living environment. Tampere region is one of the most rapidly growing urban areas in Finland and home to a vibrant knowledge-intensive entrepreneurial community. The city is an industrial powerhouse that enjoys a rich cultural scene and a reputation as a centre of Finland's information society. Despite its growth, living in Tampere is highly affordable with private market two-room apartment rents starting from approx. 550 €. In addition, the excellent public transport network enables quick, easy and cheap transportation around the city of Tampere and university campuses.

Read more about Finland and Tampere:

- https://www.visitfinland.com/about-finland/
- https://finland.fi/
- http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/161193/MEAEguide_18_2018_TervetuloaSuomeen_Eng_PDFUA.pdf
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