20.11.2017

Three Postdoctoral Researchers/Project Researchers (Speech processing and deep learning)

The University of Eastern Finland, UEF, is one of the largest multidisciplinary universities in Finland. We offer education in nearly one hundred major subjects, and are home to approximately 15,000 students and 2,500 members of staff. From 1 August 2018 onwards, we'll be operating on two campuses, in Joensuu and Kuopio. In international rankings, we are ranked among the leading universities in the world.

The Faculty of Science and Forestry operates on the Kuopio and Joensuu campuses of the University of Eastern Finland. The mission of the faculty is to carry out internationally recognised scientific research and to offer research-education in the fields of natural sciences and forest sciences. The faculty invests in all of the strategic research areas of the university. The faculty's environments for research and learning are international, modern and multidisciplinary. The faculty has approximately 3,800 Bachelor's and Master's degree students and some 490 postgraduate students. The number of staff amounts to 560. http://www.uef.fi/en/lumet/etusivu

We are now inviting applications for three Postdoctoral Researcher/Project Researcher positions in speech processing and deep learning funded by Academy of Finland, School of Computing, Joensuu Campus.

- **Two positions in automatic speaker verification, voice conversion, anti-spoofing (NOTCH project)**
- **One position in deep reinforcement learning for physical agents (DEEPEN project)**

The two projects share similarities in terms of machine learning methods being used and developed further, but are otherwise differently focused.

The NOTCH research project (NOn-cooperaTive speaker CHaracterization), being led by Associate Professor Tomi Kinnunen, aims at advancing state-of-the-art in automatic speaker verification (defense) and voice conversion (attack) under a generic umbrella of non-cooperative speech, whether being induced by spoofing attacks, disguise, or other intentional voice modifications. A successful applicant needs to have background in speaker verification, anti-spoofing, voice conversion, machine learning or closely related topics.

The DEEPEN research project (Deep Reinforcement Learning for Physical Agents) is run in co-operation between UEF and robotics group at Aalto University. UEF's part, lead by Senior Researcher Ville Hautamäki, aims at designing new statistical models for simulated robot control and to take steps towards solving the so-called "reality gap" problem. The post-doc may also contribute to speech and deep learning topics. A successful applicant needs to have background in deep learning, reinforcement learning, speech technology or machine vision. Practical experience in DRL research environments (e.g. VizDoom or MuJoCo), will be counted as a plus.

The Machine Learning group of the School of Computing, at the facilities of Joensuu Science Park, provides access to modern research infrastructure and is a strongly international working environment. We hosted the Odyssey 2014 conference, were a partner in the H2020-funded OCTAVE project, and are a co-founder of the Automatic Speaker Verification and Countermeasures (ASVspoof) challenge series (http://www.asvspoof.org/).

A person to be appointed as a postdoctoral researcher shall hold a suitable doctoral degree that has been awarded less than five years ago. If the doctoral degree has been awarded more than five years ago, the post will be one of a project researcher. The doctoral degree should be in spoken language technology, electrical engineering, computer science, machine learning or a closely related field. Researchers finishing their PhD in the near future are also encouraged to apply for the positions. However, they are expected to hold a PhD degree by the starting date of the position. We expect strong hands-on experience and creative out-of-the-

box problem solving attitude. A successful applicant needs to have an internationally proven track record in topics relevant to the project he or she applies to.

English may be used as the language of instruction and supervision in these positions.

The positions will be filled from earliest January 1, 2018 for a period of 12 months. The continuation of the position will be agreed separately. The position will be filled for a fixed term due to pertaining to a specific project (Postdoctoral researcher positions shall always be filled for a fixed term, UEF University Regulations 31 §).

The salary of the position is determined in accordance with the salary system of Finnish universities and is based on level 5 of the job requirement level chart for teaching and research staff (€2.865,30/ month). In addition to the job requirement component, the salary includes a personal performance component, which may be a maximum of 46.3% of the job requirement component.

For further information on the position, please contact (NOTCH): Associate Professor Tomi Kinnunen, email: tkinnu@cs.uef.fi, tel. +358 50 442 2647 and (DEEPEN): Senior Researcher Ville Hautamäki, email: villeh@cs.uef.fi, tel. +358 50 511 8271. For further information on the application procedure, please contact: Executive Head of Administration Arja Hirvonen, tel. +358 44 716 3422, email: arja.hirvonen@uef.fi.

A probationary period is applied to all new members of the staff.

You can use the same electronic form to apply for both research projects. The electronic application should contain the following appendices:

- a résumé or CV
- a list of publications
- copies of the applicant's academic degree certificates/ diplomas, and copies of certificates / diplomas relating to the applicant's language proficiency, if not indicated in the academic degree certificates/diplomas
- motivation letter
- a cover letter indicating the position to be applied for
- The names and contact information of at least two referees are requested in the application form.

The application needs to be submitted **no later than December 22, 2017 (by 24:00 EET)** by using the electronic application form.

Navigate to http://www.uef.fi/en/uef/en-open-positions and search for "Three Postdoctoral Researchers/Project Researchers (Speech processing and deep learning)" to find the link to the electronic application form.