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ASSISTANT PROFESSORS IN BIOMEDICAL ENGINEERING / POSTDOCTORAL RESEARCH FELLOWS (FORSKARASSISTENTER)

Reference number 2009/54

Application deadline 2009-05-15

Five western Swedish partners is investing in a common biomedical engineering center, MedTech West. The goal is to provide better conditions for research, development and innovation through increased interaction between academics, health care and industry. The parties, Chalmers University of Technology, University of Borås, Göteborg University, Sahlgrenska University Hospital and the Region Västra Götaland, around applied health care research together with biomedical engineering industry. The aim is that new knowledge and new technologies will lead to new products, processes and services in the health care sector. The Center formation is to serve as a platform where the parties coordinate research, development and education within the biomedical engineering area with the patient in focus. The parties now seek up to four assistant professors that will play central roles in the development of the centre.

Job description

The main duty is to conduct research in the MedTech West centre which is located at the Sahlgrenska University Hospital with employment at any of the parties, Chalmers University of Technology, Gothenburg University and Högskolan i Borås. The duties also include initiating and leading both internal and external projects, often with multiple partners, in the field of biomedical engineering with a focus on any of the subdivisions diagnostics, treatment, monitoring or E-health. The position consists of approximately 80% research, 10% teaching and 10% administrative tasks. The duties also include co-supervision of postgraduate students and supervision of MSc projects as well as teaching at bachelor, master and doctoral levels. Collaboration, within the centre and with industrial partners and society in general, is an important part of the position. The position as Assistant professor is full-time and is a stepping stone in the career within academy, or society in general. The position holder is expected to achieve "docent" level during the latter part of their employment. The position is limited to four years. The employment contract is divided in two plus two years. After two years, a evaluation of the merits will be performed.

MedTech West and the partners offer an attractive working environment which distinguish by a strive to be free from discrimination and give equal rights for everybody.

Assistant Professor is a post that offers an opportunity to qualify for higher research positions, both in academia and in society at large. The appointment is for two + two years of full-time employment. An assistant professor is expected to reach the Swedish docent level (in Swedish "oavlönad docent") within the four years. After two years the progress is assessed.

More Information:

<http://www.chalmers.se/s2/EN/news/vacancies-at-signals/positions/assistant-professor-in6008>



2) CISP'09 and BMEI'09, 17-19.10 Tianjin, China

The 2nd International Congress on Image and Signal Processing (CISP 2009) and the 2nd International Conference on BioMedical Engineering and Informatics (BMEI 2009) will be jointly held in Tianjin, China, from 17 to 19 October 2009. We cordially invite you to submit a paper and/or an exhibition.

Selected best papers will appear in SCI-indexed journal(s). The papers published in the proceedings will be included in the IEEE Xplore and submitted to Ei Compendex for indexing (CISP 2009 IEEE Catalog Number: CFP0994D; BMEI 2009 IEEE Catalog Number: CFP0993D). CISP'09-BMEI'09 is technically co-sponsored by the IEEE Engineering in Medicine and Biology Society.

Tianjin is one of the four municipalities in China. It is a financial and commercial center in North China and is known for its numerous travel resources and rich history, such as the Huangyaguan Great Wall, Dule Temple, Panshan Mountain and Food Street. It takes only 30 minutes to travel between Tianjin and Beijing by high-speed train.

The registration fee of US\$420 includes lunches, dinners, and banquet. The previous CISP'09-BMEI'09 attracted over 2600 submissions from more than 30 countries.

CISP'09-BMEI'09 aims to provide a high-level international forum for scientists and researchers to present the state of the art of multimedia, signal processing, biomedical engineering, and biomedical informatics.

For more information, visit the conference web page:

<http://www.tjut.edu.cn/cisp-bmei2009>

3) Verkkokäsikirja tutkimusaineistojen tiedonhallintaan

Yhteiskuntatieteellinen tietoarkisto on julkaissut verkkosivuillaan Tutkimusaineistojen tiedonhallinnan käsikirjan. Se sisältää ohjeita sähköisen tutkimusaineiston hallintaan sen elinkaaren eri vaiheissa.

Suomen Akatemia vaatii nykyisin tutkimusrahoituksen hakijoilta tiedonhallintasuunnitelmaa, jossa kuvataan miten tutkimusaineisto hankitaan, miten sitä käytetään ja säilytetään tutkimusprojektin aikana ja miten mahdollistetaan aineiston käyttö projektin päätyttyä. Tiedonhallinnan käsikirja opastaa sekä tiedonhallintasuunnitelman tekemisessä että tutkimusaineiston koko elinkaaren hallinnassa.

Käsikirja perustuu pääosiltaan tietoarkiston käytäntöihin ja kokemukseen. Mukana on runsaasti esimerkkejä ja malleja sekä linkkejä lisämateriaaliin. Sisältö on jaettu yhdeksään osaan, joissa käsitellään muun muassa: tiedonhallinnan ja tutkimuksen suunnittelua, tutkittavien informointia, tiedostoformaatteja ja ohjelmistoja, kvantitatiivisen ja kvalitatiivisen datan käsittelyä, aineiston anonymisointia, kuvailua ja säilyttämistä pitkäaikaisesti käyttökuntoisena.

Julkaisun alkuperäisestä toteutuksesta vastasi tietoarkistossa työryhmä, johon kuuluivat Arja Kuula, Mari Kleemola ja Jouni Sivonen. Heidän lisäksi käsikirjaan ovat kirjoittaneet Sanni Haverinen ja Tuomas J. Alaterä. Käsikirjaa ylläpitää Yhteiskuntatieteellinen tietoarkisto.

Lisätietoa:

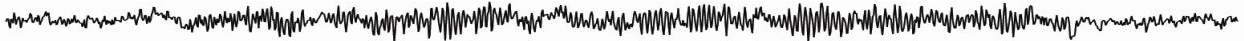
- Tutkimusaineistojen tiedonhallinnan käsikirja:

<http://www.fsd.uta.fi/tiedonhallinta/index.html>

- Suomen Akatemia: tutkimussuunnitelman rakenne:

<http://www.aka.fi/fi/A/Tutkijalle/Hakeminen/Liitteet/Tutkimussuunnitelma/>

Yhteiskuntatieteellinen tietoarkisto on tutkimuksen ja opetuksen valtakunnallinen palveluinfrastruktuuri. Se arkistoi ja välittää koti- ja ulkomaisia elektronisia tutkimusaineistoja tutkimukseen, opetukseen ja opiskeluun. Yksikkö toimii Tampereen yliopiston yhteydessä.



4) Prof. Timo Lakan ja Prof. Jari Karhun virkaanastujaisesitelmät 29.4 Kuopiossa

Professori **Timo Lakan** ja professori **Jari Karhun** virkaanastujaisilaisuus on keskiviikkona 29.4.2009 klo 12 alkaen Snellmanian auditoriossa L21 (Yliopistonranta 1E).

Lääketieteellisen fysiologian professori Timo Lakka pitää virkaanastujaisesitelmänsä aiheesta "UUTTA TUTKIMUSNÄYTTÖÄ LIIKUNNAN TERVEYSVAIKUTUKSISTA" ja fysiologian professori Jari Karhu pitää virkaanastujaisesitelmänsä aiheesta "FYSILOGIA - IKKUNA IHMISEEN".

Samassa tilaisuudessa kuullaan emeritusprofessori **Osmo Hännisen** 70-vuotisjuhlaesitelmä "FYSILOGIAN TUTKIMUSHAASTEET EILEN, TÄNÄÄN JA HUOMENNA". Juhlaesitelmän pitäjän esittelee Kuopion korkeakoulun 1. rehtori, professori **Olli Castren**.

Klo 15 alkaen Savon kielen seura jatkaa samassa auditoriossa L21 Osmo Hännisen 70-vuotispäivien kunniaksi järjestetyllä ohjelmalla "**Humanisti Osmo Hänninen 70 vuotta**".

Yleisö on tervetullut tilaisuuteen.

5) Dissertation on "Automatic sleep stage classification using EOG", 20.5, Tampere

Jussi Virkkala, doctoral thesis "Automatic Sleep Stage Classification Using Electro-oculography". Public examination: 20.5.2009 at 12.00, Tietotalo building, Auditorium TB222, Tampere University of Technology.

Abstract: In this thesis automatic sleep stage classification was developed and evaluated. The method was based on signals recorded by electro-oculography electrodes. Monitoring sleep is important for the diagnosis of sleep disorders. Altered sleep is related to obesity and diabetes, and loss of sleep may lead to daytime sleepiness which in turn may cause accidents. Standard sleep stage measurement requires the application of multiple electrodes by trained professionals. Signals are then classified visually in a timeconsuming and subjective process. Many automatic sleep classification methods also exist. Some methods work with self-applicable, usually forehead, electrodes. However, the use of standard sleep electro-oculography electrode placement enables the recording of frontal EEG, EMG and EOG using a single electrode pair. Nearly 300 sleep recordings were used to develop automatic methods for separating wakefulness and sleep stages during intentional night-time sleep and during unintentional daytime sleep through maintenance of wakefulness tests (MWT). Signals detected using only standard electro-oculography electrodes were used for automatic sleep stage classification. The signals were recorded both with and without the mastoid reference electrode. Results were also compared with activity-based methods, and for reference, we also recorded EEG and submental EMG tonus. Reference sleep stage scoring was carried out visually according to the Rechtschaffen and Kales standard. Reasonable sleep stage information could be obtained using self-applicable electrooculography electrodes combined with automatic analysis. This developed self-applicable automatic sleep staging system would make large scale ambulatory sleep studies plausible for screening sleep disorders and investigating the relationship between irregular sleep and health.

More information: <http://dSPACE.cc.tut.fi/dpub/handle/123456789/207?locale-attribute=en>