CONFERENCIA DRA. KERSTIN DENECKE

17/02/2017

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Temática
Investigación

Hora: 11:30h

Lugar: AULA 5 - EDIFICIO A4

El Centro de Estudios Avanzados en TIC (CEATIC) organiza la siguiente conferencia:

Título: Extraction and Processing of Rich Semantics from Medical Texts

Ponente: Professor Kerstin Denecke, Bern University of Applied Sciences

Dirigido a: Alumnos de doctorado y alumnos de Máster en Ingeniería Informática. Podéis hacer extensiva la invitación a todos los que consideréis.

Abstract: Pharmaceutical companies and individual patients exploiting advances in translational medicine and informational infrastructure, are joining clinical interests in recording detailed patient records. The latter comprise a broad range of clinical documents including nurse letters, discharge summaries and radiology reports describing a patient's health status, diagnoses, applied procedures and observations of the health care team. The rich semantics such as facts, experiences, opinions or information that are hidden in those medical documents could – when extracted automatically - support a broad range of applications including clinical decision support systems. Physicians could learn about the experiences of their colleagues, get hints to critical events in the treatment of a specific patient or receive information for improving treatment. However, language peculiarities, content diversity, streaming nature of clinical documents pose many challenges and finding the trade-off of filtering noise at the cost of losing information which is potentially relevant is crucial. In contrast to biomedical documents, clinical documents are often not well formulated, contain verbless clauses, writing errors and sentence complexity ranges from few word phrases to difficult sentence structures. New technologies are required for dealing with the peculiarities of clinical documents, in particular for extracting and analysing rich semantics, for medical information gathering and the application of the extracted knowledge in knowledge based systems. In this talk, the topic of extraction of rich semantics including stances from medical documents will be introduced and first research results will be presented.

Short-Bio

Dr. Kerstin Denecke is professor of medical informatics at the Institute of Medical Informatics of the BFH. Before, she was scientific director of the Digital Patient Modeling group at Innovation Center Computer Assisted Surgery (ICCAS) at the Medical Faculty of the University of Leipzig. Dr. Denecke holds a Diploma in Computer Science and was awarded a doctoral degree in Computer Science by the Technical University of Braunschweig / Germany. Before she joined the university of Leipzig, she worked as a researcher at L3S research center and as a software architect at an IT company providing software for hospitals. She coordinated

several research projects, among others the EU funded project *M-Eco: Medical Ecosystem on event driven surveillance of infectious diseases* and was involved in the EU Projects *Terence* and *LivingKnowledge*. Her main research interests are natural language processing, text and data mining and decision support as well as digital patient modelling. The specific areas she has been working on include medical language processing, information extraction, sentiment analysis and text classification. She has published a number of research papers in several international conferences and journals.