University of Lethbridge

MATHEMATICS & COMPUTER SCIENCE

Speaker: Annika Hinze, Technical University Berlin and University of Waikato, New Zealand

Title: <u>A-mediAS: An Adaptive Integrating Event Notification Service</u>

Date: Friday, September 19th, 2003

Time: 2:00 – 3:00 pm   Room: D630

Abstract:

Event Notification Services (ENS) inform about the occurrences of events that are of special interest for the service's users, e.g. the publication of new Internet content. Upcoming systems for event notification, such as mobile traveller information systems and remote monitoring of commercial buildings, cover multiple applications and integrate event data from different sources.

A main challenge is the evaluation of user profiles under different and changing application requirements. Of particular interest are (1) profile evaluation using differing semantics and (2) high filter performance under changing system load.

This talk introduces the design and implementation of A-mediAS – an adaptive event notification system. A case study of a remote monitoring application shows the effective adaptation of evaluation semantics in A-mediAS. Different event filtering strategies are introduced and their
adaptation to varying event and profile distributions are shown. Finally, the transfer of event notification concepts into new applications, such as the the Semantic Web is discussed. pectral collocation methods have become very useful in providing highly accurate solutions to differential equations. A straightforward implementation of these methods involves the use of spectral differentiation matrices. To obtain optimal accuracy these matrices must be computed carefully. We demonstrate that naive algorithms for computing these matrices suffer from severe loss of accuracy due to roundoff errors. Several improvements are analyzed and compared. A number of numerical examples are provided, demonstrating significant differences between the sensitivity of the forward problem and inverse problem.

About the speaker:

Annika Hinze studied Technical Mathematics, Computer Science and Electronics at the Technical University Berlin, Germany (M.S. Degree). She worked for over five years in the Database and Information Systems Group at the Freie Universitaet Berlin (FU Berlin) specializing in Event Notification Services. She was involved with the development of the Darwin digital library at the FU Berlin and contributed to the developement of Hermes, an alerting system for electronic articles, at the FU Berlin. She received her PhD degree from the the Institute of Computer Science at the FU Berlin. In October, she starts as lecturer at the Department of Computer Science at the University of Waikato, New Zealand.

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