

# DBTA Workshop on Mobile Information Context-Awareness

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# Information in Context

- Adapt information delivery to the current user situation
  - devices available
  - task at hand
  - user preferences and history
  - user location
  - environmental factors
    - **companions**
    - **time**
    - **noise**
    - .....

# Mobile Environments

- Low Information Bandwidth
  - Mobile Devices
    - **limited screen size**
    - **use of non-visual channels e.g. audio, vibration, ...**
  - Users
    - **often busy with other tasks/activities**



*driving*



*emergency services*



*tourism*



## From Location-Aware to Context-Aware

- Many mobile applications have focussed on location-awareness
  - find restaurants nearby
  - tell me about the building in front of me
  - task assumed to be dependent on locations (meeting room, lecture, ....)
  - .....
- Although location plays a special role in mobile applications, other factors influence what and how information delivered
  - navigation information may depend on weather, history, preferences etc.
  - give me information by audio rather than visually if I'm on the move
  - .....



## What's Needed?

- **Models of Context**
  - What is context and how is it defined for a specific application?
- **Context Acquisition and Representation**
  - How do we determine context from sensor and other data?
  - How do we represent the contextual state of an application?
- **Mechanisms to support Context-Awareness**
  - What mechanisms can be used to adapt information delivery to context?
- **Methods for the Design of Context-Aware Applications**
  - How can we support the development of context-aware applications?



## Who's interested in Context-Awareness?

- Web Engineering Community
- Human-Computer Interaction Community
- Mobile Computing Community
- Ubiquitous and Pervasive Computing Community
- Database Community
- Information Retrieval Community



## Schedule

- 14:15 – 14:45** **Location-Aware Information Services**  
**Prof. Stefano Spaccapietra, EPF Lausanne**
- 14:45 – 15:15** **Context-Aware Data Management**  
**Dr. Michael Grossniklaus, ETH Zurich**
- 15:15 – 15:45** *Coffee*
- 15:45 – 16:15** **Information Retrieval in Context**  
**Prof. Fabio Crestani, University of Lugano**
- 16:15 – 16:45** **uMove: Interaction through Motion in Ubiquitous Computing Systems**  
**Dr. Vincenzo Pallotta, University of Fribourg**
- 16:45 – 18:30** **Open Forum and Apero**  
*CASCOM: Context-Aware Business Application Service Co-Ordination in Mobile Computing Environments, University of Basel*  
*EdFest: Context-Aware Access to Festival Information based on Interactive Paper Brochure and Map, ETH Zurich*  
*Reliable Health Monitoring on Mobile Devices, University of Basel*  
*mExplorer: A Mobile Learning Game, University of Zurich*  
*UbiGlide and UbiShop, University of Fribourg*