

Workshop on Behavior-based User Interface Customization



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Background and Motivation

End users of today's applications have limited ability to customize their user interface to fit specific user preferences and tasks. Although users come in all shapes and sizes, they must make do with one size fits all applications. Furthermore, particular tasks may require that the user hop between several applications, each with its own interface characteristics, often not designed to work well together.

User interface customization allows interfaces to be adapted to particular user preferences, and specialized to the specific tasks that users need to perform. It may take a variety of forms, including: changing the layout to hide irrelevant menus and buttons and highlight frequently-used options; changing font and icon sizes; designing new views not originally supported by the application designer; and providing macro operators that automate common procedures within and across applications.

An emerging area of research focuses on automatically customizing applications based on observations of user behavior, employing techniques from machine learning, plan recognition, and the broader AI community. For example, systems that observe a user's actions may be able to infer users' tasks and, through this understanding, be able to adapt user interfaces that will facilitate performance of tedious tasks or provide assistance with complex procedures. Further examples of automatic customization include:

- adaptive web sites based on web usage logs
- inferring a user's skill level and adapting the interface appropriately
- intelligent macros constructed through programming by demonstration
- dynamic interface layout based on common usage patterns

The purpose of this workshop is to bring together researchers with experience in the field of behavior-based customization, in order to consolidate our knowledge of current techniques and identify key research challenges for the future.

The workshop will be organized around a small number of focus questions. We expect the outcome of the workshop to:

- Identify the required characteristics for a common platform (e.g., at the operating system level) for research into behavior-based customization,
- Define the limits of customization, both practical and theoretical,
- Determine the sweet spots, where behavior-based UI customization is mostly likely to be successful, and where existing AI techniques best apply, and
- Define the open research questions and agenda that need to be addressed to move the area of behavior-based UI customization forward.

Workshop format

Each participant will be given the opportunity to give a brief presentation on their work or views on this area. Much of the workshop will be focused discussions on several topics related to this research area. The number of participants will be limited to 15. All submissions will appear as paper contributions in the workshop proceedings.

Specifically, the morning will consist of short (10 minute) presentations by workshop participants. Each presentation will describe the participant's work in the area of behavior-based UI customization, with a focus on techniques and applications that address the topic. The afternoon will be devoted to a set of three or four discussion topics. A leader for each topic will be selected by the program committee; the leader will give a very brief introduction to the topic, followed by an open discussion. Topics will be selected from common themes in the workshop submissions, as well as the goal statement for the workshop.

Call for Participation

Prospective participants are asked to submit a 4-page paper describing methods or applications relating to the workshop topic. All submissions should follow the [CHI paper format](#) and be submitted electronically in PDF format at conferencereview.com.

In addition, a brief biography describing each researcher's experience and interests relevant to the workshop topic should be included. The program committee will select participants based on the relevancy of the submitted material to the theme of the workshop.

The deadline for submissions is **November 3, 2003**. Note that all workshop participants will be required to register for the main IUI/CADUI conference.

Questions about the workshop should be directed to iuiwksp@us.ibm.com.

[Call for participation \(pdf\)](#)

[Call for participation \(text\)](#)

Important Dates

Submission of workshop papers:

November 3, 2003

Notification of acceptance:

November 24, 2003

Workshop at IUI/CADUI conference

January 13, 2003

Workshop organizers

- Lawrence Bergman, IBM TJ Watson Research
- Tessa Lau, IBM TJ Watson Research

Program committee

- Mathias Bauer, DFKI
- Lawrence Bergman, IBM TJ Watson Research
- Margaret Burnett, Oregon State University

IUI 2004 Workshop on Behavior-Based UI Customization

- Brian D. Davison, Lehigh University
- Tessa Lau, IBM TJ Watson Research
- Henry Lieberman, MIT Media Lab
- Rob Miller, MIT
- Daniel Oblinger, IBM TJ Watson Research
- Jean-David Ruvini, Bouygues e-lab