

May 18, 2015
Florence, Italy



Association for
Computing Machinery

Advancing Computing as a Science & Profession



FutureMobileUI'15

Proceedings of the 2015 Workshop on
Future Mobile User Interfaces

Sponsored by:

ACM SIGMobile

In cooperation with:

ACM SIGOPS



**Association for
Computing Machinery**

Advancing Computing as a Science & Profession

**The Association for Computing Machinery
2 Penn Plaza, Suite 701
New York, New York 10121-0701**

Copyright © 2015 by the Association for Computing Machinery, Inc. (ACM). Permission to make digital or hard copies of portions of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyright for components of this work owned by others than ACM must be honored. Abstracting with credit is permitted. To copy otherwise, to republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee. Request permission to republish from: permissions@acm.org or Fax +1 (212) 869-0481.

For other copying of articles that carry a code at the bottom of the first or last page, copying is permitted provided that the per-copy fee indicated in the code is paid through www.copyright.com.

Notice to Past Authors of ACM-Published Articles

ACM intends to create a complete electronic archive of all articles and/or other material previously published by ACM. If you have written a work that has been previously published by ACM in any journal or conference proceedings prior to 1978, or any SIG Newsletter at any time, and you do NOT want this work to appear in the ACM Digital Library, please inform permissions@acm.org, stating the title of the work, the author(s), and where and when published.

ISBN: 978-1-4503-3504-1

Additional copies may be ordered prepaid from:

ACM Order Department

PO Box 30777
New York, NY 10087-0777, USA

Phone: 1-800-342-6626 (USA and Canada)
+1-212-626-0500 (Global)
Fax: +1-212-944-1318
E-mail: acmhelp@acm.org
Hours of Operation: 8:30 am – 4:30 pm ET

Printed in the USA

Chairs' Welcome

It is our great pleasure to welcome you to the ACM MobiSys 2015 Future Mobile User Interfaces workshop. This is a new workshop that aims to provoke thoughts about the future of mobile interfaces. Mobile user interfaces have always been constrained to the shape of the mobile devices and the limitations due to the size of the display. However in recent years, we have seen the emergence of devices with new form factors, including foldable screens or even vibro-tactile displays. These new devices include various sensors allowing for novel types of input and outputs with the mobile technologies. This workshop will address innovations in terms of interaction with mobile and wearable devices, as well as with the applications they enable.

The workshop program includes an interesting mix of papers and includes four refereed paper presentations as well as invited talks around the themes of mobile User Interfaces for special applications, integration of mobile devices with larger systems and wearable technologies. We have included a discussion and activity period to engage the speakers and the audience as well as some time at the end of the workshop to discuss the future directions. We thank the MobiSys organizers for supporting this workshop and we look forward to your participation in the workshop!

The program committee reviewed and accepted the following:

<i>Track</i>	<i>Reviewed</i>	<i>Accepted</i>	
Position Papers	7	4	57%

Jessica Cauchard
Stanford University, USA
Workshop Co-chair

James Landay
Stanford University, USA
Workshop Co-chair

Yang Li
Google Inc., USA
Workshop Co-chair

Table of Contents

Future Mobile User Interfaces 2015 Workshop Organization	vi
---	-----------

FutureMobileUI'15 Paper Presentations

Session Chair: Jessica Cauchard (*Stanford University*)

• Mobile User Interfaces Based on Attention	1
Ann McNamara, Chethna Kabeerdoss, Conrad Egan (<i>Texas A&M University</i>)	
• Design, Development and Evaluation Challenges for Future Mobile User Interfaces in Safety-Critical Contexts	5
Célia Martinie, Philippe Palanque (<i>University Toulouse 3</i>)	
• Integrated Interaction with Large and Small Devices	9
Antonella Di Rienzo, Franca Garzotto, Paolo Cremonesi (<i>Politecnico di Milano</i>), Cristina Frà, Massimo Valla (<i>Telecom Italia S.p.A.</i>)	
• Smart Jewelry: The Future of Mobile User Interfaces	13
Alexandra Ju (<i>Rhode Island School of Design</i>), Mirjana Spasojevic (<i>Harman International</i>)	

Author Index	16
---------------------------	-----------

FUTURE MOBILE USER INTERFACES 2015

Workshop Organization

Workshop Chairs: Jessica Cauchard (*Stanford University, USA*)
James Landay (*Stanford University, USA*)
Yang Li (*Google Inc., USA*)

Program Committee: Caroline Appert (*CNRS LRI, France*)
Daniel Ashbrook (*Rochester University, USA*)
Elizabeth Bales (*Google Inc, USA*)
Hao Lu (*Google Research, USA*)
Michael Rohs (*University of Hannover, Germany*)
Nicholas Lane (*Bell Labs, USA*)
Per Ola Kristensson (*Cambridge University, UK*)
Shiri Azenkot (*Cornell Tech, USA*)

Sponsor:

