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Gesture and Sign Language in Human-Computer Interaction and Embodied Communication

9th International Gesture Workshop, GW 2011
Athens, Greece, May 25-27, 2011
Revised Selected Papers

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ISSN 0302-9743 e-ISSN 1611-3349
ISBN 978-3-642-34181-6 e-ISBN 978-3-642-34182-3
DOI 10.1007/978-3-642-34182-3
Springer Heidelberg Dordrecht London New York

Library of Congress Control Number: 2012951293

CR Subject Classification (1998): I.2, I.3.7, H.5.2, H.1.2, I.5.4, I.5, I.4

LNCS Sublibrary: SL 7 – Artificial Intelligence

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Typesetting: Camera-ready by author, data conversion by Scientific Publishing Services, Chennai, India

Printed on acid-free paper

Springer is part of Springer Science+Business Media (www.springer.com)

Preface

The 9th International Gesture Workshop, GW 2011, was held in Athens, Greece, May 25–27, 2011, and was hosted by the Institute for Language and Speech Processing / ATHENA R.C. and the National and Kapodistrian University of Athens. The focus of this event was placed on the study of gestures and sign language in the framework of embodied communication and human-computer interaction, following the interdisciplinary tradition of Gesture Workshops since 1996.

The wide range of topics covered and the number of high-quality presentations composing the GW 2011 program (<http://access.uoa.gr/gw2011>) reflect the steady growth of interest of the research community worldwide in the study of human gesture, spanning across a variety of domains from the cognitive and psychological aspects of gesture analysis, human-computer and human-robot interaction to sign language research, Web 2.0 applications, and dancing and music notation systems.

Invited contributions by keynote speakers sketched the state of the art and spotted future perspectives in gesture research within the multimodal, embodied human communication landscape. Stefan Kopp put the emphasis on the use of gestures in real and simulated dialogue focusing on developing and testing empirically-based computational simulations of speech and gesture behavior and their exploitation in building embodied artificial agents that can engage in human-like interactive behavior. Sylvie Gibet focused on issues relating to the analysis and synthesis of sign language gestures, highlighting the tight connection between high-level semiotic and cognitive representation processes connected with gesture analysis to then propose a methodology for analyzing and synthesizing human expressive and semiotic gestures using sign language gestures for a case study. Petros Maragos presented an overview of ideas, methods, and research results in multimodal sensory information processing with emphasis on audio-visual signal fusion and on integration of low-level (signal-based) information with high-level (semantics-based) information.

During the conference, 35 submissions, peer reviewed based on extended abstracts of 4–6 pages, were presented. This book gathers a collection of 24 selected articles on work originally presented at GW 2011, revised and peer reviewed after the event. The articles are ordered in five sections:

- Human Computer Interaction
- Cognitive Processes
- Notation Systems and Animation
- Gestures and Signs: Linguistic Analysis and Tools
- Gestures and Speech.

Thus, the contents of this volume are representative of the multitude of research areas which compose the range of interests of the Gesture Workshops community.

We are grateful to the authors of the articles in the volume and also to the reviewers, who contributed to the quality of the work presented with most constructive input. We hope that the present volume will be as inspiring for its interdisciplinary audience as the preceding ones in the GW series. Thanks also to Christian Vogler and the local committee, Dimitrios Chalastanis, Athanasia-Lida Dimou, Maria Emmanouil, Vasileios Golematis, Theodor Goulas, Panayiotis Kariotis, Alexandros Pino, and Ariadni Velissaropoulou, and to the GW 2011 webmaster Hernisa Kacorri, as well as to the teams at ILSP/ATHENA RC and the University of Athens for hosting the event and contributing to experiencing an inspiring meeting. Last but not least, financial support by the University of Athens, ILSP/ATHENA RC, and Innoetics Ltd is gratefully acknowledged.

May 2012

Eleni Efthimiou
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Stavroula-Evita Fotinea



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