GUEST EDITORIAL PREFACE

Special Section on Advances in Adaptive and Affective Learning

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INTRODUCTION

In the last decade there has been an increasing research interest towards adaptivity in e-Learning. This is mainly due to the idea that traditional approaches cannot be adopted in distance learning, characterized by individualized learning, which has to follow specific requirements and preferences of the learner. Adaptation can occur at different levels, such as at Interaction level, supporting the user’s interaction with the system; at Course Delivery level, aiming at reaching the best fit between the course contents and the user profile/requirements; at Content Discovery and Assembly level, adaptive techniques are adopted to discover and assemble learning content from distributed repositories; the Adaptive Collaboration level incorporates adaptive learning inside collaborative environments like forums or resource sharing applications, i.e. creating groups of people with the same interest.

Together with adaptivity, also the affective domain is critical when instruction is conducted in distance learning modality, without the presence of a tutor.

Affective learning is related to the learners’ attitudes, motivations, beliefs, and emotions. As an example, one of the factors enhancing motivation within the social dimension is reputation, which make evident the contributions of each learner to the community. Affect is critical during the learning process since learning is influenced by attitude, motivation, and other affective factors, which are neither directly observable nor easily measurable. As a consequence, often this aspect is neglected and only students’ performances are evaluated.

ARTICLE OVERVIEW

The International Workshop on Distance Education Technologies (DET) has been established as renowned event covering the newest trends in distance education technologies. DET workshop is closely associated with the International Conference on Distributed Multimedia Systems (DMS) workshop on the one hand, and with the IJDET journal on the other hand and focuses on creative solutions on distance education and combines several advanced topics on
design, implementation, and applications of e-
learning. Submissions cover novel approaches on
distance learning tools, communication
mechanisms, distance learning and culture, new
educational technologies, virtual worlds and
serious games, mobile learning, and distance
learning and the arts.

In 2011, this workshop was held in conjunc-
tion with the 17th International Conference on
Distributed Multimedia Systems in Florence.
Authors that submitted work to the DET 2011
workshop came from United States, Asia,
Europe, with remarkably many submissions
from Italy.

This special section includes three out-
standing out of the twenty submissions we
received for DET 2011. After an already rigorous
review process at the conference, we invited
only three authors to submit an extended version
of their contribution to this special section. All
these submissions were of very high quality, but
unfortunately it was only possible to include
the following top-ranked submissions into this
special section, which – however – give an
excellent overview of adaptive and affective
learning topic covered in DET 2011.

The first contribution from Pierpaolo Di
Bitonto, Teresa Roselli, Veronica Rossano, and
Maria Sinatra (University of Bari, Italy) aims at
presenting the evolution of different solutions of
adaptive e-learning to retrieve Learning Ob-
jects (LOs) and to tailor learning resources and
paths in SCORM compliant distance learning
environments. The paper discusses the main
research questions such as What, How and Why
the research has been focused on giving differ-
ent kinds of answers to these questions. Then
three main technological approaches adopted
by the authors have been described, such as a
multi-agent system, an adaptive SCORM com-
pliant package and an e-learning recommender
system. This paper won the Best Paper Awards
of the DET 2011 workshop.

The next article from Maria De Marsico,
Andrea Sterbini, and Marco Temperini (Sa-
pienza University of Rome, Italy) concerns
the integration between personalized learning
paths and collaborative learning activities. To
this aim this paper presents the combination of
the functions of two pre-existing prototypes of
web-based systems, to investigate how the
above integration can merge adaptive and
social e-learning. Also a mapping between the
student model and the definition of Vygotskij’s
Autonomous Problem Solving and Proximal
Development regions is presented, aiming at
providing an appropriate guidance to the
learner, especially when selecting a social
learning activity.

The last (but not least) work from Luigi
Colazzo, Andrea Molinari, and Nicola Villa
(University of Trento, Italy) discusses the po-
tential of three different learning approaches
and the metaphor adopted by each of them. In
particular, the metaphor of “course” adopted by
LMSs, the social network metaphor related to
web 2.0 technologies and the learning approach
based on (virtual) community, and where the
subject is just a participant that adheres to
the rules of the community, with duties, rights, tasks
to do and objectives to achieve.

CONCLUSION AND
ACKNOWLEDGMENT

I would like to thank many people who made
this special section possible. First, I would like to
thank Fuhua (Oscar) Lin, Editor in Chief of this
journal and DET 2011 Program Co-Chair, who
gave me the opportunity to act as guest editor in
this special section. Then, I would like to thank
the IJDE Executive Editor Maiga Chang, the
DEET 2011 and DMS 2011 organizers and com-
mittees, who helped to manage an exceptional
event. In particular, I would express my thanks
to Shi-Kuo Chang, the Steering Committee
Chair of DMS 2011, to Kazuo Yana, DET 2011
Workshop Co-Chair together with me, and to the
others Program Co-Chairs Teresa Roselli, and
Veronica Rossano. Next, we would like thank
all members of the program committee as well
as the reviewers of this special section. After
that, we do not want to forget the authors, who
gave us a hard time in selecting the best papers
from those excellent submissions. Last but not least, we want to thank all those participants who made their way to Florence, allowing DET 2011 to became a success. We hope this section of DET best papers will be of interest to the readers and will encourage future innovative and synergetic research. We look forward to the IJDET next issue of the best papers of the DET 2013 workshop that will be hold in Brighton, United Kingdom.

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*Guest Editor*

*IJDET*

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*R. Francese is Assistant Professor at the University of Salerno since 2004. Her research interests include software engineering, Human-Computer Interaction, collaborative work and learning, and mobile applications. She has published more than 70 papers on these topics in international journals, books, and conference proceedings. She is member of the Program Committee of several international and national conferences and of the IJDET Editorial Board.*