

UMAP 2017 PALE Workshop Organizers' Welcome

Welcome to the 7th *International Workshop on Personalization Approaches in Learning Environments (PALE)* held in conjunction with the 25th ACM Conference on User Modeling, Adaptation, and Personalization (UMAP 2017).

Personalization approaches in learning environments can help to foster effective, efficient, and satisfactory learning. The focus of the PALE workshop series is on the different perspectives in which personalization can be addressed in learning environments. It offers an opportunity to present and discuss a wide spectrum of issues and solutions. In particular, this seventh edition includes seven papers dealing with adaptive exercise selection, personality, learning styles, control over item difficulty, tag recommendation, interactive presentation platform, psychomotor activity modeling, as well as affective computing.

The PALE 2017 workshop is a follow-up of the six previous PALE editions. Their aim is to share and discuss new trends in current research on how user modeling and associated artificial intelligent techniques are able to contextualize and manage the increasing amount of information coming from the task at hand and its surrounding environment, in order to provide personalized learning support, which is sensitive to learners and their context. This covers many interrelated fields, including intelligent tutoring systems, learning management systems, personal learning environments, serious games, agent-based learning environments, and informal workplace learning settings. Moreover, we are especially interested in the enhanced sensitivity towards the management of vast data coming from learners' interactions (like sensor detection of affect in context) and technological deployment (including web, mobiles, tablets, tabletops, wearable technology), and how could this wide range of situations and features impact on modeling the learner context and interaction. Furthermore, we aim to cover the need of personalized learning in various settings, ranging from formal to informal ones.

The higher-level research question addressed in the workshop is: "How to deal with the increasing amount of information available from various resources and contexts, in order to provide effective personalized assistance in learning situations?"

To select the workshop papers a blind peer-review process was carried out. At least three members of the Program Committee (listed below) were assigned to each paper. As a result, the following 7 submissions (out of 9) were accepted:

1. J. Okpo, M. Dennis, J. Masthoff, N. Beacham. *Conceptualizing a Framework for Adaptive Exercise Selection with Personality as a Major Learner Characteristic.*
2. M. Alhathli, J. Masthoff, A. Siddharthan. *Should learning material's selection be adapted to learning style and personality?*
3. J. Papoušek, R. Pelánek. *Should We Give Learners Control Over Item Difficulty?*
4. P. Babinec, I. Srba. *Educational-specific Tag Recommendation in CQA Systems.*
5. V. Triglianios, M. Labaj, R. Moro, J. Simko, M. Hucko, J. Tvarozek, C. Pautasso, M. Bielikova. *Experiences Using an Interactive Presentation Platform in a Functional and Logic Programming Course.*
6. O. C. Santos, M. Eddy. *Modeling Psychomotor Activity: Current Approaches and Open Issues.*
7. J. G. Boticario, O. C. Santos, R. Cabestrero, P. Quiros, S. Salmeron-Majadas, R. Uria-Rivas, M. Saneiro, M. Arevalillo-Herráez, F. Ferri. *BIG-AFF: exploring low cost and low intrusive infrastructures for affective computing in secondary schools.*

These papers deal with various interesting topics, including adaptive exercise selection, adaptation based on personality and learning styles, control over item difficulty, tag recommendation, interactive presentation platform, psychomotor activity modeling, as well as affective computing. In particular, Okpo et al. [1] categorize the learner characteristics that have been used to adaptively select the next exercise in Intelligent Tutoring Systems. Alhathli et al. [2] attempt to answer the question whether learning material's selection should be adapted to learning style and personality. Papoušek and Pelánek [3] describe a large scale experiment, which allows learners to select the difficulty of the exercises that they perform. Babinec and Srba [4] present a method to tag recommendations in educational question-answer forums. Trigilianos et al. [5] report on an experimental usage of their web-based interactive tool during lessons. Santos and Eddy [6] propose a modeling approach to build personalized learning environments that support the acquisition of motor skills, such as those required in the practice of martial arts. Boticario et al. [7] introduce challenges in measuring affect from low cost and low intrusive infrastructures in intelligent learning systems with the aim of maintaining engagement.

The organization of the PALE 2017 Workshop was partially supported by the following projects:

- BIG-AFF - Fusing multimodal Big Data to provide low-intrusive Affective and cognitive support in learning contexts (TIN2014-59641-C2-2-P)
- Supervised Educational Recommender System (VEGA 1/0475/14)
- Innovative methods of teaching informatics in large groups with support for online education (KEGA 028STU-4/2017)
- HIBER - Human Information Behavior in the Digital Space (APVV-15-0508)
- ADAPTION - Migration zum Cyber-physischen Produktionssystem (BMBF)

More information about the workshop, including its schedule, can be found at the PALE 2017 web site: <http://adenu.ia.uned.es/workshops/pale2017/>.

Milos Kravcik

Workshop Co-organizer
DFKI GmbH

Olga C. Santos

Workshop Co-organizer
UNED

Jesus G. Boticario

Workshop Co-organizer
UNED

Maria Bielikova

Workshop Co-organizer
Slovak University of Technology

Tomas Horvath

Workshop Co-organizer
Eotvos Lorand University



PALE 2017 Workshop Organization

- Workshop Co-chairs:** Milos Kravcik (*DFKI GmbH, Germany*)
Olga C. Santos (*UNED, Spain*)
Jesus G. Boticario (*UNED, Spain*)
Maria Bielikova (*Slovak University of Technology, Slovakia*)
Tomas Horvath (*Eotvos Lorand University, Hungary*)
- Program Committee:** Miguel Arevalillo-Herráez (*University of Valencia, Spain*)
Hana Bydzovska (*Masaryk University, Czech Republic*)
Mihaela Cocea (*University of Portsmouth, UK*)
Paul De Bra (*Eindhoven University of Technology, Netherlands*)
Matt Dennis (*University of Portsmouth, UK*)
Sabine Graf (*Athabasca University, Canada*)
Mirjana Ivanovic (*University of Novi Sad, Serbia*)
Kinshuk (*University of North Texas, USA*)
Noboru Matsuda (*Carnegie Mellon University, USA*)
Alexander Nussbaumer (*Graz University of Technology, Austria*)
Alexandros Paramythis (*Contextity AG, Switzerland*)
Elvira Popescu (*University of Craiova, Romania*)
Sergio Salmeron-Majadas (*UNED, Spain*)
Jozef Tvarozek (*Slovak University of Technology, Slovakia*)
Carsten Ullrich (*DFKI GmbH, Germany*)
Stephan Weibelzahl (*Private University of Applied Sciences Göttingen, Germany*)
- Subreviewers:** Muhammad Anwar (*Athabasca University, Canada*)
Jason Bernard (*Athabasca University, Canada*)