



HELLENIC DEMOCRACY

## National and Kapodistrian University of Athens

SCHOOL OF ECONOMICS AND POLITICAL SCIENCES

FACULTY OF COMMUNICATION AND MEDIA STUDIES

LABORATORY OF NEW TECHNOLOGIES IN COMMUNICATION, EDUCATION AND THE MASS MEDIA

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### Constantinos Mourlas

Position: Associate Professor, Department of Communication and Media Studies, National and Kapodistrian University of Athens

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### Academic Degrees

Computer Science (PhD 1995 , Diploma 1988)

### Professional Occupation

Oct. 2012 --- today	Associate Professor, Dept. of Communication and Media Studies, National and Kapodistrian University of Athens
March 2012 --- July 2012	Visiting Professor, Department of Computer Science, University of Applied Sciences (MUAS) - Hochschule München, Munich, Germany
Oct. 2002 --- Oct 2012	Assistant Professor, Dept. of Communication and Media Studies, National and Kapodistrian University of Athens
Dec. 1998 --- Oct.2002	Lecturer, Dept. of Computer Science, University of Cyprus, Nicosia, Cyprus
Jan. 1998 --- Nov. 1998	ERCIM fellow at Rutherford Appleton Laboratory, UK for post-doctoral studies through research
Jan. 1989 --- Dec. 1996	Co-operation with the Department of Informatics - National and Kapodistrian University of Athens under EU-funded research projects (EDS, APPLAUSE, PARACHUTE)

### Scientific Distinctions

**Dec. 2018 -**, Member of the Board of Directors of The Athens News Agency - Macedonian Press Agency (ANA-MPA).

**Sept. 2018 - today**, Scientific Coordinator of the postgraduate studies (MSc) on the direction of "Data Science for Communication and Journalism" , Dept of Communication and Media Studies, NKUA.

**March 15, 2012 - July 15, 2012, Visiting Professor** during spring semester at the Department of Computer Science, Munich University of Applied Sciences (MUAS) - Hochschule München, Munich.

## Scientific Activity

The research interests has been focused mainly on the study of intelligent systems and more specifically on adaptive and personalized communication environments. This field is generally broad and covers a wide range of applications that have similar behaviors and attributes. The term *adaptation* is studied in two different versions, which are:

1. Adaptation of content and services to improve human-computer interaction through personalization techniques based on cognitive and emotional factors.
2. Adaptation of content based on intelligent filtering techniques, recommender systems and AI algorithms, applied in intelligent interfaces, computational journalism and personalized news reading.

Recently, particular emphasis has been placed on the retrieval, processing and visualization of information and pattern recognition, hidden in a very large amount of data (big data analysis), which are sometimes structured, semi-structured or unstructured. Programming languages such as Python and R, AI algorithms for classification, mining and pattern recognition as well as NLP techniques to retrieve opinions (opinion mining) and emotionally loaded texts, are studied in user generated content .

Dr. C. Mourlas, since 2016, is also Director of the Digital Media Lab, Dept of Communication and Media, National and Kapodistrian University of Athens.

## Teaching Experience

### *Undergraduate Courses*

2002 - today	Information Technologies in Communication and Mas Media, compulsory, 1st year studies
2002 - today	Applications of Information Technologies in Communication and Mass Media, 1st year studies
2016 - today	On-line Journalism, elective course, 3rd & 4th year of studies
2016 - today	Data Journalism (& Programming with Python) , elective course, 3rd & 4th year of studies

### *Graduate Courses*

2014 - today	User Centered Design and Evaluation of Interactive Environments
2014 - 2018	Adaptive and Personalized Environments for Digital Communication and the Web
2016 - today	Big Data Analysis in Communication and Journalism (Programming in Python), Thesis Tutorials
2018 - today	Machine Learning for Data Mining and Predictive Analytics

## Coordinator of the Computational Journalism Research Group

Computational Journalism Group is a space for research and collaboration that works within the New Technologies Lab, Dept. of Communications and Mass Media, NKUA. It aims at promoting the connection between journalism and data science by focusing on in-depth understanding of contemporary computing methods that are globally used, assuming that the convergence of these two areas forms a great and quite promising field of knowledge. The team examines particularly the interconnection between Artificial Intelligence, Journalism and Political Communication.

## **Participation as Coordinator in National and European Projects for Research and Development (short list)**

**FACT-CHECKING European cooperation project on disinformation and fact-checking training. Empowering current and future media and media education professionals, to identify, prevent, and combat fake news spread over digital networks, Erasmus+ KA2, Sept. 2019 - Aug.2022**

The goal of the project is the design and development of a multidisciplinary and international training program on strategies and tools in order to prevent, identify, and combat fake news.

The development of the project could follow the key steps described below:

- a) European online and classroom course mapping (mainly in the member countries of the partnership) in the fields related to 'fake news'.
- b) European needs survey and analysis in terms of knowledge, skills and competences (mainly in the member countries of the partnership)
- c) Joint design and development of the curriculum (training program: master curricula or intensive training) and production of course material.
- d) Local and/or online testing of the defined curriculum in the member countries of the partnership.
- e) Validation of the course program (changes and improvements) and local/online implementation of the course program.
- f) Dissemination of the project outcomes

**Creative Europe Project "LABOURGAMES", Ref N°: 570569-CREA-1-2016-1-DE-CULT-COOP1, Creative Europe - Culture Sub– Support to European cooperation projects – 2016 - 2019**

LABOURGAMES is an innovation-oriented network project bringing together the »world of labour« with the »world of play« by allowing smart use of game principles and applying them in the working world to facilitate learning effects, decision-making, and motivation.

**Play2DO - A simulated training framework for skills development addressing students with intellectual and developmental disabilities and their trainers. Reference no. 2016-1-UK01-KA202-024613, Erasmus+, 2016 - 2018**

The Play2Do project aims to support special education teachers, mainstream teachers, and VET trainers who work with students/trainees with intellectual disabilities by offering an educational game for teachers to complement their training through simulated practice learning and improve their skills in dealing with critical incidents or challenging situations which can occur in everyday practice.

**PredMine: A PREDICTIVE ANALYSIS PLATFORM USING LIVE BIG DATA, A Bilateral Cooperation of Science & Technology between Greece and Israel 2013-2015. Co-financed by Greece and the European Union - European Regional Development Fund**

PredMine is a predictive analytics platform focusing on the insurance sector. It provides a variety of data mining and big data analytics tools, facilitating the utilization of predictive modeling by insurance companies. The PredMine platform that was designed and implemented by the participating enterprises brings the advantages of predictive analytics, text mining and big data processing to the financial and insurance sector.

Erasmus+ European Project, M-CARE European Project (M-Care - 539913-LLP-1-2013-1-TR-LEONARDO-LMP), Duration: 2013-2015

European Project Erasmus+ " Assistive Technology Learning Through A Unified Curriculum/ ATLEC", LEONARDO DA VINCI Multilateral Projects for Development of innovation (duration: 1/1/2012 - 31/12/2014, total budget: 533.288 euros).

Code RED, UK/13/LLP-LdV/TOI-678, Type: LLP-Leonardo-Transfer of Innovation, Starting date: 01 Oct 2013, Duration: 24 months

RECALL - Reconnecting Excluded Communities via Lifelong Learning through the Use of Location Based Services (RECALL KA3 LLL project - 504970-LLP-1-2009-1-UK-KA3-KA3MP) (duration: 1/11/2009 - 31/12/2012, total budget: 589.000 euros)

### **PUBLICATIONS (short list)**

#### **Books**

- B1) C. Mourlas, N. Tsianos, & P. Germanakos (Eds.), "Cognitive and Emotional Processes in Web-based Education: Integrating Human Factors and Personalization", Advances in Web-Based Learning Book Series, Information Science Reference (ISR), IGI Global's most prestigious imprints, ISBN: 978-1-60566-392-0, IGI Global, release date: October, 2009.
- B2) C. Mourlas & P. Germanakos (Eds.), "Mass Customization for Personalized Communication Environments: Integrating Human Factors", Information Science Reference (ISR), IGI Global's most prestigious imprints, ISBN: 978-1-60566-260-2, IGI Global, release date: May, 2009.
- B3) C. Mourlas & P. Germanakos (Eds.), "Intelligent User Interfaces: Adaptation and Personalization Systems and Technologies", Information Science Reference (ISR), IGI Global's most prestigious imprints, ISBN: 978-1-60566-032-5, IGI Global, release date: September 15, 2008.

#### **Book Contributions**

- K1.Psaltis, A., & Mourlas, C. Realtime BioSensing System Assessing Subconscious Responses of Engagement for Personalized Learning. A chapter in Digital Technologies and Instructional Design for Personalized Learning, IGI Global, 2018
- K2.Psaltis, A., & Mourlas, C. A real time attachment free, psycho physiological stress and heart rate measurement system. A chapter in Advanced Instrument Engineering: Measurement, Calibration, and Design, IGI Global, 2013.
- K3.Costas Mourlas, Personalized Learning in Hypermedia Environments, A chapter in *E-Learning Book 4*, ISBN 979-953-307-688-0, In Tech Publishing, 2012.

#### **Publications in Scientific Journals**

- Π1.Psaltis, A., Rizopoulos, C., & Mourlas, C. Ascertaining user engagement via an unobtrusive purpose built biofeedback device sensing evoked emotional constructs in real time. *Journal of Ambient Intelligence & Smart Environments - JAISE 2014*
- Π2. Saridaki, M., & Mourlas, C. (2013). Integrating Serious Games in the Educational Experience of Students with Intellectual Disabilities: Towards a Playful and Integrative Model. *International Journal of Game-Based Learning (IJGBL)*, 3(3), 10-20. doi:10.4018/ijgb.2013070102
- Π3. A. Psaltis, C. Mourlas, A Real Time Attachment Free, Stress and Heart Rate Measurement System, Article in *International Journal on Measurement Technologies and Instrumentation Engineering (IJMTIE)*, Volume 1(2), pp. 1-13, April-June 2011.

- Π4. Saridaki, M., & Mourlas, C. Motivational aspects of gaming for students with intellectual disabilities, An article in *International Journal of Games Based Learning*, IGI Global, Volume 1(4), pp. 48-58, October-December 2011.
- Π5. N. Tsianos, Z. Lekkas, P. Germanakos, C. Mourlas, & G. Samaras, “An Experimental Assessment of the Use of Cognitive and Affective Factors in Adaptive Educational Hypermedia”, *IEEE Transactions on Learning Technologies (TLT)*, IEEE Computer Society, Vol. 2, No. 3, pp. 249-258, July-Sept. 2009, doi:10.1109/TLT.2009.29.
- Π6. P. Germanakos, N. Tsianos, Z. Lekkas, C. Mourlas, & G. Samaras, “Realizing Comprehensive User Profiling as the Core Element of Adaptive and Personalized Communication Environments and Systems”, *The Computer Journal*, Special Issue on Profiling Expertise and Behaviour, Oxford University Press, 2008, doi:10.1093/comjnl/bxn014.
- Π7. P. Germanakos, N. Tsianos, Z. Lekkas, C. Mourlas, & G. Samaras, “The Role of Human Factors in Web Personalization Environments”, *Encyclopedia of Information Science and Technology*, 2<sup>nd</sup> edition, IGI Global, 2008.
- Π8. P. Germanakos, N. Tsianos, Z. Lekkas, C. Mourlas, & G. Samaras, “Improving mCommerce Services Effectiveness with the use of User-Centric Content Delivery”, *eCommerce in Organizations Journal*, Special Issue on Mobile and Context Aware eCommerce, Jan-Mar 2007, Vol. 6(1): 1-18.
- Π9. P. Germanakos, N. Tsianos, Z. Lekkas, C. Mourlas, & G. Samaras, “Capturing Essential Intrinsic User Behaviour Values for the Design of Comprehensive Web-based Personalized Environments”, *Computers in Human Behavior Journal*, Special Issue on Integration of Human Factors in Networked Computing, doi:10.1016/j.chb.2007.07.010.
- Π10. A.C. Kakas and A. Michael and C. Mourlas, «ACLP: Abductive Constraint Logic Programming», *The Journal of Logic Programming*, Special Issue on Abductive Logic Programming, Vol. 44, No. 1-3, pp. 129--177, July/August 2000.
- Π11. M. Vazirgiannis and C. Mourlas, «An Object-Oriented Model for Interactive Multimedia Presentations», *The Computer Journal*, Special Issue on Multimedia, Vol. 36, No. 1, pp. 76--86, 1993.

### ***Selected Publications in Conference Proceedings with full referee process***

- Σ 1 Sotirakou, D. Trilling, C., Germanakos, & Mourlas, C. (2019, October). Opening the black box of perceived quality: Predicting endorsement on a blog site, In *IEEE/WIC/ACM International Conference on Web Intelligence*, 2019.
- Σ 2 Sotirakou, C., Germanakos, P., Holzinger, A., & Mourlas, C. (2018, August). Feedback Matters! Predicting the Appreciation of Online Articles A Data-Driven Approach. In *International Cross-Domain Conference for Machine Learning and Knowledge Extraction* (pp. 147-159). Springer, Cham.
- Σ 3 Mandenaki, C., Mourlas, C. (2018). When text mining meets discourse analysis: “digging” in the GREEK populism via automatic methods, 2nd International Conference on Europe in Discourse-Agendas of Reform, September 21st - 23rd, 2018, Athens, Greece (to be published)
- Σ 4 Sotirakou, C., Papavasiliou, S., Mourlas, C., Van Isacker, K. (2015). “Gamified mobile/online learning for personal care givers for people with disabilities and older people”, *Proc. of the Interactive Technologies and Games (iTAG)*, IEEE International Conference, 22-23 October 2015, Nottingham, UK
- Σ 5 Sotirakou, C., Mourlas, C. (2015). “Designing a gamified News Reader for mobile devices”, *Proc. of the IEEE International Conference on Interactive Mobile Communication, Technologies and Learning (IMCL)*, 19-20 November 2015, Thessaloniki, Greece.
- Σ 6 Sotirakou, C., Mourlas, C. (2015). “A Gamified News Application for Mobile devices: An approach that turns digital news readers into players of a social network”, *International*

Conference on Games and Learning Alliance, GALA 2015, 10-11 December 2015, Rome, Italy. Springer Lecture Notes in Computer Science (LNCS) book series.

- Σ 7 Saridaki, M. & Mourlas, C. (2014). Flow, Fun and Frame in the Classroom: Redefining the Engagement and Self-Determination of Students with Intellectual Disability through Games. *Interactive Technologies and Games (iTAG)*, 2014 International Conference, 16-17 Oct. 2014, page(s): 44- 50. 10.1109/iTAG.2014.19, publisher: IEEE
- Σ 8 Saridaki, M. ; Mourlas, C. (2014). Playing in the special education school: from gamers to game designers in European Conference in the Applications of Enabling Technologies 2014; Glasgow 11/2014
- Σ 9 Saridaki, M.; Mourlas, C. (2014). Changing the Rules of the Game: Digital Games as Tools of Change in the Special Education Classroom in 8th European Conference on Games Based Learning ECGBL 2014 Berlin; Publisher: Academic Conferences and Publishing International, Limited ISBN: 978-1-910309-55-1 ISSN: 2049-0992 10/2014
- Σ 10 Psaltis, A., Rizopoulos, C. & Mourlas, C. Mapping User Engagement to States of Affect via an Unobtrusive Biofeedback Device - A Dynamic Visualization of Real-time Assessment, *Physiological Computing Conference (PhyCS 2014)*, Portugal 2014 (short paper)

#### Awards

- **(2014) Best Student Paper Award:** Psaltis, A., Rizopoulos, C., Lekkas, Z., & Mourlas, C. (2014, June). Deducing user states of engagement in real time by using a purpose built unobtrusive physiological measurement device: an empirical study and HCI design challenges. In *International Conference on Augmented Cognition* (pp. 55-66). Springer.
- **(2009) Best Student Paper Award:** N. Tsianos, Z. Lekkas, P. Germanakos, C. Mourlas, & G. Samaras, "User-centered Profiling on the basis of Cognitive and Emotional Characteristics: An Empirical Study", *Proceedings of the 5<sup>th</sup> International Conference on Adaptive Hypermedia and Adaptive Web-based Systems (AH 2008)*, Hannover, Germany, July 28 – August 1, 2008, LNCS 5149, Springer-Verlag Berlin Heidelberg, pp. 214-223. (27% acceptance) (<http://www.ah2008.org/index.php?section=83>)