### Carla Limongelli, Engineering Department, Via Vito Voleterra, 62 – 00146 Roma, ITALY

## RESEARCH AND TEACHING ACTIVITY

#### **Teaching Activity**

A continuous teaching activity has started as teaching assistant for courses of Fundamentals of Computer Science, Functional Programming and Artificial Intelligence. She has taught and teaches various courses of Fundamentals of Computer Science for civil engineers and for Computer Science and a course on Algorithms and Data Structures.

-She has taught and teaches courses of Fundamentals of Computer Science and Algorithms and Data Structures. She also teaches "didactic of computer science" for teacher's formation curriculum (TFA and PAS).

- She has been advisor of two PhD students at Roma Tre University and co-advisor of two PhD students at Griffith University – Queensland, Australia.

#### Recent Research Activity

Artificial Intelligence methodologies and technologies for e-learning. The research mainly focuses on Intelligent Adaptive Learning Environments, User Modeling and User-Adapted Interaction, and collaborative learning environments. In particular, LS-Plan, a framework for personalization and adaptation in e-learning, is a prototype proposed for automatic sequencing of e-learning courses. Adaptation is meant, with respect to the knowledge possessed by the learner and her learning styles, both evaluated prior of the course and maintained during course fruition. LS-Plan has been integrated into Moodle Learning Management System. Present work focuses on the following topics:

- Retrieval of didactic materials
- Community of practice for sharing material and experiences among teachers
- Social collaboration tools, to support the process of course construction
- Recommendation systems to support the operations of retrieving, analyzing, and importing LOs from a set of standard Learning Objects Repositories
- Automatic extraction and recommendation of learning material from Wikipedia
- Extracting information for establishing didactic dependencies between Wikipedia pages

#### **Scientific Committees**

-She is program committee member of various international conferences such as ITHET 2015, ICALT 2015, HCI 2015, ITS 2016, ITHET 2016, IEETel 2016, HCI 2016, ICALT 2016, ICALT 2017, ICWL 2017, ITS 2017, ICALT 2018, ICWL 2018, ITS 2018, Information Visualization 2019, UMAP 2019, ITS 2019, ICWL 2019, .

She has been co-chair of the Doctoral consortium at ICWL 2016.

She has been part of the commission for diploma thesis awards (Premio Lesmo) Al\*IA 2017 (Associazione Italiana per l'Intelligenza Artificiale).

She is chair of the track "Technology-Enhanced Adaptive Learning" of the congress ACM UMAP 2018 (User Modeling Adaptation and Personalization).

#### Citation Indexes

From Google Scholar (All) Citations 762 h-index 10 i10index 25 (Since 2014) Citations 422 h-index 13 i10-index 16

From Scoups (last 15 years) Citations 431 h-index 13

# ACTIVITIES AT ROMA TRE UNIVERISTY

-She has been the Coordinator of a Faculty group for the "use of technology in education" from: 20/02/2009 to

2013-2014 and 2014-2015. She joined the Scientific Commette of the course "La tutela del patrimonio culturale: conoscenza storica e diagnostica scientifica per il contrasto alle aggressioni criminali" managing the e-learning platform.

-2014-2017. As part of the framework agreement between the Italian-Latin American Institute (IILA) and Roma Tre, she was responsible for coordinating the web platform for the creation of online courses on "PROTECCION DEL PATRIMONIO CULTURAL Y LUCHA CONTRA EL TRAFICO ILICITO" for the countries: Argentina, Bolivia, Colombia, Ecuador, Guatemala and Peru. The courses ended positively in May 2017.- 2015-2016.

2014-2015. She was member of the Council and the Scientific Committee of the 1st level Master "Experts in the protection of cultural heritage" and managed the e-learning platform.

- 2015-2016. In collaboration with the Departments of Engineering, Science of Education, Philosophy, Communication and Entertainment, National Institute for Deaf and High School Kepler, participated in the "Talent Italy" MIUR competition presenting the MOOC "Thinking of Studying Engineering?" Ranked in fifth place.

-2017. Responsible for the research contract between the Inter-university Research Center for Sustainable

Development (CIRPS) and the Department of Engineering for the management and management of the "Somali Web University" domain.

-2017. Responsible for the training (development of a training program for the creation and management of a platform for distance learning) of a technician from the Somali National University as part of the agreement between the Ministry of Foreign Affairs and International Cooperation of the Italian Republic and Roma Tre for the project: "Higher Education for Teachers of the Somali National University operating in Somalia".

-2017-2018. Collaboration in the preparation of an online course to counter the phenomenon of university dropout in the context of computer science courses for first-year Engineering students, commissioned by the Roma TrE-Education Foundation.

- 2019 member of Junta of University Language Center (Centro Linguistico di Ateneo CLA).

#### **Recent Publications**

- De Medio, C., Gasparetti, F., Limongelli, C., Sciarrone, F. (2018) Modeling teachers and learning materials: A
  comparison among similarity metrics. Information Visualisation Biomedical Visualization, Visualisation on Built
  and Rural Environments and Geometric Modelling and Imaging, IV 2018.
- Gasparetti, F., De Medio, C., Limongelli, C., Sciarrone, F., & Temperini, M. (2018). Prerequisites between learning objects: Automatic extraction based on a machine learning approach. Telematics and Informatics, 35(3), 595-610.
- Limongelli, C., Lombardi, M., Marani, A., & Taibi, D. (2017). Enrichment of the dataset of joint educational entities
  with the web of data. Paper presented at the Proceedings IEEE 17th International Conference on Advanced
  Learning Technologies, ICALT 2017.
- Gasparetti, F., De Medio, C., Limongelli, C., Sciarrone, F., Temperini, M. Prerequisites between learning objects: Automatic extraction based on a machine learning approach (2016) Telematics and Informatics. Article in Press.
- Limongelli, C., Lombardi, M., Marani, A., Sciarrone, F., Temperini, M. A recommendation module to help teachers build courses through the Moodle Learning Management System (2016) New Review of Hypermedia and Multimedia, 22 (1-2), pp. 58-82.
- Limongelli, C., Sciarrone, F., Temperini, M. A social network-based teacher model to support course construction (2015) Computers in Human Behavior, 51 (PartB), pp. 1077-1085.
- De Marsico, M., Limongelli, C., Sciarrone, F., Sterbini, A., Temperini, M. UnderstandIT: A community of practice of teachers for VET education (2014) WEBIST 2014 - Proceedings of the 10th International Conference on Web Information Systems and Technologies, 1, pp. 338-345.awards, memberships, references. Remove headings not relevant in the left column.
- Limongelli, C., Lombardi, M., Marani, A., Taibi, D. Enrichment of the Dataset of Joint Educational Entities with the Web of Data (2017) Proceedings - IEEE 17th International Conference on Advanced Learning Technologies, ICALT 2017, art. no. 8001851, pp. 528-529.
- De Medio, C., Gasparetti, F., Limongelli, C., Sciarrone, F., Temperini, M. Course-Driven Teacher Modeling for Learning Objects Recommendation in the Moodle LMS (2017) UMAP 2017 - Adjunct Publication of the 25th Conference on User Modeling, Adaptation and Personalization, pp. 141-145.
- Limongelli, C., Lombardi, M., Marani, A., Taibi, D. Enhancing categorization of learning resources in the DAtaset of joint educational entities (2017) CEUR Workshop Proceedings, 1963, .
- De Medio, C., Gasparetti, F., Limongelli, C., Lombardi, M., Marani, A., Sciarrone, F., Temperini, M. Towards a characterization of educational material: An analysis of coursera resources (2017) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 10108 LNCS, pp. 547-557.
- Estivill-Castro, V., Limongelli, C., Lombardi, M., Marani, A. DAJEE: A dataset of joint educational entities for information retrieval in technology enhanced learning (2016) SIGIR 2016 - Proceedings of the 39th International ACM SIGIR Conference on Research and Development in Information Retrieval, pp. 681-684.
- Limongelli, C., Lombardi, M., Marani, A. Towards the recommendation of resources in Coursera (2016) Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 9684, pp. 461-463.