

Prof. Giovanni STILO

Academic Curriculum Vitae

2022

SHORT BIO

Giovanni Stilo is an Associate Professor and head of the Master's Degree course in Applied Data Science at the University of L'Aquila, where he received his PhD in April 2013. From 2012 to 2018, he was a researcher at Sapienza University of Rome. During his postdoctorate, in 2014, he was Visiting Researcher at Yahoo Labs in Barcelona, Spain.

His research interests fall into artificial intelligence, data mining and machine learning and are centred on real-world problems requiring large-scale data processing. Specifically, his current research interests include but are not limited to anomaly detection, computational biology, reinforcement learning, temporal analysis of social networks and social streams, as well as (social) web mining and (web) information filtering, while in the past also focused more on information retrieval models, text clustering and automatic taxonomy generation. In recent years, he developed a special interest in trustworthiness aspects of machine learning and data mining, such as Explainability, Bias and Fairness. He has published in top-tier conferences and journals, such as AIIM, IJCAI, DMKD, JWS, COLI, TREC and PlosOne. Moreover, he has been organising top-tier and highly relevant international conferences (IEEE ICDM, ECIR, CIKM) and as editor of international journals and volumes (Springer's Information Retrieval Journal, Information Processing Management and LNCS volume).

During his academic growth, he devoted much of his attention to teaching and tutoring, where he worked on more than 30 different national and international theses (of B.Sc., M.Sc. and P.h.D. levels). In more than ten years of academia, he provided University level courses for ten different topics and grades in the scientific field of Computer and Data Science. He was involved in every institution where he was by participating actively in several committees dedicated to managing the department and the teaching activities.

PART I - GENERAL INFORMATION

FULL NAME: Giovanni STILO
E-MAIL: giovanni.stilo@univaq.it
SPOKEN LANGUAGES: Italian (mother tongue), English (full working proficiency)
CURRENT POSITIONS: Associate Professor,
Head of the Master's Degree course in Applied Data Science

PART II - EDUCATION

[APR' 2013] **Ph.D.** in COMPUTER SCIENCE, University of "L'Aquila"
Ph.D. Thesis: "*Techniques for an Unordered World*"
Advisor: Prof. Michele FLAMMINI

[OCT' 2008] **M.Sc.** in COMPUTER SCIENCE, "Tor Vergata" University of Rome
M.Sc. 110/110 *summa cum laude*
Thesis: "*Tecniche Efficienti di Information Retrieval per il Trattamento di documenti di Interesse Legale*" | Advisor: Prof. Giorgio GAMBOSI

[FEB' 2006] **B.Sc.** in COMPUTER SCIENCE, "Tor Vergata" University of Rome
B.Sc. 110/110 *summa cum laude*
Thesis: "*Approccio Euristicamente al Problema del Broadcast ad Energia minima su Reti Disomogenee*" | Advisor: Prof.sa Miriam DI IANNI

PART III - APPOINTMENTS

- IIIA - [DEC'2021-PRESENT]
ACADEMIC POSITION: Head of the Master's Degree course in Applied Data Science
INSTITUTION: Inf. Eng., Computer Sc. and Math. Dep., University of L'Aquila
AREA: Degree course in Applied Data Science
- [DEC'2021-PRESENT]
POSITION: Associate Professor
INSTITUTION: Inf. Eng., Computer Sc. and Math. Dep., University of L'Aquila
AREA: Artificial Intelligence, Data Mining and Machine Learning
- [DEC'2018-DEC'2021]
POSITION: Assistant Professor (Tenure T.: RTD-B art.24 c.3 l.A L. 30.12.2010)
INSTITUTION: Inf. Eng., Computer Sc. and Math. Dep., University of L'Aquila
AREA: Data Mining and Machine Learning
- [JUL'2016-DEC'2018]
POSITION: Assistant Professor (RTD-A art.24 c.3 l.A L. 30.12.2010)
INSTITUTION: Computer Science Dep., "Sapienza" University of Rome
AREA: Data Mining, Social Network Analysis and Social computing
- [2014-2016]
POSITION: Post-doctoral Research Fellow (Ass. di Ric. art.51c.6L.27.12.1997)
INSTITUTION: Computer Science Dep., "Sapienza" University of Rome
AREA: Data Mining, Social Network Analysis and Social computing
- [MAY'14-NOV'14]
POSITION: Short Term - Visiting Research Fellow
INSTITUTION: Yahoo Labs, Barcelona, Spain (Web Mining group)
AREA: Social and Web Mining
- [2013]
POSITION: Short Term - Research Fellow
INSTITUTION: Computer Science Dep., "Sapienza" University of Rome
AREA: MultiJEDI Project
- [APR'12-DEC'12]
POSITION: Short Term - Research Fellow
INSTITUTION: Computer Science Dep., "Sapienza" University of Rome
AREA: Big Data Analysis e Data Mining
- [2010-2012]
POSITION: Assistant Professor (Short Term)
INSTITUTION: Faculty of Mathematical, Physical and Natural Sciences,
"Tor Vergata" University of Rome
- [2009-2013]
POSITION: PhD Student
INSTITUTION: Inf. Eng., Computer Sc. and Math. Dep., University of L'Aquila
AREA: Text Mining e Data Extraction

IIIB - [2013-2015]
OTHER POSITION: Research contracts
INSTITUTION: "Pediatric Hospital Bambino Gesù"
AREA: Mining in e-Health related data

[2009-2012]
POSITION: Applied Research Fellow
INSTITUTION: Nestor s.c.a.r.l. Laboratory
AREA: Researcher in the filed of Information Retrieval and Document management

[2007-2008]
POSITION: Project related contracts
INSTITUTION: Ministry of Justice
AREA: Evaluation of SIDIP and DIGIT projects

PART IV - TEACHING AND MENTORING EXPERIENCE

COURSES TAUGHT AS A PROFESSOR *Deep Neural Networks* (24/48h, 3/6 CFU)
M.Sc. in Computer Science,
Department of Inf. Eng., Comp. Sc. and Math.,
University of L'Aquila
A. Years: 2022-2023

Data Mining (48h, 6 CFU)
M.Sc. in Applied Data Science,
Department of Inf. Eng., Comp. Sc. and Math.,
University of L'Aquila
A. Years: 2022-2023

Database Systems (48h, 6 CFU)
M.Sc. in Applied Data Science,
Department of Inf. Eng., Comp. Sc. and Math.,
University of L'Aquila
A. Years: 2021-2023

Reinforcement Learning (Module of the AI Course) (12h, 1.5 CFU)
M.Sc. in Computer Science,
Department of Inf. Eng., Comp. Sc. and Math.,
University of L'Aquila
A. Years: 2019-2023

Social Mining (48h, 6 CFU)
M.Sc. in Applied Data Science,
Department of Inf. Eng., Comp. Sc. and Math.,
University of L'Aquila
A. Years: 2019-2022

Data Mining (40h)
M.Sc. in Computer Science,
Department of Natural, Engineering, and Technology Sciences,
Invited by the Arab American University of Palestine
A. Years: Summer 2020

Networks Analysis and Mining (28h)
M.Sc. in Computer Science,
Faculty of Math. and Comp. Science,
Invited by the University of Havana
A. Years: 2019-2020

Networks (48h, 6 CFU)
M.Sc. in Applied Data Science,
Department of Inf. Eng., Comp. Sc. and Math.,
University of L'Aquila
A. Years: 2018-2019

Social And Behavioral Networks (60h, 6 CFU)
M.Sc. in Data Science,
Faculty of Information Engineering, Informatics and Statistics,
"Sapienza" University of Rome
A. Years: 2016-2019

Web and Social Information Extraction (16h, 2 CFU)
M.Sc. in Computer Science,
Faculty of Information Engineering, Informatics and Statistics,
"Sapienza" University of Rome
A. Years: 2016-2019

Foundations of Computer Science (32 h)
M.Sc. in Biology and human evolution,
Faculty of Mathematical, Physical and Natural Sciences,
"Tor Vergata" University of Rome
A. Years: 2009-2012

COURSES TAUGHT AS A ASSISTANT *Web and Social Information Extraction* (16 h, Laboratory classes)
M.Sc. in Computer Science,
Faculty of Information Engineering, Informatics and Statistics,
"Sapienza" University of Rome
A. Years: 2013-2016

Programming Methodologies (8 h)
B.Sc. in Computer Science,
Faculty of Mathematical, Physical and Natural Sciences,
"Tor Vergata" University of Rome
A. Years: 2006-2008

PH.D. MENTORING ONGOING ANDREA D'ANGELO [Mid 2025¹]
Information Retrieval Scoring functions for the Clouds of Vectors Model: new approaches, implementations and trustworthiness aspects.

Ph.D. in Computer Science,
Department of Inf. Eng., Comp. Sc. and Math.,
University of L'Aquila
Co-Advised with Prof. Antinisca Di Marco

GIORDANO D'ALOISIO [Mid 2024]

¹From here on are: Expected Graduation date

Quality-driven data science workflow realization: from specification to implementation

Ph.D. in Computer Science,
Department of Inf. Eng., Comp. Sc. and Math.,
University of L'Aquila
Co-Advised with Prof. Antinisca Di Marco

MARIO ALFONSO PRADO-ROMERO [Late 2024]
Ensemble Methods for Explaining Graph Neural Networks
Ph.D. in Computer Science,
Gran Sasso Science Institute,

HAMED SARVARI [Late 2023]
Ensembles Techniques for Outlier Detection
Ph.D. in Computer Science,
Department of Computer Science,
The Volgenau School of IT & Engineering,
George Mason University, Fairfax, Virginia, U.S.A
Co-Advised with Prof. Carlotta Domeniconi

GRADUATED

BARDH PRENKAJ [Early 2022²]
Latent Deep Sequential Learning of Behavioural Sequences
Ph.D. in Computer Science,
Faculty of Information Engineering, Informatics and Statistics,
“Sapienza” University of Rome
Co-Advised with Prof. Paola Velardi

LORENZO MADEDDU [Mid 2022]
Machine Learning Methods for Extracting Medical Knowledge from the Human Interactome
Ph.D. in Computer Science in Medicine,
Medical School Department,
“Sapienza” University of Rome
Co-Advised with Prof. Paola Velardi

GIORGIA DI TOMMASO [Late 2019]
Semantics-Aware method for multi-domain entity Recommenders
Ph.D. in Computer Science,
Faculty of Information Engineering, Informatics and Statistics,
“Sapienza” University of Rome
Co-Advised with Prof. Paola Velardi

JOSE CAMACHO COLLADOS [Early 2018]
Semantic Vector Representations of Word Senses, Concepts and Entities and their Applications in NLP
Ph.D. in Computer Science,
Faculty of Information Engineering, Informatics and Statistics,
“Sapienza” University of Rome

THESIS
ADVISING

ANDREA D'ANGELO [Oct. 2022²]
Clouds of vectors for density-based Information Retrieval
M.Sc. in Computer Science,
Department of Inf. Eng., Comp. Sc. and Math.,

²From here on are: Already Graduated

University of L'Aquila

RABEE ADEL QASEM [Early 2022]

Using Deep Reinforcement Learning model to design Sustainable Mobility Infrastructure

M.Sc. in Data Science ,
Department of Natural, Engineering, and Technology Sciences,
Arab American University of Palestine

ABDELRAHMAN SALAMEH [Early 2022]

Neural networks based solution to enhance e-wallet customers prediction at telecommunication companies.

M.Sc. in Data Science ,
Department of Natural, Engineering, and Technology Sciences,
Arab American University of Palestine

LOAI BITAWI [Early 2022]

Density-Based Approach for Information Retrieval Documents Ranking in Embedding Space

M.Sc. in Data Science ,
Department of Natural, Engineering, and Technology Sciences,
Arab American University of Palestine

BENEDETTA FLAMMINI [Mid 2021]

A Reinforcement Learning approach to Anomaly Detection in Temporal Graphs

M.Sc. in Applied Data Science,
Department of Inf. Eng., Comp. Sc. and Math.,
University of L'Aquila

GIORDANO D'ALOISIO [Mid 2021]

Approach to design Data Science Pipeline with High Quality

M.Sc. in Computer Science ,
Department of Inf. Eng., Comp. Sc. and Math.,
University of L'Aquila
Co-Advised with Prof. Antinisca Di Marco

MANUEL DI PIETRO [Late 2019]

Solving the cold start problem using GAN in the Geomarketing context

M.Sc. in Computer Science,
Department of Inf. Eng., Comp. Sc. and Math.,
University of L'Aquila

CECILIA MARTINEZ OLIVA [Early 2019]

Embeddings techniques for semantic clustering of a Twixonomy

M.Sc. in Data Science ,
Faculty of Information Engineering , Informatics and Statistics,
"Sapienza" University of Rome

GABRIELE AVELLINO [Early 2019]

Ranking of topics in a Large Scale System

M.Sc. in Data Science,
Faculty of Information Engineering, Informatics and Statistics,
"Sapienza" University of Rome

MATTEO URISSELLI [Early 2019]
Predict the Future of Patients from the Electronic Health Records
M.Sc. in Computer Science,
Faculty of Information Engineering, Informatics and Statistics,
“Sapienza” University of Rome
Co-Advised with Prof. Paola Velardi

ANDREA LORINO [Late 2018]
The impact of the cold start problem in a semantic recommender system
M.Sc. in Computer Science,
Faculty of Information Engineering, Informatics and Statistics,
“Sapienza” University of Rome
Co-Advised with Prof. Paola Velardi

ANDREA LENZI [Late 2018]
Understanding patients health from social website signals
M.Sc. in Computer Science,
Faculty of Information Engineering, Informatics and Statistics,
“Sapienza” University of Rome
Co-Advised with Prof. Paola Velardi

BARDH PRENKAJ [Late 2018]
Time-Aware Topic Detection and Anomaly Classification in a Multi-Layer Network
M.Sc. in Computer Science,
Faculty of Information Engineering, Informatics and Statistics,
“Sapienza” University of Rome
Co-Advised with Prof. Paola Velardi

LORENZO MADEDDU [Late 2018]
Disease Prediction in Biological Networks
M.Sc. in Computer Science,
Faculty of Information Engineering, Informatics and Statistics,
“Sapienza” University of Rome
Co-Advised with Prof. Paola Velardi

CARLO SPATOCCO [Late 2017]
Continuity of perturbed principal eigenvectors in Perron-Frobenius theory
M.Sc. in Mathematics, Faculty of Mathematics,
“Sapienza” University of Rome
Co-Advised with Prof. Alessandro D’Andrea

PIERFABIO SANNA [Mid 2017]
A tool for the visualization of Semantic Users’ Interest
B.Sc. in Computer Science,
Faculty of Information Engineering, Informatics and Statistics,
“Sapienza” University of Rome
Co-Advised with Prof. Paola Velardi

VALENTINA PIZZO [Early 2017]
Analyzing Italian users’ Interests in Medical Domain
M.Sc. in Computer Science,
Faculty of Information Engineering, Informatics and Statistics,
“Sapienza” University of Rome
Co-Advised with Prof. Paola Velardi

MANUELA BENEDETTI [Early 2017]
'Behaviors of Pregnant Women in On-Line Social Media
M.Sc. in Computer Science,
Faculty of Information Engineering, Informatics and Statistics,
"Sapienza" University of Rome
Co-Advised with Prof. Paola Velardi

BARDH PRENKAJ [Early 2017]
Automatic Information Extraction in News Media Domain
B.Sc. in Computer Science,
Faculty of Information Engineering, Informatics and Statistics,
"Sapienza" University of Rome
Co-Advised with Prof. Paola Velardi

GIORGIA DI TOMMASO [Oct. 2015]
*Design and Development of a Platform for Leadership Analysis
in Enterprise Social Networks*
M.Sc. in Computer Science,
Faculty of Information Engineering, Informatics and Statistics,
"Sapienza" University of Rome
Co-Advised with Prof. Paola Velardi

CLAUDIO RAUSO [Mar. 2015]
Geographic profiling of Twitter users
M.Sc. in Computer Science,
Faculty of Information Engineering, Informatics and Statistics,
"Sapienza" University of Rome
Co-Advised with Prof. Paola Velardi

GIULIO DE STEFANO [Jun. 2014]
Efficient Crawling Techniques on Online Community Networks
B.Sc. in Computer Science,
Faculty of Information Engineering, Informatics and Statistics,
"Sapienza" University of Rome
Co-Advised with Prof. Paola Velardi

PART V - COMMITTEES, QUALIFICATION, HONORS AND AWARDS

Qualification	National Scientific Qualification - Scientific Sector 01/B1 - comp.-science - Associate Prof. - Second Quarter - Qualified from 11/09/2019 to 11/09/2028.
Qualification	National Scientific Qualification - Scientific Sector 09/H1 - comp.-eng. - Associate Prof. - - Second Quarter - Qualified from 09/09/2019 to 09/09/2028.
Head	Head of the Master's Degree course in Applied Data Science of Department of Inf. Eng., Comp. Sc. and Math. of University of L'Aquila, 2021/2024.

- Committee Committee for the **Research Infrastructures (HPC and Big Data)** of Department of Inf. Eng., Comp. Sc. and Math. of University of L'Aquila, 2021/2024.
- Committee Committee for **Teaching and Research Laboratories** of Department of Inf. Eng., Comp. Sc. and Math. of University of L'Aquila, 2021/2024.
- Committee Committee for [CAD] of the Degree of **Applied Data Science** of University of L'Aquila 2018/2023.
- Committee Committee for [CAD] the Degree of **Computer Science** of University of L'Aquila 2019/2023.
- Committee Committee for [CAD] of the Degree of **Computer Engineering** of University of L'Aquila 2022/2023.
- Committee Committee for [CAD] of the Degree of **Automation engineering** of University of L'Aquila 2022/2023.
- Committee In 2022/2023 he is *Part of the Committee of the 38th Ph.D. Program in Engineering and Information Sciences*, Department of Inf. Eng., Comp. Sc. and Math. of University of L'Aquila.
- Committee In 2020/2021 he was *Part of the Committee of the 36th Ph.D. Program in Innovative Biomedical Technologies in Clinical Medicine*, Medical Dep., "Sapienza" University of Rome.
- Committee In 2019/2020 he was *Part of the Committee of the 35th Ph.D. Program in Innovative Biomedical Technologies in Clinical Medicine*, Medical Dep., "Sapienza" University of Rome.
- Committee In 2018/2019 he was *Part of the Committee of the 34th Ph.D. Program in Innovative Biomedical Technologies in Clinical Medicine*, Medical Dep., "Sapienza" University of Rome.
- Committee In 2017/2018 he was *Part of the Committee of the 33th Ph.D. Program in Innovative Biomedical Technologies in Clinical Medicine*, Medical Dep., "Sapienza" University of Rome.
- Committee Committee responsible of analyse and reshaping the Master Degree of Computer Science of University of L'Aquila work conducted in 2020/2021 with special focus on AI.
- Committee Working group for the analysis of the CENSIS results - Master and Bachelor Degree of Computer Science of University of L'Aquila 2020/2021.
- Committee Committee for the evaluation of the international students' admissions - Master Degree of Applied Data Science of University of L'Aquila 2020/2023.
- Committee Evaluating Committee for the international students' scholarships - University of L'Aquila 2020/2022.
- Committee Evaluating Committee for the refugee students' scholarships - UNICORE 2.0 - University of L'Aquila 2020/2021.

Committee	Committee for the evaluation of the students participating at TOLC@CASA (High-School to University access) (August, September, November)- University of L'Aquila 2020/2023.
Tutor	Academic tutor of the refugee student (Name Omitted for Privacy Concern) - UNICORE 2.0 - Master Degree of Applied Data Science of University of L'Aquila.
Membership	<i>Tutor of the first edition of course for lifelong learning/training for young incoming teachers</i> promoted by Gruppo di Lavoro Qualita' e Innovazione della Didattica (GdL QuID), "Sapienza" University of Rome.
Membership	<i>Involved in the experimentation phase for lifelong learning/training for young incoming teachers</i> promoted by Gruppo di Lavoro Qualita' e Innovazione della Didattica (GdL QuID), "Sapienza" University of Rome.
Membership	<i>Institute of Electrical and Electronics Engineers (IEEE)</i> . Full member (2016 - present).
Best Student Paper Awards	G. Di Tommaso, G. Stilo and P. Velardi, <i>Detecting Network Leaders in Enterprises</i> 2017 IEEE 21st International Conference on Computer Supported Cooperative Work in Design, 26 Apr - 28 Apr 2017, Wellington, New Zealand [38].
Award	"Fondo per le attivita' base di ricerca" promoted by Consiglio Direttivo n.87 del 14 giugno 2017 dell' Agenzia Nazionale di Valutazione del sistema Universitario e della Ricerca. FOUNDED: â - 3.000,00, 2017
Award	Degree Award announced by Confindustria and A.I.C.A. to promote best works in I.C.T. field of research, Milano, Italy. 2009.
Honor	Officially included by the Ministry of Cultural Heritage and Activities and Tourism, in the list of experts eligible to advice on "Development and management of Computer applications , Computer management of documents and processes and the application of innovative technologies for the public use of cataloging and photographic collections". 2011-2013
TREC Challenge	Second position during the Text REtrieval Conference (TREC) Legal Track, organized by National Institute of Standards and Technology, Gaithersburg, Maryland, United States. TREC is the most important forum to compare challenging solutions in Information Retrieval since the past 16 years, 2008.

PART VI - INVOLVEMENT IN FUNDED PROJECTS

FAIR-EDU	<p>FAIR-EDU: PROMOTE FAIRNESS IN EDUCATION INSTITUTIONS - This work is supported by ESFRI - European Strategy Forum on Research Infrastructures</p> <p>DURATION: 1 June 2022 - 31 December 2022</p> <p>FOUNDED: € 10.000,00</p> <p>POSITION: Proposer and PI;</p> <p>RESPONSIBILITIES: The project aims to evaluates the algorithmic bias present in the staff-related data generated and used by the University of L'Aquila (UAQ). We identified several research questions that will be answered in four interleaved phases carried on with the support of the Working Group of the Gender Equality Plan and the IT staff of UAQ.</p>
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- EUGAIN** **EUGAIN**: EUROPEAN NETWORK FOR GENDER BALANCE IN INFORMATICS - This work is supported by The European Cooperation in Science and Technology - COST Action CA19122.
<https://www.cost.eu/actions/CA19122/>
DURATION: 10 October 2018 - 18 October 2024
POSITION: Participant;
RESPONSIBILITIES: The main aim of this COST Action is to improve gender balance in Informatics through the creation and strengthening of a truly multi-cultural European network of academics working on the forefront of the efforts in their countries, institutions and research communities.
- SBDATA++** **SoBigData++**: EUROPEAN INTEGRATED INFRASTRUCTURE FOR SOCIAL MINING AND BIG DATA ANALYTICS - This work is supported by European Union's Horizon 2020 research and innovation programme under grant agreements No. 871042,
<https://plusplus.sobigdata.eu/>
DURATION: 1 January 2020 - 31 December 2024
FOUNDED: € 9.997.172,50
POSITION: Participant in WP10;
RESPONSIBILITIES: Working on the City of Citizen Exploratory. The work is focused on several methods and KPIs dedicated to cities, citizens and territories. With special attention to the reconstruction-related problems of the urban area of L'Aquila.
- TERRITORI APERTI** **Territori Aperti**: DOCUMENTATION, TRAINING AND RESEARCH CENTER FOR THE RECONSTRUCTION AND RECOVERY OF AFFECTED AREAS FROM NATURAL DISASTERS - This work is supported by Fondo Territori Lavoro e Conoscenza di Cgil, Cisl, Uil.
DURATION: 17 December 2018 - 17 December 2024
FOUNDED: € 1.800,00
POSITION: P.I. of *New tech. for data processing and analysis*;
RESPONSIBILITIES: study and identifying Data Mining and machine Learning techniques that can be applied to the processes of reconstruction and development.
- DIGFORASP** **DIGital FOREnsics**: EVIDENCE ANALYSIS VIA INTELLIGENT SYSTEMS AND PRACTICES - This work is supported by The European Cooperation in Science and Technology - COST Action CA17124.
<https://www.cost.eu/actions/CA17124/>
DURATION: 10 September 2018 - 09 September 2022
POSITION: Participant;
RESPONSIBILITIES: exploring the potential of the application of Artificial Intelligence and Automated Reasoning in the Digital Forensics field, and creating synergies between these fields.
- ELEXIS** **ELEXIS**: EUROPEAN LEXICOGRAPHIC INFRASTRUCTURE - This work is supported by e-Infrastructures H2020-EU.1.4.1.2.,
https://cordis.europa.eu/project/rcn/213379_en.html
DURATION: 1 February 2018 - 31 January 2022
FOUNDED: € 4.999.967,50 (€ 453.750,00 to partner Sapienza)
POSITION: Participant;
RESPONSIBILITIES: Definition of the metrics needed to compute analytics for words, senses, domains and other lexical-semantic information (including phrases, collocations, etc.) across the analyzed lexical resources.

- SERENA** **SERENA:** SEMANTIC RECOMMENDER FOR ALL - This work is supported by IBM faculty Award 2017.
 DURATION: 1 January 2017 - 31 December 2017
 FOUNDED: € 15.000,00 to Computer Science Department.
 POSITION: Participant;
 RESPONSIBILITIES: Definition and implementation of algorithms oriented to the extraction of the semantic information from the users' profiles.
- FIORDALISO** **Fiordaliso:** ANALYSIS OF SOCIAL BEHAVIORS OF CO-WORKERS IN ONLINE ENTERPRISE SOCIAL NETWORKS. - This work is supported by Regione Lazio (Italy), under grant: POR. FESR. 2007/2013 CUP. F88C14000460007.
 DURATION: 1 November 2014 - 31 October 2015
 FOUNDED: € 150.000,00 to Computer Science Department.
 POSITION: WP Leader;
 RESPONSIBILITIES: Lead investigator of the work-package related to definition and creation of a social network analytics framework that extensively analyzes the social behaviors in ESNs as a function of gender, role, time, and competences of co-workers.
- GAME4BIO** **Game4Bio:** SERIOUS GAMING FOR BIODIVERSITY PRESERVATION IN FOOD AND AGRICULTURE. - This work is supported by "Sapienza" University of Rome, under grant: Interdisciplinary Research Project 2015.
 DURATION: 1 January 2015 - 31 December 2015
 FOUNDED: € 22.000,00 to Computer Science Department.
 POSITION: Participant;
 RESPONSIBILITIES: Designing of a gamified storytelling component focused on a geo-referenced platform dedicated to the eno-gastronomic sector in the area of the via Francigena.
- WESOCIAL** **WeSocial:** WOMEN AND SOCIAL LEADERSHIP. - This work is supported by "Sapienza" University of Rome, under grant: AWARDS Research Project 2014.
 DURATION: 1 January 2014 - 31 December 2014
 FOUNDED: € 53.000,00 to Computer Science Department.
 POSITION: Technical Leader;
 RESPONSIBILITIES: Definition and implementation of a measure of informal leadership which draws on leadership models in organization science and on a computational model based on multiplex networks.
- HC4A (I)** **HC4A:** HOME CARE FOR ALL. - This work is supported by Regione Lazio (Italy), under grant: POR. FESR. 2007/2013 CUP. F81I14000020007.
 DURATION: 1 January 2013 - 4 March 2014
 FOUNDED: € 25.000,00 to Computer Science Department.
 POSITION: Participant;
 RESPONSIBILITIES: Development support for methodologies for semantic indexing, question answering and construction of ontologies in the sanitary field.

Technology Transfer

- GRETEL (PI)** GRETEL is an open source framework for Evaluating Graph Counterfactual Explanation Methods. It is implemented using the Object Oriented paradigm and the Factory Method design pattern. Our main goal is to

create a generic platform that allows the researchers to speed up the process of developing and testing new Graph Counterfactual Explanation Methods.

<https://github.com/MarioTheOne/GRETEL>

G (PI)

Fast and Memory Efficient Graph Library for Graph Mining in Java. Manage Weighted Direct,/Undirect Graph also with weights on Vertices. Many algorithms ready to use as PageRank, HITS and many others. Concurrent Multithread algorithms configurable on demand.

Giovanni Stilo is the founder of the **G** library.

<https://github.com/giovanni-stilo/G>

UCRAWLER (PI)

Universal Crawler (uCrawler) is a Concurrent, Distributed, Highly Configurable, and Flexible Next Generation Crawler. **uCrawler** allows to define a specialized crawler directly through configuration files. Principal features are: web pages, rest services, extendable, concurrent, distributed, flexible, efficient.

Giovanni Stilo is the founder of the **uCrawler** echo-system.

<https://github.com/giovanni-stilo/uCrawler-Core>

TERRIER IR (I)

Terrier is a highly flexible, efficient, and effective open source search engine developed at the School of Computing Science, University of Glasgow. Terrier is readily deployable on large-scale collections of documents. Terrier implements state-of-the-art indexing and retrieval functionalities, and provides an ideal platform for the rapid development and evaluation of large-scale retrieval applications.

Giovanni Stilo has contributed identifying and solving several issues.

<http://terrier.org/>

PART VII - RESEARCH ACTIVITIES

International Collaborations

COLLABORATION AGREEMENT AND RESULTS

CLAIRE - Confederation of Laboratories for Artificial Intelligence Research in Europe - International collaboration focused on: Bioinformatics (protein and molecular data analysis).

The topic joins forces from AI, clinical and life-sciences experts working on the analysis of complex and multi-sourced biomedical data integrating clinical evidence on COVID-19 with genomic and proteomic information, as well as molecular data. We are exploring data-driven AI methodologies and bioinformatics approaches covering network data analysis, machine learning and deep learning for graphs, predictive modelling, and feature selection of Omics data. <https://covid19.claire-ai.org/>

Data Mining and Machine Learning Laboratory, led by Prof.ssa Carlotta Domeniconi of Department of Computer Science at George Mason University, Fairfax, Virginia, USA. The scope of the collaboration is oriented in research activities focused on anomaly detection, social network and social media mining, and multiplex networks. 01/01/2017 - ongoing. We published *Graph-based Selective Outlier Ensembles*[34] and we are collaborating on the paper entitled *A Configurable Methodology for Centrality Measures in Multiplex Networks with Cyclic Dependencies*.

Data Science and Big Data Analytics research group, coordinated by Dr. Ludovico Boratto - Eurecat Foundation, Barcellona, Spain. Collaboration activities focused on organisation of workshop and journal's special issue, and on research in the field of "social media for personal-

ization and search technologies”. 01/01/2016 - ongoing. Organised Workshops [BIAS’2020, SoMePeaAS ’19, SIR’18, SoAPS ’18, SERecSys ’17, SoMePeaAS ’17, SERecSys ’16], Journal [SoMePeAS-IRJ] and a Volume [SoAPS-LNCS] have been organized during this collaboration. See at “Scientific Community Service” section for a detailed description of editorial activities and workshop organization.

Yahoo! Academic Research Program Agreement - Between Dr. Giovanni Stilo and Yahoo! Inc., 701 First Avenue Sunnyvale CA 94089 - Agreement focused on research activities in the field of Event detection and discovery in Yahoo! query logs. 15/11/2014 - 15/11/2015.

The outcome of this collaboration are the papers entitled *Importance of Unexpectedness: Discovering Buzzing Stories in Anomalous Temporal Graphs* [14] and *Identifying Buzzing Stories via Anomalous Temporal Subgraph Discovery* [39] that are in the field of the event/topic discovery.

Linguistic Computing Laboratory (LCL), led by Prof. Paola Velardi and Prof. Roberto Navigli, Rome, Italy. The scope of the collaboration is oriented in research activities focused on event discovery, users’ profiling, semantic recommender system, temporal mining, e-Health and social network analysis. 1/05/2012 - ongoing.

Several results were achieved during this collaboration. Here after are cited only the most important: [35, 15, 36, 16, 17, 37, 19, 41, 21, 22, 23].

VISITING

University of Havana, hosted by Prof. Alberto Fernandez Oliva, of the Faculty of Math. and Comp. Science Havana, Cuba. Collaboration focused on Topic detection and discovery in news logs. 13/12/2019 - 20/01/2020

Yahoo! Research Labs, led by Prof. Ricardo Baeza-Yates, Barcelona, Spain. Collaboration focused on Event detection and discovery in query logs. 19/05/2014 - 18/10/2014

Scientific Community Service

EDITORIAL
ACTIVITY

[BIAS-CCIS ’22] Conference proceedings on *Advances in Bias and Fairness in Information Retrieval*, published by Springer in the series Communications in Computer and Information Science (CCIS), volume 1610, 2022, edited with with Dr. L. Boratto, Dr. S. Faralli, and Dr. M. Marras. <https://link.springer.com/book/10.1007/978-3-031-09316-6>

[ECML/PKDD ’21] guest editorial board of the ECML/PKDD 2020/2021 journal track.

[BIAS-IPM ’21] Special Issue on *Algorithmic Bias and Fairness in Search and Recommendation*, will be published by Elsevier in Information Processing Management Journal (IPM), edited with with Dr. Ludovico Boratto, Dr. Stefano Faralli, and Mirko Marras. 2020-2021 <http://shorturl.at/bfQR3>

[BIAS-CCIS ’21] Conference proceedings on *Advances in Bias and Fairness in Information Retrieval*, published by Springer in the series Communications in Computer and Information Science (CCIS), volume 1418,

2021, edited with with Dr. Ludovico Boratto, Dr. Stefano Faralli, and Mirko Marras.

[**BIAS-CCIS '20**] Conference proceedings on *Bias and Social Aspects in Search and Recommendation*, published by Springer in the series Communications in Computer and Information Science (**CCIS**), volume 1245, 2020, edited with with Dr. Ludovico Boratto, Dr. Stefano Faralli, and Mirko Marras.

[**ECML/PKDD '20**] guest editorial board of the ECML/PKDD 2019/2020 journal track.

[**SoAPS-LNCS '19**] Volume on *Social Aspects in Personalization and Search*, published by Springer in the series Lecture Notes in Computer Science (**LNCS**), editor with Dr. Ludovico Boratto. **Accepted by LNCS and will appear in Autumn 2019**

[**SoMePeAS-IRJ '19**] Special Issue on *Social Media for Personalization And Search* of the Information Retrieval Journals (Springer), guest editor with Dr. Ludovico Boratto and Dr. Andreas Kaltenbrunner. Volume 22, Issue 1-2, April 2019,
<https://link.springer.com/journal/10791/22/1/page/1>

[**SoMePeAS-CEUR '17**] *Proceedings of the Workshop on Social Media for Personalization and Search* co-located with 39th European Conference on Information Retrieval (ECIR 2017) , editor with Dr. Ludovico Boratto and Dr. Andreas Kaltenbrunner. 2017
<http://ceur-ws.org/Vol-1840/>

CONFERENCES
ORGANIZATION
INVOLVEMENT³

[**BIAS '23**] Co-Chair of *Fourth International Workshop on Algorithmic Bias in Search and Recommendation*, (BIAS '23), with Dr. Ludovico Boratto, Dr. Stefano Faralli, and Mirko Marras, hosted by *45nd European Conference on Information Retrieval (ECIR 2023)*, 2 April 2022, Dublin, Ireland. [**ACCEPTED**]

[**itaDATA '21**] Chair of *Research Track on Big Data and AI 1*, (ita-DATA '21), of the *The 1st Italian Conference on Big Data and Data Science*, September 20-21 2022, Milan, Italy
<https://www.itadata.it/program>

[**UMAP '22**] Co-Chair of the Doctoral Consortium of *30th ACM Conference on User Modeling, Adaptation and Personalization*, (UMAP '22), with Prof. Rita Orji, 4-7 July 2022, Barcelona, Spain.

[**BIAS '22**] Co-Chair of *Third International Workshop on Algorithmic Bias in Search and Recommendation*, (BIAS '22), with Dr. Ludovico Boratto, Dr. Stefano Faralli, and Mirko Marras, hosted by *44nd European Conference on Information Retrieval (ECIR 2022)*, 10 April 2022, Stavanger, Norway.
<https://biasinrecsys.github.io/ecir2022/>

[**BIAS '21**] Co-Chair of *Second International Workshop on Algorithmic Bias in Search and Recommendation*, (BIAS '21), with Dr. Ludovico Boratto, Dr. Stefano Faralli, and Mirko Marras, hosted by *43nd European Conference on Information Retrieval (ECIR 2021)*, 1 April 2021, Lucca,

³Note that all these workshops/tracks are organized in the context of top rated conferences in the field, and they are subject to a peer-review of the workshop proposal.

Italy

<https://biasinrecsys.github.io/ecir2021/>

[**ICDM '21**] Chair of *Research Track on Graph Neural Networks 2*, (ICDM '21), of the *21th IEEE International Conference on Data Mining*, 7 - 10th December 2021 Auckland, New Zealand

<https://icdm2021.auckland.ac.nz/>

[**BIAS '20**] Co-Chair of *International Workshop on Algorithmic Bias in Search and Recommendation*, (BIAS '20), with Dr. Ludovico Boratto, Dr. Stefano Faralli, and Mirko Marras, hosted by *42nd European Conference on Information Retrieval (ECIR 2020)*, 14 April 2020, Lisbon, Portugal

<http://bias.disim.univaq.it/>

[**KDD '20**] Chair of *Research Track on Autoencoders*, (KDD '20), of the *26th ACM SIGKDD Conference on Knowledge Discovery and Data Mining*, 25th August 2020, San Diego, U.S.A.

<https://www.kdd.org/kdd2020/>

[**ICDM '20**] Co-Chair of *Research Track on Outlier and Anomaly Detection*, (ICDM '20), of the *20th IEEE International Conference on Data Mining*, 20th November 2020, Sorrento, Italy

<http://icdm2020.bigke.org/>

[**Coding Conscious Cities '19**] Co-Chair of *Coding Conscious Cities - Interdisciplinary Research Tracks*, (Conscious '19), with Dr. Itai Palti, Natalia Olszewska, Eleonora Velluto, hosted by *ACM Celebration of Women in Computing - womENCourage 2019*, 17 September 2019, Rome, Italy

<https://womencourage.acm.org/2019/interdisciplinary-research-tracks/>

[**SoMePeaAS '19**] Co-Chair of *SoMePeaAS: Workshop on Social Media for Personalization And Search*, (SoMePeaAS '19), with Dr. Ludovico Boratto, hosted by *European Conference on Information Retrieval (ECIR)*, 14 April 2019, Cologne, Germany

<http://somepeas.di.uniroma1.it/somepeas-ws2019.html>

[**SIR '18**] Co-Chair of *SIR: Workshop on Social Interaction-based Recommendation*, (SIR '18), with Dr. L. Boratto, Dr. S. Faralli and Dr. C. Morbidoni, hosted by *International Conference on Information and Knowledge Management (CIKM)*, 22 October 2018, Turin, Italy

<http://sir.di.uniroma1.it/>

[**SoAPS '18**] Co-Chair of *SoAPS: Workshop on Social Aspects in Personalization and Search*, (SoAPS '18), with Dr. Ludovico Boratto, hosted by *European Conference on Information Retrieval (ECIR)*, 26 March 2018, Grenoble, France

<http://soaps.di.uniroma1.it/>

[**SERecSys '17**] Co-Chair of *SERecSys: Second Workshop on Semantics-Enabled Recommender Systems*, (SERecSys '17), with Dr. Ludovico Boratto and Prof. Salvatore Carta, hosted by *IEEE International Conference on Data Mining (ICDM)*, 8 November 2017, New Orleans, (USA)

<http://serecsys.di.uniroma1.it>

[**SoMePeaAS '17**] Co-Chair of *SoMePeAS: Workshop on Social Media for Personalization And Search*, (SoMePeaAS '17), with Dr. Ludovico Boratto and Dr. Andreas Kaltenbrunner, hosted by *European Conference on Information Retrieval (ECIR)*, 9 April 2017, Aberdeen, Scotland (UK)

<http://somepeas.di.uniroma1.it/somepeas-ws2017.html>

[**SERecSys '16**] Co-Chair of *SERecSys: Workshop on Semantics-Enabled Recommender Systems*, (SERecSys '16), with Dr. Ludovico Boratto and Prof. Salvatore Carta, hosted by *IEEE International Conference on Data Mining (ICDM)*, 12 December 2016, Barcelona (Spain)

<http://serecsys.di.uniroma1.it/serecsys2016.html>

INVITED TALKS

Task Force on AI COVID-19: Results and next steps, 15th of July 2020, Worldwide Webinar organised by the CLAIRE - Confederation of Laboratories of Artificial Intelligence Research in Europe. [LINK](#)

Challenges and Solutions to the Student Dropout Prediction Problem in Online Courses 19th October 2020, Tutorial at *29th ACM International Conference On Information and Knowledge Management*, (CIKM '20), October 19 - 23, 2020, Galway - Ireland

Tailoring Centrality Measures in Multiplex Networks with Cyclic Dependencies, 18 November 2019, George Mason University, Department of Computer Science, Fairfax, USA.

Time Makes Sense, 6 November 2018, Gran Sasso Science Institute, L'Aquila, Italy.

Centrality Measures in Multiplex Networks with Cyclic Dependencies, 23 July 2018, EURECAT Labs, Barcellona, Spain.

Capturing users' information and communication needs for the press officers., 7 June 2017, EURECAT Labs, Barcellona, Spain.

Time Makes Sense - Yahoo Labs, Barcelona, Spain, June 2014
<https://tinyurl.com/yb33rlrr>

JOURNALS REVIEWING

Machine Learning, (**MACH**),
ISSN 08856125, 15730565, Springer Netherlands

TKDD: ACM Transactions on Knowledge Discovery from Data, (**TKDD**),
ISSN 15564681, Association for Computing Machinery Press

ACM Transactions on Intelligent Systems and Technology, (**TIST**),
ISSN 21576904, 21576912, Association for Computing Machinery Press

IEEE Transactions on Knowledge and Data Engineering, (**TKDE**),
ISSN 10414347, IEEE Computer Society

Data Mining and Knowledge Discovery, (**DAMI**),
ISSN 13845810, 1573756X, Springer Netherlands

Artificial Intelligence, An International Journal, (**AI**),
Elsevier B.V.

Knowledge and Information Systems, An International Journal, (**KAIS**),
ISSN 02191377, 02193116, Springer London

Artificial Intelligence in Medicine, (**AIIM**),
ISSN 09333657, 18732860, Elsevier

Information Processing Management An International Journal, (**IPM**),
ISSN 03064573, 18735371, Elsevier Ltd.

Applied Network Science, (**ANS**),
ISSN 23648228, Springer Verlag.

PROGRAM
COMMITTEES

22nd IEEE International Conference on Data Mining, (ICDM '22),
November 28 - Dec. 1, 2022, Orlando USA

28th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, (KDD '22), August 14 - 18, 2022, Washington DC, USA

The 31st International Joint Conference on Artificial Intelligence, (IJCAI '22), July 23-29, 2022, Vienna, Austria

SIAM International Conference on DATA MINING , (SDM '22), April 28 - 30, 2022, Alexandria, Virginia, (USA)

European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases, (ECML-PKDD '21), September 13 - 17, 2021, Bilbao, Spain

21th IEEE International Conference on Data Mining, (ICDM '21), December 7 - 10, 2021, Auckland, New Zealand

59th Annual Meeting of the Association for Computational Linguistics and the 10th International Joint Conference on Natural Language Processing, (ACL-IJCNLP '21), August 1 - 6, 2021, Bangkok, Thailand

ACM SIGKDD Conference on Knowledge Discovery and Data Mining, (KDD '21), August 14 - 18, 2021, Singapore

International Joint Conference on Artificial Intelligence, (IJCAI '21), August 19 - 26, 2021, Montreal, Canada

European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases, (ECML-PKDD '20), September 14 - 18, 2020, Ghent, Belgium

International Joint Conference on Artificial Intelligence, (IJCAI '20), January 7 - 15, 2020, Yokohama, Japan

20th IEEE International Conference on Data Mining, (ICDM '20), November 17 - 20, 2020, Sorrento, Italy

ACM SIGKDD Conference on Knowledge Discovery and Data Mining, (KDD '20), August 23 - 27, 2020, San Diego - USA

AAAI Conference on Artificial Intelligence, (AAAI '20), February 7 - 12, 2020, New York, USA

European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases, (ECML-PKDD '19), September 16 - 20, 2019, Wurzburg, Germany

International Joint Conference on Artificial Intelligence, (IJCAI '19), August 10 - 16, 2019, Macao, China

ACM SIGKDD Conference on Knowledge Discovery and Data Mining, (KDD '19), August 4 - 8, 2019, Anchorage, Alaska - USA

AAAI Conference on Artificial Intelligence, (AAAI '19), January 27 - February 1, 2019, Honolulu, Hawaii, USA

IEEE International Conference on Data Mining (ICDM), (ICDM '18), November 17 -20, 2018, Singapore

European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases, (ECML-PKDD '18), September 10 - 14, 2018, Dublin, Ireland

ACM SIGKDD Conference on Knowledge Discovery and Data Mining, (KDD '18), August 19 - 23, 2018, London, United Kingdom

SIAM International Conference on DATA MINING , (SDM '18), November 3 - 5, 2018, San Diego, California, (USA)

IEEE International Conference on Data Mining (ICDM), (ICDM '17), November 18 -21, 2017, New Orleans, Louisiana, (USA)

ACM SIGCHI Symposium on Engineering Interactive Computing Systems: 2nd Workshop on Engineering Computer-Human Interaction in Recommender Systems (EnCHIReS 2017), (SIGCHI '17), 26-29 June, 2017 (Lisbon, Portugal)

ACM SIGKDD Conference on Knowledge Discovery and Data Mining, (KDD '17), August 13 - 17, 2017, Halifax, Nova Scotia - Canada

IEEE BigData Congress 2016 5th IEEE International Congress on Big Data, (Big Data '16), June 27 - July 2, 2016, San Francisco, USA

IEEE BigData Congress 2015 4th International Congress on Big Data, (Big Data '15), June 27 - July 2, 2015, New York, USA

ACM Conference On Online Social Networks, (COSN '14), October 1-2, 2014, Dublin, Ireland

Conferenza Italiana di Linguistica Computazionale, (CLIC '14), Dicembre 9-10, 2014, Pisa, Italy

CONFERENCE
PARTICIPATION

The 1st Italian Conference on Big Data and Data Science, (**itaDATA '22**), September 20-21 2022, Milan, Italy. Chairing BIG DATA AND AI Research Paper Session.

30th ACM Conference on User Modeling, Adaptation and Personalization, (**UMAP '22**), 4-7 July 2022, Barcelona, Spain. Chairing the DC.

44th European Conference on Information Retrieval (**ECIR-2022**), 10-14 April 2022, Stavanger, Norway. Co-Chairing BIAS Workshop.

43th European Conference on Information Retrieval (**ECIR-2021**), March 28, April 1 2021, Lucca, Italy. Co-Chairing BIAS Workshop.

21th IEEE International Conference on Data Mining, (**ICDM '21**), December 7 - 10, 2021, Auckland, New Zealand

42th European Conference on Information Retrieval (**ECIR-2020**), April 14-17 2020, Lisbon, Portugal. Co-Chairing BIAS Workshop.

20th IEEE International Conference on Data Mining, (**ICDM '20**), November 17 - 20, 2020, Sorrento, Italy

ACM SIGKDD Conference on Knowledge Discovery and Data Mining, (**KDD '20**), August 23 - 27, 2020, San Diego - USA

29th ACM International Conference On Information and Knowledge Management, (**CIKM '20**), October 19 - 23, 2020, Galway - Ireland

The 34th Annual ACM Symposium on Applied Computing (**SAC-2019**), April 8 - 12, Limassol, Cyprus 2019. Oral presentation of [34], and chairing the *Data Mining Session n°2*.

The 5th IEEE International Conference on Data Science and Advanced Analytics (**DSAA-2018**), 1-4 October 2018, Turin, Italy. Presents a tutorial on *Data Sources and Techniques to Mine Human Mobility Patterns*

International Conference on Information and Knowledge Management (**CIKM-2018**), 22 October 2018, Turin, Italy. Co-Chairing SIR Workshop.

40th European Conference on Information Retrieval (**ECIR-2018**), March 26-29 2018, Grenoble, France. Co-Chairing SoAPS Workshop.

IEEE International Conference on Data Mining series (**ICDM-2017**), 8 November 2017, New Orleans, (USA). Co-Chairing SERecSys Workshop.

The 11th International AAI Conference On Web And Social Media (**ICWSM-17**), May 15-18, 2017, Montreal, Canada. Oral presentation of [37]

39th European Conference on Information Retrieval (**ECIR-2017**), April 9-13 2017, Aberdeen, Scotland UK. Co-Chairing SoMePeaAS Workshop.

IEEE International Conference on Data Mining series (**ICDM-2016**), 12 December 2016, Barcelona, Spain. Co-Chairing SERecSys Workshop.

24th International Conference on Artificial Intelligence, (**IJCAI '15**), July 25-31, Buenos Aires, Argentina, 2015. Oral presentation of [41]

Workshop: Wikipedia, a Social Pedia: Research Challenges and Opportunities (**ICWSM '15**), May 26-29, Oxford, UK 2015. Oral presentation of [53].

24th International World Wide Web Conference (**WWW '15**), May 18-22, Florence, Italy, 2015.

Knowledge Engineering and Knowledge Management (**EKAW '14**), November 24-28, Linköping, Sweden, 2014. Oral presentation of [43].

The 2014 IEEE/WIC/ACM International Conference on Web Intelligence (**WIC '14**), August 11-14, Warsaw, Poland, 2014. Oral presentation of [44].

Brain Informatics and Health (**BIH '14**), August 11-14, Warsaw, Poland, 2014. Oral presentation of [45].

17th Text REtrieval Conference (**TREC '08**), National Institute of Standards and Technology (NIST), November 18-21, Gaithersburg, Maryland, USA, 2008. Oral presentation of [47].

Business Information Systems Workshops, (**BIS '09**) International Workshops, April 27-29, Poznan, Poland, 2009. Oral presentation of [55].

PART VIII - SELECTED PUBLICATIONS

For each publication we indicate title, authors, date of publication, journal IF (if available on the journal web-page), citations, press/media release (if any), and DOI.

BOOK CHAPTERS

- [1] L. Madeddu and G. Stilo
Deep Learning methods in Network Biology.
In Bacciu, Davide and J G Lisboa, Paulo and Vellido, Alfredo,
“*Deep Learning in Biology and Medicine*”
ISBN 978-1-80061-093-4, WorldScientific, 2021
DOI: <https://doi.org/10.1142/q0322>
- [2] M. Iannotta, M. Gatti, G. Stilo
Leveraging the enterprise social network for the emergence of women’s leadership.
In Canonico, P., Consiglio, S., Mangia, G., Martinez, M., Mercurio, R., Moschera, L. (eds), “Organizing in the shadow of power”
ISBN 978-88-98-85428-8, pp. 505-526, Studi MOA (2018). Collana di Management e Organizzazione Aziendale.
Available also in e-format on amazon: <https://tinyurl.com/yas45d9z>

- [3] L. Cavallaro, S. Costantini, P. De Meo, A. Liotta and G. Stilo, Network Connectivity Under a Probabilistic Node Failure Model *IEEE Transactions on Network Science and Engineering*, vol. 9, no. 4, pp. 2463-2480, 1 July-Aug. 2022, DOI: <https://doi.org/10.1109/TNSE.2022.3164357>.
Journal IF: **5.033**
- [4] G. Mudassir, E. Howard, L. Pasquini, C. Arbib, E. Clementini, A. Di Marco, G. Stilo. Toward Effective Response to Natural Disasters: A Data Science Approach. *IEEE Access*, V.9, pp. 167827-167844, 2021 (DOI: <https://doi.org/10.1109/ACCESS.2021.3135054>).
Journal IF: **3.367**
- [5] G. Di Tommaso, S. Faralli, M. Gatti, M. Iannotta, G. Stilo, P. Velardi. An Enterprise Social Analytics Dashboard to Support Competence Valorization and Diversity Management. *Applied Sciences*, V.18, 2021 (DOI: <https://doi.org/10.3390/app11188385>).
Journal IF: **2.679**
- [6] L. Boratto, S. Faralli, M. Marras, G. Stilo. Report on the international workshop on algorithmic bias in search and recommendation (Bias 2020). *ACM Special Interest Group on Information Retrieval Forum (ACM SIGIR)*, V.54, Article 9, 2021 (DOI: <https://doi.org/10.1145/3451964.3451973>).
Journal IF: **12**
- [7] S. Nunes, S. Little, S. Bhatia, L. Boratto, G. Cabanac, R. Campos, F. Couto, S. Faralli, I. Frommholz, A. Jatowt, A. Jorge, M. Marras, P. Mayr, G. Stilo. ECIR 2020 Workshops: Assessing the Impact of Going Online. *ACM Special Interest Group on Information Retrieval Forum (ACM SIGIR)*, V.54, Article 7, 2021 (DOI: <https://doi.org/10.1145/3451964.3451971>).
Journal IF: **12**
- [8] L. Boratto, S. Faralli, M. Marras, G. Stilo. Guest editorial of the IPM special issue on algorithmic bias and fairness in search and recommendation. *Information Processing Management (IPM)*, V.59, 2021 (DOI: <https://doi.org/10.1016/j.ipm.2021.102791>).
Journal IF: **6.222**
- [9] G. Di Tommaso, M. Gatti, M. Iannotta, A. Mehra, G. Stilo, P. Velardi. Gender, rank, and social networks on an enterprise social media platform. *Social Networks (SN)*, V.62, P.58-67, 2020 (DOI: <https://doi.org/10.1016/j.socnet.2020.02.007>).
Journal IF: **2.376**
- [10] B. Prenkaj, P. Velardi, G. Stilo, D. Distanto, and S. Faralli
A Survey of Machine Learning Approaches for Student

Dropout Prediction in Online Courses. *ACM Comput. Surv.* (**CSUR**), 53, 3, Article 57 (June 2020), 34 pages (DOI: <https://doi.org/10.1145/3388792>).
Journal IF: **7.990**

- [11] M. A. Prado-Romero, A. Coto-Santiesteban, A. Celi, and G. Stilo
A time-sensitive model to predict topic popularity in news providers
Intelligent Data Analysis (IDA), vol. 24, no. S1, pp. 123-140, IOS Press 2020 (DOI: <https://doi.org/10.3233/IDA-200012>).
Journal IF: **1.32**
- [12] L. Madeddu, G. Stilo and P. Velardi
A feature-learning-based method for the disease-gene prediction problem. *International Journal of Data Mining and Bioinformatics (IJDMB)*, Inderscience Publishers (IEL) August 2020, Volume 24, Issue 1, pp 16-37
(DOI: <https://doi.org/10.1504/IJDMB.2020.109502>).
Journal IF: **0.772**
- [13] A. Lenzi, M. Maranghi, G. Stilo, P. Velardi
The social phenotype: Extracting a patient-centered perspective of diabetes from health-related blogs
Artificial Intelligence in Medicine (AIIM), V. 101 , ELSEVIER 2019 (DOI: <https://doi.org/10.1016/j.artmed.2019.101727>).
Journal IF: **4.383**
- [14] F. Bonchi and I. Bordino and F. Gullo and G. Stilo
Importance of Unexpectedness: Discovering Buzzing Stories in Anomalous Temporal Graphs
Web Intelligence Journal (WIJ), vol. 17, no. 3, pp. 177-198, IOS Press 2019 (DOI: <https://doi.org/10.3233/WEB-190412>).
Journal IF (SJR): **0.63**
- [15] A. Cucchiarelli and C. Morbidoni and G. Stilo and P. Velardi
A Topic Recommender for Journalists
Information Retrieval Journal (IRJ), Springer April 2019, Volume 22, Issue 12, pp 4731
(DOI: <https://doi.org/10.1007/s10791-018-9333-2>).
Journal IF: **2.209**
- [16] S. Faralli, G. Stilo and P. Velardi
Automatic Acquisition of a Taxonomy of Microblogs Users' Interests.
Web Semantics: Science, Services and Agents on the World Wide Web (JWS), V. 45, I. 1, p. 23-40, ELSEVIER 2017 (DOI: <https://doi.org/10.1016/j.websem.2017.05.004>).
Journal IF: **2.238**
- [17] G. Stilo, P. Velardi
Hashtag Sense Clustering based on Temporal Similarity.

Computational Linguistics (COLI), V. 43, I. 1, p. 181-200, MIT Press Journals, March 2017 (DOI: http://dx.doi.org/10.1162/COLI_a_00277).
Journal IF: **2.510**

- [18] Stilo, G., Basagni, S., Gesualdo, F., Velardi, P., Tozzi, A.E., et Al. Results from the centers for disease control and prevention's predict the 2013-2014 Influenza Season Challenge (2016) *BMC Infectious Diseases*, 16 (1), art. no. 357. (DOI: <http://dx.doi.org/10.1186/s12879-016-1669-x>).
- [19] G. Stilo, P. Velardi
Efficient temporal mining of micro-blog texts and its application to event discovery.
Data Mining and Knowledge Discovery (DMKD), V. 30, I. 2, p. 372-402, Springer US, March 2016 (DOI: <http://dx.doi.org/10.1007/s10618-015-0412-3>).
Journal IF: **3.644**
- [20] S. Faralli, G. Stilo, P. Velardi
Recommendation of microblog users based on hierarchical interest profiles.
Social Network Analysis and Mining (SNAM), V. 5 p. 1-23, Springer Vienna 2015 (DOI: <http://dx.doi.org/10.1007/s13278-015-0264-2>).
Journal IF (SJR): **2.97**
- [21] F. Gesualdo, G. Stilo, A. D'Ambrosio, E. Carloni, E. Pandolfi, P. Velardi, A. Fiocchi, A. E. Tozzi
Can Twitter Be a Source of Information on Allergy? Correlation of Pollen Counts with Tweets Reporting Symptoms of Allergic Rhinoconjunctivitis and Names of Antihistamine Drugs.
PloS one (PloS one'15), July 21, 2015 (DOI: <http://dx.doi.org/10.1371/journal.pone.0133706>).
Journal IF: **2.740**
- [22] P. Velardi, G. Stilo, A. E. Tozzi, F. Gesualdo
Twitter mining for fine-grained syndromic surveillance.
Artificial Intelligence in Medicine (AIMM), V. 61 I.3 p. 153â 163, ELSEVIER 2014 (DOI: <http://dx.doi.org/10.1016/j.artmed.2014.01.002>).
Journal IF: **4.383**
- [23] F. Gesualdo, G. Stilo, E. Agricola, M. V. Gonfiantini, E. Pandolfi, P. Velardi, A. E. Tozzi
Influenza-Like Illness Surveillance on Twitter through Automated Learning of Naive Language.
PloS one (PloS one'13), December 4, 2013 (DOI: <http://dx.doi.org/10.1371/journal.pone.0082489>).
Journal IF: **2.740**

- [24] Mario Alfonso Prado-Romero and Giovanni Stilo
GRETEL: Graph Counterfactual Explanation Evaluation Framework. In *Proceedings of the 31st ACM International Conference on Information Knowledge Management (CIKM '21)*. Association for Computing Machinery, New York, NY, USA, 4389–4393.
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