

PERSONAL INFORMATION



Danilo Dessì

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Sex male | Date of birth 29/01/1992

SHORT DESCRIPTION

I am a computer scientist and an enthusiastic researcher. I obtained my M.Sc. and Ph.D. at the University of Cagliari, Italy. I like learning how things work and pushing myself up to address more and more challenging tasks. Thanks to the passion my supervisors conveyed to me, I am building my career in computer science research areas covering the intersection between symbolic and sub-symbolic AI. Recently, my research has targeted the extraction and construction of large-scale knowledge graphs to make sense of data and infer knowledge, with the long-term goal of building cognitive systems. An output of my research is the Computer Science Knowledge Graph (<http://w3id.org/cskg>), a knowledge base that describes 24M entities among methods, tasks, materials, and metrics in the Computer Science domain.

PROFESSIONAL EXPERIENCE

August 2024 - today



Assistant Professor of Computer Science

Department of Computer Science, College of Computing and Informatics, University of Sharjah (Sharjah, UAE)

Research topics: Knowledge Graphs, Machine Learning, Natural Language Processing

Teaching: Programming I & Programming II

October 2022 – July 2024



Senior Researcher

GESIS, Leibniz Institute for the Social Sciences (Germany)

Department: Knowledge Technologies for the Social Sciences – Big Data Analytics

Research topics: Knowledge Graphs, Machine Learning, Natural Language Processing

October 2021 – September 2022
(1 year)

Assistant Professor of Computer Science

Department of Mathematics and Computer Science, University of Cagliari, Cagliari (Italy)

Team: Artificial Intelligence and Big Data Laboratory

Research topics: Knowledge Graphs, Machine Learning, Natural Language Processing

Teaching: Computer Architecture

January 2020 – November 2021
(1 year, 11 months)

PostDoc Researcher

FIZ Karlsruhe - Leibniz Institute for Information Infrastructure & Karlsruhe Institute of Technology (AIFB Institute), Karlsruhe, (Germany)

Team: Information Service Engineering **Team Supervisor:** Prof. Dr. Harald Sack

Research topics: Knowledge Graphs, Ontology Design, Machine Learning, Natural Language Processing

October 2019 – January 2020
(4 months)



Research Assistant

Department of Mathematics and Computer Science, University of Cagliari, Cagliari (Italy)

Team: Artificial Intelligence and Big Data Laboratory

Research topics: Deep Learning, Knowledge Graphs, Natural Language Processing

March 2016 – July 2019
(40 hours/year)



Academic Tutor

Department of Mathematics and Computer Science, University of Cagliari, Cagliari (Italy)

Temporary contract 40 hours/year

Topics: Design of Combinational Circuits - Microarchitecture - IJVM Language - Educational Processor MIC1 - Processor 8088

Course: Computer Architecture – Bachelor's Level

June 2016 – September 2016
(4 months)



Research Intern at Philips Research

Philips Research, Data Science Department, High Tech Campus 36, Eindhoven (The Netherlands)

Research topics: IBM Watson, Machine Learning, Healthcare, Natural Language Processing

EDUCATION AND TRAINING

October 2016 – September 2019
(3 years)

Thesis submission: October 2019

Thesis Defense: February 2020



Ph.D. in Computer Science

University of Cagliari, Mathematics and Computer Science Department, Cagliari (Italy)

Research topics: Knowledge Graphs, Machine Learning, Deep Learning, Natural Language Processing, Sentiment Analysis.

Supervisor: Prof. Dr. Diego Reforgiato Recupero

Thesis: Knowledge Extraction from Textual Resources through Semantic Web Tools and Advanced Machine Learning Algorithms for Applications in Various Domains.

January 2019 - March 2019
(3 months)

Research Intern

Laboratoire d'Informatique de Paris Nord (LIPN) – University Paris 13, Paris, (France)

Supervisors: Prof. Dr. Davide Buscaldi

Research topics: Knowledge Graphs, Natural Language Processing, Machine Learning, Scholarly Data

September 2018 - Dec. 2018
(3 months)

Research Intern

Knowledge Media Institute (KMi) – The Open University, Milton Keynes, (UK)

Supervisor: Prof. Dr. Enrico Motta & Dr. Francesco Osborne

Research topics: Knowledge Graphs, Natural Language Processing, Machine Learning, Scholarly Data

September 2017 - Dec. 2017
(3 months)

Research Intern

Centre for Data Science, New York University, New York City, (USA)

Supervisor: Prof. Dr. Dennis Shasha

Research topics: Graph Analysis, Biological Networks, AI for Biology

September 2014 - Sept. 2016
(2 years)



Computer Science M.Sc. Degree

University of Cagliari, Science faculty, Cagliari (Italy)

Image Processing - Formal Methods - Security Foundation – Advanced Algorithms and Data Structures - Biometrics and Security - Data Mining - Network Computation - Computer Architecture - Operating Systems II - Networking Architecture - Computational Mathematics - Database II - Operative Research

Final score: 110/110 **Date:** 22 September 2016 **Age:** 24 **Supervisor:** Prof. Gianni Fenu

Thesis: A Complex Network approach to evaluate the “Natura 2000” network.

September 2014 - January 2015
(5 months)

CCNA Exploration Certification

Cisco Networking Academy (www.netacad.com)

- ❖ CCNA 1 – Network Fundamentals
- ❖ CCNA 2 – Routing Protocols and Concepts

September 2011- July 2014
(3 years)



Computer Science B.Sc. Degree

University of Cagliari, Science faculty, Cagliari (Italy)

Computer Science Foundation - Operating Systems – Relational Database - Computer Networks – Imperative Programming - Object Oriented Programming - Functional Programming - Algorithms – Programming languages - Data Structures - Automata - Human Computer Interaction - Software Engineering - Computer Architecture - Statistics - Mathematical Analysis – Traineeship (350 hours)

Final score: 110/110 (cum laude) **Date:** 25 July 2014 **Age:** 22

Thesis: Convergence of processes and services on mobile devices.

Supervisor: Prof. Gianni Fenu

September 2006 – July 2011
(5 years)



Computer Science High School Diploma

ITIS Othoca, Oristano (Italy)

Programming Foundations – Information Transmission – Analogical Electronics - Digital Electronics - Statistics – Database – Mathematics – English Language

Final score: 100/100 **Date:** 04 July 2011 **Age:** 19

PERSONAL SKILLS

Mother tongue
Other languages

Italian

English

UNDERSTANDING		SPEAKING		WRITTEN PRODUCTION
Listening	Reading	Spoken interaction	Spoken production	
C1	B2	C1	B2	B2
Certificate of B2 level from Linguistic Centre of the University of Cagliari				

Communication skills

I acquired good communication skills during my experience as lecturer for bachelor students, academic tutoring, presentations of academic projects, presentations in seminars, and academic international conferences.

Social ability

Good social skills obtained during my school and university career, teamwork in several institutions, my teaching experience as lecturer and tutor, and international collaborations. Moreover, I have international experience in several countries (Italy, France, Germany, USA, The Netherlands) where I have closely worked and interacted with people from all over the world.

Management skills

I acquired good organization skills in the planning and execution of projects, in organizing research involving international colleagues, and in conducting projects according to milestones and work package deadlines.

- Computer skills
- ❖ **Programming skills:** Python (*excellent*), Java (*excellent*), C (*high*), C++ (*high*), OCaml (*basis*), R (*basis*), Proficiency with VCSs. (SVN & GIT), Knowledge of NetBeans, Eclipse, AndroidStudio, and PyCharm IDEs
 - ❖ **Web Programming:** PHP (*high*), JSP (*good*), Javascript (*basis*)
 - ❖ **Markup Languages:** HTML, CSS, XML, LaTeX, Turtle, JSON
 - ❖ **Database:** SQL, MySQL DBMS
 - ❖ **Linked Data Resources:** Wikidata, DBpedia, AI-KG, CS-KG
 - ❖ **Operating System:** Windows (7, 8, 10) (*good*), Linux (*high*), IOS (*high*)
 - ❖ **Browser:** Firefox, Internet Explorer, Google Chrome
 - ❖ **Machine Learning:** Scikit-learn, Keras, Tensorflow, PyTorch
 - ❖ **Natural Language Processing:** Gensim, NLTK, Spacy, StanfordCoreNLP
 - ❖ **Complex Networks:** Networkx, iGraph
 - ❖ **Data Science tools:** Pandas, python Notebooks
 - ❖ **Semantic Web tools:** Framester, Fred, IBM Watson, Semafor, Pikes, RDFLib, Protégé, Virtuoso, Blazegraph, SPARQL language
 - ❖ **Others:** suite Office and similar, MatLab, pgAdmin, Oracle VM Virtual Box

AWARDS

- ❖ **Winner of a mobility grant 2019 sponsored by Labex EFL** to stay 3 months at the University of Paris 13 (France).
- ❖ **Winner of a PlaceDoc grant 2018 sponsored by the University of Cagliari** to stay 3 months at the Knowledge Media Institute – Open University (UK).
- ❖ **Winner of a GlobusDoc grant 2017 sponsored by the University of Cagliari** to stay 3 months at the New York University (USA).
- ❖ **Best poster award at ESWC-14 conference** with Leveraging Cognitive Computing for Multi-Class Classification of E-Learning Videos (see publications for more details).
- ❖ **Winner of a 3-years PhD Grant** (from October 2016 to September 2019) funded by the Autonomous Region of Sardinia.
- ❖ **Regional Merit Scholarship - Academic Year 2012-2013** Autonomous Region of Sardinia.
- ❖ **Regional Merit Scholarship - Academic Year 2011-2012** Autonomous Region of Sardinia.

TEACHING ACTIVITIES / SUPERVISION

Teaching experience

- ❖ Assistant Professor of Computer Architecture at the University of Cagliari at the B.Sc. Degree in Applied Computer Science and Data Analytics in the academic year 2021/2022. Department of Mathematics and Computer Science, Faculty of Science, University of Cagliari, Cagliari, Italy.
- ❖ Academic Teacher for the Seminar on Representation Learning for Knowledge Graphs. Winter semester, 2020-2021. Karlsruhe Institute of Technology (institute AIFB), Karlsruhe, Germany.
- ❖ Academic Teacher for the Project Courses in Information Service Engineering, *Projektpraktikum Information Service Engineering*. Winter semester, 2020-2021. Karlsruhe Institute of Technology (institute AIFB), Karlsruhe, Germany.
- ❖ Academic Tutor of Computer Architecture for the B.Sc. Degree in Computer Science in the academic years 2016, 2017, 2018, 2019, at the University of Cagliari, Cagliari, Italy.

PhD student supervision

- ❖ Susmita Gangopadhyay (M.Sc.). Thesis topic: Classification and Topic Modeling for Online Analysis. Co-supervision during my affiliation at GESIS.
- ❖ Fabian Hoppe (M.Sc. & 3rd year Ph.D. Student). **Topic:** Fine-Grained Multi-Label Text Categorization on Insufficient Labeled Data. Co-supervision during my affiliation at FIZ Karlsruhe.
- ❖ Oleksandra Vsesviatska Bruns (M.A. & 2nd year Ph.D. Student) **Topic:** Ontological Engineering for Cultural Heritage Data Analysis. Co-supervision during my affiliation at FIZ Karlsruhe.
- ❖ Mary Ann Tan (M.Sc. & 1st year Ph.D. Student). **Topic:** Knowledge Graphs for Cultural Heritage Portals. Co-supervision during my affiliation at FIZ Karlsruhe.

- Thesis supervision
- ❖ Mahsa Vafaie (M. Sc. & 1st year Ph.D. Student). **Topic:** From Archival Records to Linked Open Data: a Knowledge Graph Creation Pipeline. Co-supervision during my affiliation at FIZ Karlsruhe.
 - ❖ 2021. Felix Boltz (M.Sc.). Concept-level Sentiment Analysis with SenticNet and Word Embeddings. Karlsruhe Institute of Technology.
 - ❖ 2020. Benedikt Böhme (B.Sc.). Evaluation of Fine-Grained Text Classification. Karlsruhe Institute of Technology.

RESEARCH ACTIVITY / PUBLICATIONS

Metrics

Google Scholar: 52 papers, 837 citations, 816 5-years citations, h-index 16 (updated on: September 2nd, 2024)

Scopus: 51 papers, 509 citations, h-index 13 (updated on: September 2nd, 2024)

Project Participation

New Research Infrastructure for Digital Behavioral Data at GESIS

Funding Agency: German Federal Ministry of Education and Research

Role: Researcher **Period:** October 2022 – July 2024

NFDI4DataScience

Funding Agency: German Federal Ministry of Education and Research

Role: Researcher **Period:** October 2022 – July 2024

STAR: Enabling Safe, Secure & Ethical AI in Manufacturing

Funding Agency: European Union's Horizon 2020 research and innovation programme under grant agreement no. 956573

Period: October 2021 – October 2023

Platform MaterialDigital (<https://www.materialdigital.de/>)

Funding Agency: German Federal Ministry of Education and Research **Role:** Researcher **Period:** January 2020 – November 2021

User-oriented restructuring of the German Digital Library Portal (DDB)

Funding Agency: German State Minister for Culture and Media **Role:** Researcher

Period: January 2020 - November 2021

Archivportal-D: Subject-related Points of Access

Funding Agency: German Federal Ministry of Education and Research **Role:** Researcher

Period: January 2020 – May 2021

The Natura 2000 Network Ecosystem Services and Complex Networks

Funding Agency: Autonomous Region of Sardinia **Role:** Junior Researcher

Period: 2016

Journals

Buscaldi, D., Dessì, D., Osborne, F., Piras, D., Reforgiato Recupero, D., Rocca, S. (2024). Assessment of Modern Large Language Models Using Fine-Tuning and Few-Shot Learning for Named Entity Recognition in Academic Texts. **Under Review.**

Buscaldi, D., Dessì, D., Motta, E., Murgia, M., Osborne, F., Reforgiato Recupero, D. (2024). Evaluating Large Language Models for Context-Aware Citation Prediction. **Under Review.**

Dessì, D., Osborne, F., Reforgiato Recupero, D., Buscaldi, D., Motta, E. (2024). CS-KG 2.0: A Large-scale Knowledge Graph of Computer Science. **Under Review.**

Zloch, M., **Dessì, D.**, D'Souza, J., Castro, L. J., Zapilko, B., Karmakar, S., Mathiak, B., Stocker, M., Otto, W., Auer, S., Dietze, S. (2024). Research Knowledge Graphs: the Shifting Paradigm of Scholarly Information Representation. **Under Review**.

Borrego, A., **Dessì, D.**, Hernández, I., Osborne, F., Reforgiato Recupero, D., Buscaldi, D., Ruiz, D., Motta, E. (2024). Research Hypothesis Generation over Scientific Knowledge Graphs. **Under review**.

Alonso, R., **Dessì, D.**, Meloni, A., Murgia, M., Reforgiato Recupero, D., Scarpi, G. (2024). A Seamless ChatGPT Knowledge Plugin about the labor market. **Under review**.

Alonso, R., **Dessì, D.**, Meloni, A., Reforgiato Recupero, D. (2024). A Novel Approach for Job Matching and Skill Recommendation Using Transformers and the O*NET Database. **Under review**.

Buscaldi, D., **Dessì, D.**, Motta, E., Murgia, M., Osborne, F., Reforgiato Recupero, D. (2024). Citation Prediction by Leveraging Transformers and Natural Language Processing Heuristics. In *Information Processing & Management*, 61(1), 103583. DOI: <https://doi.org/10.1016/j.ipm.2023.103583>.

Alonso, R., **Dessì, D.**, Meloni, A., Reforgiato Recupero, D. (2024). A Novel Knowledge Plug-in for Incorporating Information about Employability from the O*NET Database into Conversational Agents. In *IEEE Access*. DOI: <https://doi.org/10.1109/ACCESS.2024.3423359>

Zavarella, V., Consoli, S., Reforgiato Recupero, D., Fenu, G., Angioni, S., Buscaldi, D., **Dessì, D.**, Osborne, F. (2024). Triplétoile: Extraction of Knowledge from Microblogging Text. In *Heliyon*, DOI: <https://doi.org/10.1016/j.heliyon.2024.e32479>.

Angioni, S., Consoli, S., **Dessì, D.**, Osborne, F., Reforgiato Recupero, D., & Salatino, A. (2024). Exploring Environmental, Social, and Governance (ESG) Discourse in News: An AI-Powered Investigation through Knowledge Graph Analysis. In *IEEE Access*. DOI: <https://doi.org/10.1109/ACCESS.2024.3407188>.

Borrego, A., **Dessì, D.**, Hernández, I., Osborne, F., Reforgiato Recupero, D., Ruiz, D., Buscaldi, D., Motta, E. (2022). Completing Scientific Facts in Knowledge Graphs of Research Concepts. In *IEEE Access*. DOI: <https://doi.org/10.1109/ACCESS.2022.3220241>.

Dessì, D., Osborne, F., Reforgiato Recupero, D., Buscaldi, D., Motta, E. (2022). SCICERO: A deep learning and NLP approach for generating scientific knowledge graphs in the computer science domain. In *Knowledge-Based Systems Journal*, 258. DOI: <https://doi.org/10.1016/j.knosys.2022.109945>.

Dessì, D., & Reforgiato Recupero, D. (2021). LexTex: A Framework for Assigning Scores to WordNet Word Senses in Domain Specific Categories. *Journal of Intelligent Information Systems*. Springer. DOI: <https://doi.org/10.1007/s10844-021-00679-0>.

Dessì, D., Reforgiato Recupero, D., & Sack, H. (2021). An Assessment of Deep Learning Models and Word Embeddings for Toxicity Detection within Online Textual Comments. *MDPI Electronics*, Volume 10 (7), 779. DOI: <https://doi.org/10.3390/electronics10070779>.

Dessì, D., Osborne, F., Reforgiato Recupero, D., Buscaldi, D., & Motta, E. (2021). Generating Knowledge Graphs by Employing Natural Language Processing and Machine Learning Techniques within the Scholarly Domain. *Future Generation Computer Systems*, 116, (pp. 253-264). DOI: <https://doi.org/10.1016/j.future.2020.10.026>.

Dessì, D., Fenu, G., Marras, M., & Reforgiato Recupero, D. (2019). Bridging learning analytics and Cognitive Computing for Big Data classification in micro-learning video collections. *Computers in Human Behavior*, 92, (pp. 468-477). DOI: <https://doi.org/10.1016/j.chb.2018.03.004>.

Dessì, D., Cirrone, J., Reforgiato Recupero, D., & Shasha, D. (2018). SuperNoder: a tool to discover over-represented modular structures in networks. *BMC Bioinformatics*, 19, 318. DOI: <https://doi.org/10.1186/s12859-018-2350-8>.

Fenu, G., Pau, P. L., & Dessì, D. (2017). Functional models and extending strategies for ecological networks. *Applied Network Science* 2.1:10. DOI: <https://doi.org/10.1007/s41109-017-0032-5>.

Conference Papers

Gangopadhyay S., Schellhammer, S., Hafid, S., Dessì, D., Koß, C., Dietze, S., and Jabeen, H. (2024). Investigating Characteristics, Biases and Evolution of Fact-Checked Claims on the Web. In *Proceedings of the 35th ACM Conference on Hypertext and Social Media* (pp. 246–258). ACM.

Dessì, D., Osborne, F., Reforgiato Recupero, D., Buscaldi, D., Motta, E. (2022) CS-KG: A Large-Scale Knowledge Graph of Research Entities and Claims in Computer Science. In *Proceedings of the 21st International Semantic Web Conference*. Springer, Cham.

Vsesviatska O., Tietz T., Hoppe F., Sprau M., Meyer N., Dessì D., & Sack, H. (2021). ArDO: An Ontology to Describe the Dynamics of Multimedia Archival Records. In *Proceedings of the 36th ACM/SIGAPP Symposium on Applied Computing* (pp: 1855-1863). ACM.

Dessì, D., Osborne, F., Reforgiato Recupero, D., Buscaldi, D., Motta E., & Sack, H. (2020). AI-KG: an Automatically Generated Knowledge Graph of Artificial Intelligence. In *Proceedings of the 19th International Semantic Web Conference* (pp. 127-143). Springer, Cham.

Dessì, D., Fenu, G., Marras, M., & Reforgiato Recupero, D. (2018). COCO: Semantic-Enriched Collection of Online Courses at Scale with Experimental Use Cases. In *World Conference on Information Systems and Technologies* (pp. 1386-1396). DOI: 10.1007/978-3-319-77712-2_133.

Workshop Papers

Tsaneva, S., Dessì, D., Osborne, F., Sabou, M. (2024). Enhancing Scientific Knowledge Graph Generation Pipelines with LLMs and Human-in-the-Loop. Accepted at the *4th International Workshop on Scientific Knowledge: Representation, Discovery, and Assessment, co-located with the International Semantic Web Conference 2024*.

Gan, L., Blum, M., Dessì, D., Mathiak, B., Schenkel, R., Dietze, S. (2024). Hidden Entity Detection from GitHub Leveraging Large Language Models. Accepted at the *7th workshop on Deep Learning and Large Language Models for Knowledge Graphs, co-located with 30th ACM SIGKDD Conference on Knowledge Discovery and Data Mining 2024*.

Zavarella, V., Consoli, S., Reforgiato Recupero, D., Fenu, G., Angioni, S., Buscaldi, D., Dessì, D., Osborne, F. (2024). Knowledge Graphs for Digital Transformation Monitoring in Social Media. In *Proceedings of the 3rd International workshop on knowledge graph generation from text, co-located with the Extended Semantic Web Conference (ESWC 2024)*. CEUR Workshop Proceedings (Vol. 3747).

Buscaldi, D., Dessì, D., Motta, E., Murgia, M., Osborne, F., Reforgiato Recupero, D. (2024). Automating Citation Placement with Natural Language Processing and Transformers. In *Proceedings of the Second International Workshop on Semantic Technologies for Scientific, Technical and Legal Data (SemTech4STLD), co-located with the Extended Semantic Web Conference (ESWC 2024)*. CEUR Workshop Proceedings (Vol. 3697).

Angioni, S., Consoli, S., Dessì, D., Osborne, F., Reforgiato Recupero, D., & Salatino, A. (2024). Investigating Environmental, Social, and Governance (ESG) Discussions in News: A Knowledge Graph Analysis Empowered by AI. In *Proceedings of the Second International Workshop on Semantic Technologies for Scientific, Technical and Legal Data (SemTech4STLD), co-located with the Extended Semantic Web Conference (ESWC 2024)*. CEUR Workshop Proceedings (Vol. 3697).

Dessì, D., Dessì, R. (2023). Diving into Knowledge Graphs for Patents: Open Challenges and Benefits. In *Proceedings of the First International Workshop on Semantic Technologies for Scientific, Technical and Legal Data (SemTech4STLD), co-located with the Extended Semantic Web Conference (ESWC 2023)*. CEUR Workshop Proceedings (Vol. 3443).

- Giraldo, O., **Dessì, D.**, Dietze, S., Rebholz-Schuhmann, D., & Castro, L. J. (2023). Machine-Actionable Metadata for Software and Software Management Plans for NFDI. In *Proceedings of the Conference on Research Data Infrastructure (Vol. 1)*.
- Gangopadhyay, S., Boland, K., **Dessì, D.**, Dietze, S., Fafalios, P., Tchechmedjiev, A., Todorov, K., & Jabeen, H. (2023). Truth or Dare: Investigating Claims Truthfulness with ClaimsKG. In *Proceedings of the Second International Workshop on Linked Data-driven Resilience Research (D2R2), co-located with the Extended Semantic Web Conference (ESWC 2023)*.
- Hoppe, F., **Dessì, D.**, & Sack, H. (2021). Understanding Class Representations: An Intrinsic Evaluation of Zero-Shot Text Classification. In *Proceedings of the Deep Learning for Knowledge Graphs workshop, co-located with the International Semantic Web Conference (ISWC 2021). CEUR Workshop Proceedings (Vol. 3034)*.
- Tan, M. A., Tietz, T., Bruns, O., Oppenlaender, J., **Dessì, D.**, & Sack, H. (2021). DDB-KG: The German Bibliographic Heritage in a Knowledge Graph. In *Proceedings of the 6th International Workshop on Computational History (Histoinformatics 2021), co-located with the ACM/IEEE Joint Conference on Digital Libraries (JCDL 2021). CEUR Workshop Proceedings (Vol. 2981)*.
- Vafaie, M., Pilz, N., Bruns O., **Dessì, D.**, & Sack, H. (2021). Modelling Archival Hierarchies in Practice: Key Aspects and Lessons Learned. In *Proceedings of the 6th International Workshop on Computational History (Histoinformatics 2021), co-located with the ACM/IEEE Joint Conference on Digital Libraries (JCDL 2021). CEUR Workshop Proceedings (Vol. 2981)*.
- Bruns, O., Tietz, T., Vafaie, M., **Dessì, D.**, & Sack, H. (2021). Towards a Representation of Temporal Data in Archival Records: Use Cases and Requirements. In *Proceedings of the International Workshop on Archives and Linked Data (LinkedArchives), co-located with the 25th International Conference on Theory and Practice of Digital Libraries (TPDL 2021)*.
- Dessì, D.**, Käser, T., Marras, M., Popescu, E., & Sack, H. (2021). Designing Intelligent Systems for Online Education: Open Challenges and Future Directions. In *Proceedings of the 1st International Workshop on Enabling data-driven decisions from Learning on the Web (L2D) co-located with WSDM 2021. CEUR Workshop Proceedings (Vol. 2876, pp 57-64)*.
- Ihsan, A. Z., **Dessì, D.**, Alam, M., Sack, H., & Sandfeld, S. (2021). Steps towards a Dislocation Ontology for Crystalline Materials. In *Proceedings of the Second International Workshop on Semantic Digital Twins (SeDiT 2021) co-located with ESWC 2021. CEUR Workshop Proceedings (Vol. 2887)*.
- Hoppe, F., **Dessì, D.**, & Sack, H. (2021). Deep Learning meets Knowledge Graphs for Scholarly Data Classification. *Proceedings of the of 1st International Workshop on Scientific Knowledge: Representation, Discovery, and Assessment (Sci-K 2021), co-located with The Web Conference 2021. Companion Proceedings of the Web Conference 2021 (pp. 417-421)*.
- Alam, M., Biswas, R., Chen, Y., **Dessì, D.**, Gesese, G. A., Hoppe, F., & Sack, H. (2021). HierClasSArt: Knowledge-Aware Hierarchical Classification of Scholarly Articles. *Proceedings of the of 1st International Workshop on Scientific Knowledge: Representation, Discovery, and Assessment (Sci-K 2021), co-located with The Web Conference 2021. Companion Proceedings of the Web Conference 2021 (pp. 436-440)*.
- Tietz, T., Bruns, O., Göller, S., Razum, M., **Dessì, D.**, & Sack, H. (2021). Knowledge Graph enabled Curation and Exploration of Nuremberg's City Heritage. In *Proceedings of the Conference on Digital Curation Technologies 2021 (Qurator 2021). CEUR Workshop Proceedings (Vol. 2836)*.
- Hoppe, F., Tietz, T., **Dessì, D.**, Meyer, N., Sprau, M., Alam, M., Sack, H. (2020). The Challenges of German Archival Document Categorization on Insufficient Labeled Data. Presented at WHiSe@ESWC. In *CEUR Workshop Proceedings (Vol. 2695, pp. 15-20)*.
- Consoli S., **Dessì, D.**, Fenu, G., Marras, M. (2020). Deep Attention-based Model for Helpfulness Prediction of Healthcare Online Reviews. Presented at SmartPhil@IUI 2020. In *CEUR Workshop Proceedings (Vol. 2596, pp. 33-49)*.

Dessì, D., Helaoui, R., Kumar, V., Reforgiato Recupero, D., & Riboni, D. (2020). TF-IDF vs Word Embeddings for Morbidity Identification in Clinical Notes: An Initial Study. In *SmartPhil workshop at ACM IUI 2020, CEUR Workshop Proceedings (Vol. 2596, pp. 1-12)*.

Reforgiato Recupero, D., **Dessì, D.**, & Concas E. (2019). A Flexible and Scalable Architecture for Human-Robot Interaction. *European Conference on Ambient Intelligence Aml 2019. (pp. 311-317)*. DOI: 10.1007/978-3-030-34255-5_21.

Buscaldi, D., **Dessì, D.**, Motta, E., Osborne, F., & Reforgiato Recupero, D. (2019). Mining Scholarly Data for Fine-Grained Knowledge Graph Construction. In *Proceedings of the Deep Learning for Knowledge Graphs workshop, co-located with ESWC 2019. CEUR Workshop Proceedings (Vol. 2377, pp. 21-30)*.

Dessì, D., Dragoni, M., Fenu, G., Marras, M., & Reforgiato Recupero, D. (2018). Analisi Emozionale di recensioni di corsi online basata su Deep Learning e Word Embeddings. In *Conferenza GARR 2018. (Italian only)*.

Dessì, D., Reforgiato Recupero, D., Fenu, G., & Consoli, S. (2017). Exploiting Cognitive Computing and Frame Semantic Features for Biomedical Document Clustering. *SeWeBMeDA@ESWC 14th. (pp. 20-34)*.

Fenu, G., Pau, P. L., & **Dessì, D.** (2016). Modeling and Extending Ecological Networks Using Land Similarity. In *International Workshop on Complex Networks and their Applications (pp. 709-718)*. Springer. DOI: 10.1007/978-3-319-50901-3_56.

Poster Papers

Alonso, R., **Dessì, D.**, Meloni, A., Reforgiato Recupero, D. (2023). A General and NLP-based Architecture to perform Recommendation: A Use Case for Online Job Search and Skills Acquisition. In *Proceedings of the 38th ACM/SIGAPP Symposium on Applied Computing (pp. 936-938)*. ACM.

Tan M. A., Tietz T., Bruns, O., Oppenlaender, J., **Dessì, D.**, & Sack H. (2021). DDB-EDM to FaBiO: The Case of the German Digital Library. In Proceedings of the 20th International Semantic Web Conference - Posters and Demos (ISWC2021-P&D). In *CEUR Workshop Proceedings (Vol. 2980)*.

Alam, M., Birkholz, H., **Dessì, D.**, Eberl, C., Fliegl, H., Gumbsch, P., von Hartrott, P., Mädler, L., Niebel, M., Sack, H., & Thomas, A. (2021). Ontology Modelling for Materials Science Experiments. In Proceedings of the Semantics 2021, Poster&Demos. In *CEUR Workshop Proceedings (Vol. 2941)*.

Bardaro G., **Dessì D.**, Motta E., Osborne F., & Reforgiato Recupero, D. (2019). Parsing Natural Language Sentences into Robot Actions. In Proceedings of the 18th International Semantic Web Conference - Posters and Demos. In *CEUR Workshop Proceedings (Vol. 2456, pp 93-96)*.

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Chapters/Books

Alonso, R., **Dessì, D.**, Meloni, A., Murgia, M., & Reforgiato Recupero, D. (2024). Integrating Knowledge into Conversational Agents for Worker Upskilling. In: *Soldatos, J. (eds) Artificial Intelligence in Manufacturing*. Springer, Cham. DOI: https://doi.org/10.1007/978-3-031-46452-2_15.

Dessì, D., Dragoni, M., Fenu, G., Marras, M., & Reforgiato Recupero, D. (2020). Deep Learning Adaptation with Word Embeddings for Sentiment Analysis on Online Course Reviews. In *Deep learning based approaches for sentiment analysis book* (pp. 57-83).

Dessì, D., Reforgiato Recupero, D., Fenu, G., & Consoli, S. (2019). A Recommender System of Medical Reports Leveraging Cognitive Computing and Frame Semantics. In *Machine Learning Paradigms* (pp. 7-30). DOI: https://doi.org/10.1007/978-3-319-94030-4_2.

Invited papers

Dessì, D., Käser, T., Marras, M., Popescu, E., & Sack, H. (2021). L2D 2021: First International Workshop on Enabling Data-Driven Decisions from Learning on the Web. In *Proceedings of the 14th ACM International Conference on Web Search and Data Mining* (pp. 1165-1166).

Technical Reports / White papers

Alam, M., Dittmann, F., Niebel, M., Lehmann, J., **Dessì, D.**, Morgado, J.F., von Hartrott, P., Eberl, C., Gumbsch, P. & Sack, H. (2020). Towards Digitizing Physical Entities in Materials Science.

Dessì D., Fenu, G., Reforgiato Recupero, D., & Consoli S. (2017). Exploration of IBM Watson for Healthcare Applications, Philips Research Europe Technical Note, PR-TN 2017/00115, Eindhoven, The Netherlands.

Workshop Chair

Workshop Co-Chair of **SemTech4STLD 2024**, the *2nd International Workshop on Semantic Technologies and Deep Learning Models for Scientific, Technical and Legal Data* co-located with the Extended Semantic Web Conference 2024 (ESWC 2024).

Workshop Co-Chair of **DaMaLOS 2024**, the *4th International Workshop on Metadata and Research (objects) Management for Linked Open Science*, co-located with the Extended Semantic Web Conference (ESWC 2024).

Workshop Co-Chair of **DaMaLOS 2023**, the *3rd International Workshop on Metadata and Research (objects) Management for Linked Open Science*, co-located with the Extended Semantic Web Conference (ESWC 2023).

Workshop Co-Chair of **L2D 2021**, the *1st International Workshop on Enabling Data-Driven Decisions from Learning on the Web*, co-located with the 14th ACM International Conference on Web Search and Data Mining (WSDM 2021).

Workshop Co-Chair of **X-SENTIMENT 2021**, the *6th International Workshop at ESWC on eXplainable SENTiment Mining and EmotioN deTectioN*, co-located with the Extended Semantic Web Conference, (ESWC 2021).

Editorships / Proceedings

MDPI Electronics journal (ISSN: 2079-9292, **IF: 2.690**) Special Issue on *Advances in Artificial Intelligent Systems for the Scholarly Domain*. (2022-2023). Guest editors: **Dessì, D.**, Reforgiato Recupero, D., & Osborne, F.

Link: https://www.mdpi.com/journal/electronics/special_issues/KCKFBLD7I5

Dessì, R., **Dessì, D.**, Osborne, F., Aras, H.: Proceedings of the *2nd International Workshop on Semantic Technologies for Scientific, Technical and Legal Data (SemTech4STLD)*, co-located with the Extended Semantic Web Conference (ESWC 2024). CEUR Workshop Proceedings (Vol. 3697), CEUR-WS.org, online at <https://ceur-ws.org/Vol-3697/>.

Castro, L. J., **Dessì, D.**, Dierkes, J., Rebholz-Schuhmann, D., Schimmler, S. (2023): (Eds.): Proceedings of *3rd Workshop on Metadata and Research (objects) Management for Linked Open Science (DaMaLOS 2023)*, co-located with the 21st Extended Semantic Web Conference (ESWC 2023). PUBLISSO workshop proceedings, online at <https://researchr.org/publication/damalos-2023>.

Bonnin, G., **Dessì, D.**, Fenu, G., Hlosta, M., Marras, M., & Sack, H. (2021). Guest Editorial of the FGCS Special Issue on Advances in Intelligent Systems for Online Education. Future Generation Computer Systems journal (ISSN: 0167-739X, **IF: 7.187**)

MDPI Electronics journal (ISSN: 2079-9292, **IF: 2.397**) Special Issue on *Explainable Deep Learning for Sentiment Analysis*. (2020-2022). Guest editors: **Dessì, D.**, Reforgiato Recupero, D., & Sack H. K

Link: https://www.mdpi.com/journal/electronics/special_issues/SA_electronics

Dessì, D., Käser, T., Marras, M., Popescu, E., & Sack, H.: (Eds.): Proceedings of the *First International Workshop on Enabling Data-Driven Decisions from Learning on the Web 2021 (L2D 2021)*, co-located with the 14th International Conference on Web Search and Data Mining 2021 (WSDM 2021), CEUR workshop proceedings, vol. 2876, CEUR-WS.org, online at <http://ceur-ws.org/Vol-2876/>.

Ben Abbès, S., Hantach, R., Calvez, P., Buscaldi, B., **Dessì, D.**, Dragoni, M., Reforgiato Recupero, D., & Sack, H. (Eds.): *Advances in Semantics and Explainability for NLP: Joint Proceedings of the 2nd International Workshop on Deep Learning meets Ontologies and Natural Language Processing (DeepOntoNLP 2021) & 6th International Workshop on Explainable Sentiment Mining and Emotion Detection (X-SENTIMENT 2021)*, co-located with the 18th Extended Semantic Web Conference (ESWC 2021), CEUR workshop proceedings, vol. 2918, CEUR-WS.org, online at <http://ceur-ws.org/Vol-2918/>.

Review Activity/Program Committee

Journals: Applied Soft Computing Journal, Knowledge Based-Systems, PLOS ONE Journal, The Internet and Higher Education Journal, Artificial Intelligence Review Journal, Journal of Ambient Intelligence and Humanized Computing, Expert Systems with Applications, Future Generation Computer Systems Journal, Semantic Web Journal, Quantitative Science Studies Journal, MDPI Applied Sciences

Conferences: ISWC Research Track, ISWC Resource Track, CIKM, ACM SIGIR Research Track, ESWC Resource Track, ESWC Research Track, ACM SAC Research Track, ACM HyperText, Clic-it 2019, Semantics.

Workshops: Sci-K at The Web Conference, SKG at TPD, BIAS at ECIR, DL4KG at ESWC and ISWC, EMSASW2018 at ESCW, SemTech4STLD at ESWC.

Participation in Conferences

- ❖ **Extended Semantic Web Conference (ESWC) 2024**, May 2024, workshop organizer and speaker.
- ❖ **Extended Semantic Web Conference (ESWC) 2023**, May 2023, workshop organizer and speaker.
- ❖ **International Semantic Web Conference (ISWC) 2022**, October 2022, Virtual conference, speaker.
- ❖ **Semantics 2021**, September 2021, Virtual Conference, Poster owner.
- ❖ **Extended Semantic Web Conference (ESWC) 2021**, June 2021, Virtual Conference, workshop organizer.
- ❖ **Web Search and Data Mining (WSDM) 2021**, March 2021, Virtual Conference, workshop organizer.
- ❖ **Symposium on Applied Computing (SAC) 2021**, March 2021, Virtual Conference, participant.
- ❖ **The Web Conference 2021**, April 2021, Virtual Conference, participant.
- ❖ **International Semantic Web Conference (ISWC) 2020**, November 2020, Virtual conference, speaker.
- ❖ **Extended Semantic Web Conference (ESWC) 2020**, June 2020, Virtual Conference, participant.
- ❖ **The Web Conference 2020**, (20-24) March 2020, Virtual Conference, participant.
- ❖ **Symposium on Applied Computing (SAC) 2019**, (8-12) April 2019, Limassol, Cyprus, speaker.
- ❖ **European Data Forum**, (29 - 30) June 2016, Eindhoven (The Netherlands), participant.

- Memberships**
- ❖ **Human Robot Interaction Lab @ Unica** (<http://hri.unica.it/>)
 - ❖ **Artificial Intelligence and Big Data Laboratory @ Unica** (<https://aibd.unica.it/>)
 - ❖ **Scholarly Knowledge Modelling, Mining, and Make Sense @ The Open University** (<http://skm.kmi.open.ac.uk/#people>)
- Schools**
- Student at the **ISWS Summer School 2018** organized by Dr. Valentina Presutti & Prof. Harald Sack

ADDITIONAL INFORMATION

- Driving license** Italian driving license, category **B**
- Professional references**
- Diego Reforgiato Recupero**, Full Professor at University of Cagliari, diego.reforgiato@unica.it
- Sergio Consoli**, Scientific Project Officer at the Joint Research Centre of the European Commission, (Ispra), sergio.consoli@ec.europa.eu
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I declare that the contained information in this Curriculum Vitae is true.

Sharjah, 02/09/2024
