# Livio Robaldo

Curriculum Vitae et Studiorum

## Personal Information

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| *Name Surname* | **Livio Robaldo** |
| *Contacts* | **livio.robaldo@swansea.ac.uk** |
| *Website* | **www.liviorobaldo.com** |
| *Current work position* | **Senior Lecturer in Computational Law at the School of Law, Swansea University** |

## Track record

Livio Robaldo is a **Senior Lecturer in LegalTech** at the School of Law of Swansea University, specialized in the application of **Knowledge Representation (KR)** and **Natural Language Processing (NLP)** to the legal domain.

Previously, he was post-doctoral researcher and PhD student in Computer Science at the University of Luxembourg (2015-2020) and at the University of Turin (2004-2015).

Livio Robaldo had an active role in the writing, management, and research activities of several research projects, notably **three H2020 Marie Skłodowska-Curie (MC) projects**: an MC Individual Fellowship (IF) project that he wrote and managed from 2015 until 2017, an MC Research and Innovation Staff Exchange (RISE) project that he wrote and managed from 2016 until 2019, and a MC Innovative Training Networks (ITN) project that he contributed to write and managed from 2017 until 2020. He also participated on a voluntary basis in several other research projects, notably the Penn Discourse Treebank and Anawiki, which are respectively hosted at the University of Pennsylvania and the University of Essex.

Livio Robaldo has always been interested in technology transfer activities as well. All over his career, he had several collaborations with industry, also in the context of his research projects. In 2024, he was awarded an **Innovate UK project grant** together with a consortium involving two LegalTech companies, three UK university and the UK National Archives. In 2014-2021, he was a partner of **Nomotika SRL, spin-off of the University of Turin** that was eventually closed in January 2021. In 2014, he won the **Working Capital Accelerator** (WCAP), a Telecom Italia grant to support new startups and innovative research projects, with the project **SentiTagger**[1].

Livio Robaldo has a long track record of publications in Knowledge Representation (KR) of natural language, Natural Language Processing (NLP), and related topics. In particular, he published **31 journal papers, 14 of which in the role of first author**; Scopus indexes **86 papers** (co-)authored by Livio Robaldo, with **2095 citations** and **h-index=20**.

He reviewed papers submitted to the **Artificial Intelligence and Law** journal, **Artificial Intelligence** journal, **Applied Ontology**, the **Journal on Data Semantics**, the **Journal of Applied Logics**, the **Journal of Logic, Language, and Information**, the **Journal of Semantics**, and several conferences (IJCAI, ECAI, CogSci, ICAIL, JURIX, etc.), for which he was part of the program committees. He is currently in the **Editorial Boards** of the **Artificial Intelligence and Law** journal and the **Journal of Applied Logics**.

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[1] https://www.telecomitalia.com/content/dam/telecomitalia/it/archivio/documenti/media/note_stampa/corporate/2014/SCHEDA-VINCITORI-WCAP2014.pdf

His teaching record currently includes **twenty-three courses** in the roles of **Lecturer** plus other teaching activities in the role of Teaching Assistant and Private Teacher for PhDs, postgraduates, undergraduates, high school students, and companies.

Since his Ph.D., **Livio Robaldo supervised or co-supervised more than twenty bachelor or master students** for the preparation of their bachelor/master theses. He daily followed the activities related to their theses, while guiding and advising them. **He also co-supervised several Ph.D. students with whom he also co-authored publications**.

# Education

Livio Robaldo earned a **MSc** in **Computer Science** from the Department of Computer Science of the University of Turin, on July 2003, with the final mark of **110 cum laude and mention for the exceptional curriculum**. Thanks to these achievements, he was awarded the **premio Optime**, Confindustria award given to the best graduates of the University and Polytechnic of Turin, for the Academic year 2003-2004. On February 2007, he earned, from the same department, a **Ph.D** in **Computer Science**, by defending a thesis titled **Dependency Tree Semantics**.

After the Ph.D. defense, Livio Robaldo was **visiting scholar at the University of Pennsylvania (UPenn)** (Philadelphia, USA) from February to June 2007, and again two years later, from June to July 2009. In 2015 and 2016, he visited the Bulgarian company **APIS Hristovich EOOD** in Sofia, in the context of the project ProLeMAS, for six months in total. In 2017, he was a **visiting scholar at Stanford University** (Palo Alto, USA) from October to December 2017. He visited, for shorter periods, other universities in Europe and in the United States.

Furthermore, Livio Robaldo attended several conferences, summer schools, seminars, etc. connected to both his research and his technology transfer activities, among which it is worth mentioning the **Working Capital Accelerator 2014 Program**, a two-months intensive seminar series devoted to start-up foundation, pitch preparation, business and marketing analysis, etc., organized by Telecom Italia for the winners of the WCAP 2014 grant.

**Ph.D Thesis:**

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| *Title:* | **Dependency Tree Semantics** |
| *Supervisor:* | Prof. Leonardo Lesmo |
| *External reviewers:* | Prof. Maribel Romero (Penn University, Philadelphia, USA)<br>Prof. Johan Bos (Università "La Sapienza", Roma, Italy) |
| *Description:* | Dependency Tree Semantics (DTS) is a novel semantic formalism for underspecifying the scope of NL quantifiers. The key idea is to achieve underspecification via Skolem-like dependencies. DTS's main advantage, with respect to its contemporary proposals, is the ability of representing Independent Set readings, i.e. readings where multiple sets of entities are independent of one another. |

# Research Projects

Livio Robaldo had an active role in several research projects; the main ones are listed below. He was the **Principal Investigator** of the projects **ProLeMAS** and **SentiTagger** and **WP leader** in the project **DAPRECO**. He coordinated the writing of the project **MIREL** and he managed it for all over its duration[2]. He participated in the writing of the project **LAST-JD RIoE**, of which he was the main responsible for the University of Luxembourg in 2015-2020.

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[2]See http://www.liviorobaldo.com/MIRELstatement.pdf

- **Innovate UK project "Odyssey - Opening the National Archive's legal data to AI for A2J"**. The project aims to: (I) Enrich The National Archives XML files with additional metadata specifically designed to improve interoperability and accuracy of LLMs. (ii) Fine-tune & evaluate GPT-based LLMs on the corpus. State of the art LLMs (GPT, Llama2, Claude2) will be assessed, to hone the accuracy, ethics and legal suitability for use. (iii) Create Plain-English, standardised LLM prompts for legal subject matter information summarisation for consistent input into LLMs. (iv) For ESG purposes, the LegalPath A2J app for litigants in person, previously developed by two of the project partners, will then empower litigants in person and SMEs to construct standardized prompts for accessing LLMs fine-tuned on the enriched datasets.

- **Marie Skłodowska-Curie RISE project "MIREL"**. The MIREL (MIning and REasoning with Legal texts) project created an international and inter-sectorial network to define a formal framework and to develop tools for MIning and REasoning with Legal texts, with the aim of translating these legal texts into formal representations that can be used for compliance checking and decision support. Livio Robaldo coordinated the writing of the project, which has been retained for funding under the call H2020-MSCA-RISE-2015, with the **overall score of 97.20%**. He then managed MIREL all over its duration (2016-2019).

- **Marie Skłodowska-Curie ITN project "LAST-JD RIoE - Rights of the Internet of Everything"**. The LAST-JD International Doctorate in "Law, Science, and Technology" is an interdisciplinary integrated doctorate, designed to address new challenges in: (1) Bioethics and Biolaw, (2) ICT Law, and (3) Legal Informatics. Livio Robaldo participated in the writing of this project, which has been evaluated and retained for funding under the call H2020-MSCA-ITN-2017, with the **overall score of 94.80%**. Livio Robaldo was responsible of the LAST-JD International Doctorate in "Law, Science, and Technology" for the University of Luxembourg from 2015 until 2020. He helped the students of the program while advising them in their research activities, assisting them with administrative procedures, and co-authoring papers.

- **FNR-CORE project "DAPRECO"**. DAPRECO was funded by Fonds National de la Recherche (FNR), the main national research agency in Luxembourg. The main outcome of the project is the DAPRECO knowledge base [Robaldo et al., 2020], which represents norms in the General Data Protection Regulation (GDPR) via 966 formulae in reified Input/Output logic [Robaldo and Sun, 2017], the main result of his previous project ProLeMAS (see below).

- **Marie Skłodowska-Curie IF project "ProLeMAS"**. Drawing from Livio Robaldo's past experience in Natural Language Semantics and Natural Language Processing, ProLeMAS (Processing Legal language in normative Multi-Agent Systems) aimed at designing a new logic for normative reasoning in multi-agent systems. ProLeMAS has been retained for funding under the call H2020-MSCA-IF-2014_ST, with the **overall score of 96.40%**. ProLeMAS led to the design and developed of **reified Input/Output logic** [Robaldo and Sun, 2017] and related research, e.g., [Sun and Robaldo, 2017].

- **Working Capital (WCAP) project "SentiTagger"**. WCAP is a Telecom Italia grant to support new startups and innovative research projects. In 2014, the selection was highly competitive: **only 40 projects out of about 1,300 submitted ones were selected**. Each selected project was granted 25,000 euros, VAT excluded, from Telecom Italia. SentiTagger developed a prototype able to automatically tag free text in OpinionMining-ML, the XML format defined in [Robaldo and Di Caro, 2013]. The prototype uses the SDFTagger framework to recognize named entities and concepts for populating a reference OWL ontology. The linguistic expressions in which these named entities occur are then classified as either positive or negative comment, suggestion, or observation (see [Robaldo et al, 2013]).

- **European FP7 project "EUCases"**. EUCases was a research project supported by 7th Framework Programme (FP7) funding. EUCases developed a unique pan-European law and case law Linking Platform transforming multilingual legal open data into linked open data after semantic and structural analysis. Livio Robaldo has been the responsible of the Italian NLP toolkit of EUCases (see `http://www.liviorobaldo.com/EUCasesStatement.pdf`). After EUCases, Livio Robaldo became a stakeholder of the spin-off Nomotika, upon invitation of the founders, due to their interests in his developed tools and resources.

- **Phrase Detective corpus**. The Phrase Detective corpus [Poesio et al, 2013] was part of the AnaWiki project, that aimed at developing tools to allow and encourage large numbers of volunteers over the Web to collaborate in the creation of semantically annotated corpora. The corpus was annotated with information about anaphora including over 162,000 annotations. The annotations were carried out via an online game where annotators compete to each other to win prices. Livio Robaldo was an expert annotator of the game and contributed to the validation phase. In addition, he developed Java procedures to enable annotations in Italian texts. Prof. Poesio was later awarded an ERC Advanced grant on the project "DALI - Disagreements and Language Interpretation", drawn from the Phrase Detective game.

- **Penn Discourse Treebank (PDTB)**. The Penn Discourse Treebank (PDTB), is, to date, the largest scale corpus annotated with information related to discourse structure and discourse semantics. There are a total of 40600 tokens annotated in the PDTB-2.0 [Prasad et al. 2008b]. Livio Robaldo contributed to the definition of the sense annotation schema of the PDTB and he was a validator of the sense annotations stored in the corpus [Robaldo et al. 2008], [Miltsakaki et al. 2008]. Together with Eleni Miltsakaki, he later inspected 1000 of the 1193 annotated instances of Concession in the PDTB and subclassified them according to the source of concession. He also built logical formalization of (some of) these instances in terms of the reification-based framework of prof. J.R. Hobbs. The results of this analysis have been published in [Robaldo and Miltsakaki, 2014].

- **Regional research project "ICT4LAW"**. ICT4LAW was a 3 years converging technologies project financed by Regione Piemonte. This project aimed at developing beyond state of the art ICT and applying them to the legal field to build the core of a new generation of services. These technologies stemmed from the convergence of ICT methodologies developed in the area of cognitive science, e.g. ontologies, automated analysis of natural language, autonomous agents, neural networks and statistical techniques to analyse quantitative data, and agent-based simulation which adopts the simulative method of cognitive science and apply it to the complexity of social and economic reality. At the end of the project, the spin-off Nomotika was founded by the project partners Augeos Spa and University of Turin.

# Dissemination, reviewing, and networking activities

Livio Robaldo **attended numerous conferences and workshops**, e.g. IJCAI, ECAI, ICAIL, JURIX, etc., where a paper he (co-)authored was accepted as either a full presentation or a poster. He is currently in the **Editorial Boards** of the **Artificial Intelligence and Law** journal and the **Journal of Applied Logics** and he reviewed papers submitted to conferences and workshops, e.g. IJCAI, ECAI, CogSci, ICAIL, JURIX, etc., and to the **Artificial Intelligence** journal, the **Artificial Intelligence and Law** journal, **Applied Ontology**, the **Journal on Data Semantics**, the **Journal of Applied Logics**, the **Journal of Logic, Language, and Information**, and the **Journal of Semantics**. He organized or co-organized several conferences, workshops, and other dissemination events. He was the **main guest editor of three special issues in LegalTech** and he was invited as **keynote speaker** as detailed below:

- **Principal guest editor of the Special Issue** "Mining and Reasoning with Legal Texts", the IfCoLog Journal of Logics and their Applications.

- **Invited speaker at International Workshop on Artificial Intelligence for Legal Documents (AI4LEGAL)**, online, Nov 2020, where he presented reified I/O logic and the DAPRECO knowledge base [Robaldo et al., 2020].

- **Main organizer of the demo session "NLP and Big Data"** at the European Investment Bank annual economic conference 2019.

- **Invited speaker at the United Nations Conference on Trade and Development (UNCTAD)**, in particular in the **Industry dialogue on trade facilitation for e-commerce development**, Geneva (Switzerland), Apr 2019, where he presented LAST-JD, MIREL, and other academic activities in Legal Informatics at the University of Luxembourg.

- **Principal guest editor of the Special Issue** "Reasoning on Legal Texts", the IfCoLog Journal of Logics and their Applications.

- **Principal guest editor of the Special Issue** "Natural Language Processing for Legal Texts", the Journal of Artificial Intelligence and Law.

- **Membership of the Technical Committee** "OASIS LegalRuleML", a standardization initiative under OASIS, aiming at creating an XML standard for representing semantic/logical content of legal documents, for use by both humans and machines.

- **Promoter of a Framework Agreement** between the University of Luxembourg and the University of Bologna, centered on the LAST-JD doctoral school.

- **Promoter of a Framework Agreement** between the University of Luxembourg and the University of Turin, centered on research in LegalTech.

- **Co-organizer of JURIX 2017**, the 30th international conference on Legal Knowledge and Information Systems.

- **Main organizer of the Workshop "Mining and Reasoning with Legal Texts"**, collocated with the "The 16th International Conference on Artificial Intelligence and Law (ICAIL 2017)" conference.

- **Main organizer of the Workshop "Mining and Reasoning with Legal Texts"**, collocated with the "The 29th international conference on Legal Knowledge and Information Systems (JURIX 2016)" conference.

- **Main organizer of the Tutorial "Mining and Reasoning with Legal Documents"**, collocated with the "The 22nd European Conference on Artificial Intelligence (ECAI 2016)" conference.

- **Main organizer of the Tutorial "Normative MAS and the Law"**, collocated with the "Principles and Practice of Multi-Agent Systems (PRIMA 2015)" conference.

- **Main organizer of the Workshop on Language and Semantic Technology for Legal Domain (LST4LD)**, collocated with RANLP 2015, in Hissar (Bulgaria).

- **Invited speaker at IUI 2013 conference**, Santa Monica (Los Angeles), Mar 2013. Livio Robaldo was an invited speaker of the conference. He presented the Phrase Detective corpus, introduced in [Poesio et al, 2013].

# Teaching activity

Livio Robaldo is currently **Senior Lecturer** at the University of Swansea, in which he designed and coordinated the modules of **"Foundations in LegalTech"** and **"Artificial Intelligence and Law"**. His teaching record includes **BSc and MSc modules** as Lecturer, reported below:

- **Undergraduate module of "Foundations in LegalTech"**, School of Law, University of Swansea. The module provides an introduction to key technologies that are increasingly used in the legal industry and in the justice system, specifically to help law firms perform tasks faster and more accurately and to facilitate access to justice for citizens. The module illustrates the technical basics of these technologies, while addressing their pros and cons, legal and ethical challenges, risks and opportunities. Livio Robaldo taught in this module, in the role of *coordinator and principal lecturer*, in 2021, 2023, and 2024.

- **Undergraduate module of "Programming for Finance"**, School of Law, University of Swansea. This module introduces students to programming using Python and its application to finance. Students will learn basic programming concepts and apply them to financial applications such as data analysis and financial modeling. Finance professionals need to involve in different areas or functions within any organization. Sometimes it requires a strong programming language to analyze large data sets. Here comes the use of Python and is the most preferred coding language among finance professionals now. Livio Robaldo taught in this module, in the role of *coordinator and principal lecturer*, in 2024.

- **Postgraduate module of "Artificial Intelligence in Commerce and Legal Practice"**, School of Law, University of Swansea. The module will focus on the use of AI within commercial and legal settings. It is often the case that once the technology is put in place issues will arise, such as the question of whether such technology can function within the parameters of existing legal rules. Human rights ¿ even within a commercial framework ¿ must also be considered as part of any analysis concerning the use of AI (notably, for example, the right to privacy). Overall, this module intends to provide an in-depth analysis of AI in the context of existing private legal rules while also exploring its role in society, what legal frameworks need to be developed. Livio Robaldo taught in this module, in the role of *co-lecturer*, in 2023 and 2024.

- **Postgraduate module of "Distributed Ledger Technology (Blockchain) and Commerce - Law and Regulation"**, School of Law, University of Swansea. The module intends to analyse the legal position of those employing such ledgers in the context of their businesses. To appreciate the potential legal problems emerging, the applications of such ledgers in different areas of commercial law (finance, insurance, shipping) will be studied. The module will then discuss whether any change in private law rules is required to ensure that such ledgers do not create unexpected consequences for relevant parties. Regulators are also actively exploring the need to regulate the use of such ledgers. Regulation is rather challenging in this area due to potential jurisdictional problems, and overly strict regulation could potentially reduce the commercial values of such ledgers. These issues, along with others, will be discussed as part of this module. Livio Robaldo taught in this module, in the role of *co-lecturer*, in 2023 and 2024.

- **Postgraduate module of "Artificial Intelligence and Law"**, School of Law, University of Swansea. The module is intended to give the students in law an overview of principles and techniques of Artificial Intelligence as applied to legal information such as legislation, case law, and contracts. Students are taught some of the key elements of AI including logic, knowledge representation, natural language processing, and machine learning, among others. Livio Robaldo taught in this module, in the role of *coordinator and principal lecturer*, in 2020, 2021, and 2022.

- **Postgraduate module of "Introduction to Programming"**, School of Law, University of Swansea. The module provides an introduction to programming languages, needed for the students of the LLM to understand implementations of LegalTech applications. The module is preparatory for other modules of the LLM. Livio Robaldo taught in this module, in the role of *coordinator and principal lecturer*, in 2022.

- **Postgraduate module of "Contemporary issues in LegalTech"**, School of Law, University of Swansea. This module aims to survey contemporary issues in LegalTech, analysing recent technological and legal developments, including new and emerging technologies, relevant changes in the regulatory landscape, new and amended frameworks of law, etc. The module also aims to introduce the students to a range of professional skills across the dimensions of entrepreneurship, ethics and interdisciplinarity. Livio Robaldo taught in this module, in the role of *co-lecturer*, in 2021 and 2022.

- **Postgraduate module of "Tecnologie di Servizi Web"**, SAA Administration business school, University of Turin. The module was intended to give the students an overview of Web technologies through theoretical frontal lectures (TCP/IP, HTML/CSS/CMS/XML, Web 2.0, and SEO). The course included a laboratory part on WordPress. Livio Robaldo taught in this module, in the role of *coordinator and principal lecturer*, in 2014, 2013, 2012, 2011, and 2010.

- **Postgraduate module of "Sistemi Informativi"**, SAA Administration business school, University of Turin. The module was intended to give the students an overview of Information Systems. The program included both a theory part (UML, BPMN, Six Sigma methodologies, etc.) and a laboratory on the software iGrafx Process for Six Sigma. Livio Robaldo taught taught in this module, in the role of *coordinator and principal lecturer*, in 2015, 2014, and 2013.

- **Undergraduate module of "Informatica"**, Department of Psychology, University of Turin. The module was intended to give the students an overview of basic Office tools (Word, Excel, Power Point, and Access). It also included a part devoted to the HTML format. Livio Robaldo taught in this module, in the role of *coordinator and principal lecturer*, in 2011.

- **Postgraduate course of "Informatica applicata alla Comunicazione Multimediale"**, Faculty of Languages and Foreign literature, University of Turin. The course was intended to give the students an overview of NLP/NLG technologies involved in Machine Translation. The module included a laboratory part about the SDL Trados Studio software. Livio Robaldo taught in this module, in the role of *coordinator and principal lecturer*, in 2008.

- **Undergraduate module of "Informatica"**, Faculty of Philosophy, University of Turin. The module aimed at giving the students an overview of Computer Science (main hardware and software components within a computer) as well as of basic Office tools. Livio Robaldo taught in this module, in the role of *coordinator and principal lecturer*, in 2007.

# Publications

Below, only the publications on International Journals are reported. The full list of Livio Robaldo's publications (including those on conferences, workshops, and technical reports) is available online at `https://www.liviorobaldo.com/publications.html`.

### International Journals

- [Anim et al., 2024] Anim, J. and Robaldo, L. and Wyner, A.: *A SHACL-Based Approach for Enhancing Automated Compliance Checking with RDF Data.* Information, Vol. 15(12). 2024.

- [Liga and Robaldo, 2023] Liga, D. and Robaldo, L.: *Fine-tuning GPT-3 for legal rule classification.* Computer Law & Security Review: the International Journal of Technology Law and Practice, Vol. 51, 2023.

- [Esposito et al., 2023] Esposito, C. and Horne, R. and Robaldo, L. and Buelens, B. and Goesaert, E.: *Assessing the Solid Protocol in Relation to Security and Privacy Obligations.* Information, Vol. 14(7). 2023.

- [Robaldo et al., 2023] Robaldo, L. and Pacenza, F. and Zangari, J. and Calegari, R. and Calimeri, F. and Siragusa, G.: *Efficient compliance checking of RDF data.* Journal of Logic and Computation, to appear.

- [Robaldo et al., 2023a] Robaldo, L. and Batsakis, S. and Calegari, R. and Calimeri, F. and Fujita, M. and Governatori, G. and Morelli, M.C. and Pacenza, F. and Pisano, G. and Satoh, K. and Tachmazidis, I. and Zangari, J.: *Compliance checking on first-order knowledge with conflicting and compensatory norms: a comparison among currently available technologies.* Artificial Intelligence and Law, to appear.

- [Siragusa and Robaldo, 2022] Siragusa, G. and Robaldo, L.: *Sentence Graph Attention For Content-Aware Summarization.* Applied Sciences. Vol. 12(20).

- [Amantea et al., 2022] Amantea, I. and Robaldo, L. and Sulis, E. and Governatori, G. and Boella, G.: *Business Process Modelling in Healthcare and Compliance Management: A Logical Framework.* Journal of Applied Logics. Vol. 9(4).

- [Antoniou et al., 2022] Antoniou, G. and Atkinson, K. and Baryannis, G. and Batsakis, S. and Di Caro, L. and Governatori, G. and Robaldo, L. and Siragusa, G. and Tachmazidis I.: *Explainable Reasoning with Legal Big Data: A Layered Framework.* Journal of Applied Logics. Vol. 9(4).

- [Siragusa et al., 2021] Siragusa, G. and Robaldo, L. and Di Caro, L. and Violato, A.: *Textual Entailment for Cybersecurity: An Applicative Case.* Journal of Applied Logics. Vol. 8(4).

- [Antoniou et al., 2021] Antoniou, G. and Baryannis, G. and Batsakis, S. and Governatori, G. and Islam, M. and Liu, Q. and Robaldo, L. and Siragusa, G. and Tachmazidis, I.: *Large-scale Legal Reasoning with Rules and Databases.* Journal of Applied Logics. Vol. 8(4).

- [Robaldo et al., 2020] Robaldo, L. and Bartolini, C. and Palmirani, M. and Rossi, A. and Martoni, M. and Lenzini, G.: *Formalizing GDPR provisions in reified I/O logic: the DAPRECO knowledge base.* The Journal of Logic, Language, and Information. Vol. 29.

- [Humphreys et al., 2020] Humphreys, L. and Boella, G. and van der Torre, L. and Robaldo, L. and Di Caro, L. and Ghanavati, S. and Muthuri, R: *Populating legal ontologies using semantic role labeling.* Artificial Intelligence and Law (to appear).

- [Bartolini et al., 2019] Bartolini, C. and Lenzini, G. and Robaldo, L.: *The DAta Protection REgulation COmpliance Model,* IEEE Security and Privacy, Vol. 17(6). 2019.

- [Robaldo and van der Torre, 2019]   Robaldo, L. and van der Torre, L.: *Introduction to legal AI: special issue "reasoning on legal texts"*, Journal of Applied Logics 6(5). 2019.

- [Robaldo et al., 2019b]   Robaldo, L. and Villata, S. and Wyner, A. and Grabmair, M.: *Introduction for artificial intelligence and law: special issue "natural language processing for legal texts"*. Artificial Intelligence and Law 27(2). 2019.

- [Robaldo and Sun, 2017]   Robaldo, L. and Sun, X.: *Reified Input/Output logic: Combining Input/Output logic and Reification to represent norms coming from existing legislation*. The Journal of Logic and Computation, Vol. 27, Issue 8.

- [Ajani et al., 2017]   Ajani, G. and Boella, G. and Di Caro, L. and Robaldo, L. and Humphreys, L. and Praduroux, S. and Rossi, P. and Violato, A.: *The European legal taxonomy syllabus: A multi-lingual, multi-level ontology framework to untangle the web of European legal terminology*. Applied Ontology, Vol. 11 (4), pp. 325-375, 2017

- [Sun and Robaldo, 2017]   Sun, X. and Robaldo, L.: *On the Complexity of Input/Output Logic*. The Journal of Applied Logic, Vol. 25.

- [Sun et al., 2017b]   Sun, X., Zhao, X., and Robaldo, L.: *Ali Baba and the Thief, Convention Emergence in Games*. Journal of Artificial Societies and Social Simulation, Vol. 20, Issue 3.

- [Sun et al., 2017a]   Sun, X. and Zhao, X. and Robaldo, L.: *Norm-based deontic logic for access control, some computational results*. Future Generation Computer Systems, Vol. 79.

- [Boella et al., 2016]   Boella, G. and Di Caro, L. and Humphreys, L. and Robaldo, L. and Rossi, P. and van der Torre, L.: *Eunomos, a legal document and knowledge management system for the Web to provide relevant, reliable and up-to-date information on the law*. Artificial Intelligence and Law, Vol. 24 (245).

- [Boella et al, 2014]   G. Boella, L. Di Caro, A. Ruggeri, L. Robaldo: *Learning from Syntax Generalizations for Automatic Semantic Annotation*. The Journal of Intelligent Information Systems. Vol. 43(2).

- [Robaldo and Miltsakaki, 2014]   L. Robaldo and E. Miltsakaki: *Corpus-driven Semantics of Concession: Where do Expectations Come from?*. Discourse & Dialogue, Vol 5, No 1.

- [Robaldo et al, 2014]   L. Robaldo, J. Szymanik, B. Meijering: *On the identification of quantifiers' witness sets: a study of multi-quantifier sentences*. The Journal of Logic, Language, and Information. Vol. 23, No 1, pp 53-81.

- [Poesio et al, 2013]   M. Poesio, J. Chamberlain, U. Kruschwitz, L. Robaldo, L. Ducceschi: *Phrase Detectives: Utilizing Collective Intelligence for Internet-Scale Language Resource Creation*. ACM Transactions on Interactive Intelligent Systems. 3 (1).

- [Robaldo and Di Caro, 2013]   L. Robaldo and L. Di Caro: *OpinionMining-ML*. Computer Standards & Interfaces, 35 (5).

- [Robaldo, 2013]   L. Robaldo: *Conservativity: a necessary property for the Maximization of witness sets*. The Logic Journal of the IGPL, 21 (5), pp. 853-878.

- [Robaldo and Di Carlo, 2013]   L. Robaldo and J. Di Carlo: *Flexible disambiguation and Expressive completeness in Dependency Tree Semantics*. The Journal of Semantics, 30 (2).

- [Robaldo 2011]   L. Robaldo: *Distributivity, Collectivity, and Cumulativity in terms of (In)dependence and Maximality*. The Journal of Logic, Language, and Information, 20(2), pp. 233-271. 2011.

- [Robaldo 2010b] L. Robaldo: *Interpretation and Inference with Maximal referential terms*, The Journal of Computer and System Sciences, 76 (5), pp. 373-388. 2010.

- [Robaldo 2010a] L. Robaldo: *Independent Set readings and Generalized Quantifiers*, The Journal of Philosophical Logic, 39 (1), pp. 23-58, 2010.