

Mustafa Jarrar

Full Professor

Computer Science, Birzeit University, Palestine



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- Director of **PhD Program in Computer Science**.
- Director of **SinaLab for Computational Linguistics and Artificial Intelligence**.
- Founder & Former Director of **Sina Institute for Knowledge Engineering and Arabic Technologies**.
- Founder & Director of the **Palestinian e-Government Academy**.
- Recent Achievement (Open Scourse): **Arabic lexicographic Database** | **Arabic Ontology** | **Palestinian Dialectal Corpus** | **Wojood NER** | **NLU Tools** | **Palestinian e-Government Framework**

Research Interests

Natural Language Processing, Ontology Engineering, Knowledge Graphs

Lexical Databases, Dialects, Social Media, Semantic Web, Graph Databases, eGovernment, Interoperability, Linked-Data, Cultural Heritage, Upper Level Ontologies

Education

- **PhD in Computer Science** [2000 - 2005]
Vrije Universiteit Brussel, Belgium
Thesis: "Towards Methodological Principles for Ontology Engineering". Supervisor: Prof. Robert Meersman
- **Masters of Science in Computer Science** [1999 - 2000]
Vrije Universiteit Brussel, Belgium
- **Computer Systems Engineering** [1990 - 1995]
Palestinian Polytechnic University, Palestine

Employment

- **University of Birzeit**, Palestine. [2009 - present]
Professor of Computer Science
- **State University of New York at Buffalo**, USA. [2016 - 2017]
Research Associate Professor, Biomedical Informatics Department (Fulbright Scholar)
- **University of Cyprus**, Cyprus. [2007 - 2009]
Marie Curie Fellow, Computer Science Department
- **Vrije Universiteit Brussel**, Belgium. [1999 - 2007]
Senior Research Scientist
- **Arab Islamic Bank**, Palestine. [1998 - 1999]
Chief of Technology
- **Kinana for Computer & Engineering**, Palestine. [1996 - 1998]
Co-founder and CEO

Scientific Awards

1. **MIT Technology Review "Leading Arab Experts in AI"** (2022)
Top 30 Arab experts in AI worldwide
2. **Abdul Hameed Shoman Arab Researchers Award** (2019)
(\$20000) Technology - distinguished research on Arabic computational linguistics.
3. **Mohammed Bin Rashid Award for the Arabic Language** (2018)
(\$70000) Best intelligent applications - Lexicographic Search Engine.
4. **Best Poster Award** (2019)
The 2nd Conference on Language, Data and Knowledge.
5. **2nd Best Paper Award** (2017)
The 8th International Conference on Biomedical Ontology.
6. **Fulbright Visiting Scholar** (2016)
(1 year) spent at the State University of New York at Buffalo, USA.
7. **Google Faculty Research Award** (2016)
(\$51000) for developing an Arabic large-scale lexicographic database.
8. **The EU Marie Curie Fellowship** (2007)
(2 years) from the European Union, spent at the University of Cyprus.
9. **Best Paper Award** (2002)
The International Conference on Ontologies, Databases, and Applications of Semantics.
10. **BTC Doctoral Scholarship** (2000)
(3 years) from the Belgian Ministry of Cooperation, spent at the Free University of Brussels.

Research Grants

1. **CONVERSER** (Co-Principal Investigator)
(\$50000), TÜBİTAK-HCIE Program. [March 2021 - February 2023]
dialogue system (Chatbot) for Palestinian Banks that can understand standard and dialectal Arabic.
2. **Arabic Lemon** (Principal Investigator)
(\$16000) from **Birzeit University**. [December 2018 - December 2019]
To modernize and represent Arabic lexical resources using the W3C's Lemon Model.
3. **MOSIAC** (Partner)
(€798,000) from **European Union FP7, No. 612076**, 13 Partners, [2014 - 2015].
To foster R&D cooperation between the EU and Mediterranean countries on societal challenges.
4. **Arabic Ontology** (Principal Investigator)
(\$14500) seed funding from **Birzeit University**, [2010 - 2012].
To develop an Arabic Ontology; a formal specification of the concepts of all Arabic words. Similar to Arabic WordNet, but with ontological principles.
5. **VerbMesh** (Principal Investigator)
(\$11500) from **Birzeit University**. [July 2014 - January 2016]
To develop a large-scale graph of the Arabic verbs, and their inflectional relations.
6. **Curras** (Principal Investigator)
(\$35000) from the **Research Council- Ministry Of Higher Education**, [December 2013 - December 2015]
To develop a well-annotated corpus of the Palestinian Arabic dialect.
7. **Zinnar - The Palestinian e-Government Interoperability Framework** (Inventor)
Voluntary Consultancy for the Palestinian Government.
A framework to enable e-governmental and e-services in Palestine (adopted by all ministries).
8. **SIERA** (Coordinator)

- (€560,000) from **European Union FP7 (No. 295006)**, 5 Partners, [October 2011 - September 2014].
To build multilingual and multi-cultural knowledge sharing technologies.
9. **Palestinian e-Governance Academy (PalGov I)** (Coordinator)
(€564,964) from **the European Union TEMPUS (No. 511159)**, 11 partners, [2010 - 2012]
Capacity building for Palestinian ministries to gain the know-how for implementing e-government, in three main areas (interoperability, security, IT-laws).
 10. **GovSeer** (Partner)
(€50,000) from Italy CooperLink, 2 partners, [2010 - 2012].
Ontology-Based Interoperability of e-Government Services.
 11. **MashQL** (Principal Investigator)
(Non-funded project) to develop a novel approach for querying the Data Web (Web 3.0).
 12. **SEARCHiN** (Fellowship)
Funded by the European Union Marie Curie actions. 3 years. SEARCHing In a Networked World.
 13. **Knowledge Web** (Partner)
(€6,700,000) from the European Union FP6-IST-2002-507482 Networks of Excellence, [January 2004 - December 2007]
Supporting the transition of Ontology technology from Academia to Industry.
 14. **Innovanet** (Partner)
Funded the European Union FP5-IST-2001-38422.
Innovation engineering for the support of scientific discovery.
 15. **CCFORM** (Partner)
(€594,591) from the European Union FP5-IST-2001-34908 Networks of Excellence, [June 2002 - November 2003]
Consumer Complaint FORM for online resolution mechanisms.
 16. **OntoWeb** (Partner)
(€1,865,799) from the European Union FP5-IST-2000-29243 Thematic network, [June 2001 - May 2004]
Ontology-based Information Exchange for Knowledge Management and Electronic Commerce.
 17. **Namic** (Partner)
(€2,601,085) from the European Union FP5-IST-1999-12392 CSC, [March 2000 - April 2002]
News Agencies Multilingual Information Categorization.
 18. **IrisWeb**
Funded by DWTC Belgium
On ontology-based browsing in a (digital) library.
 19. **POLARIS**
Funded by Vrije Universiteit Brussel
To develop a prototype of the next-generation Digital University Library system.
 20. **DOGMA**
Funded by Vrije Universiteit Brussel
To develop Ontology-Guided Mediation of Applications. A framework for engineering and deploying formal ontologies.

Professional Memberships

1. **Wiki Palestine Association.** Co-founder and Board Member (2022 - On)
2. **UN ESCWA Technology Centre (ETC) Board of Governors.** Board Member (2011 - 2014)
3. **National Committee for Science and Technology Statistics at the Palestinian Central Bureau of Statistics.** Member (2014 - Present)
4. **National E-Government Core Team.** Member (2010 - Present)
5. **National E-Government Interoperability Committee (Zinnar).** Founder and Member (2010 - Present)
6. **Marie Curie Alumni Association.** Member (2015 - Present)
7. **The Ontology Outreach Advisory.** Co-founder and Secretariat (2006 - 2012)
8. **IEEE Learning Technology Standards Committee.** Member (2005 - 2006)
9. **CEN/ISSS ICT Skills And Curricula.** Member (2006 - 2007)

10. **IFIP Working Group 2.6 On Databases.** Member (2003 - Present)
11. **IFIP Working Group 2.12 On Web Semantics.** Member (2004 - Present)
12. **The Palestine Engineers' Association.** Member (1996 - Present)

Roles at Birzeit University

1. Director: **PhD Program in Computer Science** (2020-On)
2. Director: **SinaLab for Computational Linguistics and Artificial Intelligence** (2011-On)
3. Chair: **University's Scientific Research Groups Committee** (2023-On)
4. Chair: **Master Students Scholarship Committee** (2022-On)
5. Founder and Director: **Sina Institute for Knowledge Engineering and Arabic Technologies** (2011 - 2015)
6. Director: **Master Program in Computing** (2010 - 2013)
7. Member: **University's Scientific Research Committee** (2010 - 2014, 2017 - 2018)
8. Member: **Faculty's Recruitment and Tenure Committee (CADER)** (2010 - 2015)

Research Visits

1. **Institute of Technology, Villetaneuse, University of Paris 13**, France. Prof. Haifa Zargayouna. 3 weeks. June 2018
2. **State University of New York at Buffalo**, USA. Bioinformatics Dept., Prof. Werner Ceusters. 1 year. June 2017
3. **University of Namur**, Belgium. Faculty of Law, Prof. Romian Robert. 2 Weeks. June 2011
4. **University of Savoy**, France. Computer Science Dept. Prof. Christophe Roche. 1 Week. January 2011
5. **University of Trento**, France. Computer Science Dept. Prof. Marco Ronchetti. 2 Weeks. November 2010
6. **National & Kapodistrian University of Athens**, Greece. Computer Science Dept., Prof. Yannis Ioannidis. 1 week. October 2008
7. **Free University of Bozen-Bolzano**, Italy. Computer Science Dept., Prof. Enrico Franconi. 3 Weeks. October 2006
8. **University of Trento**, Italy. Computer Science Dept. Prof. Fausto Giunchiglia. 3 Weeks. September 2006
9. **National Research Institute (CNR)**, Italy. Laboratory for Applied Ontology. Prof. Nicola Guarino. 2 Weeks. June 2006

Consultancy Services

1. **Academic Evaluator**, promotion evaluations for 12 EU and Arab universities (Associate/Full Professor ranks).
2. **Arabic NLP Dialect Expert**, United Nations – NLP, Arabic dialects, and opinion mining in social media.
3. **Projects Evaluator**, for many universities and government programs.
4. **Proposal Evaluator**, European Union Erasmus+ Program - EACEA Agency.
5. **Proposal Evaluator**, European Union TEMPUS Program - EACEA Agency.
6. **Proposal Evaluator**, European Union Erasmus Mundus Program - EACEA Agency.
7. **Ministry Advisor**, E-Government Program - Palestinian Ministry of Telecommunication and IT.
8. **GIS and Spatial Databases Expert**, Palestinian Municipalities.
9. **Data Governance Expert**, Data-Driven Migration e-Governance, Palestinian Government.

Guest Editor

1. **Special Issue on Querying the Data Web -Novel techniques for querying structured data on the web**, Internet and Web Information Systems Journal (WWW), Springer. 2011
2. **Special Issue on Knowledge Management and e-Human Resources Practices for Innovation**, International Journal of Knowledge and Learning, Inderscience. 2013

Organization of Conferences

1. Co-organizer, *Arabic NER Shared-Task*, WANLP 2023, Singapore.
2. Co-chair, SNAMS'18 Workshops *Fifth International Conference on Social Networks Analysis, Management & Security*, Valencia, Spain.
3. Co-chair, Workshops, Tutorials, and Track 1 at the (AICCSA'18) *15th ACS/IEEE International Conference on Computer Systems and Applications*, Aqaba, Jordan.
4. Co-chair, Track 12 at the (AICCSA'17) *14th ACS/IEEE International Conference on Computer Systems & Applications*, Hammamet, Tunisia.
5. Co-chair, *Arab Big Data Initiative conference 2015*, Beirut, Lebanon.
6. Chair, *Palestinian Big Data Initiative Workshop 2015*, Ramallah, Palestine.
7. Chair, (iArabic'15) *4th Palestinian Symposium on Computational Linguistics & Arabic Content*, Birzeit, Palestine.
8. Chair, (OnToContent 2015) *International Workshop on Ontology content & evaluation*, Rhodes Island, Greece.
9. Co-organizer, *Discussion Panel on Cross-Lingual Mapping Semantics*, at the 7th Global WordNet conference, Tartu, Estonia.
10. Chair, (iArabic'14) *3rd Palestinian Symposium on Computational Linguistics & Arabic Content*, Birzeit, Palestine.
11. Chair, (OnToContent 2014) *International Workshop on Ontology content & evaluation*, Calabria, Italy.
12. Chair, (iArabic'13) *2nd Palestinian Symposium on Computational Linguistics & Arabic Content*, Birzeit, Palestine.
13. Chair, (PalGov'12) *1st National Conference on e-Governance & e-Services*, Birzeit, Palestine.
14. Chair, (OnToContent 2012) *International Workshop on Ontology content & evaluation*, Rome, Italy.
15. Co-organizer, (eHR-KM'11) *1st International Workshop on Knowledge Management & e-Human Resources Practices for Innovation*, Innsbruck, Austria.
16. Chair, (OnToContent 2010) *International Workshop on Ontology content & evaluation*, Crete, Greece.
17. Chair, (OnToContent 2009) *International Workshop on Ontology content & evaluation*, Algarve, Portugal.
18. Chair, (OnToContent 2008) *International Workshop on Ontology content & evaluation*, Monterrey, Mexico.
19. Chair, (OnToContent 2007) *International Workshop on Ontology content & evaluation*, Albufeira, Portugal.
20. Chair, (OnToContent 2006) *International Workshop on Ontology content & evaluation*, Montpellier, France.
21. Chair, (OOA-HR 2006) *Semantic challenges & opportunities in the Human Resources Domain*, Oxford, UK.
22. Chair, (OnToHR 2007) *International Workshop on Semantics Meets Human Resources and Employability*, Maastricht, Netherlands.
23. Co-chair, (BADE 2007) *IEEE Workshop on Biomedical Applications for Digital Ecosystems*.
24. Co-chair, (SWWS 2006) *IFIP WG 2.12 and WG 12.4 Workshop on Web Semantics*, Montpellier, France.
25. Co-chair, (WORM 2005) *3rd International Workshop on Regulatory Ontologies*, Larnaca, Cyprus.
26. Co-chair, (SWWS 2005) *IFIP WG 2.12 and WG 12.4 Workshop on Web Semantics*, Larnaca, Cyprus.
27. Co-chair, (WORM 2004) *2nd International Workshop on Regulatory Ontologies*, Larnaca, Cyprus.
28. Chair, (OMAC 2004) *Workshop on Ontology Modularization and context*, Brussels, Belgium.
29. Co-chair, (WORM 2003) *1st International Workshop on Regulatory Ontologies*, Catania, Sicily, Italy.

Awards Committees

1. *ESCWA Digital Arabic Content Award*, 2022
2. *Arabic Hackathon*, 2021
3. *NYUAD Hackathon for Social Good in the Arab World*, 2019

Referee in Journals

1. Springer book publishing proposals.
2. *International Journal of Speech Technology*, Springer.
3. *Journal of Information Systems*, Elsevier.
4. *Journal of Applied Ontology*, IOS.
5. *Journal of Knowledge Engineering Review*, Cambridge.
6. *Journal of Data and Knowledge Engineering Journal*, Elsevier.
7. *Journal of Logical and Algebraic Methods in Programming*, Elsevier.
8. *Journal IEEE Transactions on Knowledge and Data Engineering*, IEEE.
9. *Journal Advances in Engineering Software, Special Issue on Vocabularies, Ontologies and Rules*, Elsevier.
10. *IEEE Transactions on Industrial Electronics*, IEEE.

11. Journal of Visual Languages and Computing, Special Issue on Perception and ontologies in visual, virtual and geographic spaces, Elsevier.
12. Journal on Web Semantics, Elsevier.
13. Journal of IEEE Software, IEEE.
14. Journal of Semantic Web and Information Systems, IGI-Global.
15. Journal of Electronic Commerce Research and Applications, special issue on Semantic Web Rules, Elsevier.
16. Journal on Data Semantics, Springer.
17. Semantic Web journal, IOS.
18. Journal of King Saud University, Elsevier.
19. Frontiers in Artificial Intelligence, frontiersin.
20. Journal of Artificial Intelligence Tools, World Scientific.
21. International Arab Journal of Information Technology (IAJIT), Zarka Private University.
22. Handbook of Research on Emerging Rule-Based Languages and Technologies, IGI-Global.
23. Special Issue of Fundamenta Informaticae for CILC 2011, the annual meeting of the Italian Association for Logic Programming, Association for Logic Programming.
24. Business Intelligence Book, Springer.

Program Committee Member in Conferences

1. WANLP'23, The 1st Arabic Natural Language Processing Conference, Singapore.
2. GWC'23, The 12th International Global WordNet Conferences, San Sebastian (Spain).
3. WANLP'22, The 7th Arabic Natural Language Processing Workshop, Abu Dhabi, UAE
4. LREC'22, The 13th International Conference on Language Resources and Evaluation, Palais du Pharo, France.
5. ISWC'22, The 20th International Semantic Web Conference . Hangzhou, China
6. ESWC'22, The European Semantic Web Conference, Heraklion, Greece.
7. OSCAT'22, The 5th Workshop on Open-Source Arabic Corpora and Processing Tools, Marseille, France.
8. Senior PC Member: ISWC'21, The 20th International Semantic Web Conference .
9. ESWC'21, The European Semantic Web Conference, Heraklion, Greece.
10. ACLing'21, 5th International Conference on Arabic Computational Linguistics.
11. WANLP'21, The 6th Arabic Natural Language Processing Workshop, EACL 2021 (Virtual)
12. ESAS'21, The 16th IEEE International Workshop on E-Health Systems and Web Technologies, Virtual
13. SIMPDA'21, The 11th IFIP International Symposium on Data-Driven Process Discovery and Analysis, Tartu, Estonia.
14. Senior PC Member: ISWC'20, The 19th International Semantic Web Conference , Athens, Greece.
15. LREC'20, The 12th International Conference on Language Resources and Evaluation, Marseille, France.
16. ESWC'20, The European Semantic Web Conference, Crete, Greece.
17. WANLP'20, The 5th Arabic Natural Language Processing Workshop, Barcelona, Spain.
18. ACL'19, The 57th Annual Meeting of the Association for Computational Linguistics, Florence, Italy.
19. Senior PC Member: ISWC'19, The 18th International Semantic Web Conference , Auckland, New Zealand.
20. ESWC'19, The European Semantic Web Conference, Portoroz, Slovenia.
21. WI'19, The 18th Web Intelligence conference (WI'19), Thessaloniki, Greece.
22. ICALP'19, The 6th International Conference on Arabic Language Processing, Nancy, France.
23. WANLP'19, The 4th Arabic Natural Language Processing Workshop, Florence, Italy.
24. DiLiTAL'2019 , Diversite and TAL Linguistique, Oujda, Morocco.
25. NLP-DH2019, The first international workshop on NLP for Digital Humanities, Algeria.
26. SIMPDA'19, The IFIP International Symposium on Data-Driven Process Discovery and Analysis, Bled, Slovenia.
27. SemBDM'19, The IFIP Semantics in Big Data Management.
28. SNAMS'19, The Sixth International Conference on Social Networks Analysis, Management & Security, Granada, Spain.
29. ISWC'18, The 17th International Semantic Web Conference , California, USA.
30. AICCSA'18, The 15th ACS/IEEE International Conference on Computer Systems and Applications, Aqaba, Jordan.
31. SNAMS'18, The Fifth International Conference on Social Networks Analysis, Management & Security, Valencia, Spain.
32. ACLing'18, 4th International Conference on Arabic Computational Linguistics, Dubai, UAE.
33. MISC18, International Conference on Modern Intelligent Systems Concepts, Rabat, Morocco.
34. AICCSA'17, The 14th ACS/IEEE International Conference on Computer Systems and Applications, Hammamet, Tunisia.
35. WWW'17, The 2017 World Wide Web conference, Perth, Australia.
36. ISWC'17, The 16th International Semantic Web Conference , Vienna, Austria.
37. ESWC'17, The 14th European Semantic Web Conference, Portoroz, Slovenia.
38. ACLing'17, 3rd International Conference on Arabic Computational Linguistics, Dubai, UAE.

39. ICALP'17, The 6th International Conference on Arabic Language Processing, Fez, Morocco.
40. ICTCS'17, The International Conference on New Trends in Computing Sciences, Amman, Jordan.
41. AISI'17, International Conference on Advanced Intelligent Systems and Informatics, Cairo, Egypt.
42. WANLP'17, The 3rd Arabic Natural Language Processing Workshop, Valencia, Spain.
43. FBM'17, International Workshop on Fact Based Modeling, Rhodes, Greece.
44. SIMPDA'17, The IFIP International Symposium on Data-Driven Process Discovery & Analysis, Neuchatel, Switzerland.
45. PICICT'17, The 2nd Palestinian International Conference on Information & Communication Technology, Gaza, Palestine.
46. ESAS'17, The 12th IEEE International Workshop on E-Health Systems and Semantic Web, Torino, Italy.
47. ESWC'16, The 13th European Semantic Web Conference, Crete, Greece.
48. AISI'16, International Conference on Advanced Intelligent Systems and Informatics, Cairo, Egypt.
49. SOTICS'16, The 6th International Conference on Social Media Technologies, Communication, and Informatics, Brussels, Belgium.
50. PAIS'16, Conference on Prestigious Applications of Intelligent Systems, The Hague, The Netherlands.
51. SIMPDA'16, The IFIP International Symposium on Data-Driven Process Discovery and Analysis, Graz, Austria
52. FBM'16, International Workshop on Fact Based Modeling, Rhodes, Greece.
53. IWOOD'16, 4th International Workshop on Definitions in Ontologies, Corvallis, Oregon, USA.
54. ESAS'16, The 11th IEEE International Workshop on E-Health Systems and Semantic Web, Georgia, USA.
55. ISWC'15, The 14th International Semantic Web Conference , Bethlehem, Pennsylvania, USA.
56. ESWC'15, The 12th European Semantic Web Conference, Portoroz, Slovenia.
57. SIMPDA'15, The IFIP International Symposium on Data-Driven Process Discovery and Analysis, Vienna, Austria.
58. PICCIT'15, The 4th Palestinian International Conference on Computer & Information Technology, Hebron, Palestine.
59. ICIT'15, The 7th International Conference on Information Technology, Amman, Jordan.
60. WCIS'15, The International Workshop on Computers and Information Sciences, Tabuk, KSA.
61. ESAS'15, The 10th IEEE International Workshop on E-Health Systems and Semantic Web, Taichung, Taiwan
62. ISWC'14, The 13th International Semantic Web Conference, Italy.
63. TOTh'14, The 8th TOTh International Conference on Terminology and Ontology: Theories and applications
64. CITALA'14, The 5th International Conference in Arabic Language Processing
65. ANLP'14, workshop on Arabic Natural Language Processing at EMNLP 2014
66. SIMPDA'14, The IFIP International Symposium on Data-Driven Process Discovery and Analysis
67. ORM'14, Workshop on Fact-Oriented Modeling.
68. ESAS 2014: The 9th IEEE International Workshop on Engineering Semantic Agent Systems
69. SWWS 2014: 10th International IFIP Workshop on Semantic Web & Web Semantics
70. ISWC'13, The 12th International Semantic Web Conference
71. ORM'13, Workshop on Fact-Oriented Modeling.
72. SIMPDA'13, The IFIP International Symposium on Data-Driven Process Discovery and Analysis
73. SIMPDA'13, The IFIP International Symposium on Data-Driven Process Discovery and Analysis (Asian Edition)
74. TOTh'13, The 7th TOTh International Conference ?? Terminology & Ontology: Theories and applications
75. COLING'12, The 2013 International Conference on Terminology & Ontology : Theories and applications
76. CITALA'12, The 4th International Conference on Arabic Language Processing
77. SIMPDA'12, The IFIP International Symposium on Data-Driven Process Discovery and Analysis
78. ORM'12, Workshop on Fact-Oriented Modeling.
79. ColabTKR, 2012 - Collaboration in Terminology and Knowledge Representation.
80. ESAS 2012: The 7th IEEE International Workshop on Engineering Semantic Agent Systems
81. SWWS'12, 8th International IFIP Workshop on Semantic Web & Web Semantics
82. META4eSociety'12, Methods, Evaluation, Tools and Applications for the Creation and Consumption of Structured Data for the e-Society
83. SIMPDA'11, The IFIP International Symposium on Data-Driven Process Discovery and Analysis
84. RuleML'11-USA, The International Symposium on Rules, RuleML.
85. RuleML'11_EU, The International Symposium on Rules, RuleML.
86. ISWSA'11, The International Conference Intelligent Semantic Web.
87. ORM'11 Workshop on Fact-Oriented Modeling.
88. INBAST'11, Workshop on Industrial and Business Applications of Semantic Web Technologies
89. SLSIS'11 International Workshop on Survivable Large-Scale Information Systems.
90. ESAS'11, 4th IEEE International Workshop on Engineering Semantic Agent Systems.
91. KARE'10, The 2nd International Workshop on Knowledge Acquisition, Reuse and Evaluation.
92. ISWSA'10, The International Conference Intelligent Semantic Web.
93. VORTE'10, International Workshop on Vocabularies, Ontologies and Rules for The Enterprise.
94. LOAIT'10, International Workshop on Legal Ontologies and Artificial Intelligence Techniques.
95. PICCIT'10, The 3rd Palestinian International Conference on Computer and IT.

96. ORM'10 Workshop on Fact-Oriented Modeling.
97. SWWS'10 6th International IFIP Workshop on Semantic Web & Web Semantics
98. ISWC'09, The International Semantic Web Conference -Demo and Posters track.
99. KEOD'09, The International Conference on Knowledge Engineering and Ontology Development.
100. PCI'09, The 13th Panhellenic Conference on Informatics.
101. ACIT'09, The International Arab Conference of Information Technology.
102. ORM'09, International Workshop on Fact-Oriented Modeling.
103. SWWS'09, 5th International IFIP Workshop on Semantic Web & Web Semantics
104. VORTE'09, International Workshop on Vocabularies, Ontologies and Rules for The Enterprise.
105. LOAIT'09, International Workshop on Legal Ontologies and Artificial Intelligence Techniques.
106. KARE'09, 2nd International Workshop on Knowledge Acquisition, Reuse and Evaluation.
107. ESAS'09, 4th IEEE International Workshop on Engineering Semantic Agent Systems.
108. ICIS'08, International Conference on Information Systems.
109. FLOW'08, International Workshop on Fuzzy Logic On the Web.
110. CBMS'08, The 21 IEEE International Symposium on Computer-Based Medical Systems.
111. ORM'08, Workshop on Object-Role Modeling.
112. ICDE'08, The 25th IEEE International Conference on Data Engineering (Demo track, Reviewer)
113. WOMSDE'08, Workshop on Ontologies and Metamodeling in Software and Data Engineering .
114. VORTE'08, EDOC International Workshop on Vocabularies, Ontologies and Rules for The Enterprise.
115. SWAE'2008, The 1st International Workshop on Semantic Web Architectures For Enterprises.
116. ESAS'08, The 3rd IEEE International Workshop on Engineering Semantic Agent Systems.
117. SWWS'08, 5th International IFIP Workshop on Semantic Web & Web Semantics
118. ESWC'07, The 4th European Semantic Web Conference.
119. ESAS'07, International Workshop on Engineering Semantic Agent.
120. CBMS'07, The 20th IEEE International Symposium on Computer-Based Medical Systems.
121. SWAE'2007, The 1st International Workshop on Semantic Web Architectures For Enterprises.
122. BADE 2007, IEEE Workshop on Biomedical Applications for Digital Ecosystems.
123. ORM'7, Workshop on Object-Role Modeling.
124. VORTE'07, EDOC International Workshop on Vocabularies, Ontologies and Rules for The Enterprise.
125. SWWS'07, IFIP WG 2.12 & WG 12.4 Workshop on Web Semantics.
126. SAMI'07, the Third IEEE Workshop on Situation Management.
127. LOAIT'07, International Workshop on Legal Ontologies and Artificial Intelligence Techniques.
128. ICDM'06, The IEEE Workshop on Data Mining in Bioinformatics.
129. CBMS'06, The 19th IEEE International Symposium on Computer-Based Medical Systems.
130. WOMSDE'06, The 1st Workshop on Ontologies and Metamodeling in Software and Data Engineering.
131. ORM'6, Workshop on Object-Role Modeling.
132. SWWS'06, IFIP WG 2.12 & WG 12.4 Workshop on Web Semantics.
133. SWIG06, The Canadian Semantic Web Working Symposium 2006.
134. DMB'06, IEEE ICDM 2006 Workshop on Data Mining in Bioinformatics.
135. VORTE'06, EDOC International Workshop on Vocabularies, Ontologies and Rules for The Enterprise.
136. ESAS'06, International Workshop on Engineering Semantic Agent.
137. ESWC'06, Industry Forum.
138. ODBase'05, International Conference on Ontologies, Databases and Applications of Semantics.
139. ORM'5, Workshop on Object-Role Modeling.
140. SWWS'05, IFIP WG 2.12 & WG 12.4 Workshop on Web Semantics.
141. VORTE'05, EDOC International Workshop on Vocabularies, Ontologies and Rules for The Enterprise.
142. LOAIT'05, International Workshop on Legal Ontologies and Artificial Intelligence Techniques.
143. SWCASE'05 Semantic Web Case Studies and Best Practices for eBusiness.
144. ESWC'05 Industry Forum.
145. IKE, The 2004 International Conference on Information and Knowledge Engineering.
146. SWEB 2004, International Workshop on Semantic Web Technologies in Electronic Business.

Online Courses

Slides and video-recorded lectures

1. **Natural Language Processing** (COMP9312), PhD Program in Computer Science.
2. **Introduction to Computer** (COMP121), University level for non-Science/Engineering/IT students.

3. **Computer and Programing** (COMP133/COMP142), Computer Science & Computer Engineering programs.
4. **Discrete Mathematics** (COMP233), Computer Science Program.
5. **Database Systems** (COMP333), Computer Science Program.
6. **Artificial Intelligence** (COMP338, ENCS434), Computer Science and Computer Engineering programs.
7. **Advanced Artificial Intelligence** (SCOM7341), Master Program in Computing.
8. **Knowledge Engineering** (SCOM7348, SWEN7310), Master programs in Computing, and in Software Engineering.
9. **Data Engineering and Big Data Technologies** (SWEN739,COMP9316), Master Program in Software Engineering, and PhD Program in Computer Science.
10. **Web Data Management** (MCOM7348), Master Program in Computing.
11. **Data & Business Process Modelling** (COMP438), Computer Science Program.
12. **Philosophy of Language** (PHIL4381), University general elective.
13. **Artificial Intelligence and Machine Learning** (ASDS7381), Master Program of Applied Statistics and Data Science.
14. **Process and Data Modeling** (Tutorial), to IT middle-management public servants.
15. **Data Integration and Open Information System** (Tutorial), to IT middle-management public servants.
16. **Ontology Engineering and Lexical Semantics** (Tutorial), to IT middle-management public servants.

Students

PhD Students:

1. Supervisor: Sanad Malaysha: Word Sense disambiguation. Birzeit University. (2022 - On)
2. Supervisor: Diyam Akra: Morphological Tagging. Birzeit University. (2022 - On)
3. Supervisor: Nagham Hamad: Domain Adaptation and Adversarial Learning. Birzeit University. (2022 - On)
4. Co-Supervisor: Mamoun AbuHellu: Cross-Lingual Mapping of Lexical Ontologies with Automatic Translation. Birzeit University & Milano-Beccoca University. (2012 - 2016)
5. Examiner: Fuad Alattar, Artificial Intelligence Frameworks for Sentiment Variations' Reasoning and Emerging Topic Detection, The British University in Dubai, UAE. 2021
6. Examiner: Souheila Ben Guirat, Hybrid Approaches for Arabic Information Retrieval, Manouba University, Tunisia. 2020
7. Examiner: Manar Alkhatib, Neural Machine Translation for Arabic Language, The British University in Dubai, UAE. 2019
8. Examiner: Shastri Lakshman Nimmagadda, Ontology Based Data Warehousing for Mining of Heterogeneous and Multidimensional Data Sources, Curtin University, Australia.
9. Examiner: Ingrid Pappel, Paperless: Management as a Foundation for the Application of e-Governance in Local Governments. Tallinn University Of Technology, Estonia.
10. Examiner: Nazir Ahmad Sharif: Specification for an Ontology Server Assisting a Player to Commit to an Ontology for Interoperating Information Systems. University of Queensland. Australia. 2009

Masters and BA Students (selected):

1. Supervisor(MS): Nour Shayeb: Performance Analysis of Machine Learning Algorithms in predicting missing values in the Birzeit University Arabic Lexicographic Database. Birzeit University. 2022
2. Supervisor(MS): Ala Omar: Arabic Named Entity Disambiguation and Linking in Software Engineering. Birzeit University. 2022
3. Supervisor(MS): Sana Ghanam: Arabic Synonyms Extraction. Birzeit University. 2021
4. Supervisor(MS): Qutaiba Mustafa: Detecting and Classifying Software Requirement in App Stores. Birzeit University. 2021
5. Supervisor(MS): Manar Awadallah: Predicting the Word Number in Arabic. Birzeit University. 2021
6. Co-Supervisor(MS): Shurooq Morrar: Social Media Mobilization in Time of Crisis: Palestinian Employment in Lebanon. Birzeit University. 2020
7. Supervisor(MS): Diana Al-Hafi: User Experience Evaluation for Birzeit Linguistic Search Engine. Birzeit University. 2019
8. Examiner(MS): Abdulfattah Safa: Enhancing Quality Arabic Web Content through Multilingual Information Retrieval. Birzeit University. 2018

9. Examiner(MS): Mohamad Ateeq: Speech Based Call System to Evaluate the Meaning and Grammar Errors in English. Birzeit University. 2018
10. Examiner(MS): Abd-aljabar Huroob: Using Computational Linguistics Applications in Arabic Language - Vocalizer and Summarizer as Models. Birzeit University. 2018
11. Supervisor(MS): Eman Karajah: **Towards Building an Arabic Thesaurus Automatically**. Birzeit University. 2015
12. Supervisor(MS): Diyam Akra: **Towards Building a Corpus for Palestinian Dialect**. Birzeit University. 2015
13. Examiner(MS): Mahmoud El-Askary : An Ontology-Based Approach for Diagnosing Date Palm Diseases. Islamic University of Gaza. 2015
14. Examiner(MS): Dua Awwad: Performance Analysis for Business Process Modeling Notation, Palestinian Polytechnic University. 2014
15. Supervisor(MS): Rana Rishmawi: Towards Building an Arabic Upper-Level Ontology. Birzeit University. 2013
16. Examiner(MS): Yahya Dalluol: An Ontology-Based Approach to Support the Process of Judging Hadith Isnad. Islamic University of Gaza. 2013
17. Examiner(MS): Rana Abdo: Ontology-Based Digital Libraries, AlQuds University, 2014
18. Supervisor(MS): Mohammad M. Melhem: Advanced Matching Function Towards Linking Arabic Ontology with the English WordNet. Birzeit University. 2013
19. Supervisor(MS): Rami Kalil: **Mapping ORM into OWL2 and Back**. Birzeit University. 2012
20. Co-Supervisor(MS): Georgiou M: Semantic Web Pipes. Cyprus University. 2009
21. Co-Supervisor(MS): Savvides C: Semantic Data Mashups. Cyprus University. 2009
22. Supervisor(MS): Al-Damag M: Mapping ORM into DIG. Vrije Universiteit Brussel. 2006
23. Supervisor(BA): Deik A, Farraj B, Hawash A: Querying the Data Web. Birzeit University. 2009
24. Supervisor(BA): Al-Badawi M, Aish S, Samara H: Towards Building an Arabic Ontology. Birzeit University. 2009
25. Supervisor(BA): Manoli A: Semantic Mashups at the Browser Side. Cyprus University. 2009
26. Supervisor(BA): Gielen G: Gloss Support in Ontology Modeling. Vrije Universiteit Brussel. 2007
27. Supervisor(MS): Ugurel A: Ontology-driven Web Forms. Vrije Universiteit Brussel. 2007
28. Supervisor(MS): Yan Gu: Incorporating SUMO into DOGMA. Vrije Universiteit Brussel. 2007
29. Supervisor(MS): Hoang H: Verbalization of Ontologies. Vrije Universiteit Brussel. 2005
30. Supervisor(MS): Murhaf M: Generation of RDF from Databases. Vrije Universiteit Brussel. 2004
31. Supervisor(BA): Demey J: Realizing Ontological Commitments. Vrije Universiteit Brussel. 2003
32. Supervisor(MS): Lisovoy A: DogmaModeler: Ontology Modeling. Vrije Universiteit Brussel. 2003
33. Supervisor(MS): W. Wang: Ontologization of WordNet. Vrije Universiteit Brussel. 2002
34. Supervisor(MS): M. Orzu: Ontology Mining from Databases. Vrije Universiteit Brussel. 2002
35. Supervisor(BA): P. Segers: Semantic-Based Digital Libraries. Vrije Universiteit Brussel. 2001

Articles

Google Scholar: Citations: 4100, h-index: 34

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- Sanad Malaysha, Mustafa Jarrar, Mohammad Khalilia: **Context-Gloss Augmentation for Improving Arabic Target Sense Verification**. The 12th International Global Wordnet Conference (GWC2023), Global Wordnet Association. (pp.). San Sebastian, Spain, 2023
- Mustafa Jarrar, Mohammed Khalilia, Sana Ghanem: **Wojood: Nested Arabic Named Entity Corpus and Recognition using BERT**. In Proceedings of the International Conference on Language Resources and Evaluation (LREC 2022), Marseille, France. 2022
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- Diab Abuaiadah, Dileep Rajendran, Mustafa Jarrar: **Clustering Arabic Tweets for Sentiment Analysis**. The 2017 IEEE/ACS 14th International Conference on Computer Systems and Applications. Pages(499-506). IEEE Computer Society. ISBN:9781538635810. (doi.10.1109/AICCSA.2017.162). Hammamet, Tunisia. 2017
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- Mustafa Jarrar and Marios D. Dikaiakos: **A Query Formulation Language for the Data Web**. The IEEE Transactions on Knowledge and Data Engineering. Volume 24, Number 4, Pages(783-798). IEEE Computer Society. April, 2012
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- Ramon F. Brena, Andreas Schmidt, Mustafa Jarrar, Werner Ceusters, Francisco J. Cantu: (eds): **Proceedings of the International Workshop on Ontology Content and Evaluation (OnToContent+QSI)**. In OTM 2008 Workshops. Page 583. LNCS 5333, Springer. ISBN:9783540888741. November, 2008

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2005

- Mustafa Jarrar: **Modularization and Automatic Composition of Object-Role Modeling (ORM) Schemes**. The International Workshop on Object-Role Modeling (ORM). OTM2005 Workshops. Pages(613-625). LNCS 3762, Springer. ISBN:3540297391. Larnaca, Cyprus. November, 2005
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Online Tools and Databases

with scientifically-original features and wide use.

- **Arabic-Multilingual Lexicographic Database (with Search Engine)**
 - The largest lexicographic database ever for Arabic.
 - Includes 150 Arabic lexicons, digitized over 10 years.
 - The first of its kind (e.g., no similar tools for English lexicons).
 - Search 150 lexicons for definitions, synonyms, and translations.
 - Free access to people with accessible APIs for NLP applications.
 - Awarded *Mohammed Bin Rashid Award* for the Arabic Language.
- **The Arabic Ontology**
 - An Arabic Wordnet with ontologically-clean content.

- Classification of the meanings of the Arabic terms, based on state-of-the-art science.
 - Semantically linked with Arabic lexicons, WordNet, WikiData, and others.
 - The first linguistic ontology of its kind.
 - Open source, online, and accesable via API.
- **Currasat - Arabic Dialect Corpora**
 - Morphological-annotated corpus (about 1.3K words) for six dialects
 - Palestinian, Lebanese Yemeni, Iraqi, Libyan, and Sudanese.
 - Each word is annotated with 16 features.
 - To enable machines to understand Arabic dialect.
 - Open source, and heavily used by non-native Arabic speakers.
- **Wojood NER (Nest Named-Entities Corpus and Model)**
 - About 550K tokens (MSA and dialect) that are manually annotated.
 - 21 entity types (e.g., person, organization, location, event, date, etc)..
 - Contains about 75K entities and 22.5% of which are nested.
 - Covers multiple domains and was annotated with nested entities.
 - F1-score 88.4%.
 - Open source, online, and accesable via API.
- **Tools for Natural Language Understanding**
 - A set of open source tools for Arabic NLP.
 - Lemmatizer, word-sense disambiguation, etc.
 - Jaccard Function - union, intersection and similarity between Arabic words.
 - Diacritic-Based Matching of Arabic words.
 - A framework and 30 parsers for digitizing lexicons.
- **Zinnar**
 - The Palestinian e-government interoperability framework.
 - Officially endorsed by the Palestinian Cabinet, and used by all ministries.
 - Six years of voluntary work to help the government.
 - Open source and online.
- **MashQL**
 - A query formulation language for semi-structured data.
 - A novel approach for querying the Data Web, graph databases, and data mashups.
 - Its indexing is way faster than Oracle graph database.
 - Open source and online.
- **DogmaModeler**
 - Open source ontology modeling tool based on ORM.
 - Supports: reasoning in Description Logic, verbalization, and modularization.
 - Widely used by the research community, 300 downloads a month.
- **ORM Markup language 3**
 - Open source XML-based serialization for ORM Business rules.
 - A conceptual markup language for the ORM graphical notation.
 - Supports modular schemes, and a decent set of metadata elements.
- **ORM verbalizer**
 - Open source multilingual verbalization for ORM in 11 languages.
 - Used for ontologies, conceptual models, business rules, and logic.
 - Arabic, English, Catalan, Spanish, Dutch, French, German, Italian, Lithuanian, Russian.
- **CContology**
 - Open source ontology for customer complaint management.

- Supports 11 languages.

Technical Reports

2019

- Hamzeh Amayreh, Mohammad Dwaikat, and Mustafa Jarrar: **Lexicon Digitization -A Framework for Structuring, Normalizing and Cleaning Lexical Entries**. Technical Report. Birzeit University. 2019

2018

- Rayan Dankar, Hadi Ghattas, Fadi Zaraket, Mustafa Jarrar, Hamzeh Amayreh, Walid Magdi, Alex Rutherford, Daanish Masood, Martin Waehlich: **Social Media Opinion Mining and Sentiment Analysis - Bahrain Elections**. Technical Report. United Nations. 2018
- Mustafa Jarrar: **Data-Driven Migration e-Governance in Palestine —Assessment Report**. Technical Report. EUROMED Migration IV. 2018

2015

- Mustafa Jarrar, Faeq Alrimawi: **Statistics and Inter-Annotator Agreement Calculations of the Palestinian Dialect Corpus —Curras**. Technical Report. Birzeit University, Palestine. August, 2015
- Nizar Habash, Mustafa Jarrar, Faeq Alrimawi, Diyam Akra, et al: **Palestinian Arabic Conventional Orthography Guidelines**. Technical Report. Birzeit University, Palestine. August, 2015

2014

- Mustafa Jarrar, Adnan Yahya, Ali Salhi, Mamoun Abu Helou, Bassem Sayrafi, Mahdi Arar, Jamal Daher, Amanda Hicks, Christiane Fellbaum, Stefano Bortoli, Paolo Bouquet, Rute Costa, Christophe Roche, Matteo Palmonari: **Arabization and Multilingual Knowledge Sharing**. Deliverable 2.3, EU-FP7 SIERA Project FP7-INCO-2011-6-295006. September, 2014
- Mustafa Jarrar, Paolo Bouquet, Nasser Zalmout, Bassem Sayrafi, Hanna Bullatta: **Report on Proposal Writing**. Deliverable 3.2, EU-FP7 SIERA Project FP7-INCO-2011-6-295006. September, 2014

2013

- Mustafa Jarrar, Rana Rishmawi, Hiba Olwan: **Top Levels of the Arabic Ontology (Alpha Version)**. Technical Report. Birzeit University, Palestine. 2013
- Mamoun Abu Helou, Mustafa Jarrar, Matteo Palmonari, Ali Salhi, Amanda Hicks, Stefano Bortoli, Christophe Roche, Christiane Fellbaum, Paolo Bouquet, Adnan Yahya: **Intermediate Report on Research Setup**. Deliverable 2.1, EU-FP7 SIERA Project FP7-INCO-2011-6-295006. May, 2013
- Omar Omran, Leila Amer, Mamoun Abu Helou, Mustafa Jarrar, Gianluigi Viscusi: **Sina Institute R&D Strategy**. Deliverable 1.1, EU-FP7 SIERA Project FP7-INCO-2011-6-295006. September, 2013

2011

- Mustafa Jarrar, Majd Ashhab, Radwan Tahboub, Romain Robert, Mahmoud Saheb, Ismail Romi, David Chadwick, Mohammad Jubran: **Palestinian e-Government Needs Assessment: Skills Analyses and Training**

Program. Technical Report. Deliverables: D1.1, D2.1, D3.1, PalGov Project (511159-TEMPUS-1-2010-1-PS-TEMPUS-JPHES). May, 2011

2009

- Mustafa Jarrar, Marios D. Dikaiakos: **Querying the Data Web.** Technical Report (TAR200904). Dept. of Computer Science, University of Cyprus. November, 2009

2007

- Mustafa Jarrar, Mohammed Eldammagh: **Reasoning on ORM using Racer.** Technical Report. STAR Lab, Vrije Universiteit Brussel, Belgium. August, 2007
- Mustafa Jarrar: **ORM Markup Language, version 3.** Technical Report. STAR Lab, Vrije Universiteit Brussel, Belgium. January, 2007
- Mustafa Jarrar, Luk Vervenne, Diana Maynard: **HR-Semantics Roadmap- The Semantic Challenges and Opportunities in the Human Resources Domain.** Technical Report. The Ontology Outreach Advisory, Belgium. (OOA-HR/2007-08-20/v025). August, 2007
- Mustafa Jarrar, Diana Maynard, Jeroen Hoppenbrouwers, and Zhisheng Huang: **Ontology Outreach to Industry.** Deliverable D3.1.6 (WP1.3), The Knowledge Web Network of Excellence (NoE) IST-2004-507482, Luxemburg. June, 2007
- Jorg Diederich, Diana Maynard, Frank van Harmelen, York Sure, Sylvain Dehors, Mustafa Jarrar, Martin Dzbor, Dnyanesh Rajpathak, Marco Ronchetti, Steven Willmott, and Heiner Stuckenschmidt: **Published Learning Resources and Evaluation of REASE.** Deliverable D3.1.5v2 (WP3.2), The Knowledge Web Network of Excellence (NoE) IST-2004-507482, Luxemburg. January, 2007

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- Giorgos Stoilos, Giorgos Stamou, Rob Searer, Ian Horrocks, Jeff Z. Pan, Alex Polleres, Holger Lausen, Mustafa Jarrar, Carlos F. Enguix, Holger Wache, York Sure: **The Analysis of Requirements for Further Language Extensions.** Deliverable D2.5.4 (WP2.5), The Knowledge Web Network of Excellence (NoE) IST-2004-507482, Luxemburg. January, 2006
- Mustafa Jarrar, Werner Ceusters, Diana Maynard, Rob Shearer, Lyndon Nixon, Elena Paslaru, and Malgorzata Mochol: **The Ontology Outreach Advisory Requirements, Ontology Evaluation, Recommendation, and Standardization.** Deliverable D1.3.3 (WP1.3), The Knowledge Web Network of Excellence (NoE) IST-2004-507482, Luxemburg. January, 2006
- Stefano Spaccapietra, Maarten Menken, Heiner Stuckenschmidt, Holger Wache, Luciano Serafini, Andrei Tamilin, Mustafa Jarrar, Fabio Porto, Christine Parent, Alan Rector, Jeff Pan, Mathieu d'Aquin, Jean Lieber, Amedeo Napoli, Giorgos Stoilos, Vassilis Tzouvaras, Giorgos Stamou: **Modularization of Ontologies.** Deliverable D2.1.3.1 (WP2.1), The Knowledge Web Network of Excellence (NoE) IST-2004-507482, Luxemburg. January, 2006
- Mustafa Jarrar, Maria Keet: **An Arabic Verbalization Templates for ORM Conceptual Models and Rules.** Technical Report. STAR Lab, Vrije Universiteit Brussel, Belgium. 2006
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- Mustafa Jarrar, Maria Keet, Paolo Dongilli: **Deutsche Schablonen für ORM konzeptionelle Modelle und Regeln**. Technical Report. STAR Lab, Vrije Universiteit Brussel, Belgium. 2006
- Mustafa Jarrar, Paolo Dongilli, Maria Keet: **An Italian Verbalization Templates for ORM Conceptual Models and Rules**. Technical Report. STAR Lab, Vrije Universiteit Brussel, Belgium. 2006
- Mustafa Jarrar, Paolo Dongilli, Maria Keet: **Modello italiano di verbalizzazione per modelli concettuali e regole ORM**. Technical Report. STAR Lab, Vrije Universiteit Brussel, Belgium. 2006
- Mustafa Jarrar, Maria Keet, Juozas Gordevicius: **A Lithuanian Verbalization Templates for ORM Conceptual Models and Rules**. Technical Report. STAR Lab, Vrije Universiteit Brussel, Belgium. 2006
- Mustafa Jarrar, Maria Keet, Juozas Gordevicius: **Lietuviskas verbalizacijos sablonas skirtas ORM konceptiniams modeliams ir taisyklėms**. Technical Report. STAR Lab, Vrije Universiteit Brussel, Belgium. 2006
- Mustafa Jarrar, Andriy Lisovoy, Vladislav Ryzhikov, Maria Keet: **A Russian Verbalization Templates for ORM Conceptual Models and Rules**. Technical Report. STAR Lab, Vrije Universiteit Brussel, Belgium. 2006
- Mustafa Jarrar, Maria Keet, Nuria Casellas: **A Spanish Verbalization Templates for ORM Conceptual Models and Rules**. Technical Report. STAR Lab, Vrije Universiteit Brussel, Belgium. 2006

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- Alain Leger and Mustafa Jarrar: **Outreach to Industry, Industry Board Members and Economic Sectors**. Deliverable D1.1.1v2 (WP1.1), The Knowledge Web Network of Excellence (NoE) IST-2004-507482, Luxemburg. August, 2005
- Lyndon Nixon, Malgorzata Mochol, Mustafa Jarrar, Stamatia Dasiopoulou, Vasileios Papastathis, and Yiannis Kompatsiaris: **Prototypical Business Use Cases**. Deliverable D1.1.2 (WP1.1), The Knowledge Web Network of Excellence (NoE) IST-2004-507482, Luxemburg. January, 2005
- Asuncion Gomez-Perez, Elena Paslaru Bontas, Jens Hartmann, Lyndon Nixon, Mustafa Jarrar, Maria Carmen Suarez-Figueroa, and Raul Garcia-Castro: **Identification of Standards on Metadata for Ontologies**. Deliverable D1.3.2 (WP1.1), The Knowledge Web Network of Excellence (NoE) IST-2004-507482, Luxemburg. January, 2005
- Jerome Euzenat, Thanh Le Bach, Jesus Barrasa, Paolo Bouquet, Jan De Bo, Rose Dieng, Marc Ehrig, Manfred Hauswirth, Mustafa Jarrar, Ruben Lara, Diana Maynard, Amedeo Napoli, Giorgos Stamou, Heiner Stuckenschmidt, Pavel Shvaiko, Sergio Tessaris, Sven Van Acker, Ilya Zaihrayeu: **Ontology Alignment - State of the Art**. Deliverable D2.2.3 (WP2.2), The Knowledge Web Network of Excellence (NoE) IST-2004-507482, Luxemburg. January, 2005
- Holger Wache, Luciano Serafini, Raul Garcia-Castro, Perry Groot, Asuncion Gomez-Perez, Mustafa Jarrar, Yiannis Kompatsiaris, Diana Maynard, Jeff Pan, Rosario Plaza-Arteche, Floris Roelofsen, Stefano Spaccapietra, Giorgos Stamou, Andrei Tamilin, and Ilya Zaihrayeu: **Survey of Scalability Techniques for Reasoning with Ontologies**. Deliverable D2.1.1 (WP2.1), The Knowledge Web Network of Excellence (NoE) IST-2004-507482, Luxemburg. January, 2005

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- Alain Leger, Mustafa Jarrar, Robert Meersman, Robert Tolksdorf, and Roberta Cuel: **Industry Board Members List, Clustering and Organizational and Operational Charter (MoU)**. Deliverable D1.1.v1 (WP1.1), The

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- Mustafa Jarrar, Marleen Wynants, Sven Van Acker, Peter Spyns: **Building an experimental Ontology-Based Router for Innovation, and Innovation Ontology**. Technical Report. STAR Lab, Vrije Universiteit Brussel, Belgium. 2003
- Mustafa Jarrar and Andriy Lisovoy: **DogmaModeler, a Tool for Ontology Engineering**. Deliverable D6.2 (WP 6), The FFPOIROT IP project (IST-2001-38248), 5th framework, Brussels. May, 2003
- Mustafa Jarrar, Andriy Lisovoy, Ruben Verlinden, and Robert Meersman: **Ontoform Ontology Based CCFORMs Demo**. Deliverable D6.8, The CCFORM Thematic Network (IST-2001-34908), 5th framework, Brussels. 2003
- Mustafa Jarrar, Andriy Lisovoy, Ruben Verlinden, and Robert Meersman: **Simple XForm Demo**. Deliverable D6.7, The CCFORM Thematic Network (IST-2001-34908), 5th framework, Brussels. 2003

2002

- Mustafa Jarrar, Ben Majer, Robert Meersman, Peter Spyns, Rudi Studer, York Sure, Rafael Volz: **Web Portal: Complete Ontology and Portal**. Deliverable D6.3, The OntoWeb Thematic Network (IST-2000-29243), 5th framework, Brussels. 2002
- Mustafa Jarrar, Jan Demey, Robert Meersman: **Exchanging ORM Schemas using a Conceptual Markup Language**. Technical Report. STAR Lab, Vrije Universiteit Brussel, Belgium. 2002
- Robert Meersman and Mustafa Jarrar: **An Architecture and Toolset for Practical Ontology Engineering**. Technical Report. STAR Lab, Vrije Universiteit Brussel, Belgium. 2002

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- Mustafa Jarrar and Robert Meersman: **Marrying Database and Ontology**. Technical Report. STAR Lab, Vrije Universiteit Brussel, Belgium. 2001
- Mustafa Jarrar and Robert Meersman: **Practical Ontologies and their Interpretations in Applications: the DOGMA Experiment**. Technical Report. STAR Lab, Vrije Universiteit Brussel, Belgium. 2001
- Mustafa Jarrar and Robert Meersman: **Inductive/Deductive Approaches for Semantic Searches in Digital Libraries**. Technical Report. STAR Lab, Vrije Universiteit Brussel, Belgium. 2001

Talks and Featured Keynotes

1. **On ChatGPT and Large Language Models** (video - slides). *Invited Talk*. Birzeit University Symposium - ChatGPT in Academia, 2023
2. **A Benchmark and Scoring Algorithm for Enriching Arabic Synonyms** (Article - slides). *Research Talk*. The 12th International Global Wordnet Conference (GWC2023), San Sebastian, Spain, 2023
3. **Context-Gloss Augmentation for Improving Arabic Target Sense Verification**. (Article - slides). *Research Talk*. The 12th International Global Wordnet Conference (GWC2023), San Sebastian, Spain, 2023
4. **Arabic Natural Language Understanding as a Sustainable AI Research** (Program - slides - video). *Invited Talk*. The e-AGE21 international Conference, Online, 14/12/2021
5. **Building Lexicographic Database for MSA and dialects** (Conference - slides). *Featured Keynote*. The e-AGE21 international Conference, Online, 28/9/2021
6. **Linguistic Ontologies for Knowledge Graphs** (slides). *Invited Talk*. FIP WG 2.6 Database Seminars, 21/1/2021
7. **Extracting Synonyms from Bilingual Dictionaries** (Article - slides - video). *Research Talk*. The 11th Global Wordnet Conference. South Africa 21/1/2021
8. **Linguistic Ontologies and Wordnets** (slides - video). *Invited Speaker*. The 11th Global Wordnet Conference. South Africa 18/1/2021
9. **Building the Largest Arabic-Multilingual Lexicographic Database** (media - Lecture - video). *Featured Keynote*. Shoman Cultural Forum - Abdul Hameed Shoman Foundation. Amman, Jordan 10/3/2020
10. **Computer Science Research under Israeli Occupation -my Story** (Program). *Keynote Speaker*. The 3rd International Meeting for Science in Palestine. Massachusetts Institute of Technology (MIT). Boston, USA 11/1/2020
11. **NLP Tools and Resources for Understanding Arabic Content** (news). *Keynote Speaker*. Understanding Internet Content Symposium - Birzeit University. Palestine 24/7/2019
12. **Social Media Analysis for Peace** *Invited Talk*. The United Nations AI for Peace and Security Workshop, Alan Turing Institute. London, UK 24/7/2019
13. **An Arabic-Multilingual Database with a Lexicographic Search Engine** (slides). *Research Talk*. The 24th International Conference on Applications of Natural Language to Information Systems (NLDB). Manchester, UK 26/6/2019
14. **Representing Arabic Lexicons in Lemon - a Preliminary Study** (poster - article). *Research Poster*. The 2nd Conference on Language, Data and Knowledge (LDK). Leipzig, Germany 23/5/2019.
15. **Big Linguistic Data Graph** (slides - video). *Invited Talk*. The First Arabic Speech Workshop. Qatar 29/4/2019
16. **Innovative Lexicographic Search Engine** (program). *Lightning Talk*. The 2019 NYUAD International Hackathon for Social Good in the Arab World. Abu Dhabi 25/4/2019
17. **Lexicographic Search Engine** (news). *Winner Lightning Talk*. Ceremony of the Mohammed Bin Rashid Award for Arabic Language. Dubai 11/4/2019
18. **Building a Big Linguistic Data Graph for Arabic Natural Language Processing** (program). *Featured Keynote*. The 6th Arab Women in Computing Annual International conference. Rabat, Morocco 8/3/2019
19. **The Arabic Ontology and Lexicons** (video - media). *Featured Keynote*. Renaissance Forum - The Arab

Renaissance for Democracy and Development. Amman, Jordan 21/2/2019

20. **Eight Years of Research Make Its Debut** ([ceremony](#) - [media](#) - [media](#)). *Featured Keynote*. The Launching Ceremony of the Arabic Ontology and the Lexicographic Search Engine. Birzeit University. Palestine 25/9/2018
21. **Search Engine for Arabic Lexicons** ([article](#) - [program](#)). *Research Talk*. The 5th Conference on Translation and the Problematics of Cross-cultural Understanding. The Forum for Arab and International Relations. Qatar. 12/12/2018
22. **The Arabic Ontology and Lexical Semantic Resources** ([program](#)). *Keynote Speaker*. The INFOL@NGUES 2018 Conference Beja, Tunisia 2018
23. **Classifying Processes and Basic Formal Ontology** ([slideshare](#) - [slides](#)). *Research Talk*. The International Conference on Biomedical Ontology (ICBO). Newcastle, UK 2017
24. **Clustering Arabic Tweets for Sentiment Analysis** ([slideshare](#)). *Research Talk*. 2017 IEEE/ACS 14th International Conference on Computer Systems and Applications. IEEE Computer Society. Hammamet, Tunisia 2017
25. **Arabic Ontology Engineering** ([tutorial](#)). *Tutorial*. The 2017 IEEE/ACS 14th International Conference on Computer Systems and Applications. IEEE Computer Society. Hammamet, Tunisia 2017
26. **e-Government for Better Migration Governance - The Status in Palestine, Jordan and Lebanon**. *Invited Talk*. The Sub-Regional Workshop on Migration Governance, EUROMED Migration IV. Amman, Jordan 11/10/2017
27. **Medical Terminology in the Arabic Ontology** *Invited Talk*. Hi-Cure workshop. Lisbon Portugal 12/4/2016
28. **Zinnar - The e-Government Interoperability Framework** ([slides](#) - [Zinnar](#) - [Summit Page](#)). *Keynote Speaker*. Summit On ICT-enabled Governance, and the The 4th International Summer School On Open and Collaborative Governance. Samos, Greece 2015
29. **Government Semantics For Data and Services** ([video P1](#) - [P2](#)). *Invited Talk*. Government Course, Tallinn University of Technology. Estonia 29/9/2015
30. **Advances in ICT**. *Panel Chair*. The First National Forum for Innovators - Higher Council for Innovation & Excellence, Palestine 12/9/2015
31. **The Arabic Ontology**. *Invited Talk*. American University of Beirut, Lebanon 3/9/2015
32. **On Computer Science Trends and Priorities in Palestine** ([slideshare](#) - [Slides](#)). *Keynote Speaker*. Workshop on IT Research Trends and Priorities. The Islamic University of Gaza. Palestine 28/3/2015
33. **Lessons Learned from Class Recording and Publishing of Eight Online Courses** ([Slides](#)). *Invited Talk*. Workshop on e-learning in Higher Education. Birzeit University. Palestine 6/12/2014
34. **Future Internet in Horizon 2020 Calls** ([slides](#)). *Keynote Speaker*. The 1st ICT Networking Event. Amman, Jordan 13/10/2014
35. **Fund-raising and Participation Opportunities in EU Programs**. *Invited Talk*. Workshop on Fund-raising and Participation in EU projects. Palestinian Technical University, Tulkarim 3/9/2014
36. **Towards Developing an e-Governance Interoperability Framework at Palestinian Universities**. *Keynote Speaker*. Workshop on e-Governance at Palestinian Universities. Al-Quds Open University. Tulkarim 1/6/2014
37. **Recommendations for Writing a Comparative Proposal and Networking with International Scientists**. *Invited Talk*. Workshop on Fund raising and Participation in EU projects. Arab American University in Jenin. Palestine 12/2/2014
38. **Web 3.0 and Semantic Web**. *Keynote Speaker*. The Tech-con2 - Developers Day. Ramallah, Palestine 12/10/2013

39. **Ontologizing Dictionaries and Lexical Database (program)**. *Keynote Speaker*. The Arab-Term Workshop, at the German-Jordanian University. Jordan 15/9/2013
40. **Building a Formal Arabic Ontology (article - program)**. *Research Talk*. The 2nd International conference on Arabic Language. UAE 8/5/2013
41. **Writing a Competitive Proposal Highlights from the e-Government Academy Project (video1 - video2)**. *Keynote Speaker*. The 2013 EU Tempus Information Day. Ramallah, Palestine 16/1/2013
42. **Europe-Palestine Research Cooperation —Ongoing Projects at Sina Institute at Birzeit University (video)**. *Keynote Speaker*. The 2nd International Platform on Integrating Arab e-Infrastructure in Global Environment (e-AGE), Arab States Research and Education Network (ASREN). Dubai 13/12/2012
43. **Zinnar - The e-Government Interoperability Framework (video - program)**. *Keynote Speaker*. The First National Conference on e-Governance and e-Services. Palestine 27/6/2012
44. **Building a Formal Arabic Ontology (article - slides)**. *Invited Talk*. The Experts Meeting on Arabic Ontologies and Semantic Networks. ALECSO, Arab League. Tunisia 26-28/6/2011
45. **The Palestinian Government Ontology (article - slides)**. *Invited Talk*. The Experts Meeting on Arabic Ontologies and Semantic Networks. ALECSO, Arab League. Tunisia 26-28/6/2011
46. **Ontology-Based Data and Process Governance Framework —The Case of e-Government Interoperability in Palestine (article - slides)**. *Research Talk*. The IFIP International Symposium on Data-Driven Process Discovery and Analysis (SIMPDA). Campione, Italy 30/6/2011
47. **Ontology-Based Data Governance (article - slides)**. *Invited Talk*. The eGovernance Workshop, at the Ministry of Telecommunication and Information Technology. Palestine 28/6/2011
48. **Arabic Ontology Engineering —Research Challenges and Opportunities (article - conference)**. *Keynote Speaker*. The International Conference on Intelligent Semantic Web -Services and Applications (ISWSA). Jordan 18/4/2011
49. **eGovernment Interoperability Framework in Palestine**. *Invited Talk*. at the Service Oriented Architecture Course, Masters on eGovernment. University of Trento. Italy December, 2010
50. **Building an Arabic Ontology, for Information Search and Integration**. *Invited Talk*. ExpoTech III, Birzeit University. Palestine 16/4/2010
51. **Web 3.0, The Third Generation of the Web**. *Invited Talk*. ExpoTech III, Birzeit University. Palestine 16/4/2010
52. **Mechanisms of Connecting IT Colleges in the Fields of Research and Teaching**. *Invited Talk*. Workshop on Evaluation of IT curriculum in Palestinian universities. Arab American University of Jenin. Palestine 28/3/2010
53. **Legal Ontology Engineering**. *Tutorial*. Institute of Law, Birzeit University. Palestine 2009
54. **Ontology-Based e-Governance**. *Invited Talk*. e-government Course. Birzeit University. Palestine 17/12/2009
55. **A Data Mashup Language for the Data Web**. *Invited Talk*. IFIP 2.6 Research Workshop. Nicosia, Cyprus 24/4/2009
56. **A Data Mashup Language for the Data Web**. *Research Talk*. LDOW workshop at the WWW Conference. Madrid, Spain 20/4/2009
57. **MashQL: A Query Formulation and Mashup Language**. *Research Talk*. University of Cyprus. Cyprus 25/2/2009
58. **Towards Data Mashups and Pipes**. *Research Talk*. ONISW workshop at the CiKM Conference. Napa Valley, California, USA 30/10/2008

59. **MashQL: Towards Data Mashups and Pipes.** *Invited Talk*. University of Athens. Greece 21/10/2008
60. **Web 3.0 Information Systems.** *Invited Talk*. The “Research and Technology Course (CS671). University of Cyprus. Cyprus 19/2/2008
61. **Information Search.** SEARCHiN Kick-off Meeting. *Research Talk*. University of Cyprus. Nicosia, Cyprus 10/12/2007
62. **Semantic Pipes -Towards Effective Information Search.** SEARCHiN Kick-off Meeting). *Research Talk*. University of Cyprus. Cyprus 10/12/2007
63. **Web 2.0, Social Programming, Mashups -What is in it for me!.** *Research Talk*. University of Cyprus. Cyprus 6/12/2007
64. **Formalizing ORM using the DLR and the SHOIN/OWL Description Logics.** *Research Talk*. The International Workshop on Object-Role Modeling (ORM). Algarve, Portugal 28/11/2007
65. **Reasoning on ORM Schemes -Formalizing ORM using DLR and SHOIN/OWL.** *Research Talk*. The International Conference on Conceptual Modeling (ER). Auckland, New Zealand 8/11/2007
66. **Ontology Engineering —Challenges and Opportunities.** *Invited Talk*. University of Cyprus. Cyprus 13/9/2007
67. **ORM and Description Logic.** *Invited Talk*. Web Information Systems Course. University of Hasselt, Belgium 19/4/2007
68. **Reasoning on ORM Schemes.** *Research Talk*. The Dutch-Belgian Database Day. Brussels, Belgium 15/11/2006
69. **Towards the Adoption of Linguistic Resources in Formal Ontology Engineering.** *Invited Talk*. IFIP 2.12/12.4 Research Meeting. Montpellier, France 2/11/2006
70. **The Ontology Outreach Advisory.** *Research Talk*. The OOA Kick-off workshop on Semantic challenges and opportunities in the Human Resources Domain - As part of the ePortfolio Conference. Oxford, England 11/10/2006
71. **Towards the Notion of Gloss, and the Adoption of Linguistic Resources in Formal Ontology Engineering.** *Research Talk*. The WWW Conference, Semantic Web Track. Edinburgh, UK 26/5/2006
72. **Unsatisfiability Reasoning Patterns in ORM Conceptual Schemes.** *Research Talk*. The International Conference on Semantics in Networked Word (ICSNW), Munich, Germany 29/3/2006
73. **Modularization and Auto-Composition of ORM Schemes.** *Research Talk*. The International Workshop on Object-Role Modeling (ORM). Larnaca, Cyprus 3/11/2005
74. **The Double Articulation Principle for Ontology Engineering.** *Research Talk*. University of Trento, Italy 31/8/2005
75. **Towards Methodological Principles for Ontology Engineering.** *PhD Public Defense*. PhD Public Defense. Vrije Universiteit Brussel, Belgium 26/5/2005
76. **Ontology Modularization and Composition.** *Research Talk*. Workshop on Ontology Modularization and Context. Vrije Universiteit Brussel, Belgium 14/10/2004
77. **The Dogma Methodology for Ontology Engineering.** *Invited Talk*. IFIP 2.6 Research Workshop. Sicily, Italy. 7/11/2003
78. **Ontology-Based Customer Complaint Management.** *Research Talk*. Workshop on Regulatory Ontologies and the Modeling of Complaint Regulations (WORM). Catania, Sicily, Italy 4/11/2003
79. **Formal Ontology Engineering —The DOGMA Approach.** *Research Talk*. The International Conference on

Ontologies, Databases and Applications of Semantics (ODBase). Irvine, California, USA 31/10/2002

80. **A Conceptual Markup Language that Supports Interoperability between Business Rule Modeling Systems.** *Research Talk*. The 10th International Conference on Cooperative Information Systems (CooplS). Irvine, California, USA 31/10/2002
81. **A Markup Language for ORM Business Rules.** *Research Talk*. The International Workshop on Rule Markup Languages for Business Rules on the Semantic Web, (RuleML). Sardinia, Italy 14/6/2002
82. **Decomposing Ontology into an Ontology Base and its Interpretation Layer.** *Research Talk*. Dagstuhl Seminar N° 02061: Rule Markup Techniques for the Semantic Web. Dagstuhl, Germany 3/2-8/2/2002

In the Media

reports and interviews about my research

1. **Interviews about the the Arabic Dialects Corpus** ([Al-Jazeera](#) • [AjyaL](#) • [Independent](#) • [more..](#)) 2023
2. **On Wiki Palestine and the Arabic Content on the Web** ([24FM](#)) December, 2022
3. **On the World Arabic Language Day** ([Palestine TV](#)) December, 2019
4. **Prof. Jarrar wins the Shoman Arab Researchers Award** ([Palestine TV](#) • [Quds TV](#) • [Ajyyal](#) • [Ramallah](#) • [25 more..](#)) September, 2019
5. **Arabic and AI: Why voice-activated tech struggles in the Middle East** ([Middle East Eye](#)) September, 2019
6. **Birzeit University won the Bin Rashid Arabic Language Award for its Lexicographic Search Engine** ([30 newspapers..](#)) April, 2019
7. **On DNA data storage** ([France 24](#)) April, 2019
8. **On the International Mother Language Day** ([Roya TV](#)) February, 2019
9. **Birzeit University symposium details efforts to create Arabic search engine** ([15 newspapers..](#)) February, 2019
10. **An Arabic Greeting to Birzeit University** ([Echorouk online](#) • [others 8 newspapers..](#)) December, 2018
11. **An Online Arabic Dictionary Makes Its Debut** ([Al-Fanar Media](#) • [20 newspapers..](#)) November, 2018
12. **Reportage about the Arabic Ontology** ([Al Arabiya TV](#)) September, 2018
13. **Birzeit announces linguistic search engine and the Arabic Ontology** ([Palestine TV](#) • [Palestine TV report](#) • [Quds TV](#) • [FM24](#) • [35 more..](#)) September, 2018
14. **Birzeit signs MoU with ALESCO to digitize and integrate Arabic lexicons** ([Ajyyal](#) • [ALECSO](#) • [10 more..](#)) December, 2017
15. **Launching the Corpus for Palestinian Dialect (Curras)** ([Wamda](#) • [Palestine Today](#) • [Al-Iqtisadi](#) • [10 more..](#)) January, 2017
16. **UB Department of Biomedical Informatics hosts its first Fulbright scholar** ([UB](#) • [BZU](#)) October, 2016
17. **MoU with RedCrow to Cooperate in Computational Linguistics** ([press](#) • [5 more..](#)) May, 2016

18. **Interviews about digitization and engineering of dictionaries** ([Palestine Today TV](#) • [Ajyyal](#) • [9 more..](#)) March, 2016
19. **Prof. Jarrar wins Google Research Award** ([Palestine Voice](#) • [NisaFM](#) • [24FM](#) • [35 more..](#)) February, 2016
20. **Deploying a SMART Multilingual Audio Guide in Bethlehem** ([Nisa FM](#) • [Sina](#) • [40 more..](#)) August, 2014
21. **Birzeit University won an EU-FP7 project in ICT Industry** ([15 newspapers..](#)) October, 2013
22. **Prof. Fellbaum from Princeton Concluded her Visit to Sina Institute** ([press](#) • [10 more..](#)) July, 2013
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