Dr. Pavlos Fafalios
Curriculum Vitae

March 2022

Full name:	Pavlos Fafalios
Birth date / place:	14 July 1985 / Chios, Greece
Nationality:	Greek
Work address:	N. Plastira 100, 70013 Heraklion, Crete, Greece
Tel. number:	+30-2810391619
Email:	fafalios@ics.forth.gr, fafalios.pavlos@gmail.com
Web page:	http://users.ics.forth.gr/~fafalios/
Military service:	Accomplished (Nov. 2008 – Nov. 2009)
Marital status	Married, 1 child
Languages:	Greek (Mother tongue), English (Mastery C2), French (DELF 1)

CURRENT POSITIONS

- Postdoctoral research fellow *(Marie Skłodowska-Curie Individual Fellowship)* at the Centre for Cultural Informatics, Institute of Computer Science, Foundation for Research and Technology – Hellas (FORTH), Greece
- Visiting Lecturer at the Department of Management Science and Technology, Hellenic Mediterranean University, Greece

WORK EXPERIENCE

June 2020 – Today	*Postdoctoral research fellow (Marie Skłodowska-Curie Individual Fellowship)* Centre for Cultural Informatics (CCI) and Information Systems Laboratory (ISL), Institute of Computer Science (ICS) - Foundation for Research & Technology - Hellas (FORTH) Heraklion, Greece
June 2019 – May 2020	*Postdoctoral researcher* Centre for Cultural Informatics (CCI) and Information Systems Laboratory (ISL), Institute of Computer Science (ICS) - Foundation for Research & Technology - Hellas (FORTH) Heraklion, Greece
June 2016 – May 2019	*Postdoctoral researcher* L3S Research Center, Leibniz University of Hanover Hannover, Germany
Dec. 2010 – May 2016	*Research assistant, software engineer, graduate fellow* Information Systems Laboratory (ISL), Institute of Computer Science (ICS) - Foundation for Research & Technology - Hellas (FORTH), Heraklion, Greece

TEACHING EXPERIENCE

2021-2022	Visiting Lecturer Hellenic Mediterranean University - Department of Management Science and Technology (Greece) Academic year 2021-2022 Courses: • *Algorithms and Data Structures (MST304)* [winter semester] • *Software Technology (MST602)* [spring semester] • *e-Commerce and Internet Applications (MST604)* [spring semester]

2020-2021	Visiting Lecturer Hellenic Mediterranean University - Department of Management Science and Technology (Greece) Academic year 2020-2021 Courses: *Algorithms and Data Structures (MST304)* [winter semester] *Software Technology (MST602)* [spring semester] *e-Commerce and Internet Applications (MST604)* [spring semester]
2019-2020	Visiting Lecturer Hellenic Mediterranean University - Department of Management Science and Technology (Greece) Academic year 2019-2020 Courses: *Software Technology (MST602)* [spring semester] *e-Commerce and Internet Applications (MST604)* [spring semester]
2018-2019	Co-organization of Proseminar on *Data Mining* (more info) Leibniz University of Hanover, Distributed Systems Institute, Department of Knowledge-Based Systems (Germany) Academic year 2018-2019 [spring semester]
2010 – 2016	Teaching Assistant University of Crete - Computer Science Department (Greece) Duties: lecturing, supervising, student counseling, preparing exercises and projects, marking Courses: *CS-150 Programming* (Spring semester 2009-2010), *CS-252 Object-Oriented Programming* (Winter semesters 2013-2014, 2014-2015, 2015-2016), *CS-351 Information System Analysis and Design* (Winter semesters 2010-2011, 2011-2012, 2012-2013), *CS-359 Web Programming* (Spring semesters 2010-2011, 2012-2013), *CS-463 Information Retrieval Systems* (Spring semesters 2014-2015, 2015-2016), *CS-561 Web Data Management* (Spring semester 2013-2014)

EDUCATION

October 2012 – May 2016 (**PhD**)	Ph.D., Computer Science Department, University of Crete, Greece Thesis title: *"Exploiting Linked Data in Exploratory Search"* Thesis hyperlink: http://hdl.handle.net/10442/hedi/38725 Thesis supervisor: Yannis Tzitzikas
February 2010 – July 2012 (**MSc**)	M.Sc. in Information Systems and E-commerce Technologies, Computer Science Department, University of Crete, Greece Thesis title: *"Indexes and Algorithms for Scalable and Flexible Instant Overview Search"* Thesis hyperlink: https://elocus.lib.uoc.gr/dlib/b/f/5/metadata-dlib-1348212409-493715-24126.tkl Thesis supervisor: Yannis Tzitzikas Average grade of graduate courses (of both MSc and PhD): 8.7/10.0
September 2003 – June 2009 (**Dipl. Eng.**)	Engineer's degree in Information and Communication Systems Engineering, School of Engineering, University of the Aegean, Greece Thesis title: *"Meta-Seeker: A Retroactive Algorithm for Personalized Information from Multiple Web Search Services"* Thesis hyperlink: http://hdl.handle.net/11610/8634 Thesis supervisor: Ioannis Anagnostopoulos Degree grade: 7.8/10.0

MENTORING / STUDENT SUPERVISION EXPERIENCE

PhD students:
- Renato Stoffalette João (2018-2019) (co-supervised with Stefan Dietze) *(2 joint papers)*

Master students:
- Christos Nikas (2020-2021) (advisor, supervised by Yannis Tzitzikas) *(4 joint papers)*
- Giorgos Kadilierakis (2019-2020) (co-supervised with Yannis Tzitzikas) *(3 joint papers)*
- Arjun Roy (2018-2019) (co-supervised with Stefan Dietze) *(1 joint paper)*
- Mainul Quraishi (2017-2018) (co-supervised with Eelco Herder) *(1 joint paper)*
- Neda Dehghan Faroji (2017- 2018)
- Vaibhav Kasturia (2017-2018) *(4 joint papers)*
- Muhammad Jahid Kabir (2016-2017) (co-supervised with Eelco Herder)
- Nilamadhaba Mohapatra (2016-2017 / co-supervised with Stefan Dietze) *(1 joint paper)*
- Thanos Yannakis (2016-2017 / co-supervised with Yannis Tzitzikas) *(2 joint papers)*
- Manolis Baritakis (2014-2015 / co-supervised with Yannis Tzitzikas) *(2 joint papers)*

Bachelor students:
- Antonis Sklavos (2020-2021) *(1 joint paper; under review)*
- Evangelos Maliaroudakis (2020-2021) *(1 joint paper)*
- Giorgos Rinakakis (2021-today)

RESEARCH INTERESTS

- Information Retrieval (Exploratory Search, Semantic Search, Interactive Information Access)
- Conceptual Modeling and Knowledge Representation
- Knowledge Engineering (Data Integration, Data Mining, Knowledge Extraction)
- Semantic Web and Linked Data
- Cultural Informatics / Digital Humanities

PUBLICATIONS

Journal publications (peer-reviewed)

1. **P. Fafalios** and P. Papadakos, *"Theophrastus: On Demand and Real-Time Automatic Annotation and Exploration of (Web) Documents using Open Linked Data",* Web Semantics: Science, Services and Agents on the World Wide Web, Vol. 29 (2014), Elsevier (ISSN: 1570-8268). https://doi.org/10.1016/j.websem.2014.07.009

2. **P. Fafalios**, P. Papadakos and Y. Tzitzikas, *"Enriching Textual Search Results at Query Time using Entity Mining, Linked Data and Link Analysis"*, International Journal of Semantic Computing, Vol. 08, No. 04 (2014), World Scientific (ISSN: 1793-7108). https://doi.org/10.1142/S1793351X14400170

3. **P. Fafalios** and Y. Tzitzikas, *"Type-ahead Exploratory Search through Typo and Word Order Tolerant Autocompletion"*, Journal of Web Engineering, Vol. 14, No. 1 & 2 (2015), Rinton Press (ISSN: 1540-9589). https://journals.riverpublishers.com/index.php/JWE/article/view/3893

4. **P. Fafalios**, M. Baritakis and Y. Tzitzikas, *"Exploiting Linked Data for Open and Configurable Named Entity Extraction"*, International Journal on Artificial Intelligence Tools, Vol. 24, No. 02 (2015), World Scientific (ISSN: 1793-6349). https://doi.org/10.1142/S0218213015400126

5. Y. Tzitzikas, C. Allocca, C. Bekiari, Y. Marketakis, **P. Fafalios**, M. Doerr, N. Minadakis, T. Patkos, L. Candella, *"Unifying Heterogeneous and Distributed Information about Marine Species through the Top Level Ontology MarineTLO"*, Program: Electronic library and Information Systems, Special Issue on Application of Metadata and Semantics in Science, Vol. 50, No. 1 (2016), Emerald (ISSN: 0033-0337). https://doi.org/10.1108/PROG-10-2014-0072

6. M. Mountantonakis, N. Minadakis, Y. Marketakis, **P. Fafalios**, Y. Tzitzikas, *"Quantifying the Connectivity of a Semantic Warehouse and Understanding its Evolution over Time"*, International Journal on Semantic Web and Information Systems (IJSWIS), Vol. 12, Issue 03 (2016), IGI Global (ISSN: 1552-6283). https://doi.org/10.4018/IJSWIS.2016070102

7. **P. Fafalios** and Y. Tzitzikas, *"Stochastic Re-Ranking of Biomedical Search Results based on Extracted Entities"*, Journal of the Association for Information Science and Technology (JASIST), Vol. 68, No. 11 2017. https://doi.org/10.1002/asi.23877

8. **P. Fafalios**, H. Holzmann, V. Kasturia, and W. Nejdl, *"Building and Querying Semantic Layers for Web Archives (Extended Version)"*, International Journal on Digital Libraries, 21, 149–167 (2018). Springer Berlin Heidelberg. https://doi.org/10.1007/s00799-018-0251-0

9. **P. Fafalios**, V. Iosifidis, K. Stefanidis, and E. Ntoutsi, *"Tracking the History and Evolution of Entities: Entity-centric Temporal Analysis of Large Social Media Archives"*, International Journal on Digital Libraries, 21, 5–17 (2018). Springer Berlin Heidelberg. https://doi.org/10.1007/s00799-018-0257-7

10. **P. Fafalios** and Y. Tzitzikas, "Answering SPARQL Queries on the Web of Data through Zero-Knowledge Link Traversal", ACM SIGAPP Applied Computing Review, 19(3) (2019). https://doi.org/10.1145/3372001.3372003

11. E. Ntoutsi, **P. Fafalios**, U. Gadiraju, V. Iosifidis, W. Nejdl, M. Vidal, S. Ruggieri, F. Turini, S. Papadopoulos, E. Krasanakis, I. Kompatsiaris, K. Kinder-Kurlanda, C. Wagner, F. Karimi, M. Fernandez, H. Alani, B. Berendt, T. Kruegel, C. Heinze, K. Broelemann, G. Kasneci, T. Tiropanis, S. Staab, *"Bias in data-driven artificial intelligence systems – An introductory survey"*, WIREs Data Mining and Knowledge Discovery, 10:e1356 (2020). https://doi.org/10.1002/widm.1356

12. C. Nikas, G. Kadilierakis, **P. Fafalios**, Y. Tzitzikas, "Keyword Search over RDF: Is a Single Perspective Enough?", Big Data and Cognitive Computing, 4(3):22 (2020), Multidisciplinary Digital Publishing Institute (MDPI). https://doi.org/10.3390/bdcc4030022

13. K. Petrakis, G. Samaritakis, T. Kalesios, E. García Domingo, A. Delis, Y. Tzitzikas, M. Doerr, **P. Fafalios**, *"Digitizing, Curating and Visualizing Archival Sources of Maritime History: the case of ship logbooks of the nineteenth and twentieth centuries"*. Drassana, No. 28, 60–87 (2021). https://doi.org/10.51829/Drassana.28.649

14. A. Roy, **P. Fafalios**, A. Ekbal, X. Zhu, S. Dietze, *"Exploiting stance hierarchies for cost-sensitive stance detection of Web documents"*, Journal of Intelligent Information Systems (2021), Springer, https://doi.org/10.1007/s10844-021-00642-z

15. **P. Fafalios**, K. Petrakis, G. Samaritakis, K. Doerr, A. Kritsotaki, Y. Tzitzikas, M. Doerr, *"FAST CAT: Collaborative Data Entry and Curation for Semantic Interoperability in Digital Humanities"*, Journal on Computing and Cultural Heritage, Vol. 14, Issue 4 (2021), ACM. https://doi.org/10.1145/3461460

16. K. Boland, **P. Fafalios**, A. Tchechmedjiev, S. Dietze, K. Todorov, *"Beyond Facts - a Survey and Conceptualisation of Claims in Online Discourse Analysis"*, Semantic Web journal (2022), IOS Press. **(accepted in Dec 2021)**

Conference publications (peer-reviewed)

1. **P. Fafalios** and Y. Tzitzikas, *"Exploiting Available Memory and Disk for Scalable Instant Overview Search"*, 12th International Conference on Web Information System Engineering (WISE'11), Sydney, Australia, October 2011. https://doi.org/10.1007/978-3-642-24434-6_8

2. **P. Fafalios**, I. Kitsos and Y. Tzitzikas, *"Scalable, Flexible and Generic Instant Overview Search"*, Demo paper, 21st International Conference on World Wide Web (WWW'12), Lyon, France, April 2012. https://doi.org/10.1145/2187980.2188042

3. **P. Fafalios**, I. Kitsos, Y. Marketakis, C. Baldassarre, M. Salampasis and Y. Tzitzikas, *"Web Searching with Entity Mining at Query Time"*, 5th Information Retrieval Facility Conference (IRFC'12), Vienna, Austria, July 2012. https://doi.org/10.1007/978-3-642-31274-8_6

4. **P. Fafalios** and Y. Tzitzikas, *"X-ENS: Semantic Enrichment of Web Search Results at Real-Time"*, Demo paper, 36th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR'13), Dublin, Ireland, 27 July - 1 August 2013. https://doi.org/10.1145/2484028.2484200

5. Y. Tzitzikas, C. Allocca, C. Bekiari, Y. Marketakis, **P. Fafalios**, M. Doerr, N. Minadakis, T. Patkos and L. Candela, *"Integrating Heterogeneous and Distributed Information about Marine Species through a Top Level Ontology"*, 7th Metadata and Semantic Research Conference (MTSR'13), Thessaloniki, Greece, November 2013. https://doi.org/10.1007/978-3-319-03437-9_29

6. Y. Tzitzikas, N. Minadakis, Y. Marketakis, **P. Fafalios**, C. Allocca, N. Mountantonakis and I. Zidianaki, *"MatWare: Constructing and Exploiting Domain Specific Warehouses by Aggregating Semantic Data"*, 11th Extended Semantic Web Conference (ESWC'14), Anissaras, Heraklion, Greece, May 2014. https://doi.org/10.1007/978-3-319-07443-6_48

7. **P. Fafalios** and Y. Tzitzikas, *"Configuring Named Entity Extraction through Real-Time Exploitation of Linked Data"*, 4th International Conference on Web Intelligence, Mining and Semantic (WIMS'14), Thessaloniki, Greece, June 2014. https://doi.org/10.1145/2611040.2611085

8. **P. Fafalios** and Y. Tzitzikas, *"Post-Analysis of Keyword-based Search Results using Entity Mining, Linked Data and Link Analysis at Query Time"*, 8th IEEE International Conference on Semantic Computing (ICSC'14), Newport Beach, California, USA, June 2014. https://doi.org/10.1109/ICSC.2014.11

9. **P. Fafalios** and Y. Tzitzikas, "SPARQL-LD: A SPARQL Extension for Fetching and Querying Linked Data", Demo paper, 14th International Semantic Web Conference (ISWC'15), Bethlehem, Pennsylvania, USA, October 2015. http://ceur-ws.org/Vol-1486/paper_71.pdf

10. **P. Fafalios**, T. Yannakis and Y. Tzitzikas, *"Querying the Web of Data with SPARQL-LD"*, 20th International Conference on Theory and Practice of Digital Libraries (TPDL'16), Hannover, Germany, September 5-9, 2016. https://doi.org/10.1007/978-3-319-43997-6_14

11. **P. Fafalios**, V. Kasturia, and W. Nejdl, *"Towards a Ranking Model for Semantic Layers over Digital Archives"*, Poster paper, ACM/IEEE-CS Joint Conference on Digital Libraries (JCDL'17), Toronto (Ontario, Canada), June 19-23, 2017. https://dl.acm.org/doi/10.5555/3200334.3200400

12. **P. Fafalios**, H. Holzmann, V. Kasturia, and W. Nejdl, *"Building and Querying Semantic Layers for Web Archives"*, 2017 ACM/IEEE-CS Joint Conference on Digital Libraries (JCDL'17), Toronto (Ontario, Canada), June 19-23, 2017. https://doi.org/10.1109/JCDL.2017.7991555 - ***Nominated for the "Best Paper" award!***

13. **P. Fafalios**, V. Iosifidis, K. Stefanidis, and E. Ntoutsi, *"Multi-aspect Entity-centric Analysis of Big Social Media Archives"*, 21st International Conference on Theory and Practice of Digital Libraries (TPDL'17), Thessaloniki, Greece, September 18-21, 2017. https://doi.org/10.1007/978-3-319-67008-9_21

14. **P. Fafalios**, V. Iosifidis, E. Ntoutsi, and S. Dietze, *"TweetsKB: A Public and Large-Scale RDF Corpus of Annotated Tweets"*, 15th Extended Semantic Web Conference (ESWC'18), Heraklion, Crete, Greece, June 3-7, 2018. https://doi.org/10.1007/978-3-319-93417-4_12 - ***Nominated for the "Best Paper" award!***

15. **P. Fafalios**, V. Kasturia, and W. Nejdl, *"Ranking Archived Documents for Structured Queries on Semantic Layers"*, 2018 ACM/IEEE-CS Joint Conference on Digital Libraries (JCDL'18), Fort Worth (Texas, USA), June 3-6, 2018. https://doi.org/10.1145/3197026.3197049

16. M. Quraishi, **P. Fafalios**, and E. Herder, *"Viewpoint Discovery and Understanding in Social Networks"*, 10th International ACM Web Science Conference (WebSci'18), Amsterdam, the Netherlands, May 27-30, 2018. https://doi.org/10.1145/3201064.3201076

17. **P. Fafalios** and Y. Tzitzikas, *"How Many and What Types of SPARQL Queries can be Answered through Zero-Knowledge Link Traversal?"*, 34th ACM/SIGAPP Symposium On Applied Computing. Limassol, Cyprus, April 8-12, 2019. https://doi.org/10.1145/3297280.3297505

18. R. S. João, **P. Fafalios**, and S. Dietze, *"Same but Different: Distant Supervision for Predicting and Understanding Entity Linking Difficulty"*, 34th ACM/SIGAPP Symposium On Applied Computing. Limassol, Cyprus, April 8-12, 2019. https://doi.org/10.1145/3297280.3297381

19. M. Gasquet, D. Brechtel, M. Zloch, A. Tchechmedjiev, K. Boland, **P. Fafalios**, S. Dietze, K. Todorov, *"Exploring Fact-checked Claims and their Descriptive Statistics"*, Demo Paper, 18th International Semantic Web Conference, Auckland, New Zealand, October 26–30, 2019. http://ceur-ws.org/Vol-2456/paper75.pdf

20. A. Tchechmedjiev, **P. Fafalios**, K. Boland, M. Gasquet, M. Zloch, B. Zapilko, S. Dietze, K. Todorov, *"ClaimsKG: A Knowledge Graph of Fact-Checked Claims"*, 18th International Semantic Web Conference, Auckland, New Zealand, October 26–30, 2019. https://doi.org/10.1007/978-3-030-30796-7_20

21. R. S. João, **P. Fafalios** and S. Dietze, *"Better Together - An Ensemble Learner for Combining the Results of Ready-made Entity Linking Systems"*, 35th ACM/SIGAPP Symposium On Applied Computing, Brno, Czech Republic, March 30-April 3, 2020. https://doi.org/10.1145/3341105.3373883

22. G. Kadilierakis, C. Nikas, **P. Fafalios**, P. Papadakos, and Y. Tzitzikas, *"Elas4RDF: Multi-perspective Triple-centered Keyword Search over RDF using Elasticsearch"*, Demo Paper, 17th Extended Semantic Web Conference, Heraklion, Greece, June 2-4, 2020. https://doi.org/10.1007/978-3-030-62327-2_21

23. G. Kadilierakis, **P. Fafalios**, P. Papadakos, and Y. Tzitzikas, *"Keyword Search over RDF using Document-centric Information Retrieval Systems"*, 17th Extended Semantic Web Conference, Heraklion, Greece, June 2-4, 2020. https://doi.org/10.1007/978-3-030-49461-2_8

24. D. Dimitrov, E. Baran, **P. Fafalios**, R. Yu, X. Zhu, M. Zloch, and S. Dietze, *"TweetsCOV19 - A Knowledge Base of Semantically Annotated Tweets about the COVID-19 Pandemic"*, 29th ACM International Conference on Information and Knowledge Management, 19-23 October, 2020. https://doi.org/10.1145/3340531.3412765

25. E. Maliaroudakis, K. Boland, S. Dietze, K. Todorov, Y. Tzitzikas, and **P. Fafalios**. *"ClaimLinker: Linking Text to a Knowledge Graph of Fact-checked Claims"*, Demo Paper, In Companion Proceedings of the Web Conference 2021 (ACM), April 19–23, 2021. https://doi.org/10.1145/3442442.3458601

26. **P. Fafalios**, K. Doerr, A. Kritsotaki, K. Petrakis, G. Samaritakis, A. Axaridou, G. Bruseker, Y. Tzitzikas, M. Doerr, *"Challenges and solutions towards creating a semantic network of historical maritime data"*, Abstract published and presented at Data for History 2021: Modelling Time, Space, Agents, Virtual Conference, 19 May – 30 June 2021, https://d4h2020.sciencesconf.org/data/pages/Fafalios_Doerr_Kritsotaki_Challenges_and_solutions_1.pdf

27. C. Nikas, **P. Fafalios** and Y. Tzitzikas, *"Open Domain Question Answering over Knowledge Graphs using Keyword Search, Answer Type Prediction, SPARQL and Pre-trained Neural Models"*, 20th International Semantic Web Conference, October 24-28, 2021. https://doi.org/10.1007/978-3-030-88361-4_14

28. **P. Fafalios**, K. Konsolaki, L. Charami, K. Petrakis, M. Paterakis, D. Angelakis, Y. Tzitzikas, C. Bekiari and M. Doerr, *"Towards Semantic Interoperability in Historical Research: Documenting Research Data and Knowledge with Synthesis"*, 20th International Semantic Web Conference, Oct 24-28, 2021. https://doi.org/10.1007/978-3-030-88361-4_40

29. **P. Fafalios**, *"Historical Research meets Semantic Interoperability: The Documentation System SYNTHESIS and its Application in Art History Research"*, Abstract accepted as a Long Presentation, Digital Humanities 2022, Online Event, July 27-29, 2022 **(accepted in March 2022)**

Workshop publications (peer-reviewed)

1. **P. Fafalios**, M. Salampasis and Y. Tzitzikas, *"Exploratory Patent Search with Faceted Search and Configurable Entity Mining"*, 1st International Workshop on Integrating IR technologies for Professional Search, in conjunction with the 35th European Conference on Information Retrieval (ECIR'13), Moscow, Russia, March 2013. http://ceur-ws.org/Vol-968/irps_8.pdf

2. Y. Tzitzikas, N. Minadakis, Y. Marketakis, **P. Fafalios**, C. Allocca and N. Mountantonakis, *"Quantifying the Connectivity of a Semantic Warehouse"*, 4th International Workshop on Linked Web Data Management (LWDM'14), in conjunction with the 17th International Conference on Extending Database Technology (EDBT'14), Athens, Greece, March 2014. http://ceur-ws.org/Vol-1133/paper-40.pdf

3. M. Mountantonakis, C. Allocca, **P. Fafalios**, N. Minadakis, Y. Marketakis, C. Lantzaki and Y. Tzitzikas, *"Extending VoID for Expressing the Connectivity Metrics of a Semantic Warehouse"*, 1st International Workshop on Dataset Profiling & Federated Search for Linked Data (PROFILES'14), in conjunction with the 11th Extended Semantic Web Conference (ESWC'14), Anissaras, Heraklion, Greece, May 2014. http://ceur-ws.org/Vol-1151/paper10.pdf

4. T. Yannakis, **P. Fafalios**, and Y. Tzitzikas, *"Heuristics-based Query Reordering for Federated Queries in SPARQL 1.1 and SPARQL-LD"*, 2nd Workshop on Querying the Web of Data (QuWeDa), in conjunction with the 15th Extended Semantic Web Conference (ESWC'18), Heraklion, Crete, Greece, June 3-7, 2018. http://ceur-ws.org/Vol-2110/paper7.pdf

5. N. Mohapatra, V. Iosifidis, A. Ekbal, S. Dietze, and **P. Fafalios**, *"Time-Aware and Corpus-Specific Entity Relatedness"*, Workshop on Deep Learning for Knowledge Graphs and Semantic Technologies (DL4KGS), in conjunction with the 15th Extended Semantic Web Conference (ESWC'18), Heraklion, Crete, Greece, June 3-7, 2018. http://ceur-ws.org/Vol-2106/paper4.pdf

6. K. Boland, **P. Fafalios**, A. Tchechmedjiev, K. Todorov, and S. Dietze, *"Modeling and Contextualizing Claims"*, 2nd International Workshop on Contextualized Knowledge Graphs (CKG 2019), in conjunction with the 18th International Semantic Web Conference (ISWC 2019), Auckland, New Zealand, 26-30 October, 2019. http://ceur-ws.org/Vol-2599/CKG2019_paper_1.pdf

Book chapters (peer-reviewed)

1. **P. Fafalios** and Y. Tzitzikas, *"Exploratory Professional Search through Semantic Post-Analysis of Search Results"*, Professional Search in the Modern World, Lecture Notes in Computer Science (LNCS), Vol. 8830, Springer, 2014. https://doi.org/10.1007/978-3-319-12511-4_9

2. M. Mountantonakis, N. Minadakis, Y. Marketakis, **P. Fafalios** and Y. Tzitzikas, *"Connectivity, Value and Evolution of a Semantic Warehouse"*, Book chapter at "Innovations, Developments, and Applications of Semantic Web and Information Systems", pp. 1-31, 2018, IGI Global. https://doi.org/10.4018/978-1-5225-5042-6.ch001

Publications in national conferences (peer-reviewed)

1. **P. Fafalios**, I. Kitsos and Y. Tzitzikas, *"Κλιμακώσιμη και Ευέλικτη Υποστήριξη Στιγμιαίας Επισκοπικής Αναζήτησης" (Scalable, Flexible and Generic Instant Overview Search)*, Demo paper, 11th Hellenic Data Management Symposium (HDMS'12), Chania, Greece, June 2012. http://hdms2012.softnet.tuc.gr/HDMS2012.pdf

Publications in magazines

1. Y. Tzitzikas, C. Allocca, C. Bekiari, Y. Marketakis, **P. Fafalios** and N. Minadakis, *"Ontology-based Integration of Heterogeneous and Distributed Information of the Marine Domain"*, ERCIM News, No. 96, Jan' 2014. https://ercim-news.ercim.eu/images/stories/EN96/EN96-web.pdf

2. M. Doerr, P. Fafalios, A. Delis, *"Digital Seafaring: Digitising, Curating and Exploring Archival Sources of Maritime history"*, ERCIM News, No. 124, Jan' 2021. https://ercim-news.ercim.eu/images/stories/EN124/EN124-web.pdf

Other publications (system reports, prefaces, etc.)

1. **P. Fafalios** and Y. Tzitzikas, *"Entity-based Stochastic Analysis of Search Results for Query Expansion and Results Re-Ranking"*, Text Retrieval Conference (TREC'15), Gaithersburg, Maryland, USA, November 2015. https://trec.nist.gov/pubs/trec24/papers/FORTH_ICS_ISL-CL.pdf

2. C. Nikas, **P. Fafalios**, and Y. Tzitzikas, *"Two-stage Semantic Answer Type Prediction for Question Answering using BERT and Class-Specificity Rewarding"*, Proceedings of the SeMantic AnsweR Type prediction task (SMART) at ISWC 2020 Semantic Web Challenge, co-located with the 19th International Semantic Web Conference (ISWC 2020), Virtual Conference, November 5th, 2020. http://ceur-ws.org/Vol-2774/paper-03.pdf

3. K. Todorov, **P. Fafalios**, S. Dietze, *"Beyond Facts: Online Discourse and Knowledge Graphs"*, Preface Paper, Proceedings of the 1st International Workshop on Knowledge Graphs for Online Discourse Analysis (KnOD 2021), co-located with the 30th The Web Conference (WWW 2021), Virtual Event, April 14, 2021. http://ceur-ws.org/Vol-2877/preface.pdf

TALKS / PRESENTATIONS

- [**Conference Talk**] *"Towards Semantic Interoperability in Historical Research: Documenting Research Data and Knowledge with Synthesis"*, 20th International Semantic Web Conference, Online Conference, October 26, 2021.
- [**Seminar Talk**] *"Semantic documentation of research data and knowledge in the field of Art History with the SYNTHESIS system"*, In Web Seminar on *Quantitative and Qualitative Data Analysis in Historical Research*, FORTH-ICS, October 7, 2021.
- [**Conference Talk**] *"Challenges and solutions towards creating a semantic network of historical maritime data"*, Data for History 2021, Online Conference, June 30, 2021.
- [**Invited Talk**] *"Digital Seafaring - Digitising, Curating and Exploring Archival Sources of Maritime History"*. Max Planck Institute for the History of Science (MPIWG), June 8, 2021.
- [**Seminar Talk**] *"Documentation of Scientific Research in the Humanities and Social Sciences - The European projects SeaLiT, RICONTRANS and ReKnow"*. In Web Seminar on *Information Systems for the Documentation of Scientific Research in the Humanities and Social Sciences*, FORTH-ICS, September 24, 2020.
- [**Invited Talk**] *"Museums as Trusted Source of Knowledge: A Translation into Feasible Digital Services"*. In *Embracing the virtual: European museums respond to the digital challenge*, Acropolis Museum, Athens, Greece, November 2019.
- [**Invited Lecture**] *"Stance Detection for Fact-checking"*. In *Web Science Course* (Summer Semester 2019), Department of Knowledge-Based Systems, Distributed Systems Institute, Leibniz University of Hanover, Hannover, Germany, May 2019.
- [**Paper Presentation**] *"How Many and What Types of SPARQL Queries can be Answered through Zero-Knowledge Link Traversal?"*, 34th ACM/SIGAPP Symposium On Applied Computing. Limassol, Cyprus, April 2019.
- [**Paper Presentation**] *"Ranking Archived Documents for Structured Queries on Semantic Layers"*, 2018 ACM/IEEE-CS Joint Conference on Digital Libraries (JCDL'18), Fort Worth (Texas, USA), June 2018.
- [**Poster Presentation**] *"Towards a Ranking Model for Semantic Layers over Digital Archives"*, Poster paper, ACM/IEEE-CS Joint Conference on Digital Libraries (JCDL'17), Toronto (Ontario, Canada), June 2017.
- [**Paper Presentation**] *"Multi-aspect Entity-centric Analysis of Big Social Media Archives"*, 21st International Conference on Theory and Practice of Digital Libraries (TPDL'17), Thessaloniki, Greece, September 2017.
- [**Paper Presentation**] *"Building and Querying Semantic Layers for Web Archives"*, 2017 ACM/IEEE-CS Joint Conference on Digital Libraries (JCDL'17), Toronto (Ontario, Canada), June 2017.
- [**Paper Presentation**] *"Querying the Web of Data with SPARQL-LD"*, 20th International Conference on Theory and Practice of Digital Libraries (TPDL'16), Hannover, Germany, September 2016.
- [**Paper and Poster Presentation**] *"Entity-based Stochastic Analysis of Search Results for Query Expansion and Results Re-Ranking"*, In 2015 Text Retrieval Conference (TREC'15), National Institute of Standards and Technology, Gaithersburg, Maryland, USA, November 2015.
- [**Paper Presentation**] *"SPARQL-LD: A SPARQL Extension for Fetching and Querying Linked Data"*, In 14th International Semantic Web Conference (ISWC'15), Bethlehem, Pennsylvania, USA, October 2015.

- [**Paper Presentation**] *"Post-Analysis of Keyword-based Search Results using Entity Mining, Linked Data and Link Analysis at Query Time"*, In 8th IEEE International Conference on Semantic Computing (ICSC'14), Newport Beach, California, USA, June 2014.
- [**Paper Presentation**] *"Configuring Named Entity Extraction through Real-Time Exploitation of Linked Data"*, In 4th International Conference on Web Intelligence, Mining and Semantics (WIMS'14), Thessaloniki, Greece, June 2014.
- [**Demo Presentation**] *"X-ENS: Semantic Enrichment of Web Search Results at Real-Time"*, In 36th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR'13), Dublin, Ireland, July 2013.
- [**Demo Presentation**] *"Κλιμακώσιμη και Ευέλικτη Υποστήριξη Στιγμιαίας Επισκοπικής Αναζήτησης"*, In 11th Hellenic Data Management Symposium (HDMS'12), Chania, Greece, June 2012.
- [**Demo Presentation**] *"Scalable, Flexible and Generic Instant Overview Search"*, 21st International Conference on World Wide Web (WWW'12), Lyon, France, April 2012.

MEMBERSHIP AND COMMUNITY SERVICE

Member of Scientific Communities
- Professional Member of Association for Computing Machinery (ACM)

Member of Organizing Committee
- **[Co-organizer]** 2nd International Workshop on Knowledge Graphs for Online Discourse Analysis (**KnOD 2022**), co-located with The Web Conference 2022 - https://knod22.wordpress.com/
- **[Co-organizer]** 1st International Workshop on Knowledge Graphs for Online Discourse Analysis (**KnOD 2021**), co-located with The Web Conference 2021 - https://knod2021.wordpress.com/
- **[Proceedings Chair]** 15th International Conference on Web-based Learning (**ICWL 2016**) - http://icwl2016.dis.uniroma1.it/

Member of Program Committee
- 33rd ACM Conference on Hypertext and Social Media (**HT 2022**)
- 19th Extended Semantic Web Conference (**ESWC 2022**)
- 30th ACM International Conference on Information and Knowledge Management (**CIKM 2021**)
- 32nd ACM Conference on Hypertext and Social Media (**HT 2021**)
- 18th Extended Semantic Web Conference (**ESWC 2021**)
- 23rd Intern. Workshop on Design, Optimization, Languages & Analytical Processing of Big Data (**DOLAP 2021**)
- 29th ACM International Conference on Information and Knowledge Management (**CIKM 2020**)
- 31st ACM Conference on Hypertext and Social Media (**HT 2020**)
- 11th IEEE International Conference on Knowledge Graph (**ICKG 2020**)
- 17th Extended Semantic Web Conference (**ESWC 2020**)
- 19th International Semantic Web Conference (**ISWC 2020** - Posters & Demos Track)
- 16th Extended Semantic Web Conference (**ESWC 2019**)
- 18th International Semantic Web Conference (**ISWC 2019** - Posters & Demos Track)
- 17th International Semantic Web Conference (**ISWC 2018** - Posters & Demos Track)
- 16th International Semantic Web Conference (**ISWC 2017** - Posters & Demos Track)
- 9th International ACM Web Science Conference 2017 (**WebSci 2017** - Posters Track)
- Workshop on Benchmarking Linked Data (**BLINK 2017**), co-located with ISWC 2017
- 15th International Conference on Web-based Learning (**ICWL 2016**)
- 18th International Conference on Asia-Pacific Digital Libraries (**ICADL 2016**)

Referee / Member of Editorial Board
- ACM Journal on Computing and Cultural Heritage (2021)
- Journal of Web Semantics (Elsevier) (2021)
- International Journal of Metadata, Semantics and Ontologies (IJMSO) (2021)
- ACM Transactions on the Web (TWEB) (2019,2021)
- Semantic Web Journal (IOS press) (2020)
- Information Systems (Elsevier) (2020)

- IEEE Access (2020)
- The VLDB Journal (2019)
- Journal of the Association for Information Science and Technology (2016-2018)
- Knowledge-Based Systems – Elsevier (2017)
- Knowledge and Information Systems - Springer (2016)
- IEEE Transactions on Knowledge and Data Engineering (2016, 2017)
- Information Processing & Management - Elsevier (2016)
- Multimedia Tools and Applications - Springer (2015)

PARTICIPATION IN RESEARCH PROJECTS AND ACTIONS

ReKnow (2020-now)	Project *"ReKnow – Research Knowledge Documentation, Analysis and Exploration in Empirical and Descriptive Sciences"*, Marie Skłodowska-Curie Individual Fellowship (Grant agreement ID: 890861). https://reknow.ics.forth.gr/ Role: Principal researcher, fellowship holder
RICONTRANS (2019-now)	Project *"RICONTRANS – Visual Culture, Piety and Propaganda: Transfer and Reception of Russian Religious Art in the Balkans and the Eastern Mediterranean (16th to early 20th Century)"*, ERC Consolidator Grant (No. 818791). https://ricontrans-project.eu/ Role: Supervision and implementation of activities related to data management.
SeaLiT (2019-now)	Project *"SeaLiT – Seafaring Lives in Transition. Mediterranean Maritime Labour and Shipping during Globalization, 1850s-1920s"*, ERC Starting Grant (No. 714437). http://www.sealitproject.eu/ Role: Supervision and implementation of activities related to data management.
CMBR (2019-2020)	Project *"CMBR – Centre for the study and sustainable exploitation of Marine Biological Resources"*, Greek National Roadmap for Research Infrastructures (MIS: 5002670). http://cmbr.hcmr.gr/ Role: Research and implementation of methods and tools for data integration and exploration.
ALEXANDRIA (2016 – 2019)	Project *"ALEXANDRIA – Foundations for Temporal Retrieval, Exploration and Analytics in Web Archives"*, ERC Advanced Grant (No. 339233). https://cordis.europa.eu/project/id/339233 Role: Research in methods for the semantic and entity-based exploration of Web and Social Media archives.
BlueBRIDGE (2015 – 2016)	Project *"BlueBRIDGE - Building Research environments for fostering Innovation, Decision making, Governance and Education to support Blue growth"*, H2020-EINFRA-2015-1 (No. 675680). https://cordis.europa.eu/project/id/675680 Role: Extension of the X-Search system for enabling the stochastic re-ranking of search results based on extracted entities.
iMarine (2012 – 2014)	Project *"iMarine – Data e-Infrastructure Initiative for Fisheries Management and Conservation of Marine Living Resources"*, FP7-INFRASTRUCTURES (No. 283644). https://cordis.europa.eu/project/id/283644 Role: Design and development of the system "X-Search" for the semantic exploration of search results, as well as the system "X-Link" for the extraction of entities and their further enrichment by exploiting Linked Data.
MUMIA (2012 – 2014)	Action *"MUMIA – Multilingual and Multifaceted Interactive Information Access"*, COST Action IC1002. https://www.cost.eu/actions/IC1002/ Role: Member of the action, involved in *Working Group 4 – Semantic Search, Faceted Search and Visualization*.

SOFTWARE / PROTOTYPES

ClaimLinker	Web application and API that links arbitrary text to a knowledge graph of fact-checked claims, offering a novel kind of semantic annotation of unstructured content. Developed under my supervision by the undergraduate student Evangelos Maliaroudakis. More information: https://github.com/malvag/ClaimLinker
SPARQL-LD	Extension of SPARQL 1.1 that enables to directly fetch and query RDF data from heterogeneous web sources via SERVICE calls. More information: https://github.com/fafalios/sparql-ld
X-Search	Web search service for semantic and entity-based exploration of search results. More information: http://www.ics.forth.gr/isl/X-Search
X-Link	Configurable and Linked Data-based named-entity extraction framework. More information: http://www.ics.forth.gr/isl/X-Link
Theophrastus	System for the semantic annotation and exploration of web documents. Theophrastus was awarded the 1st prize in Blue Hackathon 2013. More information: http://www.ics.forth.gr/isl/Theophrastus
IOS	System / functionality for instant overview search (search-as-you-type). More information: http://www.ics.forth.gr/isl/ios
Ithaca	Tool for converting and integrating open datasets to Linked Open Data. Ithaca was awarded the 1st prize in Hack4Med 2014 (the HOMER project Hackathon). More information: https://github.com/mountanton/Ithaca

FELLOWSHIPS / DISTINCTIONS / AWARDS / GRANTS

Fellowships & Distinctions

- **Individual postdoctoral research fellowship *"Marie Skłodowska-Curie"*** (H2020-MSCA-IF-2019) for the implementation of the project *«ReKnow – Research Knowledge Documentation, Analysis and Exploration in Empirical and Descriptive Sciences»* (Grant Agreement ID: *890861*), June 2020 – May 2022.
- **Finalist for the *"2019 ERCIM Cor Baayen Young Researcher Award"***, awarded each year to a promising young researcher in computer science or applied mathematics (more info / archived page).
- **Fellowship from legacy *"Maria Michael Manasaki"*** for the academic year 2014-2015. This fellowship is awarded once a year to an exceptional Ph.D. candidate of Computer Science department of University of Crete (more info / archived page).
- **PhD scholarship** by the Foundation for Research and Technology – Hellas (FORTH), 2013-2016
- **MSc scholarship** by the Foundation for Research and Technology – Hellas (FORTH), 2010-2012

Awards

- **1st prize** in **Hack4Med, the HOMER project Hackathon**, held in the University of Crete, Department of Computer Science, May 16-17, 2014, Voutes Campus, Heraklion, Greece. Michalis Mountantonakis and I developed and presented the system *"Ithaca: From Open Data to Linked Open Data"*.
- **1st prize** in **Blue Hacakthon 2013**, held in the Hellenic Centre for Marine Research (HCMR), July 1-2, 2013, Gournes, Heraklion, Greece. Panagiotis Papadakos and I developed and presented the system *"Theophrastus: A Semantic Exploration Tool for Marine Taxonomists"*.

Grants

- **Travel grant award from the Association for Computing Machinery (ACM)** for attending the SIGIR'13 conference in Dublin, Ireland (July 28 – August 1, 2013).
- **Travel grant award from the Semantic Web Science Association (SWSA)** and **the National Science Foundation (NSF)** for attending the ISWC'15 conference in Bethlehem, Pennsylvania, USA (Oct 11-15, 2015).

TECHNICAL SKILS

Proficient in:
- Java, J2EE (Servlets, JSP)
- PHP, HTML, CSS, JavaScript, AJAX, SQL
- XML, XPath, XQuery, JSON
- RDF, RDF/S, OWL, SPARQL/SPARQL 1.1, Linked Data
- Ontology Engineering, Knowledge Representation, CIDOC-CRM (ISO 21127:2014)
- UML