

Curriculum Vitae

PERSONAL INFORMATION

Name Huanyu Li
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My Expertise Semantic Web, Ontologies, Materials Informatics, GraphQL, Databases



SHORT BIO

I am an Assistant Professor from the Division of Human-Centered Systems (HCS), Department of Computer and Information Science (IDA), Linköping University. My work is within the area of Semantic Web and Ontologies. More specifically, my research interest is related to ontology engineering, ontology-driven data access and integration with applications in different domains (such as materials design and circular economy). I co-developed tools for data integration and ontology extension. According to Google Scholar, my publications received more than 500 citations.

ACADEMIC POSITIONS HELD

since Sep. 2024 **Biträdande universitetslektor (Assistant Professor)**
Department of Computer and Information Science (IDA), Linköping University, Sweden
Sep. 2022 - Aug. 2024 **Postdoctoral research fellow**
Department of Computer and Information Science (IDA), Linköping University, Sweden
Jun. 2022 - Aug. 2022 **Research Engineer**
Department of Computer and Information Science (IDA), Linköping University, Sweden
Dec. 2016 - Apr. 2017 **Research Assistant**
Department of Computer and Information Science (IDA), Linköping University, Sweden

EDUCATION AND ACADEMIC DEGREES

May 2017 - May 2022 **PhD in Computer Science**, include teaching, net time to graduation is 3.89 years
Department of Computer and Information Science (IDA), Linköping University, Sweden
Aug. 2014 - Oct. 2016 **MEng. Software Engineering, HIT & MSc. Information Technology, LiU**
Harbin Institute of Technology (HIT, China) and Linköping University (LiU)
Double-Degree Master program between HIT and LiU
Sep. 2010 - Jul. 2014 **BEng. Software Engineering (Rank 14/136)**
Harbin Institute of Technology (HIT, China)

PUBLICATIONS

- Journal Articles**
- [1] [Li H](#), Hartig O, Armiento R, Lambrix P. [Ontology-Based GraphQL Server Generation for Data Access and Data Integration](#), Semantic Web Journal, 2024.
 - [2] Lambrix P, Armiento R, [Li H](#), Hartig O, Abd Nikooie Pour M, Li Y. [The Materials Design Ontology](#), Semantic Web Journal, 2024.
 - [3] [Li H](#), Armiento R, Lambrix P. [A Method for Extending Ontologies with Application to the Materials Science Domain](#), Data Science Journal, 2019.
 - [4] [Li H](#), Dragisic Z, Faria D, Ivanova V, Jimenez-Ruiz E, Lambrix P, Pesquita C. [User validation in ontology alignment: functional assessment and impact](#). The Knowledge Engineering Review, 2019.
 - [5] Dragisic Z, Ivanova V, [Li H](#), Lambrix P. [Experiences from the anatomy track in the ontology alignment evaluation initiative](#). Journal of Biomedical Semantics, 2017.

- Book Chapters** [6] Lambrix P, Armiento R, Delin A, **Li H**. **FAIR Big Data in the Materials Design Domain**. Encyclopedia of Big Data Technologies, 2022.
- [7] Lambrix P, Armiento R, Delin A, **Li H**. **Big Semantic Data Processing in the Materials Design Domain**. Encyclopedia of Big Data Technologies, 2018.
- Conference Articles** [8] **Li H**, Lambrix P. **BadmintONTO: A Badminton Domain Ontology**. Ontology showcase at the 14th International Conference on Formal Ontology in Information Systems (FOIS), 2024.
- [9] **Li H**, Hartig O, Armiento R, Lambrix P. **OBG-gen: Ontology-Based GraphQL Server Generation for Data Integration**. Demo at the 22nd International Semantic Web Conference (ISWC), 2023.
- [10] Abd Nikooie Pour M, **Li H**, Armiento R, Lambrix P. **Phrase2Onto: A Tool to Support Ontology Extension**. In Proceedings of the 27th International Conference on Knowledge-Based and Intelligent Information Engineering Systems (KES), 2023.
- [11] **Li H**, Armiento R, Lambrix P. **An Ontology for the Materials Design Domain**. In Proceedings of the 19th International Semantic Web Conference (ISWC), 2020.
- [12] **Li H**, Armiento R, Lambrix P. **Extending Ontologies in the Nanotechnology Domain using Topic Models and Formal Topical Concept Analysis on Unstructured Text**, Poster at the 18th International Semantic Web Conference (ISWC), 2019.
- [13] Keskiärkkä R, **Li H**, Cheng S, Carlsson N, Lambrix P. **An Ontology for Ice Hockey**. Poster at the 18th International Semantic Web Conference (ISWC), 2019.
- Workshop Articles** [14] **Li H**, Wang C, Lambrix P. **Initial development of an ontology for the semiconductor domain – SemicONTO**. The 1st International Workshop on Semantic Materials Science at the 20th SEMANTiCS, 2024.
- [15] OB Andersson, **Li H**, Lambrix P, R Armiento. **An ontology for units of measures across history, standards, and scientific and technology domains**. The 1st International Workshop on Semantic Materials Science at the 20th SEMANTiCS, 2024.
- [16] Abd Nikooie Pour M, Tarafder P, Wiberg A, **Li H**, Moverare J, Lambrix P. **PBF-AMP-Onto: an ontology for powder bed fusion additive manufacturing processes**. The 1st International Workshop on Semantic Materials Science at the 20th SEMANTiCS, 2024.
- [17] Jansen M, Blomqvist E, Keskiärkkä R, **Li H**, Lindecrantz M, Wannerberg K, Pomp A, Meisen T, Berg H. **Designing an Ontology Network for Digital Product Passports**.
- [18] **Li H**, Blomqvist E, Lambrix P. **Initial and Experimental Ontology Alignment Results in the Circular Economy Domain**. The 2nd International Workshop on Knowledge Graphs for Sustainability (KG4S) at the 21st ESWC, 2024.
- [19] Jansen M, Blomqvist E, Keskiärkkä R, **Li H**, Lindecrantz M, Wannerberg K, Pomp A, Meisen T, Berg H. **Modelling Digital Product Passports for the Circular Economy**. The 2nd International Workshop on Knowledge Graphs for Sustainability (KG4S) at the 21st ESWC, 2024.
- [20] Abd Nikooie Pour M, Algergawy A, Buche P, Castro L, Chen J, Coulet A, Cufi J, Dong H, Fallatah O, Faria D, Fundulaki I, Hertling S, He Y, Horrocks I, Huschka M, Ibanescu L, Jain S, Jimenez-Ruiz E, Karam N, Lambrix P, **Li H**, Li Y, Monnin P, Nasr E, Paulheim H, Pesquita C, Saveta T, Shvaiko P, Sousa G, Trojahn C, Vataschinova J, Wu M, Yaman B, Zamazal O, Zhou L. **Results of the Ontology Alignment Evaluation Initiative 2023**. The 18th International Workshop on Ontology Matching at the 22nd International Semantic Web Conference, 2023.
- [21] Matentzoglou N, Braun I, R. Caron A, Goutte-Gattat D, M. Gyori B, L. Harris N, Hartley E, B. Hegde H, Hertling S, Tapley Hoyt C, Kim H, **Li H**, McLaughlin J, Trojhan C, Vasilevsky N, J. Mungall C. **A Simple Standard for Ontological Mappings 2023: Updates on data model, collaborations and tooling**. The 18th International Workshop on Ontology Matching (OM2023) at the 22nd International Semantic Web Conference (ISWC), 2023.

- [22] Blomqvist E, [Li H](#), Keskisärkkä R, Lindecrantz M, Abd Nikooie Pour M, Li Y, Lambrix P. [Cross-domain Modelling – A Network of Core Ontologies for the Circular Economy](#). The 14th Workshop on Ontology Design and Patterns (WOP2023) at the 22nd International Semantic Web Conference (ISWC), 2023.
- [23] [Li H](#), Abd Nikooie Pour M, Li Y, Lindecrantz M, Blomqvist E, Lambrix P. [A Survey of General Ontologies for the Cross-Industry Domain of Circular Economy](#). The 1st International Workshop on Knowledge Graphs for Sustainability (KG4S) at The Web Conference, 2023.
- [24] Abd Nikooie Pour M, Algergawy A, Buche P, Castro L, Chen J, Dong H, Fallatah O, Faria D, Fundulaki I, Hertling S, He Y, Horrocks I, Huschka M, Ibanescu L, Jimenez-Ruiz E, Karam N, Laadhar A, Lambrix P, [Li H](#), Li Y, Michel F, Nasr E, Paulheim H, Pesquita C, Saveta T, Shvaiko P, Trojahn C, Verhey C, Wu M, Yaman B, Zamazal O, Zhou L. [Results of the Ontology Alignment Evaluation Initiative 2022](#). The 17th International Workshop on Ontology Matching at the 21st International Semantic Web Conference, 2022.
- [25] Abd Nikooie Pour M, Algergawy A, Amardeilh F, Amini R, Fallatah O, Faria D, Fundulaki I, Harrow I, Hertling S, Hitzler P, Huschka M, Ibanescu L, Jimenez-Ruiz E, Karam N, Laadhar A, Lambrix P, [Li H](#), Li Y, Michel F, Nasr E, Paulheim H, Pesquita C, Portisch J, Roussey C, Saveta T, Shvaiko P, Splendiani A, Thieblin E, Trojahn C, Vataschinova J, Yaman B, Zamazal O, Zhou L. [Results of the Ontology Alignment Evaluation Initiative 2021](#). The 16th International Workshop on Ontology Matching at the 20th International Semantic Web Conference, 2021.
- [26] Abd Nikooie Pour M, [Li H](#), Armiento R, Lambrix P. [A First Step towards Extending the Materials Design Ontology](#). Workshop on Domain Ontologies for Research Data Management in Industry Commons of Materials and Manufacturing co-located with the 18th European Semantic Web Conference (ESWC), 2021.
- [27] Abd Nikooie Pour M, [Li H](#), Armiento R, Lambrix P. [A First Step towards a Tool for Extending Ontologies](#). The 6th International Workshop on the Visualization and Interaction for Ontologies and Linked Data co-located with the 20th International Semantic Web Conference (ISWC). 2021.
- [28] Abd Nikooie Pour M, Algergawy A, Amini R, Faria D, Fundulaki I, Harrow I, Hertling S, Jimenez-Ruiz E, Jonquet C, Karam N, Khiat A, Laadhar A, Lambrix P, [Li H](#), Li Y, Hitzler P, Paulheim H, Pesquita C, Saveta T, Shvaiko P, Splendiani A, Thieblin E, Trojahn C, Vataschinova J, Yaman B, Zamazal O, Zhou L. [Results of the Ontology Alignment Evaluation Initiative 2020](#). The 15th International Workshop on Ontology Matching at the 19th International Semantic Web Conference, 2020.
- [29] Algergawy A, Faria D, Ferrara A, Fundulaki I, Harrow I, Hertling S, Jimenez-Ruiz E, Karam N, Khiat A, Lambrix P, [Li H](#), Montanelli S, Paulheim H, Pesquita C, Saveta T, Shvaiko P, Splendiani A, Thieblin E, Trojahn C, Vataschinova J, Zamazal O, Zhou L. [Results of the Ontology Alignment Evaluation Initiative 2019](#). The 14th International Workshop on Ontology Matching at the 18th International Semantic Web Conference, 2019.
- [30] Jimenez-Ruiz E, Saveta T, Zamazal O, Hertling S, Röder M, Fundulaki I, Ngonga Ngomo A, Sherif M, Annane A, Bellahsene Z, Ben Yahia S, Diallo G, Faria D, Kachroudi M, Khiat A, Lambrix P, [Li H](#), Mackeprang M, Mohammadi M, Rybinski M, Balasubramani B, Trojahn C. [Introducing the HOBBIT platform into the Ontology Alignment Evaluation Campaign](#). The 13th International Workshop on Ontology Matching at the 17th International Semantic Web Conference, 2018.
- [31] Algergawy A, Cheatham M, Faria D, Ferrara A, Fundulaki I, Harrow I, Hertling S, Jimenez-Ruiz E, Karam N, Khiat A, Lambrix P, [Li H](#), Montanelli S, Paulheim H, Pesquita C, Saveta T, Schmidt D, Shvaiko P, Splendiani A, Thieblin E, Trojahn S, Vataschinova J, Zamazal O, Zhou L. [Results of the Ontology Alignment Evaluation Initiative 2018](#). The 13th International Workshop on Ontology Matching at the 17th International Semantic Web Conference, 2018.

[32] Achichi M, Cheatham M, Dragisic Z, Euzenat J, Faria D, Ferrara A, Flouris G, Fundulaki I, Harrow I, Ivanova V, Jimenez-Ruiz E, Kolthoff K, Kuss E, Lambrix P, Leopold H, [Li H](#), Meilicke C, Mohammadi M, Montanelli S, Pesquita C, Saveta T, Shvaiko P, Splendiani A, Stuckenschmidt H, Thieblin E, Todorov K, Trojahn C, Zamazal O. [Results of the Ontology Alignment Evaluation Initiative 2017](#). The 12th International Workshop on Ontology Matching at the 16th International Semantic Web Conference, 2017.

[33] Achichi M, Cheatham M, Dragisic Z, Euzenat J, Faria D, Ferrara A, Flouris G, Fundulaki I, Harrow I, Ivanova V, Jimenez-Ruiz E, Kuss E, Lambrix P, Leopold H, [Li H](#), Meilicke C, Montanelli S, Pesquita C, Saveta T, Shvaiko P, Splendiani A, Stuckenschmidt H, Todorov K, Trojahn C, Zamazal O. [Results of the Ontology Alignment Evaluation Initiative 2016](#). The 11th International Workshop on Ontology Matching at the 15th International Semantic Web Conference, 2016.

Edited Proceedings [34] Fu B, Lambrix P, [Li H](#), Nunes S, Pesquita C. [Proceedings of the 8th International Workshop on the Visualization and Interaction for Ontologies, Linked Data and Knowledge Graphs](#), CEUR Workshop Proceedings, 2023.

PhD Thesis [35] [Li H](#). [Ontology-Driven Data Access and Data Integration with an Application in the Materials Design Domain](#), PhD thesis, Linköping University, 2022.

Master Thesis [36] [Li H](#). [The Design and Implementation of Optimization Approaches for Large Scale Ontology Alignment in SAMBO](#), Master thesis, Linköping University, 2017.

PEDAGOGY TRAINING

2022-2023 **Course design and implementation** (6 ECTS), Didacticum, Linköping University

2021 **Genuskurs: gender awareness course for IDA's course assistants**, Department of computer and Information Science (IDA), Linköping University

2017 **Learning and Knowledge (LoK) - Advanced Course in Higher Education Pedagogy** (6 ECTS), Didacticum, Linköping University

PROFESSIONAL SERVICES

Co-organized Events

- Co-Chair of the 9th International Workshop on the Visualization and Interaction for Ontologies, Linked Data and Knowledge Graphs ([VOILA!2024](#)), 2024
- Co-Chair of the 19th International Workshop on Ontology Matching ([OM-2024](#)), 2024
- Co-Chair of the 1st International Workshop on Semantic Materials Science: Harnessing the Power of Semantic Web Technologies in Materials Science ([SeMatS-2024](#)), 2024
- Co-organize two tracks of the [OAEI](#) (Ontology Alignment Evaluation Initiative) since 2016 and co-coordinate the evaluation in 2023, 2024
- Co-Chair of the 8th International Workshop on the Visualization and Interaction for Ontologies, Linked Data and Knowledge Graphs ([VOILA!2023](#)), 2023

Program Committees

- PC member of the 23rd International Semantic Web Conference ([ISWC](#)), 2024
- PC member of the 21st European Semantic Web Conference ([ESWC](#)), 2024
- PC member of the 22nd International Semantic Web Conference ([ISWC](#)), 2023
- PC member of the 20th European Semantic Web Conference ([ESWC](#)), 2023
- PC member of the 7th International Workshop on the Visualization and Interaction for Ontologies and Linked Data ([VOILA!2022](#)), 2022

Journal Reviewers

- [Advanced Engineering Materials](#), 2024
- [Nature scientific data](#), 2024
- [Semantic Web Journal](#), 2023
- [Materials Today Communications](#), 2023

Other Service

- Management Committee member representing Sweden in the COST Action, [CA22143](#), [European Materials Informatics Network \(EuMINE\)](#)

- Co-editor of the Semantic Web Journal special issue on "Ontology Matching and Machine Learning", 2023

TEACHING AND SUPERVISION

- May 2017 to date **Teaching Assistant/Lab Assistant, Linköping University**
- Assist labs of Data Mining ([TDDD41/732A75](#)), Advanced Data Models and Databases ([TDDD43](#)), Big Data Analytics ([TDDE31/732A54](#)) courses consecutively
 - Assist labs of Database Technology ([TDDD12](#)) course in 2017 and 2022
 - Assist the "*Information Retrieval*" lab of Text Mining ([TDDE16](#)) course in 2017 and 2018
 - Co-designed lab assignments for Big Data Analytics course, 2017
 - Give lectures on "*Introduction of Relational Databases*", "*Introduction of Spark Programming in Python*" for Big Data Analytics course since 2018
 - Give lectures on "*XML*", "*RDF*", "*NoSQL databases*", "*Hadoop, HDFS and MapReduce*" and "*Graph Data Systems*" for Advanced Data Models and Databases course in 2023
- Oct. 2023 - to date **Supervision of Phd Students as Co-supervisor**
- Mina Abd Nikooie Pour, Department of Computer and Information Science, Linköping University, my role: co-supervisor since October 2023
- Dec. 2019 - to date **Supervision and Examination of Master Students**
- Kristian Sikiric, [Gambling safety net: Predicting the risk of problem gambling using Bayesian networks](#), Master's Thesis, Linköping University, 2020, my role: supervisor
 - Palaiologos Biniam, [Ontology-based information extraction from legacy surveillance reports of infectious diseases in animals and humans](#), Master's Thesis, Linköping University, 2020, my role: supervisor
 - Olumide Leshi, [An Approach to Extending Ontologies in the Nanomaterials Domain](#), Master's Thesis, Linköping University, 2020, my role: supervisor
 - Tong Zhang, [A topic model-based approach for ontology extension in the computational materials science domain](#), Master's Thesis, Linköping University, 2020, my role: supervisor
 - Philip Johansson, [Data-Driven Prediction of Cloud System Health using Clustered Logs](#), Master's Thesis, Linköping University, 2023, my role: examiner, de-facto supervisor
- Sep. 2014 - Nov. 2014 **Lab Assistant, HIT, China**
- Assisted labs in Principles of Compiling course

AWARDS AND HONORS

- 2024 I ranked 62 in the [AI 2000 Scholar Annual Ranking - Knowledge Engineering](#) given by AMiner AI, as honorable mentions (from 11 to 100).
- IDA, LiU, 2021 **Lawson Stipendium**
(first edition) - The prize is awarded to PhD students at IDA, for excellent work in internationalization, international contacts, or international exchanges.
- HIT, 2014 University Outstanding Graduates
- HIT, 2010 - 2014 Department Outstanding Student Awards, *consecutive*
- HIT, 2010 - 2014 University Outstanding Student Awards, *consecutive*
- HIT, 2010 - 2014 National Encouragement Scholarship, *consecutive*
- HIT, 2010 - 2014 Department Excellent Student Cadre, *consecutive*