Matteo Lissandrini

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Current	**Associate Professor** University of Verona (Italy)
Areas of Expertise	**Computer Science, Digital Archives, Knowledge and Information Management, Graph Databases, Data Exploration, Big Data Analysis and Mining**

Academic and Professional Activities

01/10/2023 —	**Associate Professor**, *Department of Foreign Languages and Literatures* **(University of Verona)**
15/09/2021 — 30/09/2023	**Assistant Professor**, *Department of Computer Science* **(Aalborg University)**
15/09/2019 — 14/09/2021	**Postdoctoral Researcher**, *Example Driven Analytics of Open Knowledge Graphs* Marie Skłodowska Curie IF fellowship, 2 Years **(Aalborg University)**
15/09/2018 — 14/09/2019	**Postdoctoral Researcher**, *Exploratory Analytics for Linked Open Data* Research contract, 1 Year **(Aalborg University)**
17/09/2012 — 15/09/2018	**Teaching Assistant:** *Information Systems & Data Management Systems*, BSc in Computer Science **(University of Trento)**

Education and Internships

01/10/2017 — 01/07/2018	**Laboratory for Foundations of Computer Science**, *University of Edinburgh (U.K.)* *Visiting Researcher.* Focus: Data management of semi-structured and graph data.
01/11/2012 — 27/04/2018	**PhD in Computer Science**, *University of Trento – Dept. Computer Science* Thesis: "Enabling Access to and Exploration of Information Graphs"
01/03/2014 — 01/06/2014	**Cheriton School of Computer Science**, *University of Waterloo, Ontario (Canada)* *Visiting Researcher.* Focus: Fitness of Use evaluation for social media data analytics.
01/06/2013 — 01/08/2013	**HP Research Lab**, *Palo Alto, California (U.S.)* *Visiting Researcher.* Focus: Coordination for distributed hybrid workload management.
01/09/2010 — 26/09/2012	**M.Sc. in Computer Science**, *University of Trento – Dept. Computer Science* Final Grade: 109/110
01/09/2006 — 17/03/2010	**B.Sc. in Computer Science**, *University of Verona – Dept. Computer Science* Final Grade: 110/110 cum Laude

Projects & Grants

EU Projects	"ARMADA: Reliable Conversational Domain-specific Data Exploration and Analysis", **Doctoral Network (HORIZON-MSCA-2023-DN-01).** *Role: Coordinator.* – Overall budget: € 3 289 140 – From 01-03-2025 to 28-02-2028.
	"EDAO: Example Driven Analytics of Open Knowledge Graphs", **Marie Skłodowska-Curie Individual Fellowship.** *Role: P.I.* – Overall budget: € 207 312 – From 15-09-2019 to 14-09-2021.
Other Projects	Participation in the project "ODA - Open Data for sustainability Assessment" – Funded by Aalborg University
Grants	**ACM, SIGMOD** 2014 Travel Grant – **Otto Mønsted Fund** Travel Grant

Professional Service

Conference Organizer	27th International Workshop on Design, Optimization, Languages and Analytical Processing of Big Data (**DOLAP**), Co-located with **EDBT** 2025

3rd Workshop on Search, Exploration, and Analysis in Heterogeneous Datastores – Graph Edition(**SeaGraph**), Co-located with **ICDE** 2024

26th International Workshop on Design, Optimization, Languages and Analytical Processing of Big Data (**DOLAP**), Co-located with **EDBT** 2024

2nd Workshop on Search, Exploration, and Analysis in Heterogeneous Datastores (**SeaData**), Co-located with **VLDB** 2021

1st Workshop on Search, Exploration, and Analysis in Heterogeneous Datastores (**SeaData**), Co-located with **EDBT/ICDT** 2020

Journal Reviewer	The International Journal on Very Large Data Bases (VLDB Journal), IEEE Transaction on Knowledge and Data Engineering (TKDE), ACM Transactions on Database Systems (TODS), Information Systems Journal, IEEE Transactions on Computers
PC Member	KDD'19, EDBT'20, EDBT'23, EDBT'25, ICDE'20, SIGIR'20, ISWC'20, WSDM'20, VLDB'22, VLDB'23, VLDB'24
External Reviewer	WWW'13, WWW'14, EDBT'14, EDBT'15, ICDE'15, VLDB'15, ICDE'16, EDBT'18, ICDE'18, EDBT'19, ICDE'19.

Supervision

Supervision total of 4 PhD students (1 graduates, 3 ongoing), 10+ MSc student theses (completed)

2022 — 2026 (expected)	*Abiram Mohanaraj*, **Learned Query Optimization** (co-supervisor)
2021 — 2025 (expected)	*Martin Pekár Christensen*, **Semantic Data Lakes** (co-supervisor)
2020 — 2025 (expected)	*Theis E. Jendal*, **Inductive Recommendations over Knowledge Graphs** (co-supervisor)
2020 — 2024 (graduated)	*Kashif Rabbani*, **Efficient Query Processing over Knowledge Graphs** (co-supervisor)

Invited Lectures

2024	Data Science with Graphs (**5th ACM Europe Summer School on Data Science**)
2023	Graph Data Analysis & Exploration (**11th European Big Data Management & Analytics Summer School - eBISS 2023**)
2021	Panel on Data Discovery & Pricing (**European Big Data Value Forum**)
2019	Graph Data Management & Graph Database Evaluation (**Aalborg University**)
2018	Access & Exploration of Information Graphs (**Aalborg University**) Graph Data: Storage, Processing, and Mining (**University of Trento**)
2017	New Trends on Exploratory Methods for Data Analytics (**University of Trento**)

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Publications

Book

2018   [1] "Data Exploration using Example-based Methods ",
Matteo Lissandrini*, Davide Mottin*, Themis Palpanas, Yannis Velegrakis, *Synthesis Lectures on Data Management - Morgan & Claypool Publishers*

Journal articles

2023   [2] " Extraction of Validating Shapes from very large Knowledge Graphs",
Kashif Rabbani, **Matteo Lissandrini**, Katja Hose, *Proceedings of the VLDB Endowment (PVLDB) Journal, 16(5), 2023.*

2022   [3] "A design space for RDF data representations",
Tomer Sagi*, **Matteo Lissandrini***, Torben Bach Pedersen, Katja Hose, *International Journal on Very Large Data Bases (VLDBJ) (2022) 27(1).*

[4] "A foundation for spatio-textual-temporal cube analytics",
Mohsin Iqbal, **Matteo Lissandrini**, Torben Bach Pedersen, *Information Systems (2022).*

2021   [5] "Data Citation and the Citation Graph",
Peter Buneman, Dennis Dosso, **Matteo Lissandrini**, Gianmaria Silvello, *Quantitative Science Studies Journal (QSS) (2021).*

[6] "A core ontology for modeling life cycle sustainability assessment on the Semantic Web",
Agneta Ghose*, **Matteo Lissandrini***, Emil Riis Hansen, Bo Pedersen Weidema, *Journal of Industrial Ecology (JIE) (2021).*

2019   [7] "Mining Patterns In Graphs With Multiple Weights",
Giulia Preti, **Matteo Lissandrini**, Davide Mottin, Yannis Velegrakis, *Distributed and Parallel databases (DAPD) journal, invited article on selected EDBT papers, 2019 .*

2018   [8] "Beyond Macrobenchmarks: Microbenchmark-based Graph Database Evaluation ",
Matteo Lissandrini*, Martin Brugnara*, Yannis Velegrakis, *Proceedings of the VLDB Endowment (PVLDB) Journal, 12(4), 2018.*

2016   [9] "Exemplar Queries: A New Way of Searching",
Davide Mottin*, **Matteo Lissandrini***, Themis Palpanas, Yannis Velegrakis, *International Journal on Very Large Data Bases (VLDBJ) (2016) 25(6).*

2014   [10] "Unleashing the Power of Information Graphs",
Matteo Lissandrini*, Davide Mottin*, Dimitra Papadimitriou, Themis Palpanas, Yannis Velegrakis, *ACM SIGMOD Record 43(4), 2014.*

[11] "Exemplar Queries: Give me an Example of What You Need",
Davide Mottin*, **Matteo Lissandrini***, Themis Palpanas, Yannis Velegrakis, *Proceedings of the VLDB Endowment (PVLDB) Journal , 7(5), 2014.*

Conference papers

2023   [12] "Example-Driven Exploratory Analytics over Statistical Knowledge Graphs",
Matteo Lissandrini, Torben Bach Pedersen, Katja Hose, *Proceedings of the International Conference on Extending Database Technology, (EDBT) 2023.*

2022   [13] "SHACL and ShEx in the Wild: A Community Survey on Validating Shapes Generation and Adoption",
Kashif Rabbani, **Matteo Lissandrini**, Katja Hose *Proceedings of the World Wide Web Conference, (WebConf) 2022.*

[14] "Knowledge Graph Exploration Systems: are we lost?",
Matteo Lissandrini, Davide Mottin, Torben Bach Pedersen, Katja Hose *Proceedings of the Conference on Innovative Data Systems Research, (CIDR) 2022.*

2021	[15] "Estimating the extent of the effects of data quality through observations", Daniele Foroni, **Matteo Lissandrini**, Yannis Velegrakis, *Proceedings of the 37th IEEE International Conference on Data Engineering, (**ICDE**) 2021.*
	[16] "Optimizing SPARQL Queries using Shape Statistics", Kashif Rabbani, **Matteo Lissandrini**, Katja Hose, *Proceedings of the 24th International Conference on Extending Database Technology, (**EDBT**) 2021.*
2020	[17] "Transparent Integration and Sharing of Life Cycle Sustainability Data with Provenance", Emil Riis Hansen, **Matteo Lissandrini**, Agneta Ghose, Soren Lokke, Christian Thomsen, Katja Hose, *Proceedings of the International Semantic Web Conference, (**ISWC**) 2020.*
	[18] "MindReader: Recommendation over Knowledge Graph Entities with Explicit User Ratings", Anders Brams, Anders Jakobsen, Theis Jendal, **Matteo Lissandrini**, Peter Dolog and Katja Hose, *Proceedings of the Conference on Information and Knowledge Management, (**CIKM**) 2020.*
	[19] "Graph-Query Suggestions for Knowledge Graph Exploration", **Matteo Lissandrini**, Davide Mottin, Themis Palpanas, Yannis Velegrakis, *Proceedings of the World Wide Web Conference, (**WebConf**) 2020.*
	[20] "Personalized Page Rank on Knowledge Graphs: Particle Filtering is all you need!", Denis Gallo*, **Matteo Lissandrini***, Yannis Velegrakis, *Proceedings of the 23th International Conference on Extending Database Technology, (**EDBT**) 2020.*
2018	[21] "Multi-Example Search in Rich Information Graphs", **Matteo Lissandrini**, Davide Mottin, Themis Palpanas, Yannis Velegrakis, *Proceedings of the 34rd IEEE International Conference on Data Engineering, (**ICDE**) 2018.*
	[22] "Beyond Frequencies: Graph Pattern Mining in Multi-weighted Graphs", Giulia Preti, **Matteo Lissandrini**, Davide Mottin, Yannis Velegrakis, *Proceedings of the 21th International Conference on Extending Database Technology, (**EDBT**) 2018.*

Tutorials at international conferences

2020	[23] "Example-based Exploration: Exploring Knowledge through Examples", **Matteo Lissandrini***, Davide Mottin*, Themis Palpanas, Yannis Velegrakis, *Proceedings of the Extended Semantic Web Conference (**ESWC**), 2020.*
2019	[24] "Example-driven Search: a New Frontier for Exploratory Search", **Matteo Lissandrini***, Davide Mottin*, Themis Palpanas, Yannis Velegrakis, *Proceedings of ACM SIG International conference on Information Retrieval (**SIGIR**), 2019.*
	[25] "Exploring the Data Wilderness through Examples ", Davide Mottin*, **Matteo Lissandrini***, Themis Palpanas, Yannis Velegrakis, *Proceedings of ACM SIG International conference on Management of Data (**SIGMOD**), 2019.*
2017	[26] "New Trends on Exploratory Methods for Data Analytics", Davide Mottin*, **Matteo Lissandrini***, Themis Palpanas, Yannis Velegrakis, *Proceedings of the Conference on Very Large Databases (**PVLDB**), 10(12), 2017.*

Demonstrations

2023	[27] "SHACTOR: Improving the Quality of Large-Scale Knowledge Graphs with Validating Shapes", Kashif Rabbani, **Matteo Lissandrini**, Katja Hose, *In Companion of the 2023 International Conference on Management of Data (**SIGMOD**-Companion '23) 2021.*
2021	[28] "SOFOS: Demonstrating the Challenges of Materialized View Selection on Knowledge Graphs", Georgia Troullinou, Haridimos Kondylakis, **Matteo Lissandrini**, Davide Mottin, *Proceedings of ACM SIG International conference on Management of Data (**SIGMOD**) 2021.*
	[29] "The F4U System for Understanding the Effects of Data Quality", Daniele Foroni, **Matteo Lissandrini**, Yannis Velegrakis, *Proceedings of the 37th IEEE International Conference on Data Engineering (**ICDE**) 2021.*
2018	[30] "X2Q: Your Personal Example-based Graph Explorer", **Matteo Lissandrini**, Davide Mottin, Themis Palpanas, Yannis Velegrakis, *Proceedings of the Conference on Very Large Databases (**PVLDB**) 2018.*
2014	[31] "Searching with XQ: the eXemplar Query Search Engine", Davide Mottin*, **Matteo Lissandrini***, Themis Palpanas, Yannis Velegrakis, *Proceedings of ACM SIG International conference on Management of Data (**SIGMOD**), 2014.*

* equal contribution