

Silviu Maniu

CONTACT INFORMATION	LIG, bât. IMAG 150 place du Torrent Domaine Universitaire de Saint-Martin-d'Hères, France	<i>E-mail:</i> silviu.maniu@univ-grenoble-alpes.fr <i>Web:</i> http://silviu.maniu.info/
RESEARCH INTERESTS	Data management and mining: algorithms and data structures for uncertain and graph data, sequential learning, databases.	
CURRENT POSITION	Université Grenoble Alpes , Grenoble, France <i>Professor</i>	September, 2023 – present
	Research-wise, I am attached to the Laboratoire d'Informatique de Grenoble (LIG), a CNRS, Université Grenoble Alpes, and Grenoble INP joint research laboratory (UMR 5217). <ul style="list-style-type: none">• <i>Head</i>, DAISY team, since 2025. I am teaching in the IM2AG department of Université Grenoble Alpes.	
EDUCATION	Université Paris-Saclay , Orsay, France <i>HDR</i> , Computer Science, June 2022 <ul style="list-style-type: none">• Thesis title: "Graphs and Uncertainty" Télécom Paris , Paris, France <i>Ph.D.</i> , Computer Science, September 2009 - October 2012 <ul style="list-style-type: none">• Thesis title: "Data Management in Social Networks"• Advisors: Bogdan Cautis and Talel Abdessalem• Distinction: Très Honorable (honors) Main research areas: <ul style="list-style-type: none">• development of algorithms for efficient personalized information retrieval for today's social networks, containing millions of users,• extraction and analysis of the first large scale network of trust interactions between contributors of Wikipedia articles. Politehnica University , Timisoara, Romania <i>Dipl.-Ing.</i> , Computer Science, June, 2005 <ul style="list-style-type: none">• Thesis title: Framework for the formal verification of Java programs• Advisor: Marius Minea	
PREVIOUS POSITIONS	Université Paris Saclay , Orsay, France <i>Associate Professor</i>	September, 2015 – August, 2023
	Laboratoire Interdisciplinaire des Sciences du Numérique (LISN) and part of LaHDAK team. Teaching in the Computer Science department of the Faculty of Sciences. <ul style="list-style-type: none">• <i>Deputy head</i>, LaHDAK team, 2022–2023. Inria , Paris, France <i>Visiting Researcher</i>	
		September, 2019 – August, 2020
	On a sabbatical year as an Inria <i>délégation</i> in the Valda team of ENS and Inria Paris, whose research focuses on foundational and system aspects of complex data management.	
	Huawei Noah's Ark Lab , Hong Kong <i>Researcher</i>	November, 2014 – August, 2015

Research in big data and distributed data mining in the Large-scale Data Mining and Machine Learning group.

The University of Hong Kong, Hong Kong

Postdoctoral Fellow

October, 2012 – October, 2014

Involved in research in the Databases group of the Computer Science department, supervised by Dr. Reynold C. K. Cheng.

- performing research in databases and the Web, with a focus on the management of uncertain data in large networks,
- supervising and assisting students at the M.Phil. and Ph.D. level in research topics related to crowdsourcing, link prediction in heterogeneous networks, and influence propagation in social networks.

Yahoo! Research, Barcelona, Spain *Research Intern*

June, 2012 – August, 2012

Involved in research in the Social Media Engagement group.

- analysis of the search behaviour of users of a popular photo sharing platform.

Télécom Paris, Paris, France *Teaching Assistant*

December, 2010 – June, 2012

Involved in computer lab exercises and project work.

- topics: Introduction to Databases, Advanced Databases, Web Engineering

Alcatel-Lucent, Timisoara, Romania / Paris, France / Stuttgart, Germany

Software Engineer

July, 2005 – August, 2009

Development and software integration projects in the area of customer billing and network management for several international telecommunications operators.

TEACHING

Université Grenoble Alpes, since 2023, 192 hours/year

- *Teaching Responsibilities:* Co-Head, M2 MoSiG (Master of Science in Grenoble), since 2024
- *Subjects:* databases (L3 Info, M1 MoSiG, M1 AM), data warehouses (M2 MIAGE)

Université Paris-Saclay, 2015—2023, 192 hours/year

- *Teaching Responsibilities:* Head, Master Data Science, 2020–2023; Co-head, M2 Data and Knowledge (U. Paris-Saclay) 2015–2019; Responsible, Master Cloud Computing and Services in the EIT MasterSchool (U. Paris-Sud) 2015–2019
- *M1/M2 Data Science:* courses Distributed Systems for Massive Data Management, Algorithms for Data Science, Graph and Social Data Management
- *M2 Data and Knowledge:* courses Complex Data and Knowledge, Uncertain Data Management
- *M1, L3, L2 Computer Science:* lectures and practical classes for Databases and Advanced Databases courses.

Télécom Paris, 2010—2012, 64 hours/year

- *INF225 Introduction to Databases:* teaching assistant, lab work,
- *INF345 Advanced Databases:* teaching assistant, lab work, project work,
- *ATHENS Web Search:* lab work.

University of Hong Kong, 2012—2014

- informal supervision of M.Phil. students (3 students) and Ph.D. students (2 students) with Dr. Reynold C.K. Cheng.

SELECTED
PUBLICATIONS

I have authored and published papers in the fields of social data management, uncertain data, big data mining, and crowdsourcing.

The full list, along with the full text of all my publications can be found at

<http://silviu.maniu.info/publications> ; a list with citations is available at
<https://scholar.google.com/citations?user=dZqFyeMAAAAJ>.

A. Iacob, B. Cautis, S. Maniu. Sequential Learning Algorithms for Contextual Model-Free Influence Maximization. 2023. *ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)*.

Y. Ramusat, S. Maniu, P. Senellart. Provenance-Based Algorithms for Rich Queries over Graph Databases. 2021. *International Conference on Extending Database Technology (EDBT)*.

P. Lagrée, O. Cappé, B. Cautis, S. Maniu. Algorithms for Online Influencer Marketing. 2019. *ACM Transactions on Knowledge Discovery from Data (TKDD)* 13(1).

S. Maniu, P. Senellart, S. Jog. An Experimental Study of the Treewidth of Real-World Graph Data. 2019. *International Conference of Database Theory (ICDT)*.

S. Maniu, R. Cheng, P. Senellart. An Indexing Framework for Queries on Probabilistic Graphs. 2017. *ACM Transactions on Database Systems (TODS)* 42(2).

S. Lei, S. Maniu, L. Mo, R. Cheng, P. Senellart. Online Influence Maximization. 2015. *Proc. ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)*.

C. Meng, R. Cheng, S. Maniu, P. Senellart, W. Zhang. Discovering meta-paths in large heterogeneous information networks. 2015. *Proc. International Conference on World Wide Web (WWW)*.

G. Gouriten, S. Maniu, P. Senellart. Scalable, generic, and adaptive systems for focused crawling. 2014. *Proc. ACM Hypertext Conference (HT)*. **Best Paper Award**

S. Maniu, B. Cautis. Network-aware search in social tagging applications: Instance optimality versus efficiency. 2013. *Proc. Conf. Information and Knowledge Management (CIKM)*.

PHD STUDENTS

Alexandra Iacob, “Scalable Model-Free Algorithms for Influencer Marketing”, Université Paris-Saclay, graduated in 2023, co-supervised with B. Cautis

Yann Ramusat, “The Semiring-Based Provenance Framework for Graph Databases”, École Normale Supérieure, graduated in 2022, co-supervised with P. Senellart

Maroua Bahri, “Improving IoT data stream analytics using summarization techniques”, Télécom Paris, graduated in 2020, co-supervised with A. Bifet

Jonathan Colin, Université Paris-Saclay, since 2022

Alan Gany, Université Paris-Saclay & CNRS, co-supervised with B. Cautis, since 2022

Lilia Izri, Université Paris-Saclay, co-supervised with B. Groz, since 2023

Aryak Sen, Université Grenoble Alpes, co-supervised with P. Senellart, since 2024

AWARDS

SIGWEB Douglas Engelbart Best Paper Award, at the ACM Hypertext 2014 conference.

GRANTS

Co-Investigator - Reliable Conversational Domain-specific Data Exploration and Analysis (**ARMADA**), EU Horizon-MSCA grant 101168951. 2025–2029.

Co-Investigator - Data Discovery Platform with Generalized Exploratory, Management, and Search

Capabilities (**DataGEMS**), EU Horizon-Infra grant 101188416. 2025–2027.

Principal Investigator WP 2.3 (Learning with Limited Resources) and **Co-Lead Principal Investigator** WP 2, CNRS@CREATE (Singapore) Program on Intelligent Modelling for Decision-making in Critical Urban Systems (**DesCartes**). 2022–2026.

Co-Investigator - Internet of Things Analytics. 2016–2019. Digcosme Emergence Grant, PI: A. Bifet. Amount EUR 153,800.

Co-Investigator - Discovering and Querying Meta-Graphs in Large Heterogeneous Information Networks. 2016–2019. Hong Kong GRF grant 17229116, PI: R. Cheng. Amount HKD 675,647.

Co-Investigator - Effective Noise Removal Algorithms for Ambiguous Databases. 2014–2015. HKU Internal Grant “Seed Funding Programme for Basic Research”, ref 201311159095. PI: R. Cheng. Amount HKD 47,900.

Co-Investigator - Query-Efficient Representations of Uncertain Graphs. 2013–2014. HKU Internal Grant “Seed Funding Programme for Basic Research”, ref 201211159083. PI: R. Cheng. Amount HKD 154,200.

Co-Investigator - Inferring Signed Networks in Wikipedia. 2012–2013. Amazon AWS in Education research grant. PI: B. Cautis. Amount USD 7,500.

Collaborator - French ANR project ALICIA 2015–2018. EU FP7 project ARCOMEM 2011–2013. French ANR project ISICIL 2009–2010.

SCIENTIFIC
SERVICE

PC member (at least once): WebConf, AAAI, KDD, PAKDD, IJCAI, ECML PKDD, CIKM, SUM, BDA, SIGMOD, SSDBM, DASFAA

Scientific Committees: Research Initiative in Industrial Data Science (U. Paris-Saclay) 2016.

Reviewer (at least once): Information Sciences; IEEE TKDE.

Guest co-Editor: DAPD Journal, Special Issue on Databases and Crowdsourcing.