Curriculum vitae

Bernd AMANN

July 2021

───────────────── **Civil Status** ─────────────────

Name and first name :	AMANN Bernd
Rank :	Professor
Institution :	Sorbonne Université (previously UPMC)
Date/place of birth :	29.11.1964 / Bludenz, Austria
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Professional Career and Degrees

───────────────── **Professional career** ─────────────────

since Sept 2004	Professor at the University Pierre and Marie Curie (Sorbonne University)
Sept 1994 - Sept 2004	Lecturer at the Conservatoire National des Arts et Métiers (CNAM), Paris
Oct 1997 - Sept 2004	External collaborator, INRIA-Rocquencourt
Sept 1993 - Aug 1994	ATER – Conservatoire National des Arts et Métiers (CNAM), Paris
Jan 1992 - Aug 1993	PhD Fellowship holder – INRIA Rocquencourt/CNAM
Sept 1990 - June 1991	Government scholarship holder Austrian government
Nov 1989 - April 1990	Analyst/Programmer, MC Software, Vienna (TU-Wien), Austria

───────────────── **Diplomas** ─────────────────

November 2003	*Habilitation to supervise research (HDR)*, From centralized sharing of web resources to controlled exchange of documents", 18/11/2003, Université Paris 6.
February 1994	*PhD Thesis*, Hypertext Interrogation, under the supervision of M. Scholl, 14/02/1994. CNAM/INRIA, CNAM, Paris

November 1988   *Engineer Diploma in Computer Science*, Technical University of Vienna, Austria

―――――――――――― **Responsibilities Sorbonne University** ――――――――――――

Sept 2014 - Sept 2019	*Co-responsible for the DAC course* of Master of Computer Science at Sorbonne University
Oct 2013 - Oct 2018	*Responsible for the DAPA department* of LIP6
since Oct 2013	*Responsible for the Databases team* of LIP6
jan 2010 - oct 2012	CNIL correspondent (CIL) for UPMC (Sorbonne University)

―――――――――――――― **Boards and Commissions** ――――――――――――――

since Dec 2015	Member of the Engineering UFR Council (919) of UPMC
since Oct 2013	Member of the Scientific Council of LIP6
2011 and 2012	Member of the Commission for the d'Investissement Recherche (PIR) of the UPMC
since Oct 2011	Member of the UPMC Expert Pool for Section 27
since May 2008	Member of the Scientific Council of the UFR of Engineering 919 of UPMC
May 2009 - Sept 2011	Member of the Content Thematic Commission of the Pôle CapDigital
Sept 2007 - Nov 2010	Member of the LIP6 Laboratory Council
May 2007 - Nov 2010	Member of the Department Council of the Bachelor of Computer Science of Paris 6
May 2005 - Nov 2007	Member of the Council of the Computer Science UFR of Paris 6
Sept 1999 - Sept 2004	Member of the Cedric-CNAM Laboratory Council
2001 - 2004	Member of the CSE of CNAM, Paris
2001 - 2004	External member of the CSE of Paris 6

―――――――――――――――――― **Education** ――――――――――――――――――

My teaching load is divided in a balanced way between the Bachelor and the Master Curriculum in Computer Science at Sorbonne Université. From 2014 to 2019 I was co-responsible of the Master DAC program.

Bachelor

— since Oct 2014 : Database Management Systems (3I009, L3), TD lecturer (1 group)
— since Oct 2014 : Introduction to relational databases (2I009, L2), teaching assistant.
— 2004-2014 : Databases (LI341, L3), lecturer and tutor, 8 groups 8 TD groups, 150 to 200 students.
  2004-2008 : Introduction to imperative programming in C (L2), lecturer (20H), 500 students.

Master

— since 2020 : Advanced Database Models and Languages (M1), course leader and lecturer, 90 students.
— since 2014 : Symbolic Learning and Semantic Web (M2), responsible and lecturer, 25 students.
— 2010-1015 : Master Erasmus Mundus Data Mining & Knowledge Management (DMKM), lecturer Advanced Databases (20h), XML part, 15 students

— 2008-2014 : Database tools for artificial intelligence (M2), lecturer, 50 students.
— 2008-2014 : Multi-dimensional databases (M2), lecturer (10H), responsible for UE, 25 students (former IAD speciality).

Other Training

— Training of Secondary School Teachers in Computer Science
— Machine Learning and Artificial Intelligence, Formation Continue Sorbonne Université, `https://formationmachinelearning.lip6.fr/`

―――――――――― **Research Topics** ――――――――――

I have been leading the Database team of the LIP6 laboratory since 2014. The main research topics of the LIP6 Database research team concern data management and query processing in distributed environments. In this context, we studies optimal and scalable data processing solutions using data distribution and replication, indexing and other physical, logical and/or semantic optimization techniques. Our research contributions are focused on the second research axis LIP6 "Data Science, Artificial Intelligence and Optimization".

My research area is the access and management of complex, distributed and evolving information. My research is driven by various application domains (data science, web archives, social media, web advertising) and related research contracts (ANR, CIFRE, Europe, FUI) are mainly used to recruit students. Another important motivation is to establish national and international scientific collaborations and to collaborate with industrial partners to understand current important practical challenges and to validate our research solutions.

Modeling and Querying Science Evolution :   There is an increasing demand for practical tools to explore the evolution of scientific research published in bibliographic archives such as the Web of Science (WoS), arXiv, PubMed or ISTEX. Revealing meaningful evolution patterns from these document archives has many applications and can be extended to synthesize narratives from datasets across multiple domains, including news archives, legal document archives and works of literature. In [C-LNA20a], we propose a data model and query language for the visualization and exploration of topic evolution graphs. Our model is independent of a particular topic extraction and alignment method and proposes a set of semantic and structural metrics for characterizing and filtering meaningful topic evolution patterns. These metrics are particularly useful for the visualization and the exploration of large topic evolution graphs. This work is part of the ANR EPIQUE project (`https://iscpif.fr/epique/`)

Discovering and Merging Related Analytic Datasets :   The production of analytic datasets is a significant big data trend and has gone well beyond the scope of traditionalIT-governed dataset development. Analytic datasets are now created by data scientists and data analysts using bigdata frameworks and agile data preparation tools. However, despite the profusion of available datasets, it remains quitedifficult for a data analyst to start from a dataset at hand and customize it with additional attributes coming from otherexisting datasets. [J-Liu+20] describes a model and algorithms that exploit automatically extracted and user-definedsemantic relationships for extending analytic datasets with new atomic or aggregated attribute values. Our frameworkis implemented as a REST service in SAP HANA and includes a careful theoretical analysis and practical solutions forseveral complex data quality issues.

Distributed SPARQL query processing :   RDF has become a standard format for publishing and integrating data and knowledge on the Web. The resulting Linked-Open-Data cloud continues to grow and implementing efficient SPARQL query processors is a challenging problem. To achieve scalability, we

propose to leverage the MapReduce data parallelism implemented in the Apache Spark platform. We define a cost model that allows choosing between two standard distributed join operators (partitioned and join) implemented on top of different Spark data layers. Our experimental results show that hybrid join designs combining these two operators yield significant performance improvements. Related publications : [O-Cur+15a ; C-Cur+15b ; C-NAC17].

Semantic integration of IoT data :   The objective of the EBITA projectg (2014-2017) was to explore business and research opportunities between Fraunhofer (Germany) and UPMC regarding semantic data technologies developed in the DAPA department and the Fraunhofer Institute at IOSB in Karlsruhe. During the two years of the project, the team temporarily hosted the project leader (V. Tippmann) and two research engineers. EBITA also allowed us to fund an ongoing PhD on IoT semantic data enrichment and integration (F. Hannou). Taking as a starting point the data generated by thousands of sensors on the Jussieu campus, the objective is to develop new methods of data preparation and integration combining raw sensor data and contextual information to enable high-level semantic data mining and analysis. Related publications : [C-HAB19d ; C-HAB19b ; C-HAB19c]

Continuous data flows and queries :   The Web produces continuous streams of text items published as RSS news, tweets, blog posts, etc. Users can subscribe to these feeds by defining queries that continuously filter and rank the most recent information. A major challenge is then to efficiently process millions of these subscription requests on high speed input streams. As part of the ANR ROSES project (2008-2012) on RSS aggregation and filtering, we have worked on multi-query optimization   (PhD J. Creus [J-Cre+12]), on efficient refresh strategies for dynamic RSS feeds (PhD R. Horincar in collaboration with the MLIA team [J-HAA15 ; C-HAA12]) and on continuous top-k query processing (PhD N. Vouzoukidou in collaboration with ICS-Forth, Crete [C-VAC14 ; C-VAC12 ; O-VAC16]).

Service and Data Quality Models :   Many modern applications are defined by specialized web service compositions to process and produce complex data. complex data. In some domains, such as scientific data scientific data processing chains or web data, the choice of services (and the parameters used) can strongly influence the quality influence the quality of the results obtained. We address the problem of estimating and improving workflows by taking into account quality of the data produced by the service calls. service calls. In [C-Car+14a ; C-Ama+13 ; C-Car+14b] we study the interaction between service quality and data quality models, their implementation and their application in the context of web data warehouse generation. data warehouses.

Research Contracts and Collaborations

— *CIFRE SAP, 2017-2021*, Automatic extension of analytical schemes, thesis Rutian LIU
— *ANR EPIQUE, 2016-2021*, *coordinator*, Reconstructing the evolution of science on a large scale ; The EPIQUE project concerns the analysis of the dynamics of evolutionary corpora and the automatic construction of "phylomemetic" theme networks (in analogy with family trees of natural species). The BD teams coordinate the project and are mainly interested in evolutionary problems.
— *FUI A.B.C.D., 2015-2017* : Advertising Big Collaborative Data
— *EBITA (Fraunhofer/Sorbonne University project), 2014-2016* semantic open IoT platforms. Two-year (2015-2016) Franco-German collaborative project between the Sorbonne University and UPMC and the Fraunhofer Institute.
— *ARESOS (MASTODONS action), 2012-2014* : Analysis of Large Networks Socio-semantic Networks. The ARESOS project focuses on the analysis of large socio-semantic networks. It is driven by researchers in sociology, mathematics, linguistics, and computer science. ARESOS has laid

the groundwork for the preparation of the ANR EPIQUE project with ISC and IRISA.

— *DIM AAP 2015 Complexes Transversales aux Systèmes*, 2015 - 2018, 102 kE Large-scale phylomic reconstruction for interdomain comparison of scientific evolution ; PhD S. Castillo.

— *SIGNALERT (direct collaboration), 2013–2015* : detection and validation of natural events by crowdsourcing

— *CIFRE Cassidian/Airbus, 2011-2015* : Evaluation and recommendation of service compositions (thesis C. Caron)

— *E.Dot (RNTL project, 2003 - 2006) :* tools for the construction of thematic XML warehouses.

— *MesMuses (European IST contract, 2000 - 2003) :* organization, structuring and presentation of technological and scientific knowledge scientific knowledge to the general public of a science museum (Metaphor for Science Museums).

— *C-Web (European IST contract, 1999) :* RDF platform for sharing of resources in web communities.

— *WIRE (ESPRIT project, 1996 - 1998) :* tools for the creation of a secured intranet.

Scientific Outreach and Animation

— *Invited presentation at the e-EGC Winter School (January 2017, Grenoble)*
— *Member of the steering committee of the GDR MADICS (since 2015)*
— *Keynote presentation at the WEBIST conference (April 2015, Lisbon)*
— *Invited presentation at the BDA thematic days (June 2014, Ile d'Oléron)*
— *Participation in the creation of the GDR MADICS (2013-2014)*
— *Chairs of conference sessions (EDBT, BDA) (January 2015)*
— *Member of the steering committee of the BDA community (since 2009)*
— *Organization of the CNRS Mastodons/ARESOS Workshop (Nov 2012)*
— *Organization of the National Conference on Advanced Databases (Nov 2020)*

Expertise and Reviews

Evaluation Committees , :
— *Member of the HCERES evaluation committee of the LIMOS laboratory* (dec 2020)
— *Member of the HCERES evaluation committee of the iCube laboratory* (Jan 2017)
— *Member of the jury CR2 INRIA Saclay* (Apr-May 2016)
— *Member of the HCERES evaluation committee of the Gepasud laboratory* (Feb 2016)
— *Member of the AERES evaluation committee of the LIG laboratory* (Dec 2014)
— *Member of the CNRS evaluation committee of the UMI LAFMIA* (Sep 2014)
— *Member of the AERES evaluation committee of the ESPACE-DEV laboratory* (Jan 2014)
— *Expert of evaluation of projects ANR (National Agency of Research)*
— Evaluator for the Paris Seine Initiative of Excellence (April 2018)

Member of program and review committees , :
— *Journal Editor :* TLDKS Special Issue - Advanced Data Stream Management and Continuous Query Processing, volume 8290 of LNCS. Springer, 2013.
— *International journal reviews* : IEEE Transactions on Knowledge and Data Engineering (TKDE), ACM Transactions on Database Systems (TODS),World-Wide Web Journal (WWWJ).
— International conference program committees : ADBIS (2021,2020, 2018, 2017), *CIKM* (2010,2009,2008), CoopIS (2007, 2005), DBKDA (2016), DEXA (2007), DIACHRON (2016), DSAA (2016), *EDBT* (2020,2017, 2016, 2014, 2011, 2010), ESWC (2016), ICCS (2021, 2020, 2016), ICDE (2016),

ICEIS (2009,2010) ISMIS (2015), ISWAG (2015), KMIS (2009,2010,2011),RED Workshop (2009,2008), SOFSEM (2014),*VLDB* (2018), VLDB/PhD Workshop (2009), WISE (2019), WOD (2013)
— National Conferences : EGC and BDA (PC chair in 2009).

PhD Thesis Supervision

— Li Ke, Topic Extraction and Alignment for Large Scientific Document Collections, co-supervised with Hubert Naacke, ANR EPIQUE project funding, March 2018-June 2021
— Liu Rutian, Semantic Services for Data Discovery and Transformation Support in a Context of Heterogeneous and Distributed Data Sources, co-supervised with Stéphane Gançarski and Eric Simon (SAP), CIFRE SAP thesis, Sept 2016- June 2021
— Samuel Castillo, Large scale phylomemy reconstruction for inter-domain comparison of sicence evolution, co-supervised with Hubert Naacke and David Chavalarias, January 2016 - December 2017 (ISC-PIF grant), Jan 2016 - Sept 2017 (abandoned)
— Fatma Hannou, Data curation for the internet of things, co-supervised with Amine Baazizi, October 2015 - January 2019.
— Nelly Vouzoukidou, Continuous top-k queries over real-time web streams, co-supervised with Vassilis Christophides (Univ. of Crete), September 2011 - June 2015.
— Clémént Caron (CIFRE EADS/Cassidian), Provenance and Quality in Data Oriented Workflows : Application to the WebLab Platform, CIFRE EADS/Cassidian thesis, co-supervised with Camelia Constantin, September 2011 - February 2014.
— Jordi Creus, ROSES : A continuous query engine for large-scale RSS feed aggregation, co-supervised with Dan Vodislav, September 2008 - December 2012. Horincar, Refresh Strategies and Online Change Estimation for Highly Dynamic Web Content, co-supervised with Thierry Artières, September 2008 - September 2012. documents that takes into account the information loss problem and integrates a
— Camelia Constantin : Ranking of services and data by their use. PhD thesis, Paris 6, co-supervised with D. Gross-Amblard, September 2004 - November 2007.
— Irini Fundulaki : XML Resource Integration and Query for Web Communities. Resources for Web Communities, PhD thesis, CNAM, co-supervised with with M. Scholl, January 1999 - January 2003.

Collaborations

— *AR2 Consulting* : collaboration with Antoine Rizk within the framework of a KYC (Know Your Client) project
— *SAP France* : collaboration with Eric Simon within the framework of a CIFRE thesis (R. Liu) on the quality of analytical requests
— *Université Paris-Est Marne-la-Vallée (UPEM)* : collaboration with Olvier Curé on the optimization of SPARQL queries
— *Fraunhofer IOSB (Karlsruhe, Germany)* : collaboration in the framework of a Fraunhofer-SU project on IOT (EBITA, thesis F.Z. Hannou)
— *SIGNALERT (PME, France)* : consulting and coaching on signaling and validation of natural events
— *University UNICAMP (Brazil)* : scientific collaboration with exchange of PhD students of Crete (Greece) : co-supervision of theses
— *University of Cergy-Pontoise* : co-supervision of theses

List of works and publications

Livres

[B-AL13]   **Amann, B.**, Lamarre, P., *Transactions on Large-Scale Data- and Knowledge-Centered Systems - Special Issue on Advanced Data Stream Management and Continuous Query Processing*. T. 8290. Lecture Notes in Computer Science. Springer, 2013. URL : `https://hal.archives-ouvertes.fr/hal-01221876`.

[B-AR02]   **Amann, B.**, Rigaux, P., *Comprendre XSLT*. Sous la dir. d'O'REILLY. Jan. 2002. URL : `https://hal.archives-ouvertes.fr/hal-01124704`.

Chapitres

[A-ACN18]   **Amann, B.**, Curé, O., Naacke, H., "Distributed SPARQL Query Processing : a Case Study with Apache Spark". In : *NoSQL Data Models : Trends and Challenges*. T. 1. Wiley, août 2018. URL : `https://hal.archives-ouvertes.fr/hal-02078524`.

[A-AG17]   **Amann, B.**, Grigori, D., "L'intégration de données massives, hétérogènes et distribuées". In : *Les Big Data à découvert*. Sous la dir. de CNRS EDITIONS. 2017, p. 104-105. URL : `https://hal.archives-ouvertes.fr/hal-01499373`.

[A-Ama14]   **Amann, B.** "XSLT". In : *Encyclopedia of Social Network Analysis and Mining*. Springer, 2014, p. 2432-2435. URL : `https://hal.archives-ouvertes.fr/hal-01221737`.

[A-Ama09]   **Amann, B.** "XSL/XSLT". In : *Encyclopedia of Database Systems*. Springer, 2009, p. 3676-3681. URL : `https://hal.archives-ouvertes.fr/hal-01294659`.

[A-ABN07]   **Amann, B.**, Benbernou, S., Nguyen, B., "Web services : Technology issues and foundations". In : *Web Data Management Practices : Emerging Techniques and Technologies*. IDEA Group Publishing, 2007, p. 244-267. DOI : `10.4018/978-1-59904-228-2.ch011`. URL : `https://hal.archives-ouvertes.fr/hal-00292902`.

[A-Ama06]   **Amann, B.** "Recherche d'information sur le web". In : *Encyclopédie des systèmes d'information*. Vuibert, 2006, p. 555-563. URL : `https://hal.archives-ouvertes.fr/hal-01337080`.

Journaux

[J-Liu+20]   Liu, R., Simon, E., **Amann, B.**, Gançarski, S., "Discovering and merging related analytic datasets". In : *Information Systems* 91 (juill. 2020), p. 101495. DOI : `10.1016/j.is.2020.101495`. URL : `https://hal.archives-ouvertes.fr/hal-02459098`.

[J-HAA15]   Horincar, R., **Amann, B.**, Artières, T., "Online refresh strategies for content based feed aggregation". In : *World Wide Web* 18.4 (juill. 2015), p. 913-947. DOI : `10.1007/s11280-014-0288-y`. URL : `https://hal.archives-ouvertes.fr/hal-01185362`.

[J-Col+13]   Collet, C., **Amann, B.**, Bidoit, N., Boughanem, M., Bouzeghoub, M., Doucet, A., Gross-
Amblard, D., Petit, J.-M., Hacid, M.-S., Vargas-Solar, G., "De la gestion de bases de
données à la gestion de grands espaces de données". In : *Revue des Sciences et Tech-
nologies de l'Information - Série ISI : Ingénierie des Systèmes d'Information* 18.4 (nov.
2013). http ://isi.revuesonline.com/article.jsp ?articleId=18839 - RSTI série ISI : Per-
sonnalisation, contexte et mobilité - ISBN : 9782746246256, p. 11-31. DOI : 10 .
3166/isi.18.4.11-31. URL : https://hal.archives-ouvertes.
fr/hal-00923534.

[J-Cre+12]   Creus, J., **Amann, B.**, Christophides, V., Travers, N., Vodislav, D., "RoSeS, un moteur
de requêtes continues pour la syndication RSS à large échelle". In : *Revue des Sciences
et Technologies de l'Information - Série ISI : Ingénierie des Systèmes d'Information*
17.5 (2012), p. 57-85. DOI : 10.3166/isi.17.5.57-85. URL : https://hal.
archives-ouvertes.fr/hal-00765315.

[J-CAG07]   Constantin, C., **Amann, B.**, Gross-Amblard, D., "Un modèle de classement de services
pour contribution et utilité". In : *Revue des Sciences et Technologies de l'Information
- Série ISI : Ingénierie des Systèmes d'Information* 12.1 (2007), p. 33-60. DOI : 10 .
3166/isi.12.1.33-60. URL : https://hal.archives-ouvertes.fr/
hal-01185364.

[J-Mil+05]   Milo, T., Abiteboul, S., **Amann, B.**, Benjelloun, O., Dang Ngoc, F., "Exchanging In-
tensional XML Data". In : *ACM Transactions on Database Systems* 30 (2005), p. 1-40.
URL : https://hal.archives-ouvertes.fr/hal-01124910.

[J-AFS00]   **Amann, B.**, Fundulaki, I., Scholl, M., "Integrating ontologies and thesauri for RDF
schema creation and metadata querying". In : *International Journal on Digital Libraries*
3.3 (2000), p. 221-236. DOI : 10.1007/s007990000037. URL : https://hal.
archives-ouvertes.fr/hal-00948932.

Conferences

[C-LNA20a]   Li, K., Naacke, H., **Amann, B.,** "EPIQUE : Extracting Meaningful Science Evolution
Patterns from Large Document Archives". In : *International Conference on Extending
Database Technology (EDBT)*. Copenhagen, Denmark, mars 2020. URL : https://
hal.sorbonne-universite.fr/hal-02444386.

[C-LNA20b]   Li, K., Naacke, H., **Amann, B.,** "Exploring the Evolution of Science with Pivot Topic
Graphs". In : *International Workshop on Big Data Visual Exploration and Analytics
BigVis at EDBT 2020*. Copenhague, Denmark, mars 2020. URL : https://hal.
sorbonne-universite.fr/hal-02459335.

[C-HAB19b]   Hannou, F.-Z., **Amann, B.**, Baazizi, M.-A., "Explaining Query Answer Completeness
and Correctness with Partition Patterns". In : *30th International Conference on Data-
base and Expert Systems Applications - DEXA 2019*. T. 11707. Lecture Notes in Com-
puter Science. Linz, Austria, août 2019, p. 47-62. DOI : 10.1007/978-3-030-
27618-8_4. URL : https://hal.sorbonne-universite.fr/hal-
02310582.

[C-HAB19c]   Hannou, F.-Z., **Amann, B.**, Baazizi, M.-A., "Exploring and Comparing Table Fragments
With Fragment Summaries". In : *Eleventh International Conference on Advances in
Databases, Knowledge, and Data Applications (DBKDA)*. Athènes, Greece : IARIA,
juin 2019, p. 31-38. URL : https://hal.sorbonne-universite.fr/hal-
02310651.

[C-HAB19d]   Hannou, F.-Z., **Amann, B.**, Baazizi, M.-A., "Query-Oriented Answer Imputation for Aggregate Queries". In : *Advances in Databases and Information Systems - 23rd European Conference, ADBIS 2019*. T. 11695. Lecture Notes in Computer Science. Bled, Slovenia : Springer, août 2019, p. 302-318. DOI : `10.1007/978-3-030-28730-6\_19`. URL : `https://hal.sorbonne-universite.fr/hal-02310571`.

[C-Naa+19]   Naacke, H., Li, K., **Amann, B.**, Curé, O., "Efficient similarity-based alignment of temporally-situated graph nodes with Apache Spark". In : *IEEE International Conference on Big Data, High Performance Big Graph Data Management, Analysis, and Mining*. Los Angeles, United States, déc. 2019. URL : `https://hal.sorbonne-universite.fr/hal-02444359`.

[C-NAC17]   Naacke, H., **Amann, B.**, Curé, O., "SPARQL Graph Pattern Processing with Apache Spark". In : *GRADES (Graph Data-management Experiences & Systems), Workshop, SIGMOD 2017*. Chicago, United States, mai 2017, p. 1-7. URL : `https://hal.archives-ouvertes.fr/hal-01502519`.

[C-NCA16]   Naacke, H., Curé, O., **Amann, B.,** "SPARQL query processing with Apache Spark". In : *Journées Bases de Données Avancées (BDA 2016)*. Poitiers, France, nov. 2016, p. 24-25. URL : `https://hal.archives-ouvertes.fr/hal-01447387`.

[C-Cur+15b]   Curé, O., Naacke, H., Baazizi, M.-A., **Amann, B.,** "On the Evaluation of RDF Distribution Algorithms Implemented over Apache Spark". In : *The 11th International Workshop on Scalable Semantic Web Knowledge Base Systems*. Bethlehem, Pennsylvania, United States, oct. 2015, p. 16-31. URL : `https://hal.archives-ouvertes.fr/hal-01214902`.

[C-Cur+15c]   Curé, O., Naacke, H., Randriamalala, T., **Amann, B.,** "LiteMat : A scalable, cost-efficient inference encoding scheme for large RDF graphs". In : *2015 IEEE International Conference on Big Data (Big Data)*. Santa Clara, CA, United States : IEEE, oct. 2015, p. 1823-1830. DOI : `10.1109/BigData.2015.7363955`. URL : `https://hal-upec-upem.archives-ouvertes.fr/hal-01740588`.

[C-GAS15]   Gomes Jr. L., **Amann, B.**, Santanchè, A., "Beta-Algebra : Towards a Relational Algebra for Graph Analysis". In : *The Workshops of the EDBT/ICDT 2015 Joint Conference (EDBT/ICDT)*. Brussels, Belgium, mars 2015, p. 157-162. URL : `https://hal.archives-ouvertes.fr/hal-01213298`.

[C-Car+14a]   Caron, C., **Amann, B.**, Constantin, C., Giroux, P., "WePIGE : The WebLab Provenance Information Generator and Explorer". In : *17th International Conference on Extending Database Technology, EDBT 2014*. Athens, Greece, mars 2014, p. 664-667. URL : `https://hal.archives-ouvertes.fr/hal-01217477`.

[C-Car+14b]   Caron, C., **Amann, B.**, Constantin, C., Giroux, P., Santanchè, A., "Provenance-Based Quality Assessment and Inference in Data-Centric Workflow Executions". In : *OTM 2014 Conferences - Confederated International Conferences : CoopIS, and ODBASE 2014*. T. 8841. Lecture Notes in Computer Science. Amantea, Italy, oct. 2014, p. 130-147. DOI : `10.1007/978-3-662-45563-0\_8`. URL : `https://hal.archives-ouvertes.fr/hal-01213301`.

[C-VAC14]   Vouzoukidou, N., **Amann, B.**, Christophides, V., "MeowsReader : Real-Time Ranking and Filtering of News with Generalized Continuous Top-k Queries". In : *ACM International Conference on Information and Knowledge Management (CIKM)*. Shanghai, China : ACM, nov. 2014, p. 2066-2068. DOI : `10.1145/2661829.2661851`. URL : `https://hal.archives-ouvertes.fr/hal-01215971`.

[C-Ama+13]   **Amann, B.**, Constantin, C., Caron, C., Giroux, P., "WebLab PROV : Computing fine-grained provenance links for XML artifacts". In : *BIGProv'13 Workshop (in conjunction with EDBT/ICDT)*. Gênes, Italy : ACM, mars 2013, p. 298-306. DOI : `10.1145/2457317.2457367`. URL : `https://hal.archives-ouvertes.fr/hal-01219732`.

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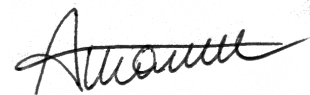
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