Sabeur Aridhi

October 31, 2023

Contents

Sabeur Aridhi

Associate Professor (Maître de conférences)
University of Lorraine, France

Personal Data

Address: LORIA, Campus Scientifique,
F54506 Vandoeuvre lès Nancy, France
Phone: +33 (0)3.83.95.86.46
email: sabeur [dot] aridhi [at] loria [dot] fr
home page: http://members.loria.fr/SAridhi/

Education

Jul. 2016 University diploma "Teaching in higher education"
ESPE, Blaise Pascal University, Clermont Ferrand, France

Nov. 2013 Ph.D. in Computer Science
Doctoral School of Engineering Sciences
Blaise Pascal University, Clermont Ferrand, France
Topic: Distributed frequent subgraph mining in the cloud
Advisors: Prof. Engelbert Mephu Nguifo, Dr. Laurent d'Orazio and Prof. Mondher Maddouri
Defense date: November 29, 2013
Distinction: Very Honorable

Mar. 2010 MSc in Computer science: Data, Knowledge and Distributed Systems
University of Jendouba, Jendouba, Tunisia
Topic: Feature extraction methods in grid computing environments
Internship: Data Mining Group, Blaise Pascal University, Clermont Ferrand, France
Distinction: Very Good - Valedictorian

Jul. 2008 BSc in Computer science
University of Carthage, Bizerta, Tunisia
Senior year thesis: Semantic Web service discovery
Distinction: Very Good - Valedictorian

Work Experience

From Sep. 2016 Associate professor
TELECOM Nancy, LORIA/Inria Nancy Grand Est

Dec. 2015-Aug. 2016 Postdoctoral Researcher
Machine Learning for Big Data Group (MLBigData)
Department of Computer Science, Aalto University, Helsinki, Finland
Topic: Machine learning and Big Data

Sep. 2014-Nov. 2015 Postdoctoral Researcher
Database and Information Management Group (dbTrento)
University of Trento, Trento, Italy
Topic: Distributed analysis of large dynamic graphs
Supervisors: Prof. Yannis Velegrakis and Prof. Alberto Montresor

Sep. 2013-Aug. 2014 Research Assistant
ISIMA, Blaise Pascal University, Clermont Ferrand, France

Jun. 2012-Aug. 2013 Research Engineer and Stand-in Research Assistant

	Blaise Pascal University, Clermont Ferrand, France
Jun. 2009-Nov. 2010	Research Internee LIMOS, Clermont Ferrand, France

Research Activities

4.1 Research Area

My research area include (but are not limited to): big data management and analytics, large-scale and distributed learning, distributed analysis of large and dynamic graphs, data partitioning as well as large-scale protein function annotation.

4.2 Publications

Books and Book Chapters

- Islam M.K., **Aridhi S.**, Smail-Tabbone M. (2022). From Competition to Collaboration: Ensembling Similarity-Based Heuristics for Supervised Link Prediction in Biological Graphs. In: Communications in Computer and Information Science, vol 1550. Springer, Cham.
- Lacomme P., **Aridhi S.** and Phan R. "Bases de données NoSQL et Big Data" (in French). Editor: *Ellipses*, ISBN-10: 2340002613.
- Zoghlami M., **Aridhi S.**, Maddouri M. and Mephu Nguifo E. An Overview of in Silico Methods for the Prediction of Ionizing Radiation Resistance in Bacteria. *In: Ionizing Radiation: Advances in Research and Applications, Physics Research and Technology Series*, ISBN: 978-1-53613-539-8, 2018.

Articles in International Journals

- Karabadji N.E.I., Korba A., Assi A., Seridi H., **Aridhi S.**, Dhifli W. Accuracy and Diversity-Aware Multi-Objective Approach for Random Forest Construction. *Expert Systems With Applications*, Elsevier, 225 (1), pp.120138, 2023.
- Islam K., Ramirez D., Maigret B., Devignes M.D., **Aridhi S.**, Smail-Tabbone M. Molecular-evaluated and explainable drug repurposing for COVID-19 using ensemble knowledge graph embedding. *Sci Rep 13, Nature*, 3643, 2023.
- Sarker B., Navya K., Devignes M.D. and **Aridhi S.**. Improving Automatic GO Annotation With Semantic Similarity. *BMC Bioinformatics*, 23 (S2), pp.433, 2022.
- Inoubli W., **Aridhi S.**, Mezni H., Maddouri M., Mephu-Nguifo E. A distributed and incremental algorithm for large-scale graph clustering. *Future Generation Computer Systems, Elsevier*, 134, pp. 334-347, 2022.
- Islam M.K., **Aridhi S.**, Smail-Tabbone M. Negative sampling and rule mining for explainable link prediction in knowledge graphs. *Knowledge-Based Systems (KBS)*, 109083, 2022.
- Veras M.B.A. , Sarker B., **Aridhi S.**, Gomes J.P, Macêdo J.F., Mephu Nguifo E., Devignes M.D., Smaïl-Tabbone M. On the design of a similarity function for sparse binary data with application on protein function annotation. *Knowledge-Based Systems*, 238, pp.107863, 2022.
- Islam M.K., **Aridhi S.**, Smail-Tabbone M. An Experimental Evaluation of Similarity-Based and Embedding-Based Link Prediction Methods on Graphs. *International Journal of Data Mining & Knowledge Management Process*, 11, pp.1 - 18, 2021.
- Mezni H., Sellami M., **Aridhi S.**, Ben-Charrada F. Towards big services: a synergy between service computing and parallel programming. *Computing*, 103 (11), pp.2479-2519, 2021.
- Sarker B., Ritchie D.W. and **Aridhi S.** GrAPFI: Predicting Enzymatic Function of Proteins From Domain Similarity Graphs. *BMC Bioinformatics*, 21, 168, 2020.

- Zoghlami M., **Aridhi S.**, Maddouri M. and Mephu Nguifo E. Multiple instance learning for sequence data with across bag dependencies. *International Journal of Machine Learning and Cybernetics*, 11, pp.629-642, 2020.
- The CAFA consortium. The CAFA challenge reports improved protein function prediction and new functional annotations for hundreds of genes through experimental screens. *Genome Biology*, 20 (1), 1-23, 2019.
- Le Berre C., Sandborn W. J., **Aridhi S.**, Devignes M.D., Fournier L., Smail-Tabbone M., Danese S., Peyrin-Biroulet L. Application of Artificial Intelligence to Gastroenterology and Hepatology. *Gastroenterology*, , 158 (1):76-94, 2020.
- Karabadji N.E.I., Khelf I., Seridi H., **Aridhi S.**, Remond D., Dhifli W. A Data Sampling and Attribute Selection Strategy for Improving Decision Tree Construction. *Expert Systems With Applications*, Elsevier, 129, pp. 84-96, 2019.
- H. Mezni, **Aridhi S.**, A. Hadjali. The Uncertain Cloud: State of the Art and Research Challenges. *International Journal of Approximate Reasoning*, Elsevier, 103, pp. 139-151, 2018.
- Inoubli W., **Aridhi S.**, Mezni H., Maddouri M., Mephu Nguifo E. An Experimental Survey on Big Data Frameworks. *Future Generation Computer Systems, Elsevier*, 86, pp. 546-564, 2018.
- Karabadji N., Beldjoudi S., Seridi H., **Aridhi S.**, Dhifli W. Improving Memory Based User Collaborative Filtering with Evolutionary Multi-Objective Optimization. *Expert Systems With Applications (ESWA), Elsevier*, 98, pp.153-165, 2018.
- **Aridhi S.**, A. Montresor, Y. Velegrakis. BLADYG: A Graph Processing Framework for Large Dynamic Graphs. *Big Data Research (BDR), Elsevier*, 9(C), pp. 9-17, 2017.
- Dhifli W., **Aridhi S.** and Mephu Nguifo E. MR-SimLab: Scalable Subgraph Selection with Label Similarity for Big Data. *Information Systems, Elsevier*, 2017, 69, pp. 155-163, 2017.
- Karabadji N., Seridi H., Bousetouane F., Dhifli W., **Aridhi S.** An Evolutionary Scheme for Decision Tree Construction. *Knowledge-Based Systems (KBS), Elsevier*, 116, pp. 166-177, 2017.
- **Aridhi S.** and Mephu Nguifo E. Big Graph Mining: Frameworks and Techniques. *Big Data Research (BDR), Elsevier*, 6, pp. 1-10, 2016.
- **Aridhi S.**, Sghaier H., Zoghlami M., Maddouri M. and Mephu Nguifo E. Prediction of ionizing radiation resistance in bacteria using a multiple instance learning model. *Journal of Computational Biology (JCB)*, 23(1), pp. 10-20, 2016.
- **Aridhi S.**, Lacomme P., Ren L. and Vincent B. A MapReduce-based approach for shortest path problem in large-scale networks. *Engineering Applications of Artificial Intelligence, Elsevier*, 41, pp. 151-165, 2015.
- **Aridhi S.**, d'Orazio L., Maddouri M., Mephu Nguifo E. Density-based data partitioning strategy to approximate large-scale subgraph mining. *Information Systems, Elsevier*, 48, pp. 213-223, 2015.
- **Aridhi S.**, d'Orazio L., Mephu Nguifo E. Un partitionnement basé sur la densité de graphe pour approcher la fouille distribuée de sous-graphes fréquents. *Technique et Science Informatiques*, 33(9-10), pp. 711-737, 2014.

Articles in Peer-Reviewed International Conferences

- Sellami A., Sarker B., Smail-Tabbone M., Devignes M.D., **Aridhi S.** A Semi-supervised Graph Deep Neural Network for Automatic Protein Function Annotation. *International Work-Conference on Bioinformatics and Biomedical Engineering (IWBBIO)*, Gran Canaria, 2022.
- Islam K., **Aridhi S.**, Smail-Tabbone M. Simple negative sampling for link prediction in knowledge graphs. *Proceedings of the 10th International Conference on Complex Networks and Their Applications*, Madrid, 2021.
- Islam K., **Aridhi S.**, Smail-Tabbone M. Appraisal Study of Similarity-Based and Embedding-Based Link Prediction Methods on Graphs. *10th International Conference on Data Mining & Knowledge Management Process (CDKP 2021)*, Jul 2021, London, United Kingdom. pp.81-92.

- Islam K., **Aridhi S.**, Smail-Tabbone M. A comparative study of similarity-based and GNN-based link prediction approaches. *In Proceedings of the International Workshop on Graph Embedding and Mining (GEM) in conjunction with ECML-PKDD 2020*, Ghent, Belgium.
- Sarker B., Ritchie D.W. and **Aridhi S.** Functional Annotation of Proteins using Domain Embedding based Sequence Classification. *Proceedings of the 11th International Conference on Knowledge Discovery and Information Retrieval (KDIR 2019)*, Vienna, 2019.
- Zoghlami M., **Aridhi S.**, Maddouri M. and Mephu Nguifo E. A Structure Based Multiple Instance Learning Approach for Bacterial Ionizing Radiation Resistance Prediction. In *Proceedings of the 23rd International Conference on Knowledge-Based and Intelligent Information & Engineering Systems (KES 2019)*, Budapest, 2019.
- Sarker B., Ritchie D.W. and **Aridhi S.** Exploiting Complex Protein Domain Networks for Protein Function Annotation. *Proceedings of the 7th International Conference on Complex Networks and Their Applications*, Cambridge, 2018.
- Sarker B., Ritchie D.W. and **Aridhi S.** GrAPFI: Graph Based Inference for Automatic Protein Function Annotation. *17th European Conference on Computational Biology (ECCB)*, Athens, Greece, 2018. (poster)
- Alborzi S.Z., **Aridhi S.**, Ritchie D.W. and Devignes M.D. PPI DomainMiner: predicting domain-domain interactions from protein-protein interactions using tripartite graph modeling and vector similarity. *17th European Conference on Computational Biology (ECCB)*, Athens, Greece, 2018. (poster)
- Inoubli W., **Aridhi S.**, Mezni H., Maddouri M. and Mephu Nguifo E. A Comparative Study on Streaming Frameworks for Big Data . *Proceedings of the Latin America Data Science Workshop co-located with 44th International Conference on Very Large Data Bases (VLDB 2018)*, Rio de Janeiro, Brazil, Aug 27, 2018.
- Inoubli W., **Aridhi S.**, Mezni H., Maddouri M. and Mephu Nguifo E. An Experimental Survey on Big Data Frameworks. *Extremely Large Databases Conference (XLDB)*, 2017. **(Lightning talk, poster)**
- Inoubli W., Almada L., Coelho da Silva T.L., Coutinho G., Peres L., Magalhaes R.P., de Macedo J.F., **Aridhi S.**, Mephu Nguifo E. A Distributed Framework for Large-Scale Time-Dependent Graph Analysis. *Large-Scale Time Dependent Graphs (TD-LSG) in conjunction with ECML-PKDD*, Skopje, Macedonia, 2017.
- **Aridhi S.**, Alborzi S.Z., Tabbone M.S., Devignes M.D. and Ritchie D.W. Neighborhood-Based Label Propagation in Large Protein Graphs. *Function SIG@ISMB-ECCB*, Prague, Czech Republic, 2017.
- Alborzi S.Z., **Aridhi S.**, Devignes M.D., Saidi R., Renaux A., Martin M.J. and Ritchie D.W. Automatic Generation of Functional Annotation Rules Using Inferred GO-Domain Associations. *Function SIG@ISMB-ECCB*, Prague, Czech Republic, 2017.
- **Aridhi S.**, Sghaier H., Zoghlami M., Maddouri M. and Mephu Nguifo E. Prediction of ionizing radiation resistance in bacteria using a multiple instance learning model. In *Proceedings of the 2nd International Workshop on Advances in Bioinformatics and Artificial Intelligence: Bridging the Gap (BAI'16) @ IJCAI'16*, New York, USA. **(Highlight paper)**
- **Aridhi S.**, Brugnara M., Montresor A., Velegrakis Y. Distributed k-core decomposition and maintenance in large dynamic graphs. In *Proceedings of the 10th ACM International Conference on Distributed and Event-based Systems (DEBS '16)*, pp. 161-168, Irvine, USA, 2016.
- **Aridhi S.**, Montresor A., Velegrakis Y. BLADYG: A novel block-centric framework for the analysis of large dynamic graphs. *Proceedings of the High Performance Graph Processing Workshop HPGP@HPDC*, pp. 39-42, Kyoto, Japan, 2016.
- Sakouhi C., **Aridhi S.**, Guerrieri A., Sassi S., Montresor A. DynamicDFEP: A distributed edge partitioning approach for large dynamic graphs. In *Procedings of the 20th International Database Engineering & Applications Symposium, (IDEAS'16)*, pp. 142-147, Montreal, Canada, 2016.

- Karabadji N., **Aridhi S.**, Seridi H. A Frequent Closed Connected Subgraph Mining Algorithm in Unique Edge Label Graphs. *International Conference on Machine Learning and Data Mining (MLDM)*, pp 43-57, New York, USA, 2016.
- **Aridhi S.**, d'Orazio L., Maddouri M. and Mephu Nguifo E. Cost models for pattern mining in the cloud. In *Proceedings of the* 9th *Conference on Big Data Science and Engineering*, pp.112-119, Helsinki, Finland, 2015.
- **Aridhi S.**, Vincent B., Lacomme P. and Ren L. Shortest Path Resolution Using Hadoop. In *Proceedings of the* 10th *International Conference on Modeling, Optimization and Simulation (MOSIM)*, Nancy, France, 2014.
- **Aridhi S.**, Maddouri M., Sghaier H., and Mephu Nguifo E. Computational phenotype prediction of ionizing-radiation-resistant bacteria with a multiple-instance learning model. In *Proceedings of the* 12th *International Workshop on Data Mining in Bioinformatics (BioKDD)*. ACM, New York, NY, USA, 18-24, 2013.
- Saidi R., **Aridhi S.**, Maddouri M. and Mephu Nguifo E. Feature extraction in protein sequence classification: a new stability measure. In *Proceedings of the ACM Conference on Bioinformatics, Computational Biology and Biomedicine (BCB)*. ACM, New York, NY, USA, 683-689, 2012.
- Saidi R., **Aridhi S.**, Maddouri M. and Mephu Nguifo E. Etude de stabilité de méthodes de sélection de motifs à partir des séquences protéiques. In *Proceedings of Extraction et Gestion des Connaissances (EGC)*. RNTI-E-19, 703-704, 2010.

Articles in Peer-Reviewed International Symposiums

- Arouri C., Mephu Nguifo E., **Aridhi S.**, Roucelle C., Bonnet-Loosli G., Tsopzé N. Towards a constructive multilayer perceptron for regression task using non-parametric clustering. A case study of Photo-Z redshift reconstruction. *European Week of Astronomy and Space Science (EWASS 2017)*, Prague, Czech republic, 2017.
- **Aridhi S.**, Sghaier H., Maddouri M. and Mephu Nguifo E. Domain knowledge-based model for phenotype prediction of ionizing-radiation-resistance in bacteria. *ISCB Student Council Symposium 2014 meeting*, Strasbourg, 2014.
- **Aridhi S.**, d'Orazio L., Maddouri M. and Mephu Nguifo E. A novel MapReduce-based approach for distributed frequent subgraph mining. *Machine Learning and Data Analytics Symposium (MLDAS)*, Doha, 2014.
- **Aridhi S.**, Sghaier H., Maddouri M. and Mephu Nguifo E. Computational phenotype prediction of ionizing-radiation-resistant bacteria with a multiple-instance learning model. *ISCB Student Council Symposium meeting*, Berlin, 2013. (poster)
- **Aridhi S.**, Sghaier H., Maddouri M. and Mephu Nguifo E. *in silico* phenotype prediction of ionizing-radiation-resistant bacteria by extraction of discriminative motifs. *ISCB Student Council Symposium meeting*, Vienna, 2011. (poster)

Articles in Peer-Reviewed French Conferences

- Karabadji N., Seridi H., Korba A.A., **Aridhi S.** and Dhifli W. Optimisation Collective d'Arbres de Décision dans une Forêt Aléatoire. *36-èmes journées de la conférence "Gestion de Données – Principes, Technologies et Applications" (BDA 2020)*, Virtual.
- Inoubli W., **Aridhi S.**, Mezni H., Maddouri M., Mephu Nguifo E. Un algorithme distribué pour le clustering de grands graphes. *Extraction et Gestion des Connaissances (EGC 2020)*, Bruxelles, Belgique.
- Inoubli W., **Aridhi S.**, Mezni H., Maddouri M., Mephu Nguifo E. An Experimental Survey on Big Data Frameworks. *34-èmes journées de la conférence "Gestion de Données – Principes, Technologies et Applications" (BDA 2018)*, Bucarest, Romania.
- Zoghlami M., **Aridhi S.**, Maddouri M., Mephu Nguifo E. A multiple instance learning approach for sequence data with across bag dependencies. *Rencontres des Jeunes Chercheurs en Intelligence Artificielle (RJCIA)*, Nancy, France, 2018.

- **Aridhi S.**, Vincent B., Lacomme P. and Ren L. Taking advantages of the MapReduce paradigm in one hadoop cluster for conception of efficient optimization method. *Workshop on Big Spatial Data*, Orléans, France, 2014.
- Saidi R., Dhifli W., **Aridhi S.**, Agier M., Bronnier G., Debroas D., d'Orazio L., Enault F., Guillaume S. and Mephu Nguifo E. Protein classification in the case of large and many class datasets: A comparison with BLAST and BLAT. *Journées Ouvertes Biologie Informatique Mathématiques (JOBIM)*, Paris, France, 2011. (poster)
- **Aridhi S.**, Saidi R., Maddouri M. and Mephu Nguifo E. Étude paramétrique de la stabilité de méthodes de sélection de motifs à partir des séquences protéiques. *17ème Rencontres de la Société Francophone de Classification (SFC)*, Saint-Denis de la Réunion, France, pp 21-24, 2010.
- Saidi R., **Aridhi S.**, Agier M., Bronner G., Debroas D., d'Orazio L., Enault F., Guillaume S. and Mephu Nguifo E. Functional prediction in the scope of large-scale multi-class learning. *Journées Ouvertes en Biologie, Informatique et Mathématiques (JOBIM)*, Montpellier, France, 2010. (poster)

Theses

- **Aridhi S.** Distributed frequent subgraph mining in the cloud. *Ph.D. thesis*, Blaise Pascal University, France, November 2013.
- **Aridhi S.** Feature extraction methods in grid computing environments. *Master's thesis*, University of Jendouba, Tunisia, March 2010.

4.3 Research Projects

- **Project title:** IHU INFINY: Institut des maladies inflammatoires chroniques intestinales de Nancy
- **IHU Coordinator:** Laurent Peryin-Biroulet
- **Scientific coordinator at LORIA:** Sabeur Aridhi
- **Type:** ANR – Institut Hospitalo-Universitaire (IHU)
- **Period:** May 2023-May 2033
- **URL:** `https://ihu-nancy.org/`

- **Project title:** ML4CommunityStructure: Machine Learning and graph-based techniques to predict long-term bacterial CommunityStructure
- **Coordinator:** Sabeur Aridhi
- **Type:** Lorraine Université d'Excellence (LUE)
- **Period:** Dec. 2023-Dec. 2026

- **Project title:** TEMPOGRAPHS: Analyzing big data with TEMPOral GRAPHS and machine learning
- **Coordinator:** Sabeur Aridhi
- **Type:** PRC CNRS-INRIA/FAPs
- **Period:** Mar. 2018-Feb. 2021
- **URL:** `http://tempographs.loria.fr/`

- **Project title:** Large Evolving Graphs (LEG)
- **Coordinator:** Engelbert Mephu Nguifo
- **Type:** CNRS PEPS Blanc INS2I

- **Period:** Dec. 2016-Dec. 2018
- **URL:** `http://leg.isima.fr/`

- **Project title:** Large-Scale Time Dependent Graphs (LSTG)
- **Coordinator:** Engelbert Mephu Nguifo
- **Type:** France-Brazil Cooperation Project, PRC CNRS-FAPs
- **Period:** Jan. 2016-Dec. 2018
- **URL:** `http://projets.isima.fr/lstg/`

4.4 Scientific Supervision

I currently co-supervise 1 PhD student in computer science:

- Mohammed Khatbane, October 2023, co-advising (33%) with Yannick Toussaint and Cécile Mangavel: "Machine Learning and Graph-Based Techniques to Predict Long-Term Bacterial Community Structure".

Before this, I have had the pleasure of co-supervising 4 PhD students in computer science:

- Kamrul Islam, since November 2019, co-advising (50%) with Malika Smail-Tabbone: "Distributed link prediction in large complex graphs: application to biomolecule interactions"
  - **Actual position:** Associate professor, Jashore University of Science and Technology, Bangladesh
- Bishnu Sarker, November 2017 – April 2021, co-advising (50 %) with Dave Ritchie (Until Sep., 19) and Marie-Dominique Devignes (From Sep. 19): "Developing distributed graph-based approaches for large-scale protein function annotation and knowledge discovery"
  - **Actual position:** Assistant Professor of Computer Science and Data Science at Meharry Medical College, TN, USA
- Wissem Inoubli, September 2016 – January 2021, co-advising (30%) with Engelbert Mephu Nguifo, Haithem Mezni and Mondher Maddouri: "Mining and Analysis of Dynamic graphs: Case of graph clustering"
  - **Actual position:** Associate professor, University d'Artois, France
- Manel Zoghlami, September 2015 – December 2019, co-advising (40%) with Engelbert Mephu Nguifo (30), Mondher Maddouri (20%) and Amel Borgi (10): "Multiple instance learning approaches for ionizing-radiation-resistance prediction"
  - **Actual position:** Associate professor, University of Jendouba, Tunisia

Also, I have been involved in the supervision of several Master students during the last years:

- Mohammed Khatbane, 2021-2022, co-advising (50%) with Malika Smail-Tabbone: "link prediction in distributed knowledge graphs".
- Yan Leprun, 2021-2022, co-advising (30%) with Malika Smail-Tabbone and Pascal Moyal: "Apprentissage par renforcement pour des modèles de greffes d'organes".
- Hadia Jalil, 2020-2021, co-advising (30%) with Yannick Toussaint and Frédéric Borges: "Predicting long-term diversity in bacteria populations by graph-based machine learning approaches".
- Amal Stiti, 2019-2020, 100%: "Protein function annotation of large and distributed protein graphs".
- Navya Khare, 2018-2019, 100%: "Graph Based Automatic Protein Function Annotation Improved By Semantic Similarity".
- Zied Hermi, 2015-2016, co-advising (50%) with Haithem Mezni: "A Map-Reduce approach for frequent subgraph mining from large single graphs".
- Chayma Sakouhi, 2014-2015, co-advising (30%) with Alberto Montresor and Salma Sassi: "Partitioning of large and dynamic graphs".

- Takwa Ben Smida, 2013-2014, co-advising (30%) with Engelbert Mephu Nguifo and Sami Zghal: "Distributed frequent subgraph mining from large single graphs".
- Cyrine Arouri, 2013-2014, co-advising (20%) with Engelbert Mephu Nguifo, Roucelle Cecile and Bonnet-Loosli Gaelle: "Photo-Z redshift reconstruction using non-parametric clustering".

Teaching activities

September 2016 - now, TELECOM Nancy, University of Lorraine

- Databases (Lecture + Lab works)
- Data mining (Lecture + Lab works)
- Big Data Management (Lecture + Lab works)
- Big Data Hackathon (Event organization and supervision of students)

May 2016: "IEEE MOOC on Big Data for Smart Cities"

- **Institution:** IEEEx
- **Instructors:** Dr. Sabeur Aridhi and Pr. Yannis Velegrakis
- **Duration:** 4 weeks

2015-2016, Aalto University, Finland

- Convex Optimization for Big Data (Lecture, Master 1)

2014-2015, University of Trento, Italy

- Distributed Systems (Lecture, Master 1)
- Big Data (Lecture, Master 1)

2012-2013 and 2013-2014, Blaise Pascal University, France

- Databases (Lecture, Master 1)
- Advanced object programming (Lab works, Master 1)
- C programming language, (Lab works, Bachelor students)
- Data mining (Lab works, Master 2)
- Service Oriented Architecture (Lab works, Master 2)
- Functional programming (Lab works, Bachelor students)
- Data Structures and Algorithms (Lab works, Bachelor students)

Expertise and Community Service

Organization committees

- Advances in managing and mining Large Evolving Graphs (LEG) workshop @ ECML-PKDD 2019 (co-chair and co-organizer)
- Extraction et Gestion des Connaissances (EGC) 2019 (responsible of demonstration session)
- Advances in mining Large-Scale Time Dependent Graphs (TD-LSG) workshop @ VLDB 2018 (co-chair and co-organizer)
- Advances in mining Large-Scale Time Dependent Graphs (TD-LSG) workshop @ ECML PKDD 2017 (co-chair and co-organizer)

Program committees

- ICML Workshop on Computational Biology (WCB) 2019 to 2023
- Joint ICML and IJCAI Workshop on Computational Biology (WCB) 2018
- International Conference on Knowledge Discovery and Information Retrieval (KDIR) 2019

- Joint ICML and IJCAI 2018 Workshop on Computational Biology 2018
- Workshop on Advances in Mining Large-Scale Time Dependent Graphs (TD-LSG) @ VLDB 2018
- International Conference on Knowledge Discovery and Information Retrieval (KDIR) 2018
- Bioinformatics and Artificial Intelligence (BAI) workshop @ IJCAI 2017
- International Conference on Knowledge Discovery and Information Retrieval (KDIR) 2017
- Large-Scale Time Dependent Graphs (TD-LSG) workshop @ ECML PKDD 2017
- Workshop on IoT Systems Provisioning & Management for Context-Aware SmartCities (ISYCC 2017)

Reviewing committees

Regular reviewer for: Computing (COMP), Pattern Recognition Letters, Information Sciences (INS), Knowledge And Information Systems (KAIS), Information Systems (Inf. Sys.), International Journal of Pattern Recognition and Artificial Intelligence, Information Sciences (INS)

Editorials

I have been invited to write three editorials for presenting and summarising works presented at conferences and/or workshops I organised:

- Workshop on Large-Scale Time Dependent Graphs (TD-LSG 2018) co-located with the 44th International Conference on Very Large Data Bases (VLDB 2018)
- Workshop on Large-Scale Time Dependent Graphs (TD-LSG 2017) co-located with the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD 2017)
- International Workshop on Uncertainty in Cloud Computing (UCC 2017) co-located with the 28th International Conference on Database and Expert Systems Applications (DEXA 2017)

PhD examinations

- Marcelo Veras, Federal University of Ceará, Brazil, "On the design of similarity functions for binary data", June, 2022.
- Zekarias Tilahun Kefato, Universiy of Trento, "Network and Cascade Representation Learning Algorithms based on Information Diffusion Events" , 2019.
- Nasrullah Sheikh, Universiy of Trento, "Network Representation Learning with Attributes and Heterogeneity", 2019.

Project reviews

- Expert for ANR 2023
- Expert for ANR 2018
- Comité Français d'Évaluation de la Coopération Scientifique et Universitaire avec le Brésil (COFECUB) 2017