Chiheb-eddine BEN N'CIR

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Date of Birth: 07/06/1985 in Tunisia.

Affiliation: Assistant Professor at **ESEN, University of Manouba**

Manager of **MBDS Master, ESEN, University of Manouba**

Member of **LARODEC** Laboratory, University of Tunis.

Research domains : Machine Learning ; BigData ; Overlapping Clustering ; Text clustering ;Kernel methods;

Personal Pages: http://www.larodec.com/member/chercheurs_permanents/ben-ncir-chiheb-eddine

https://sites.google.com/site/benncirchihebb/home

https://scholar.google.com/citations?user=in6yvikAAAAJ&hl=fr

http://www.researcherid.com/rid/E-8340-2015

https://www.researchgate.net/profile/Chiheb_Eddine_Ben_Ncir

Languages: Fluent Arabic, Fluent French, Professional English.

Education

ISG, University of Tunis 2014 : Ph.D in Computer Science & Management

ISG, University of Tunis 2010 : (M.Sc) Degree in Computer Science & Management

ISG, University of Tunis 2008 : (B.Sc) Degree in Computer Science & Management

Experiences

Since September 2014 : Assistant-Professor in Computer Science, ESEN, University of Manouba

September 2014 – September 2015 : Assistant-Professor in Computer Science, FSEG, University of Sfax

September 2010 – June 2014 : Lecturer in Computer Science, ISG, University of Tunis

June 2009 – September 2010 : Business Intelligence Consultant, ODI.C .

Skills

Programming languages

- **Classic:** C/C++, Visual Basic, JAVA.
- **Web**: PHP, JSP,
- **Other**: R, Matlab.

Data mining and Machine Learning : Data Classification, Data clustering, Text Clustering, Data cleaning and filtering, linear regression, Principal component Analysis (tools : **Matlab, R, SPSS, Weka, Tanagra**).

Data Base Management Systems: ORACLE, SQL Server, MySQL.

Reporting: JasperReports, Jfreereports (Pentaho reporting), SQL Report.

Business Intelligence: QlikView, Microsoft reporting service, Microsot Analysis Service, Pentaho (ETL: Pentaho data integration; OLAP: mondrian/jipivot…), SpagoBI.

Ph.D and MSc Thesis

ISG, University of Tunis 2011-2014 : Ph.D in Computer science Science & Management
Title of the Thesis: Efficient k-means based methods for overlapping clustering.
Advisor: Dr. Nadia Essoussi, University of Tunis, Tunisia
Co-advisor: Dr. Guillaume Cleuziou, University of Orleans, France

ISG, University of Tunis 2019-2010: (M.Sc) in Computer Science & Management
Title: Classification recouvrante basée sur les méthodes de noyaux.
Advisor: Dr. Nadia Essoussi, University of Tunis, Tunisia
Co-advisor: Dr. Patrice Bertrand, University of Paris 6, France

Teaching (in French)

- Clustering and data analysis
- Programming with PHP
- Programming with JAVA
- Algorithmic and programming with C
- Enterprise Resources Planning (ERP)
- Operating systems

Talks in National and International Conferences

1. International Conference on **Extraction et Gestion des connaissances (EGC-2014)** Rennes,-France, 28-31 January 2014.
2. **Fifth Meeting on Statistics and Data Mining (MSDM 2014),** Djerba-Tunisia, 12-13 Mars 2014
3. **International Conference on Knowledge discovery and Information Retrival (KDIR 2013),** Vilamora-Portugal, 19-22 September 2013
4. International Conference on **Extraction et Gestion des connaissances (EGC-2013),** Toulouse-France,29 January -1 February 2013
5. **10 th Workshop on Complexe and Massive Data (FDC-2013),** Toulouse-France, 29 January 2013
6. **International Conference on computer applications and Technologies (ICCAT-2013),** Sousse-Tunisia, 20-22 January 2013
7. **Fourth Meeting on Statistics and Data Mining (MSDM 2013),** Hammamet-Tunisia, 13-15 Mars 2013
8. International Conference on **Extraction et Gestion des connaissances section Maghreb (EGC-Maghreb-2012),** Hammamet-Tunisia, 12-15 November 2012
9. **Third Meeting on Statistics and Data Mining (MSDM 2012),** Hammamet-Tunisia, 11-13 Mars 2012
10. **43 « Journée De Statistique » (JDS-2011),** Gammart-Tunisia, 23-26 Mai 2011

11. **International Conference on Knowledge discovery and Information Retrieval (KDIR 2010),** Valencia-ESP, 25-28 October 2010

12. **Second Meeting on Statistics and Data Mining (MSDM 2010),** Hammamet-Tunisia, 12-14 Mars 2010

Co-Advisor (with Dr. Nadia Essoussi)

Completed

Master Thesis (MSc)

1. Improvement of overlapping clustering with outliers detection. Amira Rezgui, **MSc** in Computer science. Oral defense in July 2013.

2. Identification of overlapping clusters with Non-Uniform density. Hela Masmoudi, **MSc** in Computer science. Oral defense in February 2014.

3. Overlapping clustering based on Densities and Distances. Manel Achour, **MSc** in Computer science. Oral defense in July 2015.

4. Overlap Regulation for Additive Overlapping Clustering Methods, Mohamed Ismail Maiza**, MSc** in Computer science**.** Oral defense in October 2015

In progress

Doctoral student dissertations (PhD):

5. Contributions to Big Data Analysis. Mohamed Aymen Ben Haj Kacem, **Ph.D** thesis under progress since December 2014.

6. Overlapping clustering methods for community detection, Mohamed Ismail Maiza, **Ph.D** thesis under progress since December 2016.

Master Thesis (MSc)

7. Abir Zayeni, Overlapping clustering methods for Big Data, **MSc** in Computer science under progress since February 2016.

8. Efficient evaluation of overlapping clusters. Farah Hamrouni, **MSc** in Computer science under progress since February 2016.

Member of organizing committee

- **MLBD 2015** «Machine Learning and Big Data 2015» (http://larodec.wixsite.com/mlbd).
- **MSDM 2014** «International meeting on statistics and data mining MSDM 2014» (http://www.tasa-online.com/?page=msdm14).

- **MSDM 2013** «International meeting on statistics and data mining MSDM 2013» (http://www.tasa-online.com/?page=msdm13).

Reviewing and PC member

- **Journal of Intelligent Systems,** (Impact Factor 2.05). Wiley Online Library http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1098-111X

- 16Th International Conference on **Information Processing and Management of Uncertainty in Knowledge-Based systems (IPMU 2016).** http://is.ieis.tue.nl/ipmu/ (IEEE)

- 8th International Conference on **Computational Collective Intelligence (ICCCI 2016)**, http://conferences.cwa.gr/iccci2016/ (Springer)
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- The First International Conference on **Digital Economy Emerging Technologies and Business Innovation (ICEDEC 2016)** http://www.aten.tn/ICDEc2016/index.php (IEEE)

- Third International conference on **Advanced Computing, Networking, and Informatics (ICACNI 2015).** http://www.icacni.com/reviewer-board (Springer)

Webmaster

- Webmaster of the LARODEC website. (http://www.larodec.com)

Software

DocCO: Software for learning non disjoint groups of documents based on Weka machine learning toolkit. It offers the possibility to make non disjoint clustering of documents using both vectorial and sequential representation (word sequence approach based on WSK kernel). **Web site**: http://sourceforge.net/projects/documentclustering/.

Weka4OC: Software for learning non disjoint groups based on Weka machine learning toolkit. It offers several learning methods, based on k-means, able to produce overlapping clusters. Weka4OC also contains an evaluation framework that calculates several external validation measures. The software also offers a visualization tool to discover overlapping groups. **Web site**: http://sourceforge.net/projects/overlappingclus/.

Publications

Journals with Impact Factor (Thomson Reuters)

[J1] BenN'Cir, C., Essoussi, N. and Limam, M. (**2015**) Kernel based learning methods to identify overlapping clusters with linear and nonlinear boundaries. *Journal of Classification,* Volume 32, Issue 2, pages 176-211. *Springer*

[J2] BenN'Cir, C. and Essoussi, N. (**2015**). Using Sequences of Words for Non-Disjoint Grouping of Documents. *International journal of Pattern Recognition and Artificial Intelligence, Volume 29 issue 03, pages 1-20.* Worldscientific.

[J3] BenN'Cir, C., Cleuziou,G. and Essoussi, N. (**2014**). Generalization of c-means for identifying non-disjoint clusters with overlap regulation. *International Journal of Pattern Recognition Letters, Volume 45, pages 92-98*. Elsevier

Other Journals

[J4] BenN'Cir, C. and Essoussi, N. (**2012**). Recognition of overlapping Patterns with Linear and Non-Linear Separations using Positive Definite Kernels. *International Journal of Computer Application (IJCA)*, Volume 56, pages 1-8.

Chapter book

[P1] BenN'Cir, C., Cleuziou, G. and Essoussi, N. (**2015**). Overview of partitional overlapping clustering methods. *Partitional Clustering Algorithm (PCA),* pp 245-275 -Springer. *ISBN= 978-3-319-09258-4*

International Conferences

[C1] Ben HajKacem, M-A., BenN'Cir, C. and Essoussi, N. **(2016).** An Accelerated MapReduce-based K-prototypes for Big Data. *In proceeding of 5th International Symposium "From Data to Models and Back (DataMod)*, LNCS, Vienna, Austria. Springer

[C2] Mohamed Ismael Maiza, Chiheb-Eddine Ben N'Cir and Nadia Essoussi, (**2016**). Overlap Regulation for Additive Overlapping Clustering Methods, In proceeding of *10th IEEE International Conference on Research Challenges in Information Science RCIS 2016, Grenoble, France. IEEE*

[C3] Ben HajKacem, M-A., BenN'Cir, C. and Essoussi, N. (**2015**). Parallel K-prototypes for Clustering Big Data. In proceeding of 7th *International Conference on Computational Collective Intelligence Technologies and Applications (ICCCI),* LNAI, madrid, Spain. Springer

[C4] Rezgui, A., BenN'Cir, C. and Essoussi, N. (**2014**). Overlapping clustering with outliers detection. *In Proceedings of the International Conference on Pattern recognition, Applications and Methods (ICPRAM)*, pages 279-286, Angers, France. SciTePress

[C5] BenN'Cir, C., Cleuziou,G. and Essoussi, N. (2014). Généralisation des k-moyennes pour produire des recouvrements ajustables. *In Proceedings of the International Conference on Extraction et Gestion des Connaissances (EGC)*, pages 221-232, Rennes, France.

[C6] Masmoudi, H., BenN'Cir, C. and Essoussi, N. (**2014**). Identification de classes non-disjointes ayants des densités différentes. *In Proceedings of the International Conference on Extraction et Gestion des Connaissances (EGC)*, pages 257-268, Rennes, France.

[C7] BenN'Cir, C. and Essoussi, N. (**2013**). Non-Disjoint Cluster Analysis with Non-Uniform Density. *In Proceedings of the International Conference on Mining Intelligence and Knowledge Exploration (MIKE)*, LNCS volume 8284, pages 100-111, Tamil Nadu, India. Springer

[C8] BenN'Cir, C. and Essoussi, N. (**2013**) On the Extension of k-means for Overlapping Clustering: Average or Sum of clusters' representatives ?. *In Proceedings of the International Conference on Knowledge Discovery and Information Retrieval (KDIR)*, pages 208-213, Vilamora, Portugal. *ScitePress*

[C9] BenN'Cir, C., Zenned, A. and Essoussi, N. (**2013**). Non-disjoint grouping of text documents based Word Sequence Kernel. *In Proceedings of the International Conference on Extraction et Gestion des Connaissances (EGC)*, pages 253-262, Toulouse, France.

[C10] BenN'Cir, C., Cleuziou,G. and Essoussi, N. (**2013**). Un modèle générique pour les k-moyennes à recouvrements ajustables. *In Proceedings of the 10 Workshop Fouille de données complexes* à la conférence *Extraction et Gestion des Connaissances (EGC 2013),* pages 81-92, Toulouse, France.

[C11] BenN'Cir, C., Cleuziou,G. and Essoussi, N. (**2013**). Detecting overlapping clustering with parameterizable overlaps, *In Proceedings of the IEEE International Conference on Computer Applications Technology (ICCAT)*, pages 1-6, Sousse, Tunisia. IEEExplore

[C12] BenN'Cir, C. and Essoussi, N. (**2011**). Classification Recouvrante Bassée sur les Méthodes à Noyau. 43 ème *Journées de statistiques, Société Francophone de Statistique, JDS 2011*, Gammart, Tunisia

[C13] BenN'Cir, C., Essoussi, N. and Bertrand, P. (**2010**). Kernel overlapping k-means for clustering in feature space. *In Proceedings of the International Conference on Knowledge discovery and Information Retrieval KDIR*, pages 250–256, Valencia, ESP. ScitePress

National Conferences

[C01] Masmoudi, H., BenN'Cir, C. and Essoussi, N. (**2014**). Identification of Overlapping Clusters with Uneven Density. *In Proceedings of the fifth Meeting on Statistics and Data Mining MSDM'14*, pages 16-23, Djerba, Tunisia.

[C02] Rezgui, A., BenN'Cir, C. and Essoussi, N. (**2014**). Improvement of Overlapping Clustering: Improved R-OKM. *In Proceedings of the fifth Meeting on Statistics and Data Mining MSDM'14,* pages 24-30, Djerba, Tunisia.

[C03] BenN'Cir, C. and Essoussi, N. (**2013**). Overlapping Clustering of Sequential Textual Documents. *In Proceedings of the fourth Meeting on Statistics and Data Mining MSDM'13,* pages 57-63, Hammamet, Tunisia.

[C04] BenN'Cir, C. and Essoussi, N.(**2012**). Improved overlapping k-means for detecting overlapping clusters. *In Proceedings of the third Meeting on Statistics and Data Mining MSDM'12, Hammamet, Tunisia*.

[C05] BenN'Cir, C., Cleuziou,G. and Essoussi, N. (**2012**). Identification of Overlapping Clusters with Small Overlaps. In Acts of the Third International Conference on Extraction et Gestion des Connaissances (EGC-Maghreb), Hammamet, Tunisia.

[C06] BenN'Cir, C., Essoussi, N.,and Bertrand, P.(**2010**). Overlapping clustering based on kernel similarity metric. *In Proceedings of the Second Meeting on Statistics and Data Mining MSDM'10*, pages 130-136, Hammamet, Tunisia.

References

- Professor **Mohamed Limam**, Dhofar University, Oman. E-mail: Limam@du.edu.om; mohamedmtlimam@gmail.com
- Professor **Olfa Nasraoui**, University of Louisville, USA. Emails: Olfa.Nasraoui@louisville.edu
- Professor **Nahla Ben Amor**, University of Tunis, Tunisia. E-mail: nahla.benamor@gmx.fr.

- Dr. **Nadia Essoussi**, ISG, University of Tunis, Tunisia. E-Mail: nadia.essoussi@isg.rnu.tn; nadia_ess09@hotmail.fr
- Dr. **Guillaume Cleuziou**, University of Orleans, France. E-Mail: guillaume.cleuziou@univ-orleans.fr