Curriculum Vitae
Short version - since 2012

Updated April, 2022

Bernard Espinasse

Married, 3 children.

Citizenship: French.

Languages: French (native), English, Spanish (notions).

Current position: Full Professor (Professeur des Universités – classe exceptionnelle 2) in Computer Sciences at the Aix-Marseille University (AMU), Marseille, France.

Teaching: Ecole Polytechnique Universitaire de Marseille (Polytech-Marseille) - School of Engineers.

Research: LIS UMR CNRS 7020 (Laboratory of Computer Sciences and Systems), a joint research laboratory of AMU and National Centre of the Scientific Research, Marseille, France.

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1. ACADEMIC FORMATION

- 1995 **Accreditation to Supervise Researches in Computer Sciences** (Habilitation à Diriger des Recherches en Sciences - HDR), Aix-Marseille University. Dissertation (in French) : « Contribution to Intelligent, Distributed and Cooperative Information System Engineering », May 1995.

- 1981 **PhD in Information System.** Supervisors: J-L. Le Moigne and B. Munier, GRASCE URA CNRS N°935 – Aix-Marseille University. Dissertation (in French) : « Autonomy and Organizationnal Intelligence : Theoretical Elements and Application to Information System Design ». July 1981.

- 1979 **Research Master** (DEA) in System Analysis and Economic Calculus, Aix-Marseille University.

- 1978 **MBA** (D.E.S.S. CAAE), I.A.E., Aix-Marseille University.

- 1977 **Diploma of Engineer**, Ecole Nationale Supérieure d'Arts et Métiers de Paris (ENSAM).

2. PROFESSIONAL EXPERIENCE

- 96 – present: **Full Professor** in Computer Sciences, Aix-Marseille Université (AMU). *Teaching* at the Ecole Polytechnique Universitaire de Marseille (Polytech-marseille). *Research* at the **LSIS UMR CNRS N°7296** laboratory from 2000 to 2018, leader of INCOD (Distributed Information and Knowledge) team from 1999 to 2008, from 2009 to 2013 leader of the OASIS team (Ontologies, Agents and Services based Information Systems). Since 2018, researcher at the **LIS UMR CNRS 7020** in the R2I team (Information Retrieval and Interactions), Data Sciences Pole.

- 87-96: **Associate Professor** in the Management Information System (MIS) department (MIAGE) of the Applied Economics Faculty, Aix-Marseille University. Research at the GRASCE URA CNRS N°935 (System Analysis and Economic Calculus).

- 88-95: **Scientific Director** of the Systémia Institute (Research and Development and Professional Training), Aix-en-Provence.

- 86-87: **Scientific Responsable** in research and training departement of IIRIAM (International Institut of Robotique et Artificielle Intelligence of Marseille).

- 83-87: **Associate Professor** in the MIS department of the Administration Sciences Faculty, Laval University (Québec – Canada).

- 81-83: **Project manager** in the computer department, COMEX Company (Marseille).

3. EXPERTISES

- Member of several local and French committees (including CNU - National Council of French Universities).
- Expert for French national research agency (ANR) on different research programs.

- Expert for Haut Conseil pour la Recherche et l'Enseignement Supérieur (HCERES) for several research laboratories evaluations.
- Expert for FCAR (Fonds pour la Formation de Chercheurs et l'Aide à la Recherche) for Canada request subsidies evaluation for Canadian researchers.
- Expert for MITACS for evaluation of Canadian researchers' projects for subvention.
- Expert for IRSTEA French Institute for projects evaluation in Decision Support Systems field.
- Expert for PEPS (Projets Exploratoires Premier Soutien) French program (2015).
- Expert for Franco-Brazilian COFECUB program (2014).
- Expert for Excellence Prime for some French Universities (2012 et 2014).
- Participation at several Selection Committee for recruitment of Professors for some French Universities.

4. INVITATIONS

- Invited by the University of Montréal, Département DIRO, Montréal (Canada), Sept. 2017 (Invitation of Pr. G. Lapalme).
- Invited by the University of Porto, LIAAD Lab., Nov. 2017 (Invitation of Pr. P. Brazdil and J. Cordeiro).
- Invited by the Federal University of Pernambuco (UFPE), Centro de Informática, and Federal University Rural of Pernambuco (UFRPE), Recife Brazil (one week in Summer 2007 and in Spring 2008) and a month in spring 2019.
- Invited by the Laval University, Québec (Canada) at the CENTOR lab. (CENtre de recherche sur la Technologie et l'Organisation Réseau for one week in 2000 and in 2004 (Invitation from Pr. Chaib Draa and Pr. S. D'Amours).

5. TEACHING

I mainly teach at the Ecole Polytechnique Universitaire de Marseille (EPUM/Polytech-Marseille). My teaching concerns Database Technology, Information and Decision Support Systems, Software Engineering, Artificial Intelligence, Multiagents Systems, Ontologies and Web semantic.

Syllabus and slides: https://pageperso.lis-lab.fr/bernard.espinasse/index.php/enseignements-teaching/

6. RESEARCH

1. OVERVIEW

I actively participated to the creation in 2000 of the LSIS UMR CNRS 6168 (Laboratoire des Sciences de l'Information et des Systèmes) research laboratory, an where I was team leader during 15 years. Since 2018, the two research laboratories in computer science of AMU, LSIS and LIF, have merged to give the **LIS** (Laboratoire d'Informatique et Systèmes). Currently I am researcher in the **LIS UMR CNRS 7020**, a laboratory of Aix-Marseille University (AMU), in the "Data Science" Pole. My research topics have evolved over time.

My research mainly concerns the proposition of models and software architectures for the design of information systems, adaptive and open Web, favoring the use of ontologies and / or software agents. Ontologies are declarative knowledge shareable, reusable in the design of SI, their architecture, their adaptation, their use. Software agents allow the development of distributed software architecture, scalable and adaptive, and executable models (simulation). Since 2012, my research is organized around two axis: *Text Mining* and *Decision Support.*

Text Mining Axis

Information extraction. Our work first concerned the use of statistical supervised learning techniques in automatic information extraction. We first used the BWI (Boosted Wrapper Induction) algorithm to perform information extraction from collected web pages (Agathe 2 system - 2012). Then we were interested in the use of ontologies in automatic text classification, in particular the interest of conceptualisation using the Rocchio method with the thesis of **S. Albitar** defended in 2013. Our work focused also on the combined use of ontologies and symbolic (or relational) supervised learning, by inductive logic programming (ILP) for the extraction of named entities and especially of (binary) relations between named entities. This led to the development of the OntoILPER system in the framework of **R. Lima** thesis defended in 2014. We continued this work with the use of "triple-store" in its implementation (Research Master thesis of **C.C. Ngo** and **D. Magdy**), and the use of ensemble methods to improve the learning process of the OntoILPER system. Finally, we were interested in the extraction of relations by deep learning, in particular by using a vector representation enriched by considering syntactic dependencies at the level of Word Embedding (Master's thesis of **R. Azcurra** and **A. Merad**). An application of this approach to the labelling of spatial roles related to walking trajectories is the subject of **A. Moussa** thesis. Still using deep learning, let us also mention the thesis of **M. Mallek** on the extraction and classification of relations according to the context in unstructured textual documents, and the thesis of **Y. Duperis** (with the Mooben&Roster compagny) on the development of a system to assist in the constitution of consortia of competent companies for a call for tenders with an approach based on language processing and ontologies.

Automatic summarization and text simplification. The thesis of **S. Lamsiyah** concerns unsupervised multi-document summarization based on deep learning, firstly in Generic Multi-Document Summarization (G-MDS) with a centroid approach and different sentence embedding representations, and secondly by exploiting transfer learning from BERT (Bidirectional Encoder Representations from Transformers) fine-tuning on natural language comprehension tasks for sentence representation learning. Concerning Query-Focused Multi-Document Summarization (QF-MDS), we propose an unsupervised extractive

method based on transfer learning from pre-trained sentence integration models (BM25 model) combined with the maximal marginal relevance criterion. Let us also mention the work on the search for coherence in extractive summarization, in particular with the work of the Brazilian master of **R. Garcia**, on a coherent single-document extractive summarization based on integer programming, and more recently, with the work of the Brazilian master of **P. Assis**, on the cohesive single-document extractive summarization based on the semantic representation AMR (Abstract Meaning Representation) of the text to be summarized. Finally, recently and in collaboration with linguists, we are interested in automatic text simplification, in particular with the thesis of **R. Hijazi** on syntactic simplification of texts based on the DMRS (Dependency Minimal Recursion Semantics) graph-based semantic representation and the rewriting of graphs.

Decision Support Axis

On this axis, our work focuses on the design of decision support systems by modeling (multi-modeling) and agent-oriented simulation, and data warehouses with ontology use. Our main contributions concern on the one hand the processes of elaboration and integration of these models in this context of multi-modeling, and on the other hand the implementation of these models in software architectures allowing to execute and integrate distributed simulations, with or without the use of ontologies. This work was first developed in the framework of the thesis of **A. Oulhaci** (2014) on participatory agent-based simulation in the resolution of conflicting collective problems and the training of crisis management stakeholders (Games serious - Serious games). We then turned our attention to the evaluation and adaptation of a serious game environment with the thesis of **I. Daoudi** (2020). In parallel with this work, with the thesis of **L. El Sarraj** (2014), we were interested in assisting the use of a health data warehouse by using ontologies linked to the data of the warehouses and existing operating resources, as part of a research conducted with the Public Assistance of Marseilles Hospitals.

Keywords: Text mining, Information extraction, machine learning, ontology, multi-agent systems, semantic web, decision support systems, serious games, data warehouses.

Main responsabilities
- Member of the Laboratory Council (2000-2018).
- Member of the Scientific Orientations Council (2000-2018).
- Leader of the INCOD (Distributed Information and Knowledge) team (20 researchers, 2000-2008).
- Leader of the OASIS (Agents and Services oriented Information Systems) tean (15 researchers, 2009-2014).

2. RESEARCH SUPERVISING (SINCE 2012)

Total summary (since 1996)
- 1 Post-Doctorate supervision
- 17 supervisions of PhD Thesis **defended** whose one in cotutelle with Laval University (Canada), and one Sandwich-Thesis with UFPE (Brazil), and one in co-direction of Université de Fez, Maroc.
- 4 supervisions of PhD Thesis **in progress,**
- More than 30 supervisions of Master Thesis.

PhD Thesis in progress
1. **A. Moussa**, « Etiquetage de rôles spatiaux par apprentissage profond basé sur des représentations vectorielles enrichies ». Thesis in cotutelle AMU/Université de la Manouba (ENSI), Tunisie. Supervision with S. Fournier and S. Faiz. Defence planned in 2022.
2. **Y. Duperis**, « Recommandation d'emplois par apprentissage profond basé sur des phrases clés ». AMU Thesis - CIFRE. Supervision with A. Chifu and S. Fournier. Defence planned in 2022.
3. **M. Mallek**, « Extraction et classification selon le contexte de relations entre entités dans des documents textuels non structurés ». Thesis in cotutelle AMU/Université de la Manouba (ENSI), Tunisie. Supervision with W. Lejouad Chaari. Defence planned in 2022.
4. **R. Hijazi,** « Simplification syntaxique de textes en langue anglaise à base de représentations sémantiques en DMRS (Dependency Minimal Recursion Semantics) et réécriture de graphes ». AMU Thesis. Supervision with N. Gala. Defence planned in 2022.

PhD Thesis defended (since 2012)
1. **S. Lamsiyah**, « Deep Learning-Based Unsupervised Extractive Methods for Multi-Document Summarization». Thesis of the Université de Fez, Maroc. Supervision with S. Ouatk El Alaoui. Defence planned in 2021.
2. **I. Daoudi**, « De l'évaluation à l'adaptation d'un environnement de jeux sérieux: application à la gestion de crise ». Thèse en cotutelle avec l'Université de la Manouba (ENSI), Tunisie. Supervision with E. Tranvouez and W. Lejouad Chaari. Defence defended the 15th Dec. 2020.
3. **R. Lima,** « OntoILPER: An Ontology and Inductive Logic Programming-based Method to Extract Instances of Entities and Relations from Texts ». Sandwich Thesis of UFPE in computer sciences - Université Fédérale du PErnambuco. Recife, Brazil. Supervision with F. Freitas. Defended the August 20, 2014.
4. **L. El Sarraj**, « Aide à la décision autour d'un entrepôt de données de santé / Decision Making arround Health Data Warehouse ». AMU Thesis. Supervision with T. Libourel. Defended the July 12, 2014.
5. **A. Oulahaci**, « Modélisation et Simulation Orienté Agent de Comportements Humains dans un Jeu Sérieux (Serious

Game) : application à l'apprentissage de procédures en Gestion de Crises ». AMU Thesis. Supervision with E. Tranvouez. Defended the June 20, 2014.

6. **S. Albitar**, « On the Use of Semantics in Supervised Text Classification: Application in the Medical Domain ». AMU Thesis. Supervision with S. Fournier. Defended the December 21, 2013.

Master Thesis in progress

1. **R. Camelo**, « Representations Learning ». Supervision with Rinaldo Lima, *in progress* (2022).

Master Thesis defended (since 2012)

1. **R. Azcurra**, « Extraction automatique de relations d'un document par apprentissage profond avec prise en compte des dépendances syntaxiques ». Supervision with Adrian Chifu, S. Fournier, 2018.
2. **A. Merad**, « De l'usage de l'apprentissage profond au traitement automatique des langues: application à l'extraction de relations ». Supervision with Adrian Chifu, S. Fournier, 2017.
3. **R. Garcia**, « Coherent Single-Document Summarization using Integer Linear Programing ». Master of UFRPE (Recife, Brésil) Supervision with R. Lima (UFRPE), 2017.
4. **D. Magdy**, « Opérationnalisation du système d'extraction d'information OntoILPER concernant sa phase d'application par l'intégration d'un triple-store ». Supervision with R. Lima (UFRPE). 2016.
5. **C.C. Ngo**, « Extraction supervisée d'information par apprentissage symbolique en Programmation Logique Inductive : Application des méthodes d'ensemble à OntoILPER ». Supervision with R. Lima (UFRPE). 2015.
6. **H. Hamdan**, « Classification et extraction d'information de documents par apprentissage et à base d'ontologie de domaine ». Supervision with P. Bellot, 2012.

3. THESIS COMMITTEE MEMBER (SINCE 96)

- 15 PhD Thesis committees as supervisor/co-supervisor .
- 38 PhD Thesis committees as reporter.
- 23 PhD Thesis committees as examinator.
- 6 HDR committees (Accreditation to Supervise Researches in Computer Sciences) as reporter.
- 5 HDR committees de HDR as examinator.

4. JOURNALS EDITION (SINCE 2000)

Member of editorial boards

- JDS - Journal of Decision Systems, Lavoisier Ed., Paris.
- RIA – Revue d'Intelligence Artificielle, Lavoisier Ed., Paris.
- IJIDS - International Journal of Information and Decision Sciences, Inderscience Publishers.

Reviewer for

- EIS - Enterprise Information Systems, Taylor & Francis Publishers.
- IJSMP - International Journal of Simulation and Process Modelling, InderScience Publishers.
- ISI - Ingénierie des Systèmes d'Information, Hermés Ed., Paris (membre du comité de lecture d'un numéro spécial).
- JAMAS, Journal of Autonomous Agents and Multi-Agent Systems, Springer Netherlands.
- JESA - Journal Européen des Systèmes Automatisés, Hermés Ed., Paris.
- SIMPRA - Simulation Modelling Practice and Theory International Journal, Elsevier Publishers.
- SIMULATION - Transactions of The Society for Modeling and Simulation International.
- …

5. INTERNATIONAL CONFERENCE PROGRAM COMMITTEE MEMBER (SINCE 2014)

- WI 2022, IEEE/WIC/ACM, International Conference on Web Intelligence, November 17-20, 2022, Niagara Falls, Canada
- WI 2021, IEEE/WIC/ACM, International Conference on Web Intelligence, December 14-17, 2021, Melbourne, Australia.
- WI 2020, IEEE/WIC/ACM, Virtual International Conference on Web Intelligence, 14-17 December 2020
- WI 2018, IEEE/WIC/ACM, International Conference on Web Intelligence, Dec 3, 2018 - Dec 6, 2018, Santiago, Chile
- WI 2017, IEEE/WIC/ACM, International Conference on Web Intelligence, August 23-26, 2017, Liepzig, Germany.
- WI 2016, IEEE/WIC/ACM, International Conference on Web Intelligence, Osnabrück, Germany, October 13-16, 2016 in Omaha, Nebraska, USA.
- CoDIT 2016, IEEE International Conference on Control, Decision and Information Technologies, Malta, April 6-8, 2016.
- IEEE/WIC/ACM WI 2015, International Conference on Web Intelligence, Osnabrück, Germany, March 4-9, 2015.
- INTELLI 2015, The Fourth International Conference on Intelligent Systems and Applications, St. Julians, Malta, October 11 - 16, 2015.
- EEE/WIC/ACM WI 2014, International Conference on Web Intelligence, Warsaw, Poland, August 11-14, 2014.
- Participation at several Program Committees of national conferences.

6. RESEACH CONTRACTS (RESPONSABILITY SINCE 1995)

- ***CLIC&GO*** project (2009-2010): Study for the development of a Web site for business with geographical functionalities as spatial reasoning. Study performed by the OASIS team of LSIS and financed by CARNOT-STAR Institut (26 K€). Responsability: monting and coordination of the project. Publications: one national conference.

- ***SIMFONHYC*** project (1999-2003): « Simulation du fonctionnement hydraulique de la Camargue/Simulation of the Camargue Hydraulic Functionning », Study in order to represent interactions between hydraulic management and ecosystem behavior. Partners: DESMID-CNRS and LSIS laboratories. Subventioned by the Regional Council of the "Provence Alpes et Côte d'Azur" region (100 K€). Responsabilty: monting and coordination of the project. Publications: one international journal, 3 international conferences and one national conference.

- ***POSEIDON*** project (1997-2001), CNRS Program "PROSPER". Concerned the design by reuse of the product information system supporting management of technical data on products. Subventioned by the CNRS on 3 years with a global budget of 130 K€ (50K€ for LSIS). Partners: GILCO-INPG, CRISTO-CNRS, LSR-INPG, LSIS, SCHNEIDER ELECTRIC, PCO. Responsabilty: participation to monting and coordination of the project. Publications: 2 national conferences and one journal.

- ***MERISE+*** project (1993-1995) subventioned by French Industry Minister (Informatique 92 program). Study of 18 month concerning a coupling between methods Merise and Hood. The global budjet was 200 K€. Partners: Aix-Marseille University, Systémia Institute (coordinateur), Ingénia and Cecima. Responsabilty: participation to monting and coordination of the project. Publications: 2 national conferences and one journal. Publications: one national conference and one journal.

- ***BRITE/EURAM N°4390*** european project (1991-1994), concern the development of an integrated system of flexible prefabrication for personalized architectonic façade. Partners: Armines (Ecole des Mines d'Alès), Systémia Institute, GTM Group (leader partner), Robotesca (Bilbao-Espagne), ITIN Group (Milan-Italie) and Aix-Marseille University. Global budget: 2,5 M€ financed at 50% by European Union (EU). Responsabilty: participation to monting and coordination of the project. Publications: several condential report for EU.

In addition, participation to other contracts.

7. PUBLICATIONS (SINCE 2012)

Summary

	Publications Since 2012	Publications (Since 1981)
PhD Thesis		1
Accreditation to supervise research (HDR)		1
Papers in Referenced Journals (RJ)	7	27
Papers in Un-Referenced Journals (J)	3	4
Chapter in books (CH)	3	13
Edition of Proceedings (EP)		1
Text Books (TB)		2
International Conferences (IC)	30	84
National Conferences (NC)	11	22
TOTAL	85	156

1. REFERENCED JOURNALS WITH SELECTION COMMITTEE (RJ)

1. [RJ 21.2] S. Lamsiyah, A. El Mahdaouy, B. Espinasse and S. Ouatik El Alaoui, « Unsupervised Extractive Multi- Document Summarization Method based on Transfer Learning from BERT Multi-Task Fine-Tuning », in: Journal of Information Science (**JIS**), Sages Edidor, 2021- https://doi.org/10.1177/0165551521990616

2. [RJ 21.1] S. Lamsiyah, A. El Mahdaouy, B. Espinasse and S. Ouatik El Alaoui, « An Unsupervised Method for Extractive Multi-Document Summarization based on Centroid Approach and Sentence Embeddings », in: Expert Systems with Applications, An International Journal (**ESWA**), Elsevier, vol. 167, page 114152, 2021.

3. [RJ 19.1] R. Lima, B. Espinasse, F. Freitas (2019), « A logic-based relational learning approach to relation extraction: The OntoILPER system », in: Engineering Applications of Artificial Intelligence (**EAAI**) Journal, Elsevier. Vol. 78C, pp. 142-157. 2019.

4. [RJ 17.2] I. Daoudi, R. Chebil, E. Tranvouez, W. Lejouad-Chaari, B. Espinasse (2017), « Towards a Grid for Characterizing and Evaluating Crisis Management Serious Games: A Survey of the Current State of Art », **International Journal of Information Systems for Crisis Response and Management**, Vol. 9, Issue 3, pp. 76-95, July-September 2017.

5. [RJ 17.1] R. Lima, B. Espinasse, F. Freitas (2017), « An Ontology-and inductive logic programming-based system to extract entities and relations from text ». Knowledge And Information System (**KAIS**) Journal, Springer-Verlag, v. 54, p. 1-33, Springer-Verlag, 2017. https://doi.org/10.1007/s10115-017-1108-3.

6. [RJ 16.1] B. Espinasse, R. Lima, F. Freitas (2016), « Extraction automatique d'entités et de relations par ontologies et programmation logique inductive », in: **Revue d'Intelligence Artificielle (RIA)**, Vol. 30 (n° 6/2016), dec 2016 (Répertoriée Scopus et DBLP).

7. [RJ 14.2] L. El Sarraj, B. Espinasse, T. Libourel (2014), « An Ontology-Driven Personalization Approach for Data Warehouse Exploitation », in: **International Journal on Advances in Software (IJAS)**, vol 7 no 1 & 2, 2014, http://www.iariajournals.org/software/

8. [RJ 14.1] A. Oulhaci, E. Tranvouez, S. Fournier, B. Espinasse (2014), « A MultiAgent Architecture for Collaborative Serious Game applied to Crisis Management Training: Improving Adaptability of Non Played Characters », in : **EAI Endorsed Transactions on Serious Games Journal**, Vol. 2, pp. 11, ISBN: 2034-8800, http://eudl.eu/doi/10.4108/sg.1.2.e7.

9. [RJ 12.1] B. Espinasse, R. Lima, S. Albitar, S. Fournier, F. Freitas (2012), « Extraction adaptative d'information de pages Web par règles d'extraction induites par apprentissage », in: **Revue d'Intelligence Artificielle (RIA)**, Vol. 26 (n° 6/2012), pp. 643-678, dec 2012. (Répertoriée Scopus et DBLP).

2. JOURNALS WITH SELECTION COMMITTEE (J)

1. [J 17.1] B. Espinasse, P. Bellot (2017), « Introduction au Big-Data: opportunités, stockage et analyse des mégadonnées », in : **Dossiers Techniques de l'Ingénieur (DTI)**. 21 pages, février 2017.

2. [J 14.1] L. El Sarraj, B. Espinasse, T. Libourel (2014), « An Ontology-Driven Personalization Approach for Data Warehouse Exploitation », in: **International Journal on Advances in Software (IJAS)**, vol 7 no 1 & 2, year 2014, http://www.iariajournals.org/software/

3. [J 14.2] A. Oulhaci, E. Tranvouez, S. Fournier, B. Espinasse (2014), « A MultiAgent Architecture for Collaborative Serious Game applied to Crisis Management Training: Improving Adaptability of Non Played Characters », in : **EAI Endorsed Transactions on Serious Games Journal**, Vol. 2, pp. 11, ISBN: 2034-8800, http://eudl.eu/doi/10.4108/sg.1.2.e7

5. CHAPTERS IN BOOKS (CH) :

1. [CH 21] A. Moussa, S. Fournier, K. Mahmoudi, B. Espinasse, S. Faiz, « On the use of deep learning for Geodata Enrichments », in Interdisciplinary Approaches to Spatial Optimization Issues, IGI Global book chapter, 2021. DOI: 10.4018/978-1-7998-1954-7.ch010

2. [CH 20] S. Lamsiyah, A. El Mahdaouy, B. Espinasse and S. Ouatik El Alaoui. « Unsupervised Query-Focused Multi-Document Summarization using uSIF Sentence Em- bedding Model and Maximal Marginal Relevance Criterions ». In: Ezziyyani M. (eds) Advanced Intelligent Systems for Sustainable Development. (Extended version from AI2SD 2020 paper). Advances in Intelligent Systems and Computing, Springer.

3. [CH 19] S. Lamsiyah, A. El Mahdaouy, B. Espinasse and S. Ouatik El Alaoui. « A Supervised Method for Extractive Single Document Summarization Based on Sentence Embeddings and Neural Networks ». In: Ezziyyani M. (eds) Advanced Intelligent Systems for Sustainable Development. (Extended version from AI2SD 2019 paper). Advances in Intelligent Systems and Computing, vol 1105. Springer, Cham.

6. PAPERS IN SELECTIVE INTERNATIONAL CONFERENCES (IC)

1. [IC 22.1] I. Nascimento, R. Lima, A. Chifu, B. Espinasse, S. Fournier, « DeepREF: A Framework for Optimized Deep Learning-based Relation Classification », 13th Conference on Language Resources and Evaluation, **LREC2022**, Marseille, 20 - 25 June 2022 – **accepted**.

2. [IC 21.2] A. Moussa, S. Fournier, K. Mahmoudi, B. Espinasse, S. Faiz, « Spatial Role Labeling System Capturing Both Characters and Word Information Using BiLSTM and CRF », **MDAI 2021** (Core Rank B).

3. [IC 21.1] A. Moussa, S. Fournier, K. Mahmoudi, B. Espinasse, S. Faiz, « Spatial Role Labeling based on Improved Pre-trained Word Embeddings and Transfer Learning », **KES 2021** (Core Rank B).

4. [IC 20.5] S. Lamsiyah, A. El Mahdaouy, B. Espinasse and S. Ouatik El Alaoui, « Unsupervised Query-Focused Multi-Document Summarization using uSIF Sentence Embedding Model and Maximal Marginal Relevance Criterion », long paper, **AI2SD'2020** - International Conference on Advanced Intelligent Systems, Marrakech - Morocco, 21-26 december 2020.

5. [IC 20.4] M. Paixao, R. Lima, B.Espinasse, « Fake News Classification and Topic Modeling in Brazilian Portugues », **WI-IAT'2020** , IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT'20), 14-17 December 2020 - A Fully Virtual Conference.

6. [IC 20.3] M. Mallek, S. Fournier, R. Guetari, B. Espinasse and W. Lejouad Chaari, « An Unsupervised Approach for Precise Context Identification from Unstructured Text Documents », **ICTAI2020** - 32th International Conference on Tools with Artificial Intelligence, November 09-11, 2020, Virtual Conference.

7. [IC 20.2] I. Daoudi, E. Tranvouez, R. Chebil, B. Espinasse, and W. Lejouad-Chaari, « An EDM-based Multimodal Method for Assessing Learners' Affective States in Collaborative Crisis Management Serious Games », Proceedings of The 13th International Conference on Educational Data Mining, **EDM 2020**, July 10-13, Fully virtual conference.

8. [IC 20.1] F. Rodrigues, R. Lima, W. Domingues, R. Fidalgo, A. Chifu, B. Espinasse, S. Fournier, « DeepNLPF: A Framework for Integrating Third-Party NLP Tools », 12th Conference on Language Resources and Evaluation, **LREC2020**, Marseille, 11 - 16 May 2020.

9. [IC 19.3] R. Lima, S. B. Espinasse, F. Freitas, « The Impact of Semantic Linguistic Features in Relation Extraction: A Logical Relational Learning Approach », Recent Advances in Natural Language Processing, long paper, **RANLP 2019**, Varna, Bulgaria, September 2-4, 2019.

10. [IC 19.2] S. Lamsiyah, A. El Mahdaouy, S. Ouatik El Alaoui, and B. Espinasse, « A Supervised Method for Extractive Single Document Summarization based on Sentence Embeddings and Neural Networks », long paper, **AI2SD'2019** - International Conference on Advanced Intelligent Systems, Marrakech - Morocco, 08-11 july 2019

11. [IC 19.1] B. Espinasse, S. Fournier, A. Chifu, G. Guibon, R. Azcurra, V. Mace, « On the Use of Dependencies in Relation Classification of Text with Deep Learning », 20 International Conference on Computational Linguistics and Intelligent Text Processing, long paper, **CICLing 2019**, La Rochelle, France, April 7 to 13, 2019.

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