JAVIER A. ESPINOSA OVIEDO, PHD

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CONTENTS

HIGHLIGTHS

Recognitions

- **Qualification French National Council of Universities** (CNU)
- **Fellow Mexican Academy of Computer Science** (AMEXCOMP)
- Member **Mexican National System of Researchers** (SNI, level C)

Awards, Grants & Fellowships

- **Azure Data Science Award** ($20,000 dlls)
- **CONACyT postdoctoral fellowship**, Barcelona Supercomputing Centre, 2015-2017
- **CONACyT PhD grant** (Grenoble Informatics Laboratory, 2009-2013) and **MSc grant** (UDLAP, 2006-2008)

Teaching

- **International experience as invited lecturer** on selected topics of Big Data, Cloud Data Management and Web programming: ENSIMAG, ENSE3, UGA (France); UdelaR (Uruguay); UDLAP (Mexico), Barcelona Supercomputing Centre (Spain)

Others

- **Securing 135.000€** for research activities on **Urban Data Management for Disaster Relief** (BOLD Cities grant)
- **Acquisition 25.000€ in mobility grants** for CONACyT Mexican master students for realizing research activities with me in the Barcelona Supercomputing Centre and the Grenoble Informatics Laboratory
- **License** "**HSTREAM: Big Stream Processing on IOT environments**", EU Agency for the Protection of Programs

BIO

Javier A. Espinosa Oviedo is a computer scientist with core experience in databases and distributed systems. Specifically, Big Data management/processing/visualization, data-centric systems, and cloud/service computing. He currently works as a postdoctoral researcher at the University of Lyon. He is also member of the ERIC research lab (Information Systems and Data Warehouses group) and associate researcher of the French-Mexican Laboratory of Informatics and Automatic Control (LAFMIA, Database and Distributed Systems group) since 2015.

Before his current position at the University of Lyon, he held research positions at the Delft University of Technology (LDE Centre for BOLD Cities), the Barcelona Supercomputing Centre (Extreme Computing group), and the Grenoble Informatics Laboratory (LIG, HADAS database group). To date, he has contributed and coordinated the development actions of several national, international, and European research and technology transfer projects for solving data related challenges.

Javier Espinosa obtained his PhD in Computer Science from the University of Grenoble in 2013, in collaboration with the Grenoble Informatics Laboratory, and his master and bachelor's degree in Computer Science and Computer Systems Engineering, from UDLAP, in Mexico, in 2006 and 2008, respectively. His research activities have been awarded several grants and fellowships from the Mexican Council of Science and Technology (CONACyT).

Javier Espinosa is fellow of the Mexican Academy of Computer Science (AMEXCOMP), the Mexican National System of Researchers (SNI), and member of the Association for Computing Machinery (ACM).

RESEARCH INTERESTS

Discipline: Databases and Distributed Systems

Areas of Research:

- Big Data Management, Processing and Analytics
- Cloud and Services Computing
- Stream processing
- Data Visualization
- Internet Technologies

Fields of Application: Smart Cities, Internet of Things, Industry 4.0*,* Digital Humanities*,* Computational Social Science*,* eHealth

CURRENT POSITIONS

Since 09/2019   **Postdoctoral Researcher • University of Lyon 2 • France**
ERIC research lab
—Data architect ANR LIFRANUM project

SCIENTIFIC POSITIONS

Since 2015   **Associate Researcher • French-Mexican Laboratory of Informatics and Automatic Control (LAFMIA, UMI CNRS) • France & Mexico**
Databases and Distributed Systems group

2013-2020   **Associate Researcher • Grenoble Informatics Laboratory • France**
Heterogeneous & Distributed Data Management Systems group

PROFESSIONAL EXPERIENCE

2019-2020   **Postdoctoral Researcher • University of Lyon 3 • France**
HADAS database group, Grenoble Informatics Laboratory (LIG UMR CNRS)
—Efficiently querying multi-cloud eHealth data services using QoS metrics

2018-2019   **Postdoctoral Researcher • TU Delft • The Netherlands**
LDE Centre for BOLD Cities, Fac. of Arch. & the Built Environment
—Urban data management for disasters relief

2015-2017   **Postdoctoral Research Fellow • Barcelona Supercomputing Centre • Spain,** Extreme Computing group
—Visualization of crowds moving in 3D urban spaces in real-time

2013- 2015   **Postdoctoral Research Fellow • CNRS LAFMIA lab • Mexico**
—NoSQL solutions for handling Big Data Velocity and Variety

EDUCATION

2009-2013   **PhD in Computer Science • University of Grenoble • France**
Grenoble Informatics Laboratory (LIG)

Dissertation: "Active Policy Based Reliable Data Services Coordinations"
Viva: 28 October 2013
Jury:

- Prof. Samir TATA, Telecom SudParis (*president*)
- Prof. Daniela GRIGORI, Univ. Paris Dauphine (*reviewer*)
- Prof. Mohand-Saïd HACID, Univ. Claude Bernard Lyon 1 (*reviewer*)
- Dr. Khalid BELHAJJAME, Univ. Paris Dauphine (*jury member*)
- Prof. Christine COLLET, Grenoble INP (*supervisor*)
- Dr. HDR. Genoveva VARGAS-SOLAR, Senior Researcher CNRS (*co-supervisor*)
- Prof. José Luis ZECHINELLI-MARTINI, UDLAP (*co-supervisor*)

2006-2008   **MSc in Computer Science • Univ. de las Américas, Puebla • Mexico**
Thesis: "C-Language: a language for defining contracts"
Viva: 19 December 2008
Advisors: Genoveva VARGAS-SOLAR (CNRS), José Luis ZECHINELLI-MARTINI (UDLAP)

2001-2006   **BE in Computer Systems Eng. • Univ. de las Américas, Puebla • Mexico**
Final project: "Taurus: Automatic service composition system for astronomical data applications"
Viva: 14 July 2007
Advisor: José Luis ZECHINELLI-MARTINI

RECOGNITIONS OF SCIENTIFIC NATURE

2020-2024   **Qualification French National Board of Universities** (CNU)
2019-now   **Member of the Mexican National System of Investigators** (SNI level C[1])
2016-now   **Fellow Mexican Academy of Computer Science** (AMEXCOMP)

RESEARCH PROJECTS

Projects I coordinated (`PI`):

SHARED-DATA   **Urban Data Management for Disaster Relief in Cities.** Funding body: LDE BOLD Cities Centre.
2019   Call reference: SHARED projects 2019-2023. PI: Javier Espinosa (TU Delft). Budget: 135K€
`PI`

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[1] Distinction awarded by the Mexican CONACyT after successful evaluation of candidate's scientific contributions. The evaluation is carried out by pairs and classifies researchers under four levels: C, I, II, III. Recognition is valid for 3 years, after which a new evaluation decides whether the researcher maintains his/her position or moves to a higher/lower level.

CONCERNS
2016-2017
`PI`

Dealing with Crowd Distress by Building Secure Immigration Corridors. Funding body: Microsoft Research, CONACyT. Call reference: Azure Data Science Awards 2016, CONACyT Postdoctoral Fellowship and mobility grants. PI: Javier Espinosa (BSC)

Technology Transfer projects where I coordinated the development activities (`TT`):

SUMMIT
2019
`TT`

Multi-cloud services for the integration of heterogeneous data collections guided by SLA's. Funding body: Rhône-Alpes-Auvergne Region. Call reference: AAP Pack Ambition 2018. PI: Chirine Ghedira (Univ. Lyon 3). Period: 2019-2021.

—Design and implementation of a monitoring platform for eHealth FHIR data services deployed on the cloud. Prototype based on HapiFHIR, Docker, Prometheus and the ElasticSearch observability stack.

LINKSIUM
2018
`TT`

Technological transfer of the hybrid query engine HYPATIA in the context of IoT ecosystems. Funding body: SATT LINKSIUM Grenoble Alpes. PI: Genoveva Vargas-SOLAR (CNRS-LIG). Period: 02.05 - 30.09.2018

—Design of "hybrid" operators for analyzing IoT stream-historical data and coordination of their implementation on top of Spark, InfluxDB and RabbitMQ.

Projects I participated as working package (co) coordinator:

LIFRANUM
2020-2021

Identifying, indexing and analyzing born-digital French literature. Funding body: ANR. PI: Gilles Bonnet (Univ. Lyon 3). Period: 2020-2023.

—Coordinator of social media and Web data collection, metadata extraction and indexation activities.
—Definition of data science pipelines for discovering born-digital literature.
—Design and implementation of a data lake for the data exploration and analytical tasks.

POLIWEB
2013-2014

Analyzing Big Data Collections Produced by Political Parties. Funding body: CNRS. Call reference: PEPS-2014. PI: Geraldine Castel (Stendhal University)

—Coordinator of the 2014 European Elections data collection, storage, and analytical tasks.
—Design of a NoSQL solution for the storage and optimization of the query operations.

CASES
2012-2016

Customised Advisory Services for Energy-efficient Manufacturing Systems. Funding body: EU, Call reference: FP7-PEOPLE-2011-IRSES, PI: Weidong Li (U. Coventry)

—Working package (co) coordinator: Design of a cloud-based digital twin for optimizing Industry 4.0 flow shops.

S2EUNET
2010-2014

Security, Services, Networking and performance of next generation IP-based multimedia wireless Networks. Funding body: EU. Call reference: FP7-PEOPLE-2009-IRSES. PI: Prof. Frank Yong Li (UiA)

Projects in collaboration with Latin America:

IPGH
2017-2018

Building the history of climate change in Latin America. Funding body: IPGH. Call reference: PAT-2017. PI: Luis M. Vilches-Blázquez (U. Javeriana)

SWANS
2014-2016

Semantic Web Analytics: Processing Big Data on Energy Consumption. Funding body: CNRS. Call reference: STiC-AMSUD-2013. PI: Genoveva Vargas-Solar (CNRS)

CLEVER
2011-2013

Cloud-based Latin-American Environmental Virtual Observatory. Funding body: CNRS-CAPES-ANII. Call reference: STIC-AmSud-2010, PI: Genoveva Vargas-Solar (CNRS)

E-CLOUDSS
2008-2010

Building E-Government Clouds Using Distributed Semantic Services. Funding body: Microsoft Research. Call reference: LACCIR-RFP-2008. PIs: Regina Motz (UdelaR), Genoveva Vargas-Solar (CNRS), Martin Musicante (UFRN)

Selected projects:

TRIPLE-A
2019

Stimulating the Adoption of low-carbon technologies by homeowners through increased Awareness and easy Access. Funding body: EU. Call reference: Interreg2seas-2016. PI: Vincent Gruis (TU Delft). Period: 2017-2020

—Responsible of the energy consumption analysis of data issue from Home Energy monitoring Systems.
—Development of a web dashboard for visually exploring the energy consumption of households.

Demo: https://triple-a-demo.herokuapp.com

ORCHESTRA
2007-2011

Transactional Services Orchestration. Funding body: ECOS–ANUIES. Call reference: ECOS-NORD-2017. PI: Christine Collet (Grenoble INP)

—Definition of *active policies* for adding security and a transactional behavior to service-based e-government applications.

VISITING POSITIONS

2015-2016
Nanjing University of Aeronautics and Astronautics • China
Period: 01.05 to 01.06.2015; 05.07 to 02.08.2015; 15.02 to 29.02.2016 (**3 months**). Funding: EU FP7-PEOPLE-IRSES CASES project.

Visiting researcher at NUAA's College of Mechanical and Electrical Engineering. During this stay I designed and developed TigerFlow, a Service-Based Flow Shop Simulator for the industry 4.0, in collaboration with the research group of Prof. Dunbing Tang.

Prototype: https://github.com/javieraespinosa/TigerFlow

2014-2015
Universidad de la República • Uruguay
Period: 19.10 to 02.11.2014; 21.11 to 10.12.2015 (**1 month**). Funding: CNRS STiC-AMSUD SWANS project.

Visiting lecturer & researcher at UdelaR's Computer Science department, where I worked around Big Data & Data Visualization with Profs. Regina Motz and Alberto Pardo.

2014
Institute Polytechnic of Turin • Italy
Period: 25.05 to 24.06.2014 (**1 month**). Funding: EU FP7-PEOPLE-IRSES S2EUNET project.

Visiting researcher at the Internet Media Group of POLITO's Computer Science department, where I worked in the analysis of big dataset of network data using Hadoop technologies, and produced the material of my course on "Big Data Analytics".

2007-2008	**Laboratory of Informatics of Grenoble • France**
	Period: 01.09.07 to 31.07.08 (**11 months**). Funding: CONACyT mobility grant

Intern in the HADAS database group, where I developed activities in the context of service-oriented data management (part of my master thesis).

AWARDS, FELLOWSHIPS & GRANTS

- **Azure Data Science Award** ($20,000 dlls) for cloud experimentation associated to own research projects. Funding body: Microsoft Research. Period covered: 2016-2017 (12 months).

- **COST Trainee Grant** for the 2nd KEYSTONE Training School "Keyword search in Big Linked Data", at CiTIUS, University of Santiago de Compostela, Spain. Funding body: European Cooperation in Science and Technology (COST). Period covered: 18 to 22.07.2016.

- **CONACyT Postdoctoral Fellowship** for conducting research activities on data intensive architectures at the Barcelona Supercomputing Centre, Spain. Period covered: 2015-2017 (24 months).

- **CONACyT scholarship for PhD studies** at University of Grenoble, France. Period covered: 2009-2013 (48 months).

- **CONACyT mobility grant** (CONACyT beca-mixta), Laboratory of Informatics of Grenoble, France. Period covered: 2007-2008 (11 months).

- **CONACyT scholarship for master studies** at Universidad de las Américas, Puebla, Mexico. Period covered: 2006-2008 (24 months)

LANGUAGES

B=basic, G=good, P=proficiency

	Red	Written	Spoken	
Spanish	P	P	P	Mother tongue
French	P	P	G	TCF 2009: 490 pts, B2 level
English	G	G	G	TOEFL 2008: 575 pts

LICENSED SOFTWARE

HSTREAM: Big Stream Processing on IOT environments.

Inventors:	G. Vargas-Solar, J.A. Espinosa-Oviedo, C. Collet
License holder:	Grenoble INP
Countries covered:	Europe
Granted date:	Procedure undergoing in the European Agency for the Protection of Programs (APP) www.app.asso.fr
Demo:	https://github.com/javieraespinosa/hstream

PROFESSIONAL ACTIVITIES

Program Committee	**Conferences**
	- IEEE CLOUD 2021: 13rd IEEE International Conference on Cloud Computing - AICCSA 2020: 17th ACS/IEEE Int. Conf. on Computer Systems and Applications (Track 9: Data Science; Track 11: NLP & Applications) - CoopIS 2019: 27th Int. Conf. on Cooperative Information Systems
	Workshops
	- BECS 2021: 1st Int. Workshop on Big data driven Edge Cloud Services (in conjunction with ICWE'21) - STRAPS 2021, 2020: 3rd, 2nd Workshop on Smart Data Integration and Processing on Service based environments (in conjunction with ICSOC 2021/2020) - DSC 2019: 5th IEEE Int. Workshop for Data Science and Computing (in conjunction with AICCSA 2019) *DARLI-AP 2021, 2020, 2019*: 3rd, 4th, 5th Data Analytics solutions for Real-LIfe Applications (in conjunction with EDBT/ICDT)
External Reviewer	**Journals**
	- Computer Networks journal (2020) - Future Generation Computer Systems (2020, 2019) - Transactions on Emerging Topics in Computing (2019) - Information Systems Frontiers (2019) - Computing (2018, 2019) - Computación y Sistemas (2016, 2018) - Data in Brief (2017)
	Conferences
	- AICCSA (2016, 2019) - ADBIS DaS workshop (2017) - ICCS (2017) - MICAI (2016) - IKC KEYSTONE (2016) - ENC (2010, 2009)
Organization Scientific Events	*BDA Summer School "Masses de données distribuées"* 6th ed. 7-12 June 2020, Corse, France 5th ed. 17-22 June 2018, Aussois, France *Franco-Brazilian Spring School on Big Data and Smart Cities* 1st ed. 7-10th April 2015, Grenoble, France 2nd ed. 8-10th November 2017, Natal, Brazil *EDBT Summer School 2013 on Big, Linked and Open Data*, 1st-6th September 2013, Aussois, France.
Institutional Service	- Project manager, French-Mexican Laboratory of Informatics and Automatic Control (since 2015) - Chair, 4th BSC Doctoral Symposium, 2017 - Main organizer and chairperson, LDE BOLD Cities Talks (2018-2019) - Main organizer, Collaborative Workshop UAG-UdeG and BSC (2017) - Main organizer, Seminar on Web Service, LIG-Sinergy (2010)

TEACHING EXPERIENCE

All teaching material is available at http://espinosa-oviedo.com/teaching.

Type	Institution	Country	Total Hours
Master	UPMF	France	66
Master	UdelaR	Uruguay	45
Master	Grenoble INP	France	28
Undergraduate	UPMF	France	6
Undergraduate	IUT1 Grenoble	France	20
Tutorial	BSC	Spain	19
Tutorial	ISUM'18 Conference	Mexico	12
Tutorial	2nd FR-BR School on Smart Cities	Brazil	3

Summary. Total volume of teaching activities per institutions

COURSES

Institution	Course	Program	Year	Students	Hours
Barcelona Supercomputing Centre • Spain	**Big Data Visualization**	Big Data Analytics PRACE Advance Training program	2018	45	5P
			2017	47	7P
			2016	23	4P
Grenoble INP • France	**Big Data Management**	Master Electrical engineering for Smart Grids and Buildings, ENSE3[2]	2017	41	8P
			2016	27	8P
			2015	32	8P
		3rd year engineering school ENSIMAG[3]. Big Data track	2014	20	6P
			2013	42	6P
UdelaR • Uruguay	**Big Data Analytics and Visualization**	Master Pedeciba-Informática, Computer Science Institute	2016	7	10T+10P
	Big Data Analytics		2015	13	10T+10P
			2014	27	15P
IUT1 Grenoble • France	**Development of Mobile and Web Service Applications**	Licence Professionnelle Réseaux et Télécommunications. Spécialité Services Mobiles et Interface Nomad	2015	12	10T+10P
UDLAP • Mexico	**Big Data Visualization**	Supercomputing Education Program	2016	15	4P
UPMF •			2015	32	6T+12P

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[2] École Nationale Supérieure de l'Énergie, l'Eau et l'Environnement

[3] École Nationale Supérieure d'Informatique et Mathématiques Appliquées

France	**Languages and Technologies of the Web 2**	Master 1, IC2A[4] program, WIC[5] track	2014	30	6T+12P
	Introduction to Web Technologies	Licence 3, MIASHS[6] program	2014	6	4T+2P
	Digital Multimedia	Master 2, IC2A program, WIC track	2013	15	12T+12P

T/P = Theory/Practice

TUTORIALS

Course	Event	Year	Students	Hours
Data Processing and Querying at Scale using Big Data Analytics Stacks	9th International Supercomputing Conference in Mexico (ISUM'18), 3-6th March 2018, Merida, Mexico.	2018	7	12P
Visualizing Big Urban Data	2nd French-Brazilian School on Big Data & Smart Cities. 8-10th Nov. 2017, Natal, Brazil.	2017	30	3P
Scientific Visualization of Big Data	3rd BSC Int. Doctoral Symposium, 4-6th May 2016, Barcelona, Spain	2016	10	3P

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[4] Ingénierie de la Cognition, de la Création et des Apprentissages

[5] Web, Informatique et Connaissance

[6] Mathématiques et Informatique Appliquées aux Sciences Humaines et Sociales

STUDENTS SUPERVISION

	PhD	Master	Undergraduate (Eng. School)
Number	1	8	9
Involvement	50%	2 x 70% 2 x 45% 3 x 30% 1 x 50%	9 x 70%

Summary of supervised students

PHD

- **Mehrdad Farokhnejad** (undergoing). Defining human guided data collections exploration for modelling complex systems: supporting urban spaces design. University Grenoble-Alpes, France. Supervisors: G. Vargas-Solar, J. Espinosa (**involvement 50%**). Funded by the National Council of Science and Technology of Iran.

MASTER

- Hugo Santillan Villicaña. **Integration of medical data in multi-cloud environments guided by SLAs**. Universidad Autónoma de Guadalajara, Mexico, 2019. Supervisors: G. Vargas-Solar, J. Espinosa (**involvement 50%**).
- Iris Ruysch. **Paving the way for autonomous cars: Current projects and challenges in the Netherlands**. Delft University of Technology, The Netherlands, 2019. Supervisors: A. Ersoy, J. Espinosa (**involvement 70%**).
- Maysaa Khalil. **GREENHOME: Household Energy Consumption & Co2 Footprint Metering Environment**. ENSE3-Grenoble INP, France, 2019. Supervisors: G. Vargas-Solar, R. Caire, J. Espinosa (**involvement 30%**).
- Irving Hernandez Gallegos. **Data collections curation and exploration with CURARE**. Universidad Autónoma de Guadalajara, Mexico, 2018. Supervisors: G. Vargas-Solar, J. Espinosa (**involvement 30%**).
- Santiago Ruíz Angulo. **Analysis of climate change in LATAM by processing historical newspapers**, Universidad Autónoma de Guadalajara, Mexico, 2017. Supervisors: R. Dávila, G. Vargas-Solar, J. Espinosa (**involvement 45%**). Prototype: https://github.com/javieraespinosa/ipgh-lab
- Enrique Arriaga Varela. **Discovering patterns from streams for supporting real-time decision-making during neuroscience experiments**. Universidad Autónoma de Guadalajara, Mexico, 2017. Supervisors: R. Dávila, G. Vargas-Solar, J. Espinosa (**involvement 45%**). Prototype: https://github.com/javieraespinosa/hstream
- Pedropablo Lopez Amaya. **Collection and storage of transport data**, Université Claude Bernard Lyon 1, France, 2015. Supervisors: F. Da Silva, P. Ghodous, G. Vargas-Solar, J. Espinosa (**involvement 30%**).
- Xiaohu Tang, **TigerFlow: a smart Shop Floor simulator for the Industry 4.0**. Université de Nanjing, Chine. Supervisors: G. Vargas-Solar, J. Espinosa (**involvement 70%**). Prototype: https://github.com/javieraespinosa/TigerFlow

STAGES INGÉNIEUR

- Clément Quéré, **Analyzing Gender Gap in STEM**. IUT Lannion, France, 2019. Supervisors: L. D'Orazio, K. Gibert, G. Vargas-Solar, J. Espinosa (**involvement 50%**).
- Hélène Besançon, Sylvain Bouvet, Cléa Brossard, Thibaut Fourrier. **Collection and storage of online data produced during the 2014 European Elections**. Projet de spécialité, ENSIMAG, Grenoble INP, France, 2014. Supervisors: G. Vargas-Solar, J. Espinosa (**involvement 70%**).
- Océane de Loitière, Bastien Drocourt, Manon Lucas. **System for exploring the 2014 European Elections collected data**. Projet de spécialité, ENSIMAG, Grenoble INP, France, 2014. Supervisors: G. Vargas-Solar, J. Espinosa (**involvement 70%**).
- Vaello Torregrosa Braulio. **Building a mashup environment for integrating data services**. ENSIMAG, Grenoble INP, France, 2011. Supervisors: G. Vargas-Solar, J. Espinosa (**involvement 70%**).

PUBLICATIONS

	Number	Classification
Book chapters	3	
International Journals	6	1x Q1, 3x Q3
National Journals	2	
International Conferences	4	3x CORE:A, 1x CORE:C
National Conferences	2	
International Workshops	8	1x CORE:B
Posters	3	1x CORE:A, 1x CORE:B
Others	5	
Total	**33**	

Summary of peer-reviewed publications

⭐ *Representative publications*

BOOK CHAPTERS

[B1] **From Data Harvesting to Modelling and Prediction for Making Urban Territories Smart.** G. Vargas-Solar, A.S. Castillo-Camporro, J.L. Zechinelli-Martini, J. A. Espinosa-Oviedo. *Innovative Applications in Smart Cities. Advances in Smart Cities book series.* Taylor & Francis. In press: 12/2019 **InPress**

⭐ [B2] **Big continuous data: dealing with velocity by composing event streams**. G. Vargas-Solar, J. A. Espinosa-Oviedo, and J. L. Zechinelli-Martini. *Big Data Concepts, Theories and Applications*, pp. 1-27, Springer, 2016, ISBN: 978-3-319-27763-9, DOI: 10.1007/978-3-319-27763-9_1. **2016**
Citations (Scopus, 2019): 1

[B3] **Big Data Management: Challenges, Approaches, Tools and their limitations**. M. Adiba, J. C. Castrejón, J. A. Espinosa-Oviedo, G. Vargas-Solar, and J. L. Zechinelli-Martini. *Networking for Big Data*, pp. 43-55, CRC Press. ISBN: 978-1-4822-6349-7. **2015**
Citations (ResearchGate, 2020): 7

PEER-REVIEWED INTERNATIONAL JOURNAL ARTICLES

[J1] **Analyzing digital politics: Challenges and experiments in a dual perspective.** G. Castel, G. Vargas-Solar, J. Espinosa-Oviedo. *Open Journal in Information Systems Engineering*, 2020, vol. 1, n° 3, ISTE OpenScience, ISSN: 2634-1468., DOI: 10.21494/ISTE.OP.2020.0533. **2020**

[J2] **Using Autonomous Intelligence to Build a Smart Shop Floor**. D. Tang, K. Zheng, H. Zhang, Z. Zhang, Z. Sang, T. Zhang, J.-A. Espinosa-Oviedo, G. Vargas-Solar. *International Journal of Advanced Manufacturing Technology* vol. 94, issue 5-8, pp 1597–1606, 2018. ISSN:0268-3768. DOI: 10.1007/s00170-017-0459-y. **2018**
Impact Factor (JCR, 2017): 2.601

[J3] **πSOD-M: building SOC applications in the presence of non-functional requirements**. K. Belhajjame, V. de Castro, <u>J. Espinosa-Oviedo</u>, M. Musicante, U. Souza Da Costa, P. Souza Neto, G. Vargas-Solar and J.-L. Zechinelli-Martini. *International Journal of Web and Grid Services (IJWGS)*, vol.14 no.4, pp. 400-431, 2018. ISSN: 1741-1114. DOI:<u>10.1504/IJWGS.2018.095660</u> **2018**

⭐ [J4] **Big data management: what to keep from the past to face future challenges?** G. Vargas-Solar, J. L. Zechinelli-Martini, and <u>J. A. Espinosa-Oviedo</u>. *Data Science and Engineering,* vol. 2, no. 328, pp. 328-345, 2017. ISSN: 2364-1541. DOI: <u>10.1007/s41019-017-0043-3</u> **2017**

⭐ [J5] **Modelling Crowds in Urban Spaces**. I. Rudomín, G. Vargas-Solar, <u>J. A. Espinosa-Oviedo</u>, H. Pérez, and J. L. Zechinelli-Martini. *Computación y Sistemas*, vol. 21, no. 1, pp. 57–66, 2017. ISSN: 1405-5546. DOI:<u>10.13053/CyS-21-1-2584</u>. **2017**

[J6] **Humanitarian Logistics and Cultural Diversity within Crowd Simulation**. C. A. Ochoa Zezzatti, I. Rudomin, G. Vargas-Solar, <u>J. A. Espinosa-Oviedo</u>, H. Pérez, and J.-L. Zechinelli-Martini. *Computación y Sistemas*, vol. 21, no. 1, pp. 7–21, 2017. ISSN: 1405-5546. DOI:<u>10.13053/CyS-21-1-2583</u>. **2017**

PEER-REVIEWED NATIONAL JOURNAL ARTICLES

[J7] **Optimizing Data Processing Service Compositions Using SLA's**. G. Vargas-Solar, J.-L. Zechinelli-Martini, and <u>J.-A. Espinosa-Oviedo</u>. *Polibits*, vol. 53, pp. 65–75, 2016, ISSN: 1870-9044. DOI: <u>http://dx.doi.org/10.17562/PB-53-7</u>. **2016**

[J8] **Reliable Web Services Composition: An MDD Approach**. G. Vargas-Solar, V. de Castro, P. A. de Souza Neto, <u>J. A. Espinosa-Oviedo</u>, E. Marcos, M. A. Musicante, J.-L. Zechinelli-Martini, and C. Collet. *Polibits*, vol. 49, no. 1, pp. 17-27, 2014. ISSN: 1870-9044. **2014**

PEER-REVIEWED ARTICLES IN INTERNATIONAL CONFERENCES

* [C1] (Demo) **Demonstrating data collections curation and exploration with CURARE.** G. Vargas-Solar, G. Kemp, I. Hernandez Gallegos, <u>J-A. Espinosa-Oviedo</u>, C. Ferrera da Silva and P. **2019**

Ghodous. In Proc. *22nd Int. Conf. on Extending Database Technology (**EDBT'19**): Demo session,* Lisbon, Portugal, March 26-29, 2019, pp. 598-601, OpenProceedings.org, 2019. ISBN: 978-3-89318-081-3. DOI: 10.5441/002/edbt.2019.65.
Conference Rank (2019): CORE:A

[C2] **Using Autonomous Intelligence to Build a Smart Shop Floor**. D. Tang, K. Zheng, H. Zhang, Z. Sang, Z. Zhang, C. Xu, J. A. Espinosa-Oviedo, G. Vargas- Solar, and J.-L. Zechinelli-Martini. In Proc. *9th Int. Conf. on Digital Enterprise Technology (**DET'16**)*, vol. 56, pp. 354–359, Elsevier, ISSN: 2212-8271, DOI: https://doi.org/10.1016/j.procir.2016.10.039
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2009

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[C5] **Towards human in the loop based query rewriting for exploring datasets.** G. Vargas-Solar, J. A. Espinosa-Oviedo and M. Farokhnejad**.** In Proc. 5th Int. workshop on Data Analytics solutions for Real-Life Applications (DARLI-AP'21), co-located with EDBT 2021. **Accepted**.
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[C6] **Coining goldMEDAL: A New Contribution to Data Lake Generic Metadata Modeling**. E. Scholly, P. N. Sawadogo, P. Liu, J. A. Espinosa-Oviedo, C. Favre, S. Loudcher, J. Darmont and C. Noûs. In Proc. *23rd Int. Workshop on Design, Optimization, Languages and Analytical Processing of Big Data* (**DOLAP 2021**), co-located with EDBT 2021. **Accepted**.
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[C7] **Enacting Data Science Pipelines for Exploring Graphs: From Libraries to Studios**. G. Vargas-Solar, J.L. Zechinelli-Martini, J.A. Espinosa-Oviedo. In Proc. ADBIS/TPDL/EDA 2020 Workshops and Doctoral Consortium, CCIS vol 1260, Springer, 2020, pp. 271–280. DOI: https://doi.org/10.1007/978-3-030-55814-7_23

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[C12] **Experiences in building reliable mobile services-based applications**. Alberto Portilla, Hanh Tan, Javier-Alfonso Espinosa-Oviedo. In Proc. *1st Int. Workshop on Data and Services Management in Mobile Environments (DS2ME'08)* in conjunction with the *24th Int. Conf. on Data Engineering (ICDE'08)*, April 7-12, 2008, Cancun, Mexico, IEEE, pp. 121-128. ISBN: 978-1-4244-2161-9, DOI: 10.1109/ICDEW.2008.4498303 *Conference Rank (2019): CORE:A**	**2008**

PEER-REVIEWED ARTICLES IN NATIONAL CONFERENCES

[C13] (Demo) **Exploring and Curating Data Collections with CURARE.** G. Vargas-Solar, G. Kemp, I. Hernández Gallegos, J-A. Espinosa-Oviedo, C. Ferrera da Silva and P. Ghodous. In Proc. of the BDA 2019 Conference, Demo, 15-18 October 2019, Lyon, France.	**2019**
[C14] **Construire des applications fiables à base de services mobiles.** A. Portilla, T. Hanh, J.A. Espinosa-Oviedo, C. Collet, G. Vargas-Solar. In Proc. of the 4th French-speaking conference on Mobility and ubiquity computing (UbiMob'08). Saint Malo, France, May 28-30, 2008, pp. 57-64, ACM, 2008. ISBN: 978-1-59593-980-7. DOI: 10.1145/1376971.1376983.	**2008**

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* **[P2]** **Policy Driven Services Coordination for Building Social Networks Based Applications**. J. A. Espinosa-Oviedo, G. Vargas-Solar, J. L. Zechinelli-Martini, and C. Collet. In *Proc. Int. Conf. on Services Computing (SCC'11): Work in Progress Track*, Poster, 4-9 July 2011, Washington, DC, USA, IEEE, pp. 753-754. ISBN: 978-1-4577-0863-3, DOI: https://doi.org/10.1109/SCC.2011.40 *Conference Rank (2019): CORE:A, LiveSHINE:A, GGS:A, MicrosoftAcademic:B* *Citations (Scopus, 2019): 2*	**2011**
* **[P3]** **Non-functional properties and services coordination using contracts**. J. A. Espinosa-Oviedo, G. Vargas-Solar, J.-L. Zechinelli-Martini, and C. Collet. In Proc. *13th Int. Database Engineering & Applications Symp. (IDEAS'19)*, Poster, 16-18 Sept. 2009, Cetraro, Italy, ACM, pp. 307-310. ISBN: 978-1-60558-402-7. DOI: https://doi.org/10.1145/1620432.1620467 *Conference Rank (2019): CORE:B, LiveSHINE:B, GGS:B, MicrosoftAcademic:B-* *Citations (ACM): 1*	**2009**

OTHERS

* [O1] (Abstract) **Building dynamic cards for monitoring building environments behavior and reconstruction in disasters: A data centric perspective.** G. Vargas-Solar, A. Koutamanis, J.A. Espinosa-Oviedo. *10th Conf. Int. Society for Integrated Disaster Risk Management (IDRiM'19)*, Nice, France, 16-18th October 2019. **2019**

* [O2] **Supporting Real-Time Visual Analytics in Neuroscience**. E. Arriaga-Varela, J. A. Espinosa-Oviedo, G. Vargas-Solar, R. Dávila Pérez. In Book of abstracts *4th BSC Severo Ochoa Doctoral Symposium*, Barcelona, Spain, 2-4th May 2017, Barcelona Supercomputing Centre, pp. 71–72. **2017**

* [O3] **Comparing electoral campaigns by analysing online data**. J.A. Espinosa-Oviedo, G. Vargas-Solar, V. Alexandrov, G. Castel. In Book of abstracts *3rd BSC International Doctoral Symposium*, Barcelona, Spain, 4-6th May 2016, Barcelona Supercomputing Centre, pp. 61-62. **2016**

[O4] **Crowd simulation and visualization**. H. Perez, I. Rudomin, E. Ayguadé Parra, B. Hernandez, J. A. Espinosa-Oviedo, and G. Vargas-Solar. In Book of abstracts *3rd BSC International Doctoral Symposium*, Barcelona, Spain, 4-6th May 2016, Barcelona Supercomputing Centre, pp. 98–100 **2016**

[O5] **Efficient and versatile data analytics for deep networks**. D. Garcia-Gasulla, J. Moreno-Vázquez, J.A. Espinosa-Oviedo, J. Conejero, G. Vargas-Solar, R.M. Badia, U. Cortés, T. Suzumura. In Book of abstracts *3rd BSC International Doctoral Symposium*, Barcelona, Spain, 4-6th May 2016, Barcelona Supercomputing Centre, pp. 72-73. **2016**

* Articles I presented in conference/workshop