

# André Sales Fonteles

**Abstract:** Holds a PhD from *Université Grenoble Alpes*. Received his Master's degree in Computer Science from *Universidade Federal do Ceará* (2013) and his Bachelor's degree in Computer Science at *Universidade de Fortaleza* (2010). Has experience in Computer Science, focusing on crowdsourcing systems, mobile and context-aware applications and recommender systems. Associate Teaching Professor of Computer Science at Ball State University.

## Personal Information

|                                      |  |
|--------------------------------------|--|
| Full name                            | André SALES FONTELES   |
| Name used in Bibliographic Citations | A. S. FONTELES   |
| Birth Information                    | 02/04/1987 – Fortaleza, Ceará, Brazil                              |
| Residential Address                  | Muncie, IN, USA  |
| E-mail address                       | <a href="mailto:andre.fonteles@bsu.edu">andre.fonteles@bsu.edu</a> |

## Formal Education

|             |   |
|-------------|---|
| 2013 - 2017 | <ul style="list-style-type: none"><li>- Ph.D. in Computer Science<br/>Steamer, LIG<br/>Université Grenoble Alpes</li><li>- Thesis Title: <i>Spatial Crowdsourcing Platforms: A generic architecture and a recommendation framework</i></li><li>- Advisor: Jérôme Gensel</li><li>- Co-advisor: Sylvain Bouveret</li><li>- Scholarship from: Ministère de l'Enseignement Supérieur et de la Recherche de la France</li></ul>  |
| 2011 - 2013 | <ul style="list-style-type: none"><li>- Master's in Computer Science<br/>Universidade Federal do Ceará, UFC, Fortaleza, Brazil</li><li>- Master's Thesis Title: <i>A framework for adaptive and decoupled acquisition of contextual information for mobile devices (Um framework para aquisição adaptativa e fracamente acoplada de informação contextual para dispositivos móveis)</i></li><li>- Advisor: Rossana Maria de Castro Andrade</li><li>- Co-advisor: Windson Viana de Carvalho</li><li>- Scholarship from: Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq)</li></ul> |
| 2006 - 2010 | <ul style="list-style-type: none"><li>- Bachelor's in Computer Science<br/>Universidade de Fortaleza, UNIFOR, Fortaleza, Brazil</li><li>- Bachelor's Thesis Title: <i>Developing mobile collaborative mapping applications (Desenvolvimento de aplicações de mapeamento colaborativo para dispositivos móveis)</i></li><li>- Advisor: João José Vasco Peixoto Furtado</li></ul>   |

## Teaching Experience

|                         |  |
|-------------------------|--|
| Fall 2023 – Today       | <b>Associate Teaching Professor,</b><br>Courses taught: <i>Operating Systems, Computer Organization and Architecture, Introduction to Programming, and Programming Languages.</i><br><b>Department of Computer Science at Ball State University</b><br>Muncie, IN, USA   |
| Fall 2018 – Spring 2023 | <b>Assistant Professor,</b><br>Courses taught: <i>Advanced Software Engineering, Software Engineering, Software Testing: Verif. And Valid., Advanced Internet Concepts, Internet Programming, Object Oriented Programming, Operating Systems, Database Programming, Introduction to Programming, Introduction to Computer Science I, Senior Project I and II, and more.</i><br><b>Department of Computer Information Science at Indiana Wesleyan University</b><br>Marion, IN, USA |
| 2018                    | <b>Lecturer (Vacataire)</b><br>Course taught: Web Technologies<br>Duration: 18h (lecture and lab.)<br><b>ESTIA Institute of Technology</b><br>Biarritz, France   |
| 2016 - 2017             | <b>Temporary Lecturer and Researcher (ATER- Attaché temporaire d'enseignement et de recherche)</b><br>Duration: 197h of teaching (1 Full year)<br>Courses taught: <i>Mobile Programming, Algorithms and Data Structures, Human-Computer Interaction, Introduction to Client-Side Programming, Computer Science Capstone.</i><br><b>IUT2, Université Grenoble Alpes</b><br>Grenoble, France   |
| 2012                    | <b>Master's Teaching internship</b> in an Introduction to Programming course<br>Duration: 30h<br>Public: <i>Engineering students</i><br><b>Universidade Federal do Ceará</b><br>Fortaleza, Ceará, Brazil   |
| 2012                    | Non-academic paid course: Introduction to Android development<br>Duration: 32h<br>Public: Anyone with a minimum knowledge of Object Oriented Programming.<br>Contractor: <i>eDea Jr. Informatics Junior enterprise of the Universidade Federal do Ceará</i><br>Fortaleza, Ceará, Brazil  |
| 2008                    | Non-academic course: Developing with Microsoft technology<br>Duration: 28h<br>Public: Computer Science students<br>Course given at the 2 <sup>nd</sup> part of the Students to Business (S2B - 2008), Microsoft Innovation Center<br>Fortaleza, Ceará, Brazil  |
| 2007                    | Non-academic course: Introduction to game development with Java<br>Duration: 8h<br>Public: Anyone with a minimum knowledge of Object Oriented Programming.   |

|                                  |  |
|----------------------------------|--|
|                                  | Mini course given during the Technology Week event at Universidade de Fortaleza<br>Fortaleza, Ceará, Brazil  |
| 2007.1/2<br>2007.2/2<br>2008.1/2 | Undergraduate teaching assistant: Introduction to Programming course<br>Duration: 3 semesters<br>Public: Computer Science students<br><b>Role: to help students with questions and assist a professor at classroom once a week helping students with practical programming exercises.</b><br>Universidade de Fortaleza<br>Fortaleza, Ceará, Brazil |

### ***Other Professional Experiences***

| 1. Independent Android Game developer                             |   |
|---|---|
| 2011 - Today  | <b>General information:</b><br>Independent developer, having developed and maintained several games for kids, totaling hundreds of thousands of downloads.<br><b>Link to apps:</b><br><a href="https://play.google.com/store/apps/developer?id=BabyApps.org">https://play.google.com/store/apps/developer?id=BabyApps.org</a><br><b>Other information:</b><br>Mobile applications development using: Android Framework, Java, LibGdx engine, Eclipse IDE, Android Studio, git, Inkscape, GIMP and more. |
| 2. LIUPPA, Équipe T2I, UPPA, Pau, France                          |   |
| 2018<br>(6 months)  | <b>General information:</b><br>Position: Computer Science post-doc<br><b>Other information:</b><br>Contributing with the project TCV-PYR that aimed to foster tourism in the Pyrenees zone. The goal was to be achieved through two main activities. First, the integration of data from different databases. Second, the development of a prototype application that exploits this data to support tourism activities.   |
| 3. GREAt Laboratory, Fortaleza, Brazil                            |   |
| 2013<br>(6 months)  | <b>General information:</b><br>Position: Analyst Programmer, Working hours (weekly): 40<br><b>Other information:</b><br>Web and mobile development using: ASP.NET, C#, MVC 3, Gerrit, Jenkins, NUnit, NHibernate, JavaScript, Scrum, Java, Android, git, and more.  |
| 4. Engenharia do Conhecimento Laboratory – LEC, Fortaleza, Brazil |   |
| 2008 - 2010   | <b>General information:</b><br>Contract: Scholarship, Position: Analyst Programmer, Working hours (weekly): 30<br><b>Other information:</b><br>Web and mobile development of spatial applications using: Google Maps, Android, Java, JSF, Hibernate, Spring, PHP, Symfony and more.   |

### ***Awards and Honors***

|      |   |
|------|---|
| 2012 | Featured Student UNIFOR 2012, Universidade de Fortaleza |
|------|---|

|      |  |
|------|--|
| 2010 | Finalist of the “Prêmio Mobilefest de Aplicativos para Celular” – Category D, MOBILEFEST |
|------|--|

## Languages

|            |   |
|------------|---|
| Portuguese | <i>Mother tongue</i>                                |
| English    | <i>Fluent</i>                                       |
| French     | <i>Fluent</i>                                       |
| Spanish    | <i>Moderate reading and listening comprehension</i> |

## Some of my Personal Projects

|                                |  |
|--------------------------------|--|
| <b>Mini-Engine</b>             | <p><b>Description:</b><br/>Mini-engine is a small game engine built on top of PyGame to be used for educational purposes. This engine was originally conceived to be used in a Summer Camp where I taught Python programming through game development to high school students.</p> <p><b>Source:</b> <a href="https://github.com/Andre-Fonteles/mini-engine">https://github.com/Andre-Fonteles/mini-engine</a></p> <p><b>Technologies:</b> Python, PyGame, Sprites, Animation, Keyboard Events, etc.</p>   |
| <b>UbiOrb</b>                  | <p><b>Description:</b><br/>UbiOrb allows ordinary people and citizens to create their own news websites and publish news according to their point of view, fostering a more plural and free press</p> <p><b>Source:</b> <a href="https://github.com/Andre-Fonteles/UbiOrb">https://github.com/Andre-Fonteles/UbiOrb</a></p> <p><b>Platform:</b> <a href="http://ubiorb.com">http://ubiorb.com</a> <b>(no longer available)</b></p> <p><b>Technologies:</b> PHP, Symfony, Doctrine, Bootstrap, JQuery, JavaScript, Apache, MySQL, PHPMailer, etc.</p> |
| <b>LoCCAM</b>                  | <p><b>Description:</b><br/>LoCCAM is a middleware, designed to be fully embedded in Android powered mobile devices, that provides adaptive acquisition of contextual information</p> <p><b>Source:</b> <a href="https://github.com/Andre-Fonteles/LoCCAM">https://github.com/Andre-Fonteles/LoCCAM</a></p> <p><b>Technologies:</b> Android, Java, OSGi</p>   |
| <b>GENIUS-C</b>                | <p><b>Description:</b><br/>GENIUS-C is a framework to support the development of spatial crowdsourcing systems (SCP).</p> <p><b>Source:</b> <a href="https://github.com/Andre-Fonteles/GENIUS-C">https://github.com/Andre-Fonteles/GENIUS-C</a></p> <p><b>Technologies:</b> Java, JAX-RS, RESTful web services.</p>  |
| <b>My Notes API</b>            | <p><b>Description:</b><br/>Back-end application to keep track of notes.</p> <p><b>Source:</b> <a href="https://github.com/Andre-Fonteles/my-notes-api">https://github.com/Andre-Fonteles/my-notes-api</a></p> <p><b>Technologies:</b> JavaScript, NodeJS, Express, Mocha, Chai, HTTP RESTful API.</p>  |
| <b>Homebrew 8-bit Computer</b> | <p><b>Description:</b><br/>Hobby breadboard computer created to better understand low-level computing.</p> <p><b>More info.:</b> <a href="https://www.fonteles.dev/6502.html">https://www.fonteles.dev/6502.html</a></p> <p><b>Technologies:</b> 6502, Assembly, Binary</p>  |

## ***Complementary Education***

|             |   |
|-------------|---|
| 2008 - 2008 | Short Term Course in Training for Teachers of the S2B program. Microsoft Innovation Center Fortaleza, MIC, Brazil |
| 2007 - 2007 | Students To Business - S2B. Microsoft Innovation Center Fortaleza, MIC, Brazil                                    |

## ***Bibliographic Production***

### ***Refereed Journals***

1. Rajaonarivo, L., **Fonteles, A.**, Sallaberry, C., Bessagnet, M. N., Roose, P., Etcheverry, P., ... & Coudert, Q. Recommendation of Heterogeneous Cultural Heritage Objects for the Promotion of Tourism. *ISPRS International Journal of Geo-Information*, 2019.
2. **A. S. Fonteles**, S. Bouveret, and J. Gensel, "Trajectory recommendation for task accomplishment in crowdsourcing - a model to favor different actors," *Journal of Location Based Services*, 2016.
3. **A. S. Fonteles**, S. Bouveret, and J. Gensel, "Recommandation opportuniste de trajectoires pour l'accomplissement de taches dans les systemes crowdsourcing," *Document Numérique*, 2016.

### ***Refereed Conference and Workshop Proceedings***

4. S. Malvyia, **A. Fonteles**, A. Marin Batana, A. Burch-Dewitt "Recommending Security Requirements through Asset Identification and Threat Mapping" in *IEEE 33rd International Requirements Engineering Conference (RE)*, IEEE, 2025.
5. **A. S. Fonteles**, S. Bouveret, and J. Gensel, "A programming framework for Spatial Crowdsourcing," in *Proceedings of the 15th International Conference on Advances in Mobile Computing and Multimedia*, ser. MoMM '17. ACM, 2017.
6. **A. S. Fonteles**, S. Bouveret, and J. Gensel, "A generic architecture for spatial crowdsourcing," in *IEEE 10th International Conference on Research Challenges in Information Science (RCIS)*, June 2016.
7. **A. S. Fonteles**, S. Bouveret, and J. Gensel, "Heuristics for task recommendation in spatiotemporal crowdsourcing systems," in *Proceedings of the 13th International Conference on Advances in Mobile Computing and Multimedia*, ser. MoMM '15. ACM, 2015.
8. **A. S. Fonteles**, S. Bouveret, and J. Gensel, "Opportunistic trajectory recommendation for task accomplishment in crowdsourcing systems," in *Web and Wireless Geographical Information Systems, W2GIS 2015, Proceedings*. Springer, 2015.
9. **A. S. Fonteles**, S. Bouveret, and J. Gensel, "Améliorer l'appariement entre tâches et exécutants dans les Systèmes de Marché Participatifs Mobiles," in *SAGEO 2014*, ser. Actes de la conférence SAGEO 2014, Grenoble, France, Nov. 2014.
10. **A. S. Fonteles**, S. Bouveret, and J. Gensel, "Towards matching improvement between spatio-temporal tasks and workers in mobile crowdsourcing market systems," in *Proceedings of the*

*Third ACM SIGSPATIAL International Workshop on Mobile Geographic Information Systems*, ser. MobiGIS '14. New York, NY, USA: ACM, 2014, pp. 43– 50. [Online]. Available: <http://doi.acm.org/10.1145/2675316.2675319>

11. **A. S. Fonteles**, B. J. A. Neto, M. Maia, W. Viana, and R. M. C. Andrade, “An Adaptive Context Acquisition Framework to Support Mobile Spatial and Context-Aware Applications” *Web and Wireless Geographical Information Systems: 12th International Symposium, W2GIS 2013, Banff, AB, Canada, April 4-5, 2013. Proceedings*. Berlin, Heidelberg: Springer Berlin Heidelberg, 2013, ch., pp. 100–116.
12. M.E.F.Maia, **A. Fonteles**, B.Netto, R.Gadelha, W.Viana, R.M.C. Andrade, “Loccam - loosely coupled context acquisition middleware,” in *Proceedings of the 28th Annual ACM Symposium on Applied Computing*, ser. SAC '13. New York, NY, USA: ACM, 2013, pp. 534– 541. [Online]. Available: <http://doi.acm.org/10.1145/2480362.2480465>
13. B. J. A. Neto, R. M. C. Andrade, M. E. F. Maia, **A. Fonteles**, and W. Viana, “A coordination framework for dynamic adaptation in ubiquitous systems based on distributed tuple space,” in *2013 9th International Wireless Communications and Mobile Computing Conference (IWCMC)*, July 2013, pp. 1430–1435.
14. V. Furtado, M. de Oliveira, **A. Fonteles**, C. Duque, T. Assunção, M. Belchior, and J. DOrleans, “Um método para identificar atividades maliciosas em sistemas colaborativos com mapas,” in *XXIV Simpósio Brasileiro de Banco de Dados*. SBC, 2009.

### ***Demo papers***

15. **A. Fonteles**, M.N. Bessagnet, A. Le Parc-Lacayrelle, C. Sallaberry, “Un environnement pour la valorisation de données patrimoniales hétérogènes,” in *SAGEO 2018*

### ***Submitted – Under Review***

16. Malvyia, S, **A. Fonteles**, Batana Marin, A, “Automating Security Requirements: From Identifying Assets to Mitigating Threats,” in *REFSQ 2025* (under review)

## ***Academic Service***

Program Committee Member, 37th INFORSID (2019) - *INFormatique des ORganisations et Systèmes d'Information et de Décision*, Paris, France, June, 2019

Guest editor, *Energies* 2021 (ISSN 1996-1073) - Special Issue "*Smart Anything Everywhere: New Frontiers, Solutions, Issues & Challenges*"

Facilitator, *IndianaComputes!* 2019-2020 - a collaboration of universities and colleges in Indiana to provide local Computer Science training for teachers and students. (<https://indianacomputes.net>)

Mentor, *IndianaComputes!* 2021-2022 - a collaboration of universities and colleges in Indiana to provide local Computer Science training for teachers and students. (<https://indianacomputes.net>)

