

# Lesandro Ponciano

E-mail: [lesandro.ponciano@gmail.com](mailto:lesandro.ponciano@gmail.com)

Web Page: <https://lesandrop.github.io/site/>

ORCID: <https://orcid.org/0000-0002-5724-0094>

---

**Expertise:** Collaborative Systems • HCI • Data Science • e-Science • Citizen Science • Human Computation

**Experience:** Quantitative Research • System Simulation • Data Modeling • GQM Method • Data Mining

**Languages:** Portuguese (native) • English (advanced) • Spanish (basic)

---

## Education

**PhD.** in Computer Science (2012 - 2015) • Federal University of Campina Grande, Brazil

- Thesis: Human Computation from the Perspective of the Engagement and Credibility of Humans, and the Replication of Tasks
- Advisor: Francisco Brasileiro, PhD. Newcastle University (UK), [fubica@dsc.ufcg.edu.br](mailto:fubica@dsc.ufcg.edu.br)
- Grade Point Average: 10.0/10.0

**M.Sc.** in Computer Science (2009 - 2011) • Federal University of Campina Grande, Brazil

- Thesis: Assessing Energy Saving Strategies in Peer-to-Peer Opportunistic Grids
- Advisor: Francisco Brasileiro, PhD. Newcastle University (UK), [fubica@dsc.ufcg.edu.br](mailto:fubica@dsc.ufcg.edu.br)
- Grade Point Average: 9.0/10.0

**B.Sc.** in Information Systems (2005 - 2008) • Pontifical Catholic University of Minas Gerais, Brazil

- Grade Point Average: 8.9/10.0

## Work Experiences

**Researcher (01/2022 - current)** • Dresden University of Technology, Germany

- Institute of Systems Architecture - Chair of Systems Engineering
- Project: AI-Sprint - Artificial intelligence in Secure Privacy-preserving computing coNTinuum
- European Union Horizon 2020 research and innovation programme under Grant Agreement No. 101016577

**Associate Professor (02/2016 - "on leave" since 12/2021)** • Pontifical Catholic University of Minas Gerais, Belo Horizonte, Brazil

- Institute of Exact Sciences and Informatics- Department of Software Engineering and Information Systems
- Programs: Computer Science, Software Engineering, Information Systems, Electrical Engineering

**Researcher (02/2016 - 12/2016)** • Laboratory of Distributed Systems, Brazil

- Project: PrivIoT - Privacy on the Internet of Things
- Sponsored by Hewlett-Packard (HP)
- Supervisor: Andrey Brito, [andrey@computacao.ufcg.edu.br](mailto:andrey@computacao.ufcg.edu.br)
- Technical skills: R, Python, Internet of Things (IoT), survey design and validation

**Analytics Tutor (01/2012 - 05/2013)** • Federal University of Campina Grande, Brazil

- Project: Analytics Training Program
- Sponsored by Hewlett-Packard (HP) Brazil
- Supervisor: Nazareno Andrade, [nazareno@computacao.ufcg.edu.br](mailto:nazareno@computacao.ufcg.edu.br)
- Technical skills: R, Python, Data Visualization, Statistics

## Scientific Awards

- 2021** **Best reviewers of the 1st Brazilian Symposium on Computer Education (EduComp)**, Brazilian Computer Society.
- 2020** **Honorable Mention in Exact Sciences as advisor of undergraduate research** (student Gabriel Moreira Chaves), the 28th Scientific Initiation Seminar, Pontifical Catholic University of Minas Gerais.
- 2019** **Special Recognitions for Outstanding Reviews**, the ACM CHI 2020 Conference.
- 2018** **Honorable Mention in Exact Sciences as advisor of undergraduate research** (student Arthur V. Soares Pereira), the 26th Scientific Initiation Seminar, Pontifical Catholic University of Minas Gerais.
- 2017** **Third best paper of the Brazilian Symposium on Collaborative Systems (SBSC)**, paper "Analysis of the Popularity, Visibility and Activity of Different Types of Robots on the Social Network Twitter", Brazilian Computer Society.
- 2014** **Student Scholarship at the 10th IEEE International eScience Conference**, The IEEE eScience International Conference. IEEE Computer Society.
- 2011** **Best Computer Science Master Thesis - Finalist** (one of 10) in Brazil, Brazilian Computer Society.
- 2010** **Honorable Mention for the paper "Analysis of Green Computing Strategies in Opportunistic Computational Grids"**, the XXVIII Brazilian Symposium on Computer Networks and Distributed Systems.
- 2008** **Honorable Mention for the work "Analysis of Classification and Clustering Algorithms in the Discovery and Prediction of the Behavior of Parallel Tasks"**, the 16th Scientific Initiation Seminar, Pontifical Catholic University of Minas Gerais.
- 2007** **Honorable Mention for the article "Technique for Characterization of Workload of Parallel Machines to Extract Information Used by a Reconfigurable Task Scheduler"**, Scientific Initiation Papers Competition, the VIII Symposium on Computer Systems (WSCAD-CSS). Brazilian Computer Society.
- 2007** **Honorable Mention for the work "Proposal, Implementation and Evaluation of a Workload Characterization Technique for Parallel Machines for the Extraction of Information Used by a Scheduler"**, the 15th Scientific Initiation Seminar, Pontifical Catholic University of Minas Gerais.
- 2006** **Honorable Mention for the work "Advancement and Exclusion: Two Faces of the Digital Age, A Sociotechnical Analysis of ITs"**, the 14th Scientific Initiation Seminar, Pontifical Catholic University of Minas Gerais.

## Academic Awards

- 2021** **Honored Professor award**, granted by students at their commencement ceremony. Information System Program. The Pontifical Catholic University of Minas - Contagem.
- 2020** **Honored Professor award**, granted by students at their commencement ceremony. Information System Program. Pontifical Catholic University of Minas - Barreiro.
- 2019** **Honored Professor award**, granted by students at their commencement ceremony. Information System Program. Pontifical Catholic University of Minas - Barreiro.
- 2019** **Outstanding Teaching Performance**, granted by Pontifical Catholic University of Minas Gerais
- 2018** **Honored Professor award**, granted by students at their commencement ceremony. Information System Program. The Pontifical Catholic University of Minas - Contagem.
- 2018** **Outstanding Teaching Performance**, granted by Pontifical Catholic University of Minas Gerais
- 2008** **Master's dissertation approved with distinction**, Graduate Program in Computer Science, Center for Electrical Engineering and Informatics. Federal University of Campina Grande.
- 2008** **Silver medal for the second-best academic performance throughout the Bachelor's Degree in Information Systems**, Pontifical Catholic University of Minas Gerais (PUC Minas)

## Peer-reviewed Conference and Journal Publications [Published in English]

- [1] Ramos, H.; Fonseca, M.; Ponciano, Leandro. **Modeling and Evaluating Personas with Software Explainability Requirements**. In *VII Iberoamerican Workshop on Human-Computer Interaction*. 2021. [https://doi.org/10.1007/978-3-030-92325-9\\_11](https://doi.org/10.1007/978-3-030-92325-9_11) Full-paper
- [2] Nelson, M. A; Ponciano, Leandro, **"Experiences and insights from using Github Classroom to support Project-Based Courses"**. In *2021 Third International Workshop on Software Engineering Education for the Next Generation (SEENG) at ICSE-JSEET*. 2021. pp. 31-35. IEEE. DOI: [10.1109/SEENG53126.2021.00013](https://doi.org/10.1109/SEENG53126.2021.00013) Full-paper
- [3] PILAND, N.; VARESE, M.; SOACHA, K.; Ponciano, Leandro; CASTANEDA, A.; ALVAREZ, H. G.; Poster

CUEVA, R.; DONOFRIO, G.; ESPITIA, J. E.; JURADO, C.; KOVACH, A.; LUIS, C.; MALDONADO, W.; CALLEJAS, S. M.; PIERA, J.; PLOS, A.; RESTREPO, J. F.; SANCHEZ, M.; SANDOVAL, M. J.; TORRES, D.; TORRICO, O.; WALLACE, R. B. **Citizen science from the Iberoamerican perspective: an overview, and insights by the RICAP network**. In: European Citizen Science Association Conference (ECSA Conference 2020), 2020, Trieste. DOI: [10.5281/zenodo.4019060](https://doi.org/10.5281/zenodo.4019060)

- [4] de Macêdo Morais, L. A.; Andrade, N.; de Sousa, D. M. C.; Ponciano, Lesandro. **Defamiliarization, representation granularity, and user experience: A qualitative study with two situated visualizations**. In *2019 IEEE Pacific Visualization Symposium (PacificVis)*. 2019, pp. 92-101. IEEE. DOI: [10.1109/PacificVis.2019.00019](https://doi.org/10.1109/PacificVis.2019.00019) Full-paper
- [5] Ponciano, Lesandro; Pereira, Thiago Emmanuel. "Characterising volunteers' task execution patterns across projects on multi-project citizen science platforms." *Proceedings of the 18th Brazilian Symposium on Human Factors in Computing Systems*. 2019. pp. 1-11. ACM. DOI: [10.1145/3357155.3358441](https://doi.org/10.1145/3357155.3358441) Full-paper
- [6] Ponciano, Lesandro. **HCI Support Card: Creating and Using a Support Card for Education in Human-Computer Interaction**. In: Workshop on HCI Education, *Extended Proceedings of the 18th Brazilian Symposium on Human Factors in Computing Systems*. Porto Alegre, Brasil: SBC, 2019. pp. 106-111. DOI: [10.5753/ihc.2019.8409](https://doi.org/10.5753/ihc.2019.8409) Full-paper
- [7] Ponciano, Lesandro; Brasileiro, Francisco. "Agreement-based credibility assessment and task replication in human computation systems." *Future Generation Computer Systems*, 87 (2018): 159-170. DOI: [10.1016/j.future.2018.05.028](https://doi.org/10.1016/j.future.2018.05.028) Full-paper
- [8] Ponciano, Lesandro; Barbosa, Pedro; Brasileiro, Francisco; Brito, Andrey; Andrade, Nazareno. "Designing for Pragmatists and Fundamentalists: Privacy Concerns and Attitudes on the Internet of Things." *Proceedings of the XVI Brazilian Symposium on Human Factors in Computing Systems*. 2017. pp. 1-10. ACM. DOI: [10.1145/3160504.3160545](https://doi.org/10.1145/3160504.3160545) Full-paper
- [9] Eitzel, M.V., Cappadonna, J.L., Santos-Lang, C., Duerr, R.E., Virapongse, A., West, S.E., Kyba, C.C.M., Bowser, A., Cooper, C.B., Sforzi, A., Metcalfe, A.N., Harris, E.S., Thiel, M., Haklay, M., Ponciano, Lesandro, Roche, J., Ceccaroni, L., Shilling, F.M., Dörler, D., Heigl, F., Kiessling, T., Davis, B.Y. and Jiang, Q., 2017. "Citizen Science Terminology Matters: Exploring Key Terms". *Citizen Science: Theory and Practice*, 2(1), p.1. DOI: [10.5334/cstp.96](https://doi.org/10.5334/cstp.96) Full-paper
- [10] Ponciano, Lesandro; Brasileiro, Francisco; Simpson, Robert; Smith, Arfon. "Volunteers' Engagement in Human Computation for Astronomy Projects". *Computing in Science & Engineering*, v. 16, p. 52-59, 2014. DOI: [10.1109/MCSE.2014.4](https://doi.org/10.1109/MCSE.2014.4) Full-paper
- [11] Ponciano, Lesandro; Brasileiro, Francisco. "Finding Volunteers' Engagement Profiles in Human Computation for Citizen Science Projects". *Human Computation*, v. 1, n. 1, p. 245-264, 2014. DOI: [10.15346/hc.v1i2.12](https://doi.org/10.15346/hc.v1i2.12) Full-paper
- [12] Ponciano, Lesandro; Brasileiro, Francisco; Andrade, Nazareno; Sampaio, Livia. "Considering Human Aspects on Strategies for Designing and Managing Distributed Human Computation". *Journal of Internet Services and Applications*, v. 5, p. 1-28, 2014. DOI: [10.1186/s13174-014-0010-4](https://doi.org/10.1186/s13174-014-0010-4) Full-paper
- [13] Ponciano, Lesandro; Brasileiro, Francisco. "Assessing Green Strategies in Peer-to-Peer Opportunistic Grids". *Journal of Grid Computing*, v. 11, p. 129-148, 2013. DOI: [10.1007/s10723-012-9218-3](https://doi.org/10.1007/s10723-012-9218-3) Full-paper
- [14] PONCIANO, Lesandro; Andrade, Nazareno; Brasileiro, Francisco. **BitTorrent traffic from a caching perspective**. *Journal of the Brazilian Computer Society*, v. 19, p. 475-491, 2013. DOI: [10.1007/s13173-013-0112-z](https://doi.org/10.1007/s13173-013-0112-z) Full-paper
- [15] PONCIANO, Lesandro; Brasileiro, Francisco; Gadelha, Guilherme. **Task Redundancy Strategy Based on Volunteers' Credibility for Volunteer Thinking Projects**. In: AAAI Conference on Human Computation and Crowdsourcing, 2013, Palm Springs. p. 60-61. Abstract
- [16] Ponciano, Lesandro; Brito, Andrey; Sampaio, Livia; Brasileiro, Francisco. **Energy-Efficient Computing through Productivity-Aware Frequency Scaling**. In: 2012 International Conference on Cloud and Green Computing (CGC), 2012, Xiangtan. 2012. p. 191-198. DOI: [10.1109/CGC.2012.59](https://doi.org/10.1109/CGC.2012.59) Full-paper
- [17] Alves, Luiz; Maciel, Matheus; Ponciano, Lesandro; Brito, Andrey. **Assessing the impact of the social network on marking photos as favorites in Flickr**. In: 18th Brazilian Symposium on Multimedia and the web, 2012, São Paulo/SP. New York: ACM Press. p. 79-82. DOI: [10.1145/2382636.2382655](https://doi.org/10.1145/2382636.2382655) Full-paper
- [18] Ponciano, Lesandro; Brasileiro, Francisco. **On the impact of energy-saving strategies in opportunistic grids**. In: Energy Efficient Grids, Clouds and Clusters Workshop (E2GC2 2010), 2010, Bruxelas. 11th ACM/IEEE International Conference on Grid Computing (Grid 2010), 2010. v. 1. p. 282-289. DOI: [10.1109/GRID.2010.5698003](https://doi.org/10.1109/GRID.2010.5698003) Full-paper

## Peer-reviewed Conference and Journal Publications *[Published in Portuguese]*

- [1] LOUZADA, HENRIQUE; CHAVES, GABRIEL; Ponciano, Lesandro. **Exploring user profiles based on their explainability requirements in interactive systems**. In: IHC '20: XIX Brazilian Symposium on Human Factors in Computing Systems, 2020, Diamantina Brazil. New York: ACM, 2020. p. 1-6. DOI: [10.1145/3424953.3426545](https://doi.org/10.1145/3424953.3426545) Full-paper
- [2] Ponciano, Lesandro. **"Structured Debate: A Pedagogical Strategy for Teaching and Learning Human Values in Human-Computer Interaction"**. (Portuguese: Debate Estruturado: Uma Estratégia Pedagógica para Ensino e Aprendizagem de Valores Humanos em Interação Humano-Computador). In: Workshop on HCI Education, 2018. Anais Estendidos do XVII Simpósio Brasileiro de Fatores Humanos em Sistemas Computacionais (IHC). DOI: [10.5753/ihc.2018.4209](https://doi.org/10.5753/ihc.2018.4209) Full-paper
- [3] VALGAS, A.; CARMO, F.; Ponciano, Lesandro; GOES, L. **"Analysis of Popularity, Visibility and Activity of Different Types of Socialbots on Twitter Social Network"** (Portuguese: Análise da Popularidade, Visibilidade e Atividade de Diferentes Tipos de Robôs na Rede Social Twitter). In: XIV Simpósio Brasileiro de Sistemas Colaborativos, 2017, São Paulo. XXXVII Congresso da Sociedade Brasileira de Computação. Porto Alegre: Sociedade Brasileira de Computação, 2017. v. 1. p. 1342-1355. DOI: [10.5753/sbcs.2017.9958](https://doi.org/10.5753/sbcs.2017.9958) Full-paper
- [4] RAMOS, S. L. ; Góes, Luiz Fabrício; Ponciano, Lesandro; FRANCA, C.; MORAIS, H. . **"Assessing Players' Perception of Hearthstone Digital Card Game Combo Creativity"** (Portuguese: Avaliação da Percepção de Jogadores sobre a Criatividade de Combos do Jogo Digital de Cartas Hearthstone). In: Simpósio Brasileiro de Jogos e Entretenimento Digital (SBGames), Porto Alegre: SBC, 2016. p. 190-193. Short-paper
- [5] Ponciano, Lesandro; Brasileiro, Francisco; Gadelha, Guilherme; Furtado, Adabriand. **Adaptive Task Replication Strategy for Human Computation**. In: 2014 Brazilian Symposium on Computer Networks and Distributed Systems (SBRC), 2014, Florianopolis. p. 249-257. DOI: [10.1109/SBRC.2014.30](https://doi.org/10.1109/SBRC.2014.30) Full-paper
- [6] Oliveira, Jeymisson; Ponciano, Lesandro; Andrade, Nazareno; Brasileiro, Francisco. **"Strategies for obtaining a maximum item in Human Computation"** (Portuguese: Estratégias de obtenção de um item máximo em Computação por Humanos). In: XXXI Simpósio Brasileiro de Redes de Computadores e Sistemas Distribuídos (SBRC 2013), 2013, Brasília. Porto Alegre: SBC, 2013. p. 253-266. Full-paper
- [7] ARAÚJO, E. C.; Gaudencio, Matheus; Menezes, Andrey; Ferreira, Iury; Ribeiro, Iara; Fagner, Alberto; Ponciano, Lesandro; Morais, Fábio; Guerrero, Dalton; Figueiredo, Jorge. **"The Role of Study Habits in Student Programming Performance"** (Portuguese: O papel do hábito de estudo no desempenho do aluno de programação). In: Workshop sobre Educação em Computação (WEI), 2013, Maceió. Congresso da Sociedade Brasileira da Computação (CSBC). Porto Alegre: Sociedade Brasileira da Computação, 2013. p. 730-738. Full-paper
- [8] Ponciano, Lesandro; Santana, Jaíndson; Carvalho, Marcus; Gaudêncio, Matheus; Brasileiro, Francisco. **"Analysis of Green Computing Strategies in Opportunistic Computational Grids"** (Portuguese: Análise de Estratégias de Computação Verde em Grades Computacionais Oportunistas). In: XXVIII Simpósio Brasileiro de Redes de Computadores (SBRC), 2010, Gramado. Porto Alegre, Brasil: SBC, 2010. v. 1. p. 307-320. Full-paper
- [9] Ponciano, Lesandro; Brasileiro, Francisco; Santana, Jaíndson; Carvalho, Marcus; Gaudêncio, Matheus. **"Using Standby and Hibernate Strategies to Save Energy on Opportunistic Computational Grids."** (Portuguese: Usando as Estratégias Sobreaviso e Hibernação para Economizar Energia em Grades Computacionais Oportunistas). Revista Brasileira de Redes de Computadores e Sistemas Distribuídos, v. 3, p. 9-20, 2010. Full-paper

## Scientific Journal Activities

- Since 2013, reviewer for **IEEE Computing in Science & Engineering** journal
- Since 2014, reviewer for **IEEE Transactions on Human-Machine Systems** journal
- Since 2014, reviewer for **Human Computation** journal
- Since 2019, reviewer for **SBC Journal on 3D Interactive Systems** journal
- Since 2021, reviewer for **Frontiers in Psychology** journal
- Since 2021, reviewer for **Frontiers in Ecology and Evolution** journal

## Scientific Society and Association Activities

- Since 2015, member of the **Citizen Science Association** (CSA), United States.
- Since 2017, member of the **Brazilian Computer Society** (SBC), Brazil.
- Since 2019, member of the **Brazilian Society for the Advancement of Science** (SBPC), Brazil.
- Since 2019, member of the **Iberoamerican Network of Participatory Science** (RICAP), Colombia.

## Scientific Conference Activities

- Program Committee Member
  - **ACM International Conference on Supporting Group Work (GROUP)**. 2021.
  - **VII Ibero-American Conference on Human-Computer Interaction**. 2021.
  - **XX Brazilian Symposium on Human Factors in Computer Systems**. 2021.
  - **Brazilian Symposium on Collaborative Systems (SBSC)**. 2021.
  - **I Brazilian Symposium on Computer Education (EduComp)**. 2021. .
  - **I Contest for Scientific Initiation Papers in Software Engineering (CTIC-ES)** of the Brazilian Symposium on Software Engineering (SBES). 2020.
  - **XIX Brazilian Symposium on Human Factors in Computer Systems (IHC)**. 2020.
  - **XVIII Brazilian Symposium on Human Factors in Computer Systems (IHC)**. 2019.
  - **Brazilian Symposium on Collaborative Systems (SBSC)**. 2019.
  - **XVII Brazilian Symposium on Human Factors in Computer Systems (IHC)**. 2018.
  - **XIV Brazilian Symposium on Collaborative Systems (SBSC)**. 2017.
- External reviewer
  - **ACM CHI 2020 Conference**. 2019.
  - **Workshop on P2P, Dynamic, Social and Content Oriented Networks (SBRC - Wp2p+)**. 2011.
  - **Symposium on Computer Systems (WSCAD-SSC)**. 2011.
  - **Scientific Initiation Workshop in Computer Architecture and High-Performance Computing (WSCAD-WIC)**. 2011.

## Scientific Event Participations

<b>2021</b>	24th International Conference on Discovery Science	Online
<b>2021</b>	Brazilian Symposium on Computer Education	Online
<b>2020</b>	European Citizen Science Conference	Online
<b>2020</b>	Brazilian Symposium on Human Factors in Computing Systems	Online
<b>2019</b>	Brazilian National Science and Technology Week	Ponte Nova/Brazil
<b>2018</b>	Brazilian Symposium on Human Factors in Computing Systems	Belém/Brazil
<b>2017</b>	Citizen Science Association Conference	Twin Cities/USA
<b>2017</b>	Brazilian Symposium on Human Factors in Computing Systems	Joinville/Brazil
<b>2017</b>	Congress of the Brazilian Computer Society	São Paulo/Brazil
<b>2014</b>	IEEE International Conference on eScience	São Paulo/Brazil
<b>2014</b>	Brazilian Symposium on Computer Networks and Distributed Systems.	Florianópolis/Brazil
<b>2013</b>	AAAI Conference on Human Computation and Crowdsourcing	Palm Spring/ USA
<b>2012</b>	Congress of the Brazilian Computer Society	Curitiba/Brazil
<b>2010</b>	IEEE/ACM International Conference on Grid Computing	Brussels/Belgium
<b>2010</b>	Brazilian Symposium on Computer Networks and Distributed Systems	Gramado/Brazil
<b>2007</b>	IEEE International Symposium on Computer Architecture and High-Performance Computing	Gramado/Brazil



## Teaching Activities

<u>Course</u>	<u>Duration</u>	<u>Frequency/year</u>	<u>Program</u>	<u>University</u>
<b>Human-Computer Interaction</b>	68 hours over 4 months	Semiannually from 2016 until 2021	Software Engineering	PUC Minas
<b>Introduction to Informatics Research</b>	34 hours over 4 months	Semiannually from 2020 until 2021	Software Engineering	PUC Minas
<b>Software Testing</b>	68 hours over 4 months	Semiannually from 2020 until 2021	Software Engineering	PUC Minas
<b>Requirements Engineering</b>	68 hours over 4 months	Semiannually from 2017 until 2019	Information System	PUC Minas
<b>Software Quality</b>	68 hours over 4 months	Semiannually from 2017 until 2020	Information System	PUC Minas
<b>Operating Systems</b>	68 hours over 4 months	Semiannually from 2017 until 2021	Software Engineering	PUC Minas
<b>Information Systems Design</b>	68 hours over 4 months	2019	Information System	PUC Minas
<b>Distributed Application Development</b>	68 hours over 4 months	2019	Information System	PUC Minas
<b>Computer Architecture</b>	68 hours over 4 months	2017	Computer Science	PUC Minas
<b>Computer Programming</b>	68 hours over 4 months	2016	Electrical Engineering	PUC Minas
<b>Algorithms and Data Structure</b>	68 hours over 4 months	2016	Information System	PUC Minas

Since 2020, Lesandro Ponciano is certified as a **GitHub Campus Advisor**, which is a program part of the GitHub Education (<https://education.github.com/teachers/advisors>).

---