# CLAUDIA SEVIVAS

claudia.sofia.ribeiro@gmail.com
+351 916086997
https://cssr.github.io/claudia.sevivas
ORCHID: https://orcid.org/0000-0002-1796-0636

## RESEARCH INTERESTS

Serious Games, Gamification, Application in Healthcare

Machine Learning, Artificial Intelligence, Application in Emotion Recognition in Images and Interpretability and Explainability of Convolutional Neural Networks

## EDUCATION

Ph.D. Information Systems and Computer Engineering, june 2014,  Instituto Superior Técnico da Universidade de Lisboa, Lisboa, Portugal.
- Thesis: *"Serious Games for Learning: A Model of Driving Attributes for the Medical Domain"*
- Advisors: José Borbinha and João Madeiras Pereira

Licenciate Computer Science and Engineering (Lic),  October 2003, Instituto Superior Técnico da Universidade de Lisboa, Lisboa, Portugal.

- Thesis:*"OCR Algorithm Development Using Fuzzy Decision Systems"*
- Advisor: João Miguel da Costa Sousa and João Rogério Caldas Pinto

## TEACHING EXPERIENCE

During my PhD I was a teaching assistant in the following courses:

- 1 semester of databases
- 2 semesters of Artificial Intelligence
- 2 semesters of 3D Programming for Simulation and Games
- 1 semester of Animation and Three-Dimensional Visualization

## RESEARCH / FIELD WORK EXPERIENCE

- **Junior Research Assistant** (2010 - 2012):
    - TARGET - Transformative, Adaptive, Responsive and enGaging EnvironmenT (FP7-ICT-2007.4.3/Project number 231717)
- **Junior Research Assistant** (2010 - 2014)
    - GaLA - Games and Learning Alliance (FP7-ICT-2009-5/Project number 258169)
- **Postdoctoral Researcher** (2015 - 2019):
    - BlackBox - A collaborative platform to document performance composition: from conceptual structures in the backstage to customizable visualizations in the front-end (European Research Council (ERC) Starting-Grant).

- **Postdoctoral Researcher** (2019-2022):
  - o  AWESOME - Awareness While Experiencing and Surfing On Movies through Emotions (PTDC/CCI-INF/29234/2017)
- **Researcher Assistant** (2021 - 2022):
  - o  MUYA - The Multimedia Yasna (European Research Council (ERC) with an Advanced Investigator Grant)


## PUBLICATIONS

**Book**

Fernandes, M. F., Evola, V., & Ribeiro, C. M. (Eds.). (2022). *Dance Data, Cognition and Multimodal Communication*. Routledge.

**Book Chapters**

1.  Fradinho, M.,  Andersen, B.,  Pereira, J.,  Seager, W. & Ribeiro, C. (2011). The use of integrative framework to support the development of competences. In *Serious Games Development and Applications* - SGDA 2011, 117-128. Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-23834-5_11
2.  Santos, E., Ribeiro, C., Fradinho, M., & Pereira, J. (2011). Digital storytelling for competence development. In *New Horizons in Web-Based Learning* - ICWL 2010 Workshops, 35-44. Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-20539-2_5
3.  Ribeiro, C., Monteiro, M., Corredoura, S., Candeias, F., & Pereira, J. (2013).  Games in Higher Education. In *New Pedagogical Approaches in Game Enhanced Learning*, (pp. 228-247). IGI Global. https://doi.org/10.4018/978-1-4666-3950-8.ch012
4.  Ribeiro, C., Pereira, J., & Borbinha, J. (2013, September). Creating awareness of emergency departments healthcare values using a serious game. In *European Conference on Technology Enhanced Learning* (pp. 502-507). Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-40814-4_46
5.  Ribeiro, C., Pereira, J., Calado, C., & Ferreira, C. (2013). Challenges of Introducing Serious Games and Virtual Worlds in Educational Curriculum. In *Cases on Digital Game-Based Learning: Methods, Models, and Strategies* (pp. 425-450). IGI Global. https://doi.org/10.4018/978-1-4666-2848-9.ch022
6.  Ribeiro, C., Monteiro, M., Pereira, J.M., Antunes, T., Baalsrud Hauge, J. (2014). Sepsis Fast Track: A Serious Game for Medical Decision Making. In: Ma, M., Oliveira, M.F., Baalsrud Hauge, J. (eds) Serious Games Development and Applications. SGDA 2014. Lecture Notes in Computer Science, vol 8778. Springer, Cham. https://doi.org/10.1007/978-3-319-11623-5_7
7.  Ribeiro, C., Fernandes, J., Pereira, J. (2014). Didactical Competence Modeler: Dynamic Story Creation for Serious Games. In *New Horizons in Web Based Learning* (pp. 39-48). Springer Berlin Heidelberg.  https://doi.org/10.1007/978-3-662-43454-3_5

8. Ribeiro, C., Antunes, T., Pereira, J., & Monteiro, M. (2015). Critical Transport: A Serious Game to Teach the Recommendations for the Transport of Critically Ill Patients. In *Gamification: Concepts, Methodologies, Tools, and Applications* (pp. 1586-1608). IGI Global. https://doi.org/10.4018/978-1-4666-8200-9.ch080

**Conference**

1. Ribeiro, C. S., Gil, J. M., Pinto, J. R. C., & da Costa Sousa, J. M. (2004b). Ancient Word Indexing Using Fuzzy Methods. *in Proceedings of the 4th International Workshop on Pattern Recognition in Information Systems*, (pp. 210–215).
2. Ribeiro, C. S., Gil, J. M., Pinto, J. R. C., & da Costa Sousa, J. M. (2004a). Ancient Document Recognition Using Fuzzy Methods. *in Proceedings of the 4th International Workshop on Pattern Recognition in Information Systems*, (pp. 98–107).
3. Sousa, J. M. C., Caldas Pinto, J. R., Ribeiro, C. S., & Gil, J. M. (2005). Ancient document recognition Using Fuzzy Methods. *The 14th IEEE International Conference on Fuzzy Systems*, 2005. FUZZ '05. (pp. 833–838). https://doi.org/doi:10.1109/FUZZY.2005.1452502
4. Ribeiro, C., Jepp, P., Pereira, J., & Fradinho, M. (2010). "Lessons learnt in building serious games and virtual worlds for competence development". Paper presented in *Workshop Experimental Interactive Learning in Industrial Management of the IFIP Working Group 5.7*, Milan.
5. Fernandes, J., Ribeiro, C., & Pereira, J. (2011). "Collaborative Negotiated Deliberation Managing Protocol for Emergent Narrative in Educational Environments". Paper presented in *VideoJogos 2011 – Conferência de Ciências e Artes dos Videojogos*, *Porto*.
6. Ribeiro, C., Borbinha, J., Pereira, J. M., & Tribolet, J. (2012). A General Process for Developing Business Simulations Games. Paper presented In *SIMULTECH* (pp. 190-193).
7. Ribeiro, C., Borbinha, J., Tribolet, J., & Pereira, J. (2012, December). Using agent-based simulation to understand cooperation in business organizational settings. In *Proceedings of the Winter Simulation Conference* (pp. 1-2). https://doi.org/10.5555/2429759.2430234
8. Fernandes, J., Duarte, D., Ribeiro, C., Farinha, C., Pereira, J. M., & da Silva, M. M. (2012). iThink: A game-based approach towards improving collaboration and participation in requirement elicitation. *Procedia Computer Science*, *15*, (pp. 66–77). https://doi.org/10.1016/j.procs.2012.10.059.
9. Ribeiro, C., Fernandes, J., Lourenço, A., Borbinha, J., & Pereira, J. (2012). Using serious games to teach business process modeling and simulation. In *Proceedings of the International Conference on Modeling, Simulation and Visualization Methods (MSV)* (p. 1). The Steering Committee of The World Congress in Computer Science, Computer Engineering and Applied Computing (WorldComp).
10. Ribeiro, C., Antunes, T., Monteiro, M., & Pereira, J. (2013). "Serious games in formal medical education: An experimental study". Paper presented in *VS-GAMES'13 - 5th*

*International Conference on Games and Virtual Worlds for Serious Applications*. https://doi.org/ 10.1109/VS-GAMES.2013.6624240

11. Vidal B., Ribeiro C., Santos G., Pereira J., & Fernandes J. (2013). "SimBody: A Serious Game to Raise Awareness of Cardiovascular Diseases". Paper presented in *9th International Conference on Computer Graphics Theory and Applications (GRAPP).*

12. Ribeiro, C., Tiago, J., Monteiro, M., & Pereira, J. (2014). "SeGTE: A serious game to train and evaluate basic life support". Paper presented in *GRAPP 2014 - 9th International Conference on Computer Graphics Theory and Applications* (GRAPP).

13. Ribeiro C., Monteiro M., & Pereira J. (2014). MoVNI: Master of Non-Invasive Ventilation. Paper presented in *8$^{th}$ European Conference on Game Based Learning (ECGBL).*

14. Ribeiro, C., Lavoué, E., Sehaba, K., Pereira, J. & Baalsrud Hauge, J. (2014). "Identifying Engagement with Learning in Serious Games". Paper presented in *1st Workshop on Learning Analytics for and in serious games (LASG) in conjunction with the 9th European Conference on Technology Enhanced Learning (EC-TEL), Gratz*.

15. Baalsrud Hauge J., Lim T., Louchart S., Kalverkamp M., Bellotti F., & Ribeiro C. (2014). "To Facilitate or Not? Understanding the Role of the Teacher in Using Serious Games". *3$^{rd}$ Games and Learning Alliance Conference (GaLA Conf).*

16. Santos P., Ribeiro C., Antunes T., Corredoura S., & Monteiro M. (2014). "Playing with Sepsis". 8th Mediterranean Emergency Medicine Congress.

17. Neto, J., Ribeiro, C., Pereira, J., Neto, M. J. (2015). "Virtual Agents and Multi-modality of Interaction in Multimedia Applications for Cultural Heritage - A Case Study". Paper presented in *GRAPP - 10th International Conference on Computer Graphics Theory and Applications*, *Berlin*.

18. Ribeiro, C., Monteiro, M., Baalsrud Hauge, J., Pereira, J., & Antunes, T. (2016). "Sepsis Fast Track: A simulation game for Clinical education based on the Sepsis Fast Track protocol". Paper presented in *SeGAH -4th International Conference on Serious Games and Applications for Health. Orlando*. https://doi.org/10.1109/SeGAH.2016.7586226

19. Ribeiro, C., dos Anjos, R. K., & Fernandes, C. (2017, June). Capturing and documenting creative processes in contemporary dance. In *Proceedings of the 4th International Conference on Movement Computing* (pp. 1-7).

20. Ribeiro, Claudia, & Evola, V. (2017). Visualization Techniques as Methodological Tools for Dance Research. *Proceedings of the 5th International Conference on Computation, Communication, Aesthetics & X*, (pp. 46–54). xCoAx.

21. Ribeiro, Claudia, Kuffner, R., & Fernandes, C. (2018). Virtual Reality Annotator: A Tool to Annotate Dancers in a Virtual Environment. *Digital Cultural Heritage: Final Conference of the Marie Skłodowska-Curie Initial Training Network for Digital Cultural Heritage, ITN-DCH* (pp. 257–266) *Olimje, Slovenia*. https://doi.org/10.1007/978-3-319-75826-8_21

22. Anjos, R. K. dos, Ribeiro, C., & Fernandes, C. (2018). Three-Dimensional Visualization of Movement Qualities in Contemporary Dance. In *Proceedings of the 5th International Conference on Movement and Computing*, (pp. 1–7).

23. Nunes, L., Ribeiro, C., & Chambel, T. (2022). Emotional and Engaging Movie Annotation with Gamification. *Proceedings of the 17th International Joint Conference on Computer*

*Vision, Imaging and Computer Graphics Theory and Applications - Volume 2: HUCAPP*, (pp. 262–272).

**Journal**

1. Sousa, J. M. C., Gil, J. M., Ribeiro, C. S., & Pinto, J. R. C. (2006). Old document recognition using fuzzy methods. *International Journal of Intelligent Systems Technologies and Applications*, 1(3), (pp. 263–279).
2. Blazic, A. J., Ribeiro, C., Arh, T., & Others. (2012). Analysing the required properties of business simulation games to be used in e-learning and education. *Intelligent Information Management*, *6*(4), (pp. 348–356).
3. Ribeiro, Claudia, Antunes, T., Pereira, J., & Monteiro, M. (2014). Critical Transport: A Serious Game to Teach the Recommendations for the Transport of Critically Ill Patients. *International Journal of Game-Based Learning (IJGBL)*, *4*(4), (pp. 71–93).
4. Ribeiro, Claudia, Farinha, C., Pereira, J., & da Silva, M. M. (2014). Gamifying requirement elicitation: Practical implications and outcomes in improving stakeholders collaboration. *Entertainment Computing*, *5*(4), (pp. 335–345).
5. Boyle, E. A., Hainey, T., Connolly, T. M., Gray, G., Earp, J., Ott, M., ... & Pereira, J. (2016). An update to the systematic literature review of empirical evidence of the impacts and outcomes of computer games and serious games. *Computers & Education*, *94*, (pp. 178-192).
6. Carreira, P., Castelo, T., Gomes, C. C., Ferreira, A., Ribeiro, C., & Costa, A. A. (2018). Virtual reality as integration environments for facilities management: Application and users perception. *Engineering, Construction and Architectural Management*.
7. dos Anjos, R. K., Ribeiro, C. S., Lopes, D. S., & Pereira, J. M. (2018). Stroke-based splatting: an efficient multi-resolution point cloud visualization technique. *The Visual Computer*, *34*(10), (pp. 1383–1397).
8. Alarcão, A. S., Ribeiro, C., Garcia, N., Maruta, C., & Fonseca, M. J. (2022). Unfolding Handcrafted Features Contribution in CNNs for Valence and Arousal Estimation in Images. *Journal of Visual Communication and Image Representation.* Elsevier. Manuscript submitted for publication
9. Alarcão, A. S., Mendonça, V., Ribeiro, C., Maruta, C., & Fonseca, M. J. (2022). Annotate Smarter, Not Harder: Using Active Learning to Reduce Emotional Annotation Effort. *Transactions on Affective Computing*. IEEE. Manuscript submitted for publication
10. Evola, V., Ribeiro, C., Kuffner, A. (2022): DynAVis: A visualization tool for dynamic body-movement annotations. *Behavior Research Methods*. Springer. Manuscript submitted for publication

**THESIS SUPERVISION:**

- **Sepsis Fast Track: A Simulation Game for Clinical Education based on the Sepsis Fast Track Process**, Engenharia Informática e de Computadores (Master), Universidade de Lisboa Instituto Superior Técnico, Portugal (Co-Supervisor)

- **SimClinic - An Auxiliary Tool for Evaluation on Clinical Case Settings**, Engenharia Informática e de Computadores (Master), Universidade de Lisboa Instituto Superior Técnico, Portugal (Co-Supervisor)
- **Game-Based Learning Applied to Project Management Professional Certification**, Engenharia Informática e de Computadores (Master), Universidade de Lisboa Instituto Superior Técnico, Portugal (Co-Supervisor)
- **Um jogo sério sobre realidade económica/financeira de Portugal**, Engenharia Informática e de Computadores (Master), Universidade de Lisboa Instituto Superior Técnico, Portugal (Co-Supervisor)
- **Anotação de Filmes com Gamificação,** Engenharia Informática especialização em Sistemas de Informação (Master), Faculdade de Ciências da Universidade de Lisboa (Co-Supervisor)
- **Interactive and Immersive Movie Experience with Emotional Feedback,** Engenharia Informática especialização em Sistemas de Informação (Master), Faculdade de Ciências da Universidade de Lisboa (Co-Supervisor)

## INDUSTRY EXPERIENCE

- **2002 - 2003: Junior Researcher,** Biblioteca Nacional de Portugal (BNP), Lisboa, Portugal
- **2003 - 2005: Junior Researcher and Software Developer,** Biblioteca Nacional de Portugal (BNP), Lisboa, Portugal
- **2005: Teaching Assistant,** C++ Classes, Portugal Telecom - Information Systems, Lisboa, Portugal
- **2005: Software Developer,** Portugal Telecom - Information Systems, Lisboa, Portugal
- **2006 - 2008:  Project Manager,** National Mobile Telecommunications, Lisboa, Portugal
- **2008 - 2010: Técnico Superior,** ISCTE, University of Lisbon, Lisboa, Portugal

## SERVICE

- **Reviewer and secondary reviewer** for IJTEL, SIMUL, SGDA, JOCCH ACM  Journal on Computing and Cultural Heritage.
- **Conference Organization**: International Conference on Dance Data, Cognition and Multimodal, Faculdade de Ciências Sociais e Humanas da Universidade de Lisboa, 19 - 21 Setembro, 2019 (http://ddcmc19.blackbox.fcsh.unl.pt/) .