Paulo **Bala**
POSTDOCTORAL RESEARCHER

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Summary

I'm a postdoctoral researcher at Interactive Technologies Institute (ITI), LARSyS, having received a Ph.D. in Digital Media from FCT-UNL, Lisboa, Portugal in 2022. I have a MSc and BSc degrees in Informatics Engineering from Universidade da Madeira, Funchal, Portugal in 2013 and 2010; I also have a Dual Masters in Entertainment Technology from Carnegie Mellon University, Pittsburgh, USA, and Universidade da Madeira, Funchal, Portugal. I'm a teaching assistant (User Centered Computing; Service Design) at Instituto Superior Técnico (IST/UL), Lisboa, Portugal, and I'm currently co-advising 2 MSc, with 5 MSc concluded in the past. I have participated as a research member in EU and FCT funded projects. My main areas of expertise are Human-Computer Interaction, Entertainment Technology, and eXtended Reality, and my research work has been published in top peer-reviewed venues in Human-Computer Interaction (CHI, DIS, CSCW, ISMAR).

Education

Faculdade De Ciências e Tecnologia (FCT), Universidade Nova de Lisboa (UNL)
Lisbon, Portugal

PH.D IN DIGITAL MEDIA
Sep. 2016 - March 2022

- Research-focused multidisciplinary degree targeting creation, production and distribution of Digital Media.
- Curricular component: History and Trends in Digital Media; Media Lab; Media Technology; Communication Theory; Research Methods; Thesis Plan; Thesis.
- Thesis: "Leveraging eXtended Reality & Human-Computer Interaction for User Experience in 360° Video"
  - Advisors: Valentina Nisi, Nuno Nunes, Nuno Correia
  - Jury members: Steve Benford, Johannes Schöning, Teresa Chambel, Rui Rodrigues, Teresa Romão, Rui Nóbrega, Pedro Barahona (president)
  - Design, implementation and evaluation of multiple artifacts systems, targeting Attention Guidance and Visually Induced Motion Sickness (VIMS) in 360° video:
    * *IVRUX*, a tool for analysis of immersive VR narrative experiences;
    * *Cue Control*, a tool for creation of spatial audio soundtracks for 360° video, as well as collection and analysis of captured metrics emerging from the user experience; and
    * *VIMS mitigation pipeline*, a linear sequence of modules (including optical flow and visual SLAM among others) that control parameters for visual modifications such as a restricted Field of View.

Entertainment Technology Center (ETC), Carnegie Mellon University & University of Madeira
Pittsburgh, USA & Funchal, Portugal

DUAL MASTERS OF ENTERTAINMENT TECHNOLOGY
Aug. 2013 - May 2015

- Project-based, multidisciplinary degree focusing on designing interactive entertainment experiences through teamwork.
- Curricular component: Building Virtual Worlds; Visual Story; Improvisational Acting; ETC Fundamentals; Game Design; Advanced Topics in Informatics; Creative Writing; Interdisciplinary Project ETC I/II/III.

University of Madeira
Funchal, Portugal

MASTERS IN INFORMATICS ENGINEERING
Sept. 2010 - May 2013

- Multidisciplinary degree focusing on software development and human-computer interaction.
- Curricular component: Software Design and Implementation; Network Centered Applications; Organizational Engineering; Systems and Network Management; Software Architecture; Decision Support Systems; Language and Compiler Theory; Software Architecture for User Interfaces; Investment Project Analysis; Embodied Interaction.
- Dissertation: "tCAD: a 3D Modeling Application on a Depth Enhanced Tabletop Computer"
  - Advisors: Ian Oakley, Augusto Esteves
  - Jury members: Pedro Campos, Valentina Nisi, Yoram Chisik (president)
  - Designed and implemented a system mixing a tabletop computer, depth tracking (Microsoft Kinect) and tangible interaction (reacTIVision); designed and implemented a 3D modeling application using constructive solid geometry.

University of Madeira
Funchal, Portugal

BACHELORS IN INFORMATICS ENGINEERING
Sep. 2007 - June 2010

- Multidisciplinary degree focusing on software development and human-computer interaction.
- Curricular component: Calculus I; Programming Paradigms; History of Science and Technology; Experimental Science; Mechanics and Waves; Discrete Mathematics; Digital Systems; Rhetoric and Communication; Computacional Logic; Probability and Statistics; Introduction to Business Science; Data Structures and Algorithms; Theory and Foundations of Computation; Object-oriented Programming; Computer Architecture; Anglo-American Civilizations and Culture; Human-Computer Interaction; Software Processes and Metrics; Database Management Systems; Operative Systems; Requirement Engineering; Artificial Intelligence; Data Networks and Communication; Multimedia Systems.

Academic Positions

Departamento de Engenharia Informática (DEI), Instituto Superior Técnico (IST) *Lisbon, Portugal*

INVITED TEACHING ASSISTANT *Dec. 2021 - ongoing*

- User Centered Design (CCU) - Winter 2021, Winter 2022
- Service Design - Spring 2022, Spring 2023

Experience

eGames Lab, Interactive Tecnologies Institute (ITI) *Funchal, Portugal*

POSTDOCTORAL RESEARCHER *May 2023 - current*

- Prototyping of games and interaction mechanics, as well as evaluation of artefacts with participants,
- Dissemination of scientific articles.

MEMEX, Interactive Tecnologies Institute (ITI) *Funchal, Portugal*

POSTDOCTORAL RESEARCHER *May 2022 - Nov. 2022*

- Prototyping of a mobile application for story authoring, targeting people at risk of social exclusion.
- Prototyping of a AR application for exploration of cities and knowledge graphs.
- Organization of meetings between tech and social partners of the project.
- Dissemination of project reports.
- Dissemination of scientific articles.

MEMEX, Interactive Tecnologies Institute (ITI) *Funchal, Portugal*

RESEACH ASSISTANT *April 2021 - May 2022*

- Prototyping of a mobile application for story authoring, targeting people at risk of social exclusion.
- Prototyping of a AR application for exploration of cities and knowledge graphs.
- Organization of meetings between tech and social partners of the project.
- Dissemination of project reports.
- Dissemination of scientific articles.

INTERTAGUA, Interactive Tecnologies Institute (ITI) *Funchal, Portugal*

COLABORATOR *March 2021*

- Created and evaluated low and high fidelity prototype for a serious game about marine biodiversity using a Visual Question Answering chatbot.
- Dissemination of scientific articles.

Projecto Maré, Interactive Tecnologies Institute (ITI) *Funchal, Portugal*

COLABORATOR *April 2021 - July 2021*

- Project "Maré – Anonymous Mobilization of Return to normality to mitigate the covid-19 epidemic" was funded by Fundação para a Ciência e Tecnologia under the "RESEARCH 4 COVID-19" call.
- Pro bono UX design work on a Covid-19 app (Madeira Safe) for travellers arriving to Madeira.

Beanstalk, Madeira Interactive Tecnologies Institute (M-ITI) *Funchal, Portugal*

RESEARCH ASSISTANT *Dec. 2015 - Dec. 2016*

- Research project on location based narrative experiences aimed at showcasing Madeira's heritage to tourists.
- As part of a team, helped to develop the overall concept and user experience of the narrative.
- Developed multiple iterations of an XR scene.
- Dissemination of scientific articles.

Future Fabulators, Madeira Interactive Tecnologies Institute (M-ITI) *Funchal, Portugal*

DEVELOPER AND EXPERIENCE DESIGNER *July 2014 - Sep. 2014*

- Summer internship on a research project on future scenarios as storyworlds.
- Developed two interactive mobile VR experiences using Google Cardboard and Durovis Dive for exhibitions in Austria, Romania and Scotland.
- Dissemination of scientific articles.

AppSalad Lda *Castelo Branco, Portugal*

JUNIOR DEVELOPER FOR BACKEND AND MOBILE *Nov. 2012 – June 2013*

- Project work in small teams (2 to 3 people), for private clients.
- Experience with database management, web services (Yii PHP framework), interface design and implementation for mobile and web, 2D illustration for games, game design and implementation for mobile.

Honors & Awards

2022	**Special Recognitions for Outstanding Reviews**, DIS 2022	
2020	**Best Reviewer**, ICIDS 2020	
2018	**Honorable Mention**, Full paper at IMX 2020	*Barcelona, Spain*
2018	**Honorable Mention**, Full paper at CHI 2019	*Glasgow, UK*
2016	**Scholarship**, PhD. scholarship by Fundação para a Ciência e a Tecnologia	
2016	**Nominee**, Best short paper at ICIDS 2016	*Los Angeles, USA*
2016	**Nominee**, Best full paper at ICIDS 2016	*Los Angeles, USA*
2016	**Google IoT Research Award**, Google Technology Research Award Pilot of the Internet of Things (IoT)	
2015	**Winner**, CHI 2015 Student Game Design Competition ("Innovative Interfaces" category)	*Seoul, South Korea*

Publications

Note that in many areas within computer science and human-computer interaction, conferences (not journals) are the primary publication venues.

FULL CONFERENCE PUBLICATIONS

Bala, P., Sanches, P., Cesário, V., Leão, S., Rodrigues, C., Nunes, N. J., and Nisi, V. "Towards Critical Heritage in the wild: Analysing Discomfort through Collaborative Autoethnography". In: *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*. CHI '23. Association for Computing Machinery, 2023. DOI: 10.1145/3544548.3581274. URL: https://doi.org/10.1145/3544548.3581274.

Ma, S., **Bala**, P., Nisi, V., Zimmerman, J., and Nunes, N. J. "Uncovering Gig Worker-Centered Design Opportunities in Food Delivery Work". In: *Proceedings of the 2023 ACM Designing Interactive Systems Conference*. DIS '23. Association for Computing Machinery, 1, 2023, pp. 688–701. ISBN: 978-1-4503-9893-0. DOI: 10.1145/3563657.3596123. URL: https://doi.org/10.1145/3563657.3596123 (visited on 01/01/2023).

Nisi, V., **Bala**, P., Bostock, H., Cesário, V., and Nunes, N. J. ""Before Gentrification, We Claim for Habitation": Eliciting Values and Assets through Cultural Heritage Storytelling". In: *Proceedings of the 2023 ACM Designing Interactive Systems Conference*. DIS '23. Association for Computing Machinery, 1, 2023, pp. 2423–2436. ISBN: 978-1-4503-9893-0. DOI: 10.1145/3563657.3596124. URL: https://doi.org/10.1145/3563657.3596124 (visited on 01/01/2023).

Nisi, V., **Bala**, P., Cesário, V., Stuart, J., Del Bue, A., and Nunes, N. J. ""Connected to the people": Social Inclusion & Cohesion in Action through a Cultural Heritage Digital Tool". In: *Proc. ACM Hum.-Comput. Interact.* 7.CSCW2 (2023). DOI: 10.1145/3610168. URL: https://doi.org/10.1145/3610168. Forthcoming.

Bala, P., James, S., Del Bue, A., and Nisi, V. "Writing with (Digital) Scissors: Designing a Text Editing Tool for Assisted Storytelling Using Crowd-Generated Content". en. In: *Interactive Storytelling*. Vol. 13762. Series Title: Lecture Notes in Computer Science. Springer International Publishing, 2022, pp. 139–158. ISBN: 978-3-031-22297-9 978-3-031-22298-6. DOI: 10.1007/978-3-031-22298-6_9.

Bala, P., Oakley, I., Nisi, V., and Nunes, N. "Dynamic Field of View Restriction in 360º Video: Aligning Optical Flow and Visual SLAM to Mitigate VIMS". In: *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*. CHI '21. Association for Computing Machinery, 2021. DOI: 10.1145/3411764.3445499. URL: https://doi.org/10.1145/3411764.3445499.

Bala, P., Dionísio, M., Oliveira, S., Andrade, T., and Nisi, V. "Tell a Tail: Leveraging XR for a Transmedia on Animal Welfare". en. In: *Entertainment Computing – ICEC 2020*. Vol. 12523. Series Title: Lecture Notes in Computer Science. Springer International Publishing, 2020, pp. 223–239. ISBN: 978-3-030-65735-2 978-3-030-65736-9. DOI: 10.1007/978-3-030-65736-9_19.

Bala, P., Oakley, I., Nisi, V., and Nunes, N. "Staying on Track: a Comparative Study on the Use of Optical Flow in 360º Video to Mitigate VIMS". In: *Proceedings of the ACM International Conference on Interactive Media Experiences. IMX 2020, Barcelona, Spain, June 17-19, 2020*. ACM, 2020, pp. 82–93. DOI: 10.1145/3391614.3393658. URL: https://doi.org/10.1145/3391614.3393658.

Masu, R., **Bala**, P., Ahmad, M. A., Do Nascimento Correia, N., Nisi, V., Nunes, N., and Romão, T. "VR open scores: scores as inspiration for VR scenarios". In: NIME New Interfaces for Musical expression. 2020.

Bala, P., Masu, R., Nisi, V., and Nunes, N. ""When the Elephant Trumps": A Comparative Study on Spatial Audio for Orientation in 360º Videos". In: *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems, CHI 2019, Glasgow, Scotland, UK, May 04-09, 2019*. CHI '19. ACM, 2019. ISBN: 978-1-4503-5970-2. DOI: 10.1145/3290605.3300925.

Dionisio, M., **Bala**, P., Nisi, V., Oakley, I., and Nunes, N. "Step by Step: Evaluating Navigation Styles in Mixed Reality Entertainment Experience". In: *Advances in Computer Entertainment Technology - 14th International Conference, ACE 2017, London, UK, December 14-16, 2017, Proceedings*. Vol. 10714. Lecture Notes in Computer Science. Springer, 2017, pp. 32–45. DOI: 10.1007/978-3-319-76270-8_3.

Dionísio, M., **Bala**, P., Nisi, V., and Nunes, N. "Fragments of laura: incorporating mobile virtual reality in location aware mobile storytelling experiences". In: *Proceedings of the 16th International Conference on Mobile and Ubiquitous Multimedia, MUM 2017, Stuttgart, Germany, November 26 - 29, 2017*. ACM, 2017, pp. 165–176. DOI: 10.1145/3152832.3152868.

Dionísio, M., Nisi, V., Nunes, N. J., and **Bala**, P. "Transmedia Storytelling for Exposing Natural Capital and Promoting Ecotourism". In: *Interactive Storytelling - 9th International Conference on Interactive Digital Storytelling, ICIDS 2016, Los Angeles, CA, USA, November 15-18, 2016, Proceedings*. Vol. 10045. Lecture Notes in Computer Science. 2016, pp. 351–362. DOI: 10.1007/978-3-319-48279-8_31.

JOURNAL PUBLICATIONS

Nisi, V., Dionisio, M. S., **Bala**, P., Gross, T., Up, T., and Nunes, N. J. "Lucid Peninsula, a Physical Narrative Art Installation Comprising Interactive 360° Virtual Reality Components". In: *IJCICG* 10.1 (2019), pp. 1–15. DOI: 10.4018/IJCICG.2019010101.

BOOK CHAPTERS

Dionísio, M., **Bala**, P., Nisi, V., and Câmara, S. "Bringing Locative Media Indoors: Strategies For Remediation". In: *Looking Forward, Looking Back: Interactive Digital Storytelling and Hybrid Art Approaches*. Carnegie Mellon University: ETC Press, Pittsburgh, PA, 1, 2018, pp. 71–92. URL: https://press.etc.cmu.edu/index.php/product/looking-forward-looking-back/.

SHORT CONFERENCE, WIP AND WORKSHOP PUBLICATIONS

Bala, P., Nisi, V., Dionisio, M., Nunes, N. J., and James, S. "Square Peg, Round Hole: A Case Study on Using Visual Question & Answering in Games". In: *Extended Abstracts of the 2021 Annual Symposium on Computer-Human Interaction in Play*. CHI PLAY '21. Association for Computing Machinery, 2021, pp. 133–139. ISBN: 9781450383561. DOI: 10.1145/3450337.3483466.

Dionísio, M., Nisi, V., Xin, J., **Bala**, P., James, S., and Nunes, N. J. "Amnesia in the Atlantic: An AI Driven Serious Game on Marine Biodiversity". en. In: *Entertainment Computing – ICEC 2021*. Vol. 13056. Series Title: Lecture Notes in Computer Science. Springer International Publishing, 2021, pp. 427–432. ISBN: 978-3-030-89393-4 978-3-030-89394-1. DOI: 10.1007/978-3-030-89394-1_35. URL: https://link.springer.com/10.1007/978-3-030-89394-1_35.

Bala, P., Dionísio, M., Nisi, V., and Nunes, N. "IVRUX: A Tool for Analyzing Immersive Narratives in Virtual Reality". en. In: *Interactive Storytelling*. Vol. 10045. Lecture Notes in Computer Science 10045. Springer International Publishing, 2016, pp. 3–11. ISBN: 978-3-319-48279-8. DOI: 10.1007/978-3-319-48279-8_1. URL: http://link.springer.com/chapter/10.1007/978-3-319-48279-8%5C%5F1.

Nisi, V., Dionisio, M., Silva, C., Castro, D., Dionisio, D., Radeta, M., **Bala**, P., and Nunes, N. *"Echoes of Nature": a transmedia project to foster dialogue about the natural capital of Madeira island*. 2016. URL: http://nunonunes.info/publications/ICIDS2016c.pdf.

POSTERS

Dionísio, M., **Bala**, P., Oliveira, S., and Nisi, V. "Tale of T(r)ails: The Design of an AR Comic Book for an Animal Welfare Transmedia". en. In: *Interactive Storytelling*. Vol. 12497. Series Title: Lecture Notes in Computer Science. Springer International Publishing, 2020, pp. 281–284. ISBN: 978-3-030-62515-3 978-3-030-62516-0. DOI: 10.1007/978-3-030-62516-0_25.

Bala, P., Dionisio, D., Nisi, V., and Nunes, N. "Visually Induced Motion Sickness in 360° Videos: Comparing and Combining Visual Optimization Techniques". In: *IEEE International Symposium on Mixed and Augmented Reality, ISMAR 2018 Adjunct, Munich, Germany, October 16-20, 2018*. IEEE, 2018, pp. 244–249. DOI: 10.1109/ISMAR-Adjunct.2018.00077.

Bala, P., Masu, R., Nisi, V., and Nunes, N. "Cue Control: Interactive Sound Spatialization for 360° Videos". In: *Interactive Storytelling - 11th International Conference on Interactive Digital Storytelling, ICIDS 2018, Dublin, Ireland, December 5-8, 2018, Proceedings*. Vol. 11318. Lecture Notes in Computer Science. Springer, 2018, pp. 333–337. DOI: 10.1007/978-3-030-04028-4_36.

Bala, P., Dionísio, M., Trindade, R., Olim, S., Nisi, V., and Nunes, N. "Evaluating the influence of location and medium applied to mobile VR storytelling". In: *Proceedings of the 16th International Conference on Mobile and Ubiquitous Multimedia, MUM 2017, Stuttgart, Germany, November 26 - 29, 2017*. ACM, 2017, pp. 371–378. DOI: 10.1145/3152832.3156617.

Bala, P., Nisi, V., and Nunes, N. "Evaluating User Experience in 360° Storytelling Through Analytics". In: *Interactive Storytelling - 10th International Conference on Interactive Digital Storytelling, ICIDS 2017, Funchal, Madeira, Portugal, November 14-17, 2017, Proceedings*. Vol. 10690. Lecture Notes in Computer Science. Springer, 2017, pp. 270–273. ISBN: 978-3-319-71026-6 978-3-319-71027-3. DOI: 10.1007/978-3-319-71027-3_23.

DEMOS & ART EXHIBTIONS

Bala, P., Dionísio, M., Andrade, T., and Nisi, V. "Tell a Tail 360°: Immersive Storytelling on Animal Welfare". en. In: *Interactive Storytelling*. Vol. 12497. Series Title: Lecture Notes in Computer Science. Springer International Publishing, 2020, pp. 357–360. ISBN: 978-3-030-62515-3 978-3-030-62516-0. DOI: 10.1007/978-3-030-62516-0_35.

Dionisio, M., **Bala**, P., Trindade, R., Nisi, V., and Hanna, J. "Lucid Peninsula: DreamScope, an Interactive Physical Installation". In: *Proceedings of the 2015 ACM SIGCHI Conference on Creativity and Cognition*. ACM, 1, 2015, pp. 377–378. DOI: 10.1145/2757226.2757382. URL: https://dl.acm.org/citation.cfm?id=2757382&dl=ACM&coll=DL.

Dionisio, M., **Bala**, P., Trindade, R., Nisi, V., Nunes, N., et al. "DreamScope Catcher: a Touch Sensitive Interface to Catch Dreams". In: *Proceedings of the 2015 International Conference on Interactive Tabletops & Surfaces*. ACM, 1, 2015, pp. 417–420. DOI: 10.1145/2817721.2823481. URL: https://dl.acm.org/citation.cfm?id=2817721.2823481.

DESIGN COMPETITIONS

Bala, P., Nóbrega, L., Neves, G., Lopes, L., Morna, J., Camacho, J., and Freitas, C. "Keyewai: Looking at Cooperation in a Holographic Projection Screen". In: *Proceedings of the 33rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems*. ACM, 1, 2015, pp. 61–64. DOI: 10.1145/2702613.2728652.

THESIS

Bala, P. "Leveraging eXtented Reality & Human-Computer Interaction for User Experience in 360° Video". PhD thesis. Universidade Nova de Lisboa, 2022.

Bala, P. "tCAD: a 3D modeling application on a depth enhanced tabletop computer". MA thesis. University of Madeira, 1, 2014. URL: https://digituma.uma.pt/handle/10400.13/555.

Service

PROGRAM COMMITTEE MEMBER
TEI (2023), IMX - XRWALC (2022), ICIDS (2019-2021)

TRACK CHAIR
ICIDS 2016 (Poster and Demo co-chair)

EXTERNAL PAPER REVIEWER
CHI (2020, 2022), TEI (2022), DIS (2022), CHI PLAY (2018, 2021), IEEE AIVR (2021), NordiCHI (2020), IFIP-ICEC (2018)

EXTERNAL JOURNAL REVIEWER
"Audio-Visuals and Interaction Design" Journal Special Issue (EAI Creative Technologies) (2021), Entertainment Computing (Elsevier)(2021)

Invited Talks

GUEST LECTURES

Prototyping 360° Narratives   *MDMI, UMa*

INTERACTIVE VISUAL NARRATIVES I   *May 2019*
- Four 2-hour seminars on (1) Introduction to XR systems, (2) Production of VR and 360° Video, (3) Hand-on experience producing a 360° Narrative, (4) Analysis of created narratives. Invited by Mara Dionísio.

Seminar on Augmented Reality & Virtual Reality   *MDMI, UMa*

INTERACTIVE VISUAL NARRATIVES II   *May 2018*
- Two 2-hour seminars on (1) Augmented Reality Systems and (2) Virtual Reality Systems. Invited by Valentina Nisi and Vanessa Cessário.

Skills

Programming	C#, C++, R, Python, PHP, JavaScript, Java, HTML5, CSS, Sass, LaTeX
Tools & Frameworks	Unity 3D, Autodesk Maya, openFrameworks, XCode, Processing, Microsoft Office, SPSS, R Studio, Adobe Photoshop, Adobe Illustrator, Adobe Premiere, Adobe After Effects, Adobe Xd, Figma, Miro, Affinity Designer, Affinity Photo
Languages	English, Portuguese

Mentorship

MSC. STUDENTS

ongoing	**Manuel Rêgo**, Co-supervision with Valentina Nisi	*IST*
ongoing	**Sarah Leão**, Co-supervision with Valentina Nisi	*IST*
2023	**Pedro Carlos**, "Engaging Gentrification Through Service Design: Human-Centered Design for a Social Justice Issue", Co-supervision with Valentina Nisi	*IST*
2023	**Miguel Antunes**, "MEMEX application: Storytelling application user study for the cultural inclusion of the migrant population", Co-supervision with Valentina Nisi	*IST*
2022	**Catarina Rodrigues**, "Digital Tools for Critical Cultural Heritage", Co-supervision with Valentina Nisi	*IST*
2020	**Tânia Andrade**, "Tell a Tail: the design of an interactive cinematic VR for an animal welfare transmedia", Co-supervision with Valentina Nisi and Mara Díonisio	*UMa*
2020	**Sarah Oliveira**, "Tell a Tail: the design of an AR comic book for an animal welfare transmedia", Co-supervision with Valentina Nisi and Mara Díonisio	*UMa*

Summer Internships

2021	**Catarina Rodrigues**, Co-supervision with Valentina Nisi and Pedro Sanches	*IST*
2021	**Sarah Leão**, Co-supervision with Valentina Nisi and Pedro Sanches	*IST*
2020	**David Mata**, Co-supervision with Valentina Nisi and Mara Díonisio	*UMa*
2020	**Rubén Rodrigues**, Co-supervision with Valentina Nisi and Mara Díonisio	*UMa*
2019	**Tânia Andrade**, Co-supervision with Valentina Nisi and Mara Díonisio	*UMa*
2019	**Sarah Oliveira**, Co-supervision with Valentina Nisi and Mara Díonisio	*UMa*
2019	**Tiago Dias**, Co-supervision with Valentina Nisi and Mara Díonisio	*UMa*