Daniel Simões Lopes

Assistant Professor, Computer Science and Engineering Department, Instituto Superior Técnico, Universidade de Lisboa, Portugal

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Research Interests
1. Computer Graphics
2. Computational Design
3. Medical User Interaction
4. Virtual Reality and Augmented Reality

Academic Degrees
1. PhD in Computational Engineering, December 2013, Instituto Superior Técnico, Universidade de Lisboa
2. MSc in Biomedical Engineering, December 2006, Instituto Superior Técnico, Universidade Técnica de Lisboa

Academic and Research Activities
1. Assistant Professor, Instituto Superior Técnico, September 2018-present.
2. Post-doctoral Fellow, INESC-ID Lisboa, April 2014-August 2018
3. Post-doctoral Fellow, INRIA Centre de Recherche Lille - Nord Europe, December 2013-February 2014
4. Senior Researcher (Graphics & Interaction), INESC-ID Lisboa, January 2015-present
5. Institute of Mechanical Engineering at Instituto Superior Técnico, May 2008-December 2008
6. Institute of Structural Engineering, Territory and Construction at Instituto Superior Técnico, March 2007-May 2008

National Research Projects
1. Co-Principal Investigator: **ARCADE** - Augmenting Rehabilitation Centers with Context-Aware Digital Environments, 02/SAICT/2017 (€239.714,12)
2. Principal Investigator: **STREACKER** - Skeletal TRacking Enhanced with Anatomically Correct Kinematics for Exergames and Rehabilitation, UTAP-EXPL/CA/0065/2017 (€93.576,00)

3. Principal Investigator: **IT-MEDEX** - Interactive Tablets for Collaborative Scenarios Related to 3D Medical Image Exploration, PTDC/EEI-SII/6038/2014 (€173.882,00)
4. Project Coordinator: **A-MOP** - Algorithms for Macro-Molecular Pocket Detection, UTAP-EXPL/QEQ-COM/0019/2014(€29.870,00)
5. Research Member: **TECTON3D** - Digital Mockup: Touching the 3rd dimension, PTDC/EEI-SII/3154/2012
6. Research Member: **DACHOR** - Multibody Dynamics and Control of Hybrid Active Orthoses, MIT-Pt/BS-HHMS/0042/2008
7. Research Member: **PROPAFE** - Design and Development of a Patello-Femoral Prosthesis, PTDC/EME-PME/67687/2006

Scientific Committee
1. Chaire UNESCO en enseignement et recherche en anatomie numérique Université Paris Descartes, 3rd World Congress of the UNESCO Chair in teaching and research of digital anatomy Paris Descartes, Monte da Caparica, Portugal, June 21-22, 2018
2. ECCOMAS VipIMAGE 2017, 6th ECCOMAS Thematic Conference on Computational Vision and Medical Image Processing (VipIMAGE 2017), Porto, Portugal, October 18-20, 2017
3. PhyCS 2017, Member of the International Program Committee, 4th International Conference on Physiological Computing Systems, Lisboa, Portugal, 2017
4. PhyCS 2016, Member of the International Program Committee, 3rd International Conference on Physiological Computing Systems, Lisboa, Portugal, 2016
5. Senior Researcher at the Scientific Committee of INESC ID Lisboa since 2015

Review Committee
1. Multibody System Dynamics (journal), Springer, since 2011
2. Computers & Graphics (journal), Elsevier, since 2014
3. Mechanism and Machine Theory (journal), Elsevier, since 2018
4. International Journal of Non-Linear Mechanics (journal), Elsevier, since 2017
5. BJR - International Journal of Radiology, Radiation Oncology and All Related Sciences (journal), The British Institute of Radiology, since 2017
6. Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization (journal), Taylor & Francis, since 2017
7. Frontiers of Information Technology & Electronic Engineering (journal), Springer, since 2017
8. Engineering Computations (journal), Emerald Publishing, since 2017
9. Electronics Letters (journal), The Institution of Engineering and Technology, since 2017
10. AIMS Electronics and Electrical Engineering (journal), AIM Press, since 2018
11. UNESCO Anatomy Chair, Member of the extended abstract review committee, 3rd World Congress of the Unesco Chair for Teaching and Research in Digital Anatomy

Paris Descartes, Special extended abstract volume of Annals of Medicine, Monte da Caparica, Portugal, 2018

12. International Congress of CiiEM 2018, Member of the extended abstract review committee, Translational Research and Innovation in Human and Health Sciences, Monte da Caparica, Portugal, 2018

13. CHI 2019, Member of the paper review committee, 37th ACM CHI Conference on Human Factors in Computing Systems, Glasgow, United Kingdom, 2019

14. IEEE VR 2019, Member of the paper review committee, 26th IEEE Conference on Virtual Reality and 3D User Interfaces, Osaka, Japan, 2019

15. ISMAR 2018, Member of the paper review committee, 17th IEEE International Symposium on Mixed and Augmented Reality, Munich, Germany, 2018

16. IEEE VR 2018, Member of the paper review committee, 25th IEEE Conference on Virtual Reality and 3D User Interfaces, Reutlingen, Germany, 2018

17. Eurographics 2018, Member of the short papers International Program Committee, 39th Annual Conference of the European Association for Computer Graphics, Delft, The Netherlands, 2018

18. International Congress of CiiEM 2017, Member of the extended abstract review committee, Translational Research and Innovation in Human and Health Sciences, Special extended abstract volume of Annals of Medicine, Monte da Caparica, Portugal, 2017

19. CHI 2018, Member of the paper review committee, 36th ACM CHI Conference on Human Factors in Computing Systems, Montréal, Canada, 2018

20. VRST 2017, Member of the paper review committee, 23nd ACM Symposium on Virtual Reality Software and Technology, Gothenburg, Sweden, 2017

21. ISMAR 2017, Member of the paper review committee, 16th IEEE International Symposium on Mixed and Augmented Reality, Nantes, France, 2017

22. Eurographics 2017, Member of the short papers International Program Committee, 38th Annual Conference of the European Association for Computer Graphics, Lyon, France, 2017

23. ICRA 2017, Member of the paper review committee, IEEE International Conference on Robotics and Automation, Singapore, Malaysia, 2017

24. CHI 2017, Member of the papers and notes review committee, 35th ACM CHI Conference on Human Factors in Computing Systems, Denver, Colorado, USA, 2017

25. VRST 2016, Member of the poster review committee, 22nd ACM Symposium on Virtual Reality Software and Technology, Munich, Germany, 2016

26. ISMAR 2016, Member of the paper review committee, 15th IEEE International Symposium on Mixed and Augmented Reality, Mérida, México, 2016

27. SciVis 2016, Member of the paper review committee, IEEE Scientific Visualization Conference, Baltimore, Maryland, USA, 2016

28. Eurographics 2016, Member of the short papers International Program Committee, 37th Annual Conference of the European Association for Computer Graphics, Lisboa, Portugal, 2016

29. ASB 2015, 39th Annual Meeting of the American Society of Biomechanics, Columbus, Ohio, 2015

Organization of scientific meetings

1. Workshop on Interaction in Health Care: saving lives one interface at a time, under the project IT-MEDEX - Interactive Tablets for Collaborative Scenarios Related to 3D Medical Image Exploration, Oeiras, Portugal, 2017
2. Open Day in Interactive Visualization of 3D Medical Data, under the project IT-MEDEX - Interactive Tablets for Collaborative Scenarios Related to 3D Medical Image Exploration, Oeiras, Portugal, 2017
3. Workshop on Virtual Reality in Architectural Concept Modeling, under the project TECTON3D - Digital Mockup: Touching the 3rd dimension, Lisbon, Portugal, 2016
4. Workshop on Molecular Geometry and Visualization, under the UT Austin | Portugal project A-MOP: Algorithms for Macro-Molecular Pocket Detection, Lisbon, Portugal, 2015
5. ESB 2012, 18th Congress of the European Society of Biomechanics, Lisbon, Portugal, 2012
6. EUROMECH Colloquium 511, Biomechanics of Human Motion. New Frontiers of Multibody Techniques for Clinical Applications, Ponta Delgada, Açores, Portugal, 2011
7. ESMC2009, 7th EUROMECH Solid Mechanics Conference, Lisbon, Portugal, 2009

Awards and Honourable Mentions

1. **Best INESC-ID Junior Researcher Prize 2018,** Lisboa, Portugal, INESC-ID Lisboa
2. **Nominee for the MICCAI Educational Challenge 2018**, Our tutorial "3D Reconstruction of CT Colonography Models for VR/AR Applications using Free Software Tools" made it to the top 4 educational materials covering fundamental concepts in medical image computing and computer-assisted interventions, MICCAI Educational Initiative.
3. **Auggie Breakthrough Nominee 2018**, Our reseach project on Immersive Radiology was nominated to the Auggie Awards organized by VRFirstOfficial and ARealityEvent.
4. **Editors' Choice** - Medical Engineering & Physics Our paper 'On a "Columbus' Egg": Modeling the Shape of Asymptomatic, Dysplastic and Impinged Hip Joints' has been selected as the Editor's Choice for the September edition of Medical Engineering and Physics, 2018.
5. **Nominee for the Best INESC-ID Junior Researcher Prize 2017,** Lisboa, Portugal, INESC-ID Lisboa
6. **Nominee for the Best INESC-ID Junior Researcher Prize 2016,** Lisboa, Portugal, INESC-ID Lisboa
7. **Inaugural OpenSim Virtual Workshop**, Coolest Video: Contact for Tackle Simulations, Stanford University, California, April 25 to May 6, 2016, NIH National Center for Simulation in Rehabilitation Research
8. **2014 NCSRR Visiting Scholars Travel Award**, Stanford University, California, August 25 to August 27, 2014, NIH National Center for Simulation in Rehabilitation Research

9. **Fraunhofer Portugal Challenge 7th Edition (2016)**, co-supervised the Master Thesis of award-winning Pedro Parreira for his work entitled *"Novel Spatial Interaction Techniques for Exploring 3D Medical Images"* (1st place)
10. **2013 FCT Post-Doctoral Fellowship** SFRH/BPD/97449/2013
11. **2008 UT Austin | Portugal Program Doctoral Scholarship** SFRH/BD/47750/2008

Supervision of Graduate Students

Doctoral Student
1. Soraia Paulo (co-supervision, 2019-ongoing), Virtual Reality and Radiomics for Immersive Tumor Analysis in Radiotherapy and Surgical Oncology

Master Students
1. Alexandre Gordo (MEIC 2018), LOCOMOTIVE: LOCOMOtion Tasks in Immersed Virtual Environments.
2. Afonso Faria (MEIC 2018), Augmenting Rehabilitation Centres to Assist physiotherapists through Digital Environments.
3. Bárbara Santos (MEIC 2018), ImmersiveMind: Terapia de reminiscência através da utilização de vídeos 360º.
4. Tiago Jerónimo Silva (MEIC, 2018), IMPLANTAR - Augmented Reality for Surgical Planning of Dental Implants
5. Pedro Brasil Borges (MEBiom, 2017), Cave-like Virtual Environment for Collaborative CT Colonography
6. André Domingues (MEIC, 2017), Kinect-based biofeedback interfaces to improve upper limb rehabilitation
7. José Serrano (MEIC, 2017), Strategies to Accelerate Deformable and Rigid Bodies Simulation: A non-polygonal approach to contact detection
8. João Pedro Pereira (MEIC, 2017), A sketch-based interface for modeling articulated figures
9. João dos Santos (MEIC, 2017), Acoplamento de Proteínas em Ambiente Imersivo
10. Filipe Marques (MEEC, 2017), Measurement of imperceptible breathing movements from Kinect Skeleton Data
11. Luis Trigueiro (MEEC, 2017), 3D 4 D Masses: A Low-Cost Spatial Tool for 3D Sculpting
12. Sara Pires (MEBiom, 2016), Understanding the Hip Joint: a Morphological Study of the Articular Surfaces in Asymptomatic and Pathologic Conditions
13. Nuno Matias (MEBiom, 2016), Precise Extraction of Anatomical Segment Orientations from the Kinect One Sensor
14. João Martins (MEBiom, 2016), Preoperative planning software for corrective osteotomy in cubitus varus and cubitus valgus
15. Vasco Pires (MEIC, 2016), Interactive Tablets for Collaborative 3D Image Exploration
16. Hugo Fernandes (MEIC, 2016), Variant Levels of Detail for Interactive Visualization of Macromolecules
17. André Duarte (MEEC, 2016), Sketching in Virtual Space with Voxels: A CAD tool for the Early Stages of Architectural Design

18. Artur Gonçalves (MEEC, 2015), Efficient Contact Detection for Game Engines and Robotics: A non-polygonal approach with smooth convex objects
19. Pedro Parreira (MEBiom, 2015), Novel Spatial Interaction Techniques for Exploring 3D Medical Images.
20. Rita Mendes (MEBiom, 2015), Transfer Function Design for Three-Dimensional Medical Images Using Sketches
21. Daniel Simão (MEIC, 2014), GeoCake - Modelação Expedita de Terrenos e Subsolos com Interacção Baseada em Gestos
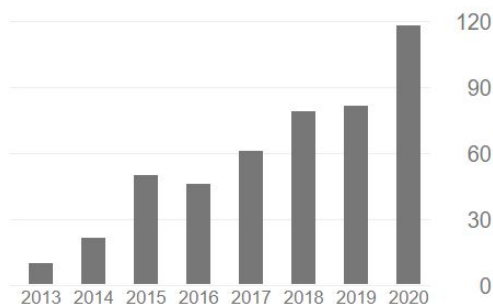
Relevant Professional Experience

1. Software Consultant, Techdrill International Ltd: London, GB, December 2013-January 2014

Language Skills

1. Portuguese and English (Conversation, Reading and Writing)
2. Spanish and French and Italian (Reading)

Publication Summary (Google Scholar)

	All	Since 2015
Citations	502	438
h-index	13	12
i10-index	17	15

Publications - International Peer-Reviewed Journals

1. E.R. Zorzal, S.F. Paulo, P. Rodrigues, J.J. Mendes, **D.S. Lopes**, An immersive educational tool for dental implant placement: A study on user acceptance, International Journal of Medical Informatics, 104342
2. T. Alves, H. Carvalho, **D.S. Lopes**, Winning compensations: Adaptable gaming approach for upper limb rehabilitation sessions based on compensatory movements, Journal of Biomedical Informatics, 108, 1035018:4, 2020. DOI: 10.1016/j.jbi.2020.103501
3. E.R. Zorzal, J.M.C. Gomes, M. Sousa, P. Belchior, P.G. da Silva, N. Figueiredo, **D.S. Lopes**, J. Jorge, Laparoscopy with augmented reality adaptations, Journal of Biomedical Informatics, 107, 103463, 2020. DOI: 10.1016/j.jbi.2020.103463

4. H.C.M. Mendes, C.I.A.B. Costa, N.A. da Silva, F.P. Leite, A. Esteves, **D.S. Lopes**, PIÑATA: Pinpoint insertion of intravenous needles via augmented reality training assistance, Computerized Medical Imaging and Graphics, 82, 101731, 2020. DOI: 10.1016/j.compmedimag.2020.101731

5. **D.S. Lopes**, S.M. Pires, C.D. Barata, V.V. Mascarenhas, J.A. Jorge, The Hip Joint as an Egg Shape: A Comprehensive Study of Femoral and Acetabular Morphologies, Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization, 8:4, Pages 411–425, 2020. DOI: 10.1080/21681163.2019.1709902

6. E.R. Zorzal, M. Sousa, D. Mendes, R.F. dos Anjos, D. Medeiros, S.F. Paulo, P. Rodrigues, J.J. Mendes, V. Delmas, J.-F. Uhl, J. Mogorrón, J.A. Jorge, **D.S. Lopes**, Anatomy Studio: a Tool for Virtual Dissection Through Augmented 3D Reconstruction, Computers & Graphics, 85, Pages 74–84, 2019. DOI: 10.1016/j.cag.2019.09.006

7. S.F. Paulo, F. Relvas, H. Nicolau, Y. Rekik, V. Machado, J. Botelho, J.J. Mendes, L. Grisoni, J.A. Jorge, **D.S. Lopes**, Touchless interaction with medical images based on 3D hand cursors supported by single-foot input: A case study in dentistry, Journal of Biomedical Informatics, Volume 100, 103316, 2019. DOI: 10.1016/j.jbi.2019.103316

8. R. de Klerk, A.M. Duarte, D.P. Medeiros, J.P. Duarte, J.A. Jorge, **D.S. Lopes**, Usability studies on building early stage architectural models in virtual reality, Automation in Construction, 103, Pages 104–116, 2019. DOI: 10.1016/j.autcon.2019.03.009

9. **D.S. Lopes**, S.M. Pires, V.V. Mascarenhas, M.T. Silva, J.A. Jorge, On a "Columbus' Egg": Modeling the Shape of Asymptomatic, Dysplastic and Impinged Hip Joints, Medical Engineering & Physics, Volume 59, Pages 50–55, September 2018. DOI: 10.1016/j.medengphy.2018.07.001

10. C. Massaroni, **D.S. Lopes**, D. Lo Presti, E. Schena, S. Silvestri, Contactless monitoring of breathing patterns and respiratory rate at the pit of the neck: a single camera approach, Journal of Sensors, Volume 2018, Article ID 4567213, 13 pages, 2018. DOI: 10.1155/2018/4567213

11. **D.S. Lopes**, R.K. dos Anjos, J.A. Jorge, Assessing the usability of tile-based interfaces to visually navigate 3-D parameter spaces, International Journal of Human-Computer Studies, Volume 118, October 2018, Pages 1-13, 2018. DOI: 10.1016/j.ijhcs.2018.05.005

12. **D.S. Lopes**, P.F. Parreira, A.R. Mendes, V.M. Pires, S.F. Paulo, C.S. Sousa, J.A. Jorge, Explicit design of transfer functions for volume-rendered images by combining histograms, thumbnails and sketch-based interaction, The Visual Computer, 34(12), 1713-1723, 2017. DOI: 10.1007/s00371-017-1448-8

13. **D.S. Lopes**, P.F. Parreira, S.F. Paulo, V. Nunes, P.A. Rego, M.C. Neves, P.S. Rodrigues, J.A. Jorge, On the utility of 3D hand cursors to explore medical volume datasets with a touchless interface, Journal of Biomedical Informatics, 72, Pages 140–149, 2017. DOI: 10.1016/j.jbi.2017.07.009

14. R.K. dos Anjos, C.S. Ribeiro, **D.S. Lopes**, J.M. Pereira, Stroke-based splatting: an efficient multi-resolution pointcloud visualization technique, The Visual Computer, Volume 34, Issue 10, pp 1383–1397. DOI: 10.1007/s00371-017-1420-7

15. A.A. Gonçalves, A. Bernardino, J.A. Jorge, **D.S. Lopes**, A benchmark study on accuracy-controlled distance calculation between superellipsoid and superovoid contact geometries, Mechanism and Machine Theory, 115, Pages 77–96, 2017. DOI: 10.1016/j.mechmachtheory.2017.04.008

16. T. Simões, **D.S. Lopes**, S. Dias, F. Fernandes, J. Pereira, J. Jorge, C. Bajaj, A. Gomes, Geometric detection algorithms for cavities on protein surfaces in molecular graphics: a survey, Computer Graphics Forum, 36, Pages 643–683, 2017. DOI: [10.1111/cgf.13158](10.1111/cgf.13158)

17. **D.S. Lopes**, D. Mendes, M. Sousa, J. Jorge, Expeditious Illustration of Layer-Cake Models On and Above a Tactile Surface, (2016), Computers & Geosciences, 90, Part A, Pages 1–9. DOI: 10.1016/j.cageo.2016.02.009

18. **D. S. Lopes**, R. R. Neptune, J. A. Ambrósio, M. T. Silva, (2016), A Superellipsoid-Plane Model for Simulating Foot-Ground Contact during Human Gait, Computer Methods in Biomechanics and Biomedical Engineering, DOI: [10.1080/10255842.2015.1081181](10.1080/10255842.2015.1081181)

19. **D. S. Lopes**, R. R. Neptune, A. A. Gonçalves, J. A. Ambrósio, M. T. Silva, (2015), Shape Analysis of the Femoral Head: A Comparative Study between Spherical, (Super)Ellipsoidal and (Super)Ovoidal Shapes, Journal of Biomechanical Engineering, 137(11):114504-114504-8, DOI: [10.1115/1.4031650](10.1115/1.4031650)

20. B. R. de Araújo, **D.S. Lopes**, P. Jepp, J.A. Jorge, B. Wyvill, (2015), A survey on implicit surface polygonization, ACM Computing Surveys, 47(4), article 60, DOI: [10.1145/2732197](10.1145/2732197)

21. D.S. Lopes, M.T. Silva, and J.A. Ambrósio, Tangent vectors to a 3-D surface normal: A geometric tool to find orthogonal vectors based on the Householder transformation, Computer-Aided Design, 45(3): 683 — 694, 2013. DOI: 10.1016/j.cad.2012.11.003

22. J.P. Jorge, F.M.F. Simões, E.B. Pires, P.A. Rego, D.G. Tavares, D.S. Lopes, and A. Gaspar, Finite element simulations of a hip joint with femoroacetabular impingement, In press, accepted manuscript in Computer Methods in Biomechanics and Biomedical Engineering, 2012. DOI: 10.1080/10255842.2012.744398

23. L.B. Rodrigues, E.B. Las Casas, D.S. Lopes, J. Folgado, P.R. Fernandes, E.B. Pires, G.E.S. Alves, and R.R. Faleiros, A finite element model to simulate femoral fractures in calves: testing different polymers for intramedullary interlocking nails, Veterinary Surgery, 41(7): 838 — 844, 2012. DOI: 10.1111/j.1532-950X.2012.01032.x

24. M.P.M. Pato, N.G.S. Santos, E.B. Pires, P. Areias, M. de Carvalho, S. Pinto, and D.S. Lopes, Finite element studies of the mechanical behaviour of the diaphragm in normal and pathological cases, Computer Methods in Biomechanics and Biomedical Engineering, 14(6): 505 — 513, 2011. DOI: 10.1080/10255842.2010.483683

25. D.S. Lopes, M.T. Silva, J.A. Ambrósio, and P. Flores, A mathematical framework for contact detection between quadric and superquadric surfaces, Multibody System Dynamics, 24(3): 255 — 280, 2010. DOI: 10.1007/s11044-010-9220-0

26. L. B. Rodrigues, D.S. Lopes, J. Folgado, P.R. Fernandes, E.B. Pires, E.B. Las Casas, and R.R. Faleiros, Bone remodelling analysis of a bovine femur for a veterinary implant design, Computer Methods in Biomechanics and Biomedical Engineering, 12(6): 683 — 690, 2009. DOI: 10.1080/10255840902865641

Publications - International Peer-Reviewed Conferences

1. **D.S. Lopes**, F. Relvas, S. Paulo, Y. Rekik, L. Grisoni, J.A. Jorge. 2019. FEETICHE: FEET Input for ContactlessHand gEsture Interaction. In The 17th International Conference on VirtualReality Continuum and its Applications in Industry (VRCAI '19),

November 14–16, 2019, Brisbane, QLD, Australia. ACM, New York, NY, USA, 10 pages. DOI: 10.1145/3359997.3365704

2. **D.S. Lopes**, D. Medeiros, S.F. Paulo, P.B. Borges, V. Nunes, V. Mascarenhas, M. Veiga, J.A. Jorge, Interaction Techniques for Immersive CT Colonography: A Professional Assessment, In: Frangi A., Schnabel J., Davatzikos C., Alberola-López C., Fichtinger G. (eds) Medical Image Computing and Computer Assisted Intervention − MICCAI 2018. MICCAI 2018. Lecture Notes in Computer Science, vol 11071, Pages 629–637, Springer, Cham, 2018. DOI: 10.1007/978-3-030-00934-2_70

3. M. Sousa, D. Mendes, S. Paulo, N. Matela, J. Jorge, **D.S. Lopes**, VRRRRoom: Virtual Reality for radiologists in the reading room, Proceedings of the 35th Annual ACM Conference on Human Factors in Computing Systems (CHI 2017), New York: ACM Press, 2017. DOI: 10.1145/3025453.3025566

4. Soraia Figueiredo Paulo, Nuno Figueiredo, Joaquim Armando Jorge, **Daniel Simões Lopes**, 3D Reconstruction of CT Colonography Models for VR/AR Applications using Free Software Tools, MICCAI Educational Challenge 2018, Granada, Spain.

5. Soraia Figueiredo Paulo, Miguel Belo, Rafael Kuffner dos Anjos, Joaquim Armando Jorge, **Daniel Simões Lopes**, Volume and Surface Rendering of 3D Medical Datasets in Unity®, MICCAI Educational Challenge 2018, Granada, Spain.

6. Francisco Fernandes, **Daniel Simões Lopes**, João Santos, Alfredo Ferreira, PuzzleDock: An Immersive Protein Docking Environment, International Conference on Graphics and Interaction - ICGI 2018, Lisbon, Portugal, 2018 (to appear)

7. **Daniel Simões Lopes** and Joaquim A. Jorge, Extending Medical Interfaces towards Virtual Reality and Augmented Reality, Translational Research and Innovation in Human and Health Science, Annals of Medicine, 2019 (to appear)

8. Joaquim A. Jorge and **Daniel Simões Lopes**, Challenges and Approaches to Interactive Visualization in Healthcare Workspaces, Translational Research and Innovation in Human and Health Science, Annals of Medicine, 2019 (to appear)

9. André Domingues, Joaquim Jorge and **Daniel Simões Lopes**, Kinect-based biofeedback interfaces to improve upper limb rehabilitation, ANNALS OF MEDICINE, Volume 50:sup1, Pages S110-S111, TAYLOR & FRANCIS LTD, 2018. DOI: 10.1080/0785389

10. Filipe Marques, Alexandre Bernardino, Joaquim Jorge and **Daniel Simões Lopes**, Estimating respiratory frequency by filtering depth camera skeletal data, ANNALS OF MEDICINE, Volume 50:sup1, Pages S111-S112, TAYLOR & FRANCIS LTD, 2018. DOI: 10.1080/0785389

11. João Martins, Soraia F. Paulo, Joaquim Jorge, Manuel Cassiano Neves and Daniel Simões Lopes, Combining 2D and 3D image data for preoperative planning of corrective osteotomies in cubitus varus and cubitus valgus, 2nd International Congress of CiiEM - Translational Research and Innovation in Human and Health Sciences, June 11 to 13, 2017, Lisboa, Portugal

12. **Daniel Simões Lopes**, Elena Seminati, Dario Cazzola, Contact parameters for rugby tackling simulations, 23rd Congress of the European Society of Biomechanics, ESB 2017, July 2 to 5, 2017, Seville, Spain

13. Soraia F. Paulo, João Martins, Ana M. Mota, Elisa M. Abreu, João Niza, Nuno Matela, Joaquim Jorge, **Daniel S. Lopes**: The Underrated Dimension: How 3D Interactive Mammography Can Improve Breast Visualization, VI ECCOMAS Thematic Conference On Computational Vision And Medical Image Processing, VipIMAGE 2017, October 18 to 20, 2017, Porto, Portugal

14. Vasco Pires, Miguel Belo, Carlos Sousa, Joaquim Jorge, **Daniel Simões Lope**s, Interactive Tablets for 3D Image Exploration, VI ECCOMAS Thematic Conference On Computational Vision And Medical Image Processing, October 18 to 20, 2017, Porto, Portugal

15. D. S. Lopes, M. Silva and J. Ambrósio, Modeling and Visualization of Complex Biomedical Structures by Means of Superquadric Surface Representations, Mathematical Aspects of Imaging, Modelling and Visualization in Multiscale Biology, ICES, University of Texas at Austin, USA, March 31 to April 04, 2009. (poster presentation)

16. **Lopes, D.S.,** Rodrigues, L.B., Martins, J.A.C, Pires, E.B., de Las Casas, E.B., Faleiros, R.R. – A geometric modeling pipeline for bone structures based on computed tomography data: a veterinary study, Proceedings of VIPIMAGE Thematic Conference on Computational Vision and Medical Image Processing, Porto, 2007. (poster presentation; 6-page printed paper).

17. RODRIGUES, L. B.; **LOPES, D.S.**; FOLGADO, J.; FERNANDES, P. R.; LAS CASAS, Estevam Barbosa; Pires, E.A.C.B.; Martins, J.A.C.; FALEIROS, Rafael Resende. Bone Remodeling Analysis of a Bovine Femur for a Veterinary Implant Design. In: 8th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering, 2008, Porto, Portugal. Proceedings of 8th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering. Londres : Taylor & Francis, 2008. (oral presentation; 6-page paper on CD)

18. RODRIGUES, L. B.; **LOPES, D.S.**; FOLGADO, J.; FERNANDES, P. R.; Pires, E.A.C.B.; Martins, J.A.C.; LAS CASAS, Estevam Barbosa; FALEIROS, Rafael Resende. Bovine Bone Remodeling Analysis for Veterinary Applications. 8th. World Congress on Computational Mechanics (WCCM8) and 5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008), 2008, Veneza, Italy. In: Proceedings of 8th. World Congress on Computational Mechanics (WCCM8) and 5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008), 2008. (oral presentation; 2-page extended abstract)

19. **Lopes, D.S.**, Martins, J.A.C., Pires, E.B., Three-Dimensional Reconstruction of Biomechanical Structures for Finite Element Analysis, Portugal-UT Austin CFD 2008 1st

Workshop on Computational Engineering: Fluid Dynamics, Lisboa, 2008. (poster presentation; 2-page extended abstract)

20. RODRIGUES, L.B.; **LOPES, D.S.**; FOLGADO, J.; FERNANDES, P. R.; LAS CASAS, Estevam Barbosa; Pires, E.A.C.B.; Martins, J.A.C.; FALEIROS, Rafael Resende, UTILIZAÇÃO DE MATERIAIS POLIMÉRICOS NA CONFECÇÃO DE UMA HASTE INTRAMEDULAR BLOQUEADA PARA USO EM MEDICINA VETERINÁRIA, XXIX CILAMCE - Iberian Latin American Congress on Computational Methods in Engineering, 2008. (oral presentation; 14-page paper)

21. **Daniel S. Lopes**, Miguel T. Silva and Jorge A. Ambrósio, A MATHEMATICAL FRAMEWORK FOR CONTACT DETECTION BETWEEN QUADRIC AND SUPERQUADRIC SURFACES, Proceedings of the 7th EUROMECH Solid Mechanics Conference, 2009. (oral presentation, 20-page paper on CD)

22. N. Ribeiro, P.C. Fernandes, **D.S. Lopes**, J. Folgado, P.R. Fernandes, 3-D SOLID AND FINITE ELEMENT MODELING OF BIOMECHANICAL STRUCTURES - A SOFTWARE PIPELINE, Proceedings of the 7th EUROMECH Solid Mechanics Conference, 2009. (oral presentation, 18-page paper on CD)

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