

PERSONAL INFORMATION

José Félix Rodríguez Matas



 Politecnico di Milano, Piazza Leonardo da Vinci 32, 20133 Milano, Italy

 +39.02.2399.3209

 josefelix.rodriguezmatas@polimi.it

 <http://www.labsmech.polimi.it/index.php?id=419>

Sex M | Date of birth 13/12/1971 | Nationality Spanish/Venezuelan

WORK EXPERIENCE

March 2015 - present

Associate professor of Industrial Bioengineering

Politecnico di Milano, Piazza Leonardo da Vinci 32, 20133 Milan, Italy (www.polimi.it)

- Professor of continuum mechanics for biomedical engineering and laboratory of computational biomechanics
 - Research at the department of Chemistry, Materials and Chemical Engineering “Giulio Natta”
- Business or sector** Biomedical Engineering

Nov. 2011 – Feb. 2015

Associate professor of Mechanical Engineering

Universidad de Zaragoza, Pedro Cerbuna 9, 50009 Zaragoza, Spain (www.unizar.es)

- Professor of continuum and structural mechanics
 - Research at the department of Mechanical Engineering
- Business or sector** Mechanical engineering and Biomedical Engineering

Nov. 2008 – Oct. 2011

Associate research professor of Mechanical Engineering

Universidad de Zaragoza, Pedro Cerbuna 9, 50009 Zaragoza, Spain (www.unizar.es)

- Professor of continuum and structural mechanics
 - Research at the department of Mechanical Engineering
- Business or sector** Mechanical engineering and Biomedical Engineering

Dec 2003 – Oct. 2008

“Ramón y Cajal” research fellow

Instituto Universitario de Investigación en Ingeniería de Aragón (I3A). Universidad de Zaragoza. Mariano Esquillor S/N, 50018 Zaragoza, Spain (www.i3a.unizar.es)

- Research at the department of Mechanical Engineering and at I3A.
- Business or sector** Mechanical engineering and Biomedical Engineering

Dec. 2001 – Nov. 2003

Associate professor of Mechanical Engineering

Universidad Simón Bolívar. Valle de Sartenejas, 89000 Miranda, Venezuela (www.usb.ve)

- Professor of strength of materials, continuum mechanics and mechanical design.
 - Research at the department of Mechanics.
- Business or sector** Mechanical engineering

Sept. 1999 – Nov. 2001

Assistant professor of Mechanical Engineering

Universidad Simón Bolívar. Valle de Sartenejas, 89000 Miranda, Venezuela (www.usb.ve)

- Professor of strength of materials, continuum mechanics and mechanical design.
 - Research at the department of Mechanics.
- Business or sector** Mechanical engineering

June 1993 – Aug. 1995

Instructor of Mechanical Engineering

Universidad Simón Bolívar. Valle de Sartenejas, 89000 Miranda, Venezuela (www.usb.ve)

- Professor of strength of materials and mechanical design.
- Business or sector** Mechanical engineering

EDUCATION AND TRAINING

Aug. 1995 – Aug. 1999

PhD in Mechanical Engineering

University of Notre Dame, Notre Dame, IN 46556 (USA)

- Nonlinear programming and optimization
- Continuum mechanics and experimental mechanics
- Final dissertation: "Modeling the mechanical behaviour of fused deposition Acrylonitrile-Butadiene-Styrene polymer components"

Sept. 1988 – June 1993

Mechanical Engineering

Universidad Simón Bolívar, Valle de Sartenejas, 89000 Miranda, Venezuela (www.usb.ve)

PERSONAL SKILLS

Mother tongue(s) Spanish

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
Italian	C1	B2	C1	C1	B1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

ADDITIONAL INFORMATION

- Publications
- Presentations
- Projects
- Conferences
- Seminars
- Honours and awards
- Memberships
- References

Publications

Co-authored 60 scientific works in peer-reviewed international journals. ISI Research ID: H-4589-2011. ORCID: 0000-0001-7612-266X. WoS h-index: 23 (as of 30 November 2017)

Projects

- INSIST / IN-Silico trials for treatment of acute Ischemic Stroke H2020-SC1-2017-CNECT-2. Task Manager of partner POLIMI. PI (Polimi): Francesco Migliavacca.
- POPCORN / Development of corneal biomechanical model. Dynamic topographical characterization based on 3D plenoptic imaging (FP7-SME-2013 066634). Funding: European Union. Researcher of the partner UNIZAR. PI: María Begoña Calvo Calzada. Number of researchers: 3. (2013-2015).
- TIN2012-37546-C03-03. Virtual Physiological Human Whole Heart: improvement in patient-oriented treatment of cardiac arrhythmias. Funding: MINECO. Ministerio de economía y competitividad (Spain). Principal investigator (2012-2015)
- PR2010-0552 Movilidad Mo Educación. Funding: Ministerio de Educación (Spain). Date: 01/03/2011. Duration: 4 month.
- LOCMOTIC-Localización del origen de arritmias cardíacas mediante modelado y tecnologías de la información y comunicaciones. Funding: Ministerio de Industria, Turismo y Comercio (Spain). Coordinator from UNIZAR partner (2010-2013).
- PI144/09. Indices electrocardiográficos para el diagnóstico de la isquemia de miocardio. Correlación entre los mecanismos celulares y la arritmia ventricular. Funding: Aragon Government. Research supervisor. Principal investigator: Esther Pueyo Paules (2009-2011).

Major Honors and Awards

- October 2003. Ramón y Cajal postdoctoral Fellowship. Spanish ministry of Science and Technology.
- September 1995. Four years, PhD tuition scholarship from the department of Aerospace and Mechanical Engineering (University of Notre Dame).
- September 1995. Four years graduate studies scholarship by Consejo Nacional de Investigaciones Científicas y Tecnológicas (CONICIT) from the Republic of Venezuela.

Additional Information

- Jan. 2010-Sept. 2014. Member of the Board of Quality Assurance of the master in Biomedical Engineering. Universidad de Zaragoza. Spain.
- Dec. 2007-Sept. 2014. Member of the Academic Board the master in Biomedical Engineering. Universidad de Zaragoza. Spain.
- Feb. 2002-Aug. 2003. Coordinator of graduate studies in Mechanical and Civil Engineering. Universidad Simón Bolívar. Venezuela.
- Feb. 2001- Jan. 2002. Coordinator of graduate studies in Mechanical Engineering. Universidad Simón Bolívar. Venezuela.
- Cooperates with national and international Research Centres and serves as a referee for many scientific journals in the field of Biomechanics.
- Project reviewer for the Agencia Nacional de Evaluación y Prospectiva (ANEP) from the Spanish ministry of economy and competitiveness, and a number of international funding organizations.
- Reviewer for a number of International Journals: Annals of Biomedical Engineering, Journal of Biomechanics, Biomechanics and Modelling in Mechanobiology, International Journal of Solids and Structures, Medical and Biological Engineering and Computing, and others.
- Member of the European Society of Biomechanics (ESB) since 2004.

LIST OF PUBLICATIONS
PEER REVIEWED JOURNAL

1. Garcia-Canadilla P, Rodríguez JF, Palazzi MJ, Gonzalez-Tendero A, Schönleitner P, Balicevic V, Loncaric S, Luiken JJFP, Ceresa M, Camara O, Antoons G, Crispi F, Gratacos E, Bijmens B. A two dimensional electromechanical model of a cardiomyocyte to assess intra-cellular regional mechanical heterogeneities. *PLoS ONE* 12(8): e0182915 (2017). DOI: 10.1371/journal.pone.0182915.
2. Carro J, Rodríguez Matas JF, Monasterio V, Pueyo E. Limitations in electrophysiological model development and validation caused by differences between simulations and experimental protocols. *Progress in Biophysics and Molecular Biology* 129: 53-64 (2017). DOI: 10.1016/j.pbiomolbio.2016.11.006.
3. Ariza-Gracia MA, Ortilles A, Cristobal JA, Rodríguez Matas JF, Calvo B. A numerical-experimental protocol to characterize corneal tissue with an application to predict astigmatic keratotomy surgery. *Journal of the Mechanical Behavior of Biomedical Materials* 74: 304-314 (2017). DOI: 10.1016/j.jmbbm.2017.06.017.
4. Ortilles A, Rodríguez Matas JF, Ariza-Gracia MA, Pascual G, Calvo B. Why non contact tonometry tests cannot evaluate the effects of corneal collagen cross-linking. *Journal of Refractive Surgery* 33(3): 184-192 (2017). DOI: 10.3928/1081597X-20161206-02.
5. Luraghi G, Wu W, De Gaetano F, Rodríguez Matas JF, Moggridge GD, Serrani M, Stasiak J, Costantino ML, Migliavacca F. Evaluation of an aortic valve prosthesis: Fluid-structure interaction or structural simulation? *Journal of Biomechanics* 58: 45-51 (2017). DOI: 10.1016/j.jbiomech.2017.04.004.
6. Hoogendoorn C, Sebastian R, Rodríguez JF, Lekadir K, Frangi AF. An Atlas and Data-Driven Approach to Initializing Reaction-Diffusion Systems in Computer Cardiac Electrophysiology. *International Journal for Numerical Methods in Biomedical Engineering* 33: e2846 (2017). DOI: 10.1002/cnm.2846.
7. Ariza Gracia MA, Redondo S, Piñero D, Calvo B, Rodríguez Matas JF. A predictive tool for determining patient-specific mechanical properties of human corneal tissue. *Computer Methods in Applied Mechanics and Engineering* 317: 226-247 (2017) DOI: 10.1016/j.cma.2016.12.013.
8. Lopez-Menedez H, Rodríguez JF. Towards the understanding of cytoskeleton fluidisation–solidification regulation. *Biomechanics and Modelling in Mechanobiology* 16: 1159-1169 (2017). DOI: 10.1007/s10237-017-0878-6.
9. Lopez-Menedez H, Rodríguez JF. Microstructural model for cyclic hardening in F-actin networks crosslinked by α -actinin. *Journal of the Mechanics and Physics of Solids* 91: 28-39 (2016). DOI: 10.1016/j.jmps.2016.01.015.
10. Garcia A, Rodríguez Matas JF, Raimondi MT. Modeling of the mechano-chemical behaviour of the nuclear pore complex: current research and perspectives. *Integrative Biology* 8: 1011-1021 (2016). DOI: 10.1039/c6ib00153j.
11. Chandra S, Gnaranaruban V, Riveros F, Rodríguez JF, Finol E. A Methodology for the Derivation of Unloaded Abdominal Aortic Aneurysm Geometry With Experimental Validation. *Journal of Biomechanical Engineering (ASME)* 138: 101005 (2016). DOI: 10.1115/1.4034425.
12. Pueyo E, Orini M, Rodríguez JF, Taggart P. Interactive effect of beta-adrenergic stimulation and mechanical stretch on low-frequency oscillations of ventricular action potential duration in humans. *Journal of Molecular and Cellular Cardiology* 97: 93-105 (2016). DOI: 10.1016/j.yjmcc.2016.05.003.
13. Ariza Gracia MA, Zurita JF, Piñero D, Calvo B, Rodríguez Matas JF. Automated Patient-Specific Methodology for Numerical Determination of Biomechanical Corneal Response. *Annals of Biomedical Engineering* 44 (5): 1753-1772 (2016). DOI: 10.1007/s10439-015-1426-0.
14. Soudah E, Rodríguez JF, Lopez R. Mechanical stress in abdominal aortic aneurysms using artificial neural networks. *Journal of Mechanics in Medicine and Biology* 15(3): 1550029 (2015). DOI: 10.1142/S0219519415500293.
15. Ferrer A, Sebastian R, Sanchez-Quintana D, Rodríguez JF, Godoy E, Martinez L, Saiz J. Detailed anatomical and electrophysiological models of human atria and torso for the simulation of atrial activation. *PLoS ONE* 10(11): e0141573 (2015). DOI: 10.1371/journal.pone.0141573.
16. Mena A, Ferrero JM, Rodríguez JF. (2015). GPU accelerated solver for nonlinear reaction-diffusion systems. Application to the electrophysiology problem. *Computer Physics Communications* 196: 280-289 (2015). DOI: 10.1016/j.cpc.2015.06.018.
17. Ariza Gracia MA, Zurita JF, Piñero D, Rodríguez Matas JF, Calvo B. Coupled Biomechanical Response of the Cornea Assessed by Non-Contact Tonometry. A simulation study. *PLOS One* 10 (3): e0121486 (2015). DOI: 10.1371/journal.pone.0121486.
18. Riveros F, Martufi G, Gasser TC, Rodríguez Matas JF. On the Impact of Intraluminal Thrombus Mechanical Behavior in AAA Passive Mechanics. *Annals of Biomedical Engineering* 43(9): 2253-2264 (2015). DOI: 10.1007/s10439-015-1267-x.
19. Sierra M, Miana-Mena FJ, Calvo B, Muñoz MJ, Rodríguez JF, Grasa J. On Using Model Populations to Determine Mechanical Properties of Skeletal Muscle. Application to Concentric Contraction Simulation. *Annals of Biomedical Engineering* 43(10): 2444-2455 (2015). DOI: 10.1007/s10439-015-1279-6.
20. Trabelsi O, Davis FM, Rodríguez Matas JF, Duprey A, Avril S. Patient specific stress and rupture analysis of ascending thoracic aneurysms. *Journal of Biomechanics* 48: 1836-1843 (2015). DOI: 10.1016/j.jbiomech.2015.04.035.
21. Ariza Gracia MA, Piñero DP, Rodríguez JF, Perez Cambrodi RJ, Calvo B. Interaction between diurnal variations of intraocular pressure, pachymetry, and corneal response to an air puff. Preliminary evidence. *JCRS-Online case reports* 3, 12:15 (2015). DOI: /10.1016/j.jcro.2015.01.002.
22. Comejo S, Guzmán A, Valencia A, Rodríguez JF, Finol E. Flow-induced wall mechanics of patient-specific aneurysmal cerebral arteries: nonlinear isotropic vs. anisotropic wall stress. *Journal of Engineering in medicine* 228(1): 37-48 (2014). DOI: 10.1177/0954411913512283.
23. Hernández-Gascón B, Grasa J, Calvo B, Rodríguez JF. A 3D electro-mechanical continuum model for simulating skeletal muscle contraction. *Journal of Theoretical Biology* 335: 108-118 (2013). DOI: 10.1016/j.jtbi.2013.06.029.
24. Raut SS, Chandra S, Shum J, Washington CB, Muluk SC, Finol EA, Rodríguez JF. Biological, geometric and biomechanical factors influencing abdominal aortic aneurysm rupture risk: A comprehensive review. *Recent Patents on Medical Imaging* 3(1): 44-59 (2013). DOI: 10.2174/1877613211303010006.
25. Wamsley J, Rodríguez JF, Mirams GR, Burrage K, Efimov IR, Rodríguez B. mRNA expression levels in failing human hearts predict cellular electrophysiological remodeling: A population-based simulation study. *PLoS ONE* 8(2): e56359 (2013). DOI: 10.1371/journal.pone.0056359.
26. Van Oosterwyck H, Rodríguez JF, Doblaré M, García-Aznar JM. An affine micro-sphere based constitutive model, accounting for junctional sliding, can capture F-Actin network mechanics. *Computer Methods in Biomechanics and Biomedical Engineering* 16(9): 1002-1012 (2013). DOI: 10.1080/10255842.2011.648626.
27. Riveros F, Santanu C, Finol EA, Gasser TC, Rodríguez JF. A pull-back algorithm to determine the unloaded vascular geometry in anisotropic hyperelastic AAA passive mechanics. *Annals of Biomedical Engineering* 41(4): 694-708 (2013). DOI: 10.1007/s10439-012-0712-3.
28. Tobón C, Rodríguez JF, Ferrero JM(Jr), Homero F, Saiz J. Dominant frequency and organization index maps in a realistic three-dimensional computational model of atrial fibrillation. *Europace* 14(5): 25-32 (2012). DOI: 10.1093/europace/eus268.
29. Grasa J, Hernández-Gascón B, Ramírez A, Rodríguez JF, Calvo B. Modelado numérico del comportamiento del tejido músculo-esquelético. *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería* 28(3): 177 – 186 (2012). DOI: 10.1016/j.rimni.2012.03.005.
30. Dux-Santoy L, Sebastian R, Rodríguez JF, Ferrero JM, Saiz J. Interaction of specialized cardiac conduction system with antiarrhythmic drugs: a simulation study. *IEEE transactions on biomedical engineering* 58(12): 3475-3478 (2011). DOI: 10.1109/TBME.2011.2165213.
31. El Halabi F, Rodríguez JF, Rebollo L, Hurtós E, Doblaré M. Mechanical Characterization and Numerical Simulation of Polyether-ether-ketone (PEEK) Cranial Implants. *Journal of the Mechanical Behavior of Biomedical Materials* 4(8): 1819-1832 (2011). DOI: 10.1016/j.jmbbm.2011.05.039.
32. Carro J, Rodríguez JF, Laguna P, Pueyo E. A human ventricular cell model for investigation of cardiac arrhythmias under hyperkalemic conditions. *Proceeding of the Royal Society A* 369(1954): 472-480 (2011). DOI: 10.1098/rsta.2011.0127.
33. Niederer SA, Kerfoot E, Benson AP, Bernabeu MO, Bernus O, Bradley C, Chery EM, Clayton R, Fenton FH, Garry A, Heidenreich E, Land S, Maleckar M, Pathmanathan P, Plank G, Rodríguez JF, Roy I, Sachse FB, Seeman G, Skavhaug O, Smith N. Verification of Cardiac Tissue Electrophysiology

- Simulators using an N-Version Benchmark. *Proceeding of the Royal Society A* 369: 4331-4351 (2011). DOI: 10.1098/rsta.2011.0139.
34. Mincholé A, Pueyo E, Rodríguez JF, Zacur E, Doblare M, Laguna P. Quantification of restitution dispersion from the dynamic changes of the T wave peak to end, measured at the surface ECG. *IEEE transactions on biomedical engineering* 58(5): 1172-1182 (2011). DOI: 10.1109/TBME.2010.2097597.
 35. Heidenreich E, Ferrero JM(Jr), Doblare M., Rodríguez JF. Adaptive macro finite elements for the numerical solution of monodomain equations in cardiac electrophysiology. *Annals of Biomedical Engineering* 48: 2335-2348 (2010). DOI: 10.1007/s10439-010-9997-2.
 36. Heidenreich E, Gaspar FJ, Ferrero JM(Jr), Rodríguez JF. Compact schemes for anisotropic reaction-diffusion equations with adaptive time step. *International Journal for Numerical Methods in Engineering* 82: 1022-1043 (2010). DOI: 10.1002/nme.2801.
 37. Alastrue V, García A, Peña E, Rodríguez JF, Martínez MA, Doblare M. Numerical Framework for Patient-specific Computational Modelling of Vascular Tissue. *International Journal for Numerical Methods in Biomedical Engineering* 26: 35-51 (2010). DOI: 10.1002/cnm.1234.
 38. Rodríguez JF, Martufi G, Doblare M, Finol E. The effect of material model formulation in the stress analysis of abdominal aortic aneurysms. *Annals of Biomedical Engineering* 37(11): 2218-2221 (2009). DOI: 10.1007/s10439-009-9767-1.
 39. Teng Z, Ochoa I, Li Z, Lin Y, Rodríguez JF, Bea JA, Doblare M. Nonlinear mechanical property of tracheal cartilage: A theoretical and experimental study. *Journal of Biomechanics* 41: 1995-2002 (2008). DOI: 10.1016/j.jbiomech.2008.03.032.
 40. Rodríguez JF, Ruiz C, Doblare M, Holzapfel GA. Mechanical stresses in abdominal aortic aneurysms: Influence of diameter, asymmetry, and material anisotropy. *Journal of Biomechanical Engineering (ASME)* 137 (2008). DOI: 10.1115/1.2898830.
 41. Rodríguez JF, Alastrue V, Doblare M. Finite element implementation of a stochastic three dimensional finite-strain damage model for fibrous soft tissue. *Computer Methods in Applied Mechanics and Engineering* 197: 946-958 (2008). DOI: 10.1016/j.cma.2007.09.017.
 42. Muñoz MJ, Bea JA, Rodríguez JF, Ochoa I, Grasa J, Pérez del Palomar A, Zaragoza P, Osta R, Doblare M. An experimental study of the mouse skin behaviour. Damage and Inelastic aspects. *Journal of Biomechanics* 41: 93-99 (2007). DOI: 10.1016/j.jbiomech.2007.07.013.
 43. Heidenreich EA, Rodríguez, JF, Gaspar FJ, Doblare M. Fourth-order compact schemes with adaptive time step for monodomain reaction-diffusion equations. *Journal of computational and applied mathematics* 216: 39-55 (2007). DOI: 10.1016/j.cam.2007.04.011.
 44. Cacho F, Elbischeger PJ, Rodríguez JF, Doblare M, Holzapfel GA. A constitutive model for fibrous soft tissues considering collagen fibre crimp. *International Journal of Nonlinear Mechanics* 42(2): 391-402 (2007). DOI: 10.1016/j.ijnonlinmec.2007.02.002.
 45. Alastrué V, Rodríguez JF, Calvo B, Doblare M. Structural damage models for fibrous soft tissues. *International Journal of Solids and Structures* 44: 5894-5911 (2007). DOI: 10.1016/j.ijsolstr.2007.02.004.
 46. Grasa J, Bea JA, Rodríguez JF, Doblare M. The perturbation method and the extended finite element method. An application to fracture mechanics problems. *Fatigue and Fracture of Engineering Materials and Structures*, 29(8): 581- 587 (2006). DOI: 10.1111/j.1460-2695.2006.01028.x.
 47. Rodríguez JF, Cacho F, Bea JA, Doblare M. A stochastic-structurally-based three dimensional finite-strain damage model for fibrous soft tissue. *Journal of the Mechanics and Physics of Solids* 54: 864-886 (2006). DOI: 10.1016/j.jmps.2005.10.005.
 48. Villarraga J, Rodríguez JF, Martínez C. Buried Pipe Modeling with Initial Imperfections. *ASME Journal of Pressure Vessel Technology* 126(2): 250-257 (2004). DOI: 10.1115/1.1688369.
 49. Rodríguez JF, Thomas JP, Renaud JE. Design of Fused Deposition ABS Components for Stiffness and Strength. *ASME Journal of Mechanical Design* 125(3): 545-551 (2003). DOI: 10.1115/1.1582499.
 50. Rodríguez JF, Thomas JP, Renaud JE. Mechanical Behavior of Acrylonitrile Butadiene Styrene Fused Deposition Materials Modeling. *Rapid Prototyping Journal* 9(4): 219-230 (2003). DOI: 10.1108/13552540310489604.
 51. Tappeta RV, Renaud JE, Rodríguez JF. An Interactive Multiobjective Optimization Design Strategy for Decision Based Multidisciplinary Design. *Engineering Optimization* 34(5): 523-544 (2002). DOI: 10.1080/03052150214020.
 52. García-Palomares UM, Rodríguez JF. Sequential and Parallel Derivative Free Algorithms for Unconstrained Optimization. *SIAM Journal on Optimization* 13(1): 79-96 (2002). DOI: 10.1137/S1052623400370606.
 53. Rodríguez JF, Thomas JP, Renaud JE. Mechanical Behavior of Acrylonitrile-Butadiene-Styrene (ABS) Fused Deposition Materials. Experimental Investigation. *Rapid Prototyping Journal* 7(3): 148-159 (2001). DOI: 10.1108/13552540110395547.
 54. Rodríguez JF, Pérez VM, Padmanabhan D, Renaud JE. Sequential Approximate Optimization Using Variable Fidelity Response Surface Approximations. *Structural Optimization* 22(1): 24-34 (2001). DOI: 10.1007/s001580100122.
 55. Rodríguez JF, Renaud JE, Wujek BA, Tappeta RV. Trust Region Model Management in Multidisciplinary Design Optimization. *Journal of Computational and Applied Mathematics* 124: 139-154 (2000). DOI: 10.1007/BF01203525.
 56. Rodríguez JF, Thomas JP, Renaud JE. Characterization of the Mesostructure of Fused Deposition ABS Plastic Materials. *Rapid Prototyping Journal* 6(3): 175-186 (2000). DOI: 10.1108/13552540010337056.
 57. Rodríguez JF, Renaud JE, Watson LT. Trust Region Augmented Lagrangian Methods for Sequential Response Surface Approximation and Optimization. *ASME Journal of Mechanical Design* 120: 58-66 (1998). DOI: 10.1115/1.2826677.
 58. Rodríguez JF, Renaud JE, Watson LT. Convergence of Trust Region Augmented Lagrangian Methods Using Variable Fidelity Approximation Data. *Structural Optimization* 15: 141-156 (1998). DOI: 10.1007/BF01203525.

BOOK CHAPTERS

1. Heidenreich, EA, Ferrero JM(Jr), Rodríguez JF. Modeling the Human Heart under Acute Ischemia, on Patient Specific Computational Modeling, pp. 88-104. Springer-Verlag 2012 (ISBN: 9789400745513).
2. Sebastián R, Heidenreich E, Dux-Santoy L, Rodríguez JF, Ferrero JM(Jr), Sáiz J. Modeling drug effects on personalized 3D models of the heart: A simulation study. Lecture notes in computer science 6364: Statistical atlases and computational models of the heart, pp: 222-231. Springer-Verlag 2010 (ISBN: 3-642-15834X).
3. Soudah E., Oñate E., García J., Pérez J.S., Mena A., Heidenreich E., Rodríguez J.F., Doblare M. Fluid-Structure interaction applied to blood flow simulations, on Advances in Computational Vision and Medical Image Processing, J.M. Tavares and J.R.M. Natal (Eds), Springer-Verlag, 2009 (ISBN: 978-1-4020-9085-1).
4. M. Doblare, B. Calvo, M.A. Martínez, E. Peña, A. Pérez del Palomar, J.F. Rodríguez. On Modeling Soft Biological Tissues with the Natural Element Method. *Biomechanical Systems Technology: Computational Methods* (Vol. 1), pp: 87-116. World Scientific Publishing 2007.