

Fernando Fonseca, MD, MsC PhD

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Invited Assistant Professor, Faculty of Medicine, University of Coimbra
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Fernando Fonseca, born in Viseu, Portugal, began his medical education and Orthopaedic residency training in Coimbra from 1985 to 1991. He became an attending Orthopaedic surgeon at the Hospital da Universidade Coimbra in 1991.

Currently, is a Head of Orthopaedic Department in Coimbra Hospital and University Centre, Professor of Orthopaedic Surgery at Faculty of Medicine, University of Coimbra

Education :

1981 : Medical Doctor by Faculty of Medicine, Oporto University

1985-1991 : Residence in Orthopaedic Department, Coimbra University Hospital.

1991 : Speciality, as Orthopaedic Surgeon, by Ordem dos Médicos

1995 : Master in Sports Medicine, Faculty of Medicine, Coimbra University.

2002 : Doctorat in Medicine – Orthopedic Science, Faculty of Medicine, Coimbra University.

Professional experience :

2007- present : Assistant **Professor** Orthopaedics in Faculty of Medicine, University of Coimbra

2003-present: Associate Professor and Visiting Professor, Faculty of Medicine, Beira Interior University, Covilhã

1991- 2011 : Consultant surgeon on Orthopaedic Department in Coimbra University Hospital, for knee surgery, arthroscopic and sports medicine

2011 - present : Head of Orthopaedic Department in Coimbra University Hospital

2012 – present: Medical advisor of Perceive 3D (<http://perceive3d.com>)

Focus on practice :

Total knee arthroplasty (primary and revision)

Total hip arthroplasty.

Sports medicine

Chondral disease, chondral defects

Research interests :

Total knee arthroplasty and total hip arthroplasty. Biomechanic.

Chondral disease, chondral defects

Societies :

Portuguese Orthopedic and Traumatology Society

European Society of Sports medicine, Knee surgery and Arthroscopy

Portuguese Knee Society

Brasilian Orthopedic and Traumatology Society

Leadership positions :

Portuguese Knee Society

Portuguese Orthopedic and Traumatology Society (2017-2018 President)

Visiting Professorships

Senior researcher, at Center for Mechanical Technology and Automation (TEMA), University of Aveiro, Portugal.

Associate Professor, Faculty of Medicine, Beira Interior University, Covilhã

Special Awards

J. Espregueira Mendes award (SPOT)

Jorge Mineiro award (SPOT)

Selected publications :

Book

1. Fundamentos de biomecânica músculo-esquelética e ortopédica
António Completo, Fernando Fonseca, 2011
Publindustria ISBN: 978-972-8953-70-6

Papers (international indexed publications)

1. Experimental validation of intact and implanted distal femur finite element models.
J. Biomech, 40 (11): 2467-76; 2007 (Epub 2007 Jan)
António Completo, Fernando Fonseca, José A. Simões

Citation:

Large diameter femoral heads impose significant alterations on the strains developed on femoral component and bone: a finite element analysis.
Open Orthop J. 2011; 5:229-38. (Epub 2011 Jul).
Theodorou EG, Provatidis CG, Babis GC, Georgiou CS, Megas PD.

2. Finite Element and Experimental Cortex Strains of the Intact and Implanted Tibia
J. Biomech Eng, 129 (5) 791-797; 2007
António Completo, Fernando Fonseca, José A. Simões

3. Strain shielding in proximal tibia of stemmed knee prosthesis: Experimental study
J. Biomech, 41 (3), 560-566, 2008 (Epub 2007 Nov)
António Completo, Fernando Fonseca, José Simões

Citation::

Cruciate-retaining TKA using a third-generation system with a four-pegged tibial component: a minimum 10-year follow-up note.
Clin Orthop Relat Res. 2010; 468(8):2160-7. (Epub 2010 May).
Schwartz AJ, Della Valle CJ, Rosenberg AG, Jacobs JJ, Berger RA, Galante JO.

Can medio-lateral baseplate position and load sharing induce asymptomatic local bone resorption of the proximal tibia? A finite element study.

Orthop Surg Res. 2009 Jul 17; 4:26. (Epub 2009 Jul).

Innocenti B, Truyens E, Labey L, Wong P, Victor J, Bellemans JJ

Fixation of revision TKA: a review of the literature.

Knee Surg Sports Traumatol Arthrosc. 2011 Jun;19(6):872-9. Epub 2010 Set

Beckmann J, Lüring C, Springorum R, Köck FX, Grifka J, Tingart M.

4. The influence of different tibial stem designs in load sharing and stability at the cement-bone interface in revision TKA.

Knee, 15 (3), 227-232; 2008

António Completo, Fernando Fonseca, José Simões, M Oliveira.

Citation:

Fixation of revision TKA: a review of the literature.

Knee Surg Sports Traumatol Arthrosc. 2011 Jun;19(6):872-9. Epub 2010 Set

Beckmann J, Lüring C, Springorum R, Köck FX, Grifka J, Tingart M.

- 5 Experimental bone strain analysis in distal tip of tibial stems in revision Total Knee Arthroplasty
Journal of Biomechanics 41 (S1); 2008
Inês Silva, António Completo, Fernando Fonseca, José A Simões
6. Fixation with autogenous osteochondral grafts for the treatment of osteochondritis dissecans (stages III and IV).
Int Orthop, 33 (1), 139-144; 2009 (Epub, 2007 Nov)
Fernando Fonseca, Inês Balacó.
- Citation:
Viability of loose body fragments in osteochondritis dissecans of the knee. A series case.
Int Orthop, 34 (6), 827-831; 2010 (Epub, 2010 Feb)
Cecilia Pascual-Garrido, Ignacio Tanoira, Domingo L. Muscolo, Miguel A. Ayerza, Arturo Makino
7. Revision total knee arthroplasty: The influence of femoral stems in load sharing and stability.
Knee, 16(4):275-279; 2009 (Epub 2009 Mar)
António Completo, José A. Simões, Fernando Fonseca
- Citation:
A sliding stem in revision total knee arthroplasty provides stability and reduces stress shielding.
Acta Orthop. 2010 Jun; 81(3):337-43.
Meijerink HJ, van Loon CJ, de Waal Malefijt MC, van Kampen A, Verdonchot N.
- Toward the development of virtual surgical tools to aid orthopaedic FE analyses.
EURASIP J Adv Signal Process. 2010 Jan 1; 2010:1902931-1902937
Tadepalli SC, Shivanna KH, Magnotta VA, Kallemeyn NA, Grosland NM.
- Fixation of revision TKA: a review of the literature.
Knee Surg Sports Traumatol Arthrosc. 2011 Jun;19(6):872-9. Epub 2010 Set
Beckmann J, Lüring C, Springorum R, Köck FX, Grifka J, Tingart M.

8. Mosaicoplastia revestida com periósseo no tratamento de perda osteocondral do joelho
Rev Bras Ortop Traum; 44(2), 153-158; 2009
Fernando Fonseca.

9. Sistema de fabrico rápido de implantes ortopédicos.
Rev Bras Ortop Traum; 44(3), 260-265; 2009
Carlos Relvas, Joana Reis, José Potes, Fernando Fonseca, José A Simões

10. Biomechanical evaluation of proximal tibia behavior with the use of femoral stems in revision TKA: An in vitro and finite element analysis.
Clinical Biomechanics, 25 (2), 159-165; 2010 (Epub 2009 Nov)
António Completo, A. Rego, Fernando Fonseca, A. Ramos, C. Relvas, José António Simões.
Citation:
Fixation of revision TKA: a review of the literature.
Knee Surg Sports Traumatol Arthrosc. 2011 Jun;19(6):872-9. Epub 2010 Set
Beckmann J, Lüring C, Springorum R, Köck FX, Grifka J, Tingart M.

11. Migração de parafuso em artroplastia total do joelho
Rev Bras Ortop Traum; 45(1), 91-93; 2010
Fernando Fonseca, José Tomé, Manuel Barreto

12. Mosaicplastie associée à un apport perioste dans le traitement de pertes de substances osteochondrales du genou
Maitrise Orthopédique, 190,8-11; 2010
Fernando Fonseca

13. Improved Stability with intramedullary stem after anterior femoral notching in total knee arthroplasty
Knee Surg Sports Traumatol Arthrosc, Epub 2011, DOI 10.1007/s00167-011-1557-2.
António Completo, Fernando Fonseca, Carlos Relvas, António Ramos, José A. Simões

14. Biomechanical analysis of total elbow replacement with unlinked iBP prosthesis: an in vitro and finite element analysis
Clin Biomech; 26(10), 990-997; 2011 (Epub 2001 Jul)
António Completo, J. Pereira, Fernando Fonseca, António Ramos, Carlos Relvas, José A Simões

15. Fratura periprotética da tibia combinada com fratura de fadiga da haste tibial da ATJ
Rev Bras Ortop Traum; 46(6), 720-725; 2011
Fernando Fonseca, Edgar Rebelo, António Completo

16. A new press-fit stem concept to reduce the risk of end-of-stem pain at revision TKA: A pre-clinical study
Knee; 2012 (Epub 2012 Jan)
António Completo, Fernando Fonseca, José A Simões António Ramos, Carlos Relvas

17. Identification of clinical predictors of flarein systemic lupus erythematosus patients: a 24-month prospective cohort study
Rheumatology, 2013
L Inês, C Duarte, R S Silva, A S Teixeira, F Fonseca, JÁ da Silva JA

18. Biomechanical evaluation of different techniques o proximal tibia en revision of total knee arthroplasty: An in-vitro and finite elements analysis
.Clin Biomech, 2013
A Completo, R Duarte, F Fonseca, J A Simões, A Ramos, C Relvas

19. Maquet III procedure: what remains after initial complications -long-term results.
J Orthop Surg Res. 8:1.11, 2012
Fernando Fonseca, João Pedro Oliveira, Pinho Marques

20. Anterior knee pain and sensitivity after anterior cruciate ligament: its impact on sports
OA Orthopaedics 2013 Aug 01;1(2):13 13 Aug
J P Oliveira, F Fonseca, J C Noronha (2013) .

21. Roturas totais do aparelho extensor do joelho
Rev Bras Ortop. 2016;51(6):640-645

- D Moura, F Fonseca (2016).
22. Rupturas bilaterais simultâneas dos tendões patelares
Rev Bras Ortop. 2017;52(1): 111-114
D Moura, P Marques, F Lucas, F Fonseca (2016).
23. Comparative assessment of intrinsic mechanical stimuli on knee cartilage and compressed agarose constructs
Medical Engineering and Physics 000 (2017) 1-7
A Completo, C Bandejas, F Fonseca (2017).
24. Transplante de aloenxerto de aparelho extensor do joelho em casos de rotura do tendão patelar em pacientes com artroplastia total
Rev Bras Ortop. 2017; (in press)
F Fonseca (2017).