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Name: Christopher Wilson

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Date of Birth: 19th March 1959

Nationality: British

Registration: CSST in Orthopaedic Surgery.
GMC Specialist Register – GMC number: 2915290

Present Appointment:

1996 onwards

Consultant Trauma & Orthopaedic Surgeon at the
University Hospital of Wales
Honorary Professor Cardiff University

My special interests are: knee surgery and trauma surgery practice.
70% elective knee surgery and 30% trauma surgery. Special interests
are: ligament reconstruction and knee reconstruction, lower limb
realignment and osteotomy around the knee, and partial joint
replacements. Special interests in trauma are: lower limb fractures,
knee reconstruction and acute knee injuries.

Previous Employment:

March 1996 to November 1996	Fellowship in Knee Surgery Royal North Shore Hospital Sydney Dr Myles Coolican: training in soft tissue knee reconstruction, joint replacement in the knee and general knee reconstructive surgery.
March 1991 onwards	Orthopaedic Training Scheme South Wales
September 1988	Peri-fellowship Training Scheme Nottingham
October 1985	Lecturer in Anatomy at University College London
February 1985	House Officer – Chase Farm Hospital London
August 1984	House Officer – University College Hospital

General Education:

Heversham Grammar School	
Cumbria	1970 - 1977
13 GCSE O'levels	
4 GCSE A'levels	

Medical Education:

Honorary Professor Cardiff University	2009 onwards
MFSEM	June 2009
FRCS Orth	
Specialist Intercollegiate Orthopaedic Examination	March 1995
FRCS	
Royal College of Surgeons of Edinburgh	August 1989
MBBS	
University of London (UCL)	June 1984
BSc (Hons)	
History of Medicine University of London (UCL)	June 1981

Teaching/Training:

2005 to present

Member of Higher Surgical Training Committee South Wales
Member of Faculty for Cardiff UWIC MSc in Sports and Exercise Medicine
Member of Faculty Cardiff University MSc Bioengineering
Member of Faculty University Hospital of Wales FRCS Orth Revision Course
Member of Faculty Basingstoke Osteotomy Course
Member of Faculty Newcastle Osteotomy Course
Member of Faculty RCS Basic Arthroscopy Techniques
Member of Faculty RCS Intermediate Arthroscopy Techniques
Member of Faculty RCS Training the Trainers Course
Undergraduate Examiner for the finals Cardiff Medical School
Active undergraduate and postgraduate teacher

Societies:

BASK (British Association for Surgery of the Knee)
British Orthopaedic Sports Trauma Association
British Trauma Association
American Academy of Orthopaedic Surgeons
ESSKA

Publications/Presentations:

Whatling GM, Lovern B, Wilson C, Holt CA, Objective classification of osteoarthritic, non-pathological and total knee replacement function using stair-gait functional variables, *9th International Conference on Computer Methods in Biomechanics and Biomedical Engineering*, (2010)

Whatling GM, Wilson C, Holt CA, Kinematic assessment of total knee replacements and natural knees using dynamic fluoroscopy and 3D model registration, *9th International Conference on Computer Methods in Biomechanics and Biomedical Engineering*, (2010)

Whatling GM, Wilson C, Holt CA, Assessing total knee replacements and natural knee kinematics in-vivo using dynamic fluoroscopy and 3D model based matching, *British Orthopaedic Research Society Annual Meeting*, (2010)

Whatling GM, Wilson C, Holt CA, Kinematic assessment of total knee replacements and natural knees using dynamic fluoroscopy and 3D model registration, *9th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering*, (2010)

Whatling GM, Ozturk H, Pierron F, Larcher M, Young P, Evans J, Jones D, Banks SA, Fregly BJ, Khurana A, Kumar A, Williams RW, Wilson C, Holt CA, Comparing motion capture with image registration to study the errors associated with quantifying knee kinematics, *British Association for Surgery of the Knee (BASK 2009)*, (2009)

Whatling GM, Holt CA, Jones L, Evans SL, Wilson C, Williams R, Sharma A, Dent C, Quantifying non-pathological and osteoarthritic knee function during stair walking, *8th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering (Porto, Portugal)*, (2009)

Whatling GM, Jones L, Evans SL, Wilson C, Williams R, Dent C, Holt CA, Using stair gait and an objective classifier to identify knee osteoarthritis, *55th Annual Meeting of the Orthopaedic Research Society* (2009)

Whatling GM, Watling D, Wilson C, Metcalfe A, Holt C (2013). Biomechanical changes following high tibial osteotomy. British Orthopaedic Research Society and Bone Research Society Joint Meeting, Oxford, 4-5 Sep. Abstract published in *The Bone and Joint Journal*. (Best poster prize from BORS).

Duggan P, Wilson C, Williams R, Holt C, Whatling G. (2012). The impact of total knee arthroplasty upon gait analysis in the contralateral, non-operated native knee using three-dimensional motion capture. British Orthopaedic Association Annual Congress.

GM Whatling, CA Holt, K Brakspear, H Roberts, D Watling, RS Kotwal, C Wilson, R Williams, A Metcalfe, J Sultan, DJ Mason (2011). Knee joint biomechanical and biological changes following High Tibial Osteotomy. Inaugural South West Regional Regenerative Medicine Meeting (CITER & AR UK BBC AGM). 12-13 Sep, Bristol.

A. K Harvey, D. J. Watling, C. A. Holt, D. J. Mason, S. A. Jones, R. G. Wise, R. Williams, C. Wilson, G. M. Whatling. (2011). Self-evaluation of knee impairment provides insight into the reduction in arthritic pain after total knee replacement. Inaugural South West Regional Regenerative Medicine Meeting (CITER & AR UK BBC AGM). 12-13th Sep, Bristol.

Whatling GM, Watling D, Wilson C, Holt C. (2011). Biomechanical Assessment of Osteoarthritic Joints. Cardiff School of Engineering Research Conference. 11-13 July, Gregynog.

Whatling GM, Holt CA, Brakspear K, Roberts H, Watling D, Kotwal RS, Wilson C, Williams R, Metcalfe A, Sultan J, Mason DJ. (2011). High Tibial Osteotomy: Linking Biomechanical and Biological Changes. Arthritis Research UK Biomechanics and Bioengineering Centre 2nd Symposium, 4th July.

Whatling GM, Holt CA, Brakspear K, Roberts H, Watling D, Kotwal RS, Wilson C, Williams R, Metcalfe A, Sultan J, Mason DJ. High Tibial Osteotomy: Linking Biomechanical and Biological Changes. British Orthopaedic Research Society, Cambridge, UK, 27-29 June 2011.

Whatling GM, Wilson C, Holt CA. (2011). Assessing total knee replacements and natural knee kinematics in-vivo using dynamic fluoroscopy and 3D model based matching. Advances and New Developments in Osteoarthritis/Degenerative Diseases – Benchtop to Bedside. 1st June, Anglia Ruskin University, Postgraduate Medical Institute, Chelmsford.

Whatling G. M, Wilson C, Holt C.A. (2010). Using objective classification and stair-gait to characterise knee osteoarthritis and monitor functional recovery following a total knee replacement. Advances and New Developments in Osteoarthritis/Degenerative Diseases – Benchtop to Bedside. 1st June, Anglia Ruskin University, Postgraduate Medical Institute, Chelmsford. (Best poster Prize).

Whatling G.M, Lovern B, Wilson C, Holt C. A. (2010). Classifying osteoarthritic knee function and the outcome of total knee replacement surgery from assessments of stair gait. 9th CITER AGM & 1st Arthritis Research UK Biomechanics and Bioengineering Centre AGM, Gloucestershire, 16-17 September.

Holt C.A, Brakspear K, Roberts H, Whatling G.M, Kotwal R.S, Wilson C, Williams R, Sultan J and Mason D.J. (2010). Arthritis Research UK Biomechanics and Bioengineering Centre at Cardiff: - Correlating biomechanics and biological indicators of pathology for subjects undergoing High Tibial Osteotomy. International Union of Theoretical and applied Mechanics symposium on Analysis and simulation of human motion, Leuven, Belgium, 13-15 September.

Whatling G. M, Wilson C, Holt C.A. (2010). Assessing total knee replacements and natural knee kinematics in-vivo using dynamic fluoroscopy and 3D model based matching. British Orthopaedic Research Society, Cardiff 12-13 July.

Whatling G. M, Wilson C, Holt C.A. (2010). Using objective classification and stair-gait to characterise knee osteoarthritis and monitor functional recovery following a total knee replacement. British Orthopaedic Research Society, Cardiff 12-13 July.

Whatling G.M., Wilson C. and Holt C.A. (2010). Kinematic assessment of total knee replacement and natural knees using dynamic fluoroscopy and 3D model registration. Cardiff School of Engineering Research Conference. Gregynog, 21-23 June.

Mason D.J., Whatling G., Kotwal R.S., Brakspear K., Roberts H., Wilson C., Williams R., Sultan J. and Holt C. (2010). Can Joint realignment surgery reveal mechanically regulated signals that influence pain and pathology in humans? Annual Meeting of the European Research Society (EORS), June.

Whatling G.M., Wilson C. and Holt C.A. (2010). Kinematic assessment of total knee replacement and natural knees using dynamic fluoroscopy and 3D model registration. Cardiff School of Engineering Research Conference. Gregynog, 21-23 June.

British Orthopaedic Association Meeting 1993

Comparison of Compression Forces Generated by Memory Metal Staples and Herbert Screws
C. Wilson D. O'Doherty

British Orthopaedic Association Meeting 1994

Comparison of MRI with Bone Scanning in Femoral Neck Fractures
Wilson C., Evans P.

American Knee Society – Boston 2009

Role of Glutamate Levels following High Tibial Osteotomy

Abstracts:

Mason DJ, Whatling GM, Kotwal RS, Brakspear K, Roberts H, Wilson C, Williams R, Sultan J, Holt CA, Can joint realignment surgery reveal mechanically regulated signals that influence pain and pathology in humans? [Abstract], *Journal of Biomechanics*, 43 (S1) (2010) ISSN 0021-9290 [10.1016/S0021-9290\(10\)70107-X](https://doi.org/10.1016/S0021-9290(10)70107-X)

Whatling GM, Wilson C, Holt CA, Assessing total knee replacements and natural knee kinematics in-vivo using dynamic fluoroscopy and 3D model based matching, *Proceedings. British Orthopaedic Research Society*, (2010)

Whatling GM, Wilson C, Holt CA, Using objective classification and stair-gait to characterise knee osteoarthritis and monitor functional recovery following a total knee replacement, *Proceedings. British Orthopaedic Research Society*, (2010)

D J Mason, ¹K Brakspear, ²C Wilson, ²R Williams, ²R S Kotwal (2010). Glutamate, a signal that links mechanical loading, pain and pathology in human arthritis. Invited paper, Computer Methods in Biomechanics and Biomedical Engineering, Porto. ISBN: 978-9562121-0-8.

Journal of Bone and Joint Surgery (British) Supplement Aug 2012

GM.Whatling, CA.Holt, K.Brakspear, H.Roberts, D.Watling, RS.Kotwal, C Wilson, R Williams, A.Metcalf, J Sultan, DJ Mason. High tibial osteotomy. Linking biomechanical and biological changes.

Mason D.J., Whatling G., Kotwal R.S., Brakspear K., Roberts H., Wilson C., Williams R., Sultan J. and Holt C. (2010). Can joint realignment surgery reveal mechanically regulated signals that influence pain and pathology in humans? Abstracts of the International Conference on Orthopaedic Biomechanics, Clinical Applications and Surgery (OBCAS), London Journal of Biomechanics, Vol. 43(S1), June, S51(S-54). ISSN 0021-9290.

Whatling G.M., Wilson C. and Holt C.A. (2010). Kinematic assessment of total knee replacements and natural knees using dynamic fluoroscopy and 3D model registration. Proc. of the 9th Intl. Symposium on Computer Methods in Biomechanics and Biomedical Engineering, Valencia, Spain, 24-27 Feb.

Whatling G.M. Lovern B., Wilson C. and Holt C.A. (2010). Objective classification of osteoarthritic, non-pathological and total knee replacement function using stair-gait functional variables. Proc. of the 9th Intl. Symposium on Computer Methods in Biomechanics and Biomedical Engineering, Valencia, Spain, 24-27 Feb.

T.R. Bowers, H. Hodgson, G. Jones, A. Mustafa, C. Wilson, R. Williams, S. Fairhurst, D.J. Mason. Does metabolite composition of synovial fluid associate with outcomes of total knee arthroplasty? British Orthopaedic Research Society Annual Conference, September 2012. Orthopaedic Proceedings March 2013 95-B: 73-73

http://www.bjiprocs.boneandjoint.org.uk/content/95-B/SUPP_13/73

GM Whatling, CA Holt, K Brakspear, H Roberts, D Watling, RS Kotwal, C Wilson, R Williams, A Metcalfe, J Sultan, DJ Mason. High tibial osteotomy: Linking biomechanical and biological changes. British Orthopaedic Research Society, June 2011. Orthopaedic Proceedings August 2012 94-B: 99-99. http://www.bjiprocs.boneandjoint.org.uk/content/94-B/SUPP_XXXVI/99

HC Roberts, R Chowdhury, S Paisey, C Wilson, DJ Mason. Loading of the human knee alters synovial fluid metabolite profiles. British Orthopaedic Research Society, June 2011. Orthopaedic Proceedings August 2012 94-B: 88-88. http://www.bjjprocs.boneandjoint.org.uk/content/94-B/SUPP_XXXVI/88

A N Moideen, V Paringe, AGhandour, C Wilson, D O'Doherty. Outcome of radial extracorporeal shockwave therapy for the treatment of patellar tendinopathy. British Association for Surgery of the Knee April 2011. Orthopaedic Proceedings July 2012 94-B: 23-23
http://www.bjjprocs.boneandjoint.org.uk/content/94-B/SUPP_XXIX/23

N.K. Rath, A. Bewick, R. Williams, C. Wilson, S. White, M. Forster. FPV patellofemoral arthroplasty - a two to six year outcome. British Association for Surgery of the Knee April 2011. Orthopaedic Proceedings July 2012 94-B: 17-17.
http://www.bjjprocs.boneandjoint.org.uk/content/94-B/SUPP_XXIX/17

G. M. Whatling, C. Wilson, C. A. Holt. Assessing total knee replacements and natural knee kinematics in-vivo using dynamic fluoroscopy and 3D model based matching. British Orthopaedic Research Society, 2010. Orthopaedic Proceedings May 2012 94-B: 44-44
http://www.bjjprocs.boneandjoint.org.uk/content/94-B/SUPP_XVIII.toc

D J. Mason, K. Brakspear, C. Wilson, R. Williams, R S. Kotwal. Expression of glutamate receptors and transporters in human subchondral bone in osteoarthritis. British Orthopaedic Research Society January, 2011. Orthopaedic Proceedings January 2011 93-B: 69-69.
http://www.bjjprocs.boneandjoint.org.uk/content/93-B/SUPP_I/69.3

R S Kotwal, K Brakspear, H Roberts, C Wilson, R Williams, J Sultan, D J Mason. Is glutamatergic signalling mechanically-regulated in human subchondral bone? British Orthopaedic Research Society, 2010. Orthopaedic Proceedings May 2012 94-B: 37-37
http://www.bjjprocs.boneandjoint.org.uk/content/94-B/SUPP_XVIII/37

HC Roberts, S Paisey, P Jemmett, PD Hodgson, C Wilson, DJ Mason. Using NMR to identify biomarkers of pain and pathology in osteoarthritis. British Orthopaedic Research Society, 2010. Orthopaedic Proceedings May 2012 94-B: 8-8.
http://www.bjjprocs.boneandjoint.org.uk/content/94-B/SUPP_XVIII/8.abstract

P Jemmett, HC Roberts, S Paisey, C Wilson, DJ Mason. Differences in synovial fluid metabolite profiles between osteoarthritis and meniscal tears. British Orthopaedic Research Society, 2010. Orthopaedic Proceedings May 2012 94-B: 32-32.
http://www.bjjprocs.boneandjoint.org.uk/content/94-B/SUPP_XVIII/32.abstract

G.M. Whatling, C. Wilson, C.A. Holt. Using objective classification and stair-gait to characterise knee osteoarthritis and monitor functional recovery following a total knee replacement. British Orthopaedic Research Society, 2010. Orthopaedic Proceedings May 2012 94-B: 43-43.
http://www.bjjprocs.boneandjoint.org.uk/content/94-B/SUPP_XVIII/43

G M Whatling, M Larcher, P Young, J Evans, D Jones, S A Banks, B J Fregly, A Khurana, A Kumar, R W Williams, C Wilson, C A Holt. Comparing motion capture with image registration to study the errors associated with quantifying knee kinematics. British Association for Surgery of the Knee July, 2010. Orthopaedic Proceedings July 2010 92-B: 407-407.
http://www.bjjprocs.boneandjoint.org.uk/content/92-B/SUPP_III/407.4

R S Kotwal, K Brakspear, C Wilson, R Williams, D J Mason. Expression of glutamate receptors and transporters in human meniscus: correlation with anatomical location, pain or pathology. British Association for Surgery of the Knee July, 2010. Orthopaedic Proceedings July 2010 92-B: 411-411 http://www.bjjprocs.boneandjoint.org.uk/content/92-B/SUPP_III/411.4

R W Trickett, C Wilson. Patellar tendon reconstruction with combined hamstring autograft and Achilles tendon allograft: a new surgical technique and case report. British Association for Surgery of the Knee July, 2010. Orthopaedic Proceedings July 2010 92-B: 424-424
http://www.bjiprocs.boneandjoint.org.uk/content/92-B/SUPP_III/424.1

D J Mason, K Brakspear, C Wilson, R Williams, R S Kotwal. Expression of glutamate receptors and transporters in human subchondral bone in osteoarthritis. British Association for Surgery of the Knee July, 2010. Orthopaedic Proceedings July 2010 92-B: 411-411
http://www.bjiprocs.boneandjoint.org.uk/content/92-B/SUPP_III/411.3

S. Akhtar, A. Mofidi, C. Wilson, R. Williams. Time dependent chondral changes in the anterior cruciate deficient knee. British Association for Surgery of the Knee September, 2009. Orthopaedic Proceedings September 2009 91-B: 419-420. http://www.bjiprocs.boneandjoint.org.uk/content/91-B/SUPP_III/419.6

Alorwerth, C Wilson, N Topley, I Pallister. Increased neutrophil activity after autologous transfusion in total knee arthroplasty: explaining lower post-operative infection rates. British Orthopaedic Association February, 2003. Orthopaedic Proceedings February 2003 85-B: 101-101
http://www.bjiprocs.boneandjoint.org.uk/content/85-B/SUPP_II/101.2

S Roy, C Wilson, R Williams, A J Sharma, C Holt, P O'Callaghan. Mobile bearing versus fixed bearing total knee replacement: a prospective randomised trial. British Association for Surgery of the Knee November, 2002. Orthopaedic Proceedings November 2002 84-B: 324-324.
http://www.bjiprocs.boneandjoint.org.uk/content/84-B/SUPP_III/324.2

Alorwerth, N Topley, I Pallister, C A Wilson. The effects of auto transfusion on neutrophil activity in total knee replacement implications for the prevention of arthroplasty infection. British Association for Surgery of the Knee July, 2002. Orthopaedic Proceedings July 2002 84-B: 159-159
http://www.bjiprocs.boneandjoint.org.uk/content/84-B/SUPP_II/159.3

Published Abstracts:

JB Catterall, S Dewitt, DJ Mason, Wilson C, K Fagerlund, JM Halleen, B Catterson. CTx-II is a marker of cartilage destruction and reflects cartilage metabolism. Osteoarthritis and Cartilage - *under review (2013)*

Wilson, C. Colin Michael Dent (Obituary) BMJ 2009; 339: b4465

Maripuri, S.N., Debnath, U.K., Mehtha, H., Thomas, R., & Wilson, C. 2007. Management of infected TKR. Current Orthopaedics, 21, (4) 314-323

Naidu Maripuri S, Debnath UK, Hemmadi S, Wilson C. Sliding hip screw in pelvis: a rare intra-operative complication. Arch Orthop Trauma Surg. 2007 Sep; 127(7):523-5. Epub 2006 Nov 7.

Lakshmanan P, Wilson C. "Created" patella in total knee arthroplasty (TKA) after prior patellectomy. SurgTechnol Int. 2005; 14:275-8.

Lakshmanan P, Wilson C. Total knee arthroplasty in a patellectomised posterior cruciate ligament-deficient knee: a new technique of patellar tendon bone grafting. Knee. 2004 Dec; 11(6):481-4.

Farmer SE, Wilson C. BMJ 2003; 327: E121 (Minerva)

lorwerth A, Wilson C, Topley N, Pallister I. Neutrophil activity in total knee replacement: implications in preventing post-arthroplasty infection. Knee. 2003 Mar; 10(1):111-3.

Logan AJ, Roy S, Wilson C. Emphysema of the knee and thigh following excessive use of the Mitek vaporizer during arthroscopy of the knee. Clin J Sport Med. 2002 May; 12(3):182-3.

HG David, JT Green, AJ Grant, CA Wilson. Simultaneous bilateral quadriceps rupture: a complication of anabolic steroid abuse. J Bone Joint Surg Br January 1995 77-B: 159-160

Evans PD, Wilson C, Lyons K. Comparison of MRI with bone scanning for suspected hip fracture in elderly patients. J Bone Joint Surg Br. 1994 Jan; 76(1):158-9.

Successful Grants:

- £30,000 grant from BASK to support macrophage activity in autologous blood transfusion
- Previous Wishbone Fellowship to support research into tumourigenic potential of “altered” cells in osteosarcoma following chemotherapy
- ARUK Programme Grant (Principal Investigator) – Arthritis Research UK Biomechanics and Bioengineering Centre October 2009- March 2015. Amount 2.5million pounds
- NISCHR AHSC Clinical Research Fellowship (Chief Investigator); April 2014 – March 2017. Amount £83,693
- ARUK Project Grant (Co-applicant) - Investigating the mechanism of the protective role of glutamate receptor antagonists against early onset osteoarthritis following joint destabilisation injuries; January 2014-December 2017. Amount: £201,651
- EPSRC Project Grant (Co-application) - Development of a novel surgical planning tool for high tibial osteotomy and a musculoskeletal model to determine the changes in internal knee loading. 2012-2013. Amount £125,000
- NIHR Programme Grant (Co-applicant) - Chronic pain after total knee replacement: better post-operative prevention and management (STAR programme). September 2015- August 2020. Amount 2 million pounds
- ARUK pump priming grant – Assessing glutamate receptor and transporter expression in HTO cone cores. May 2010-Sept 2010. Amount £5,000
- ARUK pump priming grant - Pilot studies to validate using NMR to identify biomarkers of pain and pathology in human arthritis. 2011-2012. Amount £2,000
- ARUK pump priming grant - Using NMR to assess biomarkers of pain and pathology in human synovial fluid. 2010-2011. Amount £15,000

Submitted – awaiting outcome:

- NISCHR MSK research Unit (co-applicant) January 2015-December 2018 – 1.5 million pounds
- ARUK Programme Grant renewal application (Principal Investigator) – Arthritis Research UK Biomechanics and Bioengineering Centre April 2015 – March 2020. Amount 2 million pounds

Higher Degree Vivas

I have examined in PhD vivas on:

Paul Yuh Lee	11 April 2013	Cardiff
K Knezevic (Harris)	21 May 2013	Oxford

Present Length and Experience:

I perform over 100 knee ligament reconstructions per year, 60 osteotomies around the knee per year. Over 150 partial and/or total knee replacements per year and over 110 major trauma operations per year.