Dr Murat Ali MEng PhD CEng MIMechE

PUBLICATIONS, CONFERENCES, ARTICLES AND PRESENTATIONS

Journal Papers

- **M. Ali**, S. Partridge, M. Al-Hajjar, S. Williams, J. Fisher, LM. Jennings, Influence on hip joint simulator design and mechanics on the wear and creep of metal-on-polyethylene bearings, Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine.
- **Ali, Murat** and Partridge, Susan and Al-Hajjar, Mazen (2016) *Dataset associated with 'Influence of hip joint simulator design and mechanics on the wear and creep of metal-on-polyethylene bearings'.* University of Leeds. [Dataset] https://doi.org/10.5518/102.
- **M. Ali** and K. Mao, Contact mechanics and wear simulations of hip resurfacing devices using computational methods, Acta of Bioengineering and Biomechanics, Vol. 16, No. 2, pp.103,110, 2014.
- **M. Ali** and K. Mao, Contact Analysis of Hip Resurfacing Devices Under Normal and Edge Loading Conditions, IAENG Special Issue Journal, Engineering Letters, Volume 20 Issue 4, Pages 317-329.

Conferences, Papers and Posters

- **Murat Ali**, Mazen Al-Hajjar, Louise M. Jennings, John Fisher. Variations in Component Positioning Leading to Dynamic Separation and Edge Loading Influences the Deformation and Wear of Metal-on-Polyethylene Hip Replacement Bearings. ORS 2017.
- **Murat Ali**, Mazen Al-Hajjar, Louise M. Jennings, John Fisher. Wear and deformation of metal-on-polyethylene hip replacements under edge loading conditions due to variations in surgical positioning. International Society for Technology in Arthroplasty (ISTA), 2016.
- **Murat Ali**, Mazen Al-Hajjar, Jonathan Thompson, Graham H. Isaac, Louise M. Jennings, John Fisher. Edge Loading and Wear of Ceramic-on-Ceramic Bearings Under Variations in Component Positioning. International Society for Technology in Arthroplasty (ISTA), 2016.
- **M. Ali**, M. Al-Hajjar, LM. Jennings, J. Fisher. Dynamic Separation, Wear And Deformation Of Metal-On-Polyethylene Bearings Under Variations In Component Positioning. British Orthopedic Society (BORS). Accepted for Oral Presentation. Sept 2016.
- **Murat Ali**, Mazen Al-Hajjar, Louise M. Jennings, John Fisher. Wear and deformation of metal-on-polyethylene hip replacements under edge loading conditions due to variations in surgical positioning. Wellcome Trust grant application visit poster presentation. May 2016.

- L.W. Etchels, M. Al-Hajjar, **M. Ali**, J. Thompson, G. Isaac, J. Fisher. A geometric model to predict the occurrence and severity of edge contact for different acetabular cup orientations. Wellcome Trust grant application visit poster presentation. May 2016.
- **Murat Ali**, Mazen Al-Hajjar, Louise M. Jennings, John Fisher. Enhanced Preclinical Testing of Hip Joint Replacements. MeDe Innovation Annual Conference 2016.
- M. Al-Hajjar, OL. Jones, **M. Ali**, S. Williams, L.M. Jennings, J. Fisher, G.H. Issac. Effect of Surgical Variations on the Function and Tribological Performance of Hip Joint Replacement. MeDe Innovation Annual Conference 2016.
- **M. Ali**, S. Partridge, M. Al-Hajjar, S. Williams, J. Fisher, L M. Jennings, Preclincal hip simulation - Experimental validation of an electromechanical hip joint simulator. Mede Innovation Workshop 2015. Oral presentation.
- M. Al-Hajjar, OL. Jones, **M. Ali**, LM. Jennings, J. Fisher. Our approach to adoption through International Standards. Mede Innovation Workshop 2015. Oral presentation.
- **M. Ali**, Mazen Al-Hajjar, Louise M. Jennings, John Fisher. Wear and Deformation of Metal-on-Polyethylene Hip Replacements under Variations in Surgical Positioning, ORS 2016 Abstract. Accepted. Poster.
- **M. Ali**, M. Al-Hajjar, J. Fisher, LM. Jennings, Effect of input kinematics on the wear of ceramic-on-ceramic hip joint replacements under standard ad microseparation conditions, BORS 2015 Abstract. Oral presentation.
- **M. Ali**; S. Partridge, M. Al-Hajjar, S. Williams, J. Fisher, L M. Jennings, Wear of cross-linked polyethylene using electromechanical and pneumatic hip joint simulators, Musculoskeletal biomechanics and tribology, MEIbioeng 2015.
- **M. Ali**, M. Al-Hajjar, J. Fisher, L M. Jennings, Wear of ceramic-on- ceramic hip joint replacements under standard and microseparation conditions with two axes and three axes of rotation, ISTA 2015 Abstract. Poster.
- **M. Ali**, M. Al-Hajjar, J. Fisher, L M. Jennings, Wear of Cross-linked UHWMPE Hip Replacements using an Electromechanical Hip Joint Simulator Under Two-axis and Three-Axis of Rotation Conditions, ISB2015. Oral present.
- **M. Ali**, S. Partridge, M. Al-Hajjar, S. Williams, J. Fisher, LM. Jennings, Wear of Crossed-Linked UHMWPE using Electromechanical and Pneumatic Hip Joint Simulators, ORS 2015 Abstract 893. Poster.
- **M. Ali**, JHA. Vlaskamp, NN. Eddin,; B. Falconer, C. Oram, Technical development and socioeconomic implications of the Raspberry Pi as a learning tool in developing countries, 5th

Computer Science and Electronic Engineering Conference (CEEC), 2013, pp.103-108, 17-18 Sept. 2013. Oral presentation.

- **M.Ali** and K. Mao, Mechanical and Tribological Study of Hip Resurfacing Devices, Book of Abstracts, International Conference of the Polish Society of Biomechanics: Biomechanics 2012, Bialystok 2012. pp. 19-20. Oral presentation.
- **M. Ali** and K. Mao, Computational Contact Modelling of Hip Resurfacing Devices, Lec- ture Notes in Engineering and Computer Science: Proceedings of The World Congress on Engineering 2012, WCE 2012, 4-6 July, London, U.K. pp. 2054-2059, 2012. Awarded Best Paper of The 2012 International Conference of Mechanical Engineering. Oral present.
- **M. Ali** and K. Mao, The Use of Computational and Theoretical Methods to Study Edge Loading of Hip Resurfacing Devices, Institute of Digital Healthcare: Digital Innovation and Technology for Patient Benefit, The University of Warwick. November, 2011. Poster.

Personal invitations

- Personal invitation to MeDe Innovation research workshops - Presented Preclincal hip simulation - Experimental validation of an electromechanical hip joint simulator (Dec 2015).
- Personal invitation to present at Mede Annual Conference 2015 - Stratified design and manufacture of orthopaedic implants Enhanced preclinical testing of hip joint replacements.
- Personal invitation to deliver a speech at The 3rd Annual World Congress of Orthopaedics 2015 (WCORT-2016) in Theme 2-8: Hip.
- Personal invitation to deliver a speech at The 2nd Annual World Congress of Orthopaedics 2015 (WCORT-2015) in BP 503: Hip Arthroscopy, Replacement and Revision.
- Personal invitation to deliver a speech at The 1st Annual World Congress of Orthopaedics 2015 (WCORT-2015) Speaker of Part 3-6: Hip and Femur.

Book Chapters

- **M. Ali**, M. Al-Hajjar, L.M. Jennings, Chapter 31. Tribology of UHMWPE in the hip, UHMWPE Biomaterials Handbook, 3rd Edition.
- **M. Ali** and K. Mao, Contact Analysis of Hip Resurfacing Devices under Normal and Edge Loading Conditions, IAENG Transactions on Engineering Technologies. Series Title: 7818, Chapter 14.

Theses

- **M. Ali**, Computational and Theoretical Modelling of Orthopaedic Hip Implant Devices, University of Warwick, School of Engineering, Doctor of Philosophy (2013).
- **M. Ali**, C. Emery, A. Field, J. Robertson, C. Woolliscroft, S. Woolliscroft, Brunel Racing, Formula Student 2006 Group Major Masters Project, School of Engineering and Design, Brunel University, March 2006.
- **M. Ali**, Design, Development and Manufacture of the Suspension Uprights for the Formula Student Car BR-6, Year 3 Mechanical Engineering Degree Thesis, School of Engineering and Design, Brunel University, March 2005.

Key Presentations

- **M.Ali**, Data management of publications., iMBE Institute Meeting (Apr 2015).
- Lee Etchels, Mazen Al-Hajjar, **Murat Ali**, Louise M. Jennings, Sophie Williams, Jonathan Thompson, Graham H. Isaac, John Fisher, iMBE, The Effect of Cup Inclination, Version and Tilt Angle on the Occurrence and Extent of Edge Contact – A Geometric Model
- LM. Jennings, **M. Ali**, P.Wood., Laboratory processes and Engineering Design, iMBE, The University of Leeds (Feb 2016).
- **M. Ali**, M. Al-Hajjar, J. Fisher, LM. Jennings, Effect of Input Kinematics on the Wear of Ceramic-on-Ceramic Hip Joint Replacements under Standard and Microseparation Conditions. iMBE Institute Meeting (Sept 2015).
- **M. Ali**, Simulator data analysis using MATLAB, Virtual Group Meeting. iMBE. The University of Leeds (Jun 2015).
- **M. Ali**, M. Al-Hajjar, S. Williams, LM. Jennings, J. Fisher, Effect of Cup Version, Tilt and Inclination Angle on the Occurrence of Edge Loading - A Geometric Model. DePuy and iMBE DTP Partnership Meetings (Apr and Jun 2015).
- **M. Ali**, Analysing the wear and creep and polyethylene using Redlux. iMBE lab meeting (Jun 2015).
- **M. Ali**, M. Al-Hajjar, J. Fisher, LM. Jennings, EM13 electromechanical simulator ceramic-on-ceramic six-axis load cell torque outputs. iMBE. The University of Leeds. Murat Ali, Mazen Al-Hajjar, John Fisher, Louise M Jennings (Apr 2015).
- **M. Ali**; S. Partridge, M. Al-Hajjar, S. Williams, J. Fisher, L M. Jennings, Wear of Cross-Linked UHMWPE using Electromechanical and Pneumatic Hip Joint Simulators. iMBE Institute Meeting. The University of Leeds (Mar 2015).

- **M. Ali**, M. Al-Hajjar, J. Fisher, LM. Jennings. Wear of Hip Replacements using Electromechanical Hip Joint Simulators. DePuy Technology Partnership Research Meeting (Nov 2014).
- **M. Ali**, M. Al-Hajjar, J. Fisher, LM. Jennings. Validation of a new electromechanical multi-station hip joint simulator. Doctoral training students welcome meeting and iMBE institute meeting. The University of Leeds (Jun and Sept 2014).
- **M. Ali**, LM. Jennings, J.Fisher, An introduction to medical technologies at Leeds. Middle East Technical University (Sept 2014).
- **M. Ali** and K. Mao, Computational and Theoretical Contact Modelling of Hip Implant Devices with the Application of Wear Simulations. Middle East Technical University (Sept 2014).
- **M. Ali**, M. Al-Hajjar, LM. Jennings, Polyethylene liner soak and weighing. iMBE laboratory meeting. The University of Leeds. (Dec 2013).
- **M. Ali** and K. Mao, Mechanical and Tribological study of Orthopaedic devices research: Progress review, discussion and forward planning, Smith and Nephew (Oct 2010).
- **M. Ali** and K. Mao, Mechanical and Tribological study of Orthopedic Devices for Articulating Joints – Research Interests, Smith and Nephew (Apr 2010).
- **M. Ali** and K. Mao, Mechanical and Tribological study of Orthopedic Devices for Articulating Joints. Cafe Scientique. The University of Warwick (Apr 2010).
- **M. Ali** and K. Mao, Mechanical and Tribological Study of Orthopedic Devices. Presentation to orthopedic research group at Warwick Medical School and at the MSc Biomaterials module (Mar 2010).
- **M. Ali**, Goodrich GTF project kick off presentation, Goodrich GTF work force layout, Goodrich GTF Exhaust Project Proposal (Jun 2008).
- **M. Ali**, April 2008 to December 2008: Monthly Alstom Aerospace Engineering Resource Planning presentations (Apr to Dec 2008).
- **M. Ali**, Goodrich GTF Project Request for Quotation Presentation (Mar 2008).
- **M. Ali**, Six Sigma Project Storyboard - Honeywell TFE-731 Stage 3 LPT Disk Shaft Diameter Gauge. Alstom Power Systems (Jan 2008).
- **M. Ali**, A. Champion, E. D'Alconzo, M. Daly, A. Farah, M. Jones, D. Perry, J. Qu´enaut, Diaphragm Key Adjustment for Steam Turbines. Alstom Power Service (Jun 2007).
- **M. Ali** and J. Robertson. Formula Student Brunel Racing presentation, Nissan Technical Centre Europe (Nov 2015).
- **M. Ali**, Brunel Racing open day presentation (Oct 2005).

- **M. Ali**, Presentations at Eli Lilly and Company to engineers, project managers and departmental heads (2003-04).

Articles

Published on my website

- **M. Ali,** Engineering Solutions in Healthcare, 25th June 2016.
- **M. Ali and A. Wright**, The Sky is not the Limit for 3D-printing, 31st May 2016
- **M. Ali**, Designing and Manufacturing Custom Medical Devices, 24th April 2016.
- **M. Ali,** The Strength of Robots and Machines, 2nd April 2016.