

Curriculum Vitae – Chong Yok Rue, Desmond

Name: Dr Desmond Y.R. Chong

Title: Associate Professor

Email: Desmond.Chong@SingaporeTech.edu.sg

Contact No: +65-65921366

Office Mailing Address: 10 Dover Drive, Singapore 138683



Current Positions:

- Associate Professor, Engineering Cluster, Singapore Institute of Technology (SIT)
- Visiting Associate Professor, Faculty of Medicine, University of Malaya, Malaysia

Employment History:

Jul 2018 – Present: Associate Professor, Engineering Cluster, Singapore Institute of Technology
Oct 2019 – Present: Visiting Associate Professor, Faculty of Medicine, University of Malaya
Jan 2019 – Dec 2020: Deputy Programme Director, BEng (Hons) in Aerospace Engineering, SIT
Jan 2018 – Dec 2019: Deputy Programme Director, BEng (Hons) in Aeronautical Engineering / BEng (Hons) in Aerospace Systems, SIT
Jan 2016 – June 2018: Assistant Professor, Engineering Cluster, Singapore Institute of Technology
Aug 2010 – Dec 2015: Senior Lecturer, Engineering Design and Innovation Centre (EDIC) and Department of Biomedical Engineering, Faculty of Engineering, National University of Singapore
Jun 2009 – Jul 2010: Industry Development Manager, Institute of Materials Research & Engineering (IMRE), A*STAR, Singapore
July 2002 – Jan 2006: R&D Manager, United Test & Assembly Center Ltd (UTAC), Singapore
Apr 2000 – Jun 2002: R&D Engineer, Motorola Electronics Pte Ltd, Singapore

Academic Qualifications:

PhD, Mechanical Engineering, Imperial College London, UK
MEng, Mechanical Engineering, Nanyang Technological University, Singapore
BEng, Mechanical Engineering, Nanyang Technological University, Singapore

Member of Professional Societies:

American Society of Mechanical Engineers (ASME)
The Institution of Engineers, Singapore (IES)
Biomedical Engineering Society (Singapore)

Research Interests: Orthopaedic and musculoskeletal biomechanics, finite element analysis and experimentation, medical devices design (joint implants and rehabilitation), and gait and human motion analyses.

Awards and Achievements:

- 2021, Teaching Excellence Award, Singapore Institute of Technology.
- 2019, A'Design Award, Bronze for "Differently Abled and Seniors' Assistance Design" category, Milan, Italy, April 2019.
- 2018, 6th APAC Eldercare Innovation Awards – Top 5, Singapore, May 2018.
- 2017, iCreate 2017 Global Student Innovation Challenge for Assistive Technology (gSIC-AT), Kobe, Japan – Bronze Award for Design category.
- 2016, Best Poster Award – First Prize, 2nd Asian Materials Education Symposium, Singapore, December 2016.
- 2014, Innovative Teaching Award, Faculty of Engineering, NUS.
- 24th Nov 2012, media coverage on Lianhe Zaobao p23 (联合早报), "NUS engineering students to design rehabilitation equipment to benefit patients" (工程系学生医院上课—将设计复健器材造福病人).
- 3rd May 2012, media coverage on The Straits Times pB8, "Solving problems from ground up – Pilot

- programme trains NUS High School students to find answers to real-life challenges”.
- 2005, Medical Research Scientist Award, National Medical Research Council, Ministry of Health, Singapore.

Awards and Achievements (supervised students):

- 2017, iCreate 2017 Global Student Innovation Challenge for Assistive Technology (gSIC-AT), Kobe, Japan – Bronze Award for Design category.
- 2017, 11th Scientific Meeting of Biomedical Engineering Society (Singapore) – BES-SEC (Society of Engineers for the Community) Students’ Design Award 2017 – Gold Award.
- 2017, 11th Scientific Meeting of Biomedical Engineering Society (Singapore) – Gold Award for poster presentation, undergraduate category.
- 2016-17, Tech-Factor Challenge 2016 - Aging-in-Place, Singapore – Top 10 Finalists and incorporated a start-up company - InnovationsKraft.
- 2015, 9th Scientific Meeting of Biomedical Engineering Society (Singapore) – First Runner-up (Merit) for poster presentation, undergraduate category.
- 2013, 7th Scientific Meeting of Biomedical Engineering Society (Singapore) – Bronze Award for oral presentation, undergraduate category.
- 2012, 6th Scientific Meeting of Biomedical Engineering Society (Singapore) – Gold Award for oral presentation, undergraduate category.
- 2012, 6th Scientific Meeting of Biomedical Engineering Society (Singapore) – First Runner-up for poster presentation, undergraduate category.

Research Projects/Grants:

- PI: “Design and biomechanical analysis of novel biodegradable Magnesium implants for foot/ankle fractures”, A*STAR Industry Alignment Fund – Industry Collaboration Projects (IAF-ICP), 2021–2023.
- Co-PI: “HEALS: A cost-effective, ergonomic solution for lower limb immobilization after foot and ankle injuries”, Academic Clinical Programme (ACP) Funding, SingHealth, Apr 2021 – Mar 2024.
- Co-PI: “MOTIVATE: Multi-mOdal Training program to promote physical activity After sTroKE”, SIT Ignition Grant, Jul 2020 – Jul 2022.
- Co-PI: “Gait Analysis in Osteoarthritis”, Rehabilitation Research Institute of Singapore (RRIS) - Rehabilitation Research Grant, Sep 2019 – Mar 2022.
- PI: “Reliability and stress analysis of permanent way and rolling stock”, SIT Strategic Initiative Applied Research Fund, Apr 2018 – Mar 2020.
- Co-PI: “Designing new VR games for Physical, Social and Cognitive Wellbeing of stroke survivors in rehabilitation”, SIT Seed Grant, Jul 2018 – Jul 2019.
- Co-PI: “3D reconstruction of knee joint and wrist joint using CT scan data followed by 3D printing of these joints”, SIT Seed Grant, Jul 2018 – Jul 2020.
- Co-PI: “Hand hygiene reminder and monitoring system”, SIT Ignition and Innovation Grant, Jan 2017 – Dec 2017.
- Co-PI: “Arm skate rehab device for post-stroke exercise”, SIT Ignition Grant, Jul 2016 – Jun 2017.
- PI: “Finite element analysis of bone and implant stresses in the use of 3D printed orthopaedic implants”, National University Hospital, Jun 2017 – Jul 2017.
- Co-PI: “Design and development of an interpositional knee spacer for knee osteoarthritis”, SingHealth Foundation (SHF/FG567P/2014) Research Grant, Apr 2015 – Mar 2017.
- Co-PI: “Risk of periprosthetic tibial fracture after unicompartmental knee replacement: A biomechanical study for the Asian population”, NUHS Clinician Scientist Program, Aug 2015 – Aug 2016.
- PI: “Design innovation in next-generation joint implants for more active and younger patients”, Academic Research Fund (AcRF) Tier 1, Ministry of Education (MOE), Singapore, Jan 2014 – Jun 2015.
- Co-PI: “Harvesting corticocancellous bone graft from the proximal tibia as an alternative to the iliac crest – a biomechanical and computational study”, NMRC Grant, Dec 2012 – Dec 2015.

Patents:

- “Molded High Density Electronic Packaging Structure for High Performance Applications” - US Patent 7,361,995, 2008.
- “Chip Scale Package and Method of Assembling the Same” - US 2008/0290509 A1, 2008 / WO 2005 053373 A2, 2005.

- “3D MEMS/MOEMS Package” – US 2004/0140475 A1, 2004.
- “WL-BGA for MEMS/MOEMS Devices” – US 2004/0140557 A1, 2004.

Selected Publications:

Journals

- MYA Muslim, MR Draman, AM Merican, DYR Chong, “Changes in the tibial strain following proximal fibular osteotomy: A biomechanical cadaveric study”, *Orthopedics*, 2021. (in press)
- M Nouman, T Dissaneewate, DYR Chong, S Chatpun, “Effects of thickness and length of custom made insole on plantar pressure for diabetic foot with neuropathy: A finite element approach”, *Songklanakarin Journal of Science and Technology*, 2021. (in press)
- M Nouman, T Dissaneewate, DYR Chong, S Chatpun, “Effects of custom-made insole materials on frictional stress and contact pressure in diabetic foot with neuropathy: Results from a finite element analysis”, *Applied Sciences*, Vol. 11, No. 8, 3412, 2021.
- M Nouman, DYR Chong, S Chatpun, “Finite element approach towards selection of appropriate materials to redistribute peak plantar pressure in diabetic foot with neuropathy”, *PSU Medical Journal*, 2021. (in press)
- JH Shu, X Xiong, DYR Chong, Y Liu, Z Liu, “The relations between the stress in temporomandibular joints and the deviated distances for mandibular asymmetric patients”, *Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine*, Vol. 235, No. 1, pp 109-116, 2021.
- JH Shu, QY Wang, DYR Chong, Z Liu, “Impact of mandibular prognathism on morphology and loadings in temporomandibular joints”, *Biomedical Engineering / Biomedizinische Technik*, Vol. 66, No. 1, pp 81-89, 2021.
- A Xue, A Tan, DYR Chong, TTM Xu, “Design and Multi-disciplinarity: Co-creation in practice”, *Applied Degree Education and the Future of Work, Lecture Notes in Educational Technology*, C Hong and WWK Ma (eds.), pp 63-76, Springer, Singapore, May 2020.
- JH Shu, H Ma, LR Jia, HY Fang, DYR Chong, TH Zheng, J Yao, Z Liu, “Biomechanical behaviour of temporomandibular joints during opening and closing of the mouth: A 3D finite element analysis”, *International Journal for Numerical Methods in Biomedical Engineering*, Vol. 36, No. 8, e3373, 2020.
- ISM Moideen, CT Lim, RCH Yeow, DYR Chong, “Finite element analysis of bone-prosthesis interface micromotion for cementless talar component fixation through critical loading conditions”, *International Journal for Numerical Methods in Biomedical Engineering*, Vol. 36, No. 3, e3310, 2020.
- L Yan, JL Lim, JW Lee, CSH Tia, GK O'Neill, DYR Chong, “Finite element analysis of bone and implant stresses for customized 3D printed orthopaedic implants in fracture fixation”, *Medical & Biological Engineering & Computing*, Vol. 58, No. 5, pp 921-931, 2020.
- JH Shu, YL Zhang, DYR Chong, Z Liu, “Effects on loads in temporomandibular joints for patients with mandibular asymmetry before and after orthognathic surgeries under the unilateral molar clenching”, *Biomechanics and Modeling in Mechanobiology*, Vol. 19, No. 2, pp 533-541, 2020.
- DQK Ng, CT Lim, AK Ramruttun, KJ Tan, W Wang, DYR Chong, “Biomechanical analysis of proximal tibia bone grafting and the effect of the size of osteotomy using a validated finite element model”, *Medical & Biological Engineering & Computing*, Vol. 57, No. 8, pp 1823-1832, 2019.
- ACT Choh, DYR Chong, “Biomechanical analysis of the placement of fixation lag screw in different intertrochanteric hip fracture angles”, *Biosurface and Biotribology*, Vol. 5, No. 2, pp 52-56, 2019.
- JH Shu, J Yao, YL Zhang, DYR Chong, Z Liu, “The influence of bilateral sagittal split ramus osteotomy on the stress distributions in the temporomandibular joints of the patients with facial asymmetry under symmetric occlusions”, *Medicine*, 2018, 97, No. 25, e11204.
- FC Han, CJ Pearce, DQK Ng, AK Ramruttun, DYR. Chong, D Murphy, CT Lim and BCS Lee, “A double button adjustable loop device is biomechanically equivalent to tension band wire in the fixation of transverse patellar fractures—A cadaveric study”, *Injury*, 2017, 2, 270-276.
- CT Lim, DQK Ng, KJ Tan, AK Ramruttun, W Wang and DYR Chong, “A Biomechanical Study of Proximal Tibia Bone Grafting Through the Lateral Approach”, *Injury*, 2016, 47, 2407-2414.
- DYR Chong, UN Hansen and AA Amis, “Cementless MIS Mini-Keel Prosthesis Reduces Interface Micromotion versus Standard Stemmed Tibial Components”, *Journal of Mechanics in Medicine and Biology*, 2016, 16, 1650070.
- S Goh, K Chua, A Yew, NN Lo and DYR Chong, “The Quest for Longevity in the Total Hip Replacement - a Concept Study of Design Elements Using Finite Element Analysis”, *Bone & Joint Journal*, 2016, 98-B (S1), 85.
- T Prachgosin, DYR Chong, W Leelasamran, P Smithmaitrie and S Chatpun, “Medial Longitudinal

- Arch Biomechanics Evaluation During Gait in Subjects with Flexible Flatfoot, *Acta of Bioengineering and Biomechanics*, 2015, 17, 121-130.
- DYR Chong, UN Hansen, R van der Venne, N Verdonchot and AA Amis, The Influence of Tibial Component Fixation Techniques on Resorption of Supporting Bone Stock after Total Knee Replacement, *Journal of Biomechanics*, 2011, 44, 948-954.
 - DYR Chong, UN Hansen and AA Amis, The Influence of Tibial Prosthesis Design Features on Stresses Related to Aseptic Loosening and Stress-Shielding, *Journal of Mechanics in Medicine and Biology*, 2011, 11, 55-72.
 - DYR Chong, UN Hansen and AA Amis, Analysis of Bone-Prosthesis Interface Micromotion for Cementless Tibial Prosthesis Fixation and the Influence of Loading Conditions, *Journal of Biomechanics*, 2010, 43, 1074-1080.
 - DYR Chong, UN Hansen and AA Amis, A Possible Tibial Prosthesis Interface Micromotion at Gait: Mini-keel vs Standard Designs, *Journal of Biomechanics*, 2008, 41, S238.
 - DYR Chong, FX Che, LH Xu, HJ Toh, JHL Pang, BS Xiong and BK Lim, Evaluation on Influencing Factors of Board-level Drop Reliability for Chip Scale Packages (Fine-pitch Ball Grid Array), *IEEE Transactions on Advanced Packaging*, 2008, 31, 66-75.
 - DYR Chong, BK Lim, KJ Rebibis, SJ Pan, S Krishnamoorthi, R Kapoor, AYS Sun and HB Tan, Exposed Die-Top Encapsulation Molding for an Improved High Performance Flip Chip BGA Package, *IEEE Transactions on Advanced Packaging*, 2006, 29, 674-682.
 - DYR Chong, FX Che, JHL Pang, K Ng, JYN Tan and PTH Low, Drop Impact Reliability Testing for Lead-Free and Lead-Based Soldered IC Packages, *Microelectronics Reliability*, 2006, 46, 1160-1171.
 - JHL Pang, DYR Chong and TH Low, Thermal Cycling Analysis of Flip Chip Solder Joints, *IEEE Transactions on Component & Packaging Technologies*, 2001, 24, 705-712.
 - John HL Pang, DYR Chong, "Flip Chip on Board Solder Joints Reliability Analysis Using 2-D and 3-D FEA Models", *IEEE Transactions on Advanced Packaging*, Vol. 24, No. 4, pp 499-506, November 2001.
 - HLJ Pang, TI Tan, YR Chong, GY Lim, CL Wong, "Analysis of Underfill Encapsulation Curing Deformations on Flip Chip On Board (FCOB) Package Reliability", *Journal of Electronics Manufacturing*, Vol. 8, Nos 3 & 4, pp 181-191, September & December 1998.

Education

- A Xue, A Tan, DYR Chong, TTM Xu, "Design and Multidisciplinarity: Co-creation in practice", *International Conference on Applied Education, Technology and Innovation 2019 (THEi AETI 2019)*, Hong Kong, 16-18 April 2019.
- ASM Goh, JH Choo, DYR Chong, "The Scooter as a Vehicle to Teach Materials", *2nd Asian Materials Education Symposium*, Singapore, 8-9 December 2016.
- DYR Chong, JH Choo, EK Soh, YS Ng, MP Tham, "An Engineering in Medicine Programme - Opening Engineering Students' Mind Through a Living Laboratory Education", *Proceedings of the 120th ASEE Annual Conference and Exposition*, Atlanta, USA, 23-26 June 2013, P6879.
- EK Soh, A Kaur, MP Tham, DYR Chong, "Engineers in Hospital: An Immersive and Multidisciplinary Pedagogical Approach for Better Solutions", *Proceedings of the 120th ASEE Annual Conference and Exposition*, Atlanta, USA, 23-26 June 2013, P8128.

Conferences

- ISM Moideen, YS Ong, CT Lim, RCH Yeow, DYR Chong, "Biomechanical analysis of bone-prosthesis interface micromotion for cementless talar component fixation in preventing aseptic loosening failure", *17th International Conference on Biomedical Engineering*, Singapore, 9-12 December 2019.
- CT Lim, FC Han, YH Ng, LH Gan, DYR Chong, "A biomechanical study of the proximal tibia after Unicompartmental Knee Replacement", *63rd Annual Congress of the Korean Orthopaedic Association*, Seoul, Korea, 17-19 October 2019.
- DYR Chong, "Biosolid and orthopaedic mechanics", *1st International Biomechanics & Clinical Tissue Engineering Symposium*, Singapore, 23-24 October 2018. (invited speaker)
- M Lee, DYR Chong, "Differences in the mechanics of elite ten-pin bowlers when performing under varying levels of anxieties", *36th International Society of Biomechanics in Sports (ISBS) Conference 2018*, *ISBS Proceedings Archive*, Vol. 36, Issue 1, Auckland, New Zealand, 10-14 September 2018.
- YY Pang, M Goh, DYR Chong, "Development of a portable universal muscle strengthening and

- rehabilitation device for the elderly and post-stroke patients", 8th World Congress of Biomechanics, Dublin, Ireland, 8-12 July 2018.
- A Xue, DYR Chong, A Tan, T Xu, "Optimising engagement for post-stroke rehabilitation", Global Conference on Integrated Care, Singapore, 1-3 Feb 2018.
 - YY Pang, ZR Kong, DYR Chong, "Universal muscle strengthening and rehabilitation device for the elderly and post-stroke patients", 11th International Convention on Rehabilitation Engineering and Assistive Technology, Kobe, Japan, 22-24 Aug 2017.
 - AMB Abdullah, DYR Chong, "Development of a wearable device to measure posture deviations and posture rehabilitation in Parkinson's disease patients", 11th International Convention on Rehabilitation Engineering and Assistive Technology, Kobe, Japan, 22-24 Aug 2017.
 - FC Han, CT Lim, D Murphy, CJ Pearce, BCS Lee, AK Ramruttun, DQK Ng, DYR Chong, "A double button adjustable loop device is biomechanically equivalent to tension band wire in the fixation of transverse patellar fractures – A cadaveric study", 18th EFORT Congress, Vienna, Austria, 31 May – 2 Jun 2017.
 - AMB Abdullah, DYR Chong, "Development of a wearable device to measure posture deviations and posture rehabilitation in people with Parkinson's Disease", Biomedical Engineering Society (Singapore) 11th Scientific Meeting, 20 May 2017.
 - YY Pang, ZR Kong, DYR Chong, "Design of a low-cost and portable universal muscle strengthening and rehabilitation device for the elderly and post-stroke patients", Biomedical Engineering Society (Singapore) 11th Scientific Meeting, 20 May 2017.
 - XL Wu, JYM Choi, RCH Yeow, DYR Chong, "The Study of the Effect of Hip Abductor Strengthening Exercises on Biomechanics of Subjects with Patellofemoral Pain Syndrome", 16th International Conference on Biomedical Engineering, Singapore, 7-10 December 2016.
 - Theresia, GL Foo, JH Choo, DYR Chong, "The Use of 3D Printing Technology in Surgical Planning for Chordoma Treatment and Tibia Fracture", 5th International Senior Project Conference in Engineering and Technology, Thailand, 26-28 May 2016.
 - XL Wu, JYM Choi, RCH Yeow, DYR Chong, "The Study of the Effect of Hip Abductor Strengthening Exercises on Biomechanics of Subjects with Patellofemoral Pain Syndrome", Biomedical Engineering Society (Singapore) 10th Scientific Meeting, 14 May 2016.
 - CT Lim, DQK Ng, AK Ramruttun, FC Han, KJ Tan, DYR Chong, "Fatigue Strength of the Proximal Tibia Donor Site after Extensive Bone Grafting", American Academy of Orthopaedic Surgeons 2016 Annual Meeting, Orlando, USA, 1-5 March 2016.
 - CK Chan, JC Teoh, LC Hernandez-Barraza, DYR Chong, CH Yeow, "Effects of Additional Constant and Impromptu Cognitive Loadings on Lower Extremity Gait Performance", 25th Congress of the International Society of Biomechanics, Glasgow, UK, 12-16 July 2015.
 - ACT Choh, JCK Ng, AKS Yew, SL Chia, DYR Chong, "The Study of Contact Pressure of a Customized Knee Spacer Using Finite Element Analysis", 7th WACBE World Congress on Bioengineering, IFMBE Proceedings Vol. 52. Singapore, 6-8 July 2015.
 - JCK Ng, ACT Choh, AKS Yew, SL Chia, DYR Chong, "The Study of the Contact Mechanics of the Patellofemoral Arthroplasty", 7th WACBE World Congress on Bioengineering, IFMBE Proceedings Vol. 52. Singapore, 6-8 July 2015.
 - C Wong, GL Foo, JH Choo, DYR Chong, "Pre-surgical Planning of Bone Fracture Fixation Using 3D Printing Technology", 16th EFORT Congress (European Federation of National Associations of Orthopaedics and Traumatology), Prague, Czech Republic, 27-29 May 2015.
 - HL Koh, ZY Li, AHK Chan, EL Tay, DYR Chong, "A Study on the Kinematics of Human Subjects in Using A New Backward Fall Compensatory Response Training Device", Biomedical Engineering Society (Singapore) 9th Scientific Meeting, 16 May 2015.
 - CT Lim, DQK Ng, W Wang, KJ Tan, DYR Chong, "Optimizing Bone Grafting Procedures in Proximal Tibial Bone Grafting - A Biomechanical Study", 61st Annual Meeting of the Orthopaedic Research Society, Las Vegas, USA, 28-31 March 2015.
 - DQK Ng, CT Lim, W Wang, KJ Tan, DYR Chong, "A Validated FE Model for Proximal Tibia Bone Grafting: The Study of the Effect of Window Size on Tibia Stability and Mechanics", 61st Annual Meeting of the Orthopaedic Research Society, Las Vegas, USA, 28-31 March 2015.
 - HL Koh, ZY Li, AHK Chan, EL Tay, DYR Chong, "A Study on the Kinematics of Human Subjects in Using a New Backward Fall Stepping Response Training Device", Singapore Rehabilitation Conference 2015, 26-27 March 2015.
 - ZY Li, HL Koh, AHK Chan, EL Tay, DYR Chong, "The Study of Muscle Activation in Human Subjects Undergoing a New Backward Fall Stepping Training Regime", Singapore Rehabilitation Conference 2015, 26-27 March 2015.
 - K Junitra, NA Azman, SZ Sarker, FM Lim, PY Lee, DYR Chong, "Development of a Plantar Pressure

- Measuring Device for Gait Correction for Diabetic Patients with Neuropathy”, Singapore Rehabilitation Conference 2015, 26-27 March 2015.
- DWM Lim, ZY Li, HL Koh, H Vu, DYR Chong, “Automated Stepping Response Training Device for Fall Prevention”, 2014 Capstone Design Fair, Kintex, Korea, 27-28 November 2014.
 - S Goh, K Chua, A Yew, NN Lo, DYR Chong, “The Quest for Longevity in the Total Hip Replacement - a Concept Study of Design Elements Using Finite Element Analysis”, 27th Annual Congress of the International Society for Technology in Arthroplasty, Kyoto, Japan, 24-27 September 2014.
 - ACT Choh, DYR Chong, “Finite Element Analysis of the Placement of a Fixation Lag Screw in Different Intertrochanteric Hip Fracture Angles”, 7th World Congress of Biomechanics, Boston, USA, 6-11 July 2014.
 - HL Koh, ZY Li, DWM Lim, H Vu, FM Lim, HKA Chan, EL Tay, DYR Chong, “A Study to Assess a New Stepping Response Training Device for Fall Prevention”, Singapore Rehabilitation Conference 2014, 27-29 March 2014.
 - C Wong, I Lye, V Kow, JH Lim, YS Ng, DYR Chong, “An Electromyography (EMG) Triggered Device for Rehabilitation Training, Assistive and Monitoring Purposes”, Singapore Rehabilitation Conference 2014, 27-29 March 2014.
 - EX Ng, C Monkhouse, P Wong, G Meyer, Y Aloni, DYR Chong, “Assessment of the Impact of Positive Heels (Plantarflexion) and Negative Heels (Dorsiflexion) Shoes on Human Walking Gait”, The 15th International Conference on Biomedical Engineering, IFMBE Proceedings Vol. 43, Singapore, 4-7 December 2013.
 - T Prachgosin, DYR Chong, W Leelasamran, P Smithmaitrie, S Chatpun, “The Differences of Three Dimensional Gait Mechanics of Normal- and Flat-arched Feet in Adults”, The 15th International Conference on Biomedical Engineering, IFMBE Proceedings Vol. 43, Singapore, 4-7 December 2013.
 - RJM Ooi, DYR Chong, “Involuntary Muscle Contraction Under Prolonged Sub-Maximal Exertions”, Biomedical Engineering Society (Singapore) 7th Scientific Meeting, 18 May 2013.
 - DYR Chong, SJ Yeo, NO Nivbrant, B Nivbrant, NN Lo, “Is Fixation Performance of MIS Mini-keel Tibial Prosthesis Comparable to Standard Stemmed Prosthesis – A Randomised Clinical Study with RSA”, 59th Annual Meeting of the Orthopaedic Research Society, San Antonio, USA, 26-29 January 2013.
 - F Ng, K Chua, A Ramruttun, H Sanusi, J Hui, DYR Chong, “The role of Medial Patellofemoral Ligament (MPFL) Reconstruction and Tibial Tubercle Surgical Procedures on Patellar Subluxation/Dislocation”, Biomedical Engineering Society (Singapore) 6th Scientific Meeting, 19 May 2012.
 - DYR Chong, “Biomechanics in Orthopaedic and Sports Applications”, Proceedings 2011 International Conference of Korean Society of Sport Biomechanics, 25-26 November 2011. (invited speaker)
 - DYR Chong, UN Hansen, SJ Yeo, SY Poh, NN Lo, AA Amis, “Assessment of Bone Remodelling after Tibial Prosthesis Implantation – A Computational Modelling Study”, 32nd Annual Scientific Meeting of Singapore Orthopaedic Association, 18-21 November 2009.
 - DYR Chong, UN Hansen, AA Amis, “Computational Biomechanics Analysis of Fixation Performance and Bone Resorption of Tibial Prosthesis Implantation”, ASME Summer Bioengineering Conference 2009, CA, USA, 17-21 June 2009.
 - DYR Chong, UN Hansen, AA Amis, “Computational Biomechanical Analysis of Fixation Performance and Bone Resorption of Tibial Prosthesis Implantation”, Proceedings of the ASME 2009 Summer Bioengineering Conference, ASME 2009 Summer Bioengineering Conference, Parts A and B. Lake Tahoe, California, USA. June 17–21, 2009. pp. 975-976. ASME.
 - DYR Chong, UN Hansen, SJ Yeo, SY Poh, SWY Cai, NN Lo, AA Amis, “Bone Remodelling Predictions in the Proximal Tibia after Implantation of the MIS Mini-Keel Tibial Prostheses”, 55th Annual Meeting of the Orthopaedic Research Society, Nevada, USA, 22-25th February 2009.
 - DYR Chong, UN Hansen, AA Amis, “Assessment of Tibial Prosthesis Fixation Performance – A Finite Element Modelling Approach”, Bioengineering 08, Imperial College London, UK, 18-19th September 2008.
 - DYR Chong, UN Hansen, AA Amis, “A Possible Tibial Prosthesis Interface Micromotion at Gait: Mini-Keel vs Standard Designs”, 16th Congress of the European Society of Biomechanics, Lucerne, Switzerland, 6-9th July 2008.
 - DYR Chong, AA Amis, UN Hansen, “Is Fixation Performance of MIS Mini-keel Tibial Prosthesis Mechanically Comparable to Standard Stemmed Prosthesis? A Finite Element Modelling Study”, 54th Annual Meeting of the Orthopaedic Research Society, San Francisco, USA, 2-5th March 2008.