Curriculum Vitae

ZHANG Ming 张明 (BSc, MSc, PhD, FHKIE)
Head and Professor, Department of Biomedical Engineering
Faculty of Engineering, The Hong Kong Polytechnic University
Tel: (852) 2766 4939, Fax: (852) 23342429,
Email: ming.zhang@polyu.edu.hk

ResearcherID: F-8331-2011, URL: http://www.researcherid.com/rid/F-8331-2
Author ID (Scopus) 35197676900
ORCID: http://orcid.org/0000-0002-6027-4594
ResearchGate: https://www.researchgate.net/profile/Ming_Zhang12
Google Scholar https://scholar.google.com/citations?user=qIXnmEUAAAAJ&hl=en

EDUCATION AND QUALIFICATIONS

1991-1995 PhD study, Dept of Medical Engineering & Physics, King's College School of Medicine & Dentistry, University of London.
Speciality: Medical Engineering

1984-1987 MSc study, Department of Mechanical Eng., Beijing Institute of Technology.
Speciality: Mechanical Engineering

1978-1982 BSc study, Dept. of Automatic Control Eng., Beijing Institute of Technology.
Speciality: Fluid transmission and control.

WORK EXPERIENCE

5/2017-now Professor, Department of Biomedical Engineering (BME), The Hong Kong Polytechnic University (PolyU)
Head of Department (since 1 July 2020)
Associate Head (Aug 2019-30 June 2020)
Director, Research Centre for Musculoskeletal Bioengineering (till 2019).
Faculty Research Committee member, Faculty Board member (till 2019), FSC member (till 2019)
Lab In-Charge: Biomechanics Lab

4/2012-4/2017 Professor, Interdisciplinary Division of Biomedical Engineering (BME), The Hong Kong Polytechnic University (PolyU)
Director, Research Centre for Musculoskeletal Bioengineering.
Chair of Divisional Research Committee (2012-2015), Faculty Research Committee (2012-2015, 2017-now) member, University Research Committee (2013-2015) member, Faculty Board member, DSC member, FSC member
Lab In-Charge: Biomechanics Lab

2/2008-3/2012, Professor, Department of Health Technology and Informatics, PolyU
Director, Research Centre for Musculoskeletal Bioengineering (from July 2007).
Chair of Postgraduate Scheme, and Award Coordinator for MSc in Biomedical Eng
DRC member, Departmental Program Promotion (before June 2006), Enrolment (before June 2006), Space Liaison for BME Labs (from July 2006)

3/2006-now Guest and Visiting Professor, Beihang University

22/9/2011-2018, Visiting Professor, Sichuan University

1/9/2010-2015, Visiting Professor, Shanghai Jiaotong University

1/1/2010-2012, Honorary Professor, University of Hong Kong

1/12/2008-2011, Adjunct Professor, Chinese University of Hong Kong

8/2013-2016, Honorary Professor, Taiyuan University of Technology

1/2007-2010 Visiting Professor, Beijing Institute of Technology

5/2005-1/2008 Associate Professor, Department of Health Technology and Informatics, PolyU

2/2000-4/2005 Assistant Professor, Jockey Club Rehabilitation Engineering Centre, PolyU
9/2002-8/2005 Visiting Professor of Sichuan University (Sep 2002 –Aug 2005)
7-8/2003 Visiting Professor, Dept of Orthopaedic Surgery, Johns Hopkins University
2/1999-1/2000 Lecturer, Rehabilitation Engineering Centre, PolyU
2/1997-2/1999 Postdoctoral Research Fellow, Rehabilitation Engineering Centre, PolyU
11/1995-1/1997 Research Associate, Rehabilitation Engineering Centre, PolyU
1987-1991 Assistant Lecturer/Lecturer in Dept of Mechanical Engineering, Beijing Institute of Technology, Teaching: 1) Machine Elements, 2) Mechanical System Design
1982-1984 Assistant Engineer in a factory of Machine Manufacture, Shandong, China.

RESEARCH INTERESTS

computational modelling and simulation, prosthetics and orthotics bioengineering, skin and soft tissue mechanics, skin friction, foot biomechanics and footwear design, gait analysis, material properties of biomaterials and interfacial materials, bone biomechanics, osteoporosis, sleeping support, etc.

TEACHING SUBJECTS

- BME 31125 Biomechanics, (for both BME and ME undergraduates, starting 2014)
- BME 21119 Fundamentals of Biomechanics (for BME undergraduates, 2013/14-2015-16)
- BME 31112 Biomedical Engineering research and design studies II, (for BME undergraduates from 2014)
- BME 5126 Clinical Biomechanics (for MSc in BME)
- BME5226 Clinical Biomechanics (for MSc in P&O)
- BME 6000 Advanced Topic in Biomedical Engineering (for research students from 2014)

- Introduction to Biomechanics (for undergraduate, before 2013)
- Mechanics of Tissues and Biomaterials (for undergraduate, before 2013)
- Biomedical Engineering Design (for undergraduate, before 2013)
- Biomaterials Science and Engineering (for undergraduate)

SUPERVISION FOR RESEARCH POSTGRADUATES

- **On-going as Chief Supervisor**

1. Hong, Tommy, full-time PhD, starting 26 Aug 2019
2. Zhang Guoxi, full-time PhD, starting 26 Aug 2019
3. Peng Yinghu, full-time PhD, starting 26 Aug 2018
4. LEUNG Ka Wing, Part-time MPhil, 2017
5. LI YanLong, Full-time MPhil, starting 20 Aug 2017
6. Tan Qitao, Full-time PhD, starting 19 Jul 2016
7. Li Ning, full-time PhD, thesis submission 2020
8. Xu Zhi, Full-time PhD, starting 1 Sept 2013, submission of thesis 2020

- **Graduated as Chief Supervisor**

9. Chen Linwei, Full-time PhD, Graduate 2019
10. Yan Fei, Full-time Dual Awarded PhD with Sichuan U, Biomechanical Study of Muscle Atrophy and Oxygen Transport in Residual Limbs, Starting 1 Sept 2012, thesis submitted in Sept 2018
11. Ren SiCong, Full-time MPhil, Biomechanical study of sitting related cervical musculoskeletal disorders, starting 5 Feb 2014, viva 14 Jul 2016
12. OCKENFELD Corinna Ursula, Full-time PhD, Interactive Exoskeleton Robotic Knee System for Lower Limb Rehabilitation, Aug 2016
13. Evan Aditya, Full-time PhD, Intention-driven Robotic Hand Rehabilitation System with Individuated Finger Training Feature, viva, Aug 2015
14. Wang Yan, Full-time PhD, Biomechanical Study of Total Ankle Arthroplasty, starting 21 Nov 2011, Viva 13 Jan 2016.
15. Cong Yan, Full-time PhD, Evaluation of Biomechanical Environment of Foot within Different Shoes, (starting 19 Dec 2006, viva passed in 13 Feb 2012)

16. Liu Xuan, Full-time PhD Research Student, Development of a Computational Model of Knee-ankle-foot Complex for Foot Support Design, (starting 30 April 2008, viva passed in 5 March 2013)
17. Huang Meng, Full-time MPhil, Effect of Foot Supports on Knee Joint Loading, (starting 6 March 2008, viva passed in 20 March 2012)
18. Wong Wai Chi, Full-time MPhil, Development of Computational Model for Total Knee Arthroplasty Design, (starting 17 Aug 2007, viva passed in 9 Feb 2010)
19. Man Hok Sum, Part-time MPhil, Development and Evaluation of Economical Trans-tibial Prosthesis for Rural Area , (starting 24-Dec-2007, viva passed in 3 Sept 2010)
20. YU Jia, Full-Time PhD, Development of a Computational Foot Model for Biomechanical Evaluation of High-Heeled Shoe Designs, (starting 10 Aug 2005, viva passed in 19 may 2009)
21. Dong Xiang, Full-time PhD research student, Biomechanical and Histological Study of the Interfaces of Osseointegrated Transfemoral Prosthesis (starting 29 Jan 2004, withdrawn 2009)
22. Cheung TM Jason, Full-Time PhD, Development of Knowledge-based Criteria for Designing Foot Orthoses, (staring 26 Oct 2002, submitted thesis in Oct 2005,viva passed in 26 Jan 2006)
23. LEE CC Winson, Chief Supervisor, Full-Time PhD, Computational and Experimental Analysis of the Use of Lower-limb Prostheses - Concerning Comfort, Structural Design and Gait Performance, (starting 7 Oct 2001, submitted thesis in Sept 2005, viva passed in 6 Feb 2006)
24. Boone David, Part-Time PhD, Investigation of Socket Reactions from Transtibial Prosthesis Malalignment, (starting 15 Dec 2000, viva passed in 22 Jul 2005
25. Bonnie Tsung YS, Full-Time MPhil, Insole Design Based on Pressure Distribution and Foot Shape under Different Weight Bearing Conditions, (staring 25 Oct 2000, viva passed in 3 Dec 2002)
26. Cheung TM Jason, Full-Time MPhil , A Finite Element Study of the Effects of Mechanical Loading on the Fluid Flow and Biomechanical Response of the Intervertebral Disc, (staring 6 Oct 1999, viva passed in 21 Aug 2002)

- **Co-supervision for Research students**

27. Yang Xianda, Beihang University
28. Wang Lizhen in Beihang U
29. Wang Yuxing in Beihang U
30. Niu Wenxin in Beihang U
31. Mo Zhong Jun in Beihnag U
32. Zhang Yifan in ITC, PolyU
33. Liu Cheng, BME PolyU
34. Ma Xia, BME PolyU
35. Dong Ruiqi, BME PolyU
36. Gao Qiang, BME PolyU
37. Wang Qiang, BME PolyU
38. Kobayashi Toshiki, BME PolyU
39. Li Nga Mei Agnes, BME PolyU
40. Xiu Kaihua in Sichuan University
41. Wang Tao in Sichuan University
42. Wong Wai Yin Allison, BME PolyU
43. Lai Pik Ki Peggy, BME PolyU
44. Lee Ka Lai Christina, BME PolyU
45. LAW Yat Chau Sam, BME PolyU
46. Dong Xiang, in Sichuan U
47. Liu Zhan, in Sichuan U

SERVICES TO EDITORIAL BOARD of JOURNALS

- Associate Editor, Molecular and Cellular Biomechanics

- Associate Editor, Medicine in Novel Technology and Devices
- Editorial Board Member, Computer Methods and Programs in Biomedicine (from 2019, SCI)
- Editorial Board Member, Journal of Mechanics in Medicine and Biology (from July 2010, SCI)
- Editorial Board Member (associate editor), Journal of Medical and Biological Engineering (SCI)
- Editorial Board Member, Journal of Medical Imaging and Health Informatics (SCI)
- Section Editor (Biophysical Stimulation), Journal of Orthopaedic Translation (Jul 2013, SCI)
- **Associate Editor**, IEEE Trans Neural Systems & Rehabilitation Engineering (April 2004-April 2006)
- Editorial Board Member, International Journal of the Digital Human
- **Editorial Board Member** of （医用生物力学）Journal of Medical Biomechanics (in Chinese) (from Sept. 2002)
- Editorial Board Member, （世界康复工程与器械）International Rehabilitation Engineering & Devices
- Editorial Board member of journal of "Modern Rehabilitation" (in Chinese) (April 2000-April 2001)
- Invited Guest Editor for Clinical Biomechanics Supplement Issue 2007

SERVICES TO PROFESSIONAL & SCIENTIFIC BODIES

- Council Member of World Council of Biomechanics (WCB), (2014-2026)
- **President** (1 July 2019-now), President-elect (1 July 2017-June 2019), Secretary-Elect (2007-2011), Secretary (2011-2015), **World Association for Chinese Biomedical Engineers (WACBE)**
- **Vice President (since 2019)** of China Association of Assistant Products (previously Prosthetics and Orthotics)中国康复辅助器具（原假肢矫形器）协会
- **Chair of Chinese Society of Rehabilitation Engineering** under Chinese Society of Biomedical Engineering (April 2016 -). 中国生物医学工程学会康复工程分会主任委员
- Chair of Chinese Society of Rehabilitation Engineering under China Association of Assistant Products, 中国康复辅助器具协会康复工程专业委员会主任委员（2016.7-）
- **Vice Chair of** Chinese Society of Rehabilitation Engineering and Assistive Technology, under China Disabled Person's Federation 中国残疾人康复协会下的中国康复工程与辅助技术专业委员会副主任委员 (2016.10-)
- **Committee member** (Vice Chairman 2006-2011) of China Society of Biomechanics under China Society of Mechanics, and Chinese Society of Biomedical Engineering 中国生物力学专业委员会委员(副主任委员, Dec 2006-2011) (Since Oct 2003)
- **Chair** of Biomechanics and Bioengineering Committee, International Chinese Musculoskeletal Research Society (ICMRS), since 2019
- Founding Chair, Hong Kong Society of Biomechanics (since 2016)
- Executive Committee Members, Asian-Pacific Association for Biomechanics (since 2013)
- **Standing Council member** of Chinese Society of Biomedical Engineering 中国生物医学工程协会常务理事（start 1 Dec 2012）
- 4th **Committee member** of Chinese Society of Rehabilitation Engineering under Chinese Association of Rehabilitation Medicine 中国康复医学会下的中国康复工程专业委员会委员(May 2002 – 2006)
- Ordinary **member of Committee** of Biomedical Division, HKIE (April 2004 –April 2007, 2014-2017, 2017-2019), 香港工程师协会生物医学分会委员会 委员
- Committee Member of ISPO (Hong Kong) Education and Research (from 2006-now)
- **Steering Committee member,** i-FAB, International Foot and Ankle Biomechanics Community

- Fellow (since 2018), Corporate Member (2002-2018) of Hong Kong Institution of Engineers (HKIE)
- Member (life member) of International Chinese Musculoskeletal Research Society (ICMRS)
- Member (life member) of World Association for Chinese Biomedical Engineers (WACBE)
- Member of IEEE (Institution of Electric and Electronic Engineering)
- Member of China Society of Biomedical Engineering
- Member of Chinese Society of Biomaterials, (2001-2005, ref No: 120043)

- Member of ISPO (International Society for Prosthetics and Orthotics)

- Advisory Committee Member of The School of Biological Science and Medical Engineering, Beihang University, 1 Aug 2014-2018
- **Hong Kong Research Grant Council Panel member** (Engineering Panel) (from 2017)
- **National Natural Science Foundation of China (NSFC), Mechanics Panel Review Committee Member**, 国家自然科学基金数理学部, 力学学科评审专家(in 2007, and since 2012)
- Advisory Committee Member "长江新里程"计划项目顾问委员 (from 2007)
- International Experts Committee Member of Mechanical Virtual Human of China, Shanghai Jiaotong University, (March 2006 – now)

INTERNATIONAL CONFERENCES CHAIRMAN AND ORGANIZER

- International Advisory Committee member, WACBE World Congress on Bioengineering, Taipei, 16-19 Aug 2019
- **Chair of 2018 Rehabilitation Engineering Conference and International Forum on Rehabilitation Engineering, Qinhuangdao, 6-9 Sept 2018**
- **Congress Chair, WACBE World Congress on Bioengineering, Hong Kong, 30 July-2 Aug 2017**
- Program Committee member, The 6th Sina-American Workshop on Biomedical Engineering and China-Overseas Joint Workshop on Biomechanics, 第六届中美生物医学工程暨海内外生物力学学术研讨会, 2016
- Chair of organizing Committee, 中国康复辅助器具协会康复工程专业委员会成立大会暨中国康复医学与工程学术研讨会，秦皇岛，2016.7.7-9.
- OC member, 第二届中国康复辅具业发展战略研讨会， 北京，2016.4.21-22
- International Advisory Committee member, WACBE World Congress on Bioengineering, Singapore, 5-8 July 2015
- Technical Program Committee member, BME 2014 Biomedical Engineering International Conference, Hong Kong, 4-6 Dec 2014
- Local Organising Committee member, The 1st International Workshop on Multiscale Mechanobiology (IWMM 2014), 15-18 may 2014, CUHK, Hong Kong
- Advisory Committee member, The 1st BME Symposia of Beihang University, 15-16 May 2014, Beihang, Beijing
- Organizing Committee member, 2014 Asia-Pacific Region Seating Symposium (APRSS 2014) May 18-21, 2014, Xi'an, China
- Co-Chair, 6th WACBE World Congress on Bioengineering, 5-8 Aug 2013, Beihang University, Beijing
- Technical Program Committee Member, 2nd International Conference on Biomedical Engineering and Biotechnology (iCBEB 2013), Wuhan, China, on October 11-13, 2013
- Theme Chair, (Theme 15 Rehabilitation Medicine, Sports Medicine, Rehabilitation Engineering and Prosthetics), World Congress on Medical Physics and Biomedical Engineering, 26-31 May 2012, Beijing China
- Scientific Committee member, ISB2011, 3-7 July 2011, Brussels, Belgium
- Program Committee member, BME2010, 2-5 Nov, Hong Kong
- Program Co-Chair, The 3rd International Conference on Biomedical Engineering and Informatics, 16-18 Oct 2010, Yantai, China
- Scientific Committee Co-Chair, The 1st International Conference on Foot Disorders and Pedorthic Service, 24-28 Sept 2010, Beijing
- Symposium organizer for Prosthetics, 6th World Congress of Biomechanics, 1-6 Aug 2010, Singapore
- Scientific Program Committee Member, 4th Sino-American Workshop on Biomedical Engineering and China-Overseas Joint Workshop on Biomechanics, 26-31 July 2010, Chong Qing, China
- Vice Chair of Program Committee, 9th national Conference on Biomechanics, 11-15 Oct 2009, Tianjin, China

- **Secretary-General, WACBE World Congress on Bioengineering 2009, 26-29 July 2009, Hong Kong.**
- Scientific Committee Member, Symposium on Biomedical Engineering and Human Health for Doctoral Students, NSFC and Shanghai Jiaotong University, 20-23 Oct 2008
- Scientific Committee Member, 2008 Beijing ICHTS-2nd APBM Workshop on Bone Histomorphometry and Imaging, 21-22 Oct 2008
- Scientific Committee Member, BME2008 Hong Kong, Hong Kong, 23-25 Oct 2008
- Scientific Committee Member, 1st i-FAB Congress, Bologna, Italy, 4-6 September 2008
- Scientific Program Committee Member and Track Chair of Rehab Eng and Med Behaviour, the Seventh Asian-Pacific Conference on Medical and Biological Engineering (APCMBE 2008), 22-25 April 2008
- Technical Committee Member, The 1st National Digital Medicine Symposium, Chong Qing, China, 30 Nov-3 Dec 2007
- Scientific Program Committee Member, 3rd Sino-American Workshop on Biomedical Engineering and China-Overseas Joint Workshop on Biomechanics, 4-8 July 2007, Guangzhou, China
- Organizing Committee Chair, 8th China National Conference on Biomechanics, Dec 19-24 2006, Hong Kong (Triennial Conference, Biomechanics Committee)
- Technical Program Committee Chair, Biomedical Engineering Conference, Hong Kong 2006 (Biannual Conference, Bioengineering Division, Hong Kong Institution of Engineers), 21-23 Sept 2006
- Scientific Program Committee Member, 6th National Conference on Rehabilitation Medicine and Rehabilitation Engineering, 26-28 Aug 2005, Xi'an, China
- Organizing Committee member, 2005 International Symposium on Quality of Bone and Salford Biomaterials Evaluation by MicroCT, PQCT, QCT and MRI, Oct 17-18, 2005, The Chinese University of Hong Kong
- Organizing Committee member, 11th ISPO, 2004 Hong Kong, 1-6 Aug 2004 第十一届国际假肢及矫形器大会组委会成员

  Executive Committee Member 执行委员会成员
  Subcommittee Chair
  Member of Scientific Committee
  Symposium Organizer 研讨会组织人
- Track Chair for Rehabilitation Engineering and Medical Behaviours (Track 11), WCCBME2004 Beijing, 27-30 Sept 2004 第二届华人生物医学工程大会 康复工程部组织人
- Chairing conference section(国际会议分会场主持人):
  1) Chair the 1st plenary session, and Special Symposium on Advances in Neural and rehabilitation Engineering, The 3rd International Conference on Biomedical Engineering and Informatics, 16-18 Oct 2010, Yantai, China
  2) Chair plenary session and Track 13, the Seventh Asian-Pacific Conference on Medical and Biological Engineering (APCMBE 2008), 22-25 April 2008
  3) Chair Symposium "Development and Improving the Design of Footwear", in SMART Convention 2007, Hong Kong.
  4) Chair plenary session, BME2006
  5) Chair two sections in 6th Chinese National Conference on Rehabilitation Engineering, 25-27 Aug 2005, Xi'an China
  6) Track 16, Assistive Technology, World Congress on MPBE, Chicago, 2000,
  7) Rehabilitation Engineering, Chinese Conference of Rehabilitation Medicine, Beijing, 2001.
  8) ISPO2004, Charing two sections
  9) Hong Kong BME2004, Chair of section C2, computational modelling
  10) Chair for Track 11 Rehabilitation engineering and Medical Behaviour (four sections), and Chair for two sections, The 2nd World Congress for Chinese Biomedical Engineers, Beijing China, 27-29 Sept 2004**.**
  11) Joint and Teeth Biomechanics I, 7th National Conference on Biomechanics, Xi'an, China, 13-18 Oct 2003.

PRIZES and AWARDS

1. K.C. Wong Scholarship during my PhD studies from 1991 to 1995.
2. 1996 Nightingale Prize for 1995 best scientific paper published in Journal of Medical Engineering & Physics, "Zhang M, Lord M, Turner-Smith AR, and Roberts VC, Development of a nonlinear finite element modelling of the below-knee prosthetic socket interface, Med. Eng. & Phys. 17(8), pp 559-66, 1995, awarded by Institute of Physics & Engineering in Medicine and Biology (IPEMB), UK".
3. 2001 Best Paper in Rehabilitation Engineering, presented in The Conference of China Association of Rehabilitation Medicine, Beijing, Oct 2001.
4. 2005 RSscan International Pressure Research Award for outstanding research presentation in 7th Symposium on Footwear Biomechanics, Cleveland, Ohio, USA, July 27-29, 2005. Cheung JTM, Luximon A, Zhang M, Parametrical Design of Foot Orthosis for Plantar Pressure Relieve based on Computational Modelling.
5. 2006 A winner of the Best Animation Award in 19th Annual Worldwide ABAQUS Users' Conference (AUC), May 23-25, 2006, Boston, USA. JTM Cheung, Ming Zhang, Computational biomechanical foot model.
6. 2006 HKIE Outstanding Paper Award for Young Engineers/Researchers, "Finite Element and Cadaveric Simulations of the Muscular Dysfunction of Weight bearing Foot", Cheung JTM and Zhang M, Sept 2006.
7. 2006 Best Young Engineers Papers Competition award in BME2006, A 3D finite element model of female foot with high heeled shoe, Yu J, Cheung JTM and Zhang M, 21-23 Sept 2006
8. 2006 Faculty Award for Distinguished Thesis (presented to Dr Jason Cheung Tak Man, November 2006 (Chief Supervisor Zhang M)
9. 2007 The Li Ning Basic Research Award for an Outstanding Research Presentation at the 8th Footwear Biomechanics Symposium in Taipei, 27-29 June 2007. Cheung JTM, Bouchet B, Zhang M, and Nigg BM, A 3D Finite Element Simulation of Foot-Shoe Interface.
10. 2008 The Best Paper Award, Symposium on Biomedical Engineering and Human Health for Doctoral Students, NSFC and Shanghai Jiaotong University, 20-23 Oct 2008, Influence of resistances to Ni-Ti alloy inner fixing devices, Liu X, Zhang M, Li DY, Fan YB
11. 2009 Nike Basic Research Award, Cheung JTM, Yu J, Zhang M, Computational Simulation of High Heeled Shoe Fitting and Walking, In: Proceedings of the 9th Symposium on Footwear Biomechanics, Stellenbosch, South Africa, 10-12 July, 2009.
12. 2009 Best Paper Award, Zhang M, Cheung JTM and Yu J, Foot-ankle biomechanical models for joint biomechanics and shoe/orthosis design, XII Scientific Meeting of Chinese Orthopedic Foot & Ankle Society, and 2nd International Symposium of Foot & Ankle Surgery, Chongqing, China, 11-13 Sept 2009
13. 2012 Hong Kong Medical and Healthcare Device Industries Association Student Research Award (1st Runner-up), Finite element modeling combined with motion analysis and musculoskeletal modeling to explore joint loadings under orthoses interventions, Xuan Liu, Ming Zhang, Hong Kong Medical and Healthcare Device Industries Association, Nov 2012
14. 2012 Best paper Award (Poster), Cong Y, Zhang M, Effects of heel heights on in-shoe triaxial stresses, 10th national Conference on Biomechanics and 12th National Conference on Biorheology, 11-15 Oct 2012, Chengdu, China.
15. 2013 Best Paper (Oral) award, "Foot kinematics wearing high-heeled shoes, Yan Cong, Ming Zhang", WACBE World Congress on Bioengineering, Beijing, 5-8 Aug 2013.
16. 2013 "健乐新人奖"，第十六届全国运动生物力学学术交流大会，Niu Wenxin, Wang Yang, Jiang Chenghua, Wang Lejun, Zhang Ming, Fan Yubo, 24 Oct 2013
17. 2013 Hong Kong Medical and Healthcare Device Industries Association Student Research Award (2nd Runner-up), Computational Study of Foot and Ankle for Optimization of Surgery Protocol and Prosthesis Design, Yan WANG, Ming ZHANG, Hong Kong Medical and Healthcare Device Industries Association, Nov 2013

18. 2014 Best Paper Award, Niu Wenxin, Feng TN, Wang LJ, Zhang M, Jiang CH, 双腿着陆竖直方向地面反力峰值的系统综述和数学模型分析，第十七届全国运动生物力学学术交流大会，26-29 Sept 2014, Dalian, China
19. 2014 Hong Kong Medical and Healthcare Device Industries Association Student Research Award (Top Prize), Interactive Exoskeleton Robotic Knee System for the Lower Limb Rehabilitation, Corinna Ockenfeld, Ming Zhang, Raymond Tong, Hong Kong Medical and Healthcare Device Industries Association, Nov 2014
20. 2015 Best paper Award, Wang Yan & Zhang Ming, 基于有限元法的全踝关节置换术的有效性分析，第十一届全国生物力学学术会议暨第十三届生物了流变学学术会议，10-13 Oct 2015， Taiyuan , China
21. 2015 Hong Kong Medical and Healthcare Device Industries Association Student Research Award (1st Runner-up), Biomechanical Evaluation of the Design of the Total Ankle Joint Replacements, Yan WANG, Ming ZHANG, Hong Kong Medical and Healthcare Device Industries Association, 30 Nov 2015
22. **Natural Science Award (First-class) of the 2015 Higher Education Outstanding Scientific Research Output Awards by the Ministry of Education**. 國家教育部 2015 年度高等學校科學研究優秀成果獎，自然科学奖一等奖， Biomechanical study of musculoskeletal injury, protection and rehabilitation 骨肌損傷與康復生物力學研究.
23. **The Hong Kong Polytechnic University President's Awards for Excellent Performance/Achievement 2015/2016, Individual Award for Research and Scholarly Activities, announced in 22 Dec 2016.**
24. 2015 Faculty of Engineering Research Grant Achievement Award, announced in 23 Dec 2016
25. 2017 Huang Jiasi Biomedical Engineering Award (first class), Chinese Society of Biomedical Engineering, Fan YB, Zhang M, Gong H, Wang LZ, Sun LW, Zhang DW, Niu WX
26. 2017, Best paper (second class) for Young Researchers, 2017 Chinese Biomedical Engineering Conference, Wang Yan and Zhang Ming, Biomechanical study of Ankle arthrodesis and Arthroplasty
27. 2017, Best Presentation award for young investigators, Wang Yan, Wong DWC, Tan Qitao, Chen Linwei, Zhang Ming, Biomechanical evaluation of the design of the total ankle arthroplasty, The 8th WACBE World Congress on Bioengineering, 30 July-2 Aug 2017, Hong Kong.
28. 2017, Best Presentation award for young investigators, Tan Qitao, Wang Yan, Zhang Ming, Muscle fatigue revealed by muscular oxygenation based on near-infrared spectroscopy methods, The 8th WACBE World Congress on Bioengineering, 30 July-2 Aug 2017, Hong Kong.
29. 2018, 二等奖获,一种设计压紧/释放型大腿假肢接受腔的新方法, 孟昭建， 张明， 梁锦伦, 全国康复科学与技术论文大赛 (International Rehabilitation Canton Forum) 2018 April 2-4
30. 2018, Best Paper Award, Y Wang, Qitao TAN, M Zhang. Biomechanical comparison of the foot between total ankle arthroplasty and ankle arthrodesis (踝关节置换术与踝关节融合术的足部生物力学分析与对比), 12th National Conference of Biomechanics, Xi'an, 2018 Aug.
31. 2018, Best Paper Award, Qitao TAN, Yan WANG, Zengyong LI, Ming ZHANG, Muscle fatigue evaluation based on muscle oxygenation using near-infrared spectroscopy（基于近红外光谱血样检测的肌肉疲劳评估）, 12th National Conference on Biomechanics, Xi'an 2018
32. 2018, Best Paper Award, Qitao TAN, Yan WANG, Zengyong LI, Ming ZHANG, Assessement of peripheral muscle fatigue based on muscle oxygenation（基于血流信号的肌肉局部疲劳评估方法）, 2018 Rehabilitation Engineering Conference & International Symposium on Rehabilitation Engineering, Qinhuangdao 2018 6-9 Sept
33. 2019 Best Paper Award for Poster Presentation, Qitao Tan, Y Wang, ZY Li, M Zhang. Muscle fatigue evaluation based on muscle oxygenationand surface electromyography, 2019 China Biomedical Engineering Conference, Jinan, Nov. 14-17.

34. 2019 Young Scholar Award, Y Wang, Q Tan, M Zhang. Effects of foot orthosis on joint motion in the lower limb for pediatric flatfoot. The 9th WACBE World Congress on Bioengineering, Taipei, 2019 Aug. 16-19

INVITED GUEST/PLENARY TALKS

1. A Three-Dimensional Finite Element Model of the Foot and Ankle for Foot Support Design, 7th National Conference on Biomechanics, Xi'an, China, 13-18 Oct 2003, Plenary report.
2. Computational Models of Foot and Ankle - Application to Foot Support Design, 2nd World Congress for Chinese Biomedical Engineers, Beijing China, 27-29 Sept 2004, Invited Track talk.
3. Computational modelling of body-support interfaces, 11th World Congress of the International Society for Prosthetics and Orthotics, Hong Kong, 1-6 Aug 2004, Invited Symposium talk.
4. How computational modeling contributes to prosthesis computer-aided design technology, 11th World Congress of the International Society for Prosthetics and Orthotics, Hong Kong, 1-6 Aug 2004, Invited Symposium talk.
5. Skin friction and its effects at body-support interfaces, Symposium, 11th World Congress of the International Society for Prosthetics and Orthotics, Hong Kong, 1-6 Aug 2004, Invited Symposium talk
6. Computational Models for Foot Biomechanics and Foot Support Design, Prosthetic and Orthotic Joint Seminar, Hong Kong, 3 Dec 2004, organized by The Hong Kong Society of Certified Prosthetists and Orthotists.
7. Computational Biomechanics in Orthopedic Research, Advanced Orthopaedic Basic Science Workshop, Dept of Orthopadic and Traumatology, University of Hong Kong, 19-22 April 2005.
8. Rehabilitation Medicine and Biomedical Engineering Research for Physically Disabled, 57th Eastern Forum of Science and Technology-Mechanobiology and Biomedical Engineering (东方论坛第 57 届学术研讨会), 8-9 June 2005, Shanghai, Organized by Shanghai Government and China Society of Biomechanics.
9. Computational Models for Foot Biomechanics and Footwear Design, Application of Science in Footwear Research and Development, The Chinese University of Hong Kong, 18 Aug 2005.
10. Computational biomechanics for body/support interfaces, The 6th National Conference on Rehabilitation Engineering, 25-27 Aug 2005, Xi'an, Organized by China Rehabilitation Engineering Committee.
11. Rehabilitation Engineering and Biomedical Engineering, invited talk in Faculty of Life Sciences, Beijing Institute of Technology, 24 Sept 2005.
12. Finite Element Analysis of Micro-CT in evaluation of Bone Quality, 2005 International Symposium on Quality of Bone and Scaffold Biomaterials evaluated by MicroCT, pQCT, QCT and MRI, Dept. of Orthopaedic and Traumatology, The Chinese University of Hong Kong, 16-18 Oct 2005.
13. Bioengineering Research in Rehabilitation Engineering, invited talk in Dept of Bioengineering, Beihang University, 24 March 2006.
14. Biomechanical Computational Modeling in Rehabilitation Engineering, invited talk in the 1st Meeting of International Experts Committee of Mechanical Virtual Human of China, Shanghai Jiaotong University, 27 March 2006
15. Contact biomechanics for body supports in rehabilitation Engineering, 103rd Scientific Forum for Chinese Young Scientists, 中国科学院第 103 次中国青年科学家论坛, Beijing, 21-22 April 2006.
16. Foot and Ankle Biomechanics, 1st VIMS (Virtual Interactive Musculoskeletal System) Conference, Beijing, 29 May – 1 June, 2006
17. Development of Digital Human Foot Models for Foot Biomechanics and Footwear Design, Innovating Future Healthcare Workshop, 27 Jun 2006, PolyU, Hong Kong
18. R&D in rehabilitation technical aids, Forum on Rehabilitation Technical Aids, 15-18 Aug 2006, Weihai Shandong China.

19. Development of digit foot-ankle models for foot biomechanics and shoe design, Proceedings of SMART (Sport Medicine and Rehabilitation Therapy) 2007 Convention, 9-10 June 2007, Hong Kong.
20. Biomechanical Engineering of Footwear, SMART-TBIS, 13-16 Aug, 2008, Hong Kong, (Keynote).
21. Computational Simulation for footwear design and systematic evaluation, SMART-TBIS, 13-16 Aug, 2008, Hong Kong.
22. Application of Biomechanics on Rehabilitation Engineering, Proceed of Advanced Workshop on Biomechanics, Shanghai, 21-27 July 2008
23. Digital foot-ankle-knee biomechanical models for joint biomechanics and shoe design, 11th Forum of Engineering Frontier – Digital Medicine, 7-10 Nov 2008, Chinese Academy of Engineering, Beijing
24. Biomechanical Simulation of Lower Limb, 数字医学研究进展与挑战 (Advance and Challenges in Digital Medicine Research), 21 March 2009, Chinese Society of Biomedical Engineering
25. Multi-level computational models for bone remodelling and biomechanics, International Symposium on Orthopaedic Translational Research and Technical Advance, 29-31 May 2009, Shanghai
26. Biomechanical evaluation platform for footwear design, 2009 International Symposium on Biomechanics & Annual Scientific Meeting of Taiwanese Society of Biomechanics, 10-12 Dec 2009, Invited plenary talk
27. Multi-level computational models for musculoskeletal biomechanics, 2009 International Symposium on Biomedical Engineering & Annual Scientific Meeting of Biomedical Engineering Society of ROC, Invited talk
28. Multi-level biomechanical models for rehabilitation engineering, 4th Sino-American Workshop on Biomedical Engineering and China-Overseas Joint Workshop on Biomechanics, 26-31 July 2010, ChongQing, China
29. Computational foot-ankle-knee models for joint biomechanics and footwear design, MICCAI 2010 Workshop Proceedings, Computational Biomechanics for Medicine V, 20-24 Sept 2010, Beijing, pp3.
30. Foot-ankle biomechanics and computational models, 1st Int Conference on Foot Dospoder and Pedorthic Services in China, 2010 Sept 24-28, pp176
31. Musculoskeletal Bioengineering research and rehabilitation devices development, Scientific Conference on Rehabilitation Device development, 28 Sept 2010, National Research Centre for Rehabilitation Devices, Beijing
32. In-shoe Triaxial Transducer Measurement System, Li Ning Sports Science Research Centre Annual Research Meeting, 20-21 Oct 2010, Beijing
33. Education, research and product development for rehabilitation engineering, Proceed of 2011 International Conference for Bioeconomy, 26-28 June 2011,Tianjin, China
34. Lower-limb Biomechanics for foot support design, Plenary talk in 10th national Conference on Biomechanics and 12th National Conference on Biorheology, 11-15 Oct 2012, Chengdu, China
35. Computational models for joint biomechanics and footwear design, (keynote), Biomedical Engineering International Conference BME2012, 5-8 Dec 2012.
36. Biomechanical Study on Foot and Foot Support, The First BME Symposium of Beihang University, 15-16 May 2014
37. 香港 BME 教育及香港理工大学 BME 教育认证情况，2014 年两岸四地生物医学工程论坛——生物医学工程教育、科技与产业发展， 17-20 Aug2014， Huangshan， China
38. 肌骨生物力学计算模型的发展及在运动科学研究中的应用 Computational Biomechanical Modeling of Musculoskeletal System and Applications in Sports Science, 第 17 届全国运动生物力学学术交流大会, 26-29 Sept 2014, Dalian, China, Invited plenary talk
39. Computational Models for Human Body Support Design, BME 2014 Biomedical Engineering International Conference, Hong Kong , 4-6 Dec 2014, Keynote speech

40. Computational biomechanics for foot and ankle surgery (足踝外科中的计算生物力学), International Summit on Medical Device & 2nd International Biomedical Engineering Symposium, Beihang University, 13-14 May 2015, Keynote speech
41. Neuromusculoskeletal Science and Engineering in PolyU BME, Symposium on Biomedical and Rehabilitation Engineering, PolyU, 15 May 2015, keynote talk
42. Computational Contact biomechanics for human support design, 7th WACBE World Congress on Bioengineering, 6-8 July 2015, Singapore, invited talk
43. 肢体康复工程中的生物力学研究，第十一届全国生物力学学术会议暨第十三届生物了流变学学术会议，10-13 Oct2015， Taiyuan , China, invited talk
44. 计算生物力学在康复工程中的应用，第二届中国康复辅具业发展战略研讨会，2016.4.22-23，北京, Invited plenary talk.
45. 下肢生物力学在康复工程中的应用，中国康复辅助器具协会康复工程专业委员会成立大会暨中国康复医学与工程学术研讨会，秦皇岛，2016.7.7-9， Invited plenary talk.
46. Computational models of foot and ankle for clinical application, The 6th Sina-American Workshop on Biomedical Engineering and China-Overseas Joint Workshop on Biomechanics, 第六届中美生物医学工程暨海内外生物力学学术研讨会, 4-8 Aug 2016, Shanghai.
47. Computational models of foot and ankle for foot support design, 14th Int Symposium on Computer Methods in Biomechanics and Biomedical Engineering, 20-22 Sept 2016 Tel Aviv Israel, Invited talk
48. Computational biomechanics of foot and ankle, The 8th WACBE World Congress on Bioengineering, Hong Kong, 30 July – 2 Aug 2017, invited plenary speech.
49. 康复辅具设计基础 – 支撑界面生物力学，整合康复医学论坛，2018 中国整形医学大会，2018，28-30 April，Xi'an
50. 康复辅具设计基础 – 支撑界面生物力学， 第四届中国康复辅助器具产业发展战略研讨会，7-9 June, 2018，Beijing
51. Musculoskeletal Biomechanics and Health, 2018 Infinitus Science & Technology Innovation and Cooperation Forum, 28 June 2018, Guangzhou, invited talk
52. Customs Design and 3D printing of prosthesis and orthosis, 2018 Rehabilitation Engineering Conference & International Symposium on Rehabilitation Engineering, Qinhuangdao, 6-9 Sept 2018, invited plenary talk
53. Musculoskeletal health and rehabilitation aid technology, Health Care Industry Forum, Conference of Great Business Partners, Jinan, Shandong, 28-29 Sept 2018
54. Opportunities and Challenges of Applying Additive Manufacturing Technology for Prosthetic and Orthotic Clinics, 2019 International Summit Forum on Engineering Science and Technology Strategy: from Frontier Technology to Research and Development of Products using Medical Additive Manufacturing, Shenzhen, 15 June 2019, invited talk
55. Interface biomechanics for human body support design, 2019 Workshop on Application of Biomechanics in Clinical Treatment and Rehabilitation & 1st International Conference on Medicine in Novel technology and Devices, 11-12 Aug 2019, Beihang University, invited talk
56. Biomechanical foot models for surgical treatments and foot support design, 9th WACBE World Congress on Bioengineering, 16-19 Aug 2019, Taipei, keynote

FUNDED RESEARCH PROJECTS

Research Projects as Principal Investigator

No	Project Title	Investigators	Funding Source(s) and Amount (HK$)	Start Date	Completion Date
57	Shoe effect on relieving lower-limb muscle fatigue for flat foot	**Zhang M,** Tan QT, Wang Y, Wong D	Collaborative Dr Kong 380,000+87,820 RGC matching	July 2019	Feb 2021
56	Computer Modeling and Simulation for Running Shoe Optimization	**Zhang M.** Wong Duo, Wang Y	Collaborative LiNing 298,592+93,168 RGC matching	Aug 2019	Aug 2021
55	Functionally Graded Orthopaedic Implants: Design , Manufacture and Biomechanical Analysi	**Zhang M,** Fan Yubo, Yao Yan	Joint supervision scheme 180,600	5 July 2019	4 July 2020
54	Biomechanical Evaluation and Design Optimization for Mattress Toppers	**Zhang M,** Wong Duo, Wang Y, Lin J	Collaborative Infinitus 932,880+386,616 (RGC matching)	20 June 2019	31 Dec 2021
53	A fatigue-relieving smart shoe using magnetorheological fluid (MRF) for elderly walking exercises	**Zhang M,** Wong DWC, Wang Y	ITS/262/18 1398400	July 2019	June 2021
52	Customs Design and 3D printing of Prosthesis and Orthosis假肢矫形器的个性化设计与增材制造应用示范 (2018YFB1107000)	**Zhang M, etc (91)**	National Key R&D Program China（国家重点研发计划） RMB24,931,000	May 2018	April 2021
51	Biomechanical study of foot and ankle for surgical and orthosis treatment足踝生物力学研究及其在手术和辅具治疗中的应用	**Zhang M,** Li ZY, Niu WX, Wang Y, Wong Y	NSFC Key Project（NSFC 重点项目） RMB3,500,000	1 Jan 2018	31 Dec 2022
50	Biomechanical Study of Hallux Valgus and Clinical Interventions (PolyU 152065/17E)	**Zhang M,** Wong DWC, Leung A, Li X	**GRF** 443,950	1 Jan 2018	31 Dec 2020
49	Computational Modeling of Deformed Transcatheter Aortic Valve with Different Configurations and Leaflet Thickness	**Zhang M,** Fan Yubo, Yang XD	Joint supervision scheme 180,600	15 July 2017	14 July 2018
48	Biomechanical study of sleeping supporting system睡眠支撑系统设计准则的生物力学研究	**Zhang M**	Shenzhen basic Research RMB300,000	1 Jan 2017	31 Dec 2018
47	Biomechanical Studies of Physical Exercises for Prevention of Lower Extremity Injuries	**Zhang M,**	Dean's reserve 400,000	1 Dec 2016	31 5 2018
46	Biomechanical study of adult acquired flatfoot deformity for surgical treatment and implant design PolyU152002/15E	**Zhang M,** Niu WX, Graham Michael	**GRF** 695,854	1 Jan 2016	31 Dec 2018
45	Biomechanical Study of Foot and Ankle for Surgical Treatment and Prosthesis Design PolyU 152216/14E	**Zhang M** Cheng CK,Niu WX, Yang YF	**GRF** 500,000	1 Jan 2015	31 Dec 2016

44	Development of Biomechanical Model for evaluation of Children Pillow Designs	**Zhang M** Wong WC Wang Y	Collaborative Research (Infinitus) 580,000	15 Dec 2015	14 Jun 2017
43	Development of biomechanical models of sitting position for spine health and body support design	**Zhang M** Wong MS Tam Eric	Collaborative Research (Infinitus) 980,000	2 Dec 2013	1 Dec 2015
42	Development of biomechanical models of lying human body with support for mattress and pillow design	**Zhang M** Leung Aaron Lee Winson	Collaborative Research (Infinitus) 782,000	2 Dec 2013	1 Dec 2014
41	Biomechanical Study of Kneeling: Beneficial or Detrimental Effects on the Knee Structures	**Zhang M** Leung KL Fan YB	PolyU Research Grant (GRF rated 3.5) 165,000	1 Jan 2014	31 Dec 2015
40	Biomechanical Study of Kneeling - Its Beneficial or Detrimental Effects on the Knee Structures	**Zhang M** Leung AKL	PolyU Research Grant (GRF rated 3.5) 174,439	16 Jan 2013	31 Jan 2015
39	Biomechanical effects of foot/ankle supports on knee joint足踝支撑对膝关节的生物力学影响 (11272273)	**Zhang M**	NSFC 面上 RMB780,000	1 Jan 2013	31 Dec 2016
38	Multi-level biomechanical study of lower limb and application in rehabilitation field人体下肢跨层次骨生物力学研究及其在航空与康复领域中的应用	**FanY，** **Zhang M**	NSFC 重点国际合作 RMB3,000,000	1 Jan 2012	31 Dec 2016
37	Development of a Computational Model of Lower limb for Osteonecrosis	**Zhang M,** Jia Yu	Collaborative (Guanzhou Univ of Chinese Med) HK$120,000	15 May 2012	14 May 2013
36	Dynamic analysis of the human cervical spine and finite element modelling of total disk replacement with dynamic cervical implant	**Zhang M,** Fan YB Mo ZJ	Joint supervision, PolyU 150,000	25 May 2012	31 Dec 2013
35	Biomimetic Self-setting CA-P Based Bone Cements with Anti-collapsibility Performance	**Zhang M** Yu Tao	HK Scholar Postdoctoral Fellowship 315,000	15 Oct 2011	14 Oct 2013
34	Dynamic Computational Models for Biomechanical Evaluation of Footwear Designs	**Zhang M,** Cheung J, Leung A	**GRF** $681,195	1 Jan 2012	31 Dec 2014
33	Development of In-shoe Tri-axial Force Measuring System to Assess the regional Plantar Interfacial Stress Profiles During Sport Movement	**Zhang M,** Leung A	Collaborative research LiNing 225,148	10 Jun 2011	9 Mar 2012
32	Experimental study and numerical simulation of foot and ankle during landing	**Zhang M,** Fan YB Niu WX	Joint supervision, PolyU 150,000	1 Feb 2011	31 Jan 2012
31	Dynamic Computational Models for Biomechanical Evaluation of Footwear Designs	**Zhang M,** Cheung J, WCC Lee	PolyU Research Grant (GRF rated 3.5) 105,000	1 Jan 2011	31 Dec 2012
30	Finite Element Study of the Bone Remodelling Process of a Rat Femur	**Zhang M** Fan YB, Wang YX	Joint supervision, PolyU 150,000	1 June 2010	31May 2012

29	Femoral Strength and Fracture Risk Prediction Using Imaging-based Finite Element Analysis	**Zhang M** Gong H	PolyU Research Grant 150,000	1 Jan 2010	30 Dec 2012
28	Bone-implant Interface Bonding and Anti-infection Study of Osseointegrated Transfemoral Prosthetic Materials	**Zhang M,** Zhang HQ	Postdoctoral fellowship, PolyU 736,000	Mar 2009	Mar 2011
27	Impact injury mechanism of head diffuse axonal injury using finite element method	**Zhang M,** Fan YB, Wang LZ	Joint supervision, PolyU 150,000	2 Mar 2009	1 Mar 2010
26	Effects of Plantar Supports on Loading Transfer for High-heeled Shoe Design	**Zhang M** Tina Zhang A Luximon	**GRF** HK$581,486	1 Jan 2009	31 Dec 2011
25	Foot Support Design Concerning Foot-Ankle as well as Knee Joint Loading	**Zhang M**, Cheung JT, Leung AL	Hong Kong **RGC** Earmarked Research Grant HK$409,660	1 Jan 2008	31 Dec 2010
24	Development of a Digit Human Foot System for Design and Evaluation of Healthcare and Fashionable Shoes	**Zhang M**, Cheung JT, Leung A, Luximon A	ITF HK$998,000	1 Dec 2007	30 Nov 2008
23	Research and Development of Foot Aid Technology	Yan HP, **Zhang M** (PolyU-Leader)	中国科技部,国家支撑计划 Ministry Sci &Tech China 2,900,000RMB 580,000 for PolyU	Apr 2007	2010
22	Development of Training System for Lower-limb Amputees	Zhang XY **Zhang M** (PolyU-Leader)	中国科技部,国家支撑计划 Ministry Sci &Tech China 1,400,000RMB 280,000 for PolyU	Apr 2007	2010
21	Development of Capability in Supporting the Design and Manufacture of Superfinished Orthopaedic Implants for Biomedical Applications	Lee WB, Cheung CF, **Zhang M** (Co-PI)	ITF 5,600,000	1 Apr 2007	31 Mar 2009
20	Mechanical and Biological Coupled Computational Models for Bone Remodeling and Osteoporotic Process	**Zhang M,** Gong H, Qin L	PolyU Research Grant 150,000	Jan 2007	Dec 2008
19	Mechanism Studies and Practical Methods Research on Vibration for Bone Loss	**Zhang M,**	PolyU Researc Grant 150,000	March 2007	March 2008
18	Development of Biophysical Exercise Devices and Mechanism Studies on Prevention of Bone Loss	**Zhang M,** Gong H, Tam E, Mak A, Wong MS, Guo X	PolyU Niche area 1,500,000	Jun 2006	May 2009
17	Research on Biomechanics of Lower-limb Amputees and Prosthesis	**Zhang M** Fan Yubo	Distinguish Overseas Young Researcher, NSFC, 400,000RMB	Jan 2006	Dec 2008

16	Biomechanical Evaluation of Sizing and Shaping for Footwear Design	**Zhang M** Luximon L Leung AKL Fan YB	Hong Kong **RGC** Earmarked Research Grant $391,684	Jan 2006	Dec 2007
15	Biomechanical Modeling and Experimental Study of Human Foot: Application to Foot Support Design	**Zhang M** An KN Fan YB	Hong Kong **RGC** Earmarked Research Grant $157,363	Dec 2004	May 2007
14	Appropriate Innovative Prosthetic Bioengineering (a product development project under the umbrella proposal Technology for the Elderly and the Disabled, Mak A)	**Zhang M** as project leader	The Hong Kong Jockey Club Charities Trust $2,739,000	Dec 2003	Nov 2007
13	Computational Model of Bone-Remodeling Process at Basic Multicellular Units Level and Its Application to the Numerical Simulation of Primary Osteoporosis	**Zhang M** Gong H Qin L	PolyU Postdoctoral Fellowship $624,000	May 2005	May 2007
12	Development of micro-finite element model for quantifying mechanical properties of trabecular bone	**Zhang M** Shi SQ Guo X Qin L	PolyU Central Res Grant $250,000	July 2003	Aug 2005
11	Biomechanical Modeling and Experimental Study of Human Foot: Applicable to Foot Insole and Orthosis Design	**Zhang M** An KN Fan YB	PolyU Central Res Grant (RGC fundable unfunded project) $170,000	Aug 2003	Nov 2005
10	Footwear Fitting For Diabetic Mellitus	**Zhang M** Luximon A	PolyU Postdoctoral Fellowship $878,560	Feb 2003	Feb 2005
9	Study of Bio-Mechanical Functional Design of Socks	LI Y **Zhang M** (Co-PI)	PolyU Central Res Grant $360,000	Aug 2002	Feb 2005
8	Computational Modeling for Quantifying Lower-Limb Prosthetic Design	**Zhang M** Mak AFT Boone DA	Hong Kong **RGC** Earmarked Research Grant $441,404	Dec 2002	Nov 2005
7	Comprehensive Computational Modeling for Lower-Limb Prosthetic Design	**Zhang M** Mak A Boone DA	PolyU Central Res Grant (RGC fundable unfunded project) $200,000	Sep 2001	Apr 2004
6	Comprehensive Computational Modeling for quantifying Lower-limb prosthetic Design	**Zhang M** Mak A Boone DA	Dean Reserve (RGC fundable unfunded project) $100,000	Sep 2001	Sep 2003

5	Computational Modelling of Human Foot	**Zhang M** Leung A	RGC Direct Allocation 120,120	Jun 2001	May 2003
4	Development of 3D Computational Foot and Ankle Models	**Zhang M**	PolyU Central Res Grant $50,000	Nov 2000	Sep 2002
3	A Study of Human Upper Extremity Movement Control Model	**Zhang M** Xiao SJ	PolyU Central Res Grant $50,000	Nov 2000	Jun 2002
2	Functional Motion Analysis and Computer Simulation of Upper Limb for the Development of Powered Orthoses	**Zhang M** Mak A	RGC Direct Allocation 111,904	May 2000	Apr 2001
1	Experimental Measurements and Finite Element Analysis of Mechanical Properties of Residual Limb Tissues Confined in a Prosthetic Socket	**Zhang M** Mak A	PolyU Central Res Grant $50,000	Jul 1999	Aug 2000

Research Projects as Co-Investigator

16	High performance sportswear and devices (Phase II) (ITP/015/11TP)	Li Yi ... Zhang M	ITF 4,504,757	Jun 2012	Jun 2014
15	Development and Manufacturing of Fall Prevention Shoes for Elderly and Patients with Balance Deficit	Leung KS, Cheung WH, Zhang M, ..	ITF 825,000	Apr 2009	Sep 2010
14	Development of a myoelectric stimulation device for ankle sprain correction in a sprain-free running shoe	Chan KM, Fong DTF,.. **Zhang M**	ITF, ITS/048/08 999,936	Oct 2008	Mar 2010
13	Interactive Intention-driven upper-limb training robotic system	Tong R, Tan E, **Zhang M**	ITF 3,600,000	Apr 2008	Mar 2010
12	Biochemical and Theoretical Characterization of Interactions between Estrogen Receptor and Co-regulators	Zhao YX **Zhang M,** Yao F	PolyU Research Grant 320,000	Feb 2007	Jan 2009
11	Development of an in-shoe sensor system for real-time ankle supination torque measurement in a sprain-free running shoe	Chan KM, Hong YL, Hui KC **Zhang M**	ITF (GSP) $874,349	Sep 2006	Aug 2007
10	Evaluation of the Effects of Phytoestrogenic Compounds on Bone Quality in Ovariectomized Rats Using Micro-computed Tomography (Micro-CT) Based Finite Element Techniques	Wong MS **Zhang M** Guo E	PolyU Central Res Grant $320,000	Jun 2006	May 2008
9	Preliminary Study on the Effect of Foot Orthoses on Lower Limb Motion and Patellofemoral Alignment	Leung A **Zhang M** Zheng YP	PolyU Central Res Grant $170,000	Sep 2004	Jul 2006

8	The Effects of Total Contact Foot Orthosis on Muscle Activation Patterns of Selected Leg Muscles	Leung A Fu SR **Zhang M** Zheng YP	PolyU Internal Competitive Research Grant (DA) $178,000	Mar 2004	Nov 2005
7	Biomechanical Study on Osseointegration	Fan YB **Zhang M** et al.	Natural Science Foundation, China RMB260,000	2004	2006
6	Biomechanical study for design of new type of prosthesis and its control	Jia XH **Zhang M** et al	Natural Science Foundation, China RMB240,000	2004	2006
5	A New Design of Rehabilitation Robot Using Functional Electrical Stimulation (FES) For People After Stroke	Tong R **Zhang M**	PolyU Central Res Grant $300,000	Jun 2002	Aug 2005
4	Pilot Study of an Innovative Application of CAD/CAM in Prosthetics: Individualized Flexible Shank Optimization by FEM and Whole Prosthesis Fabrication by FDM	Boone A **Zhang M** Contoyannis B	PolyU Central Res Grant $50,000	May 2001	Nov 2002
3	Assessment System for CAD/CAM Lower-Limb Prosthetic Socket	Mak A **Zhang M** Zheng Y Leung A	PolyU, IGARD $1,779,000	Feb 2000	Jan 2002
2	Systematic Evaluation of the Effects of Prosthesis Alignment on Gait and Socket Interfacial Pressure for Transtibial Amputees	Chow D **Zhang M**	PolyU Central Res Grant $100,000	May 1999	Apr 2000
1	Development of a Computational Model for Assessment of Above-Knee Prosthetic Socket Design	Mak A. **Zhang M**	PolyU Central Research Grant $785,680	Feb 1997	Jan 1999

Other Grants

- Large Equipment Grant, PolyU, A Three-Dimensional Foot Laser Scanner- INFOOT, HK280,000, PI, 2004
- Large Equipment Grant, PolyU, Upgrade of the CAD/CAM system for Prosthetics and Orthotics Laboratory, Co-I, 2002
- Development of on-line version of academic subject REC2803 Introduction to Biomechanics, PolyU OPD Web-enabling and e-learning support program, $150,000, Jul 2003 – Apr 2004
- Computer-aided-learning for prosthetic designs, Principal investigator for sub-project, Funded by UGC Teaching Development Grant 1999-2001, HK$257,003.

PUBLICATIONS (* corresponding Author)

Papers Submitted or accepted for publication in Peer-Reviewed Journals

1. Yang YH, Zhang Q, Xu TP, Zhang HY, **Zhang M**, Lu L, Hao YF, Fuh JYH, Zhao X, Photocrosslinkable nanocomposite ink for printing strong, biodegradable and bioactive bone graft, Biomaterials, accepted, 2020 (**Q1 top 5%,** 2019 IF=10.317, 1/38 Materials Science, Biomaterials)
2. Li WH, **Zhang M**, Li ZY, Assessment of coupling interaction between cerebral oxyhemoglobin concentrations and arterial blood pressure in patients with hypertension, Medical Physics, minor revision, 2020 (**Q1**, 2019 IF=3.17, 33/133 Radiology, Nuclear Medicine & medical Imaging)
3. Chen LW, Wong DWC, Wang Y, Tan QT, Lam WK, **Zhang M***, Changes in segment coordination variability and the impacts of the lower limb across running mileages in half marathons: implications for running injuries, Journal of Sport and Health Science, accepted Aug 2020 (**Q1 top 10%,** 2019 IF=5.200, 5/85 Sports)
4. Wang Y, Tan QT, Pu F, Boone D, **Zhang M***, Review on the application of additive manufacture in prosthetic and orthotic clinics in a biomechanical perspective, Engineering, accepted, 2020 (**Q1 top 5%**, 2019 IF=6.495, 4/91 Engineering, Multidisciplinary)

Papers Published in Peer-Reviewed Journals

2020

5. Wong DWC, Wang Y, Chen TLW, Yan F, Peng YH, Tan QT, Ni M, Leung AKL, **Zhang M***, Finite Element Analysis of Generalized Ligament Laxity on the Deterioration of Hallux Valgus Deformity (Bunion), Front. Bioeng. Biotechnol. | doi: 10.3389/fbioe.2020.571192 (**Q2**, 2019 IF=3.644, 20/71 Multidisciplinary Sciences)
6. Wong DWC, Wang Y, Niu W, **Zhang M***, 2020. Finite element analysis of subtalar joint arthroereisis on adult-acquired flexible flatfoot deformity using customized sinus tarsi implant. Journal of Orthopaedic Translation DOI: 10.1016/j.jot.2020.02.004. (**Q1 top 10%**, 2019 IF=3.986, 8/82 Orthopaedics)
7. Chen TLW, Wang Y, Wong DWC, Lam WK, **Zhang M***, 2020. Joint contact force and movement deceleration among badminton forward lunges: a musculoskeletal modeling study. Sports Biomechanics DOI: 10.1080/ 14763141.2020.1749720. (**Q2**, 2019 IF=2.023, 41/85 Sports Sciences)
8. Ni M, Zhang F, Mei J, Lin CYJ, Gruber SMS, Niu W, Wong DWC, **Zhang M**, 2020. Biomechanical analysis of four augmented fixations of plate osteosynthesis for comminuted mid-shaft clavicle fracture: A finite element approach. Experimental and Therapeutic Medicine, 20: 2106-2112, June 17, 2020 https://doi.org/10.3892/etm.2020.8898 (**Q3**, 2019 IF=1.785, 103/138, Medicine, Research & Experimental)
9. Zhang HW, Lv L, Sun WJ, Niu WX, Wong DWC, Ni M*, **Ming Zhang**. 2020, Biomechanical analysis of minimally invasive crossing screw fixation for calcaneal fractures: implications to early weight-bearing rehabilitation. Clinical Biomechanics DOI: 10.1016/j.clinbiomech.2020.105143. (**Q3**, 2019 IF=1.624, 64/87 Engineering, biomedical)
10. Meng ZJ, Wong DWC, **Zhang M**, Leung AKL, 2020. Analysis of Compression/Release Stabilized Transfemoral Prosthetic Socket by the Finite Element Modeling Method. Medical Engineering & Physics. DOI: 10.1016/j.medengphy.2020.05.007. (**Q3**, 2019 IF=1.737, 62/87 Engineering, biomedical)
11. Xu Z, Wong DWC, Yan F, Chen TLW, **Zhang M***, Jiang WT*, Fan YB, Lower Limb Inter-Joint Coordination of Unilateral Transfemoral Amputees: Implications for Adaptation Control, Appl. Sci. 2020, 10, 4072; doi:10.3390/app10124072 (**Q2**, 2019 IF=2.474, 32/91 Engineering, multidisciplinary)
12. Wong DWC, Lam WK, Chen TKW, Tan Q, Wang Y, **Zhang M***, 2020. Effect of upper-limb, lower-limb, and full-body compression garments on full body kinematics and free-throw accuracy in basketball players. Appl. Sci. 2020, 10, 3504; doi:10.3390/app10103504 (**Q2**, 2019 IF=2.474, 32/91 Engineering, multidisciplinary)

13. Tan Q, Wang Y, Chen TLW, Wong DWC, Yan F, Li Z, **Zhang M***, 2020. Exercise-induced hemodynamic change in muscle tissue: Implication to muscle fatigue. Appl. Sci. 2020, 10, 3512; doi:10.3390/app10103512 (**Q2**, 2019 IF=2.474, 32/91 Engineering, multidisciplinary)
14. Peng Y, Wong DWC, Wang Y, Chen TLW, Jin Z, **Zhang M***, 2020. Immediate effect of medially posted insoles on lower limb joint contact forces during walking in adult-acquired flatfoot. International Journal of Environmental Research and Public Health, 17: 2226. Int. J. Environ. Res. Public Health 2020, 17(7), 2226; https://doi.org/10.3390/ijerph17072226 (**Q2**, 2019 IF=2.849, 58/193 Public, Environmental & Occupational Health)
15. Yao Y, Wang LZ, Li J, Tian S, **Zhang M**, Fan YB, A novel auxetic structure based bone screw design: Tensile mechanical characterization and pullout fixation strength evaluation, Materials and design, Volume 188, March 2020, 108424 (p1-11), https://doi.org/10.1016/j.matdes.2019.108424 (**Q1**, 2019 IF=6.289, 59/316 Material Science, Multidisciplinary)
16. **Zhang M**, Gong H, Translation of engineering to medicine: A focus on finite element analysis, Journal of Orthopaedic Translation, 2020 Volume: 20 Pages: 1-2 Special Issue: SI, Editorial Material. DOI: 10.1016/J.JOT.2019.12.001 (**Q1** top 10%, 2019 IF=3.986, 8/82 Orthopaedics)
17. Chen LW, Wong DWC, Wang Y, **Zhang M***, Prediction on the plantar fascia strain offload upon Fascia taping and Low-Dye taping during running, Journal of Orthopaedic Translation, Volume 20, January 2020, Pages 113-121 (**Q1** top 10%, 2019 IF=3.986, 8/82 Orthopaedics)

2019

18. 王岩，张明*. 足踝矫形器及其生物力学研究进展[J]. 科技导报，2019, 37(22): 60-68; doi:10.3981/j.issn.1000-7857.2019.22.007
19. Ni M, Wong DWC, Niu WX, Wang Y, Mei J, **Zhang M***, Biomechanical Comparison of Modified Calcanail System with Plating Fixation in Intra-articular Calcaneal Fracture: A Finite Element Analysis, Med Eng Phys, 2019, 70 (Aug), 55-61 (**Q3**, 2019 IF=1.737, 62/87 Engineering, Biomedical)
20. Xie H, **Zhang M**, Huo CC, Xu GC, Li ZY, Fan YB, Tai Chi Chuan exercise related change in brain function as assessed by functional near–infrared spectroscopy, Scientific Reports, 9:13198 (2019), DOI: 10.1038/s41598-019-49401-9 (**Q1**, 2019 IF=3.998, 17/71 Multidisciplinary Sciences)
21. Wang Y, Wong DWC, Tan QT, Li ZY, **Zhang M***, Total ankle arthroplasty and ankle arthrodesis affect the biomechanics of the inner foot differently, Scientific Report, 9: 13334 (2019) (**Q1**, 2019 IF=3.998, 17/71 Multidisciplinary Sciences)
22. Zhang M, Gong H, Zhang K, **Zhang M**, Prediction of lumbar vertebral strength of elderly men based on quantitative computed tomography images using machine learning, Osteoporosis International, 2019 Aug, 30(12): 2271-82. 10.1007/s00198-019-05117-0 (**Q2**, 2019 IF=3.864, 44/143, Endocrinology & Metabolism)
23. Ji XL Yan YF, Sun T, Zhang Q, Wang YX, **Zhang M**, Zhang HY*, Zhao X*, Glucosamine sulphate-loaded distearoyl phosphocholine liposomes for osteoarthritis treatment: combination of sustained drug release and improved lubrication, Biomater. Sci., 2019,7, 2716-2728 https://doi.org/10.1039/C9BM00201D (**Q1**, 2019 IF=6.183, 6/38 Materials Science, Biomaterials)
24. Wang K, Wang LJ, Deng Z, Jiang CH, Niu WX, **Zhang M**, Influence of passive elements on prediction of intradiscal pressure and muscle activation in lumbar musculoskeletal models, Computer methods and Programs in Biomedicine, 2019, May 177, 39-46 doi.org/**10.1016/J.CMPB.2019.05.018** (**Q1**, 2019 IF=3.632, 16/108 Computer Science, Interdisciplinary Application)
25. Chen TLW, Agresta CE, Lipps DB, Provenzano SG, Hafer JF, Wong DWC, **Zhang M***, Zernicke RF, Ultrasound elastographic assessment of plantar fascia in runners using rearfoot strike and forefoot strike, Journal of Biomechanics 2019, 89, 65-71 (**Q3**, 2019 IF=2.32, 48/87 Engineering, biomedical)
26. Chen TLW, Wong DWC, Wang Y, **Zhang M***. Foot arch deformation and plantar fascia loading during running with heel strike and forefoot strike: a dynamic finite element analysis. J Biomech. 2019 Jan 23;83:260-272. doi: 10.1016/j.jbiomech.2018.12.007 (**Q3**, 2019 IF=2.32, 48/87 Engineering, biomedical)

27. Wong DW, Wang Y, Lin J, Tan Q, Chen TL, **Zhang M***. 2019. Sleeping mattress determinants and evaluation: a biomechanical review and critique. PeerJ 7:e6364 https://doi.org/10.7717/peerj.6364 (**Q2**, 2019 IF=2.379, 32/71 Multidisciplinary Sciences)
28. Lee WCC, Leung AKL, **Zhang M**, Biomechanical approach in facilitating long-distance walking of healthy elderly people, Hong Kong Medical Journal, 2019, v 25, No Supp 2, Feb, 44-47

2018

29. Niu WX, Wang LJ, Jiang CH, **Zhang M**, Effect of dropping height on the forces of lower-extremity joints and muscles during landing: A musculosketetal modelling, Journal of Healthcare Engineering, Volume 2018 (2 July), Article ID 2632603, 8 pages, https://doi.org/10.1155/2018/2632603 (**Q3**, 2019 IF=1.803, 67/102 Health Care Sciences & Services)
30. Yan F, Jiang WT*, Xu Z, Wang QY, Fan YB, **Zhang M***, Developing transmission line equations of oxygen transport for predicting oxygen distribution in the arterial system, Scientific Reports Volume: 8 Published: Dec 2018, DOI: 10.1038/s41598-018-23743-2. (**Q1**, 2019 IF=3.998, 17/71 Multidisciplinary Sciences)
31. Huo CC, **Zhang M**, Bu LG, Xu GC， Liu Y， Li ZY， Sun LL， Effective Connectivity in Response to Posture Changes in Elderly Subjects as Assessed Using Functional Near-Infrared Spectroscopy， Frontiers in Human Neuroscience Volume: 12 Published: MAR 16 2018， DOI: 10.3389/fnhum.2018.00098 (**Q2**, 2019 IF=2.673, 24/77 Psychology)
32. Wang Y，Li ZY， Wong DWC, Cheng CK, **Zhang M***, Finite element analysis of biomechanical effects of total ankle arthroplasty on the foot, Journal of Orthopaedic Translation Volume: 12 Pages: 55-65 Published: JAN 2018, DOI: 10.1016/j.jot.2017.12.003 (**Q1 top 10%,** 2019 IF=3.986, 8/82 Orthopaedics)
33. Li DY, Liu XQ, Wang Y, Ni M, **Zhang M**, 2 4 式太极拳足踝关节主要运动方式分析, 河北体育学院学报(J of Hebei Sport University), V32(4)2018, July, p66-70
34. Wong DWC, Wang Y, Leung AKL, Yang M, **Zhang M***, Finite element simulation on posterior tibial tendinopathy: Load transfer alteration and implications to the onset of pes planus, Clinical Biomechanics, V51 Pages: 10-16 Published: JAN 2018, DOI: 10.1016/j.clinbiomech.2017.11.001 (**Q3**, 2019 IF=1.624, 64/87 Engineering, biomedical)
35. Chen TLW, Wong DWC, Xu Z, Tan QT, Wang Y, Luximon A, **Zhang M***, Lower limb muscle co-contraction and joint loading of flip-flops walking in male wearers, Plos One Volume: 13 Issue: 3 Published: MAR 21 2018, DOI: 10.1371/journal.pone.0193653 (**Q2**, 2019 IF=2.74, 27/71 Multidisciplinary Sciences)
36. Wei Y, Wang Y, **Zhang M**, Yan G, Wu S, Liu W, Ji G, Li-Tsang CWP, The application of 3D-printed transparent facemask for facial scar management and its biomechanical rationale. Burns Volume: 44 Issue: 2 Pages: 453-461 Published: MAR 2018 DOI: 10.1016/j.burns.2017.08.006 (**Q2**, 2019 IF=2.066, 91/210 Surgery)
37. Ni M, Mei J, Li K, Niu WX, **Zhang M**, The primary stability of different implants for intra-articular calcaneal fractures: an in vitro study, BioMed Eng OnLine (2018 May) DOI: 10.1186/s12938-018-0484-6 (**Q3,** 2019 IF=2.059, 56/87 Engineering Biomedical)

2017

38. Wong DWC, Wang Y, Chen TLW, Leung AKL, **Zhang M***, Biomechanical consequences of subtalar joint arthroereisis in treating posterior tibial tendon dysfunction: a theoretical analysis using finite element analysis, COMPUTER METHODS IN BIOMECHANICS AND BIOMEDICAL ENGINEERING, Volume: 20 Issue: 14 Pages: 1525-1532, DOI: 10.1080/10255842.2017.1382484 (**Q3**, 2019 IF=1.502, computer science, interdisciplinary app)
39. Xu GC, **Zhang M**, Wang Y, Liu ZA, Huo CC, Li ZY, Huo MY, Functional connectivity analysis of distracted drivers based on the wavelet phase coherence of functional near-infrared spectroscopy signals, PLOS ONE, Volume: 12 Issue: 11, Article Number: e0188329, DOI: 10.1371/journal.pone.0188329, Published: NOV 27 2017. (**Q2**, 2019 IF=2.74, 27/71 Multidisciplinary Sciences)

40. Liu Z, **Zhang M**, Xu GC, Huo CC, Tan QT, Li ZY, Yuan Q, Effective Connectivity Analysis of the Brain Network in Drivers during Actual Driving Using Near-Infrared Spectroscopy, FRONTIERS IN BEHAVIORAL NEUROSCIENCE, Volume: 11 Published: OCT 31 2017, DOI: 10.3389/fnbeh.2017.00211 (**Q2**, 2019 IF=2.512, 23/52 Behavioural Sciences)
41. Niu WX, **Zhang M**, Yao J, Wang LP, Siu KC, Biomechanics in Musculoskeletal Health, Journal of Healthcare Engineering, Volume 2017, Article ID 8916431, 2 pages, https://doi.org/10.1155/2017/8916431 (**Q3**, 2019 IF=1.803, 67/102 Health Care Sciences & Services)
42. Bu LG, **Zhang M,** Li JF, Li FY, Liu HS, Li ZY, Effects of Sleep Deprivation on Phase Synchronization as Assessed by Wavelet Phase Coherence Analysis of Prefrontal Tissue Oxyhemoglobin Signals, PLOS ONE, 2017, Volume 12(1), Article Number: e0169279, DOI: 10.1371/journal.pone.0169279, Published: JAN 3 2017 (**Q2**, 2019 IF=2.74, 27/71 Multidisciplinary Sciences)
43. Yan F, Jiang WT*, Dong RQ, Wang QY, Fan YB, **Zhang M***, Blood Flow and Oxygen Transport in Descending Branch of Lateral Femoral Circumflex Arteries After Transfemoral Amputation: A Numerical Study, J Med Biol Eng, 2017 Feb, 37(1): 63-73 (**Q4**, 2019 IF=1.173, 73/87 Engineering Biomedical)
44. Chen TLW, Wong DWC, Wang Y, Ren SC, Yan F, **Zhang M***, Biomechanics of fencing sport: A scoping review, PLOS ONE Volume: 12 Issue: 2 Published: FEB 10 2017, e0171578 (**Q2**, 2019 IF=2.74, 27/71 Multidisciplinary Sciences)
45. Wang SC, Wang LZ, Wang YW, Du CF, **Zhang M**, Fan YB, Biomechanical analysis of combining head-down tilt traction with vibration for different grades of degeneration of the lumbar spine, Medical Engineering & Physics 2017 (Jan), 39(1), 83-93. (**Q3**, 2019 IF=1.737, 62/87 Engineering, biomedical)
46. Zhang XS, Guo Y, An MW, **Zhang M**, Contact pressure measurement of the computer mouse and wrist during mouse operations by TekScan, 医用生物力学，Volume 32, Issue 5, 1 October 2017, Pages 469-475DOI: 10.16156/j.1004-7220.2017.05.014

2016

47. Sun J, Yan SH, Jiang Y, Wong DWC, **Zhang M**, Zeng JZ, Zhang K, Finite element analysis of the valgus knee joint of an obese child, Biomedical Engineering Online, Volume: 15, Supplement: 2, Article Number: 158, Published: DEC 28 2016. (**Q3**, 2019 IF=2.059, 56/87 Engineering Biomedical)
48. Ni M, Wong DWC, Mei J, Niu WX*, **Ming Zhang**, 2016. Biomechanical Comparison of Locking Plate, Crossing Metallic and Absorbable Screws Fixation for Intra-articular Calcaneal Fractures. Sci China Life Sci. 2016 Sep; 59(9):958-64 DOI: 10.1007/s11427-016-0010-9. (**Q1**, 2019 IF=4.611, 13/93 Biology)
49. 倪明, 黄伟志, 梅炯, 牛文鑫, **张明**, 2016. 锁定钢板、交叉金属螺钉和可吸收螺钉固定治疗 跟骨关节内骨折的生物力学比较。中国科学: 生命科学 46(6):756-762.
50. Yu J, Wong DWC, Zhang HT, Luo ZP, **Zhang M***, 2016. Influence of High-heeled Shoe on Strain and Tension Force of Anterior Talofibular Ligament and Plantar Fascia during Balanced Standing and Walking. Medical Engineering and Physics. 2016 Oct; 38(10): 1152-6 DOI: 10.1016/j.medengphy.2016.07.009 (**Q3**, 2019 IF=1.737, 62/87 Engineering, biomedical)
51. Martin N, Luximon Y, Ball R, **Zhang M**, Emerging the point clouds of head and ear using ICP, Int. J. of the Digital Human, 2016 Vol.1, No.3, 305 - 317
52. Wang BT, **Zhang M**, Bu LG, Xu LW，Wang W, Li ZY，Posture-related changes in brain functional connectivity as assessed by wavelet phase coherence of NIRS signals in elderly subjects，BEHAVIOURAL BRAIN RESEARCH Volume: 312 Pages: 238-245 Published: OCT 1 2016 (**Q2**, 2019 IF=2.977, 14/52 Behavioural Sciences)
53. Ren SC, Wong DWC, Yang H, Zhou Y, Lin J, **Zhang M***, 2016. Effect of Pillow Height on the Biomechanics of Head-neck Complex: Investigation on Crano-cervical Pressure and Cervical Spine Alignment. PeerJ 4: e2397, 2016 Aug 31, DOI: 10.7717/peerj.2397. (**Q2**, 2019 IF=2.379, 32/71 Multidisciplinary Sciences)

54. Kobayashi T, Orendurff MSm **Zhang M**, Boone D, Socket reaction moments in transtibial prostheses during walking at clinically perceived optimal alignment, PROSTHETICS AND ORTHOTICS INTERNATIONAL Volume: 40 Issue: 4 Pages: 503-508 Published: AUG 2016. (**Q3**, 2019 IF=1.363, 56/82 Orthopaedics)
55. Guo LX, Dong RC, **Zhang M**, Effect of lumbar support on seating comfort predicted by a whole human body-seat model, Source: INTERNATIONAL JOURNAL OF INDUSTRIAL ERGONOMICS 53: 319-327, MAY 2016, DOI: 10.1016/j.ergon.2016.03.004 **(Q3,** 2019 IF=1.662, 11/16 Ergonomics)
56. Guo LX, Li R, **Zhang M**, Biomechanical and fluid flowing characteristics of intervertebral disc of lumbar spine predicted by poroelastic finite element method, Acta of Bioengineering and Biomechanics 2016, Volume: 18 Issue: 2 Pages: 19-29, 2016 DOI: 10.5277/ABB-00406-2015-02 (**Q4**, 2019 IF=0.968, 80/87 Engineering Biomedical)
57. Ni M, Niu WX, Wong DWC, Zeng W, Mei J, **Zhang M**, Finite element analysis of locking plate and two types of intramedullary nails for treating mid-shaft clavicle fractures, Injury-International J of The Care of The Injury, Volume 47, Issue 8, August 2016, Pages 1618–1623, (**Q2**, 2019 IF=2.106, 35/87 Orthopaedics)
58. Wong DWC, Niu WX, Wang Y, **Zhang M*,** 2016. Finite Element Analysis of Foot and Ankle Impact Injury: Revaluation of Calcaneus and Talus Fracture. Plos One, 2016 Apr, 11(4): e0154435 (**Q2**, 2019 IF=2.74, 27/71 Multidisciplinary Sciences)
59. Gong H, Wang LZ, Fan YB, **Zhang M**, Qin L, Apparent- and Tissue-Level Yield Behaviors of L4 Vertebral Trabecular Bone and Their Associations with Microarchitectures, ANNALS OF BIOMEDICAL ENGINEERING 2016 (Apr), 44(4): 1204-1223 (**Q2**, 2019 IF=3.324, 30/87 Engineering Biomedical)
60. Niu WX, Feng TN, Wang LJ, Jiang CH, **Zhang M**, Effects of Prophylactic Ankle Supports on Vertical Ground Reaction Force during Landing: A Meta-Analysis, JOURNAL OF SPORTS SCIENCE AND MEDICINE, 15(1): 1-10 , MAR 2016 (**Q3**, 2019 IF=1.806, 51/85 Sports Sciences)
61. Liu X, Ouyang J, Fan YB, **Zhang M**, A Footwear–foot–knee Computational Platform to Explore Footwear Effects on Knee Joint Biomechanics, J Med and Biol Eng, 2016 (Apr), 36(2): 245-256. DOI: 10.1007/s40846-016-0126-z. (**Q4**, 2019 IF=1.173, 73/87 Engineering Biomedical)
62. Wan AH, Wong DW, Ma CZ, **Zhang M**, Lee WC, Wearable vibrotactile biofeedback device allowing identification of different floor conditions for lower-limb amputees, Archives of Physical Medicine and Rehabilitation, 27(7) 2016 July, 1210-1213. (**Q1**, 2019 IF=3.098, 9/68 Rehabilitation)
63. Wang Y; Wong DWC, **Zhang M***, Computational models of the foot and ankle for pathomechanics and clinical applications - A review, Annals of Biomedical Engineering, 44(1), 2016, pp. 213–221. (**Q2**, 2019 IF=3.324, 30/87 Engineering Biomedical)
64. TAN QT, **Zhang M**, Yi Wang; Manyu Zhang; Bitian Wang; Qing Xin; Age-related alterations in phase synchronization of oxyhemoglobin concentration changes in prefrontal tissues as measured by near-infrared spectroscopy signals, Microvascular Research, 2016 (Jan), 103: 19-25, DOI: **10.1016/j.mvr.2015.10.002 (Q2, 2019 IF=2.73, 28/65 peripheral Vascular Disease)**

2015

65. 周嘉骏;张洪涛;罗宗平;张明;余嘉, 高跟鞋与足部跖间应力关系的有限元分析, 医用生物力学, 06 期, pp 506-509, 2015/12/15.
66. Shi H, Yu T, Li Z, Lu W, **Zhang M***, Ye JD*, Bone regeneration strategy inspired by the study of calcification behavior in deer antler, Materials Science & Engineering C, Materials for Biological Applications, 2015 Dec, 57: 67-76 (**Q1**, 2019 IF=5.88, 7/38 Material Science, Biomaterials)
67. Wong DWC, Wang Y, **Zhang M**, Leung AKL, Functional Restoration and Risk of Non-union of the First Metatarsocuneiform Arthrodesis for Hallux Valgus: A Finite Element Approach. Journal of Biomechanics, 2015 48(12): 3142-3148. DOI: 10.1016/j.jbiomech.2015.07.013. (**Q3**, 2019 IF=2.32, 48/87 Engineering, Biomedical)

68. Dong RQ, Jiang WT, **Zhang M**, Leung A, Wong MS, Review: hemodynamics studies for lower limb amputation and rehabilitation, J Mech Med Biol, 2015, Vol 15(4) Aug, 1530005: 1-11 (**Q4**, 2019 IF=1.173, 73/87 Engineering Biomedical)
69. Wang Y, Li ZY, Wong DWC, **Zhang M***, Effects of Ankle Arthrodesis on Biomechanical Performance of the Entire Foot, Plos One, July 2015, e0134340 (**Q2**, 2019 IF=2.74, 27/71 Multidisciplinary Sciences)
70. Luximon Y, Cong Y, Luximon A, Zhang **M**, Effects of heel base size, walking speed, and slope angle on center of pressure trajectory and plantar pressure when wearing high-heeled shoes, Human Movement Science, 2015 (June), 14: 307–319 (**Q2**, 2019 IF=2.096, 39/87 Sport Sciences)
71. Tan QT, **Zhang M**, Wang Y, Zhang MY, Wang Y, Xin Q, Wang BT, Li ZY, Frequency-specific functional connectivity revealed by wavelet-based coherence analysis in elderly subjects with cerebral infarction using NIRS method, Medical Physics, 2015, 42(9), Sept, 5391-5403 **(Q1**, 2019 IF=3.17, 33/133 Radiology, Nuclear Medicine & medical Imaging)
72. Liu X, **Zhang M**, Fan YB, The Biomechanical Responses of Knee Joint to Foot Supports: Computational Simulation of the Lower Limb, World J of Complex Medicine (世界复合医学), 2015, March, 1(1), 53-57

    刘璇、*张明、樊瑜波, 膝关节对于足底支撑的生物力学响应：人体下肢计算机仿真, 世界复合医学, 1(1), pp 53-57, 2015/3/3.期刊论文
73. Mo ZJ, Zhao YB, Du CF, Sun Y, **Zhang M***, Fan YB*, Does location of rotation center in artificial disc affect cervical biomechanics? Spine, 2015, 40(8) April, E469-E475 (**Q2**, 2019 IF=2.646, 25/87 Orthopaedics)
74. Qin L*, Pan Y, **Zhang M***, Xu M, Lao HC, O'Laughlin MC, Tong S, Zhao YL, Hung VWY, Cheng JCY, Guo X*. Lifelong bound feet in China: a quantitative ultrasound and lifestyle questionnaire study in postmenopausal women, BMJ Open 2015, 5: e006521. doi:10.1136/bmjopen-2014-006521 (joint Correspondence author) (**Q2**, 2019 IF=2.496, 53/165 Medicine, General & Internal)
75. Niu WX, Yao J, Chu ZW, Jiang CH, **Zhang M**, Fan YB, Effects of Ankle Eversion, Limb Laterality and Ankle Stabilizers on the Transient Postural Stability of Unipedal Standing, Journal of Medical and Biological Engineering, 2015, 35: 69-75 (**Q4**, 2019 IF=1.173, 73/87 Engineering Biomedical)
76. Li WH, **Zhang M**, Lv GM, Han QY, Gao YJ, Wang Y, Tan QT, Zhang MY, Zhang YX, Li ZY, Biomechanical response of the musculoskeletal system to whole body vibration using a seated driver model, Int J Ind Ergonomics 2015, 45: 91-97 **(Q3,** 2019 IF=1.662, 11/16 Ergonomics)
77. Gao YJ, Zhang **M**, Han QY, Li WH, Xin Q, Wang Y, Li ZY, Cerebral autoregulation in response to posture change in elderly subjects-assessment by wavelet phase coherence analysis of cerebral tissue oxyhemoglobin concentrations and arterial blood pressure signals, Behavioural Brain Research, 278 (2015) 330–336 (**Q2**, 2019 IF=2.977, 14/52 Behavioural Sciences)

2014

78. Niu WX, Feng TN, Jiang CH, **Zhang M**, Peak vertical ground reaction force during two-leg landing: A systematic review and mathematical modeling, BioMed Research International, 2014, Article Number: 126860, DOI: 10.1155/2014/126860 (**Q3**, 2019 IF=2.276, 96/156 Biotechnology & Applied Microbilogy)
79. Niu WX, Tang TT, **Zhang M**, Fan YB, An in vitro and finite element study of load redistribution in the midfoot, Science China- Life sciences, 2014, vol 57(12), 1191-1196 (**Q1**, 2019 IF=4.611, 13/93 Biology)
80. Cong Y, Lam G, Cheung JTM, **Zhang M***, In-shoe plantar tri-axial stress profiles during maximum-effort cutting maneuvers, Journal of Biomechanics, 2014, 47(16) Dec, 3799-3806. (**Q3**, 2019 IF=2.32, 48/87 Engineering, Biomedical)
81. Wong DWC, **Zhang M**, Leung AKL, Biomechanics of First Ray Hypermobility: An Investigation on Joint Force during Walking Using Finite Element Analysis, Med Eng Phys, 2014, 39(11): 1388-1393. (**Q3**, 2019 IF=1.737, 62/87 Engineering, Biomedical)
82. Han QY, **Zhang M**, Li WH, Gao YJ, Xin Q, Wang Y, Li ZY, Wavelet coherence analysis of prefrontal tissue oxyhaemoglobin signals as measured using near-infrared spectroscopy in elderly

subjects with cerebral infarction. Microvascular Research, 2014, 95: 108-115 (**Q2**, 2019 IF=2.73, 28/65 peripheral Vascular Disease)

83. Wang Y, Li ZY, **Zhang M***, Biomechanical Study of Tarsometatarsal Joint Fusion Using Finite Element Analysis, Med Eng Phys, 2014, 36(11): 1394-1400. (**Q2**, 2019 IF=3.324, 30/87 Engineering Biomedical)
84. Yu T, Gao CY, Ye JD, **Zhang M***, Synthesis and Characterization of a Novel Silver-Substituted Calcium Phosphate Cement, J. Mater. Sci. Technol., 2014, 30(7), 686-691 (**Q1 top 10%,** 2019 IF=6.155, 4/79 Matallurgy & Metallugical Engineering)
85. Kobayashi T, Orendurff MS, **Zhang M**, Boone DA, Individual responses to alignment perturbations in socket reaction moments while walking in transtibial prostheses, Clin Biomech, 2014, 29(5, May): 590-4 (**Q3**, 2019 IF=1.624, 64/87 Engineering, Biomedical)
86. Yao J, Wen CY, **Zhang M**, Cheung JT, Yan C, Chiu KY, Lu WW, Fan YB, Effect of Tibial Drill-guide Angle on Mechanical Environment at Bone Tunnel Aperture after Anatomic Single-bundle Anterior Cruciate Ligament Reconstruction, International Orthopaedics, 2014, 38(5 May): 973-981. (**Q1**, 2019 IF=2.854, 19/82 Orthopaedics)
87. Yao J, Kuang GM, Wong DWC, Niu WX, **Zhang M**, Fan YB, Influence of screw length and diameter on tibial strain energy density distribution after anterior cruciate ligament reconstruction, Acta Mechanica Sinica, 2014, 30(2) April: 241-249 (**Q4**)
88. Li ZY, **Zhang M**, Cui RF, Xin Q, Lu LQ, Zhou W, Han QY, Gao YJ, Wavelet coherence analysis of prefrontal oxygenation signals in elderly subjects with hypertension, Physiological Measurement, 2014, 35(5): 777-791 (**Q3**, 2019 IF=2.309, 43/81 Biophysics)
89. Cui RF, **Zhang M**, Li ZY, Xin Q, Lu LQ, Zhou WW, Han, QY, Gao YJ, Wavelet coherence analysis of spontaneous oscillations in cerebral tissue oxyhaemoglobin concentrations and arterial blood pressure in elderly subjects, Microvascular Research, 2014, 93(May): 14-20 (**Q2**, 2019 IF=2.73, 28/65 peripheral Vascular Disease)
90. Luximon Y, Yu J and **Zhang M***, A Comparison of Metatarsal Pads on Pressure Redistribution in High Heeled Shoes, Research Journal of Textile and Apparel, Vol. 18, No. 2, pp.40-48 (2014) ISSN 1560-6074 (print)
91. Wang YX, **Zhang M***, Fan YB*, Comparison of Stress on Knee Cartilage during Kneeling and Standing Using Finite Element Models, Medical Engineering & Physics, 2014, 36(4) April, 439-447 (**Q2**, 2019 IF=3.324, 30/87 Engineering Biomedical)
92. Mo ZJ, Zhao YB, Wang LZ, Sun Y, **Zhang M**, Fan YB, Biomechanical effects of cervical arthroplasty with U-shaped disc implant on segmental range of motion and loading of surrounding soft tissue, Eur Spine J, 2014, 23(3): 613-21 (**Q2**, 2019 IF=2.458, 27/82 Orthopaedics)
93. Yu T, Liu X, JD Ye, **Zhang M***, Investigation of mechanical behavior of CPC/bone specimens by finite element analysis, Ceramics International, 2014, 40(2, March), 2933-42. (**Q1** Top 10%, 2019 IF=3.83, 2/28 Materials Sciences, Ceramics)

2013

94. Yeung LF, Leung AKL, **Zhang M**, Lee WCC, Effects of long-distance walking on socket-limb interface pressure, tactile sensitivity and subjective perceptions of trans-tibial amputees, Disability & Rehabilitation, 2013, 35(11), 888-93. (**Q1 Top 10%,** 2019 IF=2.222, 4/71 Rehabilitation)
95. Niu WX, Wang LJ, Feng TN, Jiang CH, Fan YB, **Zhang M**, Effects of bone Young's modulus on finite element analysis in the lateral ankle biomechanics, Applied Bionics and Biomechanics, 2013 (10): 189-195 (**Q4**, 2019 IF=1.141, 76/87 Engineering Biomedical)
96. Wang LZ, Niu XF, Ni YK, Xu Peng, Lu Shan, Liu XY, **Zhang M** and Fan YB, Effect of Microstructure of Spongy bone on Different Parts of Woodpeckers' Skull on Resist-Impact Injury, Journal of Nanomaterials, 2013, Article ID 924564, 6 pages (**Q3**, 2019 IF=1.98, 200/314 Materials Science, Multidisciplinary)
97. Yu T, Gao CY, Ye JD, **Zhang M**, Synthesis and characterization of a novel silver doped calcium phosphate cement, Journal of Materials Science & Technology, 2013, 96(6): 1944-1950 (**Q1 Top 10%,** 2019 IF=6.155, 4/79 Metallurgy & Metallurgical Engineering)

98. Yu J, Cheung JTM, Wong DWC, Cong Y, **Zhang M***, Biomechanical simulation of high-heeled shoe donning and walking, J Biomech, 2013, 46(12) Aug: 2067-74 (**Q3**, 2019 IF=2.32, 48/87 Engineering, Biomedical)
99. Niu WX, **Zhang M**, Fan YB, Zhao QP. Dynamic postural stability for double-leg drop landing. Journal of Sports Sciences, 2013, 31(10) Jul, 1074-81. (Q2, 2019 IF=2.687, 27/85 Sports Science)
100. Wang, LZ, Lu S, Liu, XY, Niu, XF, Wang, C, Ni, YK, Zhao, MY, Feng, CL, **Zhang, M**, Fan, YB, Biomechanism of impact resistance in the woodpecker's head and its application, SCIENCE CHINA-LIFE SCIENCES, 2013, 56(8): 715-719 (**Q1,** 2019 IF=4.611, 13/93 Biology)
101. Yeung LF, Leung AKL, **Zhang M**, Lee WCC, Effects of heel lifting on trans-tibial amputee gait before and after treadmill walking: a case study, Prosthetics and Orthotics International 2013, 37(4) Aug, 317–323 (**Q3**, 2019 IF=1.363, 56/82 Orthopaedics)
102. Li ZY, **Zhang M**, Xin Q, Zhou WW, Cui RF, Lu LQ, Assessment of cerebral oxygenation oscillations in subjects with hypertension, Microvascular Research, 2013, 88(Jul), 32-41. (**Q2**, 2019 IF=2.73, 28/65 peripheral Vascular Disease)
103. Yu T, Ye JD, **Zhang M***, Effect of Magnesium Doping on Hydration Morphology and Mechanical Property of Calcium Phosphate Cement Under Non-Calcined Synthesis Condition, J. Am. Ceram. Soc., 2013, 96 (6), 1944–1950 (**Q1**, 2019 IF=3.502, 3/28 Materials Science , Ceramics)
104. Li ZY, **Zhang M**, Xin Q, Luo ST, Cui RF, Zhou W, Lu LQ, Age-related changes in spontaneous oscillations assessed by wavelet transform of cerebral oxygenation and arterial blood pressure signals, Journal of Cerebral Blood Flow & Metabolism, 2013, 33(5) May: 692–699. (**Q1**, 2019 IF=5.681, 13/76 Hematology)
105. Kobayashi T, Orendurff MS, **Zhang M**, Boone D, Effect of alignment changes on sagittal and coronal socket reaction moment interactions in transtibial prostheses, J Biomechanics, 2013, 46(7) Apr, 1343-1350. (**Q3**, 2019 IF=2.32, 48/87 Engineering, Biomedical)
106. Boone D, Kobayashi T, Chou TG, Arabian AK, Coleman KL, Orendurff MS, **Zhang M**, Influence of malalignment on socket reaction moments during gait in amputees with transtibial prostheses, Gait and Posture, 2013 Apr; 37(4):620-6 (**Q2**, 2019 IF=2.349, 29/82 Orthopaedics)
107. Pang MYC, **Zhang M**, Li LSW, Jones AYM, Changes in bone density and geometry of the radius in chronic stroke and related factors: a one-year prospective study, Journal of Musculoskeletal and Neuronal Interactions, 2013, 13(1), 77-88. (**Q4**, 2019 IF=1.660, 62/81, Physiology)
108. Liu X, **Zhang M***, Redistribution of knee stress using laterally wedged insole intervention: finite element analysis of knee–ankle–foot complex. Clinical Biomechanics, 2013, 28 (1): 61-67, (**Q3**, 2019 IF=1.624, 64/87 Engineering, biomedical)
109. Zhang HQ, **Zhang M**, Fu LW, Cheng YN, Synthesis and structural characterization of Zinc and Magnesium doped hydroxyapatite, Key Engineering Materials 2013, 531-532, 250-253

2012

110. Kobayashi T, Orendurff M, **Zhang M**, Boone D, Effect of transtibial prosthesis alignment changes on out-of-plane socket reaction moments during walking in amputees, J Biomechanics, 2012, 45(15): 2603-09 (**Q3**, 2019 IF=2.32, 48/87 Engineering, Biomedical)
111. Niu WX, Chu ZW, Yao J, **Zhang M**, Fan YB, & Zhao QP. Effects of laterality, ankle inversion and stabilizers on the plantar pressure distribution during unipedal standing. Journal of Mechanics in Medicine and Biology, 2012, 12(3), 1250055 (15 pages) (**Q4**, 2017 IF=0.859)
112. Boone D, Kobayashi T, Chou TG, Coleman AK, Orendurff MB, **Zhang M,** Perception of socket alignment perturbations in amputees with transtibial prostheses, J Rehab Res Dev, 2012, 49(6), 843-54. (**Q4**)
113. Li ZY, **Zhang M**, Chen GQ, Luo SL, Liu FF, Li JY, Wavelet analysis of lumbar muscle oxygenation signals during whole body vibration - implications for the development of localized muscle fatigue, European Journal of Applied Physiology, 112(8): 3109-3117, 2012 Aug (**Q2**, 2019 IF=2.58, 28/85 Sports Science)
114. Gong H, **Zhang M***, Fan YB, Kwok WL, Leung PC, Relationships between femoral strength evaluated by nonlinear finite element analysis and BMD, material distribution and geometric

morphology, Ann Biomed Eng, 2012, vol 40(7) July, 1575-85. (**Q2**, 2019 IF=3.324, 30/87 Engineering Biomedical)

115. Yao J, Wen CY, Cheung JTM, **Zhang M**, Hu Y, Yan CH, Chiu P, Lu WWJ, and Fan YB, Deterioration of Stress Distribution Due to Tunnel Creation in Single-Bundle and Double-Bundle Anterior Cruciate Ligament Reconstructions, Ann Biomed Eng, 2012, vol 40(7) July, 1554-67. (**Q2**, 2019 IF=3.324, 30/87 Engineering Biomedical)
116. Luo ST, Li ZY, **Zhang M**, Chen GQ, Detection and Analysis of Alcohol Near-Infrared Spectrum in Vitro and Vivo Based on Wavelet Transform, 光谱学与光谱分析 Spectroscopy and Spectral Analysis, 2012, Vol 32(6) June, 1541-6 (**Q4**)
117. Zhang YF, Luximon A, Pattanayak AK, **Zhang M**, Shoe last design exploration and customization, Journal of the textile Institute, 2012, Vol 103 (5) May, 541-8.
118. Yang L, Gong H, **Zhang M***, Transmissibility of whole body vibration stimuli through human body in different standing postures, Journal of Mechanics in Medicine and Biology, 2012, 12(3), page1250047-1-14. (**Q4**, 2017 IF=0.859)
119. Li ZY, **Zhang M**, Xin Q, Chen GQ, Liu FF, Li JP, Spectral analysis of near-infrared spectroscopy signals measured from prefrontal lobe in subjects at risk for stroke, Medical Physics, 2012, 39(4), 2179-2185. (**Q1**, 2019 IF=3.17, 33/133 Radiology, Nuclear Medicine & medical Imaging)
120. Li ZY, **Zhang M**, Li JY, Xin Q, Chen GQ, Li JP, Liu FF, Spectral analysis of cerebral oxygenation responses to seated whole-body vibration in healthy men, Int J of Industrial Ergonomics, 2012, 42(2), 341-346. **(Q3,** 2019 IF=1.662, 11/16 Ergonomics)
121. Sun PD, Chen C, Wu CF, Zhao WD, **Zhang M**, Ouyang J, Assignment and verification on mechanical parameters of soft tissue in finite element analysis, J Medical Biomechanics (in Chinese), 2012, 27(1), 27-31.
122. Pang MYC, Yang FZH, Lau RWK, Li LSW, **Zhang M**, Changes in bone density and geometry of the upper extremities post-stroke: a case report. Physiotherapy Canada Journal, 2012;64(1):88-97
123. Yeung LF, Leung AKL, **Zhang M**, Lee WCC. Long-distance walking effect on below-knee amputee compensatory gait patterns. Gait & Posture, 2012, 35(2), 328-333 (**Q2,** 2019 IF=2.349, 29/82 Orthopaedics)
124. Lin, YL, Choi KF, **Zhang M**, Li, Y. Luximon A, Yao L, Hu JY, An optimized design of compression sportswear fabric using numerical simulation and the response surface method, Textile Research Journal, 2012, 82(2), 108-116. (**Q1**, 2019 IF=1.926, 5/24 Materials Science, Textiles)
125. Luximon Y, Luximon A, Yu J, **Zhang M***, Biomechanical Evaluation of Heel Elevation on Load Transfer - Experimental Measurement and Finite Element Analysis, Acta Mechanica Sinica, 2012, 28(1), 232-240. (**Q4**)

2011

126. Cong Y, WCC Lee, **Zhang M***, Regional plantar foot pressure distributions on high-heeled shoes--shank curve effects, Acta Mechanica Sinica, 2011, 27(6, Dec), 1091-1097 (**Q4**)
127. Niu WX, Wang Y, Yao J, **Zhang M**, Fan YB, & Zhao QP. Consideration of Gender Differences in Ankle Stabilizer Selection for Half-Squat Parachute Landing. Aviation, Space, and Environmental Medicine, Vol 82 (12), December, 2011, 1118-1124 (**Q4**)
128. Wang LZ, Cheung JTM, Pu F, Li DY, **Zhang M***, Fan YB*, Why do Woodpeckers Resist Head Impact Injury: A Biomechanical Investigation, Plos One, 2011, Oct 6(10), e26490, doi:10.1371/journal.pone.0026490. (**Q2**, 2019 IF=2.74, 27/71 Multidisciplinary Sciences)
129. Li ZY, **Zhang M**, Xin Q, Li JY, Chen GQ, liu FF, Li JP Correlation analysis between prefrontal oxygenation oscillations and cerebral artery hemodynamics in Humans, Microvascular Research, 2011, 82, 304-310. (**Q2**, 2019 IF=2.73, 28/65 peripheral Vascular Disease)
130. Guo LX, Zhang YM, **Zhang M**, Finite element modeling and modal analysis of the human spine vibration configuration, IEEE Trans Biomed Eng, 2011, 58, 2987-90 (**Q1**, 2019 IF=4.424, 14/87 Engineering Biomedical)
131. **Zhang M**, Fan YB, Wang XT, Biomechanics in Rehabilitation Engineering, J Med Biomechan, 2011, 26(4), 291-293 (in Chinese)

132.Huang M, **Zhang M***, Leung, A, Effects of wedged insoles on knee loading using gait analysis, J Med Biomechan, 2011, 26(4), 294-298 (in Chinese)
133.Cong Y, Cheung JTM, Leung AKL, **Zhang M***, Effect of Heel Height on In-Shoe Localized Triaxial Stresses, J Biomech, 2011, 44(12), 2267-2272. (**Q3**, 2019 IF=2.32, 48/87 Engineering, Biomedical)
134.Gong H, **Zhang M***, Fan YB, Micro-finite element analysis of trabecular bone yield behavior - effects of tissue non-linear material properties, Journal of Mechanics in Medicine and Biology, 2011, 11(3): 563-80 (**Q4**, 2017 IF=0.859)
135.**Zhang M**, Fan YB, Application of biomechanics in rehabilitation engineering, Int Rehabil Eng & Devices (世界康复工程与器械), 2011 July Vol 1(1): 74-78.
136.Zhang HQ, **Zhang M***, Characterization and thermal behaviour of calcium deficient hydroxyapatite whiskers with various Ca/P ratios, Materials Chemistry and Physics, 2011, Vol 126, 642-648.(**Q2**, 2019 IF=3.408, 115/314 Materials Science Multidisciplinary)
137.Li Z, **Zhang M**, Wang Y, Wang YH, Xin Q, Li JP, Lu CH, Wavelet Analysis of Sacral Tissue Oxygenation Oscillations by Near-infrared Spectroscopy in Persons with Spinal Cord Injury, Microvascular Research, 2011, 81(1): 81-7. (**Q2**, 2019 IF=2.73, 28/65 peripheral Vascular Disease)
138.Zhang HQ, **Zhang M***, Phase and thermal stability of Hydroxyapatite whiskers precipitated using amine Additives, Ceramics International, 2011, 37(1): 279-286 (**Q1** Top 10%, 2019 IF=3.83, 2/28 Materials Sciences, Ceramics)

2010

139.Gong H, Zhu D, **Zhang M**, Zhang XZ, Computational model for the underlying mechanisms regulating bone loss by mechanical unloading and estrogen deficiency, Tsinghua Science and Technology, 2010, 15(5): Oct 540-6. (**Q3**, IF=1.328, 68/108 Computer Science, Software Eng)
140.Guo X, Liu MQ, Man HC, Wang XY, Mu JJ, Li YZ, Feng JS, Shi SQ, **Zhang M**, Laser acupuncture and prevention of bone loss in tail-suspended rats, Aviation, Space, and Environmental Medicine 2010;81(10):914-8 (**Q4**)
141.Zhang HQ, and **Zhang M***, Effect of surface treatment of hydroxyapatite whiskers on the mechanical properties of bis-GMA-based composites, Biomed Mater., 5(7), 1-7, 2010 (**Q2**, 2019 IF=3/174, 31/87 Engineering Biomedical)
142.Mak AFT, **Zhang M,** Tam EWC, Biomechanics of pressure ulcer in body tissues interacting with external forces during locomotion, Annual Review of Biomedical Engineering, Vol 12 (1): 29-53 2010 July. (**Q1 Top 5%**, 2019 IF=15.542, 2/87 Engineering, Biomedical)
143.Gong H, **Zhang M***, A Computational Model for Cortical Endosteal Surface Remodeling Induced by Mechanical Disuse, Molecular and Cellular Biomechanics, 2010, Vol. 7, No. 1, pp. 1-12
144.Yao J, Fan YB, Zhang M, Li DY, Gong H, 前交叉韧带损伤的继发性生物力学影响, 力学学报，01 期， 2010/1/18.

2009

145.Chen W, Pu F, Li DY, Fan YB, **Zhang M**, Effect of different partial foot amputation levels on gait, J of Medical Biomechanics (in Chinese), 2009, Oct 24(5), 374-8
146.Ma C, **Zhang M**, Zhang CL, Analysis of joint reaction forces of human body with standing posture, J Beijing Institute of Technology, 2009, 18(4), 437-442.
147.Ma C, Yang JX, Li ZX, Zhang CL, **Zhang M**, Tan C, Transmissibility of swing and vertical vibrations in human lower limb, Beijing Biomedical Engineering (Chinese), 2009, 28(6) Dec, 638-642.
148.Guo LX, **Zhang M**, Li JL, et al., Influence prediction of tissue injury on frequency variations of the lumbar spine under vibration, OMICS- A Journal of Integrative Biology, 2009, 13(6), 521-526. (**Q3**, 2019 IF=2.507, 77/156 Biotechnology & Applied Microbilogy)
149.Li ZY, **Zhang M**, Zhang XY, Dai SX , Yu XX, Wang Y, Assessment of cerebral oxygenation during prolonged simulated driving using near infrared spectroscopy: its implications for the development of fatigue, European Journal of Applied Physiology, 2009, 107: 281-287 (**Q2**, 2019 IF=2.58, 28/85 Sports Science)
150.Cheung JTM, Yu J, Wong DWC, **Zhang M***, Current methods in computer-aided engineering for footwear design, Footwear Sciences, 2009, 1(1), 31-46

151.Fan YB, Xiu KH, Dong X, **Zhang M**, The influence of mechanical loading on osseointegration: an animal experiment, Science in China Series C-Life Sciences, 2009, 52(6):579-86 (**Q1**, 2019 IF=4.611, 13/93 Biology)

152.Cheung JTM, Yu J and **Zhang M***, Review of computational models for footwear design and evaluation, Korean Journal of Sports Biomechanics, 2009, 19(1), 13-25.

153.Guo LX, **Zhang M**, YM Zhang Teo EC, Vibration modes of injured spine at resonant frequencies under vibration, Spine, 2009, 34(19), E682-E688 (**Q2**, 2019 IF=2.458, 25/82 Orthopaedics)

154.Gong H, Yubo Fan, **Zhang M***, Qin L. Age and Direction-related Adaptations of Lumbar Vertebral Trabecular Bone with respect to Apparent Stiffness and Tissue Level Stress Distribution. Acta Mechanica Sinica, 2009. 25(2), 121-129. (**Q4**)

155.Tan C, Ma C, Li ZL, Ke Z, Gong H, **Zhang M**, Chen SG, 45Hz 全身振动预防尾吊模型大鼠骨质丢失的研究, 中国康复医学杂志， 03 期， 2009/3/15.

156.Fan YB, Xiu KH, Dong X, **Zhang M**, 力学载荷对骨整合影响的动物实验研究, 中国科学 C 辑:生命科学， 03 期， 2009/3/15

2008

157.Jia XH, Wang RC**, Zhang M**, Li XB, Influence of Prosthetic Sagittal Alignment on Trans-Tibial Amputee Gait and Compensating Pattern: A Case Study, Tsinghua Science & Technology, 2008, 13 (5), Oct, 581-6. (**Q3**, IF=1.328, 68/108 Computer Science, Software Eng)

158.**Zhang M**, Cheng CK, Fan YB, Research and development in China, Clin Biomech, 2008, 23(S1), s1(**Q3**, 2019 IF=1.624, 64/87 Engineering, biomedical)

159.Lai PPK, Leung AKL, Li ANM, **Zhang M**, Three-dimensional gait analysis of obese adults, Clin Biomech 2008, 23(S1), S2-26 (**Q3**, 2019 IF=1.624, 64/87 Engineering, biomedical)

160.Fan YB, Xiu KH, H. Duan, **Zhang M**, Biomechanical and Histological Evaluation on the Feasible Application of Bioresorbable Poly-L-Lactic cushion to the Plate Internal Fixation for fracture healing, Clin Biomech, 2008, 23(S1), s7-s16. (**Q3**, 2019 IF=1.624, 64/87 Engineering, biomedical)

161.Qian YL, Fan YB, Liu Z, **Zhang M**, Numerical simulation on tooth movement in a therapy period, Clin Biomech, 2008, 23(S1), s48-s52. (**Q3**, 2019 IF=1.624, 64/87 Engineering, biomedical)

162.Yu J, Cheung JTM, Fan YB, Zhang Y, Leung AKL, **Zhang M***, Development of a finite element model of female foot for high-heeled shoe design, Clin Biomech, 2008, 23(S1), s31-s38 (**Q3**, 2019 IF=1.624, 64/87 Engineering, biomedical) .

163.Gong H, Fan YB, **Zhang M***, Numerical simulation on the adaptation of forms in trabecular bone to mechanical disuse and basic multi-cellular unit activation threshold at menopause, Acta Mechanica Sinica, 2008, 24(2): 207-214. (**Q4**)

164.Cheung JTM, **Zhang M***, Parametrical design of pressure-relieving foot orthoses using statistical-based finite element method, *Med Eng Phys*, 2008, 30(2), 269-277. (**Q3**, 2019 IF=1.737, 62/87 Engineering, biomedical)

165.Yu J and **Zhang M***, Three dimensional finite element analysis of foot and its orthopaedic application, Chinese J Orthop and Traum, 2008, 10(2): 113-115

166.Guo LX, **Zhang M**, Wang ZW, Zhang YM, Wen BC, Li JL, Influence of anteroposterior shifting of trunk mass centroid on vibrational configuration of human spine, Computers in Biology and Medicine 2008, 38(1): 146-151. (**Q1**, 2019 IF=3.434, 8/59 mathematics & Computational Biology)

2007

167.**Zhang M**, Cheung JTM, Yu J, Fan YB, Three-dimensional finite element modeling of the human foot and its biomechanical applications, J Med Biomechanics (Chinese), 2007, 22(4): 339-345.

168.Gong H, **Zhang M***, Qin L, Hou Y, Regional variation in the Apparent and Tissue-Level Mechanical parameters of Vertebral Trabecular bone with aging using mico-finite element analysis, Annals Biomed Eng, 2007, Vol 35(9), Sept. 1622-1631. (**Q2**, 2019 IF=3.324, 30/87 Engineering Biomedical)

169.Lee WCC and **Zhang M***, Using computational simulation to aid in the prediction of socket fit: A preliminary study, *Med Eng Phys* 2007, 29 (8) Oct: 923-9. (**Q3**, 2019 IF=1.737, 62/87 Engineering, Biomedical)

170.Guo LX, **Zhang M**, Teo EC, Influences of denucleation on contact force of facet joints under whole body vibration, Ergonomics, 50(7), 967-978, 2007 (**Q2**, 2019 IF=2.19, 38/77 Psychology)

171.Fan YB, Qian YL, Liu Z and **Zhang M**, Numerical simulation of tooth movement in a therapy period, J of Medical Biomechanics, Vol 22 (June) p10-11, 2007

172.**Zhang M**, Yu J, Cheung JTM, Leung AK, Fan YB, Computational foot models for high-heeled shoe design, J of Medical Biomechanics, Vol 22 (June) p15-16, 2007

173.Gong H, **Zhang M**, Zhu D, Li R, 62 岁和 69 岁椎体松质骨表观弹性模量与骨量的关系, 清华大学学报(自然科学版)， 47(08)， pp 1393-1396， 2007

2006

174.Dou P, Jia XH, Suo SF, Wang RC, **Zhang M**, Pressure distribution at the stump/socket interface in transtibial amputees during walking on stairs, slope and non-flat road, Clin Biomech, 2006 21(10), Dec, 1067-1073. (**Q3**, 2019 IF=1.624, 64/87 Engineering, Biomedical)

175.Cheung JTM, **Zhang M***, Finite element and cadaveric simulations of the muscular dysfunction of weightbearing foot, HKIE Transactions 2006 Dec, 13(4): 8-15.

176.Lee WCC, **Zhang M***, Fatigue Test of Low-Cost Flexible-Shank Monolimb Trans-Tibial Prosthesis, *Porst Orthot Int*, 2006 Dec, 30(3): 305-315 (**Q3**, 2019 IF=1.363, 56/82 Orthopaedics)

177.Chen NZ, Lee WCC, **Zhang M*, A** Robust Design procedure for improvement of quality of lower-limb prosthesis, *Bio-medical Materials and Engineering*, 2006, 16(5), 309-18. (**Q4**, 2019 IF=1.243, 71/87 Engineering Biomedical)

178.Lee WCC, **Zhang M***, Chan P, Boone DA, Gait analysis of flexible-shank low-cost trans-tibial prosthesis, *IEEE Trans Neural Systems and Rehab Eng*, 2006, 14(3) Sept, 370-377. (**Q1 top 10%,** 2019 IF=3.34, 7/68 Rehabilitation)

179.Gong H, **Zhang M***, Zhang H, Zhu D, Yang L, Theoretical analysis of contributions of disuse, BMU activation threshold, and osteoblastic formation threshold to changes in BMD at menopause, Journal of Bone and Mineral Metabolism, 2006, 24(5) Sept: 386-394. (**Q3**, 2019 IF=2.297, 91/138 Medicine Research & Experiment)

180.**Zhang M***, Lee WCC, Quantifying regional load bearing ability of transtibial residual limbs, *Prosthetics Orthotics International*, 2006; 30(1): 25-34. (**Q3**, 2019 IF=1.363, 56/82 Orthopaedics)

181.Cheung JTM, **Zhang M***, A serrated jaw clamp for tendon gripping, *Med Eng Phys*, 2006, 28(4): 379-382. (**Q3**, 2019 IF=1.737, 62/87 Engineering, Biomedical)

182.Dai XQ, Li Y, **Zhang M**, Cheung JTM, Effect of Sock on biomechanical responses of foot during walking, *Clin Biomech*, 2006, 21(3), 314-321. (**Q3**, 2019 IF=1.624, 64/87 Engineering, Biomedical)

183.Chan CW , Qin L , Lee KM, **Zhang M** , Cheng JCY, Leung KS, Low intensity pulsed ultrasound accelerated bone remodeling during consolidation stage of distraction osteogenesis, *J of Orthopedic Research*, 2006, 24 (Feb): 263-270. (**Q2**, 2019 IF=2.728, 23/82 Orthopaedics)

184.Cheung JTM, An KN, **Zhang M*,** Biomechanical consequences of partial and total plantar fascia release – a finite element study, *Foot Ankle Int*., 2006, 27(2), Feb, 125-132, (**Q2**, 2019 IF=2.292. 31/82 Orthopaedics)

185.Chen NZ, Lee WCC, **Zhang M***, A numerical approach to evaluate the fatigue life of monolimb, *Medical Engineering & Physics*, 2006, 28(3), 290-6. (**Q3**, 2019 IF=1.737, 62/87 Engineering, Biomedical)

186.Gong H, **Zhang M***, Qin L, Guo X, Shi SQ, Regional Variations in microstructural properties of vertebral trabeculae with structural groups, *Spine*, 2006, 31(1): 24-32. (**Q2**, 2019 IF=2.646, 25/87 Orthopaedics)

187.Cheung JTM, **Zhang M**, An KN, Effect of Achilles tendon loading on plantar fascia tension in the standing foot, *Clin Biomech*, 2006, 21(2): 194-203. (**Q3**, 2019 IF=1.624, 64/87 Engineering, Biomedical)

188.Liu Z, Fan YB, Qian YL, **Zhang M**, 一体化假肢与传统假肢生物力学模型的比较, 中国临床康复，2006, 10(33)， pp 98-100

2005

189.Jia XH, **Zhang M**, Wang RC and Fan YB, Inertial effects on interface pressure between prosthetic socket and residual limb, *J of Biomedical Engineering* (in Chinese), 2005, 22(3): 468-471.

190.Jia XH, **Zhang M**, Fan YB and Wang RC, Dynamic loads at knee joint of trans-tibial amputee on different terrains, *J of Biomedical Engineering* (in Chinese), 2005, 22(2): 221-4.

191.Jia XH, Fang LD, **Zhang M**, Wang RC, 膝下残肢界面应力准动态有限元模型研究, 中国康复医学杂志，2005, 20(07)， pp 484-486

192.Yeung HY, Qin L, Lee KM, **Zhang M**, Leung KS, Cheng JCY, A novel approach for quantification of porosity for biomaterial implants using micro computed tomography (μCT), *Journal of Biomedical Materials Research*, Part B: Appl Biomater 75B (2):234-242, 2005. (**Q2**, 2019 IF=2.831, 35/87 Engineering Biomedical)

193.Lee WCC and **Zhang M***, Design of Monolimb Using Finite Element Modelling and Statistics-Based Taguchi Method, *Clin Biomech*, 2005, 20(7), 759-766. (**Q3**, 2019 IF=1.624, 64/87 Engineering, Biomedical)

194.Luximon A, Goonetilleke RS and **Zhang M***, 3D feet shape generation from 2D information, *Ergonomics*, 2005, 48(6), 625-41. (**Q2**, 2019 IF=2.19, 38/77 Psychology)

195.Jia XH, **Zhang M***, Li XB, Lee WCC, A quasi-dynamic nonlinear finite element model to investigate prosthetic interface stresses during walking for trans-tibial amputees, *Clin Biomech*, 2005, 20(6), 630-635. (**Q3**, 2019 IF=1.624, 64/87 Engineering, Biomedical)

196.Cheung JTM, **Zhang M*,** Leung AKL and Fan YB, Three-dimensional finite element analysis of the foot during standing - a material sensitivity study, *J Biomech* 2005, 38(5): 1045-54 (**Q3**, 2019 IF=2.32, 48/87 Engineering, Biomedical)

197.Lee WCC, **Zhang M***, Mak AFT, Regional pain threshold and tolerance of trans-tibial stumps to external load, *Arch Phys Med Rehab*, 2005, 86(4): 641-9. (**Q1**, 2019 IF=3.098, 9/68 Rehabilitation)

198.Cheung JTM and **Zhang M***, A 3-dimensional finite element model of the human foot and ankle for insole design, *Arch Phys Med Rehab*, 2005, Vol 86(2): 353-8. (**Q1**, 2019 IF=3.098, 9/68 Rehabilitation)

199.Gong H, **Zhang M***, Yeung HY and Qin L, Regional variations in microstructural properties of vertebral trabeculae with ageing, *J Bone & Mineral Metabolism*, 2005, 23(2): 174-180, (**Q3**, 2019 IF=2.297, 91/138 Medicine Research & Experiment)

200.Fan YB, Liu Z, **Zhang M**, Pu F, Jiang WT, 内骨架一体化小腿假肢的生物力学研究, Chinese J Biomedical Eng (in Chinese), 2005, 24(1), 1-7

2004

201.Cheung JTM, **Zhang M***, An KN, Effects of plantar fascia stiffness on the biomechanical responses of the ankle-foot complex, *Clin Biomech*, 2004, Vol 19(8): 839-846. (**Q3**, 2019 IF=1.624, 64/87 Engineering, Biomedical)

202.Lee WCC, **Zhang M***, Boone DA, Contoyannis B, Finite element analysis to determine the effect of monolimb flexibility on structural strength and interaction between residual limb and prosthetic socket, *J Rehab Res Dev*, 2004, 41(6A): 775-786, (**Q4**)

203.Leung AKL, Cheng JCY, **Zhang M,** FAN YB, Dong X, Contact force ratio: a new parameter to assess foot arch function, *Prost Orthot Int*, 28: 167-174, 2004. (**Q3**, 2019 IF=1.363, 56/82 Orthopaedics)

204.Jia XH, **Zhang M**, Wang RC, Jin DW, 3D finite element dynamic analysis of interface stress at residual limb of a trans-tibial amputee, Chinese Journal of Rehabilitation Medicine, 2004, 19(5), 334-6.

205.Fan YB, Pu F, **Zhang M**, Jiang WT, Yang SQ, Leung AKL, Zheng YP, Mak AFT, Biomechanical evaluation techniques for personalized lower-limb prosthetic socket designing, Chinese Journal of Biomedical Engineering, 2004 (Dec), 23(6): 544-548

206.Liu Z, Fan YB, **Zhang M**, The stress distribution in transtibial monolimb at various typical subphases of stance, *J of Sichuan University (Engineering Science Edition)* (in Chinese), 2004, 36(5): 25-29.

207.Liu Z, Fan YB, **Zhang M**, et al., Influence of wall thickness on the stress distribution within transtibial monolimb, *Journal of Biomedical Engineering* (in Chinese), 2004, 21(4):562-565.

208.Tsung BYS, **Zhang M***, Mak AFT and Wong MWN, Effectiveness of insoles on plantar pressure redistribution, *J Rehab Res Dev*, 2004, 41(6A): 767-774 (**Q4**)

209.Lee WCC, **Zhang M***, Jia XH and Cheung JTM, Finite element modeling of contact interface between trans-tibial residual limb and prosthetic socket, *Med Eng Phys* 2004 ,26(8), 655-662. (**Q3**, 2019 IF=1.737, 62/87 Engineering, Biomedical)

210.Jia XH, **Zhang M**, Wang RC, Jin DW, Dynamic investigation of interface stress on below-knee residual limb in a prosthetic socket, *Tsinghua Science and Technology*, 2004 9(6): 680-3. (**Q3**, IF=1.328, 68/108 Computer Science, Software Eng)

211.Jia XH, **Zhang M*** and Lee WCC, Load transfer mechanics between trans-tibial prosthetic socket and residual limb – dynamic effects, *J Biomech*, 2004, 37(9), 1371-1377. (**Q3**, 2019 IF=2.32, 48/87 Engineering, Biomedical)

212.Jia XH, **Zhang M***, Wang RC, Jin DW, Lee CC, Effect of dynamic loads on the interface pressure at residual limb/prosthetic socket interface of a trans-tibial amputee, *Journal of Tsinghua University (Sci & Tech)*, 2004,Vol.44, No 2, 186-189.

2003

213.Liu Z, Fan YB, **Zhang M**, Jiang WT, The 3D finite element stress analysis of transtibial monolimb, *J of Biomedical Engineering* (in Chinese), 2003, 20(4), 622-625.

214.Cheung TM, **Zhang M***, Chow DHK, Effects of vibration loading on the fluid flow of the intervertebral disc – a finite element study, *Clinical Biomechanics*, 2003, Nov, 18(9): 790-799. (**Q3**, 2019 IF=1.624, 64/87 Engineering, Biomedical)

215.Tsung YS, **Zhang M***, Fan YB, Boone DA, Quantitative Comparison of Plantar Foot Shapes under Different Weight Bearing Conditions, *J Rehab Res Dev*, 2003, Nov. 40(6): 517-26 (**Q4**)

2002

216.Li XF, Zhang GX, Qiu ZR and **Zhang M**, Trajectory reconstruction of human upper extremity when moving on horizontal plane, *Journal of Tianjin University*, 2002, 35(4), 1-5.

217.Yang NF**, Zhang M***, Huang CH, Jin DW, Synergic analysis of upper-limb target-reaching movements, *J Biomech*, 35(6), 739-46, 2002. (**Q3**, 2019 IF=2.32, 48/87 Engineering, biomedical)

218. Jiang WT, Fan YB, Pu F, **Zhang M**, Zheng YP, Chen JK, Fast automated finite element mesh generation of residual lower limb for a clinical application, *Space Medicine and Medical Engineering*, (in Chinese), 15(4) Aug: 286-290, 2002.

219. Bai L, Fan YB**, Zhang M,** Chen JK, Experimental methods for mechanically stimulating the cells in vitro, *J of Biomedical Engineering* (in Chinese), 19(2): 324-8, 2002

220.Dong X, Fan YB, **Zhang M,** Chen JK, Studies on biomechanics of human foot: a review, *J of Biomedical Engineering* (in Chinese), 19(1): 148-153, 2002.

221.Bi S, Cheung TM, **Zhang M**, Wang FG, A three-dimensional finite element model for simulating lumber manipulations, Acad J PLA Postgrad Med Sch (in Chinese), 2002, 23(1) Mar: 67-9.

222.Bi S, Cheung TM, **Zhang M**, The study of finite element model for lumbar vertebrae in torsion, J Medcal Biomechanics (in Chinese), 2002 17(1) Mar: 20-3.

223.Bi S, Cheung TM**, Zhang M**, Wang FG, Li YK, A three-dimensional finite element model of lumbar vertebrae in traction, Chinese Journal of Rehabilitation Medicine, 2002, 17(2), 84-6.

224.Bi S, Li YK, Zhao WD, Wang AY, Zhang Y, **Zhang M**, Cheung TM, Wang FG, Comparative study of simulated lumbar manipulation techniques using biomechanical and three-dimensional finite element models, Chinese J Phys Med Rehabil, 2002 24(9), Sept: 525-7.

225.Yang NF, **Zhang M***, Huang CH, Jin DW, Motion quality evaluation of upper limb target-reaching movements, *Med Eng & Phys*, 24: 115-120, 2002. **(Q3**, 2019 IF=1.737, 62/87 ENGINEERING, BIOMEDICAL)

2001

226.Yang NF, Wang RC, Jin DW, Dong H, Huang CH, **Zhang M**. Evaluation method of human upper limb movement function based on Fitts' Law. Chinese Journal of Rehabilitation Medicine, 2001, 16(6): 336-339.

227.Pu F, Fan YB, Jiang WT, **Zhang M**, Mak AFT, Chen JK, 3D visualization and information interaction in biomedical application, *J of Biomedical Engineering* (in Chinese), 18(2): 169-172, 2001.

228.Bi S and **Zhang M**, Establishment and application of three-dimensional finite element models of spine, The Journal of Cervicodynia and Lumbodynia (in Chinese), 2001, 22(4): 339-41.

229.Zhang M, Roberts C, Reply to Letter to the Editor, Comparison of computational analysis with clinical measurement of stresses on below-knee residual limb in a prosthetic socket, *Med Eng & Phys*, 23: 519-20, 2001. (**Q3**, 2019 IF=1.737, 62/87 Engineering, Biomedical)

230.Mak AFT, **Zhang M**, Boone DA, State-of-the-art research in lower-limb prosthetic biomechanics - socket interface, *J Rehab Res Dev*, 38(2): 161-174, 2001 (**Q4**, IF=1.277)

2000

231.**Zhang M***, and Roberts VC, Comparison of computational analysis with clinical measurement of stresses on below-knee residual limb in a prosthetic socket, *Med Eng & Phys*, 22: 607-12, 2000. (**Q3**, 2019 IF=1.737, 62/87 Engineering, Biomedical)

232.**Zhang M**, Mak AFT, Computer-aided design and computational modelling of lower-limb prosthetic socket, Modern Rehabilitation (in Chinese), 4(2), 192-3, 2000.

233.**Zhang M**, Mak AFT, Fan YB, Three-dimensional finite element analyses on the transtibial residual limb and its prosthetic socket, *J of Biomedical Engineering* (in Chinese) , 17(4): 403-6, 2000.

1999

234.**Zhang M**, and Mak AFT, In vivo skin frictional properties, *Prosthetics & Orthotics, International*, 23, 135-141, 1999. (**Q3**, 2019 IF=1.363, 56/82 Orthopaedics)

1998

235.**Zhang M**, Mak AFT, and Roberts VC, Finite element modelling of a residual lower-limb in a prosthetic socket - a survey of the development in the first decade, *Med. Eng. & Phys.*, 20(5), 360-373, 1998. (**Q3**, 2019 IF=1.737, 62/87 Engineering, Biomedical)

236.**Zhang M**, Turner-Smith AR, Tanner A, and Roberts VC, Clinical investigation of the pressure and shear stress on the trans-tibial stump with a prosthesis, *Med. Eng. & Phys.*, Vol 20 (3): 188-198, 1998. (**Q3**, 2019 IF=1.737, 62/87 Engineering, Biomedical)

237.Li XF, Xiao SJ, **Zhang M,** 模型预测控制在功能电刺激中的应用, 医疗保健器具， 03 期， 1998

1997

238.**Zhang M**., YP Zheng and Mak AFT, Estimating the effective Young's modulus of soft tissues from indentation tests nonlinear finite element analysis of effects of friction and large deformation, *Med. Eng. & Phys.*, Vol. 19(6): 512-517, 1997. (**Q3**, 2019 IF=1.737, 62/87 Engineering, Biomedical)

1996

239.**Zhang M**, and Mak AFT, A finite element analysis of the load transfer between an above-knee residual limb and its prosthetic socket - Roles of interfacial friction and distal-end boundary conditions, *IEEE Trans. Rehabil. Eng*., Vol. 4(4), 337-346, 1996.

240.**Zhang M**, Turner-Smith AR, Roberts VC, and Tanner A, Frictional action at residual limb/prosthetic socket interface. *Med. Eng. & Phy*s. 18(3), 207-214, 1996. (**Q3**, 2019 IF=1.737, 62/87 Engineering, Biomedical)

1995

241.**Zhang M**, Lord M, Turner-Smith AR, and Roberts VC, Development of a nonlinear finite element modelling of the below-knee prosthetic socket interface. *Med Eng & Phys* 17(8), 559-66, 1995 (**Q3**, 2019 IF=1.737, 62/87 Engineering, Biomedical)

1994

242.**Zhang M**, Turner-Smith AR, and Roberts VC, The reaction of skin and soft tissue to shear forces applied externally to the skin surface, *P I Mech Eng H: J Eng in Medicine*, 208 (4), 217-222, 1994. (**Q4**, 2019 IF=1.282, 70/87 Engineering, Biomedical)

1993

243.**Zhang M**, and Roberts VC, The effect of shear forces externally applied to skin surface on underlying tissues. *J Biomed Eng*, Vol. 15 (6), 451-456, 1993. (**Q3**, 2019 IF=1.737, 62/87 Engineering, Biomedical)

244.**Zhang M**, Peng RJ, and Mao QD, Analysis of lubricating regime between piston and cylinder of engines, *J of Lubrication and Seal* (in Chinese) Dec 1987.

Book/Journal/Proceedings as Editor

245.Fan YB, **Zhang M** (editors), (Biomechanics in Rehabilitation Engineering)康复工程生物力學，上海交通大學出版社有限公司, 2017.12, ISBN：9787313179937

246.**Zhang M**, Fan YB (editors), Computational Biomechanics of the Musculoskeletal System, CRC press, Sept 2014, ISBN: 978-1-4665-8803-5

247.Cheung CF, Lee WB, **Zhang M**, To S, Technical Guidebook for Supporting Design, fabrication and Measurement of Orthopaedic Implants for Bio-medical Application, The Hong Kong Polytechnic University, ISBN 962367905, 2010

248.Yu WC, **Zhang M**, Wang LP, Song YB, Proceedings of 2010 3rd International Conference on Biomedical Engineering and Informatics, 16-18 Oct, Yantai, China

249.**Zhang M**, Wu Ed, Zhu C, Proceedings, WACBE World Congress on Bioengineering 2009, 26-29 July 2009, Hong Kong

250.**Zhang M**, Proceedings of Biomedical Engineering Conference (BME2006), Biomedical Division of HKIE, 21-23 Sept 2006.

251.**Zhang M,** Cheng CK, Fan YB, Clinical Biomechanics, 2008, 23 Supplement

Published Book Chapters

252.Wong DWC, Ni M, Wang Y, **Zhang M** (2020). Biomechanics of Foot and Ankle. In: Frontier in Orthopaedic Biomechanics. Edited by C.-K. Cheng and Savio L.-Y. Woo, pp. 219-263, Springer Singapore, ISBN: 978-981-15-3158-3.

253.Gong He, Fan YB, Zhang M,预测宏微观骨强度的非线性有限元建模与仿真，in： 生物力学建模仿真与应用 (editors: Fan YB, Deng XY), 2017 Dec, ISBN: 9787313184986， PP 405-418

254.Wang Y, Wong WC, Zhang M, 足踝生物力学建模及其临床应用，in： 生物力学建模仿真与应用 (Fan YB, Deng XY), 2017 Dec, ISBN: 9787313184986， PP 421-438

255.Niu WX, Zhang M, 步态站立中期足的载荷分布和力传导，in: 骨与关节生物力学（editors: Zhang XZ and Tang TT）, 上海交通大學出版社有限公司, 2017.12, ISBN：9787313185006, pp239-242

256.Yu J, Zhang M, 高跟鞋对足踝影响的生物力学研究，in: 骨与关节生物力学（editors: Zhang XZ and Tang TT）, 上海交通大學出版社有限公司, 2017.12, ISBN：9787313185006, pp244-247

257.Yan F, Dong RQ, Jiang WT, Zhang M, 1 下肢残肢的生物力学, in Fan YB, Zhang M (editors), 康复工程生物力學，上海交通大學出版社有限公司, 2017.12, ISBN：9787313179937. pp1-18

258. Xu Zhi, Wong WC, Wang Yan, Jiang WT, Zhang M, 2 下肢假肢的生物力学研究, in Fan YB, Zhang M (editors), 康复工程生物力學，上海交通大學出版社有限公司, 2017.12, ISBN：9787313179937. PP19-33

259.Wong WC, Wang Y, Zhang Ming, 楔形鞋垫生物力学, in Fan YB, Zhang M (editors), 康复工程生物力學，上海交通大學出版社有限公司, 2017.12, ISBN：9787313179937. PP57-70

260.Lee WCC, Leung AKL, Zhang M, Biomechanics applications in rehabilitation, in: Biomechanics - Encyclopedia of Life Support System, eds: Manuel Doblare and Jose Merodio, 2015/12/30 Eolss Publisher Co. Ltd, UK, ISBN：178021023X, pp331-349

261.**Zhang M**, Yu J, Cong Y, Wang Y, Cheung JTM, Chapter 1 Foot Model for Investigating Foot Biomechanics and Footwear Design, in book: Computational Biomechanics of the Musculoskeletal System, eds, Ming Zhang and Yubo Fan, CRC Press, 2014, pp 3-18

262. Yu J, **Zhang M**, Chapter 2 Female Foot Model for High-Heel Shoe Design, in book: Computational Biomechanics of the Musculoskeletal System, eds, Ming Zhang and Yubo Fan, CRC Press, 2014, pp 19-36,
263. Wang Y, **Zhang M**, Chapter 3 Foot and Ankle Model for Surgical Treatment, in book: Computational Biomechanics of the Musculoskeletal System, eds, Ming Zhang and Yubo Fan, CRC Press, 2014, pp 37-48,
264. Wong DWC, Leung AKL, **Zhang M**, Chapter 4 First Ray Model Comparing Normal and Hallux Valgus Foot, in book: Computational Biomechanics of the Musculoskeletal System, eds, Ming Zhang and Yubo Fan, CRC Press, 2014, pp 49-60
265. Yu J, Wong DWC, **Zhang M**, Chapter 5 Dynamic Foot Model for Impact Investigation, in book: Computational Biomechanics of the Musculoskeletal System, eds, Ming Zhang and Yubo Fan, CRC Press, 2014, pp 61-71
266. Yao J, **Zhang M**, Fan YB, Chapter 6 Knee Joint Model for Anterior Cruciate Ligament Reconstruction, in book: Computational Biomechanics of the Musculoskeletal System, eds, Ming Zhang and Yubo Fan, CRC Press, 2014, pp 75-82
267. Wang YX, Fan YB, **Zhang M**, Chapter 7 Knee Joint Models for Kneeling Biomechanics, in book: Computational Biomechanics of the Musculoskeletal System, eds, Ming Zhang and Yubo Fan, CRC Press, 2014, pp 83-92
268. Wong DWC, **Zhang M**, Chapter 8 Knee Implant Model: A Sensitivity Study of Trabecular Stiffness on Periprosthetic Fracture, in book: Computational Biomechanics of the Musculoskeletal System, eds, Ming Zhang and Yubo Fan, CRC Press, 2014, pp 93-102
269. Gong H, Fan YB, **Zhang M**, Chapter 9 Femur Model for Predicting Strength and Fracture Risk, in book: Computational Biomechanics of the Musculoskeletal System, eds, Ming Zhang and Yubo Fan, CRC Press, 2014, pp 105-112
270. Wong DWC, Pang ZH, Yu J, Leung AKL, **Zhang M**, Chapter 8 Knee Implant Model: A Sensitivity Study of Trabecular Stiffness on Periprosthetic Fracture, in book: Computational Biomechanics of the Musculoskeletal System, eds, Ming Zhang and Yubo Fan, CRC Press, 2014, pp 113-124
271. Niu WX, Mei J, Tang TT, Fan YB, **Zhang M**, Ni M, Chapter 11 Pelvis Model for Reconstruction with Autografted Long Bones Following Hindquarter Amputation, in book: Computational Biomechanics of the Musculoskeletal System, eds, Ming Zhang and Yubo Fan, CRC Press, 2014, pp 125-138
272. Liu X, **Zhang M**, Chapter 12 Foot–Ankle–Knee Model for Foot Orthosis, in book: Computational Biomechanics of the Musculoskeletal System, eds, Ming Zhang and Yubo Fan, CRC Press, 2014, pp 141-152
273. Lee WCC, **Zhang M**, Chapter 13 Lower Residual Limb for Prosthetic Socket Design, in book: Computational Biomechanics of the Musculoskeletal System, eds, Ming Zhang and Yubo Fan, CRC Press, 2014, pp 153-162
274. Guo LX, **Zhang M**, Chapter 15 Spine Model for Vibration Analysis, Teo EC, in book: Computational Biomechanics of the Musculoskeletal System, eds, Ming Zhang and Yubo Fan, CRC Press, 2014, pp 175-198
275. Mo ZJ, Wang LZ, **Zhang M**, Fan YB, Chapter 16 Cervical Spinal Fusion and Total Disc Replacement, in book: Computational Biomechanics of the Musculoskeletal System, eds, Ming Zhang and Yubo Fan, CRC Press, 2014, pp 199-212
276. Wang LZ, Xu P, Liu XY, Mo ZJ, **Zhang M**, Fan YB, Chapter 19 Head Model for Protection, in book: Computational Biomechanics of the Musculoskeletal System, eds, Ming Zhang and Yubo Fan, CRC Press, 2014, pp245-254
277. Gong H, **Zhang M**, Qin L, Chapter 24 Micro-Finite Element Model for Bone Strength Prediction, in book: Computational Biomechanics of the Musculoskeletal System, eds, Ming Zhang and Yubo Fan, CRC Press, 2014, pp 323-330
278. Gong H, Fan YB, **Zhang M**, Chapter 25 Simulation of Osteoporotic Bone Remodeling, in book: Computational Biomechanics of the Musculoskeletal System, eds, Ming Zhang and Yubo Fan, CRC Press, 2014, pp 331-342

279. Lee WB, Cheung CF, **Zhang M**, To S, Need for the development of capability for supporting design, fabrication and measurement of superfinished orthopaedic implants, Chapter 1, in book: Technical Guidebook for Supporting Design, Fabrication and Measurement of Orthopaedic Implants for Bio-medical Application, eds: Cheung CF, Lee WB, Zhang M, To S, The Hong Kong Polytechnic University, p1-10, 2011
280. **Zhang M**, Wong WC, Qin L, Cheung CF, Overview of development of orthopaedic implants, in book: Technical Guidebook for Supporting Design, Fabrication and Measurement of Orthopaedic Implants for Bio-medical Application, eds: Cheung CF, Lee WB, Zhang M, To S, The Hong Kong Polytechnic University, p11-23.2011
281. Wong WC, **Zhang M**, Cheung CF, Modeling and analysis for supporting design of orthopaedic implants, in book: Technical Guidebook for Supporting Design, Fabrication and Measurement of Orthopaedic Implants for Bio-medical Application, eds: Cheung CF, Lee WB, Zhang M, To S, The Hong Kong Polytechnic University, p24-57. 2011
282. Luximon A, Luximon Y, Wong DWC, Zhang M, (Chapter 20) The Geriatric 3D Foot Model, in Advances in Applied Digital Human Modeling, ed: Vincent G. Duffy, CRC Press, Taylor & Francis Group, (ISBN: 978-1-4398-3511-1), pp176-185. 2010
283. Cheung JTM, Yu J, **Zhang M**, Foot biomechanical models - establishment, applications and future, In: Engineering Frontier – Current Development and Future of Digital Medicine, eds: Zhang XX and Fu Z, pp90-118, Oct 2009, Higher Education Publisher, China
284. Gong H, **Zhang M**, Qin L, Chapter 40, Micro-finite element analysis of bone, in book: A Practice Manual for Musculoskeletal Research, ed: Leung KS, Qin YX, Cheung WH, Qin L, World Scientific, 2008, pp671-689.
285. Jia XH, Zhang JC, Wang RC, Fang LD, Jin DW**, Zhang M**, The influence of shoe-heel height on knee muscle activity of transtibial amputees during standing, in: Digit Human Modeling, HCII2007, LNCS4561, ed: VG Duffy, Springer-Verlag Berlin Heidelberg, pp640-645, 2007.
286. Yang YY, Wang YC, **Zhang M**, Jin DW, Wu FF, Optimal control and synergic pattern analysis of upper limb reaching-grasping movements, in: Digit Human Modeling, HCII2007, LNCS4561, ed: VG Duffy, Springer-Verlag Berlin Heidelberg, pp268-275, 2007.
287. Yang YY, Wang YC, **Zhang M**, Jin DW, Wu FF, Redundant muscular force analysis of human lower limbs during rising from a squat, in: Digit Human Modeling, HCII2007, LNCS4561, ed: VG Duffy, Springer-Verlag Berlin Heidelberg, pp259-267, 2007.
288. Gong H, **Zhang M**, Qin L, Mechanical Properties of Vertebral Trabeculae with Ageing, in: Advanced Bioimaging Technologies in Assessment of Quality of Bone and Scaffold Biomaterials, Eds: L QIN, HK Genant, JF Griffith, KS Leung, Springer-Verlag Berlin Heidelberg, pp463-474, 2007.
289. Dai XQ, Liu R, Li Y, **Zhang M**, Kowk YL, Numerical simulation of skin pressure distribution applied by Graduated Compression Stockings (GCS), chapter 21, in Studies in Computational Intelligence, vol 55, Computational Textile, eds: Zeng XY, Li Y, Yuan D and Koehl L, pp301-9, 2007
290. **Zhang M**, Cheung JTM, Li Y, Computational Modeling of the Foot-Insole Interface, chapter 21, in Studies in Computational Intelligence, vol 55, Computational Textile, eds: Zeng XY, Li Y, Yuan D and Koehl L, pp311-321, 2007
291. **Zhang M**, Dai XQ, Li Y, Cheung JTM, Computational simulation of dynamic skin and sock pressure distributions, chapter 21, in Studies in Computational Intelligence, vol 55, Computational Textile, eds: Zeng XY, Li Y, Yuan D and Koehl L, pp323-333, 2007
292. Luximon A, **Zhang M**, Chapter 22, Biomechanical Engineering Design of Shoes, in a book: "Biomechanical Engineering of Textiles and Clothing", ed Y. Li and X-Q Dai, Woodhead Publishing Limited, Cambridge, England, 2006, pp365-390.
293. Li Y, **Zhang M**, Cheung JT, Dai XQ, Chapter 21, Biomechanical Engineering Design of Socks, in a book: "Biomechanical Engineering of Textiles and Clothing", ed Y. Li and X-Q Dai, Woodhead Publishing Limited, Cambridge, England, 2006, pp347-364.

294. **Zhang M**, Cheung JT, Chapter 13, Human skin and underlying soft tissues, in a book: "Biomechanical Engineering of Textiles and Clothing", ed Y. Li and X-Q Dai, Woodhead Publishing Limited, Cambridge, England, 2006, pp223-239.
295. Cheung JT, **Zhang M,** Chapter 7, Mechanics of human skin and underlying soft tissues, in a book: "Biomechanical Engineering of Textiles and Clothing", ed Y. Li and X-Q Dai, Woodhead Publishing Limited, Cambridge, England, 2006, pp111-124.
296. Luximon A, **Zhang M**, Chapter 6, The human body, in a book: "Biomechanical Engineering of Textiles and Clothing", ed Y. Li and X-Q Dai, Woodhead Publishing Limited, Cambridge, England, 2006, pp91-110.
297. Luximon, A., **Zhang, M**., Shoe last design for improved fit and comfort, 2nd Edition of the International Encyclopedia of Ergonomics and Human Factors by W. Karwowski (ed.), Publisher: Taylor and Francis, Chapter 338, 2006, p1703-1707.
298. Luximon, A., **Zhang, M.**, Foot biomechanics, 2nd Edition of the International Encyclopedia of Ergonomics and Human Factors by W. Karwowski (ed.), Publisher: Taylor and Francis, Chapter 75, 2006, p333-337.
299. Gong H, **Zhang M**, Qin L, Chapter 8, Bone biomechanics, In book: "Bone Mineral and Clinic Practise", (in Chinese), Ed: Liu ZH, Chinese Science and Technology Publisher, March 2006, pp216-228.
300. Qin L, **Zhang M**, Zhang G, Leung KS, Chapter 33, Bone biomechanical testing, In book: "Bone Mineral and Clinic Practise", (in Chinese), Ed: Liu ZH, Chinese Science and Technology Publisher, March 2006, pp875-882.
301. Qin L, **Zhang M**, Mechanical testing for bone specimens, In book "Current topics of bone biology", eds: Deng HW, Liu YZ, Guo CY and Chen D, World Scientific Publication Company, 2005, pp177-212.
302. Kwan HH, **Zhang M**, Part 2 Biomechanics, in Chapter 9, Prosthetics and Orthotics, in Clinical Rehabilitation Medicine, (in Chinese), Ed Huang Dongfeng, Shantou University Publisher, 2004, pp821-7.
303. Mak FT, Tam EWC, Tsung BYS, **Zhang M**, Zheng YP, Zhang JD, Chapter 8 Biomechanics of Body Support Surfaces: Issues of Decubitus Ulcer, in Frontiers in Biomedical Engineering eds: Hwang NHC and Woo SLY, Kluwer Academic/Plenum Publishers, New York, 2003, pp111-134.
304. **Zhang M** and Mak AFT, Computer-aided learning for prosthetic design, in Tackling the Challenges to Professional Education: A Collection of Case Studies, eds Kwan K, Lai P, Lai S and Cheng A, The Hong Kong Polytechnic University, pp127-132, 2003
305. Mak AFT, **Zhang M**, Leung AKL, Artificial Limbs, In: Comprehensive Structural Integrity, Eds Milne I, Ritchie RO and Karihaloo B, Volume 9, eds Mai YW and Teoh SH, pp 329-364, Elsevier Science Limited, Oxford, UK, 2003.
306. **Zhang M**, Fan YB, Biomechanical studies on lower-limb prosthetic socket design, In Advance in Biomechanics, eds Zhu C and Long M, Springer-Velag Berlin Heideberg, July 2001, pp 134-138.
307. Fan YB, Zhao ZH, **Zhang M**, Song JL, Ge X, Zhou XJ, Chen JK, Multilevel biomechanical studies on remodelling of temporomandibular joint (TMJ), In: Advance in Biomechanics, eds Zhu C and Long M, Springer-Velag Berlin Heideberg, Beijing, July 2001, pp 139-145.
308. Mak, A.F.T. and **Zhang, M**., Skin and Muscle. In: BLACK, J. and HASTINGS, G.W., eds. Handbook of Biomaterial Properties, London: Chapman & Hall, B4, pp66-69, 1998.
309. **Zhang M** and Roberts VC, Development of a non-linear finite element model for analysis of stump/socket interface stresses in below-knee amputee. In*: Computational Biomedicine.* Eds. Held KD, Brebbia CA, Ciskowski RD and Power H, Computational Mechanics Pub, Southampton, 1993.

<u>In Proceedings and Conference Presentations</u>

310. Chen TLW, Agresta CE, Lipps DB, Provenzano SG, Hafer JF, Wong DWC, Zhang M, Zernicke RF Shear wave velocity in the plantar fascia of runners using different foot strike techniques. XXVII Congress of the International Society of Biomechanics (ISB), Calgary, 31 Jul–4 Aug 2019.

311. Zhang M, Biomechanical foot models for surgical treatment and foot support design, 9th WACBE World Congress on Bioengineering, Taipei, 16-19 Aug 2019
312. Chen LW, Wong DWC, Peng YH, Wang Y, Zhang M, using therapeutic taping to offload the plantar fascia during running- a dynamics finite element analysis, 9th WACBE World Congress on Bioengineering, Taipei, 16-19 Aug 2019
313. Wang Y, Tan QT, Zhang M, Effects of foot orthosis on joint motion in the lower limb od pediatric flatfoot, 9th WACBE World Congress on Bioengineering, Taipei, 16-19 Aug 2019
314. Tan QT, Wang Y, Wong DWC, Zhang M, Development of peripheral muscle fatigue investigated by near-infrared spectroscopy, 9th WACBE World Congress on Bioengineering, Taipei, 16-19 Aug 2019
315. Tan QT, Wang Y, Li ZY, Wong DWC, Zhang M, Localized muscle fatigue revealed by near-infrared spectroscopy, P1737, 8th World Congress of Biomechanics, Dublin, 2018 July 8-12
316. Wang Y, Tan QT, Li ZY, Zhang M, Biomechanical effects of ankle arthrodesis and total ankle arthroplasty surgeries on foot, O0298, 8th World Congress of Biomechanics, Dublin, 2018 July 8-12
317. Zhang M, Wang Y, Wong DWC, Computational biomechanics models of foot and ankle for foot support design, O1965, 8th World Congress of Biomechanics, Dublin, 2018 July 8-12
318. Zhang* (2017), Computational Biomechanics of Foot and Ankle, Paper presented at the proceedings of the 8th WACBE World Congress on Bioengineering, Hong Kong.
319. Yan Wang, Duo Wai-Chi Wong, Qitao Tan, Linwei Chen, & Ming Zhang* (2017), Biomechanical Evaluation of the Design of the Total Ankle Arthroplasty, Paper presented at the proceedings of the 8th WACBE World Congress on Bioengineering (pp. 29), Hong Kong.
320. Duo Wai-Chi Wong, Yan Wang, Min Yang, Tony Lin-Wei Chen, Aaron Kam-Lun Leung, & Ming Zhang* (2017), Metatarsal Stress after Subtalar Arthroereisis, Paper presented at the proceedings of the 8th WACBE World Congress on Bioengineering (pp. 210), Hong Kong.
321. Rui-Qi Dong, Wen-Tao Jiang*, M.S. Wong*, Ming Zhang, & Aaron Leung (2017), A Study on Hemodynamic State of Residual Limb after Trans-femoral Amputation, Paper presented at the proceedings of the 8th WACBE World Congress on Bioengineering (pp. 60), Hong Kong.
322. Qitao Tan, Yan Wang, & Ming Zhang* (2017), Muscle Fatigue Revealed by Muscular Oxygenation Based on Near-infrared Spectroscopy Method, Paper presented at the proceedings of the 8th WACBE World Congress on Bioengineering (pp. 254), Hong Kong.
323. Tony Lin-Wei Chen, Zhi Xu, Duo Wai-Chi Wong, Qitao Tan, Yan Wang, & Ming Zhang* (2017), Effects of Wearing Flip-flops on Lower Limb Muscle Activity and Joint Loading, Paper presented at the proceedings of the 8th WACBE World Congress on Bioengineering (pp. 258), Hong Kong.
324. Duo Wai-Chi Wong, Sicong Ren, Hui Yang, Yan Zhou, Jin Lin, & Ming Zhang* (2017), Influence of Pillow Height on Cervical Spine Alignment: A Finite Element Analysis, Paper presented at the proceedings of the 8th WACBE World Congress on Bioengineering (pp. 259), Hong Kong.
325. Yan Wang, Qitao Tan, Linwei Chen, & Ming Zhang* (2017), Evaluation of Biomechanical Consequences of Orthosis and Subtalar Arthroereisis in Flatfoot, Paper presented at the proceedings of the 8th WACBE World Congress on Bioengineering (pp. 270), Hong Kong.
326. Xu-Shu Zhang, Yuan Guo, Mei-wen An*, & Ming Zhang* (2017), Contact Pressure Measurement of Mouse and Wrist during Mouse Operation with Tekscan, Paper presented at the proceedings of the 8th WACBE World Congress on Bioengineering (pp. 312), Hong Kong.
327. Fei Yan, Wen-Tao Jiang*, Zhi-Hong Zhou, Qing-Yuan Wang, Yubo Fan, & Ming Zhang* (2017), Developing Transmission Line Equations of Arterial Oxygen Transport, Paper presented at the proceedings of the 8th WACBE World Congress on Bioengineering (pp. 324), Hong Kong.
328. Zhi Xu, Duo Wai-Chi Wong, Ming Zhang*, & Wentao Jiang* (2017), Kinematics and Kinetics Analysis of Inter-joint Coordination in Different Walking Velocities of Able-bodied Person, Paper presented at the proceedings of the 8th WACBE World Congress on Bioengineering (pp. 325), Hong Kong.
329. Yinglei Lin, Yi Li, Junyan Hu, Yueping Guo, Ming Zhang, & Guoru Zhao* (2017), Numerical Model to Predict Contact Pressure of Sportswear on Moving Human Leg, Paper presented at the proceedings of the 8th WACBE World Congress on Bioengineering (pp. 346), Hong Kong.

330.**Zhang M**, Wang Y, Wong DWC, Computational models of foot and ankle for foot support design, 14th Int Symposium on Computer Methods in Biomechanics and Biomedical Engineering, 20-22 Sept 2016 Tel Aviv Israel, Invited talk
331.**Zhang M**, Computational Contact biomechanics for human support design, 7th WACBE World Congress on Bioengineering, 6-8 July 2015, Singapore, invited talk,
332. Zhaonan Sun, Duo Wai-Chi Wong, Ming Zhang. Development of a Finite Element Model of the Knee Joint for Kneeling Study. Proceedings of The World Association for Chinese Biomedical Engineers (WACBE) World Congress on Bioengineering, Town Plaza, Singapore, pp. 177, 6-8 Jul 2015.
333.Zhaonan Sun, Duo Wai-Chi Wong, Ming Zhang. Effects of Load Carriage on High Heeled Gait. BME 2014 Biomedical Engineering International Conference, pp. D4, Hong Kong, 4-6 Dec 2014.
334.Wang Y, **M Zhang**. 2015 Computational Analysis of Foot and Ankle Surgeries, Symposium on Biomedical and Rehabilitation Engineering, Hong Kong, DOI: 10.13140/RG.2.1.3302.9280.
335.Y Wang, **M Zhang**. 2015 Computational model of foot and ankle for evaluation of ankle arthrodesis surgery, Belgium, DOI: 10.13140/RG.2.1.1730.0646.
336.Y Wang, M Zhang. 2014 Biomechanical Study of Ankle Arthrodesis Using Finite Element Analysis. The 1st International Workshop on Multiscale Mechanobiology, Hong Kong.
337.Y Wang, **M Zhang**. Effects of ankle fusion and tarsometatarsal joint fusion on biomechanical performance of foot, 12th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE), 13-15 Oct 2014, Amsterdam, DOI: 10.13140/2.1.4646.4805.
338.Zhongjun MO, Lizhen Wang, **Ming Zhang**, Yubo Fan (2014): Biomechanical Performance of Standalone U-shaped Implant in Cervical Arthroplasty, The 7th World Congress of Biomechanics (WCB), Boston, MA, US.
339.Wang Y, **Zhang M**, Biomechanical understanding of surgical consequence of tarsomedtatarsal joint fusion, The 6th WACBE World Congress on Bioengineering, 5-8 Aug 2013, Beijing China, pp151-152
340.Yu J, **Zhang M**, Biomechanical study of fat pad atrophy induced plantar heel pain: a dynamic-implicit finite element approach, The 6th WACBE World Congress on Bioengineering, 5-8 Aug 2013, Beijing China, pp159-160
341.Cong Y, **Zhang M**, Foot kinematics wearing high heeled shoe, The 6th WACBE World Congress on Bioengineering, 5-8 Aug 2013, Beijing China, pp167-168
342.Mo ZJ, **Zhang M**, Fan YB, Finite element modeling of a head-cervical complex, The 6th WACBE World Congress on Bioengineering, 5-8 Aug 2013, Beijing China, 169-170
343.Niu WX, Tang TT, Fan YB, **Zhang M**, Jiang CH, An in-vitro and finite element study of loading redistribution in midfoot, The 6th WACBE World Congress on Bioengineering, 5-8 Aug 2013, Beijing China, pp257-258
344.Wong DWC, **Zhang M**, Leung AKL, The role of deep transverse metartarsal ligament on hallux valgus at initial push-off, The 6th WACBE World Congress on Bioengineering, 5-8 Aug 2013, Beijing China, pp273-274
345.Cai WH, Fan YB, **Zhang M**, Cheung JTM, Stabilization comparison with two types of heel counters, The 6th WACBE World Congress on Bioengineering, 5-8 Aug 2013, Beijing China, pp304-305
346.Cui RF, **Zhang M**, Li ZY, Xin Q, Zhou W, Lu AQ, Wavelet cross-correlation analysis of cerebral oxygenation and arterial blood pressure signals at rest, 384
347.**Zhang M**., Computational models for joint biomechanics and footwear design, (keynote), Proceed of Biomedical Engineering International Conference BME2012, 5-8 Dec 2012, pp24.
348.**Zhang M**, Liu X, Yu J, Cong Y, Lower-limb Biomechanics for foot support design, 10th national Conference on Biomechanics and 12th National Conference on Biorheology, 11-15 Oct 2012, Chengdu, China, page 8
349.Wang YX, **Zhang M**, Fan YB, Finite element study of the knee joint ligament stress distribution under kneeling position, 10th national Conference on Biomechanics and 12th National Conference on Biorheology, 11-15 Oct 2012, Chengdu, China, page 212
350.Yu J, Wong DWC, Cong Y, **Zhang M**, Finite element analysis of high-heeled shoe design, 10th national Conference on Biomechanics and 12th National Conference on Biorheology, 11-15 Oct 2012, Chengdu, China, page 86

351.Cong Y, **Zhang M**, Effects of heel heights on in-shoe triaxial stresses, 10th national Conference on Biomechanics and 12th National Conference on Biorheology, 11-15 Oct 2012, Chengdu, China, page 310

352.Yeung LF, Leung AKL**, Zhang M**, Wong MS, Lee WCC. Long-distance walking effects on below-knee amputee compensatory gait patterns. Proceed of International Society for Biomechanics 2011, Belgium, 3 - 7 July, p.207.

353.Zhang M, Education, research and product development for rehabilitation engineering, Proceed of 2011 International Conference for Bioeconomy, 26-28 June 2011,Tianjin, China, pp159-161

354.Zhang JQ, Zhang M, Effects of constitution and crystallinity on the thermal behavours of calcium deficient apatite Whiskers, Proceed of BME2010, Biomedical Engineering Conference, 2-5 Nov 2010, Hong Kong, page F-3

355.Gong H, Zhu D, Xiao Z, Zhang X, **Zhang M**, Relationship between apparent elastic modulus and microstructural parameters of senile vertebral trabecular bone. The proceeding of 2010 3rd international conference on biomedical engineering and informatics, 16-18 Oct 2010, Yantai, China,1353-1356.

356.Xie HL, Guo LX, **Zhang M**, The control simulation of BRHL based on diagonal recurrent neural network. The proceeding of 2010 3rd international conference on biomedical engineering and informatics, 16-18 Oct 2010, Yantai, China,1844-1848.

357.Zhang HQ, **Zhang M**, Shen Y, Pan H, Zhang K, Lu WW, Biocompatibility and bioactivity of hydroxyapatite whiskers reinforced bis-GMA based composites. The proceeding of 2010 3rd international conference on biomedical engineering and informatics, 16-18 Oct 2010, Yantai, China,1640-1644.

358.Cong Y, **Zhang M**, Measurement of in-shoe plantar triaxial stresses in high-heeled shoes. The proceeding of 2010 3rd international conference on biomedical engineering and informatics, 16-18 Oct 2010, Yantai, China,1760-1763.

359.Guo LX, **Zhang M**, Biomechanical analysis of facet joint slippage of lumbosacral joints under static loadings. The proceeding of 2010 3rd international conference on biomedical engineering and informatics, 16-18 Oct 2010, Yantai, China,1142-1145.

360.Tan C, Su W, Ma C, Li Z, Wang H, Chen W, Ke Z, **Zhang M**, Effects of whole body vibration on prevention of bone loss in 8-week tail-suspended male rats. The proceeding of 2010 3rd international conference on biomedical engineering and informatics, 16-18 Oct 2010, Yantai, China,1823-1826.

361.Ma C, **Zhang M**, Tan C, Zhang C, Su W, Analysis of lower-limb muscle activities during whole body vibration with different standing postures. The proceeding of 2010 3rd international conference on biomedical engineering and informatics, 16-18 Oct 2010, Yantai, China,1797-1801.

362.Xu M, Lao HC, Pan Y, Hung VWY, Zhang M, Qin L, Poor bone quality in old Chinese women with bound feet – a QUS study, Proc of Int Cinf Osteporosis and Bone Research, 28-31 Oct 2010, Shezhen, China. Published on Bone 2010, 47(supp 3): pp s433-4.

363.**Zhang M**, Computational foot-ankle-knee models for joint biomechanics and footwear design, MICCAI 2010 Workshop Proceedings, Computational Biomechanics for Medicine V, 20-24 Sept 2010, Beijing, pp3.

364.**Zhang M**, Foot-ankle biomechanics and computational models, 1st Int Conference on Foot Disorder and Pedorthic Services in China, 2010 Sept 24-28, pp176

365.Lee WCC, **Zhang M**, Biomechanical Research in Lower Limb prosthetics, 6th World Congress of Biomechanics Abstracts, 1-6 Aug 2010, Singapore, pp74.

366.Li ZY, **Zhang M**, Zhang LL, Wang Y, L JP. Effects of different vibration frequencies on cerebral oxygenation oscillations as assessed by near-infrared spectroscopy in healthy drivers, 6th World Congress of Biomechanics Abstracts, 1-6 Aug 2010, Singapore, pp194.

367.Liu CX, Cheung JTM, **Zhang M**, Finite element modeling of lower limb for impact attenuation, 6th World Congress of Biomechanics Abstracts, 1-6 Aug 2010, Singapore, pp303.

368.Wang Q, Guo X, Wang XY, Liu MQ, **Zhang M**, Zheng YP, Man HC, Effect of Laser acupuncture therapy on bone and articular cartilage under simulated microgravity, 6th World Congress of Biomechanics Abstracts, 1-6 Aug 2010, Singapore, pp404.

369. **Zhang M**, Multi-level biomechanical models for rehabilitation engineering,4th Sino-American Workshop on Biomedical Engineering and China-Overseas Joint Workshop on Biomechanics, 26-31 July 2010, ChongQing, China, J of Medical Biomechanics, 25 (Suppl), pp18-19 Invited
370. **Zhang M**, Biomechanical evaluation platform for footwear design, 2009 International Symposium on Biomechanics & Annual Scientific Meeting of Taiwanese Society of Biomechanics, 10-12 Dec 2009, ppxx-xxI, Invited plenary talk
371. **Zhang M**, Multi-level computational models for musculoskeletal biomechanics, 2009 International Symposium on Biomedical Engineering & Annual Scentific Meeting of Biomedical Engineering Society of ROC, pp x , Invited talk
372. Gong H, Lu LW, Zhang R, Zhu D, **Zhang M**, relationships between femoral strength evaluated by nonlinear finite element analysis and BMD, material distribution and geometric morphology, J Med Biomech, Proceeding of 9th national Biomechanics Conference, 11-15 Oct 2009, Tianjin, p66.
373. Guo LX, Liu K, **Zhang M**, Status analysis of human spine in vibration environment, J Med Biomech, Proceeding of 9th national Biomechanics Conference, 11-15 Oct 2009, Tianjin, p99-100.
374. Wang LZ, Zhang Q, Fan YB, **Zhang M**, Development of a comprehensive finite element ccervical spine model for studying neck injury of pilot, J Med Biomech, Proceeding of 9th national Biomechanics Conference, 11-15 Oct 2009, Tianjin, p103
375. **Zhang M**, Cheung JTM and Yu J, Foot-ankle biomechanical models for joint biomechanics and shoe/orthosis design, XII Scientific Meeting of Chinese Orthopedic Foot & Ankle Society, and 2nd International Symposium of Foot & Ankle Surgery, Chongqing, China, 11-13 Sept 2009, p87-88
376. Law YC, Mak AFT, Wong MWN, Zhang M, Dynamic hip external rotation inability in adults with flatfoot, Proceed The Asian Prosthetic and Orthotic Scientific Meeting 2009, 20-22 Aug , Hong Kong, pp79
377. Zhang HQ, **Zhang M**, Darvell B, Preparation and characterization of hydroxyapatite whiskers and application as reinforcement for biomedical resin composites, Proceedings of WACBE World Congress on Bioengineering 2009, 26-29 July 2009, Hong Kong, p29
378. Li ZY, **Zhang M**, Zhang XY, Dai SX, Yu XX, Wang Y, Assessment of cerebral oxygenation during prolonged simulated driving using near infrared spectroscopy – implications for the development of fatigue, Proceedings of WACBE World Congress on Bioengineering 2009, 26-29 July 2009, Hong Kong, p114
379. Gong H, **Zhang M**, Fan YB, Effects of tissues nonlinearity to the apparent and tissue level mechanical parameters of trabecular bone, Proceedings of WACBE World Congress on Bioengineering 2009, 26-29 July 2009, Hong Kong, p154
380. Guo LX, **Zhang M**, Zhang YM, Li JL, Biomechanical analysis on the lumbar spine in sitting posture under vibration environment, Proceedings of WACBE World Congress on Bioengineering 2009, 26-29 July 2009, Hong Kong, p161
381. Wong DWC, Cheung CF, Qin L, **Zhang M**, Sensitivity of trabecular modulus to tibial stress shielding, Proceedings of WACBE World Congress on Bioengineering 2009, 26-29 July 2009, Hong Kong, p164.
382. Cheung JTM, **Zhang M**, Computational approach for footwear design and evaluation, Proceedings of WACBE World Congress on Bioengineering 2009, 26-29 July 2009, Hong Kong, p181
383. Yu J, Cheung JTM, **Zhang M**, Finite element female foot model for biomechanical evaluation of high-heeled shoe, Proceedings of WACBE World Congress on Bioengineering 2009, 26-29 July 2009, Hong Kong, p182
384. Wang Y, Li ZY, Lu CH, **Zhang M**, Monte Carlo investigation of the optical path length for near-infrared spectroscopy in risk tissue pressure sore, Proceedings of WACBE World Congress on Bioengineering 2009, 26-29 July 2009, Hong Kong, p209.
385. Huang M, **Zhang M**, Effect of wedged insoles on knee adduction moment in the normal joint, Proceedings of WACBE World Congress on Bioengineering 2009, 26-29 July 2009, Hong Kong, p214
386. Yao J, Fan YB, **Zhang M**, The effect of medial collateral ligament injuries at varying degrees on knee joint, Proceedings of WACBE World Congress on Bioengineering 2009, 26-29 July 2009, Hong Kong, p215

387. Cong Y, Luximon Y, **Zhang M**, Plantar pressure and shear stress in high-heeled shoes, Proceedings of WACBE World Congress on Bioengineering 2009, 26-29 July 2009, Hong Kong, p232.
388. Ma C, **Zhang M**, Zhang CL, Zhao ZQ, Research on transmissibility of two kinds of vibration in human body lower limb, Proceedings of WACBE World Congress on Bioengineering 2009, 26-29 July 2009, Hong Kong, p252.
389. Chen W, Pu F, Li DY, Fan YB, **Zhang M**, The effect of different partial foot amputation levels on gait, Proceedings of WACBE World Congress on Bioengineering 2009, 26-29 July 2009, Hong Kong, p267
390. Man HS, Leung A, **Zhang M**, Effect of low magnetitude and high frequency vibration on bone healing in trans-tibial amputee, Proceedings of WACBE World Congress on Bioengineering 2009, 26-29 July 2009, Hong Kong, p272
391. Cheung JTM, Yu J, **Zhang M**, Computational Simulation of High Heeled Shoe Fitting and Walking (Nike Basic Research Award), In: Proceedings of the 9th Symposium on Footwear Biomechanics, Stellenbosch, South Africa, 10-12 July, 2009.
392. Cheung JTM, Wong DWC, Yu J, Luximon Y, Man HS, **Zhang M**, Computer-aided engineering for footwear design and evaluation. In: Abstracts of 22nd Congress, International Society of Biomechanics, Cape Town, South Africa, 5-9 July, 2009, Journal of Biomechanics, 2009. (**Q3**, 2019 IF=2.32, 48/87 Engineering, Biomedical)
393. **Zhang M**, Multi-level computational models for bone remodelling and biomechanics, International Symposium on Orthopaedic Translational Research and Technical Advance, 29-31 May 2009, Shanghai, page 15, invited talk
394. **Zhang M**, Cheung JTM, Yu J, Digital foot-ankle-knee biomechanical models for joint biomechanics and shoe design, 11th Forum of Engineering Frontier – Digital Medicine, 7-10 Nov 2008, Chinese Academy of Engineering, Beijing, p10-11
395. Leung KS, **Zhang M**, Cheung WH, Chan SY, Development of fall prevention shoes for ederly, Proceed BME 2008, Hong Kong, 23-25 Oct 2008, p10
396. Luximon Y, **Zhang M**, Luximon A, Leung AKL, Development of 3D human foot measurement system for shoe design, Proceed BME 2008, Hong Kong, 23-25 Oct 2008, p24
397. Wong WC, **Zhang M**, Cheung CF, Qin L, Development of knee finite element model for implant design, Proceed BME 2008, Hong Kong, 23-25 Oct 2008, p22
398. **Zhang M**, Gong H, Qin L, Fan Y, Finite element analysis of bone microstructure, 2008 Beijing ICHTS-CSBME-2nd APBM Workshop on Bone Histomorphometry and Imaging, 21-22 Oct 2008, Beihang University, Beijing, pp72-74, (invited speaker).
399. Cong Y, Luximon Y, **Zhang M**, Biomechnaical evaluation of shank curves of high-heeled shoes, Proceed of 1st i-FAB (International foot and ankle biomechanics community) Congress, Bologna Italy, 4-6 Sept 2008, p63
400. Luximon Y, Luximon A, Cong Y, **Zhang M**, Biomechanical effects of size and shape on footwear, Proceed of 1st i-FAB (International foot and ankle biomechanics community) Congress, Bologna Italy, 4-6 Sept 2008, p68
401. **Zhang M**, Biomechanical Engineering of Footwear, SMART-TBIS, 13-16 Aug, 2008, Hong Kong, (Keynote speaker).
402. **Zhang M**, Computational Simulation for footwear design and systematic evaluation, SMART-TBIS, 13-16 Aug, 2008, Hong Kong, (Invited speaker).
403. **Zhang M**, Application of Biomechanics on Rehabilitation Engineering, Proceed of Advanced Workshop on Biomechanics, Shanghai, 21-27 July 2008, pp57-64 (invited speaker).
404. Cheung, C.F., Ho, L.T., Lee, W.B., To, S., Chiu, W.M. and **Zhang, M**. A Study of Factors Affecting Surface Generation in Ultra-precision Freeform Polishing", Proceedings of The 1st International Conference on Nanomanufacturing (nanoMan2008), July 14-16, Singapore, CD version (2008)
405. Liu X, **Zhang M**, Li DY, Fan YB, Influence of resistances to Ni-Ti alloy inner fixing devices, Proceed of Symposium on Biomedical Engineering and Human Health for Doctoral Students, NSFC and Shanghai Jiaotong University, 20-23 July 2008, pp14.

406. Luximon Y, Luximon A, **Zhang M**, What is needed in ergonomics design – footwear design perspective?, 2nd International Conf on Applied Human Factor and Ergonomics (AHFE), 14-17 July 2008, Las Vegas, Nevada USA
407. Li LSW, Zhang M, Lau RWK, Pang MYC, Differential changes of bone density and geometry in the distal radius epiphyses during subacute phase of stroke recovery: a case report. 5th International Society of Physical and Rehabilitation Medicine World Congress, Istanbul, Turkey, June 13-17, 2009 (2009)
408. Cong Y, Luximon Y and **Zhang M**, Effect of shank curve of high-heeled shoe on the plantar pressure distribution, Proc of 7th Asian-Pacific Conference on Medical and Biological Engineering, 22-25 April 2008, pp500-2.
409. Gong H, Fan YB and **Zhang M**, Computational simulation for osteoporosis at the basic multicellular unit level, Proc of 7th Asian-Pacific Conference on Medical and Biological Engineering, 22-25 April 2008, pp182-5.
410. **Zhang M**, Development of digit foot-ankle-knee biomechanical models for joint biomechanics and shoe design, The 1st National Digital Medicine Symposium, Chongqing, 30 Nov-3 Dec 2007, pp18
411. Gong H, **Zhang M**. Apparent and tissue level mechanical parameters of vertebral trabecular bone with ageing. Proceed of Third Asian Pacific Conference on Biomechanics, Tokyo, 5-8 Nov 2007, pp S40.
412. Wong WY, Wong MS, Tong KY, **Zhang M**, Defection of spinal posture change in trunk movements using a novel sensing system, Proceed of Third Asian Pacific Conference on Biomechanics, Tokyo, 5-8 Nov 2007, pp S83.
413. Yu J, Cheung JTM, **Zhang M**, A finite element foot model for the design of high-heeled shoes, Proc. 12th World Congress of the International Society for Prosthetics and Orthotics, Vancouver, Canada, 29 July-3 Aug, 2007, pp109.
414. Cheung JTM, Bouchet B, **Zhang M**, Nigg BM, The finite element approach to the design and evaluation of foot orthotics, Proc. 12th World Congress of the International Society for Prosthetics and Orthotics, Vancouver, Canada, 29 July-3 Aug, 2007, pp110.
415. Lee CKL, Leung AKL, **Zhang M**, The relationship between the subtalar joint angle and the plantar foot geometry, Proc. 12th World Congress of the International Society for Prosthetics and Orthotics, Vancouver, Canada, 29 July-3 Aug, 2007, pp177.
416. Man HS, Leung AKL, **Zhang M**, An immediate-trial prosthesis, Proc. 12th World Congress of the International Society for Prosthetics and Orthotics, Vancouver, Canada, 29 July-3 Aug, 2007, pp359.
417. **Zhang M**, Cheung JTM, Yu J, Leung AKL, Fan YB, Development of Digit Foot Models for Foot Biomechanics and Support Design, WACBE World Congress on Bioengineering, Bangkok, Thailand, 9-11 July 2007, pp92.
418. Gong H, **Zhang M**. Computational model for the mechanism regulating bone loss in ovariectomized rats. WACBE World Congress on Bioengineering, Bangkok, Thailand, 9-11 July 2007, pp120.
419. Cheung JTM, Bouchet B, **Zhang M**, Nigg BM, Biomechanics of foot and footwear – a finite element approach, WACBE World Congress on Bioengineering, Bangkok, Thailand, 9-11 July 2007, pp166.
420. Zhang Y, Yu J, Mok KM, **Zhang M**, Effects of metatarsal pads on pressure distribution in high heel shoes, WACBE World Congress on Bioengineering, Bangkok, Thailand, 9-11 July 2007, pp182.
421. Fan YB, Qian YL, Liu Z and **Zhang M**, Numerical simulation of tooth movement in a therapy period, Proc. of 3rd Sino-American Workshop on Biomedical Engineering and China-overseas Joint Workshop on Biomechanics, Guangzhou China, 4-7 July, 2007, pp10-11.
422. **Zhang M**, Yu J, Cheung JTM, Leung AKL, Computational foot models for high-heeled shoe design, J of Medical Biomechanics, 3rd Sino-American Workshop on Biomedical Engineering and China-overseas Joint Workshop on Biomechanics, Guangzhou China, 4-7 July, 2007, pp15-16.
423. **Zhang M**, Yu J, Zhang Y, Cheung, JTM, Cong Y Leung AKL, A 3D finite element analysis of human foot with high-heeled shoe, 8th Biennial Footwear Biomechanics Symposium, Taipei, Taiwan, 27-29 June 2007.
424. Chueng JTM, Bouchet B, **Zhang M**, Nigg BM, A 3D finite element simulation of foot-shoe interface, 8th Biennial Footwear Biomechanics Symposium, Taipei, Taiwan, 27-29 June 2007.
425. Gong H, **Zhang M**, Zhu D, Qin L. Tissue-level stress distributions of senile L4 vertebral trabecular bone. 5th International Conference on Bone and Mineral Research & 7th International Osteoporosis Symposium, 18-23 May 2007.

426. Chan YY, Li WJ, Fong DTP, Hui KC, **Zhang M**, Liao PPY, Yung PSH, Chan KM, Processing of sensor signals for detection of ankle sprain during running, Proceedings of SMART (Sport Medicine and Rehabilitation Therapy) 2007 Convention, 9-10 June 2007, Hong Kong, pp27.
427. **Zhang M**, Cheung JTM, YU J, Development of digit foot-ankle models for foot biomechanics and shoe design, Proceedings of SMART (Sport Medicine and Rehabilitation Therapy) 2007 Convention, 9-10 June 2007, Hong Kong, pp26
428. Tan C, Ke Z, Gong H, **Zhang M**, Chen SG, Vibration as a probable countermeasure in prevention of bone loss induced by simulated microgravity, Proc of 16th IAA Humans in Space Symposium, 21-24 May 2007, Beijing, China, pp201
429. Gong H, **Zhang M**, Fan YB, Computational model for the effects of mechanical and biological factors on bone loss, Proc of 16th IAA Humans in Space Symposium, 21-24 May 2007, Beijing, China, pp212.
430. Dong X, Fan YB, **Zhang M**, Bone-implant interfacial stress analysis in osseointergrated lower-limb prosthesis, J of Medical Biomechanics, vol 21 Supplement, Proceedings of 8th China National Conference on Biomechanics, Hong Kong, 19-24 Dec 2006, pp10.
431. Bi S, Li YK, Zhao WD, Wang AY, Zhang Y, **Zhang M**, Cheung JTM, Wang FG, Biomechanical and finite element analysis of manipulation on lumbar segment, J of Medical Biomechanics, vol 21 Supplement, Proceedings of 8th China National Conference on Biomechanics, Hong Kong, 19-24 Dec 2006, pp19.
432. Gong H and **Zhang M**, Computational models for prediction of trabecular remodelling processing. J of Medical Biomechanics, vol 21 Supplement, Proceedings of 8th China National Conference on Biomechanics, Hong Kong, 19-24 Dec 2006, pp24.
433. YU J, **Zhang M**, 3D finite element analysis of female foot with high-healed shoe, J of Medical Biomechanics, vol 21 Supplement, Proceedings of 8th China National Conference on Biomechanics, Hong Kong, 19-24 Dec 2006, pp52.
434. Man HS, Leung A, **Zhang M**, An evaluation on the dimensional changes of the negative impression of the residual limb in a modified sand casting method, Proceedings of ISPO 2006 Asian Prosthetics and Orthotics Workshop in Korea, Seoul, 18-19 Nov 2006, pp293.
435. Mak A, **Zhang M**, Tsang B, Lee W, Tam E, Zheng YP. The biomechanics of body support surfaces. 30th Annual Scientific Meeting of the International Society for Prosthetics and Orthotics, 12-14 Oct 2006, Perth, Australia, p.3-4.
436. Lee WCC, **Zhang M**. Design of Low-Cost Trans-Tibial Prostheses Improving Structural Integrity, Comfort and Gait. 30th Annual Scientific Meeting of the International Society for Prosthetics and Orthotics, 12-14 Oct 2006, Perth, Australia, p.85-86.
437. Gong H, **Zhang M**, Qin Li, The relationship between Young's modulus and volume fraction of vertebral trabecular bone, Proceedings of BME 2006 (Biomedical Engineering Conference), Hong Kong, 21-23 Sept 2006, pp7-9.
438. Lee WCC, Frossard L, **Zhang M**, Load mechanics in external and bone-anchored prostheses, Proceedings of BME 2006 (Biomedical Engineering Conference), Hong Kong, 21-23 Sept 2006, pp71-74.
439. Yu J, Cheung JTM and **Zhang M**, A 3D finite element model of female foot with high heeled shoe, Proceedings of BME 2006 (Biomedical Engineering Conference), Hong Kong, 21-23 Sept 2006, pp75-76.
440. Zhang Y, Yu J, Ho MC, **Zhang M**, Effect of heel height on plantar pressure distribution and subjective measure, Proceedings of BME 2006 (Biomedical Engineering Conference), Hong Kong, 21-23 Sept 2006, pp149-151.
441. Wong WY, Wong MS, Tong KY, **Zhang M**, Using tri-axial accelerometers to detect spinal posture change in sitting position, Proceedings of BME 2006 (Biomedical Engineering Conference), Hong Kong, 21-23 Sept 2006, pp175-178.
442. **Zhang M**, Cheung JTM, Leung A, Fan YB, Finite Element Simulation of the Human Foot and Ankle during the Stance Phases of Gait, World Congress on Medical Physics and Biomedical Engineering 2006(WC 2006), Seoul, Korea, Aug. 27 - Sep. 1, 2006, abstract No 4207.

443.Dong X, Fan YB, Zhong G, Long L, Xiu K, Wang B, **Zhang M**, Osseointegration of titanium implant for the transfemoral prosthesis-animal study, abstract No.7200, 5th World Congress of Biomechanics, Munich, 29 July - 4 August 2006, pp S467.

444.**Zhang M**, Cheung JTM, Leung AKL, Fan YB, Development of e-Phantoms of Human Foot Based on 3D Finite Element Models for Foot Biomechanics and Support Designs, abstract No 7196, 5th World Congress of Biomechanics, Munich, 29 July - 4 August 2006, pp S182.

445.Cheung JTM, **Zhang M**, Nigg B., Three-dimensional Finite Element Analysis of human foot and ankle during stance phases of gait, 5th World Congress of Biomechanics, Munich, 29 July - 4 August 2006, pp S180.

446.**Zhang M**, Cheung JTM, Effect of Insoles on Plantar Pressure Relief - A 3D Finite Element Analysis, abstract No 7198, 5th World Congress of Biomechanics, Munich, 29 July - 4 August 2006, pp S169

447.**Zhang M**, Development of Digital Human Foot Models for Foot Biomechanics and Footwear Design, Innovating Future Healthcare Workshop, 27 Jun 2006, PolyU, Hong Kong, pp5.

448.Lee W, Frossard L, and **Zhang M**. Comprehensive analysis of socket-type and osseointegrated lower-limb prostheses- Advancing forward to improve comfort, safety and walking ability. In Proceedings 2006 Joint Local Symposium- Physical Sciences and Engineering in Medicine, Royal Brisbane and Women's Hospital, Brisbane, Australia. , 8 June 2006, pp.12

449.Cheung JTM, **Zhang M**, Finite element modeling of the human foot and footwear. In: Proceedings of the 2006 ABAQUS Users' Conference, Boston, USA, 23-25 May, 2006, pp145-159.

450.**Zhang M**, Contact biomechanics for body supports in rehabilitation Engineering, 中国科协第 103 次中国青年科学家论坛, Beijing, 21-22 April 2006, pp5.

451.Yeung HY, Qin L, Lee KM, **Zhang M**, Leung KS, Cheng JCY, A new approach to quantity porous structure of orthopaedic biomaterial implants using MicroCT, 2005 International Symposium on Quality of Bone and Scaffold Biomaterials evaluated by MicroCT, pQCT, QCT and MRI, Hong Kong, 17-18 Oct 2005, pp151-2.

452.Dong X, **Zhang M**, Fan YB, Stress analysis of bone-implant interface in transfemoral prosthesis using a FE model, 2005 International Symposium on Quality of Bone and Scaffold Biomaterials evaluated by MicroCT, pQCT, QCT and MRI, Hong Kong, 17-18 Oct 2005, pp161-2.

453.**Zhang M**, Gong H and Qin L, Finite element analysis of MicroCT in evaluation of bone quality, Proceedings of 2005 International Symposium on Quality of Bone and Scaffold Biomaterials evaluated by MicroCT, pQCT, QCT and MRI, Hong Kong, pp73-75.

454.**Zhang M**, Dong X and Fan YB, Stress Analysis of Osseointegrated Transfemoral Prosthesis: A Finite Element Model, Proceedings of the 2005 IEEE Engineering in Medicine and Biology 27th Annual Conference, Shanghai, China, September 1-4, 2005, pp867-70

455.Jia XH, Li XB, Dou P, **Zhang M**, The Influence of Dynamic Trans-tibial Prosthetic Alignment on Standing Plantar Foot Pressure, Proceedings of the 2005 IEEE Engineering in Medicine and Biology 27th Annual Conference, Shanghai, China, September 1-4, 2005, pp842-4.

456.**Zhang M,** Computational models for body-support interfaces, Proceedings of 6th Chinese Symposium of Rehabilitation Medical Engineering and Rehabilitation Engineering, 24-28 Aug 2005, Xi'an, pp58-61.

457.**Zhang M**, Computational models for foot biomechanics and footwear design, Proceeding of Application of Science in Footwear research and Development, 18 Aug 2005, The Chinese University of Hong Kong, pp45-50

458.Cheung JTM, **Zhang M**, An KN, Biomechanical Effects of Plantar Fascia Release and Posterior Tibial Tendon Dysfunction - A Finite Element and Cadaveric Foot SimulationIn: Proceedings of the International Society of Biomechanics XXth Congress, Cleveland, Ohio, USA, July 31-Aug 5, 2005, pp129.

459.Cheung JTM, Luximon A, **Zhang M**, Parametrical Design of Foot Orthosis for Plantar Pressure Relieve based on Computational Modelling. In: Proceedings of the 7th Symposium on Footwear Biomechanics, Cleveland, Ohio, USA, July 27-29, 2005, pp104-105 (RSScan International Pressure Research Award).

460. **Zhang M**., Cheung J.T.M. and Li Y., Computational Modeling of the Foot-Insole Interface, 17th IMACS World Congress: Scientific Computation, Applied Mathematics and Simulation, Paris, France, July 11 - 15, 2005
461. **Zhang M**., Dai X.Q., Li Y., Cheung J.T.M., Computational Simulation of Dynamic Skin and Sock Pressure Distributions, 17th IMACS World Congress: Scientific Computation, Applied Mathematics and Simulation, Paris, France, July 11 - 15, 2005
462. X.Q. Dai, R. Liu, Y. LI, **M. Zhang**, Y.L. Kwok, Numerical Simulation and Prediction of Skin Pressure Distribution Applied by Graduated Compression Stockings (GCS), 17th IMACS World Congress: Scientific Computation, Applied Mathematics and Simulation, Paris, France, July 11 - 15, 2005
463. **Zhang M,** Rehabilitation Medicine and Biomedical Engineering Research for Physically Disabled, 57th Eastern Forum of Science and Technology, 东方科技论坛第 57 届学术研讨会, 8-9 June 2005, Shanghai, Organized by Shanghai Government and Biomechanics Committee.
464. **Zhang M** and Cheung JTM, Computational Models of Foot and Ankle - Application to Foot Support Design, The 2nd World Congress for Chinese Biomedical Engineers, Beijing China, 27-29 Sept 2004, Invited talk.
465. Chen NZ, Lee WCC**, Zhang M**, A Robust Design of Thermoplastic Transtibial Prosthesis: Minimizing Variations Caused by Control Factors, The 2nd World Congress for Chinese Biomedical Engineers, Beijing China, 27-29 Sept 2004.
466. Jia XH**, Zhang M**, Wang RC, Li XB, Development of a quasi-dynamic finite element model of the below-knee prosthetic socket interface, The 2nd World Congress for Chinese Biomedical Engineers, Beijing China, 27-29 Sept 2004.
467. Liu Z, Fan YB, **Zhang M**, Biomechanical Research on Endoskeletal Trans-tibial Monolimb, The 2nd World Congress for Chinese Biomedical Engineers, Beijing China, 27-29 Sept 2004.
468. Luximon A, **Zhang M**, Obesity indices and their relationships with foot measures, Proc of Biomedical Engineering Conference, BME2004, Hong Kong, 23-25 Sept 2004, pp214-218.
469. Luximon A, **Zhang M**, Mass-customization through health informatics, Proc of Biomedical Engineering Conference, BME2004, Hong Kong, 23-25 Sept 2004, pp211-213
470. Wong AWY, Wong MS, Tong KY, **Zhang M**, Tracking of body movement using accelerometer, Proc of Biomedical Engineering Conference, BME2004, Hong Kong, 23-25 Sept 2004, pp199-203.
471. Lee WCC, **Zhang M**, Mak AFT, Prediction of prosthetic socket fit of transtibial amputee with the aid of computational modelling, Proc of Biomedical Engineering Conference, BME2004, Hong Kong, 23-25 Sept 2004, pp117-120.
472. Cheung JTM and **Zhang M**, Three-dimensional finite element analysis of the human foot and ankle during stance phases of gait, Proc of Biomedical Engineering Conference, BME2004, Hong Kong, 23-25 Sept 2004, pp112-116
473. Gong H, **Zhang M**, Yeung HY, Qin L, Guo X, Shi SQ, Microstructural properties of vertebral trabeculae in different structure model groups, Proc of Biomedical Engineering Conference, BME2004, Hong Kong, 23-25 Sept 2004, pp59-61.
474. Dong X, **Zhang M**, Fan Y, Wang B, Xiu HH, Influence of mechanical loading on osseointegrated implants: an animal study, Proc of Biomedical Engineering Conference, BME2004, Hong Kong, 23-25 Sept 2004, pp50-53.
475. **Zhang M**, Computational modelling of body-support interfaces, Symposium, 11th World Congress of the International Society for Prosthetics and Orthotics, Hong Kong, 1-6 Aug 2004, pp139.
476. **Zhang M**, How computational modeling contributes to prosthesis computer-aided design technology, Symposium, 11th World Congress of the International Society for Prosthetics and Orthotics, Hong Kong, 1-6 Aug 2004, pp244.
477. **Zhang M**, Skin friction and its effects at body-support interfaces, Symposium, 11th World Congress of the International Society for Prosthetics and Orthotics, Hong Kong, 1-6 Aug 2004, pp384
478. Law YC, Mak AFT, Wong WN, **Zhang M**, The variation of dynamic foot pressure with gait parameter, 11th World Congress of the International Society for Prosthetics and Orthotics, Hong Kong, 1-6 Aug 2004, pp112.

479. Chan PPY, Boone D, **Zhang M**, Appropriate prosthetic bioengineering for low-income countries, 11th World Congress of the International Society for Prosthetics and Orthotics, Hong Kong, 1-6 Aug 2004, 334.
480. Boone D, **Zhang M**, Determination of prosthetic malalignment by fuzzy-logic algorithe, 11th World Congress of the International Society for Prosthetics and Orthotics, Hong Kong, 1-6 Aug 2004, pp363.
481. Boone D, **Zhang M**, Computerized prosthesis alignment instrument, 11th World Congress of the International Society for Prosthetics and Orthotics, Hong Kong, 1-6 Aug 2004, pp322
482. Wang XT, **Zhang M**, Development of Prosthetics and Orthotics in the People's Republic of China, 11th World Congress of the International Society for Prosthetics and Orthotics, Hong Kong, 1-6 Aug 2004, pp44.
483. Luximon A, Cheung JTM, **Zhang M**, Biomechanical Effects of Shoe Last Design on the Ankle-Foot Structures, 11th World Congress of the International Society for Prosthetics and Orthotics, Hong Kong, 1-6 Aug 2004, pp267.
484. Cheung JTM, **Zhang M**, Luximon A, Computational Model for the Parametrical Design of Foot Orthosis, 11th World Congress of the International Society for Prosthetics and Orthotics, Hong Kong, 1-6 Aug 2004, pp202.
485. Chen NZ, Lee WCC, **Zhang M**, Reliability Analysis of Fatigue Life for Thermoplastic Transtibial Prosthesis, 11th World Congress of the International Society for Prosthetics and Orthotics, Hong Kong, 1-6 Aug 2004, 188.
486. Fan YB, Xiu KH, Wang B, Dong X, **Zhang M**, A biomechanical animal model for osseointegration research, 11th World Congress of the International Society for Prosthetics and Orthotics, Hong Kong, 1-6 Aug 2004, 108.
487. Lee WCC, **Zhang M**, Boone DA, Effect of shank flexibility of trans-tibial prosthesis on interface stress between residual limb and prosthetic socket, 11th World Congress of the International Society for Prosthetics and Orthotics, Hong Kong, 1-6 Aug 2004, pp302.
488. Lee WCC, **Zhang M**, Boone DA, Towards the optimization of design parameters for monolimb using taguchi method and finite element analysis, 11th World Congress of the International Society for Prosthetics and Orthotics, Hong Kong, 1-6 Aug 2004, pp411
489. Lee WCC, **Zhang** M, Mak AFT, Pain threshold and tolerance of transtibial stumps to external pressure, 11th World Congress of the International Society for Prosthetics and Orthotics, Hong Kong, 1-6 Aug 2004, pp31.
490. Jia XH, **Zhang M**, Wang RC, Jin DW, Comparative Investigation of Normal Stresses on a Residual Limb in a Prosthetic Socket during Walking with Standing Case, 11th World Congress of the International Society for Prosthetics and Orthotics, Hong Kong, 1-6 Aug 2004, pp359.
491. Qin L, Yeung HY, Lee KM, **Zhang M**, Leung KS, Cheng JCY. Application of microCT in characterizing orthopaedic biomaterials. Proc. 1st Asian Pacific Congress of Bone Morphometry. Takamatsu, Japan, 23-26, April 2004, also in J Jap Soc Bone Mrophometry 14(2): p108, 2004
492. Gong H, **Zhang M**, Yeung HY, Qin L, Guo X. Regional variations in the microstructural parameters of L4 vertebral trabeculae. Proc. 2nd Int Con. On Bone and Mineral Research & 4th Int Osteoporosis Symposium & First WHO-Collaborating Center Asian Regional Conf on Osteoporosis. p 120-121, Guilin, China, March 26-31, 2004.
493. Qin L, Yeung HY, **Zhang M**. State-of-the-Art technologies for bone and mineral research (in the Diagnosis Part). Proc. 2nd Int Con. On Bone and Mineral Research & 4th Int Osteoporosis Symposium & First WHO-Collaborating Center Asian Regional Conf on Osteoporosis. p 62-64, Guilin, China, March 26-31, 2004.
494. Fan YB, Wang B, Xiu KH, Dong X and **Zhang M**, Biomechanical animal experiemental research on osseointegration, Proc of The First Asial Pacific Conference on Biomechanics, Emerging Science and technology in Biomechanics, March 25-28 2004, Osaka, Japan, pp175-176.
495. Law YC, Mak AFT, Wong WN, **Zhang M**, The variation of Dynamic foot pressure gait parameter, Proc of The First Asial Pacific Conference on Biomechanics, Emerging Science and technology in Biomechanics, March 25-28 2004, Osaka, Japan, pp115-116.
496. Luximon A, **Zhang M**, Advances in footwear design to reduce foot ulceration in diabetic mellitus patients, 23rd Annual Congress of the Hong Kong Orthopaedic Association, 8-9 Nov 2003, pp s66.

497. Cheung JTM, **Zhang M**, An KN, Orthopaedic applications of computational model of the human foot and ankle, 23rd Annual Congress of the Hong Kong Orthopaedic Association, 8-9 Nov 2003, pp s56.
498. Law YC, Mak AFT, Wong WN, **Zhang M**, The variation of dynamic foot pressure with gait parameter, 23rd Annual Congress of the Hong Kong Orthopaedic Association, 8-9 Nov 2003, pp s73.
499. Tsung BYS, **Zhang M**, Mak AFT, Wong MWN. Insole effectiveness varies with casting conditions. In Proceedings of XIII the International Conference on Mechanics in Medicine and Biology, November 12-15, 2003, Tainan, Taiwan. p. 240
500. **Zhang M**, Cheung JTM, Fan YB, A Three-Dimensional Finite Element Model of the Foot and Ankle for Foot Support Design, 7th National Conference on Biomechanics, Xi'an, China, 13-18 Oct 2003, pp5, plenary report.
501. Jia XH, **Zhang M**, Lee WCC, Dynamic load transfer of the residual limb and socket interface, 7th National Conference on Biomechanics, Xi'an, China, 13-18 Oct 2003, pp56
502. Dong X, Fan YB, **Zhang M**, 3D finite element analysis of foot skeleton, 7th National Conference on Biomechanics, Xi'an, China, 13-18 Oct 2003, pp38.
503. Liu Z, Fan YB, **Zhang M**, 3D finite element analysis of monolimb for below-knee amputee, 7th National Conference on Biomechanics, Xi'an, China, 13-18 Oct 2003, pp39.
504. Fan YB, Jiang WT, Bai L, Song JL**, Zhang M**, Jiang ZL, Chen JK, Development of a flow chamber for studying cell behaviour under pulsatile flow, 7th National Conference on Biomechanics, Xi'an, China, 13-18 Oct 2003, pp2.
505. Luximon A, Tao X M, **Zhang M**, Smart footwear for dynamic fit and comfort, XVth triennial congress of the International Ergonomics Association (EA2003), Seoul, Korea 24-29August, 2003.
506. Boone DA, **Zhang M**, Wong MS, Relating alignment induced biomechanical changes to sensation of optimal prosthesis alignment, World Congress on Medical Physics and Biomedical Engineering, 24 - 29 August 2003, Sydney, Australia
507. Cheung JTM, **Zhang M**, An KN, Three-dimensional finite element model of the ankle-foot complex, World Congress on Medical Physics and Biomedical Engineering, 24 - 29 August 2003, Sydney, Australia, WE.TR15
508. Lee, WCC, **Zhang M**, Jia XH, Boone D, A computational model for monolimb design, International Society of Biomechanics XIXth Congress, 6-11 July, 2003, Dunedin, New Zealand, pp234
509. Jia XH, **Zhang M**, Lee WCC, Dynamic effects of interface mechanics of residual limb/prosthetic socket system, International Society of Biomechanics XIXth Congress, 6-11 July, 2003, Dunedin, New Zealand, pp233.
510. Pu F, Fan YB, **Zhang M**, A novel system for computer-aided prosthetic socket design, biomechanical assessment, Proc 25th NCP symposium, pp3-4, 2002 Kobe, Japen
511. **Zhang M**, Cheung JTM, Leung AKL, Fan YB, A 3D computational foot model, International Symposium on Rehabilitation Engineering & Clinical Rehabilitation, Dalian, China, 27-30 Aug, 2002, pp109-113.
512. Mak AFT, **Zhang M**, Leung TP, Development of Rehabilitation Bioengineering in Hong Kong SAR and at The Hong Kong Polytechnic University, International Symposium on Rehabilitation Engineering & Clinical Rehabilitation, Dalian, China, 27-30 Aug, 2002, pp1-2.
513. Fan YB, Jiang WT, Zou YW, Bai L, **Zhang M**, Jiang ZL, Chen JK, Development of a flow chamber for studying cell behaviour under pulsatile flow, IVth World Congress of Biomechanics, Calgary, Canada, 4-9 Aug, 2002.
514. **Zhang M**, Cheung JTM, Fan YB, Leung AKL, Development of 3D finite element model of human foot and ankle, IVth World Congress of Biomechanics, Calgary, Canada, 4-9 Aug, 2002.
515. Lu WW, Yeung KT, Cheung KMC, Wong CT, **Zhang M**, Luk KDK, Leong JCY, Compressive strength in vertebroplasty under fatigue loading – an experimental and a finite element modelling analysis, IVth World Congress of Biomechanics, Calgary, Canada, 4-9 Aug, 2002.
516. Tsung YS, **Zhang M**, Mak FT, Wong WN, Evaluation of insole designs in plantar pressure relief, Proc 13th European Congress of Physical and Rehabilitation Medicine, 28-31 May 2002, Brighton, UK, pp253.
517. Cheung JTM, **Zhang M**, Chow DHK, A poroelastic finite element analysis of the intervertebral joint, Proc of BME 2002, Hong Kong, April, pp69-73

518.Tsung YS, **Zhang M**, Boone DA, Changes in plantar foot shape under weight bearing conditions, Proc of BME 2002, Hong Kong, April, pp74-77

519.Yeung KT, Lu WW, **Zhang M**, Leong JCY, Finite element modelling analysis of compressive strength in vertebroplasty, Proc of BME 2002, Hong Kong, April, pp117-21.

520.Cheung JTM, **Zhang M**, Leung AKL, A preliminary 3D finite element analysis of human foot and ankle, Proc of BME 2002, Hong Kong, April, pp122-5.

521.**Zhang M**, Gait analysis in prosthetic fitting, Proceeding of the 3rd Chinese Conference of Rehabilitation Medicine, Beijing, Oct. 23-26, 2001: 361.

522.Yang NF, Jin DW, **Zhang M**, Huang CH, Wang RC. An extending Fitts' Law for human upper limb performance evaluation. Proceedings--23rd Annual International Conference--IEEE/EMBS. Istanbul, Turkey, Oct. 25-28, 2001, paper number 68.

523.Yang NF, Jin DW, **Zhang M**, Huang CH, Wang RC. A function description for the human upper limb pointing movements performance. Proceedings--23rd Annual International Conference--IEEE/EMBS. Istanbul, Turkey, Oct. 25-28, 2001, paper number 114.

524.Yang NF, **Zhang M**, Wang RC, Huang CH, Jin DW, Zhang JC, Synergy in Human Upper Limb Movement Performance. Proceeding of the 3rd Chinese Conference of Rehabilitation Medicine, Beijing, Oct. 23-26, 2001:354-355.

525.Fan YB, **Zhang M**, Pu F, Jiang WT, Yang SQ, Chen JK, Biomechanical studies on the interaction between below-knee residual limb and prosthetic socket, National Conference of Biomedical Engineering Society, Beijing, Oct 2001, pp75 (in Chinese).

526.Yang NF, Huang CH, Jin DW, Wang RC, **Zhang M**, Effect of different states on human upper limb target reaching movements performance, BMES, 2001, USA.

527.**Zhang M**, Fan YB, Biomechanical studies on lower-limb prosthetic socket design, In Advance in Biomechanics, Proc of First International Young Investigators Workshop on Biomechanics, Beijing, July 2001, pp 134-138.

528.Fan YB, Zhao ZH, **Zhang M**, Song JL, Ge X, Zhou XJ, Chen JK, Multilevel biomechanical studies on remodelling of temporomandibular joint (TMJ), In: Advance in Biomechanics, Proc of First International Young Investigators Workshop on Biomechanics, Beijing, July 2001, pp 139-145 (in Chinese).

529.**Zhang M,** Mak AFT, Zheng YP, Leung AKL, A novel system for computer-aided socket design: stress analysis and archival package, 10th ISPO, Glasgow, 2001, ppFO2.2.

530.Zheng YP, Mak AFT, **Zhang M**, Leung AKL A novel system for computer-aided socket design: soft tissue assessment, 10th ISPO, Glasgow, 2001, ppTHO7.7.

531.Cheung JTM, **Zhang M**, Chow DHK, A finite element study of the effects of vibrational loading on the fluid flow mechanism of the intervertebral disc, Proceedings of XVIIIth Congress of International Society of Biomechanics, Zurich, Switzerland, 245, 2001 July 8-13.

532.**Zhang M**, Zheng YP, Mak AFT, Mechanical properties of bulk soft tissues of transfemoral residual limb bounded by a prosthetic socket, World Congress on Medical Physics and Biomed Eng, July 2000, Chicago.

533.**Zhang M**, Zheng YP, Law SYC, Mak AFT, Mechanical properties of residual limb tissues within a prosthetic socket – a preliminary report, The Croucher Advanced Study Institution on Engineering of Musculoskeletal Tissues, April 2000, Hong Kong

534.**Zhang M**, Mak AFT, CAD/CAM and finite element analyses on lower-limb prosthetic socket, Proc of National Conference on Rehabilitation Engineering, Beijing, Oct, 1999, pp45-47.

535.**Zhang M**, Mak AFT, Mak J, Air cushion action at the distal end of above-knee stump with a prosthetic socket, Proc. of 20th Annual Int. Conference of IEEE Eng. in Med. & Biol. Society, Hong Kong, Oct 1998, 2741-3.

536.**Zhang M**, Mak AFT, Chung AIK, MRI investigation of stump musculoskeletal actions with a prosthetic socket, Proc of 20th Annual Int. Conference of IEEE Eng. in Med. & Biol. Society, Hong Kong, Oct 1998, 2754-6

537.**Zhang M**, Mak AFT, Chung AKI, Dynamic pressure maps over areas of AK prosthetic sockets, Proceedings of 9th Word Congress of ISPO, Amsterdam, June, 1998,709-711.

538. **Zhang M**, Mak AFT, In vivo frictional properties of human skin to prosthetic interface materials, proceedings of 9th Word Congress of ISPO, Amsterdam, June, 1998, 712-714.
539. Li XF, Xiao SJ and **Zhang M**, Application of model predictive control in the FES, health Care and Medical Devices, Vol 3 pp 205-207, 1998 (in Chinese).
540. **Zhang M**, and Mak AFT, Effect of friction on the load transfer between an above-knee residual limb and prosthetic socket, Proc. of 3rd Asian-Pacific Conference of Medico-Biological Eng., Taiwan, May 1996.
541. **Zhang M**, Mak AFT, Finite element analyses of the stump end load-bearing on above-knee prosthetic socket, Proc. of Int. Conf. Biomed Eng, BME'96, June, pp. 94-97, Hong Kong, 1996.
542. **Zhang M**, Turner-Smith AR and Roberts VC, Clinical measurement of pressures and shear stresses on below-knee socket, IPSM & BES annual Scientific Conference, Sheffield, 13-15 Sept 1995.
543. **Zhang M**, and Roberts VC, Biomechanical investigation of the stump/socket interface in below-knee amputees, UK ISPO Annual Scientific Meeting, Hull 16-18 Feb., 1995.
544. **Zhang M**, Turner-Smith AR, Roberts VC, and Tanner A, Shear measurement at stump/socket interface in below-knee amputee. World Congress On Medical Physics and Biomedical Engineering, Rio de Janeiro, Brazil, Aug 1994.
545. **Zhang M**, Turner-Smith AR, and Roberts VC, Friction, slip and stresses at residual limb/prosthetic socket interfaces--a 3-D non-linear finite element analysis. World Congress On Medical Physics and Biomedical Engineering, Rio de Janeiro, Brazil, Aug 1994
546. **Zhang M**, Turner-Smith, and Roberts VC, Interfacial friction action in the stump socket of the below knee amputee - a model-based analysis. World Congress On Medical Physics and Biomedical Engineering, Rio de Janeiro, Brazil, Aug 1994
547. **Zhang M**, Turner-Smith AR, and Roberts VC, A non-linear finite element analysis of the stump/socket interface. Second World Congress on Biomechanics, Amsterdam, The Netherlands, July 1994
548. **Zhang M**, Turner-Smith AR, and Roberts VC, Interfacial friction action in the stump socket of the below knee amputee -a model-based analysis. International Conference on Medical Physics & Biomedical Engineering, Cyprus, 5-7 May 1994
549. **Zhang M**, Turner-Smith AR, and Roberts VC, The reaction of skin and soft tissue to shear forces applied externally to the skin surface. 19th Annual Day Conference on Soft Tissue Biomechanics, Leeds, Jan, 1994
550. **Zhang M**, Turner-Smith AR, and Roberts VC, Friction, slip and stresses at residual limb/prosthetic socket interface -- a 3D non-linear finite element analysis. Finite Element Analysis in Medicine, Birmingham, 11th Jan 1994
551. Roberts VC, and **Zhang M**, Biomechanical concepts in the design of stump socket for the lower limb amputee. Australasian Conference on Physical Science and Engineering in Medicine and the Biomedical Engineering Conference, Melbourne, Australian, Sept 1993.
552. **Zhang M**, Leading students to use SQ3R method in studying Machine Design, National Meeting in Teaching Methods, Wuhan, China, 1989
553. Jin YD, and **Zhang M**, A creative design of spur gears and piston rings, Annual Meeting of Design Methods, Shenzhen, China, 1988.
554. Sun YG, and **Zhang M**, Operating condition monitor - An oil analysis expert system on IBM-PC/AT, Annual Meeting of Automation, Qingdao, China, 1988.

555. <u>Dissertations</u>

556. **Zhang M**, Analysis of the control forces for hydraulic pump, BSc Thesis, Beijing Institute of Technology, 1982.
557. **Zhang M**, Wear and lubrication between piston ring and cylinder of engines, MSc thesis, Beijing Institute of Technology, 1987
558. **Zhang M**., Biomechanics of the residual limb and prosthetic socket interface in below-knee amputees, *Ph.D. dissertation*, University of London, 1995.

559.Translation (from English to Chinese)

560.Fan YB, **Zhang M**, Mak AFT, Chapter 5, Biomechanics, Fundamental of Orthopedics, Ed Mow VC, et al, 2001.

Patents/专利

序号 No.	专利名称 Title of Patents	专利授权国 Country Granting	专利号 Patent No.	授权公告日 Date of Granting	排序 Personal Ranking
1	一种基于近红外光谱的人体内酒精含量检测方法及系统	中国	CN201110418683.9	2014.03.19	2
2	Biomechanical Analysis and Design Optimization Method and Platform for Adolescent Pillow using Computer Simulation（一种青少年枕生物力学性能分析及设计优化方法及装置）	中国	PCT/CN2017/071917	2017.1	4
3	一种肌肉疲劳等级的检测方法及设备	中国	ZS1810352-1		4
4	一种可穿戴式人体背部曲线检测方法和检测装置	中国	submitted		4
5	一种杆结构多孔矫形器的制备方法	中国	202010037768.1		3