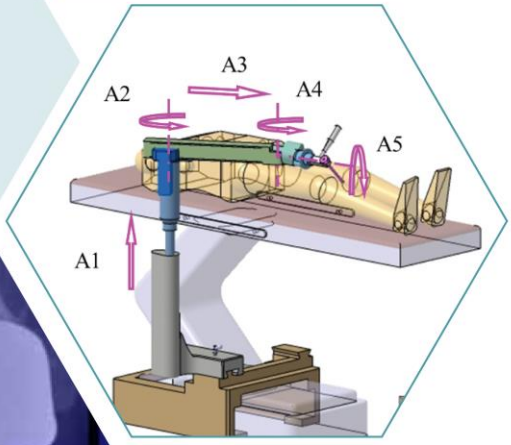
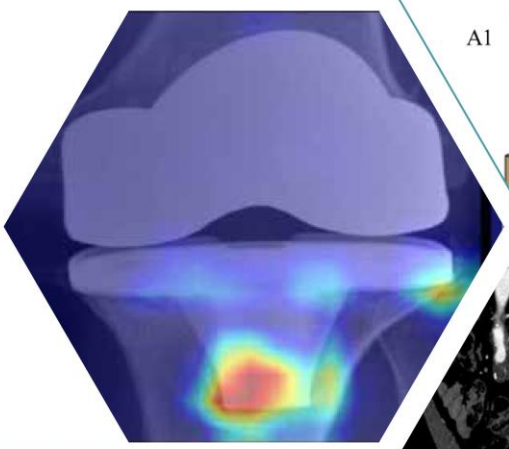
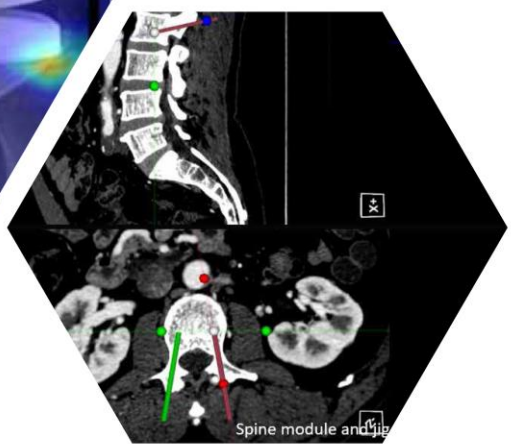
International Symposium on

Advanced Technology and 3D Printing in Orthopaedics

9 September 2023 (Saturday) **Shatin, Hong Kong**







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International Symposium on Advanced Technology and 3D Printing in Orthopaedics

Date: 9 September 2023 (Saturday)
Venue: 9/F Auditorium, CUHK Medical Centre, Shatin, Hong Kong

Organizing Committee	
Chairman	Prof. Patrick SH YUNG
Committee Member	Prof. Louis CHEUNG, Prof. Elvis CS CHUI, Prof. Sheung Wai LAW, Prof. Ling QIN

Invited Speakers

Prof. Hong CAI	Associate Professor, Chief Physician, Department of Orthopaedics, Peking University Third Hospital, China
Prof. Igor DRSTVENSEK	Professor, Faculty of Mechanical Engineering, University of Maribor, Slovenia
Prof. Shaolong KUANG	Distinguished Professor, Shenzhen Technology University, China
Prof. Yuxiao LAI	Vice Director of Institute of Biomedical and Health Engineering, Shenzhen Institutes of A dvanced Technology, Chinese Academy of Sciences, China
Prof. Huashui LIU	Professor, Director of Orthopaedics, Central Hospital Affiliated to Shandong First Medical University, China
Prof. Max Qing-Hu MENG	Chair Professor & Department Chair, Department of Electronic and Engineering, Southern University of Science and Technology, China
Prof. Guoxian PEI	Dean, Southern University of Science and Technology Hospital, China
Prof. Hongxun SANG	Chairman, Department of Orthopaedics, Shenzhen Hospital of Southern Medical University, China
Prof. Jia YU	Associate Professor, Institute of Orthopaedics, Soochow University, China
Prof. Yu WANG	Associate Professor & Assistant Dean, School of Biological Science and Medical Engineering, Beihang University, China

Local Speakers

Prof. Louis CHEUNG	Professor, Department of Orthopaedics and Traumatology, The Chinese University of Hong Kong
Prof. Kelvin CHONG	Clinical Associate Professor, Department of Ophthalmology and Visual Sciences, The Chinese University of Hong Kong
Prof. Elvis CHUI	Research Assistant Professor, Department of Orthopaedics and Traumatology, The Chinese University of Hong Kong
Prof. Kevin HO	Clinical Professional Consultant, Department of Orthopaedics and Traumatology, The Chinese University of Hong Kong
Mr. Ajax LAU	Advanced Practice Prosthetist-Orthotist, Prince of Wales Hospital
Prof. Sheung Wai LAW	Clinical Professional Consultant, Department of Orthopaedics and Traumatology, The Chinese University of Hong Kong
Prof. Wayne LEE	Assistant Professor, Department of Orthopaedics and Traumatology, The Chinese University of Hong Kong
Dr. Michael MAK	Associate Consultant, Department of Orthopaedics and Traumatology, Prince of Wales Hospital
Dr. Sibyl MAK	Adjunct Assistant Professor, Department of Mechanical Engineering, The University of Hong Kong
Prof. Michael ONG	Clinical Assistant Professor, Department of Orthopaedics and Traumatology, The Chinese University of Hong Kong
Prof. Ling QIN	Professor, Department of Orthopaedics and Traumatology, The Chinese University of Hong Kong
Dr. Haoran SUN	Chief Technology Officer, Koln 3D Technology (Medical) Limited

In alphabetical order of last name

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International Symposium on Advanced Technology and 3D Printing in Orthopaedics

Program

Day 1 - Symposium

Date: **9 September 2023 (Saturday)**

Venue: **9/F Auditorium, CUHK Medical Centre, Shatin, Hong Kong**

9 September 2023 (Saturday) 0830-1015 **The Hong Kong College Of Orthopaedic Surgeons Saturday Inter-hospital Meeting**		
0830 – 0840	Opening Remarks	SW Law
1. 3D Printing - Orthopaedic Surgical Applications		
Moderators: L Cheung, M Ong		
0840 – 0855	Challenges and the Future of 3D Printing Application in Rehabilitation	SW Law
0855 – 0910	When an Orthopedic Surgeon Meets 3D Printing	H Cai
0910 – 0925	Metal 3D printing in medicine – a design and manufacturing perspective	S Mak
0925 – 0940	Computer-assisted Upper Limb Deformity Correction	M Mak
0940 – 0955	Computerized 3D Printing and Design in Prosthetic and Orthotic Devices	Ajax Lau
0955 – 1015	Discussion	All
1015 – 1025	Group Photo	All
1025 – 1045	TEA BREAK	All
2. Overview of 3D Printing Development		
Moderators: SW Law, L Qin		
1045 – 1100	3D Printing in China - Legislation and the Latest Development	H Cai
1100 – 1115	Intelligent Orthopaedics – the Future is Coming	GX Pei
1115 – 1130	Application of 3D Printing and Navigation in Spinal Surgery	HX Sang
1130 – 1145	3D Printing - Opportunities and the Future in the Great Bay Area	L Qin
1145 – 1200	New Development of Surgeon Oriented 3D Surgical Planning System	E Chui
1200 – 1215	Metal-based 3D Medical Printing in HK and Belt & Road Region	HR Sun
1215 – 1230	Metal in Biomedical Applications	I Drstvensek
1230 – 1245	Discussion	All
1245 – 1400	LUNCH	

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International Symposium on Advanced Technology and 3D Printing in Orthopaedics

Day 1 - Symposium

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3. Advanced Artificial and Imaging Applications		
Moderators: L Cheung, E Chui		
1400 – 1415	AI Assisted Image Based Orthopaedic System	E Chui
1415 – 1430	Characteristic Motion Patterns of the Knee Joint during a Weightbearing Flexion	J Yu
1430 – 1445	Automatic System for Orbital Fracture Detection and 3D Printing	K Chong
1445 – 1500	Osteogenic Magnesium Incorporated into PLGA/TCP Porous Scaffold by 3D Printing for Repairing Challenging Bone Defect	YX Lai
1500 – 1515	Scoliosis in Hong Kong	W Lee
1515 – 1530	Discussion	All
1530 – 1545	TEA BREAK	
4. Robotics		
Moderators: E Chui, K Ho		
1545 – 1600	Surgical Robots in the GPT Era	Max Meng
1600 – 1615	Advanced Surgical Robot Development in Trauma and Fracture Reduction	Y Wang
1615 – 1630	Clinical Application of Robot-Assisted Minimally Invasive Treatment for Unstable Pelvic Ring Injury	HS Liu
1630 – 1645	The Technology Evolution and Trends of Surgical Robot in Orthopaedics	S Kuang
1645 – 1700	Application of Robotics in Adult Joint Replacement in Hong Kong	M Ong
1700 – 1715	Discussion	All
1715 – 1720	Closing Remarks	SW Law

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Invited speaker

Professor CAI Hong

Deputy Director of Orthopedics
Department of Orthopaedics
Peking University Third Hospital
China

- Doctor of Medicine, Deputy Director of Orthopedics
- Bachelor of Medicine, Deputy Director of Orthopedics

Professor Cai is a highly accomplished and dedicated orthopedic surgeon, currently serving as the Chief Physician and Associate Professor in the Orthopaedics Department of Peking University Third Hospital. He holds an M.D. degree in Surgery of Orthopaedics from Peking University Health Science Center. Professor Cai's primary focus lies in artificial joint replacement, with a particular dedication to research and development in prosthetics.

He is actively involved in advancing the field, particularly in the application of 3D printing technology in orthopedics. His research encompasses the foundation and clinical application of 3D printing in orthopedics, contributing to the development of innovative solutions in this domain. In addition to his research endeavors, Professor Cai has actively participated in the development of various types of prosthetic replacements and conducted research on clinical registration. His work has resulted in numerous publications, including papers and books that contribute to the orthopedic literature.

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Invited speaker

Professor Igor DRSTVENSEK

Professor
Faculty of Mechanical Engineering
University of Maribor
Slovenia

- B.S. in Mechanical engineering, University of Maribor
- M.S. in Technical Sciences - Mechanical Engineering, University of Maribor
- PhD in Mechanical Engineering, University of Maribor

Professor Igor Drstvenšek is a lecturer at the University of Maribor, Faculty of Mechanical Engineering, where he teaches production technologies and maintenance. His research work over the last 15 years has been dedicated to additive manufacturing and, in particular, to medical applications of additive manufacturing. He is the head of the Additive Manufacturing Laboratory at the Faculty of Mechanical Engineering, University of Maribor.

In 2006, he initiated the first implant production with additive manufacturing in Slovenia, and in the last 15 years, he has conducted 50 projects on the production of cranial and maxillofacial implants. He also conducted a clinical study on patient-specific acetabular components for revisions of severe defects after total hip arthroplasty.

He is the author of 6 national patents and 5 international patent applications. His research has been published in 427 bibliographic units, including 65 original scientific papers, 24 technical articles, 154 conference papers, and 9 books.

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Invited speaker

Professor KUANG Shaolong

Distinguished Professor
Shenzhen Technology University
Shenzhen
China

- BA in Mechanical Engineering
- MA in Mechanical Engineering
- PhD in Mechatronics Engineering

Professor KUANG Shaolong, Distinguished Professor, Academic Leader of Intelligent Medical Engineering in Shenzhen Technology University. Shenzhen High-End Talent (Class A), Chief Scientist / Principal Investigator of National Key Research and Development Program. He received his bachelor's degree in Mechanical Engineering from Anhui Polytechnic University (China) in 1996, master degree in Mechanical Engineering from Southeast University (China) in 1999, and Ph.D. in Mechatronic Engineering from Beihang University (China) in 2013.

His main research fields are medical robots and biomedical equipment, human factors and human-machine interaction.

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Invited speaker

Professor LAI Yuxiao

Vice Director
Institute of Biomedical and Health Engineering
Shenzhen Institutes of Advanced Technology
Chinese Academy of Sciences
China

Executive Director
Institutes of Centre for Translational Medicine
Research and Development, Biomedical and Health Engineering
Shenzhen Institutes of Advanced Technology
Chinese Academy of Sciences
China

- PhD in Polymer Science, Fudan University
- M.S. in Polymer Science, Sun Yet-sen University
- B.S. in Material Science, Sun Yet-sen University

Professor Yuxiao Lai is currently the professor and vice director of The Institute of Biomedical and Health Engineering (IBHE), Executive Director of the Centre for Translational Medicine Research and Development (TMC), Shenzhen Institute of Advanced Technology Chinese Academy of Sciences (SIAT). Professor Lai is mainly engaged in the R&D of orthopaedic biomaterials, and focuses on the translational research at technology and products for the clinical application in orthopaedics.

Professor Lai has performed systematic studies in the basic research of biomaterials design and synthesis, the interaction between cells and materials, and built an integrated technology platform of bone repair materials design, manufacturing, evaluation, and clinical transformation. Her studies have been published more than 60 peer review articles in international journals such as Biomaterials, Advanced Functional Materials and ACS Nano, which have been cited more than 2000 times. By cooperating with hospitals and enterprises in related fields, taking advantage of multi-disciplines during the joint studies, Professor Lai's team is keeping exploring new strategies and technologies for bone repair and translating the research outcomes into clinical application. As the first inventor of the patents "Bone Repair Materials and the Production Technologies" and "Bone Repair Materials and the Production Methods", Professor Lai jointly built up the high-tech enterprise "Jingcheng Biotech Ltd". As the technical shareholder, and the technological innovation has been translated into clinical trials in Beijing Jishuitan Hospital (3A level). The personalized bone repair products developed by Professor Lai's team won the Innovation Award of China Industry-University-Research Cooperation, the silver Award of International Exhibition of Inventions of Geneva.

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Invited speaker

Professor LIU Huashui

Director of Orthopedics
Central Hospital Affiliated to Shandong First Medical University
Shandong
China

- Medical Doctor, Specialist in Orthopaedics

Since July 1995, Professor Liu has been actively engaged in the field of trauma microsurgery and trauma orthopedics. Despite their relative youth, Professor Liu has emerged as a prominent figure in this domain and has played a vital role in advancing the specialized field within Jinan, Shandong Province. Notably, in February 2003, Professor Liu pioneered complex pelvic fracture surgeries in the Jinan region, successfully completing over 1,000 cases with favorable clinical outcomes. This extensive experience has garnered both clinical expertise and substantial social recognition, leading to significant social and economic benefits.

In December 2016, the introduction of the Tianji Orthopedic Robot marked a significant milestone in Professor Liu's career. They accomplished the first orthopedic robot-assisted surgery in Shandong Province. Over the subsequent five years, Professor Liu has led a dedicated team in performing more than 500 robot-assisted pelvic fracture surgeries. These procedures have been distinguished by their precision and minimally invasive techniques. This innovation has notably enhanced the field of orthopedic surgery and resulted in substantial societal benefits.

Furthermore, Professor Liu has actively promoted this cutting-edge technology and shared their treatment experiences at national and provincial orthopedic conferences, thereby elevating the hospital's reputation and their own professional expertise. Additionally, their project secured funding from the Ministry of Science and Technology and marked a pioneering achievement with the publication of related papers in core journals, including SCI publications.

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Invited speaker

Professor MENG Qinghu Max

Chair Professor and Department Chair
Department of Electronic and Engineering
Southern University of Science and Technology
Shenzhen
China

- PhD in Electrical & Computer Engineering, University of Victoria,
- M.Sc. in Automatic Control, Beijing Institute of Technology

Professor Meng currently serving as a Chair Professor and the Head of the Department of Electronic and Electrical Engineering at the Southern University of Science and Technology in Shenzhen, China. Professor Meng's research interests primarily focus on medical and service robotics, as well as robotics perception and intelligence. He has an impressive publication record with over 750 journal and conference papers and book chapters. Additionally, he has led more than 60 funded research projects as the Principal Investigator, accumulating a total research funding of nearly 100 million.

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Invited speaker

Professor PEI Guoxian

Dean, Southern University of Science and Technology Hosptial

Director and Chair Professor
Southern University of Science and Technology
Shenzhen
China

- Medical Doctor, The First Military Medical University
- PhD, Jinan Military Medical School

Professor Guoxian Pei has been engaged in orthopedic clinic, teaching and research for 50 years, and is one of the main leaders in the field of microsurgical orthopedics in China with significant international influence and the pioneer and founder of digital orthopedics. He was awarded the first prize of the National Science and Technology Progress Award (2020), the second prize of the National Science and Technology Progress Award (2002), the first prize of the Ministry of Education's Natural Science Award, the first prize of the Provincial Army's First Prize, and the Army's Major Scientific and Technological Achievement Award; he is also the chief editor of 22 monographs. He has published 366 papers as the first or corresponding author. He has presided over 23 projects such as National 863, 973, and Key National Natural Science Foundation of China and has obtained 17 invention patents.

He served as a member of the Disciplinary Review Group of the Academic Degrees Committee of the State Council, the seventh chairman of the Microsurgery Branch of the Chinese Medical Association, the first secretary-general of the IHCTAS, and the chief editor of Chinese Journal of Orthopaedic Trauma, etc. He has been awarded national level honors and titles such as Expert with Outstanding Contributions, Expert with Special Allowance of the State Council, the First National Star of Medical Science and Technology for Young and Middle-aged People, and the first batch of candidates for the National Hundred, Thousand and Ten-Thousand Talent Project, etc.

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Invited speaker

Professor SANG Hongxun

Chairman
Department of Orthopaedic Center
Shenzhen Hospital of Southern Medical University
Shenzhen
China

- Bachelor's in medical sciences, Fourth Military Medical University
- Master and PhD., Fourth Military Medical University

Professor Sang Hongxun is the chairman of the Department of Orthopaedic Surgery, Shenzhen Hospital of Southern Medical University. He is also an expert in the field of Orthopaedics and a spine surgeon who offers both general and specialist orthopedic care. Professor Sang is passionate about using minimal access surgery and digital orthopedics technique within the field of degenerative spine disease, spine trauma and spinal arthroplasty. Professor Sang has also devoted himself into scientific research in the arena of novel biomaterial and bone tissue engineering. Professor is a member of North American Spine Society and he also serves as the Chairman of China Digital Orthopedic Society of SICOT China Chapter. Till now, Professor Sang has contributed to 15 monographs and published more than 100 research papers.

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Invited speaker

Professor YU Jia

Associate Professor
Orthopaedic Institute
Medical College
Soochow University
Suzhou
China

- Bachelor of Refrigeration Engineering, Guangdong Ocean University
- Master of Mechanical Design & Theory, Shanghai Jiao Tong University
- Doctor of Philosophy in Biomedical Engineering, The Hong Kong Polytechnic University

Professor Yu is an associate professor of Orthopaedic Institute at Soochow University. He obtained a PhD degree from the HK PolyU, and was a visiting student/scholar at Mayo Clinic (2007) and Harvard University (2022). He was a key account manager of 3D printing company named Materilise NV. His lab focuses on musculoskeletal biomechanics and 3D printing applications. Professor Yu has published over 50 peer-reviewed papers and received several best paper awards, such as HKBME and ABAQUS. He is a member of digital orthpaedics committee at SICOT China.

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Invited speaker

Professor WANG Yu

Founder and CEO
Beijing Rossom Robot Co ltd.

Associate Professor and Assistant Dean
College of Biological and Medical Engineering
Beihang University

- Bachelor of Mechanical Engineering and Automation, Beihang University
- Doctor of Institute of Robotics, Beihang University

Professor Wang is the Founder and CEO of ROSSUM ROBOT Co. Ltd. He also serves as an Associate Professor and Assistant Dean at the School of Biological Science and Medical Engineering, Beihang University.

He participated in the development of the first orthopedic surgical robot system of China, completed the first domestic robot-assisted orthopedic surgery and the first remote orthopedic surgery. This achievement has successfully achieved industrial transformation. It became the first orthopedic surgical robot that has obtained NMPA product registration.

In 2017, He had founded Beijing Rossum Robot Technology Co., Ltd. Rossum Robot aims to developing the next generation intelligent Orthopedic robot system for fracture reduction, and was reported by Nature spotlight on Chinese medical robot in 2020.

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Local speaker

Dr. CHONG Kam-lung, Kelvin

Consultant
Department of Ophthalmology and Visual Sciences
CUHK Medical Centre
Hong Kong

- MBChB, The Chinese University of Hong Kong

Dr. CHONG Kam-lung, Kelvin clinical and research interest focus on oculofacial plastic conditions including thyroid eye disease, orbital tumors, trauma, tearing disorders and minimally invasive eyelid, lacrimal and orbital surgeries.

He graduated at the top of his class in the CUHK Faculty of Medicine (MBChB) program. He was awarded the Li Po Chun Charitable Trust Fund Overseas Postgraduate Scholarship to the University of California at Los Angeles (UCLA) and LA Biomedical Institute where he returned later for a 2-year surgical and translational research fellowship. His awards included the City Lion Club Gold Medal, Action for Vision Eye Foundation Young Researcher of the Year, Achievement Awards from American Academy of Ophthalmology (AAO) and Asia Pacific Academy of Ophthalmology (APAO), best surgical video awards in AAO (2012, 2014) and World Ophthalmology Congress (2018). He has over 40 SCI indexed peer-reviewed articles and 5 book chapters.

Dr. Chong currently serves as the Head of the Orbital and Oculoplastic Division at the Department of Ophthalmology and Visual Science (DOVS) and Prince of Wales Hospital (PWH) and the Associate Director of the CUHK Eye Center.

He is the current President of Hong Kong Society of Ophthalmic Plastic and Reconstructive Surgery (HKSOPRS), First Vice-President of the Asia-Pacific Society of Ophthalmic Plastic and Reconstructive Surgery (APSOPRS) and education officer of the International Thyroid Eye Disease Society (ITEDS). He is recently inducted into the American Society of Ophthalmic Plastic & Reconstructive Surgery (ASOPRS).

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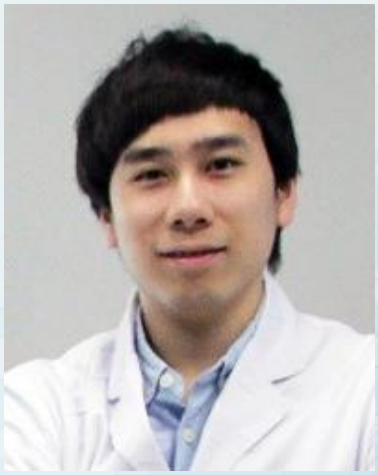
Local speaker



Professor CHUI Chun-sing, Elvis

Research Assistant Professor
Department of Orthopaedics and Traumatology
The Chinese University of Hong Kong
Hong Kong

- BSc (Hons), The City University of Hong Kong
- MSc, The Chinese University of Hong Kong
- PhD, The Chinese University of Hong Kong

Professor Chui Chun-Sing focuses on Computer-assisted surgical planning and development of novel technologies in the O&T department with 14 published peered-review manuscripts and 12 approved research grants and contracts as PI and Co-I. He is also the Honorary Advisor by the Hospital Authority to educate and train the entire 3D printing team and surgeons for surgery 3D planning, patient specific instrument design and 3D printing operations. He has assisted in surgery planning and provided intra-operative support for navigation guided surgeries for more than 10 years and more than 400 cases. Besides, he has been the manager of the Computer Aided Surgical Modeling (CASM) Laboratory since 2013. He has also been providing critical assistance for the department in 3D planning, 3D designing and 3D printing for more than 300 surgery cases. He was invited by the Hospital Authority NTEC to the "Working Group on 3D Printing" in 2021 March to help establishing the 3D printing service in NTEC utilizing his fruitful experience in medical 3D printing.

Professor Chui is specialized in research translation. He has been granted for 4 competitive grants, 2 non-competitive grants and 3 research contracts. He has pursued 7 international and local patents derived from the funded projects including robotics system, prosthesis and innovative treatment methodology. He was also the winner of the Dr. Yeung Sai-Hung Trophy in the 39th Annual Congress of Hong Kong Orthopaedic Association, representing the Best Paper Award in the Adult Joint Replacement Chapter.

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Local speaker

Mr. LAU Hong Yin Ajax

Advanced Practice Prosthetist and Orthotist
Prosthetic-Orthotic Department
Prince of Wales Hospital
Hong Kong

- BSc (Hons) in Prosthetics & Orthotics
- MPhil in Biomedical Engineering, The Hong Kong Polytechnic University

Mr. Ajax Lau is a Prosthetist & Orthotist with over 20 years of experience in providing Prosthetic, Orthotic and Assistive Technology services to the local community. He is currently serving at the Prosthetic & Orthotic Department of the Prince of Wales Hospital, and he is also appointed an Honorary Research Associate in the Department of Orthopaedics and Traumatology at the Chinese University of Hong Kong.

Mr. Lau is interested in the development of rehabilitation technologies in the design of advanced Prosthetic and Orthotic devices for various clinical applications. He has applied the latest 3D visualization and printing technology for the design and production of rehabilitation devices and patient-specific instruments for more than 10 years. He has also developed and implemented a quality management system for 3D printing services at the point-of-care.

Mr. Lau has participated in organizing talks and symposia on rehabilitation technologies, and he has delivered educational programs to local healthcare practitioners. He is a passionate advocate for the use of technology to improve the lives of people with disabilities.

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Local speaker

Professor LAW Sheung-wai

Clinical Professional Consultant
Department of Orthopaedics & Traumatology
The Chinese University of Hong Kong
Hong Kong

Chief-of-Service
Department of Orthopaedics & Traumatology
Alice Ho Miu Ling Nethersole Hospital

- MSc in Health Service Management, The Chinese University of Hong Kong
- MSc in Epidemiology and Biostatistics, The Chinese University of Hong Kong
- MSc in Occupational Medicine, The Chinese University of Hong Kong
- PGDip in Clinical Gerontology, The Chinese University of Hong Kong

Professor Law is currently a Clinical Professional Consultant, Professor and Professor of Practice in Orthopaedics and Traumatology (by courtesy) in the Department of Orthopaedics and Traumatology, Faculty of Medicine, The Chinese University of Hong Kong. He is also the President of The Hong Kong College of Orthopaedic Surgeons.

He graduated from The Chinese University of Hong Kong and received his MBChB in 1993. After finishing his fellowship training in Orthopedic Surgery. He has pursued postgraduate qualifications in various fields of medicine.

He obtained Master of Occupational Medicine, Master of Sciences in Epidemiology and Bio-statistics, Postgraduate Diploma in Clinical Gerontology, Master of Science in Health Services Management from the Chinese University of Hong Kong.

His professional interests include Orthopedic Rehabilitation- coordination of care for elderly with fragility fractures, management of osteoporosis, work rehabilitation and return to work management for injured workers, rehabilitation technology and spine surgery. Professor Law has served in the Hong Kong Osteoporosis Foundation since 2002.

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Local speaker

Dr. MAK Chu-kay Michael

Associate Consultant
Department of Orthopaedics and Traumatology
Prince of Wales Hospital
Hong Kong

Honorary Associate Professor
Department of Orthopaedics and Traumatology,
The Chinese University of Hong Kong

- MBChB, The Chinese University of Hong Kong

Dr. Mak Chu-kay Michael currently holds the position of Associate Consultant in the Department of Orthopaedics and Traumatology at Prince of Wales Hospital, a role he has held since 2018. He also serves as an Honorary Associate Professor in the Department of Orthopaedics and Traumatology at The Chinese University of Hong Kong, a position he has held since 2020.

His focus on medical research has made a lot of contributions to the field. His work in personalized medicine revolutionized disease diagnosis and treatment, leading to improved patient outcomes. He has received numerous awards in orthopaedics and traumatology, including Best Paper in Paediatric Orthopaedics, a Certificate of Merit for a presentation on ambulatory upper limb surgery, an Outstanding Teams Award for his contributions to the Hospital Replantation Team, a Hand and Wrist Biomechanics International scholarship award, and a Best Paper Award for his research in thumb duplication reconstruction.

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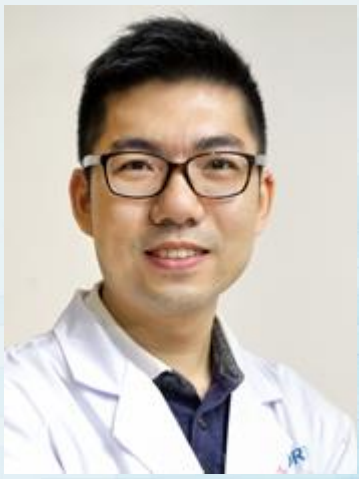
Local speaker



Professor LEE Yuk-wai Wayne

Assistant Professor
Department of Orthopaedics & Traumatology
The Chinese University of Hong Kong
Hong Kong

- BSc (Hons), Hong Kong Baptist University
- PhD, The Chinese University of Hong Kong

Professor Lee obtained his PhD in Pharmacology from The Chinese University of Hong Kong in 2009, then pursued postdoctoral training in the Department of Orthopaedics and Traumatology of CUHK. He has published over 90 publications in peer-reviewed international journals (Scopus H-index 30), and serves as reviewers of a number of international journals.

His research can be divided into two major areas of orthopaedic with important clinical relevance. The first line focuses on the development of GMP-grade cell therapy to treat osteoarthritis and other musculoskeletal problems. He is a registered authorized person for advanced therapy product in Hong Kong. His team also explore novel treatment strategies such as MSC secretome, miRNA and biomaterials with MSC tracking and controlled release properties. The second line is on the biological roles of osteocyte in adolescent idiopathic scoliosis and bone aging. His team has developed advanced research platforms for the study of osteocyte, and recently established a composite model composed of circulating microRNA and bone turnover marker to predict curve progression.

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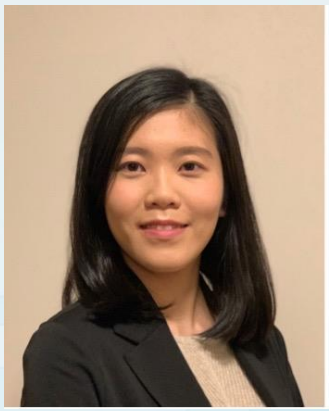
Local speaker



Dr. MAK Sibyl

Adjunct Assistant Professor
Department of Mechanical Engineering
The University of Hong Kong
Hong Kong

Dr Sibyl Mak is Adjunct Assistant Professor at Department of Mechanical Engineering, the University of Hong Kong, in which she teaches in the biomedical engineering programme.

Dr Mak's research focuses on microfluidics and additive manufacturing medical device, for which she has over 20 peer-reviewed journal articles and conference proceedings, one book chapter published, and more than 10 patents granted.

She and her team have received various awards in engineering and education, such as Best Presentation Awards in MSME2020 in Hong Kong, ICEEI2021 in Seoul, and ICAECMP2022 in Toronto. Passionate in student development and knowledge transfer, Dr Mak has launched Biomedical Innovation and Outreach Programme in 2022.

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Local speaker

Professor ONG Tim-yun, Michael

Assistant Professor (Clinical)
Department of Orthopaedics & Traumatology
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Honorary Associate Consultant
Department of Orthopaedics and Traumatology, Head of Adult Joint Replacement Team
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- BSc (UK)
- MBChB (UK)
- MSc, The Chinese University of Hong Kong

Professor Ong, Michael Tim-Yun joined the Department of Orthopaedics and Traumatology as a Clinical Assistant Professor in October 2018. He obtained his MBChB degree with an Intercalated BSc degree in Genetics from The University of Leicester, United Kingdom. Professor Ong joined the Department of Orthopaedics and Traumatology of the New Territories East Cluster in 2010 and he received his training in Orthopaedics at the Prince of Wales Hospital and the Alice Ho Miu Ling Nethersole Hospital. He obtained his MSc of Sports Medicine and Health Science from The Chinese University of Hong Kong in 2012 and completed his specialist training in 2014.

Given his surgical expertise in ACL reconstruction and joint replacement, Professor Ong is interested in basic and clinical research related to the bone tendon junction healing of ACL graft and improving surgical outcomes for joint replacement patients. In addition, Professor Ong is interested in the application of artificial intelligence to the prevention, diagnosis, and management of knee osteoarthritis. Professor Ong also has an active interest in regenerative medicine research, including the use of biomaterials and tissue engineering approaches to optimize treatments and reduce recovery time. He has authored over 50 papers in numerous international journals and has been invited to present at numerous local and oversea conferences.

In addition to his clinical activities, Professor Ong is active in education and community outreach. He is the Deputy Director of MSc in Musculoskeletal Medicine, Rehabilitation and Geriatric Orthopaedics Programmes. He is committed to promoting sports medicine education and is an active speaker in many public outreach events.

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Local speaker

Professor QIN Ling

Professor and Director
Musculoskeletal Research Laboratory
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Director
CUHU SZ-HK Innovation Technology Research Institute (Futian)

- BA, Beijing
- M.Phil, Beijing
- PhD in Cologne, Germany

Professor Qin is Professor and Director of Musculoskeletal Research Laboratory in the Department of Orthopaedics & Traumatology, the Chinese University of Hong Kong. He also holds joint professorship in Shenzhen Institutes of Advance Technology (SIAT) of Chinese Academy of Sciences (CAS) and serves Director of the Translational Medicine Research & Development Center of Institute of Biomedical & Health Engineering of SIAT. He received his BA and M.Phil. in basic medical and life sciences in physical education at the Beijing Sports University in China, and his PhD from German Sports University, Cologne, Germany and postdoctoral training in AO-Research Institute, Davos, Switzerland. Professor Qin was research scientist in the Department of Trauma & Reconstructive Surgery, University Clinic Rudolf Virchow, Charite Medical University in Germany before joining CUHK in late 1994.

Professor Qin is the past President of the International Chinese Musculoskeletal Research Society (ICMRS) and member of a number of journal editorial boards, including Editor-in-chief of Journal of Orthopaedic Translation and editorial board member of International Journal of Sports Medicine. He holds memberships in several international and national orthopaedic and related research organizations, including member of Academy of Europe (MAE) and fellow of American Institute of Medical and Biological Engineering (AIMBE). He has received over 40 Research Awards and holds over 30 innovation or new utility patents from PR China and USA.

Professor Qin published 10 monographs as editor or associate editor, 5 conference proceedings, 80 book chapters, and over 480 journal papers in English, German, and Chinese, including around 420 SCI articles published in Nat Med, Nat Comm, ARD, JBMR, Osteoporosis Int, Bone, A&R, Biomaterials, Acta Biomaterialia, Am J Sports Med, Int J Sports Med, etc. with a H-index 70 and listed as World's Best Medicine Scientists in Research.com.

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Local speaker

Dr. SUN Haoran

Chief Technology Officer
Koln 3D Technology (Medical) Limited
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- PhD in mechanical engineering,
  The University of Hong Kong
- MSc in chemical and biomolecular engineering,
  The University of Pennsylvania

Dr. SUN Haoran obtained his PhD in mechanical engineering from The University of Hong Kong and MSc in chemical and biomolecular engineering from The University of Pennsylvania. After graduation from The University of Hong Kong in 2019, he joined Koln 3D Technology (Medical) Limited for various research and development projects, including several innovation and technology fund (ITF) projects. He has abundant experience in medical engineering, tissue engineering and chemical engineering.

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