

Interdisciplinary BME-ORT Joint Symposium

Date: 23 June (Monday)

Time: 9:00am – 17:00pm

Venue: Yasumoto International Academic Park (YIA)_LT6, CUHK campus

Time	Session & Title	Presenter
09:00 – 09:10	Opening Remarks & Group Photo	Patrick Yung [ORT] / Dongan Wang [BME] on behalf of Aaron Ho (who's only available for PM sessions)
Session 1: Innovations in Musculoskeletal Tissue Engineering: Translating Science into Healing		
Moderators: Louis Cheung [ORT] & Jonathan Choi [BME]		
9:10 – 9:25	Decellularized tissue engineering hyaline cartilage graft	Dongan Wang [BME]
9:25 – 9:35	Stem cell-based therapies for tendon and tendon-bone junction repair	Pauline Lui [ORT]
9:35 – 9:50	Enabling platforms for tissue engineering research in orthopaedics (<i>zoom presentation</i>)	Barbara Chan [BME]
9:50 – 10:00	The translation application status of magnesium in orthopaedics: opportunities and challenges	Jerry Xu [ORT]
10:00 – 10:10	Mechanoresponsive periosteal stem cells in bone regeneration	Sien Lin [ORT]
10:10 – 10:25	Discussion	All speakers
10:25 – 10:40	Coffee Break	
Session 2: Smart Biosensors and AI in Orthopaedics		
Moderators: Wayne Lee [ORT] & Megan Ho [BME]		
10:40 – 10:50	Development of wearable biosensor for orthopaedic rehabilitation	SW Law [ORT]
10:50 – 11:05	Electronic biosensors harnessing carbon nanomaterials	Zhaoli Gao [BME]
11:05 – 11:15	AI and sensor application in Adolescent Idiopathic Scoliosis (AIS)	Adam Lau [ORT]
11:15 – 11:25	Artificial intelligence assisted orthopaedic systems	Elvis Chui [ORT]
11:25 – 11:35	Biosensor-based implants for monitoring the fracture healing and prostheses loosening: a proof-of-concept study	WX Tong [ORT]
11:35 – 11:50	Discussion	All speakers
Session 3: Translational Frontiers in Sarcopenia and Musculoskeletal Health		
Moderators: Huating Wang [ORT] & Zhaoli Gao [BME]		
11:50 – 12:00	Connecting science and clinic: translational research on sarcopenia treatment	Louis Cheung [ORT]
12:00 – 12:15	Nanomedicine for sarcopenia	Jonathan Choi [BME]
12:15 – 12:25	Novel treatments for sarcopenia in fragility fracture patients	Ronald Wong [ORT]
12:25 – 12:35	Osteocyte research and its implications for musculoskeletal problems	Wayne Lee [ORT]
12:35 – 12:45	Micro- and nano-plastic exposure: an emerging risk for musculoskeletal health	Ning Zhang [ORT]
12:45 – 13:00	Discussion	All speakers
13:00 – 14:10	Lunch Break	
Session 4: Molecular Control and Regeneration in Musculoskeletal Health		
Moderators: Pauline Lui [ORT] & Dongan Wang [BME]		

14:10 – 14:25	Single molecule characterisation with a solid state silicon nanopore	Aaron Ho [BME]
14:25 – 14:35	Intrinsic and extrinsic regulation of skeletal muscle stem cells in aging	Huating Wang [ORT]
14:35 – 14:50	Use of microfluidics for stem cell quality control	Megan Ho [BME]
14:50 – 15:00	G-quadruplex in skeletal muscle stem cells	Xiaona Chen [ORT]
15:00 – 15:15	Synthetic biology strategies to control intracellular signalling with high precision	Liting Duan [BME]
15:15 – 15:30	Discussion	All speakers
Section 5: Bridging Innovation and Practice in Orthopaedics: From Clinic to Classroom		
Moderators: Ronald Wong [ORT] & Dongan Wang [BME]		
15:30 – 15:40	Joint BME education program and collaboration in academic journals	Ling Qin [ORT]
15:40 – 15:50	Clinical management of Achilles tendon pathologies and our current limitations	Samuel Ling [ORT]
15:50 – 16:05	In vivo high-resolution volumetric endomicroscopy	Scott Yuan Wu [BME]
16:05 – 16:15	Kinematic analysis of robot-assisted total knee replacement implants: Are we closer to a 'normal' knee?	Michael Ong [ORT]
16:15 – 16:25	Regulatory compliance for orthopaedic translation	Delon Hsueh [ORT]
16:25 – 16:40	Discussion	All speakers
16:40 – 17:00	Closing Remarks	Patrick Yung [ORT] / Aaron Ho [BME]