

Program Outline

28 July Tue	9:00-18:00	Pre-Registration
	18:00-20:00	Dinner Buffet
	8:30-9:05	Opening Ceremony
	9:05-9:15	Group Photo Session
29 July Wed	9:15-12:00	Plenary Speech
	12:00-13:30	Lunch Break
	13:30-15:30	Oral Session
	15:30-15:50	Tea Break
	15:50-18:00	Oral Session
	18:00-20:00	Dinner Buffet
	8:30-9:00	Award Lecture
	9:00-10:00	Plenary Speech
	10:00-10:30	Tea Break
	10:30-12:00	Oral Session
30 July Thu	12:00-13:30	Lunch Break
	13:30-15:30	Oral Session
	15:30-15:50	Tea Break
	15:50-18:00	Oral Session
	18:00-20:00	Dinner Buffet
	8:30-10:00	Oral Session
	10:00-10:20	Tea Break
	10:20-12:00	Oral Session
	12:00-13:30	Lunch Break
	13:30-14:00	Award Lecture
31 July Fri	14:00-15:30	Plenary Speech
	15:30-15:50	Tea Break
	15:50-16:20	Plenary Speech
	16:20-17:00	Closing Ceremony
	18:00-20:00	Dinner Buffet

*Poster Session will be open on July 29th - 31st, a total of 3 days, all day long.

Opening Ceremony
2F 大宴会厅主会场

29 July Wed	8:30-8:35	Address by Leader of Jiangsu Provincial Association for Science and Technology
	8:35-8:40	Address by Leader of Changzhou Municipal Government
	8:40-8:45	Address by Leader of Changzhou University
	8:45-8:55	WACBE Awards Presentation
	8:55-9:00	Introduction to Changzhou Biomedical Industry
	9:00-9:05	Address by Vice President of Chinese Society of Biomedical Engineering
	9:05-9:15	Take the Group Photo of the Congress

Closing Ceremony
2F 大宴会厅主会场

31 July Fri	16:20-16:30	Best Student Oral Presentation Awards Presentation
	16:30-16:40	Best Poster Presentation Awards Presentation
	16:40-16:50	Outstanding Contribution Awards Presentation
	16:50-17:00	Address by the Congress Chair

Awardees Lectures		
Speaker/Affiliation	Date/Time	Title
Yuan-Cheng Fung Lifetime Achievement Award		2F 大宴会厅主会场
Chair: Zongming Li		
Savio L-Y. WOO <i>University of Pittsburgh</i>	29 July 9:20-10:00	A Career in Education and Translational Research: My Story over 5 Decades
Savio L-Y. Woo Distinguished Lecture Award		2F 大宴会厅主会场
Chair: Cheng-Kung Cheng and Bingmei Fu		
Chwee Teck Lim <i>National University of Singapore</i>	31 July 13:30-14:00	Why Mechanics Matter in Disease Biology: From Discovery to Translation
Wangyi Wu Mid-Career Award		2F 大宴会厅主会场
Chair: Song Li and Linhong Deng		
Jianping Fu <i>University of Michigan</i>	30 July 8:30-9:00	Bioengineered Human Embryo and Organ Models as the New Frontier
WACBE Rising Star Award		2F 红梅阁紫荆阁
Chair: Allen Liu and Youhua Tan		
Yue Shao <i>Tsinghua University</i>	29 July 13:30-14:00	Mechanodevelopment: How force and geometry shapes the form and function of life
WACBE Rising Star Award		2F 百合厅
Chair: Cheng-Kung Cheng and Jia Hua		
Minqiang Wang <i>Shanghai Jiaotong University</i>	29 July 13:30-14:00	Wearable Bioelectronics for Personalized Healthcare

Plenary Speeches 2F 大宴会厅主会场		
Speaker/Affiliation	Date/Time	Title
Chair: X. Edward Guo and Guixue Wang		
Jing Cheng <i>Tsinghua University</i>	29 July 10:00-10:30	AI Enabled Precision Chinese Medicine
Qingming Luo <i>Hainan University</i>	29 July 10:30-11:00	From Mesoscopic Brain-wide Connectome to Brainsmatics
Ning Gu <i>Nanjing University</i>	29 July 11:00-11:30	Preliminary Explorations into Vascular Informatics and Health Engineering Medicine
Hairong Zheng <i>Nanjing University</i>	29 July 11:30-12:00	Noninvasive ultrasound Brain Computer Interface
Chair: Song Li and Linhong Deng		
Xiqiao Feng <i>Tsinghua University</i>	30 July 9:00-9:30	Multiscale Mechanics of Cells and Tissues
Dinggang Shen <i>ShanghaiTech University</i>	30 July 9:30-10:00	Development and Deployment of AI Techniques in Clinical Workflow
Chair: Cheng-Kung Cheng and Bingmei Fu		
Gang Bao <i>Rice University</i>	31 July 14:00-14:30	Genome editing based approaches for understanding and treating human diseases
Bin He <i>Carnegie Mellon University</i>	31 July 14:30-15:00	Bidirectional Brain-Computer Interfacing: Challenges and Opportunities
Kam W. Leong <i>Columbia University</i>	31 July 15:00-15:30	Predicting cellular development and responses to perturbations using a diffusion model
Zhi-Pei Liang <i>University of Illinois Urbana-Champaign</i>	31 July 15:50-16:20	MRx: AI Meets Quantum Mechanics for Omni Imaging of the Brain

Special Symposium of SUSTech Biomedical Engineering

Thu, 30 July 2F 聚星堂 14:00-17:10

Time	Content/Title	Speaker
Opening Ceremony		
14:00-14:10	Opening Speech	
14:10-14:15	Guest's Speech 1	
14:15-14:20	Guest's Speech 2	
Award Presentation		
14:20-14:25	Special Contribution Award Presentation and Group Photo	
Department Situation Report		
14:25-14:40	A Decade of Innovation: Overview of SUSTech Biomedical Engineering	Xingyu Jiang
Young Scholar's Speech		
14:40-14:55	Brain Foundation Model: data, architecture, pre-/post-training, evaluation	Quanying Liu
14:55-15:10	High throughput 3D super resolution imaging	Yiming Li
15:10-15:25	Structural Biophysics for Peptide and Protein Formulation and Delivery	Zhi Luo
15:25-15:40	Iontronic Materials and Devices for Neuromorphic Interface	Kai Xiao
15:40-16:10	Tea Break	
Future Star: Student's Speech		
16:10-16:25	Whole cortex multimodal microscopy for neurovascular functional imaging study	Wei Qin
16:25-16:40	Vacuum-Driven Microfluidic Chip for Multiplexed Molecular Analysis and Expanded Nucleic Acid Data Storage	Xiangtao Shi
16:40-16:55	Novel Cell Wall-Targeting Antibiotics and Their Antimicrobial Mechanisms	Yuxiao Jia
Closing Ceremony		
16:55-17:10	Closing Address	

Meet the Editors Session		
Thu, 30 July 2F 聚德堂 13:30-15:20		
Time	Journal	Speaker/Affiliation
Chair: Song Li		
13:30-13:40	Nature BME	Alessandra Griffo
13:40-13:50	Med-X Journal	Jun Chen <i>University of California, Los Angeles</i>
13:50-14:00	MEDNTD Journal	Yubo Fan <i>Beihang University</i>
14:00-14:10	Bioactive Materials	Jian Yang <i>Westlake University</i>
14:10-14:20	Regenerative Biomaterials	Jiandong Ding <i>Fudan University</i>
14:20-14:25	Cell Biomaterials	Monika Golda-Cepa <i>Cell Press</i>
14:25-14:30	npj Regenerative Medicine	Jianping Fu <i>University of Michigan, Ann Arbor</i>
14:30-14:35	IEEE Reviews in Biomedical Engineering	Bin He <i>Carnegie Mellon University</i>
14:35-14:40	Biosensors and Bioelectronics	
14:40-14:45	Research	
14:45-14:50	Biomaterials	
14:50-15:20	Panel Q&A Session	All Editors

Oral Session Outline

Track1	7.29a.m.	7.30a.m.	7.31a.m.
2F 西太湖厅	7.29p.m.	7.30p.m.	7.31p.m.
Track2	7.29a.m.	7.30a.m.	7.31a.m.
2F 天目湖厅	7.29p.m.	7.30p.m.	7.31p.m.
Track3	7.29a.m.	7.30a.m.	7.31a.m.
2F 聚仁堂	7.29p.m.	7.30p.m.	7.31p.m.
Track4	7.29a.m.	7.30a.m.	7.31a.m.
2F 长荡湖厅	7.29p.m.	7.30p.m.	7.31p.m.
Track4	7.29a.m.	7.30a.m.	7.31a.m.
2F 西太湖厅	7.29p.m.	7.30p.m.	7.31p.m.
Track5	7.29a.m.	7.30a.m.	7.31a.m.
2F 聚德堂	7.29p.m.	7.30p.m.	7.31p.m.
Track6	7.29a.m.	7.30a.m.	7.31a.m.
2F 红梅阁紫荆阁	7.29p.m.	7.30p.m.	7.31p.m.
Track7	7.29a.m.	7.30a.m.	7.31a.m.
2F 舫舟阁	7.29p.m.	7.30p.m.	7.31p.m.
Track8	7.29a.m.	7.30a.m.	7.31a.m.
2F 聚星堂	7.29p.m.	7.30p.m.	7.31p.m.
Track9	7.29a.m.	7.30a.m.	7.31a.m.
2F 百合厅	7.29p.m.	7.30p.m.	7.31p.m.
Track10	7.29a.m.	7.30a.m.	7.31a.m.
1F 桂梅兰	7.29p.m.	7.30p.m.	7.31p.m.
Track10	7.29a.m.	7.30a.m.	7.31a.m.
2F 百合厅	7.29p.m.	7.30p.m.	7.31p.m.

Track 1: AI, Data Sciences and Systems Biomedicine
Co-Chair
Rong Fan, Tony Hu, Jessica Zhang

Wed, 29 July 2F 西太湖厅 13:30-17:35		
Oral Session I		
Time	Title	Speaker/Affiliation
Chair: Xin Gao and Zongming Ma		
Keynote Speech		
13:30-13:50	AI for the Future of Bioengineering and Medicine (AIFX3.3)	Savio L-Y. Woo <i>University of Pittsburgh</i>
13:50-14:10	Emerging Opportunities for AI and Spatial Human Biology to Transform Precision Health	Rong Fan <i>Yale University</i>
14:10-14:30	AI at Nature Biomedical Engineering	Jelle Dirk van der Hilst <i>Nature Biomedical Engineering</i>
Invited Speech		
14:30-14:45	Unlocking new metabolic perspectives in disease through spatial glycomics	Anthony Fung <i>Yale University</i>
14:45-15:00	Towards Trustworthy, Explainable and Ethical Intelligent Healthcare	Juexiao Zhou <i>The Chinese University of Hong Kong, Shenzhen</i>
Oral Speech		
15:00-15:10	Pathological Segmentation of Myocardial Infarction in LGE Cardiac Magnetic	Longling Fan <i>Kunming University of Science and Technology</i>
15:10-15:20	Maternal-Fetal Digital Twin Technology	Jieyun Bai <i>Ji'nan University</i>
Company Presentation		
15:20-15:30	Shanghai United Imaging Intelligence Co., Ltd.	
15:30-15:50	Tea Break	
Oral Session II		
Chair: Anthony Fung and Juexiao Zhou		
Keynote Speech		
15:50-16:10	Large language models in biomedicine	Xin Gao <i>King Abdullah University of Science & Technology</i>
16:10-16:30	Computational Spatial Omics: From 2D Analysis to 3D Reconstruction	Jin Gu <i>Tsinghua University</i>
Invited Speech		
16:30-16:45	A Noise- Robust Latent Space EEG Foundation Model for Subject- Level Depression Diagnosis	Sen Song <i>Tsinghua University</i>

16:45-17:00	Advancing Healthcare Through AI and Machine Learning Innovations	Yanran Wang <i>University of Michigan</i>
17:00-17:15	Highly multiplexed 3D Raman molecular histology of fresh lung tissue maps metabolic and differentiation gradients across adenocarcinoma growth patterns	Xiaoyu Zhao <i>SuperVision Medicine Co.,Ltd</i>

Oral Speech

17:15-17:25	Automated Dental Plaque Assessment: Development and Validation of the YOLO-Plaque Model for Segmentation and Coverage Analysis in Stained Oral Images	Mengmeng Lu <i>Affiliated Stomatological Hospital of Nanjing Medical University</i>
17:25-17:35	Bridging AI and Microfluidics to Decode the Nonlinear Genetic Network behind Cardiac Hypertrophy	Qianru Wang <i>Shanghai Jiao Tong University</i>

Thu, 30 July 2F 西太湖厅
13:30-15:30

Oral Session III

Time	Title	Speaker/Affiliation
Chair: Rong Fan and Jinmiao Chen		
Keynote Speech		
13:30-13:50	Constructing High-Resolution Spatial Tissue Atlases through AI-Driven Multi-modal Omics Integration	Jinmiao Chen <i>Duke-NUS Medical School</i>
13:50-14:10	Agentic and Physical AI for Scientific Discovery and Intelligent Manufacturing	Jia Liu <i>Harvard University</i>
14:10-14:30	Single-cell spatial multi-omics molecular pathology enabled by SuperFocus	Zongming Ma <i>Yale University</i>
Invited Speech		
14:30-14:45	From Clinical Databases to Smart Healthcare: Data Integration, Mining, and Application	Jianjun Ren <i>West China Hospital of Sichuan University</i>
14:45-15:00	Generative AI Digital Twin “CLOT” Enables Personalized Thrombosis Prediction	Haimei Zhao <i>The University of Sydney</i>
Oral Speech		
15:00-15:10	Polyfunctional Extracellular Vesicle-Secreting Cells Drive Breast Cancer Metastasis	Yao Lu <i>Dalian Institute of Chemical Physics, Chinese Academy of Sciences</i>
15:10-15:20	Unsupervised Lesion Inpainting for Multi-Atlas Segmentation of Lesion-Affected Brains with Structural Manifold Learning and Subspace-Assisted Diffusion Modeling	Yue Guan <i>Shanghai Jiao Tong University</i>
15:20-15:30	LFI-Leuko: The First Fluorescent Immunoassay Dataset for Automated Leukorrhea Analysis	Gang Lv <i>Suzhou Institute of Technology</i>

Track 2: Biomaterials, Tissue Engineering and Drug Delivery

Co-Chair

Kaiyong Cai, Xiao Chen, Zhen Gu, Jian Yang, Kelvin Yeung

Wed, 29 July 2F 天目湖厅

13:30-17:45

Oral Session I

Time

Title

Speaker/Affiliation

Chair: Dongan Wang and Haobo Pan

Keynote Speech

13:30-13:50	Materials and Devices for Major Cardiovascular Diseases: From Development to Clinical Application	Yunbing Wang <i>Sichuan University</i>
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Invited Speech

13:50-14:05	Stimuli-Responsive Biointerfaces for Adaptive Antibacterial Therapy and Tissue Repair	Yizhou Zhu <i>The University of Hong Kong</i>
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14:05-14:20	Advances and Perspectives in Regenerative Biomaterials	Haobo Pan <i>Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences</i>
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14:20-14:35	Mitochondria-Targeted Immune Metabolic Reprogramming – A Novel Core Regulatory Strategy for Bone Defect Repair and Chronic Wound Healing	Wenbing Wan <i>Fudan University Affiliated Pudong Medical Center</i>
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14:35-14:50	Decellularized Tissue Engineering Implantable Medical Device and Its Forward-Looking Test for Space Medicine	Dongan Wang <i>The Chinese University of Hong Kong</i>
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Oral Speech

14:50-15:00	Injectable Anti-Inflammatory Nanofiber Hydrogel Reprograms Immunosuppressive Tumor Microenvironment via Cascade-Amplified Immunogenic Cell Death	Zhaowei Zhang <i>Wuhan Textile University</i>
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15:00-15:10	Application of 3D Bioprinting and Bone Organoid Technology in Orthopedic Regenerative Repair	Bin Liu <i>PLA Northern Theater Command General Hospital</i>
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15:10-15:20	Time-Sequential and Multi-Functional 3D printing scaffold for Repairing of Challenging bone defect	Cairong Li <i>Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences</i>
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Company Presentation

15:20-15:30	Changzhou Institute of Materia Medica Co.,Ltd.
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15:30-15:50	Tea Break
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Oral Session II

Chair: Denghui Xie and Yingying Du

Keynote Speech

15:50-16:10 NIR-Activated, Oxygen Vacancy TiO₂ Nanohoneycomb
Structure on Titanium Enables Rapid Biofilm
Eradication and Osteoimmune Driven Osseointegration

Kelvin Yeung
The University of Hong Kong

Invited Speech

16:10-16:25 Mechanisms of Citrate Regulation in Bone Homeostasis
and Tissue Engineering

Denghui Xie
Southern Medical University

16:25-16:40 Bioenergetic-active Materials for Multi-Tissue
Regeneration

Yingying Du
*Huazhong University of
Science and Technology*

16:40-16:55 Engineered Repair of Ischemic Cardiac Injury

Junnan Tang
*The First Affiliated Hospital of
Zhengzhou University*

Oral Speech

16:55-17:05 Microenvironmental engineering for cell-dense
neurovascular biofabrication and regeneration

Wanlu Li
*Shanghai Jiao Tong
University*

17:05-17:15 Biomimetic Nano-antithrombin for the Repair of Small
Diameter Vascular Grafts

Ruoyun Zhang
Wuhan Textile University

17:15-17:25 Influence of Shear Flow on the Evolution Behavior of the
Fibrinogen Layer

Xiao Wu
Zhenzhou University

17:25-17:35 Rational design of robust keratin hydrogels for
biomedical applications

Shilei Hao
Chongqing University

17:35-17:45 Adhesive non-fibrotic interfaces for long-term
human-machine integration

Jingjing Wu
City university of Hongkong

Thu, 30 July 2F 天目湖厅 10:30-12:00		
Oral Session III		
Time	Title	Speaker/Affiliation
Chair: Chenjie Xu and Wei Qiao		
Keynote Speech		
10:30-10:50	Bioresponsive Drug Delivery Cells and Devices	Zhen Gu <i>Zhejiang University</i>
Invited Speech		
10:50-11:05	Development of microneedle devices for body fluid sampling and biosensing	Chenjie Xu <i>City University of Hong Kong</i>
11:05-11:20	Engineering next-generation bioactive materials to promote tissue regeneration through the modulation of skeletal interoceptive circuit	Wei Qiao <i>The University of Hong Kong</i>
Oral Speech		
11:20-11:30	Nanozymes: rational design and biomedical applications	Hui Wei <i>Nanjing University</i>
11:30-11:40	Edible adhesive hydrogels for chewing-activated biofilm control	Gang Lu <i>Shenzhen University of Technology</i>
11:40-11:50	A Gradient Intrafibrillarly Mineralized Collagen Scaffold Promotes Osteochondral Regeneration by Directing SCRG1 ⁺ Progenitor Cell Fate	Jing Zhou <i>Zhejiang University</i>
11:50-12:00	Photothermal-Responsive Phase Transition of Proteoliposomes for Heat Shock Protein Sequestering against Cancer Thermoresistance	Kai Cheng <i>The Chinese University of Hong Kong</i>

Thu, 30 July 2F 天目湖厅 13:30-17:45		
Oral Session IV		
Time	Title	Speaker/Affiliation
Chair: Sien Lin and Dan Michelle Wang		
Keynote Speech		
13:30-13:50	Bioceramic based“ion therapy”for tissue regeneration and disease treatment	Jiang Chang <i>Shanghai Institute of Ceramics, Chinese Academy of Sciences</i>
Invited Speech		
13:50-14:05	Acoustic Metastructure Coatings for Ultrasound-Activated Implant Therapy	Xuanyong Liu <i>Shanghai Institute of Ceramics, Chinese Academy of Sciences</i>
14:05-14:20	3D Printing of Biomimetic Biomaterials and Transformation	Chengtie Wu <i>Shanghai Institute of Ceramics, Chinese Academy of Sciences</i>
14:20-14:35	Decoding the Tendon Extracellular Matrix Niche: From Mechanistic Insights to Engineered Biomaterials	Dan Michelle Wang <i>The Chinese University of Hong Kong</i>
14:35-14:50	Compliant and Bioactive Materials for Multi-Tissue Repair & Regeneration	Dai Fei Elmer Ker <i>The Hong Kong Polytechnic University</i>
Oral Speech		
14:50-15:00	Mitochondria-Targeted Microneedles ReverseDoxorubicin Resistance via Apoptosis- Ferroptosis Synergy	Tianshu Hao <i>Wuhan Institute of Technology</i>
15:00-15:10	Microenvironment-Adaptive Nano-Enabled Tolerogenic Vaccine for Autoimmune Neuroinflammation	Qi Liu <i>Beihang University</i>
15:10-15:20	Neonatal Muscle-Derived Extracellular Vesicles Containing miR-542-3p Rejuvenate Aged Skeletal Muscle via a functional microneedle patch	Chengjun Li <i>Xiangya Hospital Central South University</i>
15:20-15:30	Development of a spatiotemporally programmed phototheramal therapeutic strategy for osteoarthritis	Shufang Zhang <i>Zhejiang University</i>
15:30-15:50	Tea Break	
Oral Session V		
Chair: Xiao Chen and Zi Yin		
Keynote Speech		
15:50-16:10	Metabolism-regulating citrate-based biomaterials	Jian Yang <i>Westlake University</i>
Invited Speech		

16:10-16:25	Targeting coupling of type H-like vessels and cell fate transition to delay soft tissue aging	Xiao Chen <i>Zhejiang University</i>
16:25-16:40	Bioactive Protein/Peptide Therapeutics for Bone Repair and Osteoporosis: Targeting the Neuro-Osteogenic Axis	John Akrofi Kubi <i>The University of Hong Kong</i>
16:40-16:55	FGF7 promotes tendon regeneration and suppresses fibrosis	Zi Yin <i>Zhejiang University</i>
Oral Speech		
16:55-17:05	Design of Active HSA Nanoparticles Based on Hydrophobic Interactions for Targeted Delivery of Antitumor Drugs	Run Meng <i>Nantong University</i>
17:05-17:15	A Mitochondria-Targeted Biomimetic Nanocarrier Improves Oxygen Metabolism and Potentiates Sonodynamic Antitumor Therapy	Fang Zhang <i>Wuhan Institute of Technology</i>
17:15-17:25	Mechanically Stimulated Bone Marrow Mesenchymal Stem Cell-Derived Exosomes for Steroid-Induced Osteonecrosis of the Femoral Head	Yan Wang <i>Tianjin University Tianjin Hospital</i>
17:25-17:35	AIE drugs to Fluorescent drugs	Xinghua Yu <i>Zhejiang University</i>
17:35-17:45	Microfluidic Organ-on-a-Chip Reveals EMT Heterogeneity and Associated Mechanisms in Tumor Progression	Xuan Zhang <i>Shanxi Medical University</i>

Fri, 31 July 2F 天目湖厅
8:30-11:50

Oral Session VI

Time

Title

Speaker/Affiliation

Chair: Zhong Alan Li and Zhenhua Li

Keynote Speech

8:30-8:50 Repair the heart without touching the heart **Ke Cheng**
Columbia University

Invited Speech

8:50-9:05 A Macrophage-Targeted, L-Lactate-Releasing Hydrogel Accelerates Challenging Bone Defect Healing by Mimicking Mechano-Epigenetic Signaling **Sien Lin**
The University of Hong Kong

9:05-9:20 Cardiac Injury Microenvironment Modulation and Regenerative Repair **Zhenhua Li**
South China University of Technology

Oral Speech

9:20-9:30 Alendronate-grafting citrate-based composite promotes osteoporotic bone regeneration by enhancing osteogenesis and suppressing osteoclastogenesis **Jinshan Guo**
Suzhou Institute of Biomedical Engineering and Technology, Chinese Academy of Sciences

9:30-9:40 Chiral Nanoparticles Drive Enantiomer-specific Osteogenesis and Accelerate Stem Cell-based Bone Regeneration **Zhong Alan Li**
The Chinese University of Hong Kong

9:40-9:50 Biodegradable and Electroactive Cryogel Microspheres for Neurovascularized Bone Regeneration **Yue Wang**
Peking University Third Hospital

9:50-10:00 PD-L1 Aptamer-engineered Pluripotent Nanoreactor for Chemodynamically motivated Cancer Cuproptosis-Immunotherapy **Chunhui Wu**
University of Electronic Science and Technology of China

10:00-10:20 Tea Break & Poster Session

Oral Session VII

Chair: Jun Fang and Xianlei Li

Keynote Speech

10:20-10:40 Innovation and Translation on Highly Active Biomedical Materials & Tissue Engineering Devices **Shengmin Zhang**
Huazhong University of Science and Technology

Invited Speech

10:40-10:55 Macrophage Immunomodulation Boosts Direct Cardiac Reprogramming **Jun Fang**
Shanghai Jiao Tong University

10:55-11:10 Mechano-Driven Drug Delivery and Immunotherapy **Xianlei Li**
Nanjing University

Oral Speech

11:10-11:20	Fabrication of Tissue-Integrating Hydrogels for the Repair of Spinal Cord Injury	Liumin He <i>The Third Affiliated Hospital of Sun Yat-sen University</i>
11:20-11:30	Lysyl Oxidase Facilitates Annulus Fibrosus Repair via Epigenetic Suppression of Inflammatory Memory in Intervertebral Disc Degeneration	Tingting Xia <i>Suzhou University</i>
11:30-11:40	In Situ Cellular Assembly of Adjuvants Enhances Vaccine Efficacy	Ye Liu <i>Institute of Medical Biology</i>
11:40-11:50	Amorphous calcium phosphate nanoclusters and composites for bone regeneration	Xing Zhang <i>Institute of Metal Research, Chinese Academy of Sciences</i>

Track 3: Biomedical Imaging, Signal Processing and Health Informatics
Co-Chair

Xiaoping Hu, Pengcheng Li ,Changfeng Wu, Shaohua Zhou

Wed, 29 July 2F 聚仁堂
13:30-17:45

Oral Session I

Time	Title	Speaker/Affiliation
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Chair: Xiaoping Hu and Xiaolei Song

Keynote Speech

13:30-13:50	Research and Development of Key Technologies for Multi-center Clinical Data Collaborative Utilization and Its Multi-Scenario Applications	Jinsong Li <i>Zhejiang University</i>
13:50-14:10	Novel Medical Ultrasound Research Tools: An Integrated Platform from High-Resolution Imaging to Precision Modulation	Weibao Qiu <i>University of Chinese Academy of Sciences</i>
14:10-14:30	Imaging Dynamic Biosynthesis in Aging and Disease with Multimodal Optical Metabolic Nanoscopy	Lingyan Shi <i>University of California, San Diego</i>

Invited Speech

14:30-14:45	'H+X' metabolic MRI from brain to body: the opportunities in AI era	Xiaolei Song <i>Beijing Institute of Technology</i>
14:45-15:00	Trustworthy Detection of Sub-Visual Abnormalities in High-Risk Clinical Scenarios	Longxi Zhou <i>Southern University of Science and Technology</i>

Oral Speech

15:00-15:10	Multimodal chemical microscopy for microbiome identification and metabolic profiling at single-cell resolution	Puting Dong <i>Stony Brook University</i>
15:10-15:20	Hepatocyte-Specific Nanoparticle for Sensitive and Precise Hepatobiliary Magnetic Resonance Imaging	Haiming Fan <i>Northwest University</i>
15:20-15:30	Aberration-aware 3D single molecule localization microscopy	Yiming Li <i>Southern University of Science and Technology</i>

15:30-15:50 Tea Break

Oral Session II

Chair: Changfeng Wu and Naying He

Keynote Speech

15:50-16:10	Ultra-low-field MRI: A Future Driven by Computing?	Ed Xuekui Wu <i>University of Hong Kong</i>
16:10-16:30	Super-resolution fluorescence polarization and anisotropy structured illumination microscopy	Peng Xi <i>Peking University</i>
16:30-16:50	Prospects for Clinical Application of Multinuclear Metabolic Magnetic Resonance Imaging	Fuhua Yan <i>Shanghai Jiao Tong University</i>

Invited Speech

16:50-17:05	Mapping Mitochondrial Bioenergetics in Parkinson Disease: The Emerging Role of 31P-MRSI in Early Diagnosis and Mechanistic Stratification	Naying He <i>Shanghai Ruijin Hospital</i>
17:05-17:20	An Integrated VOR-Based System for Comprehensive Assessment of Peripheral Vestibular Deficits in Mice	Fangyi Chen <i>Southern University of Science and Technology</i>
17:20-17:35	Clinical Applications and Technical Advancements in CEST MRI	Yi Zhang <i>Zhejiang University</i>

Oral Speech

17:35-17:45	AI based image reconstruction in limited angle digital tomosynthesis for automatic x-ray inspection	Cheng-chun Chang <i>Yang Ming Chiao Tung University</i>
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Thu, 30 July 2F 聚仁堂 10:30-11:40

Oral Session III

Time	Title	Speaker/Affiliation
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Chair: Shaohua Zhou and Shanshan Wang

Keynote Speech

10:30-10:50	Medical imaging foundation model: traits and trends	Shaohua Zhou <i>University Of Science And Technology Of China</i>
10:50-11:10	Towards Generalist Medical AI: Exploring Multi-Modality Foundation Models in Healthcare	Shanshan Wang <i>Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences</i>

Invited Speech

11:10-11:25	OCT-based three-dimensional multiparametric imaging of the cerebral microvasculature	Jianbo Tang <i>Southern University of Science and Technology</i>
11:25-11:40	Towards Unraveling the Molecular Fingerprints of Brain Disorders	Yao Li <i>Shanghai Jiao Tong University</i>

Thu, 30 July 2F 聚仁堂 13:30-16:45		
Oral Session IV		
Time	Title	Speaker/Affiliation
Chair: Yi Wang and Hong Zhang		
Keynote Speech		
13:30-13:50	Quantitative transport mapping (QTM) of microscopic perfusion from dynamic contrast (tracer) CT, MRI and PET	Yi Wang <i>Cornell University</i>
13:50-14:10	Nuclear Molecular Imaging Empowers Precision Heavy Ion Radiotherapy	Hong Zhang <i>Zhejiang University</i>
Invited Speech		
14:10-14:25	AI-Based Normative Analysis of Medical Imaging and Its Applications	Zhiqiang Zhang <i>Nanjing General Hospital</i>
14:25-14:40	Quantitative Magnetic Resonance Imaging of Cerebrovascular Diseases	He Wang <i>Fudan University</i>
14:40-14:55	Clinical Translation of Arterial Spin Labeling Perfusion Imaging at Ultra-High-Field MRI Xingfeng Shao Ruijin Hospital, Shanghai Jiao Tong University School of Medicine	Xingfeng Shao <i>Shanghai Ruijin Hospital</i>
14:55-15:10	4D Flow MRI and It's Applications	Rui Li <i>Tsinghua University</i>
Oral Speech		
15:10-15:20	Molecular Imaging Materials in the Second Near-Infrared Window for Tumor Diagnosis and Therapy	Guorui Jin <i>Xi'an Jiaotong University</i>
15:20-15:30	Neurometabolic Vulnerability Mapping Reveals Subtype-Specific and Individualized Stroke Phenotypes	Ziyu Meng <i>Shanghai Jiao Tong University</i>
15:30-15:50	Tea Break	
Oral Session V		
Chair: Pengcheng Li and Kannie WY Chan		
Keynote Speech		
15:50-16:10	Imaging molecular events in the brain via CEST MRI	Kannie WY Chan <i>City University of Hong Kong</i>
Invited Speech		
16:10-16:25	Deep learning-based intelligent analysis of brain magnetic resonance imaging	Xiaoyong Zhang <i>Shanghai Ruijin Hospital</i>
Oral Speech		
16:25-16:35	The Brain Neurometabolic Signature of Cognitive Resilience in Alzheimer's Disease	Wenli Li <i>Shanghai Jiao Tong University</i>
16:35-16:45	Oxygen transport impairment in the failing heart: A histology-image-based computational analysis	Haifeng Wang <i>Shantou University</i>

Track 4: Biomechanics, Sports Science and Rehabilitation
Co-Chair

Yu Liu, Yixian Qin, Guixue Wang, Lizhen Wang

Wed, 29 July 2F 长荡湖厅
13:30-18:00

Oral Session I

Time	Title	Speaker/Affiliation
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Chair: Junwei Chen and Yuzhe Liu

Keynote Speech

13:30-13:50	Mechanobiology of Glioblastoma Invasion	Guohao Dai <i>Northeastern University</i>
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Invited Speech

13:50-14:05	Multiscale Brain Biomechanics and Mechano-modulation	Yuan Feng <i>Shanghai Jiao Tong University</i>
14:05-14:20	Mechanosensitive PPAR γ + endothelial cells regulated by cyclic stretch explain atherosclerosis in vein grafts but not veins	Xili Ding <i>Beihang University</i>

Oral Speech

14:20-14:30	Effects and Mechanisms of Blood Flow Restriction-Combined Resistance Exercise on Skeletal Muscle Atrophy in Rats under Simulated Microgravity	Shiyi Tang <i>Aerospace Center Hospital</i>
14:30-14:40	Investigating Carotid Flow Reversal During TCAR Using a Lumped Parameter Model	Haoyao Cao <i>Sichuan University</i>
14:40-14:50	Full-flexion gap balancing-driven personalized preoperative planning for TKA: biomechanical evidence of improved load symmetry in an in vitro model	Zijun Tang <i>Shanghai Jiao Tong University</i>
14:50-15:00	Electromyographic Evaluation of Paravertebral Muscle Contraction During Schroth Correction Maneuvers for Scoliosis	Chen He <i>University of Shanghai for Science and Technology</i>
15:00-15:10	Comparison of In Vivo and Ex Vivo methods for evaluating Material Properties of Normal and Pathological Human Ascending Aortic Tissues	Liang Wang <i>Southeast University</i>
15:10-15:20	Biomechanical Regulation of Continuous Gradient Scaffolds for Integrated Osteochondral Regeneration	Junwei Xu <i>Beihang University</i>
15:20-15:30	Research on the Influence of Microstructured Surface Characterization Parameters on Blood Damage	Liudi Zhang <i>Soochow University</i>
15:30-15:50	Tea Break	

Oral Session II

Chair: Yuan Feng and Xili Ding

Keynote Speech

15:50-16:10	Discovery of a Novel Mechanosensitive Stem Cell Population at the BoneTendon Interface	Hongbin Lv <i>Central South University</i>
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Invited Speech

16:10-16:25	Cellular Structural Dynamics and Its Implications in Brain Mechanomedicine	Shaobao Liu <i>Nanjing University of Aeronautics and Astronautics</i>
16:25-16:40	The mechanobiological response of various mechanosensors in osteocytes based on piezoelectric bone matrix	Xiaogang Wu <i>Taiyuan University of Technology</i>
Oral Speech		
16:40-16:50	Multi-camera Stereo Digital Image Correlation and Applications in Human Biomechanics Measurement	Xinxing Shao <i>Southeast University</i>
16:50-17:00	Validation of the "Protective Flow Attenuation" Hypothesis: Numerical and Clinical Insights into Helical Flow and Thrombotic Risk in Cirrhosis	Zhuxiang Xiong <i>Beijing Anzhen Hospital, Capital Medical University, Nanchong Branch</i>
17:00-17:10	Effects of Fatigue on the Biomechanical Properties of the Triceps Surae Muscle-Tendon Unit in Runners Following Gait Retraining	Liqin Deng <i>Central South University</i>
17:10-17:20	Suspension Printing of Liquid Metal-Hydrogel Integrated Sensors for In-situ Multichannel High-Performance Electrochemical Detection	Xinpeng Wang <i>University of Health and Rehabilitation Sciences</i>
17:20-17:30	Impact of Peripheral Vascular Impedance and Intramuscular Pressure on Cardiovascular Hemodynamics in Sarcopenia	Fei Yan <i>Chongqing University Three Gorges Hospital</i>
17:30-17:40	Stress-driven design of intervertebral disc implants and optimization of mechanical and biological performance	Meng Zhang <i>Taiyuan University of Technology</i>
17:40-17:50	Biomechanical Monitoring and Protection of Traumatic Brain Injury	Yuzhe Liu <i>Beihang University</i>
17:50-18:00	Evaluating helmet performance using a physical human head-brain model	Yizhao Li <i>Shanghai University</i>

Thu, 30 July 2F 长荡湖厅
10:30-12:00

Oral Session III

Time	Title	Speaker/Affiliation
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Chair: Shaobao Liu and Juhui Qiu

Keynote Speech

10:30-10:50	Biomedical Engineering as Foundation for R&D and Application of Biodegradable Materials for Orthopaedics and Sports Medicine	Ling Qin <i>The Chinese University of Hong Kong</i>
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Invited Speech

10:50-11:05	Molecular Mechanisms Underlying the Effect of Extracellular Matrix Viscoelasticity on Immunological Functions of Dendritic Cells	Zhu Zeng <i>Guizhou Medical University</i>
11:05-11:20	Traction Force Orchestrates Pre-osteoblast Function and Differential Osteoporosis Drug Responses	Peixiang Ma <i>Shanghai Ninth People's Hospital</i>

Oral Speech

11:20-11:30	Nanodiamond-Enabled Torsion Microscopy Uncovers Multidimensional Cell-Matrix Mechanical Interactions	Yong Hou <i>The University of Hong Kong</i>
11:30-11:40	Airway smooth muscle cells drive branching morphogenesis in airway epithelial-derived organoids through mechanotransduction	Kai Ni <i>The Third Affiliated Hospital of Soochow University</i>
11:40-11:50	Auxetic Porous Bone Screw for Long-Term Stability: Design, Property Regulation, and Performance Prediction	Huiwen Huang <i>Beihang University</i>
11:50-12:00	Frequency-Resolved Mechanophenotyping Reveals Mutation-Specific Mechanical Signatures in PRPF-Linked Retinopathy	Wenwei Li <i>Aier Eye Hospital</i>

Thu, 30 July 2F 长荡湖厅 13:30-18:00		
Oral Session IV		
Time	Title	Speaker/Affiliation
Chair: Lisha Zheng and Yufei Ma		
Keynote Speech		
13:30-13:50	Fighting metastasis with force: Mechanical loading as a defence against cancer in bone	Lidan You <i>Queen's University</i>
Invited Speech		
13:50-14:05	Mechanism of mechanical force upregulating gene expression and its application in mechanomedicine	Junwei Chen <i>Huazhong University of Science and Technology</i>
14:05-14:20	Spatiotemporal regulation of heterochromatin establishment during early development in zebrafish	Juhui Qiu <i>Chongqing University</i>
Oral Speech		
14:20-14:30	Industrialization of Human-Derived Extracellular Matrix	Qiang Wei <i>Sichuan University</i>
14:30-14:40	Injectable Magnesium Phosphate Cement Functionalized with Li-hydrogel Microspheres to Promote Osteoporotic Osteogenesis via Biomechanical and Biological Stimulation	Ningze Zhang <i>The Chinese University of Hong Kong</i>
14:40-14:50	Mechanical Rejuvenation of Senescent Stem Cells and Aged Bone via Chromatin Remodeling	Xiaojing Liu <i>West China College of Stomatology</i>
14:50-15:00	Biomechanics modelling of right ventricular adaptation caused by pulmonary valve regurgitation and treatment	Debao Guan <i>Shandong University</i>
15:00-15:10	Customized Self-contractive Dressing Addresses Biomechanical Heterogeneity across Specific Wounds	Hao Liu <i>Xi'an Jiaotong University</i>
15:10-15:20	Light Wavelength-Driven Macrophage Polarization: Immunometabolism in Wound Healing	Lisha Zheng <i>Beihang University</i>
15:20-15:30	Mechanically-Tuned 3D Bioprinted Hydrogel Scaffolds Direct Mesenchymal Stem Cell Osteogenesis via YAP/TAZ Mechanotransduction for Accelerated Bone Defect Repair	Bin Liu <i>The General Hospital of the Northern Theater Command of the People's Liberation Army of China</i>
15:30-15:50	Tea Break	
Oral Session V		
Chair: Qiang Wei and Yong Hou		
Keynote Speech		
15:50-16:10	Single-molecule mechanical force gated endothelial phagocytosis in disturbed flow regions for atherogenesis	Guixue Wang <i>Chongqing University</i>
Invited Speech		

16:10-16:25	Cellular Mechanobiology Regulated by Interfacial Adhesion	Min Lin <i>Xi'an Jiaotong University</i>
16:25-16:40	Endothelial resilience factors in mechanobiology and atheroprotection	Suowen Xu <i>University of Science and Technology of China</i>
Oral Speech		
16:40-16:50	Data-augmented multi-objective inverse design of Vorochiral metamaterials for midsole applications	Yongtao Lv <i>Dalian University of Technology</i>
16:50-17:00	Cardiac Dynamics Study of Magnetic Fluid Flexible Occlusion for the Left Atrial Appendage	Dongliang Zhao <i>Shenzhen Bay Laboratory</i>
17:00-17:10	Biomechanical design of transcatheter heart valve stents	Yuanming Gao <i>Beihang University</i>
17:10-17:20	Spatial Continuity Predicts Aortic Intramural Hematoma Deterioration: A Phantom-Based In Vitro Biomechanical Study	Qingzhuo Chi <i>The Fourth Affiliated Hospital of China Medical University</i>
17:20-17:30	Biomechanical Modeling of Refractive Correction Procedures	Junjie Wang <i>Wenzhou Medical University</i>
17:30-17:40	Biomechanics guided femtosecond laser vision correction	Shaoqun Zeng <i>Huazhong University of Science and Technology</i>
17:40-17:50	A novel respiratory mechanics index derived from dynamic chest CT: the transfer function of lung parenchymal-airway volume	Chi Zhang <i>Beihang University</i>
17:50-18:00	Force-regulated condensation and intracellular interaction of membrane proteins during cell adhesion	Long Li <i>Institute of Mechanics, Chinese Academy of Sciences</i>

Fri, 31 July 2F 长荡湖厅 8:30-11:40		
Oral Session VI		
Time	Title	Speaker/Affiliation
Chair: Zuoqi Zhang and Debao Guan		
Keynote Speech		
8:30-8:50	Human injury criteria and protection biomechanics	Lizhen Wang <i>Beihang University</i>
Invited Speech		
8:50--9:05	Wearable Sensing of Neuromuscular Function and Muscle Mechanics Through Physiology-Structured sEMG and Mechanoacoustics	Changsheng Wu <i>National University of Singapore</i>
9:05-9:20	In-Vivo Testing Techniques for Bone Mechanical Properties in Clinical Settings	Zuoqi Zhang <i>Wuhan University</i>
Oral Speech		
9:20-9:30	Recapitulating the Cell Mechanical Microenvironment for Soft Tissue Regeneration	Yufei Ma <i>Xi'an Jiaotong University</i>
9:30-9:40	Mechanical Characteristics Analysis of Dynamically Adaptive Vascular Stents	Xiang Shen <i>Jiangsu University</i>
9:40-9:50	Hemodynamic dynamic quantitative analysis of intracranial atherosclerosis based on computational fluid dynamics	Li Qin <i>Jinfeng Laboratory</i>
9:50-10:00	Mechanical principles in tissue morphogenesis	Shilei Xue <i>Westlake University</i>
10:00-10:20	Tea Break	
Oral Session VII		
Chair: Yongtao Lv and Junjie Wang		
Invited Speech		
10:20-10:35	The Cellular Mechanical Mechanisms of Tumor Cell Geometry and Self-Renewal Through Caveolin-1 Signaling	Yiyao Liu <i>University of Electronic Science and Technology of China</i>
10:35-10:50	Mechanism of fluid shear stress regulating vascular smooth muscle cell phenotypic transformation to promote the formation of thoracic aortic aneurysm/dissection	Xiaoheng Liu <i>Sichuan University</i>
Oral Speech		
10:50-11:00	Stiffness Spatial Heterogeneity and Myopia-induced Softening in Tree Shrew Sclera	Xuesong Zhang <i>Beihang University</i>
11:00-11:10	Thoracic Endograft Implantation Increases Cardiac Energetic Burden	Ji Lang <i>Southeast University</i>
11:10-11:20	Glycolytic Metabolism in HCC Cells Impairs Dendritic Cell Immune Function by Disrupting Cytoskeleton Dynamics and mTOR Pathway	Zuquan Hu <i>Guizhou Medical University</i>

11:20-11:30	Study on mass transfer in intervertebral disc under dynamic loading condition and prediction based on machine learning	Ting Liang <i>Soochow University</i>
11:30-11:40	Integrin tension map reveals matrix-composites mediated cell migration status change	Yongliang Wang <i>Rehabilitation University</i>

Fri,31 July 2F 西太湖厅 8:30-11:45		
Oral Session VIII		
Time	Title	Speaker/Affiliation
Chair: Peng Wu and Ji Jing		
Invited Speech		
8:30-8:45	Viscoelastic Mechanics of Cells and Tissues Based on Multi-level Structural Characteristics	Guangkui Xu <i>Xi'an Jiao Tong University</i>
8:45-9:00	AI-assisted volumetric 3D bioprinting of vascularized full-thickness skin	Maobin Xie <i>Guangzhou Medical University</i>
Oral Speech		
9:00-9:10	Paradoxical Coagulation Dysfunction Caused by Blood Damage Induced by Non-Physiological High Shear Stress in Blood Pumps	Zengsheng Chen <i>Beihang University</i>
9:10-9:20	Mechanical Regulation of Protein Homodimerization	Mingxi Yao <i>Southern University of Science and Technology</i>
9:20-9:30	Mechanism of the Aortic Endothelial Glycocalyx in Preventing Low-Density Lipoprotein Transendothelial Transport	Hongyan Kang <i>Beihang University</i>
9:30-9:40	Matrix Stiffness Regulates Osteogenic Differentiation of ADSCs by Modulating the Hippo/YAP Pathway through Paralemmin1-Rasal2 Complex	Zhifeng Yu <i>The Ninth People's Hospital of Shanghai Jiao Tong University School of Medicine</i>
9:40-9:50	Inhibiting Pathological Actin Remodeling Promotes Corneal Epithelial Repair Under Hyperosmotic Stress	Jing Ji <i>Beihang University</i>
9:50-10:00	Laminar Shear Stress Protects Endothelial Function via NFATC1 and AMPK Signaling in Atherosclerosis	Xiangxiu Wang <i>Jinfeng Laboratory</i>
10:00-10:20	Tea Break	
Oral Session VIII		
Chair: Zengsheng Chen and Fuxiang Wei		
Invited Speech		
10:20-10:35	Running Biomechanics and Gait Retraining	Weijie Fu <i>Shanghai University of Sport</i>
Oral Speech		

10:35-10:45	A Novel FMD Analysis Correlates Cardiovascular Risk Factors to Arterial Integrity in Type 1 Diabetic and Healthy Females	Qianhong Wu <i>Villanova University</i>
10:45-10:55	Quantify the three-dimensional traction force in different germ layers of mouse embryo organoids	Fuxiang Wei <i>Huazhong University of Science and Technology</i>
10:55-11:05	CXCL12 Activates Integrin $\alpha 4 \beta 1$ and Calcium Signaling via 14-3-3 ζ -Mediated Mechanochemical Coupling	Quhuan Li <i>South China University of Technology</i>
11:05-11:15	Matrix Stiffness Drives Macrophage Plasma Membrane Rupture by Regulating NINJ1 Phase Separation	Chuanrong Zhao <i>Chongqing University</i>
11:15-11:25	Mechano-Metabolic Coupling in Tumor Drug Tolerance	Qiong Jia <i>The First Affiliated Hospital with Nanjing Medical University</i>
11:25-11:35	Quantification of Vortex Characteristics and Rupture Risk Assessment in Abdominal Aortic Aneurysms Using the Liutex Method	Peng Wu <i>Southeast University</i>
11:35-11:45	Age-related retinal adhesion behavior	Hongmei Guo <i>Taiyuan University of Technology</i>

Track 5: Biosensors and Medical Devices

Co-Chair

Jun Chen, Bifeng Liu, Peng Liu

Wed, 29 July 2F 聚德堂

13:30-18:05

Oral Session I

Time	Title	Speaker/Affiliation
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Chair: Changsheng Wu and Hongzhang Wang

Keynote Speech

13:30-13:50	Discovering Magnetoelasticity in Soft Matter for Bioelectronics	Jun Chen <i>University of California, Los Angeles</i>
13:50-14:10	Intelligent Micro- and Nanotechnology Empowering Precision Diagnosis	Tony Hu <i>Tsinghua University</i>

Invited Speech

14:10-14:25	Adaptive Bioelectronics for Physiological Monitoring	Changsheng Wu <i>National University of Singapore</i>
14:25-14:40	From 2D planar electronics to 3D gel electronics: The rise of π -conjugated hydrogel semiconductors and transistors	Shiming Zhang <i>The University of Hong Kong</i>
14:40-14:55	Fully Integrated Microfluidic Biosensors for in vitro Diagnosis	Bifeng Liu <i>Huazhong University of Science and Technology</i>
14:55-15:10	Automated Microfluidic Platform for Standardized Organoid-Based Precision Diagnostics	Yiwei Li <i>Huazhong University of Science and Technology</i>

Oral Speech

15:10-15:20	Implantable Biosensors and Microfluidics to Unlock Brain Chemistry	Yi Zhang <i>University of Connecticut, Storrs</i>
15:20-15:30	Wearable Ultrasound Electronics for Biomedical Imaging and Bio-Signal Detection	Lin Zhang <i>University at Buffalo</i>
15:30-15:50	Tea Break	

Oral Session II

Chair: Chenzhong Li and Jeff Tza-Huei Wang

Keynote Speech

15:50-16:10	Ultrasound Integrated Printing Sensing Electrodes for Brain Computer Interface	Chenzhong Li <i>The Chinese University of Hong Kong, Shenzhen</i>
16:10-16:30	Digital Partitioning, Melt Coding, and Magnetofluidic Automation – From Infection/AMR to Epigenetic Cancer Detection	Jeff Tza-Huei Wang <i>Johns Hopkins University</i>

Invited Speech		
16:30-16:45	Shape-adaptive electronics based on liquid metal circuits printed on thermoplastic films	Hongzhang Wang <i>Tsinghua University</i>
16:45-17:00	DNA-Encoded Bioanalysis	Yongxi Zhao <i>Xi'an Jiaotong University</i>
17:00-17:15	Drawn-on-Skin Bioelectronics for High-Fidelity Health Monitoring	Cunjiang Yu <i>University of Illinois Urbana-Champaign</i>

Oral Speech		
17:15-17:25	Intelligent Transformable Liquid Metals Enable Minimally Invasive Therapeutics Strategies	Xuelin Wang <i>Beihang University</i>
17:25-17:35	Bioparticle analysis for clinical diagnosis	Wenshu Zheng <i>Southern University of Science and Technology</i>
17:35-17:45	G-Triplex: A New Type of CRISPR-Cas12a Reporter Enabling Highly Sensitive Nucleic Acid Detection	Tao Li <i>Hubei University of Chinese Medicine</i>
17:45-17:55	Microfluidic Biosensing Platform integrated with flexible sensing array for cancer biomarker point-of-care testing	Yu Zhang <i>Shandong University</i>
17:55-18:05	Hierarchically Assembled Plasmonic Nanoarchitectures for Biosensing	Yi Chen <i>Southeast University</i>

Thu, 30 July 2F 聚德堂
10:30-12:00

Oral Session III

Time	Title	Speaker/Affiliation
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Chair: Yong Zeng and Peng Liu

Keynote Speech		
10:30-10:50	Multimodal Engineering to Advance Extracellular Vesicle-based Liquid Biopsy for Cancer Management	Yong Zeng <i>University of Florida</i>

Invited Speech		
10:50-11:05	New microfluidic architecture supports the integration of complex in vitro diagnosis	Peng Liu <i>Tsinghua University</i>
11:05-11:20	Biomarker sensing based on plasmonic materials	Xiangwei Zhao <i>Southeast University</i>

Oral Speech		
11:20-11:30	Multimodal Vision-based Tactile Sensing using Boundary Element Method and Spectral Separation	Longteng Yu <i>Beihang University</i>
11:30-11:40	Wireless and Flexible Bioelectronics for Digital Wound Management	Ze Xiong <i>ShanghaiTech University</i>
11:40-11:50	High-throughput screening of biomolecules, and single cells by novel biochips	Lin Han <i>Shandong University</i>

11:50-12:00 Real-time In-situ Bioanalysis

Bo Zhang

*Southern University of Science and
Technology*

Track 6: Cellular and Molecular Engineering
Co-Chair
Gang Bao, Jianping Fu, Yingxiao Wang, Josh Wu

Wed, 29 July 2F 红梅阁紫荆阁
13:30-17:35

Oral Session I

Time	Title	Speaker/Affiliation
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Chair: Allen Liu and Youhua Tan

Rising Star Award Lecture

13:30-14:00	Mechanodevelopment: How force and geometry shapes the form and function of life	Yue Shao <i>Tsinghua University</i>
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Keynote Speech

14:00-14:20	Decoding antigen-specific T cells in diseases	Ning Jenny Jiang <i>University of Pennsylvania</i>
14:20-14:40	Building Synthetic Cells to Sense, Respond, and Survive	Allen Liu <i>University of Michigan</i>

Invited Speech

14:40-14:55	Ultrasound Control of Genomic Regulatory Toolboxes for Cancer Immunotherapy	Yiqian Wu <i>Peking University</i>
14:55-15:10	Primary tumor mechanical heterogeneity defines metastatic organotropism via metabolic reprogramming	Youhua Tan <i>The Hong Kong Polytechnic University</i>

Oral Speech

15:10-15:20	Spatial control of genome editing activity enables localized immunotherapy	Sheng Tong <i>University of Kentucky</i>
15:20-15:30	The Molecular Biophysics of EGFR and PDGFR Systems in Regulating their Distinct Kinetics of Biochemical Signals through FRET imaging study	Mingxing Ouyang <i>Changzhou University</i>

15:30-15:50 Tea Break

Oral Session II

Chair: Jing Du and Sheng Tong

Keynote Speech

15:50-16:10	Magnetogenetic Approaches for Molecular Imaging and Cancer Therapy	Xiaoping Hu <i>University of California, Riverside</i>
16:10-16:30	Precision sonogenetic neuromodulation and its therapeutic potential	Lei Sun <i>The Hong Kong Polytechnic University</i>

Invited Speech

16:30-16:45	Mechanical shaping of TCR specificity and mechano-optimized TCR-T therapy	Wei Chen <i>Zhejiang University</i>
16:45-17:00	A Novel Structure-Based Protein-Protein Binding Contact Map Predicting Model	Zhenhai Li <i>Institute of Applied Mathematics and Mechanics</i>

17:00-17:15	Decoding Nuclear Mechanics in Aging and Diseases	Qin Peng <i>Shenzhen Bay Laboratory</i>
Oral Speech		
17:15-17:25	Study on the Antioxidant Effect of Lily Bulb Extract on H9c2 Cells by Double Resonator Piezoelectric Cytometry	Tiean Zhou <i>Agricultural University Of Hunan</i>
17:25-17:35	A Chromatin-Based Molecular Brake Coordinates Morphogenetic Dynamics and Cell Fate Specification	Jing Du <i>Beihang University</i>

Thu,30 July 2F 红梅阁紫荆阁
10:30-12:00

Oral Session III

Time	Title	Speaker/Affiliation
Chair: Kai Wang and Bo Liu		
Keynote Speech		
10:30-10:50	Rhythmic prestress controls embryo cell fate and stem cell self-organization	Ning Wang <i>Northeastern University</i>
Invited Speech		
10:50-11:05	Live-Cell Switch-On Probes: Real-Time, Wash-Free Imaging of Proteins and Cellular Activities Using Peptide-cpFP Sensors	Bo Liu <i>Dalian University of Technology</i>
11:05-11:20	Bispecific killer cell engager-secreting CAR-T cells redirect natural killer specificity to enhance antitumour responses	Jie Sun <i>Zhejiang University</i>
Oral Speech		
11:20-11:30	Overcoming Cellular Mechano-Adaptation with Curved Material Interfaces	Yang Song <i>Sichuan University</i>
11:30-11:40	Patient derived organoid toward vascularization and tumor-immune interactions	Yaling Liu <i>West China Hospital of Sichuan University</i>
11:40-11:50	Modular Assembly of Arterial Organoids Enables Rapid Blood Perfusion to Ameliorate Ischemic Diseases	Kai Wang <i>Peking University</i>
11:50-12:00	Minimally Destructive Injection Apparatus for Localized Delivery within Spheroids	Xueju Wang <i>University of Connecticut</i>

Thu, 30 July 2F 红梅阁紫荆阁
13:30-17:30

Oral Session IV

Time	Title	Speaker/Affiliation
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Chair: Josh Wu and Mingxing Ouyang

Keynote Speech

13:30-13:50	Molecular Imaging and Sonogenetics for Gene and Cell Therapy	Yingxiao Wang <i>University of Southern California</i>
13:50-14:10	Mitochondrial Nanostructure Remodeling in 3D Spheroids for Transfer and Therapeutic Benefits in Endothelial Restoration	Josh Wu <i>Cheng Kung University</i>

Invited Speech

14:10-14:25	Natural acoustic vibrations of single cells toward spectral mechanical phenotyping	Shuijing Tang <i>Peking University</i>
14:25-14:40	Molecular Regulation of VWF-A1 Function by the A2 Domain in von Willebrand Disease and Immunothrombosis	Jiangguo Lin <i>Guangdong Provincial People's Hospital</i>
14:40-14:55	Engineering remote-controlled programmable CAR-antigen pairing for solid tumor immunotherapy	Ziliang Huang <i>Chongqing Medical University</i>
14:55-15:10	Hierarchical tissue manufacturing via biofabrication and bioassembly	Qi Gu <i>Institute of Zoology, Chinese Academy of Sciences</i>

Oral Speech

15:10-15:20	Viscoelastic Hydrogel for Neural Regeneration via Manipulating Fate Determination of Stem Cells	Weihao Yuan <i>Hainan Medical University</i>
15:20-15:30	Mechanochemical Coupling-Driven Stimulation of Piezo1 Enables Rapid Bone Organoid Generation	Zuoying Yuan <i>Peking University Third Hospital</i>
15:30-15:50	Tea Break	

Oral Session V

Chair: Jiahe Li and Yanan Du

Keynote Speech

15:50-16:10	T cell state regulates tcr affinity and catch bond	Cheng Zhu <i>Georgia Institute of Technology</i>
16:10-16:30	Surface expression of antitoxin on engineered bacteria neutralizes genotoxic colibactin in the gut	Jiahe Li <i>University of Michigan</i>

Invited Speech

16:30-16:45	Deciphering and Reconstructing the Biomechanical Microenvironment of Tissue Fibrosis	Yanan Du <i>Tsinghua University</i>
16:45-17:00	Expanding Cellular Immunotherapy: Engineer CAR-Neutrophils for Cancer Targeting	Xiaoping Bao <i>Purdue University</i>

Oral Speech

17:00-17:10	hPSCs-derived fibrocartilage cells for rotator cuff repair guided by identifying sequential signaling during human enthesis development	Fei Fang <i>Shanghai Jiao Tong University</i>
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17:10-17:20	Mechanoepigenetic Regulation of Tumor Cells via Multi-Modal Histone Methylation	Shun Li <i>University of Electronic Science and Technology of China</i>
17:20-17:30	A Mechanochemical Model Coupling Cortical Wave Dynamics with Motor-Clutch Adhesion during Mitotic Cell Division	Hongyuan Zhu <i>Xi'an Jiaotong University</i>

Track 7: Neural Engineering and Brain-Machine Interface

Co-Chair

Jason Chen, Bingmei Fu, Ling Zou

Wed, 29 July 2F 舢舨阁

13:30-17:55

Oral Session I

Time	Title	Speaker/Affiliation
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Chair: Jason Chen and Bingmei Fu

Keynote Speech

13:30-13:50	From Neuromodulation, Brain-Computer Interface to Brain-Apparatus Communication	Dezhong Yao <i>University of Electronic Science and Technology of China</i>
13:50-14:10	Neural Engineering Approaches to Brain Neuromodulations	Jason Chen <i>Cheng Kung University</i>
14:10-14:30	Modulation of the Blood-Brain Barrier and Brain Transport by Transcranial Direct Current Stimulation	Bingmei Fu <i>The City University of New York</i>

Invited Speech

14:30-14:45	Neurotechnology-aided rehabilitation and personalized treatment for stroke patients	Chong Li <i>Tsinghua University</i>
14:45-15:00	Cross-media Biosyncretic Robotic Intelligence through Integrating Living and Nonliving Systems	Lianqing Liu <i>Shenyang Institute of Automation, Chinese Academy of Sciences</i>

Oral Speech

15:00-15:10	Dynamic Soft MicroFiber for Implantable Bio-Interface	Fei Han <i>Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences</i>
15:10-15:20	Fully biodegradable self-powered electronics for neurological diseases treatment	Liu Wang <i>Beihang University</i>
15:20-15:30	Iontronic Materials for BCI Neuromorphic Interface Devices	Kai Xiao <i>Southern University of Science and Technology</i>

15:30-15:50 Tea Break

Oral Session II

Chair: Ling Zou and Mingjun Zhang

Keynote Speech

15:50-16:10	Advancing Future Neurorehabilitation Through Novel Brain Neuromodulation Technology Design and Development	Chih-Wei Peng <i>Taipei Medical University</i>
16:10-16:30	Intelligent Biointerfaces for Wireless Neuromodulation and Translational Neuro-treatment	Yiyuan Yang <i>National University of Singapore</i>
16:30-16:50	Embodied Intelligence Brain-machine Interfaces for Predicting and Preventing Neurological Disorders	Mingjun Zhang <i>Tsinghua University</i>

Invited Speech

16:50-17:05	Self-Supervised Super-Resolution for MRI Reconstruction Using Prior-Guided Diffusion	Bo Peng <i>Suzhou Institute of Biomedical Engineering and Technology, Chinese Academy of Sciences</i>
17:05-17:20	Functional corticomuscular coupling and its application in stroke	Xiaoling Chen <i>Yanshan University</i>
17:20-17:35	WeBrain: A Web Based Brain-Apparatus Communication Platform and Its Applications	Li Dong <i>Chengdu University of Electronic Science and Technology</i>
Oral Speech		
17:35-17:45	Low-Intensity Pulsed Ultrasound Promotes Peripheral Nerve Regeneration and Functional Recovery	Yifei Yao <i>University of Shanghai for Science and Technology</i>
17:45-17:55	Non-Invasive Brain-Computer Interface Hydrogel Electrodes	Pengxiang Si <i>Shenzhen University of Technology</i>

Track 8: Biomanufacturing and Biotechnology
Co-Chair

Cheng Dong, Zhongze Gu, Arnold Ju, Kanyi Pu

Wed, 29 July 2F 聚星堂
13:30-17:35

Oral Session I

Time	Title	Speaker/Affiliation
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Chair: Arnold Ju and Khoon Lim

Keynote Speech

13:30-13:50	New Approach Methodologies (NAMs): Reshaping the Future of Cancer Drug Development and Precision Medicine	Weiqliang Chen <i>Nanjing University</i>
13:50-14:10	Human organ-on-a-chip track	Zhongze Gu <i>Southeast University</i>
14:10-14:30	Patient-specific "Physical Twin" artery-on-chip platform reveals complex flow-dependent VWF mechanobiology and guides personalized antithrombotic therapy	Arnold Lining Ju <i>The University of Sydney</i>

Invited Speech

14:30-14:45	The Interplay of Physical, Chemical and Biological Dynamics in Living Cells	Peter Su <i>University of Technology Sydney</i>
14:45-15:00	Immunomodulation for tissue repair and regeneration	Ziyu Wang <i>The University of Sydney</i>

Oral Speech

15:00-15:10	Conically channeled membranes designed for fast and efficient transport of macromolecules	Guoqiang Chen <i>Institute of Process Engineering, Chinese Academy of Sciences</i>
15:10-15:20	Microbe-gut-cartilage Axis-on-a-chip to Study Effects of Probiotics on Joint Health and Osteoarthritis	Zhong Alan Li <i>The Chinese University of Hong Kong</i>
15:20-15:30	SHIFT the SHAPE of Extrusion Bioprinting	Liliang Ouyang <i>Tsinghua University</i>

15:30-15:50 Tea Break

Oral Session II

Chair: Cheng Dong and Peter Su

Keynote Speech

15:50-16:10	Combining Light and Sound for Advanced Biofabrication	Khoon Lim <i>The University of Sydney</i>
16:10-16:30	Sonomechanobiology: A New Field of High Frequency Cell Mechanostimulation	Leslie Yeo <i>Royal Melbourne Institute of Technology</i>

Invited Speech

16:30-16:45	Biofabrication-Enabled Multifunctional Biomaterials for Tissue Repair: From 3D Bioprinting to Microenvironment Regulation	Steven Cui <i>The Chinese University of Hong Kong, Shenzhen</i>
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16:45-17:00	Synthetic Viscoelastic Activating Cells to Boost CAR-T Cell Expansion and Stemness	Zeyang Liu <i>Institute of Advanced Clinical Medicine, Peking University Health Science Center</i>
17:00-17:15	Engineered CAR T cells Secreting Aromatase for Rejuvenation of Ovarian Function in Aging	Yun Chang <i>The Hong Kong Polytechnic University</i>
Oral Speech		
17:15-17:25	Bioinspired Materials for Preventing Drug-Resistant Bacteria	Jing Wang <i>Shanghai Jiao Tong University</i>
17:25-17:35	Engineering Neural Microenvironment in Tumor on Biochip	Xiaoyan Liu <i>Huazhong University of Science and Technology</i>
Thu, 30 July 2F 聚星堂 10:30-12:00		
Oral Session III		
Time	Title	Speaker/Affiliation
Chair: Zongze Gu and Weiqiang Chen		
Keynote Speech		
10:30-10:50	Matrix-based modulation of mesenchymal stromal cell regenerative functions	Giselle Yeo <i>The University of Sydney</i>
10:50-11:10	Genetically engineering phages for disease diagnosis and treatment	Chuanbin Mao <i>The Chinese University of Hong Kong</i>
Invited Speech		
11:10-11:25	Advanced Bioprinting Strategies and Transparent Bioinks for Corneal Regeneration	Jingjing You <i>University of Sydney</i>
11:25-11:40	Biomechanics-Driven Organ on Chip	Di Huang <i>Taiwan University of Technology</i>
Oral Speech		
11:40-11:50	Vascularized retinal organoid chip for disease modeling and drug screening	Hon Fai Chan <i>The Chinese University of Hong Kong</i>
11:50-12:00	Vascular microphysiological system	Xiao Liu <i>Beihang University</i>

Track 9: Translation of Biomedical Engineering: From Bench to Bedside

Co-Chair

Cheng-Kung Cheng, Peter Lee, Chwee Teck Lim, Yunbing Wang

Wed, 29 July 2F 百合厅

13:30-17:50

Oral Session I

Time	Title	Speaker/Affiliation
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Chair: Cheng-Kung Cheng and Jia Hua

Rising Star Award Lecture

13:30-14:00	Wearable Bioelectronics for Personalized Healthcare	Minqiang Wang <i>Shanghai Jiao Tong University</i>
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Keynote Speech

14:00-14:20	Commercialization of biomaterials with a biodegradable polymer particle technology platform	Hsu-Wei Fang <i>Taipei University of Technology</i>
14:20-14:40	Preclinical Animal Study for Medical Devices - Experience Sharing and Case Discussion	Jia Hua <i>University College London</i>
14:40-15:00	Translating Four-Dimensional Musculoskeletal Imaging: From In Vivo Biomechanical Discovery to Clinical Orthopedic Practice	Tsung-Yuan Tsai <i>Shanghai Jiao Tong University</i>
15:00-15:20	Measure-Model-Manage framework for translating personalised medical devices	Peter VS Lee <i>The University of Melbourne</i>
15:20-15:30	Discussion	
15:30-15:50	Tea Break	

Oral Session II

Chair: Peter VS Lee and Tsung-Yuan Tsai

Keynote Speech

15:50-16:10	Bioresorbable cardiac occluder product development for congenital heart disease treatment	Yunbing Wang <i>Sichuan University</i>
16:10-16:30	Biomaterials for Orthopaedic Applications: Clinical needs lead the way to Innovation and clinical translation	Ling Qin <i>The Chinese University of Hong Kong</i>
16:30-16:50	Minimal-Invasive Annulus Repair System: A New Era from Simple Discectomy to Biological Repair	Chang-Jung Chiang <i>Taipei Medical University</i>
16:50-17:10	Integrated nanosensor technologies for molecular analyses of circulating biomarkers	Huilin Shao <i>National University of Singapore</i>

Invited Speech

17:10-17:25	Investigations and Practices of Fluid-Membrane Interactions for Disease Diagnosis Using Red Blood Cells	Xiaobo Gong <i>Shanghai Jiao Tong University</i>
17:25-17:40	Polyphthalocyanine-based Enzyme-Mimetic Medical Agents for the Research and Translation in the Treatment of Solar Dermatitis	Lang Ma <i>West China Hospital of Sichuan University</i>
17:40-17:50	Discussion	

Thu, 30 July 2F 百合厅 10:30-12:00		
Oral Session III		
Time	Title	Speaker/Affiliation
Chair: Chao Wang and Huizhi Wang		
Keynote Speech		
10:30-10:50	Smart Textiles for Personalized Health Care	Jun Chen <i>University of California, Los Angeles</i>
Invited Speech		
10:50-11:05	Matrix Optics-Enabled Intelligent Imaging, Sensing, and Visualization for Minimally Invasive and Microsurgery	Peng Miao <i>Shanghai Jiao Tong University</i>
11:05-11:20	Deformation-encoded light-field transduction enables 6-DoF optical force sensing in a 1.7 mm footprint	Jianlong Yang <i>Shanghai Jiao Tong University</i>
11:20-11:35	Metastructure-Driven Innovation & Translation of Bone Graft Materials and Devices	Chao Wang <i>Beihang University</i>
Oral Speech		
11:35-11:45	A Wearable System for Real-Time Quantification of Deep Tissue Young's Modulus	Huizhi Wang <i>University of Science and Technology of China Suzhou Institute of Advanced Studies</i>
11:45-12:00	Discussion	

Fri, 31 July 2F 百合厅 8:30-9:40		
Oral Session IV		
Time	Title	Speaker/Affiliation
Chair: Minqiang Wang and Xiaobo Gong		
Oral Speech		
8:30-8:40	Frontier Integration in Spinal Cord Injury Repair: Engineering-Driven Mechanistic Exploration and a New Paradigm for Clinical Translation	Shiqing Feng <i>Qilu Second Hospital of Shandong University</i>
8:40-8:50	AI-empowered atherosclerotic plaque vulnerability assessment and clinical application	Miao Chu <i>Shanghai Jiao Tong University</i>
8:50-9:00	First-in-man feasibility study of a decellularized biologic graft (LineMatrix®) for hemodialysis access: 12-month results	Xuefeng Qiu <i>Humatrix Medical Technology (Suzhou) Co., LTD</i>
9:00-9:10	High-Fidelity Drug Screening with Ultrathin Tissue Slicing and Label-free Dynamic OCT Imaging	Jianbo Tang <i>Southern University of Science and Technology</i>
9:10-9:20	A Commercial, Returnable Space Bio-experiment Platform for Space Life Ecology Experiments	Yijian Li <i>Changzhou Institute of Optoelectronic</i>
9:20-9:30	A Soft Robotic Infant Feeding Bottle for Oral Motor Training During Nutritive Feeding	Lin Jiang <i>San Jose State University</i>
9:30-9:40	Discussion	

Track 10: Biomedical Engineering Education
Co-Chair
Cheng-Kung Cheng, Zhongze Gu ,Hongjun Wang

Wed, 29 July 1F 桂梅兰 13:30-15:35		
Oral Session I		
Time	Title	Speaker/Affiliation
Project-Based Learning		Moderator: Suiren Wan
Invited Speech		
13:30-13:45	Cultivation Model of Excellent Engineers for Biomedical Engineering	Tianfu Wang <i>Shenzhen University</i>
Oral Speech		
13:45-13:55	Teaching exploration and practice on biomedical engineering experiments featuring dynamically visualized results	Juhui Qiu <i>Chongqing University</i>
13:55-14:05	Deep Integration Teaching Reform in the Courses of “Medicine and Engineering of Musculoskeletal System”	Feng Zhao <i>Beihang University</i>
14:05-14:15	Minimal-Invasive Annulus Repair System: A New Era from Simple Discectomy to Biological Repair	Jung Chang <i>Taipei Medical University</i>
14:15-14:35	Discussion	
Oral Session II		
Time	Speaker	Affiliation
Industry Partnership in BME Education		Moderator: Song Li, Xuemin Xu
Panelist: Cheng-Kung Cheng, Xiaoping Hu and Dinggang Shen		
14:35-14:55	Xuemin Xu	<i>Shanghai Jiao Tong University</i>
14:55-15:35	Discussion	

Thu, 30 July 2F 百合厅 13:30-17:50		
Oral Session III		
Time	Speaker	Affiliation
AI and BME Education		Moderator: Song Li, Hongjun Wang
13:30-14:30	X. Edward Guo	Columbia University
	Yixian Qin	The State University of New York at Stony Brook
	Suiren Wan	Southeast University
14:30-15:30	Discussion	
15:30-15:50	Tea Break	
Oral Session IV		
Accreditation		Moderator: X. Edward Guo, Deyu Li
15:50-17:30	X. Edward Guo	Columbia University
	Deyu Li	Beihang University
	Peter VS Lee	The University of Melbourne
	Cheng Dong	The Hong Kong Polytechnic University
17:30-17:50	Xuemin Xu	Shanghai Jiao Tong University
	Discussion	

Students Oral Session Outline

Track1/Track8 2F 聚星堂	7.29a.m. 7.29p.m.	7.30a.m. 7.30p.m.	7.31a.m. 7.31p.m.
Track2 2F 聚德堂	7.29a.m. 7.29p.m.	7.30a.m. 7.30p.m.	7.31a.m. 7.31p.m.
Track3/Track6 2F 聚仁堂	7.29a.m. 7.29p.m.	7.30a.m. 7.30p.m.	7.31a.m. 7.31p.m.
Track4 1F 桂梅兰	7.29a.m. 7.29p.m.	7.30a.m. 7.30p.m.	7.31a.m. 7.31p.m.
Track5/Track7/Track9 2F 红梅阁紫荆阁	7.29a.m. 7.29p.m.	7.30a.m. 7.30p.m.	7.31a.m. 7.31p.m.

Fri,31 July 2F 聚星堂 8:30-11:30 Students Oral Session-Track1		
Time	Title	Speaker/Affiliation
Chair:Sen Song, Jianjun Ren and Haimei Zhao		
8:30-8:40	Integrating Medicinal and Edible Resources with Nutrition and Health Management	Shuo Huang <i>Beijing University of Chinese Medicine</i>
8:40-8:50	AlphaFold-Guided Molecular Dynamics of Retinal Proteins for AI-Assisted Molecular Diagnostics and Bioengineering	Aris Tsai <i>SOHS</i>
8:50-9:00	One-Carbon Metabolite Profiling Across the Hypertensive Pregnancy Spectrum: Preserved Pathway Architecture and Gestational-Age-Dependent Folic Acid Effects	Yitian Xu <i>Xuzhou Medical University</i>
9:00-9:10	Non-Invasive Prediction of Hepatic Venous Pressure Gradient Using a Fully Connected Neural Network Model	Jiyang Zhang <i>Sichuan University</i>
9:10-9:20	Micro-CT-Based Morphological Analysis of the Mandibular Masseteric Attachment Region in Scx Knockout Mice	Sangkaizhen Xi <i>Affiliated Stomatological Hospital of Tongji University</i>
9:20-9:30	SCDL-BRR: Robust Medical Image Segmentation under Heterogeneous Appearance and Ambiguous Boundaries	Haoyu Yan <i>East China Jiaotong University</i>
9:30-9:40	Reproducible Radiomics Features Enable Robust Habitat Segmentation in Cervical Cancer CT Images	Hao Wang <i>Changzhou University</i>
9:40-9:50	Application of Multimodal Transformer in the Localization and Auxiliary Diagnosis of MRI-Negative Epileptic Lesions	Zicheng Xiong <i>General Hospital of Eastern Theater Command</i>
9:50-10:00	Lightweight U-Mamba-Based Framework for Spinal Biomechanical Assessment and Landmark Detection	Nian Xiong <i>Beijing University of Posts and Telecommunications</i>
10:00-10:10	Robust Choroid Plexus Segmentation via a Structure-Subspace-Driven and Uncertainty-Guided Network	Xinyu Guo <i>Shanghai Jiao Tong University</i>
10:10-10:20	Tea Break	
10:20-10:30	CNN-Encoded Liver-Spleen CT Representations Can Enhance Noninvasive Assessment of Portal Hypertension	Daiyang He <i>Sichuan University</i>
10:30-10:40	AI-Empowered Multi-Scale Nucleus-based Profiling: Linking Knee Joint Histology to Cell Phenotype	Yuanhao Fan <i>Southern University of Science and Technology</i>
10:40-10:50	A Dynamic Bimodal Virtual Model and Deformation Acquisition Method for Evaluating Brain Tumor Navigation Under Tissue Deformation	Xiaopeng Zheng <i>Tsinghua University</i>

10:50-11:00	Spatially Coupled Intratumoral-Peritumoral CT-Dose Radiomics for Predicting Radiotherapy Response in Esophageal Squamous Cell Carcinoma: A Multicenter Study	Heng Zhang <i>The Third Affiliated Hospital of Nanjing Medical University</i>
11:00-11:10	Prior-Guided Dynamic Graph Framework with Prototype Subgraph Classification for Parkinson's Disease	Yueqi Zhao <i>Henan University of Medicine</i>
11:10-11:20	Intelligent Diagnostic Model for Dental Trauma Based on Deep Learning and Image Recognition	Wangyue Dai <i>Xi'an Jiaotong University</i>
11:20-11:30	Development of an ICG polymeric nanoformulations for fluorescence-guided surgery	Jaco van Rooyen <i>Adelaide University</i>

Fri, 31 July 2F 聚德堂 8:30-12:00

Students Oral Session-Track2

Time	Title	Speaker/Affiliation
Chair:Kelvin Yeung, Yizhou Zhu and Xiaoyu Zhao		
8:30-8:40	Shikonin/Galunisertib Dual-Drug Core-Shell Coaxial Gel/PCL Nanofibrous Membrane for Radiation-Induced Skin Injury	Ziman Li <i>The Affiliated Changzhou No.2 People's Hospital of Nanjing Medical University</i>
8:40-8:50	Spin-State Modulation by Atom-Cluster Synergy Steers H ₂ O ₂ Conversion toward a Catalase-like Decomposition Pathway for Anti-Inflammatory Therapy	Hanjie Zhang <i>Nanjing University</i>
8:50-9:00	Plasma Parameter Optimization for Wound Applications: Balancing Bacterial Inactivation and Cell Viability	Yun-Hao Chung <i>Chung Yuan Christian University</i>
9:00-9:10	GDYO@Pt-Based Schottky Engineering Promotes Cranial Bone Regeneration through Piezoelectric Stimulation and Oxidative Stress Regulation	Kang Song <i>Beihang University</i>
9:10-9:20	Engineered Plant-Derived Exosome-Like Nanovesicles Modified Small-Caliber Vascular Grafts for Accelerated Endothelialization	Zilin Zhou <i>Chongqing University</i>
9:20-9:30	Self-transforming hydrogel mimicking tertiary lymphoid structures to activate cGAS-STING pathway for enhanced anti-tumor immunotherapy	Fei Wang <i>Nanjing University</i>
9:30-9:40	One-Pot Construction of Tannic Acid/Chitosan/Heparin Composite Coatings on Magnesium Alloy Surface with Enhanced Corrosion Resistance and Biocompatibility	Renwei Gao <i>Southwest Jiaotong University School of Medicine</i>
9:40-9:50	Silk Fibroin-Based Multilayer Coating Enhances the Anticoagulant Stability of ECMO Hollow Fiber Membranes	Wenbo Zhang <i>Beihang University</i>
9:50-10:00	Intraluminal Plasma Activation of Polyurethane Catheters for Fucoidan Grafting to Enhance Hemocompatibility	Sung-Jung Li <i>Chung Yuan Christian University</i>
10:00-10:20	Tea Break	
10:20-10:30	Development-Inspired Strategies for the Repair of Aged Cartilage	Qixuan Wang <i>Zhejiang University</i>
10:30-10:40	Self-Assembled Nanoparticles from Natural Herbs Alleviate Osteoarthritis by Targeting Retinol Metabolism and Inhibiting Chondrocyte Ferroptosis	Xuefeng Li <i>Zhejiang Chinese Medical University</i>
10:40-10:50	Metal-polyphenol network confined synthesis of nanozymes with programmable oxygen vacancies for UVB photodamage therapy	Xiaomiao Cui <i>Nanjing University</i>

10:50-11:00	Genetically Engineered Biomimetic Nanozymes Reprogram Immune Niches to Intercept Colitis-Carcinoma Transition	Qi Sun <i>Nanjing University</i>
11:00-11:10	Construction of a Mannosylated β -Lactoglobulin Nanodelivery System for Ulcerative Colitis Therapy	Yongmei Wang <i>Guizhou Medical University</i>
11:10-11:20	Fucoidan-Modified Selenium Nanozymes for Targeted Antioxidant and Anti-Inflammatory Therapy of Atherosclerosis	Yujiao Weng <i>Chengdu Medical College</i>
11:20-11:30	Reprogramming Activated Fibroblasts with Fibroblast Activation Protein-Targeted mRNA-LNPs for Cardiac Tissue Regeneration and Cancer Immunotherapy	Dan Yan <i>Adelaide University</i>
11:30-11:40	ROS-Responsive Microgels Loaded with VEGF-Engineered Endothelial Extracellular Vesicles for Diabetic Wound Healing via Microenvironment Reprogramming	Sheng Ding <i>Nankai University</i>
11:40-11:50	Functional Complementation of Neonatal and Adult Intervertebral Disc ECM: A&NIVD-dECM Scaffold for Enhanced Intervertebral Disc Degeneration Repair	Feifei Yuan <i>Xiangya Hospital Central South University</i>
11:50-12:00	A theranostic nanozyme for the treatment of osteoarthritis and the pathological diagnosis of glycosaminoglycans	Dongze Mo <i>Nanjing University</i>

Fri, 31 July 2F 聚仁堂 8:30-9:40

Students Oral Session-Track3

Time	Title	Speaker/Affiliation
Chair: Xiaoyong Zhang, Xiaolei Song and He Wang		
8:30-8:40	Edge-Intelligent Wearable Auscultation System for Lung Injury Monitoring	Hang Yu <i>Changzhou University</i>
8:40-8:50	Proto-BANet: An Interpretable Prototype Learning Framework for Bone Age Assessment and Adult Height Prediction	Yuxin Zhang <i>Beihang University</i>
8:50-9:00	Individualized Cholinergic Pathway Degeneration in Alzheimer's Disease Characterized by Normative Modeling	Shuoyun Feng <i>Shanghai Jiao Tong University</i>
9:00-9:10	PIM-D2Net: Preoperative-Image-Based Convolutional Matching and Dual-Stage Dual-Path Network for Dental CBCT Metal Artifact Reduction	Xizhe Zhang <i>Shanghai Jiao Tong University</i>
9:10-9:20	All-optical intracellular thermal profiling using nanodiamond-based "thermal radar"	Jiahua Zhang <i>The University of Hong Kong</i>
9:20-9:30	STaR-Morph: A Temporally Consistent Deformable Registration Framework for 4D-CBCT-to-4D-CT Alignment in Radiotherapy	Zixin Li <i>The Third Affiliated Hospital of Nanjing Medical University</i>
9:30-9:40	Multiscale Viscoelastic Rheological Modeling and Broadband Ultrasound Inverse Imaging for Early Disease Diagnosis	Zhi Cao <i>Xi'an Jiaotong University</i>

Thu, 30 July 1F 桂梅兰 10:30-12:00

Students Oral Session-Track4 I

Time	Title	Speaker/Affiliation
Chair:Yiyao Liu, Weijie Fu and Guangkui Xu		
10:30-10:40	Energetic Cost Response Clusters to Advanced Footwear Technology in Sub-3 Hour Marathon Runners	Kaicheng Wu <i>Shanghai University of Sport</i>
10:40-10:50	A Quantitative Evaluation Method for Cavitation Bubble Energy Induced by Extracorporeal Shockwaves	Yuheng Liu <i>Beihang University</i>
10:50-11:00	Foot3DTrack: A Point Cloud-based Markerless Motion Capture System for Fully-Automated Multi-Segment Foot Kinematics Analysis in Gait	Jiewen Li <i>Fudan University</i>
11:00-11:10	Research on 3D architected degradable scaffold with an integrated barrier functional shell for alveolar bone regeneration	Dan Chen <i>Beihang University</i>
11:10-11:20	Simulation of Polymer Chain Migration and Conformational Evolution in Contraction-Expansion Microchannels	Yanwei Fang <i>Shanghai University Of Engineering Science</i>
11:20-11:30	Investigation of Acute and Chronic Injury Mechanisms of the Deltoid Ligament: Insights from Finite Element Analysis and Animal Study	Yuandong Li <i>Shanghai Jiao Tong University</i>
11:30-11:40	Modelling Study on the Forced Oscillation Technique for Detecting Regional Lung Lesions	Yida Li <i>Beihang University</i>
11:40-11:50	Basketball Shoe Center-of-Mass Height Classification and Its Influence on Multidirectional Movement Performance	Weijie Gao <i>Capital University of Physical Education And Sports</i>
11:50-12:00	Title:Elastic Constant Estimation of Low-Q Materials from Resonant Ultrasound Spectra Using a Convolutional Neural Network with Unordered Multi-Spectrum Input	Shuaijie Su <i>Beihang University</i>

Thu, 30 July 1F 桂梅兰 13:30-18:00

Students Oral Session-Track4 II

Time	Title	Speaker/Affiliation
Chair:Lizhen Wang, Xiaogang Wu and Peixiang Ma		
13:30-13:40	Mechanism of Anomalous Local Aerosol Deposition in the Human Respiratory Tract Based on High-Fidelity Turbulence Resolution	Mengtao Li <i>Beihang University</i>
13:40-13:50	Spatially Resolved Structure-Function Mapping of the ACL-Bone Interface: Regional Variation in Microarchitecture, Tensile Properties, and Stress Distribution	Qingqing Yang <i>Shanghai Jiao Tong University</i>
13:50-14:00	A Coupled Biomechanical Model for Korotkoff Sound Generation and Its Potential Physiological Implications	Shuqi Ren <i>Beihang University</i>
14:00-14:10	Linear and Nonlinear Associations Between Natural Trunk Inclination and Lower-Limb Joint Mechanics During Running	Lingfeng Mao <i>Shanghai University of Sport</i>
14:10-14:20	Impact of Different Thrombosis Features on Hemodynamic environment and Secondary Thrombosis Risk of Oxygenators: A Multifactorial Numerical Analysis	Rong Liu <i>Beihang University</i>
14:20-14:30	Evaluation of Compensatory Lower Limb Movement Strategies in Sarcopenia Based on Digital Biomarkers from the Five-Times Sit-to-Stand Test	Hejin Cai <i>The Hong Kong Polytechnic University</i>
14:30-14:40	Numerical Study of Global and Local Hemodynamics and Oxygenation in Adult Membrane Oxygenators Across the Entire Operating Flow Rate Range	Xingji Fu <i>Beihang University</i>
14:40-14:50	Turning strategies modulates mediolateral stability in mild but not moderate Parkinson's disease: a margin of stability analysis	Jiaying Shao <i>Ningbo University</i>
14:50-15:00	Effects of Subtendon Architecture on Achilles Tendon Mechanics: A Finite Element-Derived Response Surface Study	Zhihao Song <i>Beihang University</i>
15:00-15:10	Altered Central Motor Control Following ACL Reconstruction: A Muscle Synergy Perspective	Ze Gong <i>Northwestern Polytechnical University</i>
15:10-15:20	Biomechanical Analysis and Intelligent Robot Design of Assistive Supports for Spinal Degeneration in the Elderly	Xiaolei Yan <i>Beijing University of Posts and Telecommunications</i>
15:20-15:30	Biomechanical Simulation of Osteotomy-Based Laminar Reconstruction for Spinal Deformity	Yiling Zheng <i>Beihang University</i>
15:30-15:40	In Vitro Analysis of Native and Neo-Sinus Hemodynamics After Transcatheter Aortic Valve Implantation: The Role of Coronary Ostial Morphology and Cardiac Output	Yuhao Wei <i>Sichuan University</i>

15:40-15:50	Tea Break	
15:50-16:00	Early Postoperative CFD-Based Hemodynamic Assessment and AI Surrogate Prediction of One-Year Graft Occlusion After Coronary Artery Bypass Grafting	Liwen Bi <i>Beihang University</i>
16:00-16:10	Distinct Multi-Planar Intersegmental Coordination in Retrained and Habitual Non-Rearfoot Strikers Under Comparable Impact Loading	Ruoyu Zhi <i>Shanghai University of Sport</i>
16:10-16:20	Efficacy Analysis and Evaluation Strategy Development of Low-intensity Pulsed Ultrasound in Promoting Median Nerve Repair	Lu Yu <i>Shanghai Jiao Tong University</i>
16:20-16:30	Effects of Secondary Flow Path Design Parameters on Hemodynamic Performances and Hemocompatibility of HeartMate 3 Blood Pump	Xin Liu <i>Beihang University</i>
16:30-16:40	Direction-Specific Neuromechanical Control Deficits in Patients with Chronic Ankle Instability During Multi-Directional Drop Landings	Jiayi Zhou <i>Northwestern Polytechnical University</i>
16:40-16:50	Hydrostatic Pressure Rescues Simulated Microgravity-Induced Remodeling of Nuclear Lamina and Chromatin in Osteocytes	Yahao Wang <i>Beihang University</i>
16:50-17:00	Biomechanical Effects of Masticatory Muscle Activation on the Temporomandibular Joint During F1 Racing	Luqi Zhang <i>Sichuan University</i>
17:00-17:10	Altered cortical activation and functional connectivity during dual-task walking in older adults with mild cognitive impairment	Xinru Li <i>Shandong sport University</i>
17:10-17:20	Numerical Investigation of Aortic Hemodynamics Under Different ECMO-PLVAD Support Conditions During Cardiac Recovery	Yuan He <i>Beihang University</i>
17:20-17:30	Hollow Midsole Structures Modulate Loading Rate and Leg Stiffness During Running	Ailing Yuan <i>Shanghai University of Sport</i>
17:30-17:40	OpenCap-Based Five-Times Sit-to-Stand Analysis for Biomechanical Characterization of Sarcopenia-Related Functional Impairment	Jialiang Xu <i>The Hong Kong Polytechnic University</i>
17:40-17:50	Promoting osteogenic differentiation of mesenchymal stem cells by regulating flow shear stress and extracellular matrix stiffness	Hui Peng <i>Chongqing University</i>
17:50-18:00	Validations and Applications of Markerless Motion Capture using OpenCap: A Review	Xiaochen Zhang <i>Soochow University</i>

Fri,31 July 1F 桂梅兰 8:00-12:10 Students Oral Session-Track4 III		
Time	Title	Speaker/Affiliation
Chair:Junwei Chen, Suowen Xu and Min Lin		
8:00-8:10	Effect of Fluid Shear Stress on the Differentiation of Bone Marrow-derived Mesenchymal Stem Cells into Corneal Epithelial Cells	Yuan Yuan Wu <i>Beihang University</i>
8:10-8:20	Cardiac Patches with Built-in Flexible Fibrous Electrodes for Myocardial Tissue Engineering and Electrophysiological Sensing	Fengqiang Zhao <i>Beijing University of Technology</i>
8:20-8:30	Topological optimization of subperiosteal implants with three fixation strategies for maxillary defect reconstruction: a finite element analysis	Siding Zhao <i>Southeast University</i>
8:30-8:40	Substrate Stiffness-Mediated Platelet "Migration-Adhesion" Mechanism and Dynamic Modeling	Xiaoning Zhang <i>Beihang University</i>
8:40-8:50	Whole-brain Hemodynamic Modeling and Its Application to Simulating Cortical Ischemia Caused by Carotid Artery Stenosis	Yingjie Xia <i>Shanghai Jiao Tong University</i>
8:50-9:00	POD-Derived Pulsatility Signatures Reveal Cannulation-Specific Aortic Hemodynamic Remodeling under VA-ECMO Support	Yuntian Meng <i>Sichuan University</i>
9:00-9:10	Study on the Combined Mechanism of High Shear Stress and Argatroban on Platelet Hemostatic Function under ECMO Support	Wan Song <i>Beihang University</i>
9:10-9:20	MoDeP: A Physically-consistent 3D Motion Reconstruction Toolbox for High-fidelity Joint Biomechanical Modeling of Real-life Activities	Xinsheng Xu <i>Fudan University</i>
9:20-9:30	A Machine Learning-Based Wearable System for Monitoring Single-Foot 3D Ground Reaction Forces	Ruoyu Sun <i>Suzhou Institute of Advanced Studies, University of Science and Technology of China</i>
9:30-9:40	Effects of Charge Barrier Destruction of Vascular Endothelial Glycocalyx on Concentration Polarization of Low-Density Lipoprotein	Wufeng Zhang <i>Beihang University</i>
9:40-9:50	Swin Transformer-Based Dynamic Corneal Biomechanical Modeling for the Diagnosis of Early Keratoconus	Xuan Chen <i>Nankai University</i>
9:50-10:00	Evaluation of Adhesion Force and Focal Adhesion Dynamics During Foam Cell Formation	Guiqin Yan <i>Beihang University</i>
10:00-10:10	Individualized HD-tDCS Enhances Sensorimotor Network Function in Chronic Ankle Instability: Evidence from Task-Based and Resting-State fMRI	Zhen Xu <i>Shanghai University of Sport</i>
10:10-10:20	Tea Break	

10:20-10:30	Mechanistic Effects of Non-Physiological Shear-Induced Fibrinogen Conformational Remodeling on Coagulation Function	Chenlu Wang <i>Beihang University</i>
10:30-10:40	Electromechanical Behaviors of the Left Ventricle with Left Bundle Branch Block: A Numerical Study	Honghui Li <i>Shanghai Jiao Tong University</i>
10:40-10:50	Piezo1 in macrophage regulates OA progression in biphasic response via mechano-immune-vascular axis	Zhongyi Chen <i>Southern University of Science and Technology</i>
10:50-11:00	Investigation of Artificial Heart High Shear-Induced Red Blood Cell Damage and Relationship with Hemostasis Dysfunction	Yuan Li <i>Beihang University</i>
11:00-11:10	Study on the Effect and Mechanism of Matrix Stiffness on the Cytotoxic Function of NK Cells	Hongfang Lv <i>Northwestern Polytechnical University</i>
11:10-11:20	A novel multi-shield socket technique for vertically fractured incisors: Biomechanical insights from 3D finite element analysis	Haidong Teng <i>Sichuan University</i>
11:20-11:30	Myofascia Mediates Muscle-to-Bone Mechanical transmission Under Simulated Microgravity	Yang Liu <i>Beihang University</i>
11:30-11:40	Context-Aware Meta-TD3: A Robust Framework for Real-Time Knee Joint Torque Estimation with Inertial Measurement Units	Zihan Tian <i>Northwestern Polytechnical University</i>
11:40-11:50	Numerical Simulation of the Hemodynamic Effect of Combined Internal Jugular Vein Stenosis and Transverse Sinus Stenosis on the Sigmoid Sinus	Yating Cui <i>Beijing University of Technology</i>
11:50-12:00	Numerical Investigation of Upper Airway Dynamics in OSA: Quantifying the Impact of Downstream Collapse on Nasal Airflow Characteristics	Jiarui Mao <i>Southeast University</i>
12:00-12:10	Stress-Growth-Driven Fibre-Mechanical Concordance and Calcification Instability in Heart Valves	Mateng Bai <i>Beihang University</i>

Fri, 31 July 2F 红梅阁紫荆阁 10:10-11:00 Students Oral Session-Track5		
Time	Title	Speaker/Affiliation
Chair: Shiming Zhang, Bifeng Liu and Yiwei Zhang		
10:10-10:20	A Rheology-Inspired Flexible Spiral Rotor for Intractable Airway Mucus Plug Clearance	Bo Che <i>Changzhou University</i>
10:20-10:30	Cation-Modulated Organic Photoelectrochemical Transistors via COF-Functionalized Antibodies for Ultrasensitive Neuron-Specific Enolase Detection	Pengyin Li <i>Changzhou University</i>
10:30-10:40	A Vital Signs Monitoring Device for High-Altitude Environments	Biaosheng Huang <i>National Institute of Metrology</i>
10:40-10:50	Integrated Design of Rotational Cutting and Torque Sensing System for Minimally Invasive Endoscopy	Haiqin Chen <i>Changzhou University</i>
10:50-11:00	Wearable Acoustic Inverse Modeling for Pulmonary Crackle Source Localization	Jiayuan Yuan <i>Changzhou University</i>

Fri, 31 July 2F 聚仁堂 10:20-11:40 Students Oral Session-Track6		
Time	Title	Speaker/Affiliation
Chair: Yiqian Wu, Zhenhai Li and Wei Chen		
10:20-10:30	Study on the Influence and Mechanism of Leptin Receptor on the Migration Ability of Ovarian Cancer Cells	Xiaoja Guo <i>Northwestern Polytechnical University</i>
10:30-10:40	ALDH1L1 Regulates Smooth Muscle Phenotypic Switching and Aortic Dissection Progression via KLF4/FOXO4 Axis	Jiaxing Duan <i>Chengdu Medical College</i>
10:40-10:50	Liver CREBZF affects the process of atherosclerosis by regulating endothelial inflammation	Liqiong Yan <i>Chengdu Medical College</i>
10:50-11:00	Nrf2 Improves the Function of Endothelial Cells by Regulating the Pentose Phosphate Pathway	Yuanyuan Liu <i>Chengdu Medical College</i>
11:00-11:10	Molecular docking-based screening of natural antifungal compounds targeting novel potassium ion channel for inhibition of fungal growth and ochratoxin A biosynthesis	Yulan Ji <i>Northwestern Polytechnical University</i>
11:10-11:20	Ergosterol synthase inhibits ochratoxin A synthesis in <i>Aspergillus carbonarius</i> through oxidative stress pathway	Saixue Yang <i>Northwestern Polytechnical University</i>
11:20-11:30	Extracellular vesicles secreted by LRP1+ ligament-derived stem cells promote tendon-bone healing after ACL reconstruction via miR-708-5p/Bambi axis	Pengling Yao <i>Xiangya Hospital Central South University</i>

11:30-11:40	Integrating Epidemiological Analysis and in vivo Modeling to Ameliorate Depression-Associated Intestinal Mucosal Immune Dysregulation via 25-Hydroxyvitamin D	Chujun Duan <i>Northwestern Polytechnical University</i>
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Fri,31 July 2F 红梅阁紫荆阁 11:00-12:00 Students Oral Session-Track7		
Time	Title	Speaker/Affiliation
Chair: Xiaoling Chen, Li Dong and Bo Peng		
11:00-11:10	Study on the Ameliorative Effect of Auricular Vagus Nerve Stimulation on Motor Function and Brain-Heart Coupling in a Rat Model of Parkinson's Disease	Wenying Ma <i>Henan Medical University</i>
11:10-11:20	Mechanistic study of the dorsal hippocampus-medial prefrontal cortex circuit in social deficits in a rat model of schizophrenia	Jing Chen <i>Henan Medical University</i>
11:20-11:30	Application of Non-invasive Brain-Computer Interface and Neuromodulation Technology in Voiding Dysfunction	Jiayao Chen <i>Fudan University</i>
11:30-11:40	MCTFormer: A Multi-Scale Channel-Gated Transformer for EEG-Based Valence Recognition	Chi Dong <i>Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences</i>
11:40-11:50	Recent Advances in Emotion-Aware Brain-Computer Interfaces for Post-Stroke Rehabilitation	Xi Wang <i>Tianjin Medical University</i>
11:50-12:00	NeuroGate: EEG Foundation Model with Gated Neurophysiological Descriptor Injection	Xiang Chen <i>Southern University of Science and Technology</i>

Fri, 31 July 2F 聚星堂 11:30-12:00 Students Oral Session-Track8		
Time	Title	Speaker/Affiliation
Chair: Ziyu Wang, Steven Cui and Zeyang Liu		
11:30-11:40	Effects of HLE on Ameliorating Endothelial Dysfunction and Diabetic Lower Extremity Ischemia	Shuai Hu <i>Chengdu Medical College</i>
11:40-11:50	Hybrid bioprinting of hydrogel bioink and liquid metal wire for cardiac tissue	Zhishuai Zhang <i>Beihang University</i>
11:50-12:00	A Novel Pumpless Microphysiological Platform for Long-Term Glioblastoma Tissue Slice Culture Towards Personalized Radiotherapy	Tesi Liu <i>Adelaide University</i>

Fri, 31 July 2F 红梅阁紫荆阁 8:30-9:40

Students Oral Session-Track9

Time	Title	Speaker/Affiliation
Chair:Jia Hua, Chao Wang and Huizhi Wang		
8:30-8:40	Unveiling the Hidden “Shear”: A Multidimensional Force Detection System for Assessing Dynamic Foot-Ground Interactions	Hu Luo <i>Fudan University</i>
8:40-8:50	Biological In vivo 3D dose distribution verification for lung cancer: from rigid-body model to porcine lung	Yutao Zhang <i>The Third Affiliated Hospital of Nanjing Medical University</i>
8:50-9:00	BrioVAD Design Optimization of a Novel Blood Pump	Kuo Wang <i>Daliann Maritime University</i>
9:00-9:10	Metal Artifact Correction for Cone-Beam CT Images Based on Deep Learning	Shih Yun Chin <i>Yang Ming Chiao Tung University</i>
9:10-9:20	Development of an Egg Surface Disinfection Device Using Combined Ultrasonic and Cold Atmospheric Plasma Technologies	Tung-Chin Lee <i>Chung Yuan Christian University</i>
9:20-9:30	Feasibility Study of Applying an Atmospheric Low-Temperature Plasma Sterilization System to Mobile X-ray Tube Heads	Yu-Ting Lai <i>Chung Yuan Christian University</i>
9:30-9:40	Nanopore-Based In-Situ Molecular Fingerprinting for Direct Intelligent Analysis of Clinical Liquid Samples	Yuxin Yang <i>Zhejiang University</i>