# Conference Agenda for ACBD-ISBM2019

| Wednesday, December 4, 2019 | | |
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| **Duration** | **Event** | **Location** |
| 14:00-15:00 | Biomanufacturing Division Standing Committee Meeting<br>（生物制造工程分会常委会议） | Building 1#, Beijing Xijiao Hotel<br>（北京西郊宾馆） |
| 15:00-17:00 | Biomanufacturing Division Committee Meeting<br>（生物制造工程分会全体委员会议） | |
| 15:00-18:00 | Registration | Lobby, Building 5#, Beijing Xijiao Hotel<br>（北京西郊宾馆） |

| Thursday, December 5, 2019 | | | | |
|---|---|---|---|---|
| **Time** | **Program** | | | **Location** |
| 07:30-08:30 | Registration | | | 2F, Building 1# |
| 08:30-09:00 | Conference opening, welcome remark/<br>Group photo | | | 3F, Building 1#/ Yard |
| Plenary Session (09:00-12:20) | | | | |
| 09:00-12:20 | Plenary Presentations | | | 3F, Building 1# |
| 12:20-13:30 | Lunch | | | Shang Yuan restaurant<br>（赏园）, Building 5# |
| Parallel Session (13:30-18:10) | | | | |
| 13:30-15:30 | **Session 1(Room 1)**<br>Biomanufacturing and Regenerative Medicine | **Session 2(Room 5)**<br>Bionic Manufacturing and Biomedical Implant /Devices | **Session 3(Room 6)**<br>Tissue and Organ on-a-Chip | 2F, Building 1# |
| 15:30-15:50 | Tea Break / Poster Review | | | |
| 15:50-18:10 | **Session 4(Room 1)**<br>Bio-Modeling and Bio-3D Printing | **Session 5(Room 5)**<br>Innovative Medical Devices and Biomaterials | **Session 6(Room 6)**<br>Young Scientists Forum-Interdiscipline and Innovation | |
| Banquet(18:30-20:30) | | | | Xiyuan restaurant(西园), Building 1# |

| Friday, December 6, 2019 | | | | | |
|---|---|---|---|---|---|
| **Time** | **Program** | | | | **Location** |
| Plenary Session (08:30-10:00) | | | | | |
| 08:30-10:00 | Plenary Presentation | | | | 2F, Building 1# |
| 10:00-10:20 | Tea Break / Poster Review | | | | |
| Parallel Session (10:20-12:20) | | | | | |
| 10:20-12:20 | **Session 7 (Room 1)**<br>Biomanufacturing and Regenerative Medicine | **Session 8 (Room 5)**<br>Innovative Medical Devices and Biomaterials | **Session 9 (Room 6)**<br>Young Scientists Forum-Interdiscipline and Innovation | **Rapid Fire（Room 2）** | 2F, Building 1# |
| 12:20-13:30 | Lunch | | | | Shang Yuan restaurant, Building 5# |
| Parallel Session (13:30-15:30) | | | | | |
| 13:30-15:30 | **Session 10(Room 1)**<br>Bionic Manufacturing and Biomedical Implant /Devices | **Session 11(Room 5)**<br>Bio-Modeling and Bio-3D Printing | **Session 12(Room 6)**<br>Tissue and Organ on-a-Chip | | 2F, Building 1# |
| 15:30-15:50 | Tea Break | | | | |
| Closing/ Award Ceremony (16:00-17:00) | | | | | Room 6, 2F, Building 1# |
| Dinner (17:30-19:30) | | | | | Xiyuan restaurant, Building 1# |

# Conference Schedule

| December 5, 2019 (Morning) | | |
|---|---|---|
| **Time** | **Program** | **Location** |
| 07:30-08:30 | Registration | 2F, Building 1# |
| 08:30-09:00 | Conference opening, welcome remark/ Group photo | 3F, Building 1#/ Yard |

| **09:00-12:20 Plenary Presentations**<br>Location: 3F, Building 1#， Co-Chair: Zhongze Gu | | | | |
|---|---|---|---|---|
| **No.** | **Time** | **Authors** | **Title** | **Institute** |
| 1 | 09:00-09:45 | Zhonglin Wang | Nanogenerators for implantable medical devices and self-powered sensors | Beijing Institute of Nanoenergy and Nanosystems, Chinese Academy of Sciences |
| 2 | 09:45-10:30 | Jianwu Dai | | Institute of Genetics and Developmental Biology |
| | 10:30-10:50 | Tea Break: 2F, Building 1# | | |
| 3 | 10:50-11:35 | Changyong Wang | Tissue engineering of vital organs | Academy of Military Medical Sciences |
| 4 | 11:35-12:20 | Zhongze Gu | Advanced fabrication and measurement methods for organ-on-a-chip | Southeast University |

| **December 5, 2019 (Afternoon)** | | | | |
|---|---|---|---|---|
| **13:30-15:30 Session 1: Biomanufacturing and Regenerative Medicine**<br>Location: Room 1, 2F, Building 1#， Co-Chair: Xin Zhao, Halim Ayan | | | | |
| **Invited Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 13:30-13:50 | Werner E. G. Müller | Morphogenetically active amorphous polyphosphate nanoparticles: A foundational breakthrough invention for personalized and regenerative medicine | University Medical Center of the Johannes Gutenberg University Mainz |
| | 13:50-14:10 | Tao Xu | | Tsinghua University |
| | 14:10-14:30 | Xin Zhao | Photocrosslinkable materials for bone regeneration | Hong Kong Polytechnic University |
| | 14:30-14:50 | Halim Ayan | Mechanically primed stem cell guided annulus fibrosus regeneration | The University of Toledo |
| | 14:50-15:10 | Nuria Montserrat | | Institute for Bioengineering of Catalonia (IBEC) |
| **Oral Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 15:10-15:23 | Xiaofang Chen | Cell reprogramming in a predetermined manner | Beihang University |
| | 15:23-15:36 | Bin Wu | Bioprinting of hierarchical scaffold for esophagus tissue repair | Huazhong University of Science and Technology |

| December 5, 2019 (Afternoon) | | | | |
|---|---|---|---|---|
| **13:30-15:36 Session 2: Bionic Manufacturing and Biomedical Implant /Devicess**<br>Location: Room 5, 2F, Building 1#，Co-Chair: Minjun Kim, Hee-Tae Jung | | | | |
| **Invited Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 13:30-13:50 | Wan Kyun Chung | Corneal suturing robot for corneal transplantation surgery | Pohang University of Science and Technology |
| | 13:50-14:10 | Minjun Kim | Magnetically actuated millibots and modular robots for self-assembling and biomanufacturing | Southern Methodist University |
| | 14:10-14:30 | Hee-Tae Jung | A new top-down lithography with high-aspect-ratio: fundamentals and applications to sensor and opto-electronics | Korea Advanced Institute of Science & Technology |
| | 14:30-14:50 | Fumihito Arai | Bridging organ and machine - organo-machine for patient simulation | Nagoya University |
| | 14:50-15:10 | Qianqian Han | The NMPA standardization progress and quality control of additive manufactured medical device | National Institutes for Food and Drug Control |
| **Oral Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 15:10-15:23 | Sida Liu | Fabrication of trabecular-like beta-tricalcium phosphate biomimetic scaffolds for bone tissue engineering | Beijing Engineering Research Center of 3D Printing for Digital Medical Health |
| | 15:23-15:36 | Longjian Xue | Bioinspired smart structured adhesives | Wuhan University |

| December 5, 2019 (Afternoon) | | | | |
|---|---|---|---|---|
| **13:30-15:30 Session 3: Tissue and Organ on-a- Chip**<br>Location: Room 6, 2F, Building 1#，Co-Chair: Chi Won Ahn, Jong-Young Kwak | | | | |
| **Invited Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 13:30-13:50 | Chi Won Ahn | Nanoscale control technology of nano-materials and their applications | Korea Advanced Institute of Science and Engineering |
| | 13:50-14:10 | Xiaohong Wang | Contribution of bio-artificial intelligence for the fabrication of biological and bio-functional structures by bio-3D printing applied in tissue engineering | University Medical Center of the Johannes Gutenberg University Mainz |
| | 14:10-14:30 | Jong-Young Kwak | Three dimensional coculture models of immune cell responses using nanofibrous membrane | Ajou University |
| | 14:30-14:50 | Tianzhun Wu | New technologies for high-performance retina prosthesis based on micro/nano engineering | Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences |
| **Oral Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 14:50-15:03 | Yun Qian | Integration molding of a graphene oxide/polycaprolactone nanoscaffold for peripheral nerve restoration and angiogenesis | Shanghai Jiao Tong University |
| | 15:03-15:16 | Zhenzhen Zhou | Tgf-β induced epithelial–mesenchymal transition in advanced cervical tumor model by 3D printing | Tsinghua University |
| | 15:16-15:29 | Zhonghan Wang | A biomimetic intervertebral disc fabricated by assembled bioprinted technique | The second hospital of Jilin University |

| December 5, 2019 (Afternoon) | | | | |
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| **15:50-17:56 Session 4: Bio-Modeling and Bio-3D Printing**<br>Location: Room 1, 2F, Building 1#， Co-Chair: Chengtie Wu , Chee Kai Chua | | | | |
| **Invited Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 15:50-16:10 | Chee Kai Chua | Print me an organ! Why we are not there yet | Singapore University of Technology and Design |
| | 16:10-16:30 | Chengtie Wu | 3D printing of biomimetic bioactive materials | Shanghai Institute of Ceramics, Chinese Academy of Sciences |
| | 16:30-16:50 | Woonbong Hwang | Recent Advances in Nanoengineered Functional Structures | Pohang University of Science and Engineering |
| | 16:50-17:10 | Jerry Fuh | Electro-hydrodynamic jetting 3D PCL/PPy Conductive Scaffolds for Peripheral Nerve Injury Repair | National University of Singapore |
| | 17:10-17:30 | Haijun Yu | Stimuli-activatable Prodrug Nanoparticles for Cancer Immunotherapy | Shanghai Institute of Materia Medica, Chinese Academy of Sciences |
| **Oral Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 17:30-17:43 | Zhengwei You | Bioelastomers, 3D printing and their diverse applications | Donghua University |
| | 17:43-17:56 | Yixue Luo | Triboelectric Nanogenerators for Electro-assisted Cell Printing | Tsinghua University |

| December 5, 2019 (Afternoon) | | | | |
|---|---|---|---|---|
| **15:50-18:02 Session 5: Innovative Medical Devices and Biomaterials**<br>Location: Room 5, 2F, Building 1#， Co-Chair: Yunbing Wang, Su Ryon Shin | | | | |
| **Invited Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 15:50-16:10 | Yunbing Wang | Research frontier of transcatheter heart valve and stent | Sichuan University |
| | 16:10-16:30 | Gregory F. Payne | Enlisting biology's "excitable media" to create complex, dynamic and sustainable materials | University of Maryland College Park |
| | 16:30-16:50 | Kaiming Ye | Formulating bioinks for tissue biofabrication | Binghamton University |
| | 16:50-17:10 | Su Ryon Shin | Micro/nano engineered biomaterials for manufacturing biomimetic tissues and biomedical applications | Brigham and Women's Hospital, Harvard Medical School |
| **Oral Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 17:10-17:23 | Qiaozhen Yu | Polypyrrole/biodegradable polymer composite micro/nano fibrous nerve tissue engineering scaffolds | Jiaxing University |
| | 17:23-17:36 | Xinming Li | Basic device design for wearable healthy pressure sensing technology | South China Normal University |
| | 17:36-17:49 | Jeong-Won Lee | A biomimetic intervertebral disc fabricated by assembled bioprinted technique | Pohang University of Science and Engineering |
| | 17:49-18:02 | Liya Zhu | Biomechanical characterization of a 3D printed porous PCU polymeric implant for artificial meniscus replacement | Nanjing Normal University |

| December 5, 2019 (Afternoon) | | | | |
|---|---|---|---|---|
| **15:50-17:50 Session 6: Young Scientists Forum- Interdiscipline and Innovation**<br>Location: Room 6, 2F, Building 1#，Co-Chair: Ting Zhang, Zhou Li | | | | |
| **Invited Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 15:50-16:10 | Ting Zhang | Bio-3D printing technologies for engineering functional tissue models in vitro | Tsinghua University |
| | 16:10-16:30 | Daishun Ling | Dynamic Superparticles For Biomedical Applications | Zhejiang University |
| | 16:30-16:50 | Zhou Li | Self-powered medical electronics | University of Chinese Academy of Sciences |
| | 16:50-17:10 | Huayu Yang | Implication of Personalized Treatment on 3D Printed Long-Term Regenerated HCC Model | Peking Union Medical College Hospita |
| | 17:10-17:30 | Changshun Ruan | Exploring on novel functional bioinks facilitates bioprinting of 3D tissue-like constructs for regeneration medicine | Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences |
| | 17:30-17:50 | Changchun Zhou | 3D Printing of CaP Bioceramic with Biomimic Porosity for Personalized Skull Reconstruction | Sichuan University |
| | 17:50-18:10 | Lin Feng | The application of micro/nano-robot in biomedical field | Beihang University |

| December 6, 2019 (Morning) | | | | |
|---|---|---|---|---|
| **08:30-10:00 Plenary Presentations**<br>Location: 3F, Building 1#，Co-Chair: Tao Xu | | | | |
| **No.** | **Time** | **Authors** | **Title** | **Institute** |
| 1 | 08:30-09:15 | Jason Z. Moore | Advancing medical tool design through improved cutting-edge geometry and force modeling | Pennsylvania State University |
| 2 | 09:15-10:00 | Feng Xu | Engineering Cell Mechanical Microenvironment | Xi'an Jiaotong University |
| | 10:00-10:20 | Tea Break: 2F, Building 1# | | |

| December 6, 2019 (Morning) | | | | |
|---|---|---|---|---|
| **10:20-12:20 Session 7: Biomanufacturing and Regenerative Medicine**<br>Location: Room 1, 2F, Building 1#，Co-Chair: Daniel Chen, Jie Na | | | | |
| **Invited Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 10:20-10:40 | Bin Liu | 医疗器械监管科学研究-新材料研究整体部署与实施 | Center for Medical Device Evaluation, National Medical Products Administration |
| | 10:40-11:00 | Daniel Chen | Bioprinting Scaffolds for Tissue Engineering | University of Saskatchewan , Canada |
| | 11:00-11:20 | Jie Na | Manufacture synthetic embryos with stem cells | Tsinghua University |
| | 11:20-11:40 | Wen Feng Lu | Design and Optimization of Bioactive 3D Scaffolds for Dentin Repair | National University of Singapore |
| **Oral Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 11:40-11:53 | Lu Feng | 3D printing scaffolds with quadruple hierarchical structure for scalable stem cell culture and harmless harvest | Tsinghua University |
| | 11:53-12:06 | Jun Yin | Fabrication of polymeric nerve conduits with dry-jet wet spinning and the application in repair of peripheral nerve injury | Zhejiang University |
| | 12:06-12:19 | Yongcong Fang | Design and assessment of scaffolds integrating oriented micro-pores with branched channel networks for myocardial tissue en-gineering | Tsinghua University |

| December 6, 2019 (Morning) | | | | |
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| **10:20-12:20 Session 8: Innovative Medical Devices and Biomaterials**<br>Location: Room 5, 2F, Building 1#，Co-Chair: Linhong Ji, Yongqin Lv | | | | |
| **Invited Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 10:20-10:40 | Linhong Ji | 提升神经康复机器人临床康复效果的设计与探索 | Tsinghua University |
| | 10:40-11:00 | Jürgen Groll | | University Hospital Wuerzburg |
| | 11:00-11:20 | Fujian Xu | 成膜型快速止血粉特性及产业化 | Beijing University of Chemical Technology |
| | 11:20-11:40 | Yongqin Lv | Engineering of artificial antibody for the early diagnosis and therapy of cancer disease | Beijing University of Chemical Technology |
| **Oral Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 11:40-11:53 | Kihwan Kim | Self-cleaning effect of superhydrophobic PDMS surface for medical application | Pohang University of Science and Technology |
| | 11:53-12:06 | Ruoyu Chen | Biomaterial-assisted Scalable Cell Production for Cell Therapy | Tsinghua University |
| | 12:06-12:19 | Yuanyuan Xu | 3D bioprinting microphysiological system for space：the first stage | Tsinghua University |

| December 6, 2019 (Morning) | | | | |
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| **10:20-12:20 Session 9: Young Scientists Forum- Interdiscipline and Innovation**<br>Location: Room 6, 2F, Building 1#， Co-Chair: Bin Li, Jin Zhou | | | | |
| **Invited Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 10:20-10:40 | Jin Zhou | Nanomaterials for Cardiac Tissues Construction and Therapy of Myocardial Infarction | Academy of Military Medical Sciences |
| | 10:40-11:00 | Bin Li | Multimodal mechano-regulation toward annulus fibrosus regeneration | Soochow University |
| | 11:00-11:20 | Haiming Fan | Engineered Magnetic Nanoparticle for Advanced biomedical application | Northwest Univerisity |
| | 11:20-11:40 | Jiankang He | Multiscale additive manufacturing for biomedical applications | Xi'an Jiaotong University |
| | 11:40-12:00 | Maling Gou | DLP-based 3D printing technology for drug delivery and therapy | Sichuan University |
| | 12:00-12:20 | Wen Zeng | Construction of small diameter tissue engineered blood vessel in vivo | Third Military Medical University |

| December 6, 2019 (Afternoon) | | | | |
|---|---|---|---|---|
| **13:30-15:36 Session 10: Bionic Manufacturing and Biomedical Implant /Devices**<br>Location: Room 1, 2F, Building 1#， Co-Chair: Deyuan Zhang, Bahattin Koc | | | | |
| **Invited Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 13:30-13:50 | Deyuan Zhang | The application of ultrasonic vibration in minimally invasive surgery | Beihang University |
| | 13:50-14:10 | Bahattin Koc | Biomimetic 3D bioprinting | Sabanci University |
| | 14:10-14:30 | Yonghua Chen | Artificial Muscles: Actuation Mechanisms and Designs for Robotic Applications | University of Hong Kong |
| | 14:30-14:50 | Sik Yoon | Biomimetic 3D cell culture model of ovarian cancer malignancy and progression | Pusan National University |
| | 14:50-15:10 | Huawei Chen | Bio-inspired functional surface for biointerface and bioelectronics | Bio-inspired functional surface for biointerface and bioelectronics |
| **Oral Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 15:10-15:23 | Zhongwei Guo | Mussel-inspired naturally derived double-network hydrogels and its application in 3D printing | Tsinghua University |
| | 15:23-15:36 | Boyang Huang | Fabrication and characterizations of hierarchical biomimetic scaffolds for bone tissue regeneration | University of Manchester |

| December 6, 2019 (Afternoon) | | | | |
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| **13:30-15:42 Session 11: Bio-Modeling and Bio-3D Printing**<br>Location: Room 5, 2F, Building 1#， Co-Chair: Wai Yee Yeong, Liliang Ouyang | | | | |
| **Invited Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 13:30-13:50 | Yunfeng Zhang | Robot-assisted laser metal deposition: the process planning issues | National University of Singapore |
| | 13:50-14:10 | Karen C. Yan | Mechanical milieu of cells in engineered tissue constructs | The College of New Jersey |
| | 14:10-14:30 | Wai Yee Yeong | 3D bioprinting: tissues, bioinks and bioelectronics | Nanyang Technological University Singapore |
| | 14:30-14:50 | Liliang Ouyang | 3D bioprinting of cell-laden hydrogels: towards generalization and simplicity | Imperial College London |
| **Oral Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 14:50-15:03 | Yongxiang Luo | 4D Bioprinting of Cell-Laden Constructs Using NIR-Triggered Shape Morphing Alginate/Polydopamine Bioinks | Shenzhen University |
| | 15:03-15:16 | Wenqing Tian | Facile Fabrication of hierarchical structures via | Huazhong University |

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| | | | cryogenic electrospinning | |
| | 15:16-15:29 | Tiankun Liu | An integrated cell printing approach for the construction of het-erogeneous tumor models | Tsinghua University |
| | 15:29-15:42 | Weili Fu | The research progress in 3D-Printing meniscus | West China Hospital |

| **December 6, 2019 (Afternoon)** | | | | |
|---|---|---|---|---|
| **13:30-15:30 Session 12: Tissue and Organ on-a- Chip**<br>Location: Room 6, 2F, Building 1#，Co-Chair: Shengli Mi, Shery Huang | | | | |
| **Invited Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 13:30-13:50 | Josep Samitier | | University of Barcelona |
| | 13:50-14:10 | Shengli Mi | A minimized valveless electromagnetic micropump for the microflu-idics actuation on organ chips | Tsinghua University |
| | 14:10-14:30 | Zaozao Chen | Development of a "Smart" System for Organs-on-a-Chip Research | Southeast University |
| | 14:30-14:50 | Shery Huang | 3D layered nano- micro- fibre printing techniques for biological and electronic applications | University of Cambridge |
| **Oral Presentations** | | | | |
| No. | **Time** | **Authors** | **Title** | **Institute** |
| | 14:50-15:03 | Jie Sun | Gliadin as template for generation of nanotopography on microfibers of electrohydrodynamic jet printed pcl scaffolds for 3D cell | Xi'an Jiaotong-Liverpool University |
| | 15:03-15:16 | Qiang Zou | Bone tissue engineering scaffolds with microfluidic channels were constructed based on reverse engineering and 3D bio-printing | Guizhou Medcial University |
| | 15:16-15:29 | Jingjing Xia | An integrated microchannel biosensor platform to analyse low density lactate metabolism in HepG2 cells in vitro | Tsinghua University |

| **December 6, 2019 (Afternoon)** | | |
|---|---|---|
| Location: Room 6, 2F, Building 1#，Co-Chair: Ting Zhang | | |
| No. | **Time** | **Event** |
| | 16:00-17:00 | Closing & Award Ceremony |