

Asia-Pacific Biofilms 2022

MSTR 2023 & 2024

# Asia-Pacific Biofilms 2024

Asia-Pacific Biofilms 2021

China Biofilms 2019

China Biofilms 2017

## Conference Program

**November 12-17, 2024 | Guangzhou, China**

**On behalf of the Organizing Committee, you are cordially invited to attend the 5<sup>th</sup> International Conference on Biofilms (Asia-Pacific Biofilms 2024), held on November 12-17 of 2024, in Guangzhou of China.**

**This conference aims to bring together leading academic scientists, engineers, and clinicians globally, primarily from the Asia-Pacific area including China, Japan and Singapore from East or Southeast Asia, India, Sri Lanka and Israel from South or West Asia, Kazakhstan and Uzbekistan from Central Asia, Australia and New Zealand from Oceania, United States and Canada from America, and many other countries/regions to share new knowledge and research progresses in microbial biofilms. Scope of APB 2024 includes molecular biology of biofilms, quorum sensing, industrially and clinically relevant biofilms and emerging technologies for biofilm mitigation. This conference will serve as a major platform that create collaborative opportunities for biofilm researchers in the Asia-Pacific area, and to facilitate our interactions with colleagues from Europe (EuroBiofilms) and the United States (ASM Biofilms). This year, APB will still be organizing the signature program. The signature program for APB 2024 is Biofilms in Australia supported by the Department of Infectious Diseases, the Alfred Hospital and Monash University.**

**Highlighted topics include:**

- 1. Bioinformatics analysis in biofilms**
- 2. Biofilms development and control**
- 3. Biofilms antimicrobial resistance**
- 4. Communication and signaling factors in biofilms**
- 5. Rapid detection and application to biofilms bacteria**
- 6. Virulence and toxins on clinical biofilms**
- 7. Evolution and stress tolerance in Biofilms**
- 8. Industrial and applied biofilms research**

**The Organizing Committee are making every effort to make this a memorable and valuable biofilm conference.**

**Sincerely yours,**

**Birthe Kjellerup**

**Liang Yang**

**Yue Qu**

**Zhenbo Xu**

**Junyan Liu**

**The Organizing Committee**

# Organization

## Organizers

**South China University of Technology**

**Southern University of Science and Technology**

**Singapore Centre for Environmental Life Sciences Engineering**

## Supporting parties

**China Society for Microbiology**

**ESCMID Study Group for Biofilms**

**American Society for Microbiology**

**Australian Society for Microbiology**

**Overseas Chinese Society for Microbiology (SinoMicro)**

**Global Chinese Association of Clinical Microbiology and Infectious Diseases (GCACMID)**

**Center for Biofilm Engineering**

**Costerton Biofilm Center**

**National Biofilms Innovation Centre**

**Biofilm Engineering Lab**

**ELSEVIER**

**Biofilm**

**Mark Shirliff Biofilm Foundation**

# Organizing Committee

## Founder and Honorable President

**Mark Shirtliff**

## Organizing Committee Members

**Birthe Kjellerup, University of Maryland**

**Chuanwu Xi, Eastern Institute of Technology**

**Enrico Marsili, University of Nottingham**

**Gamini Seneviratne, National Institute of Fundamental Studies**

**Guanglei Qiu, South China University of Technology**

**Honghua Hu, Zhejiang University**

**Janette Harro, University of Maryland**

**Junyan Liu, Zhongkai University of Agriculture and Engineering**

**Katharina Richter, The University of Adelaide**

**Kendra Rumbaugh, Texas Tech University**

**Luyan Ma, The Institute of Microbiology of Chinese Academy of Sciences**

**Liang Yang, Southern University of Science and Technology**

**Matthew Parsek, University of Washington**

**Nathan Archer, Johns Hopkins University**

**Wei Hu, Shandong University**

**Yue Qu, Monash University**

**Yulong Tan, Qingdao Agricultural University**

**Zhenbo Xu, South China University of Technology**

## Secretaries

**Yaqin Li, South China University of Technology**

**Feifeng Zhong, South China University of Technology**



## Founder and Honorable President



**Mark Shirtliff**  
**(1969-2018)**

Dr. Mark Shirtliff was a professor at University of Maryland-Baltimore, where he held a primary appointment in the Department of Microbial Pathogenesis in the University of Maryland School of Dentistry and a secondary appointment in the Department of Microbiology and Immunology in the University of Maryland School of Medicine. Mark was also the lead inventor and co-founder of the vaccine company Serenta Biotechnology, LLC that was established in 2017. The license is based on a multivalent vaccine strategy against infections caused by *Staphylococcus aureus*. Further development of the vaccine is continued by Dr. Jan Harro in the Shirtliff-Harro Lab at UMSOD and by Birthe Kjellerup-Shirtliff as Chief Scientific Officer in Serenta LLC.

Mark Shirtliff was a leading expert in the field of biofilm in the US and internationally. His childhood in the foothills of the Canadian Rocky Mountains lead him to University of Alberta, where he graduated with a bachelor in Geo-microbiology. After this, he moved to Texas, US to continue his education. Originally Mark wanted to pursue medical school to become a medical doctor, but he quickly learned that he over time would be able to help more people by performing research thus his goal became to develop diagnostics and vaccines to prevent biofilm infections. Mark graduated with his Ph.D. in 2001 from University of Texas Medical Branch, Galveston TX in the Department of Microbiology and Immunology. His thesis was titled "*Staphylococcus aureus*: Roles in Osteomyelitis."

During graduate school Mark was introduced to a fellow Canadian biofilm researcher Dr. Bill Costerton, who at that time was the Director of Center for Biofilm Engineering (CBE) at Montana State University in Bozeman, Montana. This was the beginning of an inspirational work relationship and friendship between Mark and Bill and a very prolific career in *Staphylococcus aureus* biofilm research for Mark-but it was way too short!

Bill convinced Mark that she should move to Bozeman, Montana and the CBE in 2001 to continue

working on biofilms and was initially funded to work on drinking water biofilms in Dr. Anne Camper's lab. He quickly obtained his own funding and returned to *S. aureus* research that was so important for him. The years at the CBE were instrumental in developing molecular tools, having important biofilm centered discussions and to get out in the wilderness to get great ideas. In 2003, Mark moved to Maryland and entered a tenure track position at UMB-Baltimore.

Mark was actively involved in leading the biofilm field forward. His engaging and very energetic way of behaving made him easy to talk to both about biofilms, science and completely other topics. He was very interested in listening to the junior scientists and to connect with the next generation in science. Therefore, mentoring and training of the next generation of biofilm scientists was a mission that he took seriously. Over the years, Mark trained many scientists in his lab-both graduate students, post docs and visiting scientists from around the world. He also initiated many collaborations globally and many of these excellent scientists are present at the Asia-Pacific Biofilms 2021/2022 and China Biofilms 2017/2019 series conferences. He also organized numerous biofilm workshops at international conferences such as ASM Biofilms (American Society of Microbiology), ECCMID (European Congress of Clinical Microbiology & Infectious Diseases), EuroBiofilms and of course ChinaBiofilms 2017. Over the years, Mark was the author of more than 120 peer-reviewed scientific papers and book chapters on pathogenic microorganisms. He explored the biofilm mode of growth and the chronic diseases they cause.

Mark never forgot his Canadian roots and was a proud and energetic hockey (i.e. ice hockey) fan, who would travel far distances to cheer on his favorite team Edmonton Oilers. He also loved to take his family back to the Canadian Rockies to climb on glaciers and to tell great stories from his childhood and about interesting tree-ring counting studies and field trips as a geology major in college. He also kept in touch with colleagues at the CBE, which allowed him (and his family) to spend time in Montana during the summers. This would recharge his batteries with lots of fly fishing, floats on majestic rivers and good times with friends and family.

In Mark's honor, we have started the "Mark Shirliff Memorial Biofilm Foundation" (<https://markshirliffbiofilmfoundation.org/>). Donations can be made via the website. The goal of the foundation is to support and encourage junior biofilm researchers to travel and initiate collaborations with other biofilm groups on a global scale.

The Board of Trustees include several members, who are present at ChinaBiofilms 2019: Birthe V. Kjellerup, Chair (Mark's wife), Garth D. Ehrlich, Secretary and Treasurer, Kendra Rumbaugh, Vice President, James Kaper, Zhenbo Xu and Annette Moter. Please feel free to contact any of us if you have any questions or would like to share a good story or memory about Mark.

We hope that you will participate in making Asia-Pacific Biofilms 2024 a successful follow-up to the Asia-Pacific Biofilms 2021/2022 and China Biofilms 2017/2019 series conferences that Mark was an important founder for.



## South China University of Technology



South China University of Technology (SCUT) is a leading educational institution in China, a public research-intensive university directly governed by the Chinese Ministry of Education. Located in Guangzhou, the center of southern China, it covers a total area of 405 hectares, consisting of three campuses: Wushan Campus, University Town Campus, and Guangzhou International Campus.

SCUT was first founded in 1952 by merging the engineering schools and departments of a number of major universities and polytechnic universities from five provinces in central and southern China. In 2016, SCUT was ranked the world's top 300 universities by the Academic Ranking of World Universities, with its Engineering at 22nd. According to Thomson Reuters' Essential Science Indicators, SCUT has chemistry, materials science, engineering, agricultural science, physics, biology and biochemistry, computer science, and environment and ecology ranked in the global top 1%.

School of Food Science and Engineering (SFSE) was established newly in November 2015 through the reorganization of the School of Light Industry and Food Science, however, its history can be dated back to 1952, the beginning of the University. A national evaluation of key discipline carried out in 2012 showed that the Food Science and Engineering in the School were ranking No.3 among Chinese universities.

## Southern University of Science and Technology

Southern University of Science and Technology (SUSTech) is a research-oriented public university founded in Shenzhen, China's innovation center. From their inception, SUSTech has attached enormous importance to attracting high-quality talents to its faculty. Through continuing efforts to introduce world-class educators, SUSTech is proud to have over 800 faculty members on staff, and they continue to expand its faculty with amazing talent from all over the world. Many of



their faculty have been honored with selection into national or regional talent programs, and SUSTech is keen to nurture and cultivate its talented staff. With a focus on research and encouraging innovation, the entrepreneurial spirit that shines in Shenzhen sees them grow in a multidisciplinary approach that sees substantial collaborations with government and industry. With degree programs across nine schools and 33 departments.

## Singapore Center for Environmental Life Sciences Engineering

# SCELSE

Singapore Centre for Environmental Life Sciences Engineering

The Singapore Centre for Environmental Life Sciences Engineering (SCELSE) is a unique interdisciplinary Research Centre of Excellence (RCE), funded by National Research Foundation, Singapore Ministry of Education, Nanyang Technological University (NTU) and National University of Singapore (NUS). Hosted by NTU in partnership with NUS, SCELSE is linking new insights from the life sciences with expertise from the emerging technologies in engineering and natural sciences to understand, harness and control microbial biofilm communities and microbiomes. The union of these fields has established a new discipline of environmental life sciences engineering (ELSE). SCELSE mission is “To discover, control and direct the behavior of microbial biofilm communities and microbiomes for sustainable environmental, engineering, public health and medical applications.”



## China Society for Microbiology



Chinese Society for Microbiology (CSM) is a national, academic and public welfare legal person social organization voluntarily formed by National Microbiology scientific and technological workers and units and registered by the Ministry of civil affairs of the people's Republic of China according to law. It is a non-profit social organization and a social force for the development of Microbiology in China. The Chinese Society for microbiology was established on December 18th, 1952. As early as 1928, initiated by Wu Liande, Xie Heping and Lin Zongyang, pioneers of modern medicine in China, the Chinese society of microbiology was established in Beijing. In 1937, it was renamed the Chinese society of pathology and microbiology, and moved to Shanghai. It has more than 50 members and held academic seminars. In 1945, the conference was held in Guangzhou, attended by more than 100 people. After the founding of new China in 1949, the Chinese society of microbiology was established at the capital assembly of the Chinese Medical Association in 1950. This is the gestation stage before the official establishment of the Chinese society of Microbiology in 1952.

## ESCMID Study Group for Biofilms



The objective of ESCMID Study Group for Biofilms (ESGB) is to increase knowledge on various aspects of microbial biofilms with as ultimate goals improved diagnostic tools for biofilm infections, and better approaches to prevent and treat such infections. In order to obtain these goals, a multidisciplinary approach is necessary and one of the objectives of the ESGB to facilitate cooperation between scientist working on biofilms in different disciplines.

## American Society for Microbiology



AMERICAN  
SOCIETY FOR  
MICROBIOLOGY

The American Society for Microbiology is a professional life science organization composed of more than 32,000 scientists, educators and health professionals who are dedicated to promoting and advancing microbial sciences around the world. They know that microbiology has the power to impact lives, and we are uniquely positioned to bring together key stakeholders to institute life-saving programs, advocate for science funding, encourage the next generation of microbiologists and contribute to the resolution of the most pressing global health challenges. They strive to make the microbial sciences the most diverse field in STEM and to be a homebase where microbiologists from every part of our world can come together, connect, learn and recharge for the future.

## Australian Society for Microbiology



The Australian Society for Microbiology (ASM) is a not-for-profit organisation, formed in 1959 as a learned society devoted to furthering the science of microbiology. In 1976, the ASM became an incorporated professional society, and has a membership approaching 2000. The society functions in “bringing microbiologists together” with the objective of advancing the science of microbiology in Australia.

## Overseas Chinese Society for Microbiology (SinoMicro)



海外华人微生物学会

Overseas Chinese Society for Microbiology

Overseas Chinese Society for Microbiology (Sino-Micro) is a registered non-for-profit organization formed by overseas Chinese researchers who study microbiology. Our goal is to establish a social network that will facilitate the advancement of our research programs and the development of our careers. In addition, we wish to work as a group to create a platform for enhancing scientific interactions with our colleagues in China. Current Sino-Micro members are primarily principal investigators in the USA. However, our organization is open to all overseas Chinese microbiologists.

## Global Chinese Association of Clinical Microbiology and Infectious Diseases (GCACMID)



JGAR is an official journal of and owned by the International Society of Antimicrobial Chemotherapy (ISAC), the Global Chinese Association of Clinical Microbiology and Infectious Diseases (GCACMID), and the Asia-Pacific Society of Clinical Microbiology and Infection (APSCMI). The Journal of Global Antimicrobial Resistance (JGAR) is a quarterly online Open Access journal run by an international Editorial Board that focuses on the global spread of antibiotic-resistant microbes.

## Center for Biofilm Engineering



The Center for Biofilm Engineering (CBE) at Montana State University focuses on biofilm-related research with significant industrial, environmental, and health applications. Their research spans various scales, from molecular to field-level studies, and involves collaborations across different disciplines. CBE research addresses challenges in biofilm control, environmental technologies, health, and industrial systems. Some of their applied research areas include antimicrobial efficacy, bioremediation, chronic wound healing, and water treatment systems. CBE also develops standardized



methods for biofilm study and regulation, benefiting industries like healthcare and water management.

## Costerton Biofilm Center



The Costerton Biofilm Center is a unique interdisciplinary research center established to explore the field of chronic infections caused by bacteria.

The Center provides a forum for scientists and clinicians and encourages research into the microbial aetiology of biofilms. By integrating translational and clinically relevant research, the Center takes lead in improved prevention and development of new treatments of diseases caused by biofilms. The research aims at explaining the riddle as to why biofilm-bacteria gain the upper hand in the fight against our immune system, and hopefully lead to new and innovative strategies for early diagnosis, treatment and prevention of chronic diseases for the benefit of public health.

## National Biofilms Innovation Centre



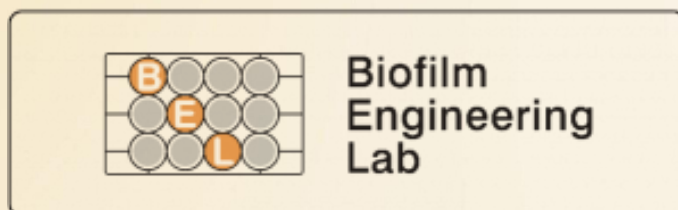
The National Biofilms Innovation Centre (NBIC) is an Innovation Knowledge Centre (IKC) jointly funded by the BBSRC and Innovate UK. By bringing together the UK's strength in biofilm research, and combining it with the expertise of industrialists, NBIC aims to deliver breakthrough technologies that will have an impact on day-to-day lives.

Led by the University of Southampton, in partnership with the Universities of Liverpool, Nottingham and Edinburgh, the National Biofilms Innovation Centre (NBIC) is a consortium of 63 academic partner institutions across the UK – it is the central hub where academia, industry, government and public policy come together to tackle the grand challenges biofilms present. NBIC's mission is to establish a network of research and innovation capacity to catalyse partnerships with



industry to achieve breakthrough innovations and impact.

## Biofilm Engineering Lab



Biofilm Engineering Lab (BEL) is mainly focused on biofilms science and engineering, combining a diversified and unique expertise in microbial processes with cellular and molecular interface approaches.

## ELSEVIER



# ELSEVIER

Elsevier as a global leader in information and analytics, Elsevier helps researchers and healthcare professionals advance science and improve health outcomes for the benefit of society. We do this by facilitating insights and critical decision-making for customers across the global research and health ecosystems. In everything we publish, we uphold the highest standards of quality and integrity at scale to ensure value to our customers.

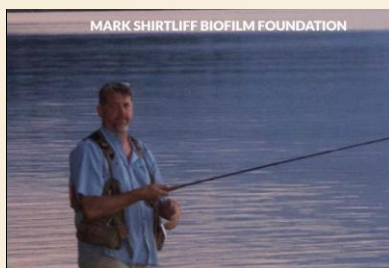
## Biofilm



Biofilm is a multidisciplinary, gold open access journal focused on hypothesis- or discovery-driven studies on microbial biofilms (i.e. multicellular communities, including surface-attached biofilms and suspended aggregates). The journal will cover biofilms in all (micro)environments,

including clinical and industrial settings and the natural environment. We accept articles that describe the basic biology of single or mixed-species biofilms (irrespective of the organism), manuscripts dealing with applied/translational aspects of biofilms, as well as manuscripts describing innovative biofilm methods. Biofilm aims to bring together different disciplines to significantly advance the knowledge of microbial communities, and encourages exploring the interfaces between these disciplines.

## Mark Shirtliff Biofilm Foundation



The Mark Shirtliff Biofilm foundation strives to expand the boundaries of knowledge of biofilms through a world-wide exchange of ideas and research.

With a focus on Early Career Researchers, its goal is to support students, educators, and researchers in furthering not only scientific discover, but inclusive scientific community. The work as a foundation supports the following:

- Support for Early Career Researchers via mentoring and education
- Engaging in community and scientific activities for the advancement of knowledge in the field of biofilms
- Raising funds for education and travel for activities including research visits and conference presentations

# Agenda

Time and date shown here refers to China Standard Time (GMT+8).

Asia: GMT+9 for JST, GMT+7 for WIT, GMT+5:30 for IST

Oceania: GMT+11 for AEST, GMT+13 for NEST

U.S. and Canada: GMT-4 for EDT, GMT-5 for CDT, GMT-6 for MDT, GMT-7 for PDT

Europe and U.K.: GMT+2 for CEST, GMT+1 for BST

Nov 12 <sup>th</sup> Registration	
16:00-18:00	Registration and meeting platform test
Nov 13 <sup>th</sup> Workshop	
Venue: Nanyue Hall	
9:00-10:30	<b>Standardization in Biofilm Methods</b>  Key aspects of spatial structure in the understanding of multispecies biofilms: concepts and methods <b>Nuno Azevedo, University of Porto, Porto</b>  Assessing the limit of detection for biofilm methods <b>Albert Parker, Montana State University, Bozeman (Online)</b>
10:30-10:45	Coffee break
10:45-12:15	<b>Dry surface biofilm study: models and methods</b>  <b>Honghua Hu, Zhejiang University, Jinhua</b> <b>Zhenbo Xu, South China University of Technology, Guangzhou</b> <b>Junyan Liu, Zhongkai University of Agriculture and Engineering, Guangzhou</b> <b>Yu Li, Qiqihar Medical University, Qiqihar</b> <b>Liping Guo, South China University of Technology, Guangzhou</b>
12:15-14:30	Lunch

14:30-16:00	<p><b>Methods to Study Biofilms</b></p> <p>Studying the roles of matrix proteins  <b>Boo Shan Tseng, University of Nevada, Las Vegas</b></p> <p>Using isothermal microcalorimetry to develop better biofilm models  <b>Kasper Kragh, Symcel, Stockholm (Online)</b></p>
16:00-16:15	<b>Coffee break</b>
16:15-17:45	<p><b>Standardization on anti-biofilm and <i>in vivo</i> studies: touching upon fundamental questions</b></p> <p><b>Su Ma &amp; Yulong Tan, Shandong Univ. &amp; Qingdao Agri. Univ., Qingdao</b>  <b>Ke Wang, First Affiliated Hospital of Guangxi Medical University, Nanning</b>  <b>Zhenbo Xu, South China University of Technology, Guangzhou</b>  <b>Yao Sun, Wenzhou Medical University, Wenzhou</b>  <b>Xiaomei Lin, South China University of Technology, Guangzhou</b></p>
17:45-19:00	<b>Dinner &amp; Networking</b>
19:00-20:15	<p><b>Getting your article published in biofilm</b></p> <p><b>Tom Coenye, Ghent University, Ghent (Online)</b>  <b>Birthe Kjellerup, University of Maryland, College Park (Online)</b></p>
20:15-20:30	<b>Meet the editors</b>



**Nov 14<sup>th</sup> Medical Microbiology****Venue: Nanhua Hall****Session 1**

**Chair**      **Garth Ehrlich, Drexel University, Philadelphia**  
**Zhenbo Xu, South China University of Technology, Guangzhou**

<b>8:50-9:00</b>	<b>Opening ceremony</b> <b>Birthe Kjellerup &amp; Zhenbo Xu</b>
<b>9:00-9:25</b>	<b>Biofilm metabolism: the interplay among the stringent response, virulence factor production, and quorum sensing</b> <b>Garth Ehrlich, Drexel University, Philadelphia</b>
<b>9:25-9:50</b>	<b>Environmental surveillance of infectious diseases for informed risk assessment and public health measures</b> <b>Chuanwu Xi, Eastern Institute of Technology, Ningbo</b>
<b>9:50-10:05</b>	<b>Co-culture of <i>Pseudomonas aeruginosa</i> and <i>Staphylococcus aureus</i> triggers <i>S. aureus</i> fermentative metabolism in an <i>in vitro</i> biofilm flow reactor</b> <b>Janette Harro, University of Maryland, Baltimore (Online)</b>
<b>10:05-10:20</b>	<b>Host-directed therapies in the fight against antimicrobial-resistant infections</b> <b>Nathan Archer, Johns Hopkins University, Baltimore (Online)</b>
<b>10:20-10:35</b>	<b>Coffee break</b>
<b>Session 2</b>	
<b>Chair</b> <b>Chuanwu Xi, Eastern Institute of Technology, Ningbo</b> <b>Liang Yang, Southern University of Science and Technology, Shenzhen</b>	
<b>10:35-11:00</b>	<b>How <i>Pseudomonas aeruginosa</i> senses surfaces</b> <b>Matthew Parsek, University of Washington, Seattle (Online)</b>
<b>11:00-11:25</b>	<b>Molecular mapping of the biofilm matrix</b> <b>Courtney Reichhardt, Washington University in St Louis, St Louis</b>
<b>11:25-11:50</b>	<b>Bacterial biofilm formation: beyond <i>in vitro</i> Models</b> <b>Rajendar Deora, The Ohio State University, Columbus</b>
<b>11:50-12:15</b>	<b>Extracellular aminopeptidase regulates exopolysaccharide production of <i>Pseudomonas aeruginosa</i> via quorum sensing</b> <b>Luyan Ma, The Institute of Microbiology of Chinese Academy of Sciences, Beijing</b>
<b>12:15-12:30</b>	<b>Iron oxide nanoparticles in the prevention and treatment of dental caries and apical periodontitis</b> <b>Lei Cheng, Sichuan University, Chengdu</b>
<b>12:30-13:45</b>	<b>Lunch</b>

<b>Session 3</b>	
<b>Chair</b>	<b>Luyan Ma, The Institute of Microbiology of Chinese Academy of Sciences, Beijing Jintao Liu, Tsinghua University, Beijing</b>
<b>13:45-14:10</b>	<b>Gut Biofilms, Microbiota, and Pathobionts</b> <b>Po-Ren Hsueh, National Taiwan University Hospital, Taipei (Online)</b>
<b>14:10-14:35</b>	<b>The role of the infectious microenvironment in chronic infections</b> <b>Thomas Bjarnsholt, University of Copenhagen, Copenhagen (Online)</b>
<b>14:35-15:00</b>	<b>Essential phage component induces resistance of bacterial community</b> <b>Jintao Liu, Tsinghua University, Beijing</b>
<b>15:00-15:25</b>	<b>Supportive treatment with S100A8/A9 and hyperbaric oxygen therapy of chronic wounds - experimental studies</b> <b>Claus Moser, University of Copenhagen, Copenhagen (Online)</b>
<b>15:25-15:40</b>	<b>Diagnosis and treatment of urinary biofilm infections</b> <b>Zhijun Song, IRS - Esbjerg and Grindsted Hospital, Esbjerg (Online)</b>
<b>15:40-15:55</b>	<b>Coffee break</b>
<b>Session 4</b>	
<b>Chair</b>	<b>Rajendar Deora, The Ohio State University, Columbus Xin Deng, City University of Hong Kong, Hong Kong</b>
<b>15:55-16:20</b>	<b>One step closer to uncertainty - diabetic foot ulcers, biofilms, antimicrobials and fungi?</b> <b>Gordon Ramage, University of Glasgow, Glasgow (Online)</b>
<b>16:20-16:45</b>	<b>Horizontally transferred cyclic GMP-AMP signaling network in <i>Escherichia coli</i> ECOR31 and physiological consequences</b> <b>Ute Römling, Karolinska Institute, Stockholm (Online)</b>
<b>16:45-17:10</b>	<b>Global regulatory network in <i>Pseudomonas</i></b> <b>Xin Deng, City University of Hong Kong, Hong Kong</b>
<b>17:10-17:35</b>	<b>Interspecific interactions alter functionality and promote the key-stone species in a synthetic four-species community</b> <b>Mette Burmølle, University of Copenhagen, Copenhagen (Online)</b>
<b>17:35-17:50</b>	<b>G-quadruplexes and extracellular RNA co-exist in <i>Pseudomonas</i> biofilm matrices</b> <b>Thomas Seviour, Aarhus University, Aarhus (Online)</b>
<b>17:50-20:00</b>	<b>Dinner &amp; Networking</b>

**Nov 15<sup>th</sup> Biofilms in Australia****Venue: Dongtang Hall****Session 1****Chair**      **Yue Qu, Monash University, Melbourne**

<b>9:00-9:30</b>	<b>Uropathogenic <i>E. coli</i> biofilms</b> <b>Mark Schembri, University of Queensland, Brisbane</b>
<b>9:30-10:00</b>	<b>Advanced approaches for management of bacterial biofilm wound infections</b> <b>Zlatko Kopecki, University of South Australia, Adelaide</b>
<b>10:00-10:30</b>	<b>New weapons against superbugs</b> <b>Katharina Richter, The University of Adelaide, Adelaide (Online)</b>
<b>10:30-10:45</b>	<b>Coffee break</b>
<b>Session 2</b>  <b>Chair</b> <b>Xenia Kostoulas, Monash University, Melbourne</b>	
<b>10:45-11:15</b>	<b>Control of ocular bacterial biofilms by antimicrobial peptides</b> <b>Mark Willcox, The University of New South Wales, Sydney</b>
<b>11:15-11:40</b>	<b>Manipulating bacteria-material interactions with complex surfaces</b> <b>Peter Kingshott, Swinburne University of Technology, Melbourne (Online)</b>
<b>11:40-12:00</b>	<b>Power of plasma-activated water: a novel anti-biofilm tool</b> <b>Heema Vyas, The University of Adelaide, Adelaide</b>
<b>12:00-12:25</b>	<b>Bovine lactoferrin enhances antibiotic killing of <i>Staphylococcus aureus</i> biofilms</b> <b>Simon Swift, University of Auckland, Auckland (Online)</b>
<b>12:25-14:00</b>	<b>Lunch</b>

<b>Session 3</b>	
<b>Chair</b>	<b>Heema Vyas, The University of Adelaide, Adelaide</b>
<b>14:00-14:30</b>	<b>Biofilms in ventricular assist device driveline infections: current understanding and perspective</b> <b>Anton Peleg, Monash University, Melbourne</b>
<b>14:30-15:00</b>	<b>Our biofilm journey in RVVC</b> <b>Yue Qu, Monash University, Melbourne</b>
<b>15:00-15:30</b>	<b>Biofilms in chronic wounds and the use of non-medicated wound dressings</b> <b>Michael Radzieta, Western Sydney University, Sydney</b>
<b>15:30-16:00</b>	<b>A new model of endotracheal tube biofilm for basic research and antimicrobial drug discovery</b> <b>Freya Harrison, The University of Warwick, Coventry (Online)</b>
<b>16:00-16:15</b>	<b>Coffee break</b>
<p align="center"><b>Nov 15<sup>th</sup> Special Symposium on Phage Therapy</b></p> <p align="center"><b>Venue: Nanyue Hall</b></p>	
<b>Chair</b>	<b>Liang Yang, Southern University of Science and Technology, Shenzhen</b> <b>Yanrui Ye, South China University of Technology, Guangzhou</b>
<b>14:30-15:00</b>	<b>Phage synthetic biology and phage therapy</b> <b>Yingfei Ma, Shenzhen Institutes of Advanced Technology, Shenzhen</b>
<b>15:00-15:30</b>	<b>Adaptive evolution of bacterial pathogen <i>Pseudomonas aeruginosa</i> against bacterial phages</b> <b>Liang Yang, Southern University of Science and Technology, Shenzhen</b>
<b>15:30-16:00</b>	<b>Host-phage interaction mediated by prophage-encoded toxin/antitoxin systems</b> <b>Xiaoxue Wang &amp; Yunxue Guo, South China Sea Institute of Oceanology, Guangzhou</b>
<b>16:00-16:30</b>	<b>A dual-functional bacteriophage protein Dap1 regulates bacterial biofilm and evades Lon protease-mediated anti-phage immunity</b> <b>Haihua Liang, Southern University of Science and Technology, Shenzhen</b>
<b>16:30-16:45</b>	<b>Genome editing and synthesis of <i>Pseudomonas aeruginosa</i> phages</b> <b>Yanrui Ye, South China University of Technology, Guangzhou</b>
<b>16:45-17:00</b>	<b>Bacteriophage activity in synovial fluid and against synovial fluid induced bacterial aggregates</b> <b>James Doub &amp; Guangchao Yu, University of Maryland, Baltimore</b>
<b>17:00-17:45</b>	<b>Clinical application of phage therapy</b> <b>Anton Peleg, Monash University, Melbourne</b>
<b>17:45-20:00</b>	<b>Dinner &amp; Networking</b>



**Nov 15<sup>th</sup> Early Career Researchers and Students****Venue: Nanyue Hall**

**Chair** **Courtney Reichhardt, Washington University in St Louis, St Louis**  
**Heema Vyas, The University of Adelaide, Adelaide**

19:00-19:08	Low cell metabolism as a central antimicrobial-resistance mechanism & therapeutic target of staphylococcal biofilms in ventricular assistant device driveline infections <b>Yao Sun, Wenzhou Medical University, Wenzhou</b>
19:08-19:16	Carbon uptake and metabolic characteristics of enriched polyphosphate accumulating organisms from municipal wastewater treatment plants <b>Liping Chen, South China University of Technology, Guangzhou</b>
19:16-19:24	Unraveling the hidden functions of benthic biofilms in drinking water reservoirs through FTICR-MS Analysis <b>Tahir Mehmood, Guangdong Technion-Israel Institute of Technology, Shantou</b>
19:24-19:32	Investigation of quality and microbial dynamics of aged citri reticulatae pericarpium (pericarps of <i>Citrus reticulata</i> 'Chachi') during storage <b>Peirong Yu, Guangdong Technion-Israel Institute of Technology, Shantou</b>
19:32-19:40	SPR detection on microbial biofilms: an initial study <b>Haoyue Xue, South China University of Technology, Guangzhou</b>
19:40-19:48	Discovery of <i>metR</i> as a regulator of biofilm formation and pathogenicity in <i>Burkholderia thailandensis</i> <b>Kaizhong Xu, Hainan University, Haikou</b>
19:48-19:56	Controlling the physicochemical properties of $\gamma$ -polyglutamic acid in engineered <i>Bacillus subtilis</i> PB5760 via redox potential modulation <b>Sunday Oguntomi, University of Nottingham, Ningbo</b>
19:56-20:04	Antimicrobial resistance and biofilm formation in <i>Candida</i> strains <b>Xueting Fu, South China University of Technology, Guangzhou</b>
20:04-20:12	The regulatory mechanism of LuxS on the formation of VBNC cells in the biofilm of beer-spoilage <i>Lactiplantibacillus plantarum</i> <b>Zhenqing Li, Qingdao Agricultural University, Qingdao</b>
20:12-20:20	Enrichment of salt-tolerant nitrifiers and analysis of their salt-tolerance potential on genomic characteristics <b>Yun Yao Liang, South China University of Technology, Guangzhou</b>
20:20-20:28	Development of methods for biofilm analysis: quantification of biofilm viability and amount <b>Biagio Delvecchio, University of Nottingham, Ningbo</b>
20:28-20:36	A study on antibacterial activity and mechanism of carvacrol <b>Ziling Zhi, Guangzhou Medical University, Guangzhou</b>
20:36-20:44	Mechanisms of formation and safety control of different depths of dormant states in foodborne pathogens <b>Yuguo Wang, South China University of Technology, Guangzhou</b>
20:44-20:52	An effective strategy to combat MRSA: the synergistic sensitization with natural compounds <b>Sisi Chen, Guangzhou Medical University, Guangzhou</b>
20:52-21:00	Research on the Adsorption Properties of EPS towards Heavy Metals and Its Mediation in the Synthesis of MeS QDs <b>Liyao Chen, Guangdong University of Technology, Guangzhou</b>

Nov 16<sup>th</sup> Food Microbiology (Venue 1)

Venue: Nanyue Hall

## Session 1

## Chair

Qingli Dong, University of Shanghai for Science and Technology, Shanghai  
Zhenbo Xu, South China University of Technology, Guangzhou

9:00-9:25	Modulation of multispecies biofilms employing antisense oligonucleotides Nuno Azevedo, University of Porto, Porto
9:25-9:40	Mechanism of acid and alkali electrolyzed water on the elimination of <i>Listeria monocytogenes</i> biofilm based on proteomic analysis Jianxiong Hao, Hebei University of Science and Technology, Shijiazhuang
9:40-9:55	Effects of lactic acid bacteria as quorum sensing inhibitors on biofilms of foodborne pathogens Qingping Zhong, South China Agricultural University, Guangzhou
9:55-10:10	Progress of <i>Listeria monocytogenes</i> biofilm risk Qingli Dong, University of Shanghai for Science and Technology, Shanghai
10:10-10:25	Identification of molecular targets of JX08806 as antibiofilm against <i>Staphylococcus aureus</i> Chunlei Shi, Shanghai Jiaotong University, Shanghai
10:25-10:40	Characterization of <i>Pseudomonas</i> spp. contamination and in situ spoilage potential in pasteurized milk production process Xin Wang, Northwest Agriculture and Forestry University, Xianyang
10:40-10:55	Coffee break
Session 2	
Chair	
Biao Suo, Henan Agricultural University, Zhengzhou Junyan Liu, Zhongkai University of Agriculture and Engineering, Guangzhou	
10:55-11:10	Dry surface biofilm: an underestimated concern for microbial contamination Honghua Hu, Zhejiang University, Jinhua
11:10-11:25	High-throughput, rapid and non-destructive detection of common foodborne pathogens via HSI coupled with deep neural networks and support vector machines Yu Ding, Jinan University, Guangzhou
11:25-11:40	Viable but nonculturable (VBNC) state: an underestimated microbial survival strategy Junyan Liu, Zhongkai University of Agriculture and Engineering, Guangzhou
11:40-11:55	Modification of cationic antimicrobial peptides and mechanism of antibacterial action at the single-molecule level Mingming Guo, Zhejiang University, Hangzhou
11:55-12:10	Role of bpfA in adhesion and biofilm formation of <i>Shewanella putrefaciens</i> CN32 under cold stress: a comprehensive transcriptomic analysis Jun Yan, Shanghai Ocean University, Shanghai
12:10-12:25	Study on inhibitory mechanism of linalool against <i>Listeria monocytogenes</i> Rongrong He, Hainan University, Haikou
12:25-14:00	Lunch

<b>Session 3</b> <b>Chair</b> <b>Moutong Chen, Guangdong Institute of Microbiology, Guangzhou</b> <b>Xiaodong Xia, Dalian Polytechnic University, Dalian</b>	
<b>14:00-14:25</b>	<b>How chemicals of emerging concern are affecting microbial communities</b> <b>Manuel Simões, University of Porto, Porto (Online)</b>
<b>14:25-14:40</b>	<b>The role of <i>rcpA</i> gene in regulating biofilm formation and virulence in <i>Vibrio parahaemolyticus</i></b> <b>Xiaodong Xia, Dalian Polytechnic University, Dalian</b>
<b>14:40-14:55</b>	<b>Investigating the potential of L<sup>(+)</sup>-lactic acid as a green inhibitor and eradicator of a dual-species <i>Campylobacter</i> spp. biofilm formed on food processing model surfaces</b> <b>Efstathios Giaouris, University of the Aegean, Mytilini (Online)</b>
<b>14:55-15:10</b>	<b>Platinum-based fluorescent nanozyme-driven “loong frolic pearls” multifunctional nanoplatform for ultrasensitive detection and synergistic sterilization of <i>B. gladioli</i></b> <b>Yingwang Ye, Hefei University of Technology, Hefei</b>
<b>15:10-15:25</b>	<b>Regulation of non-coding small RNA named <i>SaaS</i> in biofilm formation and virulence of <i>Salmonella</i></b> <b>Huhu Wang, Nanjing Agricultural University, Nanjing</b>
<b>15:25-15:40</b>	<b>Valorization of Soy Whey through Synthetic Biology</b> <b>Xiudong Xia, Jiangsu University, Zhenjiang</b>
<b>15:40-15:55</b>	<b>Coffee break</b>
<b>Session 4</b> <b>Chair</b> <b>Yulong Tan, Qingdao Agricultural University, Qingdao</b> <b>Lei Yuan, Yangzhou University, Yangzhou</b>	
<b>15:55-16:20</b>	<b>Unlocking the potential of biofilm properties in beneficial microbes for one health advancements</b> <b>Romain Briandet, University of Paris-Saclay, Paris (Online)</b>
<b>16:20-16:35</b>	<b>Role of stringent response factors in response to environmental stress in <i>Yersinia enterocolitica</i></b> <b>Jingyu Chen, China Agricultural University, Beijing</b>
<b>16:35-16:50</b>	<b>Research and application of key technologies for enhancing biological reaction processes based on cell aggregation effects</b> <b>Yong Chen, Nanjing Tech University, Nanjing</b>
<b>16:50-17:05</b>	<b>Screening of foodborne active components based on quorum sensing and its effect on <i>Streptococcus mutans</i> biofilm and its mechanism</b> <b>Su Ma &amp; Yulong Tan, Shandong Univ. &amp; Qingdao Agricultural Univ., Qingdao</b>
<b>17:05-17:20</b>	<b>Combating biofilms of foodborne pathogens with bacteriocins by lactic acid bacteria in the food industry</b> <b>Xinyi Pang, Nanjing University of Finance and Economics, Nanjing</b>
<b>17:20-17:35</b>	<b>Strategies of developing food contact materials with antibiofilm function</b> <b>Yue Ma, University of Shanghai for Science and Technology, Shanghai</b>
<b>17:35-17:50</b>	<b>From raw ingredients to product - <i>Salmonella</i> survival during chocolate production</b> <b>Danielle Duanis-Assaf, Volcani Center, Rishon LeZion (Online)</b>
<b>17:50-20:00</b>	<b>Dinner &amp; Networking</b>



**Nov 16<sup>th</sup> Basic Microbiology and Anti-Biofilms (Venue 2)****Venue: Nanhua Hall****Session 1****Chair****Wei Hu, Shandong University, Jinan****Liang Yang, Southern University of Science and Technology, Shenzhen**

<b>8:45-9:10</b>	Acquisition of biofilm-producing capability made <i>Yersinia pestis</i> a flea-transmitted pathogen <b>Ruifu Yang, Beijing Institute of Microbiology and Epidemiology, Beijing</b>
<b>9:10-9:35</b>	Revealing the heterogeneity of <i>Pseudomonas aeruginosa</i> biofilms using single-cell probe-based RNA-sequencing <b>Boo Shan Tseng, University of Nevada, Las Vegas</b>
<b>9:35-9:50</b>	Extracellular DNA: A multifunctional biofilm component <b>Rikke Meyer, Aarhus University, Aarhus (Online)</b>
<b>9:50-10:05</b>	Antibiofilm coating and its evaluation methods by ISO. <b>Hideyuki Kanematsu, National Institute of Technology, Tokyo (Online)</b>
<b>10:05-10:20</b>	LasA from <i>Pseudomonas aeruginosa</i> selectively disrupts <i>Gardnerella vaginalis</i> biofilm <b>Lichuan Gu &amp; Kundi Zhang, Shandong University, Qingdao</b>
<b>10:20-10:35</b>	<b>Coffee break</b>
<b>Session 2</b>	
<b>Chair</b>	
<b>Boo Shan Tseng, University of Nevada, Las Vegas</b>	
<b>10:35-11:00</b>	Large-scale mechanical spiral waves in bacterial communities <b>Yilin Wu, Chinese University of Hong Kong, Hong Kong</b>
<b>11:00-11:25</b>	Go with the flow: how shear stress and quorum sensing shape enterococcal virulence in infective endocarditis <b>Kimberly Kline, University of Geneva, Geneva (Online)</b>
<b>11:25-11:40</b>	Exploring unique aggregate mechanisms in a chronic infection model <b>Sophie Darch, University of South Florida, Tampa (Online)</b>
<b>11:40-11:55</b>	Novel tetrameric PilZ protein stabilizes stator ring in complex flagellar motor <b>Beile Gao, South China Sea Institute of Oceanology, CAS, Guangzhou</b>
<b>11:55-12:10</b>	Collective fountain-like flow and fractal wrinkling drive bacterial community morphogenesis <b>Boyang Qin, Shanghai Jiao Tong University, Shanghai</b>
<b>12:10-12:25</b>	Anti-biofilm enzymes strategy <b>Xinjiong Fan, Anhui Medical University, Hefei</b>
<b>12:25-13:45</b>	<b>Lunch</b>

<b>Session 3</b>	<b>Quorum Sensing in Biofilms</b>
<b>Chair</b>	<b>Haihua Liang, Southern University of Science and Technology, Shenzhen</b> <b>Yinyue Deng, Sun Yat-sen University, Guangzhou</b>
<b>13:45-14:10</b>	<b>Virulence programming and reprogramming in bacterial pathogens</b> <b>Lianhui Zhang, South China Agricultural University, Guangzhou (Online)</b>
<b>14:10-14:35</b>	<b>Tn-Seq based identification of genes that play a role in antibiotic tolerance of <i>Pseudomonas aeruginosa</i> aggregates</b> <b>Tim Tolker-Nielsen, University of Copenhagen, Copenhagen (Online)</b>
<b>14:35-15:00</b>	<b>Bacterial language: from quorum sensing signal to nucleotide second messenger</b> <b>Yinyue Deng, Sun Yat-sen University, Guangzhou</b>
<b>15:00-15:15</b>	<b>Bacterial quorum sensing and the strategies of seafood preservation</b> <b>Zunying Liu, Ocean University of China, Qingdao</b>
<b>15:15-15:30</b>	<b>The mechanism of quorum sensing signaling deterrence of <i>B. cenocepacia</i> by rhododendrol and other endophytic metabolites of <i>A. catechu</i> L. derived endophytes</b> <b>Aiqun Jia, Hainan University, Haikou</b>
<b>15:30-15:45</b>	<b>Study on the synergistic mechanism of bacterial inhibition by ITC flavouring substances and essential oils in wasabi</b> <b>Gongliang Zhang, Dalian Polytechnic University, Dalian</b>
<b>15:45-16:00</b>	<b>Coffee break</b>
<b>Session 4</b>	<b>Anti-Biofilms</b>
<b>Chair</b>	<b>Haiyan Hu, Sun Yat-Sen University, Guangzhou</b> <b>Ning Sun, Guangzhou 11<sup>th</sup> People's Hospital, Guangzhou</b>
<b>16:00-16:25</b>	<b>Novel approaches and tools to predict antimicrobial susceptibility in biofilms</b> <b>Tom Coenye, Ghent University, Ghent (Online)</b>
<b>16:25-16:40</b>	<b>A multifaceted approach to combating biofilms: computational modeling and novel nanocoatings</b> <b>Jinju (Vicky) Chen, Loughborough University, Loughborough (Online)</b>
<b>16:40-16:55</b>	<b>Tailored multilayer nanoparticle against resistant <i>P. aeruginosa</i> by disrupting the stubborn triad of thickened mucus, dense biofilm and hyperinflammation</b> <b>Haiyan Hu, Sun Yat-Sen University, Guangzhou</b>
<b>16:55-17:05</b>	<b>The <i>Staphylococcus aureus</i> arlS kinase inhibitor tilmicocin has potent anti-biofilm activity in both static and flow conditions</b> <b>Yang Wu, Fudan University, Shanghai</b>
<b>17:05-17:20</b>	<b>Evolution of antimicrobial resistance in biofilms</b> <b>Oana Ciofu, University of Copenhagen, Copenhagen (Online)</b>
<b>17:20-17:35</b>	<b>The mechanism of Agr mutation causing persistent <i>Staphylococcus aureus</i> infection</b> <b>Lei He, Shanghai Jiaotong University, Shanghai</b>
<b>17:35-17:50</b>	<b>An antibiofilm peptide AMP-17 inhibits hyphal development in <i>Candida albicans</i> exerting antibiofilm effect</b> <b>Chaoqin Sun, Guizhou Medical University, Guiyang</b>
<b>17:50-20:00</b>	<b>Dinner &amp; Networking</b>

**Nov 16<sup>th</sup> Early Career Researchers and Students****Venue: Nanyue Hall**

**Chair**      **Boo Shan Tseng, University of Nevada, Las Vegas**  
**Michael Radzieta, Western Sydney University, Sydney**

19:00-19:08	<b>Unveiling the role of fungi in cancers via the metagenomics</b> <b>Yu Li, Qiqihar Medical University, Qiqihar</b>
19:08-19:16	<b>A sex hormone catalyzes biological nitrogen fixation</b> <b>Maresh Premarathna, South China University of Technology, Guangzhou</b>
19:16-19:24	<b>The influence of dead bacteria on the 3D motion and adhesion of live bacteria</b> <b>Weixiong Zhang, Jimei University, Xiamen</b>
19:24-19:32	<b>Construction of cinnamaldehyde-loaded chitosan nanoparticles functionalized with DNase-I and their anti-biofilm activity against <i>Listeria monocytogenes</i></b> <b>Xueying Du, Nanjing University of Finance and Economics, Nanjing</b>
19:32-19:40	<b>Assessment of eggshell waste as a soil amendment in biosolarization</b> <b>Chunyu Li, Guangdong Technion-Israel Institute of Technology, Shantou</b>
19:40-19:48	<b>Pairwise encounters boost bacterial motion by transient velocity spikes</b> <b>Pu Feng, South China University of Technology, Guangzhou</b>
19:48-19:56	<b>YtnP: one novel quorum quenching enzyme from <i>Bacillus amyloliquefaciens</i> W11 inhibits biofilms and spoilage of white radish by <i>Serratia marcescens</i></b> <b>Zhiwen Ding, Hainan University, Haikou</b>
19:56-20:04	<b>Rapid amperometric determination of bacteria embedded in biocoatings</b> <b>Opeyemi Otemoye, University of Nottingham, Ningbo</b>
20:04-20:12	<b>Effect of sub-MiC of antibiotics on <i>Staphylococcus aureus</i> biofilm formation</b> <b>Yaqin Li, South China University of Technology, Guangzhou</b>
20:12-20:20	<b>Preparation of chitosan/sodium carboxymethyl cellulose film loaded with halloysite nanotubes-zingerone and its impact on fish preservation effects.</b> <b>Yanqing Li, Qingdao Agricultural University, Qingdao</b>
20:20-20:28	<b>Pathogenesis and biofilm formation in clinical <i>Klebsiella pneumoniae</i> strains</b> <b>Feifeng Zhong, South China University of Technology, Guangzhou</b>
20:28-20:36	<b>Valorization of bioactive compounds extracted or fermented from tea waste using ionic liquids</b> <b>Yuying Zeng, Guangdong Technion-Israel Institute of Technology, Shantou</b>
20:36-20:44	<b>Effect of obstacle size effect on the 3D motion behavior and biofilm formation</b> <b>Xiaolong Zhu, South China University of Technology, Guangzhou</b>
20:44-20:52	<b>Viable but nonculturable state formation and control of pathogenic and spoilage bacteria in rice and flour products</b> <b>Yanling Zhu, Zhongkai University of Agriculture and Engineering, Guangzhou</b>
20:52-21:00	<b>Detection of biofilm in hypervirulent <i>Klebsiella pneumoniae</i> isolated from hospital</b> <b>Yuzhu Mao, University of Maryland, Baltimore (Online)</b>



**Nov 17<sup>th</sup> Environmental Microbiology****Venue: Nanhua Hall****Session 1****Chair**

**Zhenbo Xu, South China University of Technology, Guangzhou**  
**Guanglei Qiu, South China University of Technology, Guangzhou**

<b>9:00-9:25</b>	<b>Energy efficient wastewater treatment-past to future</b> <b>Yan Zhou, Nanyang Technological University, Singapore</b>
<b>9:25-9:50</b>	<b>Physical, chemical and microbiological features of saline lakes in Europe</b> <b>Tamas Felfoldi, Institute of Aquatic Ecology, HUN-REN Centre for Ecological Research, Budapest, Hungary</b>
<b>9:50-10:05</b>	<b>Fungal biofilms: beneficial, harmful, and mysterious frontiers</b> <b>Erika Espinosa-Ortiz, Montana State University, Bozeman (Online)</b>
<b>10:05-10:20</b>	<b>Quorum quenching driven biofouling control in membrane bioreactor for high-strength wastewater treatment</b> <b>Faqian Sun, Zhejiang Normal University, Jinhua</b>
<b>10:20-10:35</b>	<b>After the biofilm: bacterial transfer, infections and hand hygiene in a healthcare environment</b> <b>Albert Parker, Montana State University, Bozeman (Online)</b>
<b>10:35-10:50</b>	<b>Coffee break</b>
<b>Session 2</b>	
<b>Chair</b>	
<b>Olivier Habimana, Guangdong Technion-Israel Institute of Technology, Shantou</b> <b>Jinping Cheng, The Education University of Hong Kong, Hong Kong</b>	
<b>10:50-11:15</b>	<b>Impacts of silver nanoparticles on freshwater biofilms</b> <b>Olivier Habimana, Guangdong Technion-Israel Institute of Technology, Shantou</b>
<b>11:15-11:40</b>	<b>Selective succession and enrichment of pollutants in (Micro) plastic biofilms and environmental risks</b> <b>Jinping Cheng, The Education University of Hong Kong, Hong Kong</b>
<b>11:40-11:55</b>	<b>Advanced genomic sequencing-enhanced wastewater-based epidemiology for monitoring viruses and antibiotic-resistant pathogens</b> <b>Xiaoqing Xu, Hong Kong University, China</b>
<b>11:55-12:10</b>	<b>Stopping the decay of <i>Geobacter</i> electroactive biofilm</b> <b>Xing Liu, Fujian Agriculture and Forestry University, Fuzhou</b>
<b>12:10-12:25</b>	<b>Lifestyle of marine biofilm bacteria and antimicrobial resource mining</b> <b>Wei Ding, Ocean University of China, Qingdao</b>
<b>12:25-14:00</b>	<b>Lunch</b>

<b>Session 3</b>  <b>Chair</b> <b>Yan Zhou, Nanyang Technological University, Singapore</b> <b>Jialiang Kuang, South China University of Technology, Guangzhou</b>	
<b>14:00-14:25</b>	<b>Extracellular DNA and RNA in the drinking water microbiome: quantification, sequencing analyses, and implications</b> <b>Bin Cao (Sakcham Bairoliya), Nanyang Technological University, Singapore</b>
<b>14:25-14:50</b>	<b>Carbon-emission characteristics of wastewater treatment plants in the Beijing-Tianjin-Hebei region</b> <b>Liang Duan, Chinese Research Academy of Environmental Sciences, Beijing (Online)</b>
<b>14:50-15:05</b>	<b>Effect of microplastics and antibiotics on the microbiome and resistomes on activated sludge in wastewater treatment process</b> <b>Yanping Mao, Shenzhen University, Shenzhen (Online)</b>
<b>15:05-15:20</b>	<b>Microalgal-bacterial granular sludge: a novel low-carbon wastewater treatment process sustained by natural light</b> <b>Bin Ji, Hunan University of Technology, Zhuzhou</b>
<b>15:20-15:35</b>	<b>Rapid recognition of potential microbial resources for bioremediation of organochlorine pesticides and flame retardants</b> <b>Jialiang Kuang, South China University of Technology, Guangzhou</b>
<b>15:35-15:50</b>	<b>Coffee break</b>
<b>Session 4</b>  <b>Chair</b> <b>Fangang Meng, Sun Yat-Sen University, Guangzhou</b> <b>Le Han, Chongqing University, Chongqing</b>	
<b>15:50-16:15</b>	<b>The development of membrane bio-contactors for improving nitrogen removal</b> <b>Fangang Meng (Zhong Yu), Sun Yat-Sen University, Guangzhou</b>
<b>16:15-16:30</b>	<b>Engineering 'trap then release' biofilms for microplastics removal</b> <b>Song Lin Chua, Hong Kong Polytechnic University, Hong Kong (Online)</b>
<b>16:30-16:45</b>	<b>Hybrid of benthic bioturbation and membrane aerated biofilm ecologically in-situ eliminates overloaded nitrogen in sediments of freshwater system</b> <b>Le Han, Chongqing University, Chongqing</b>
<b>16:45-17:00</b>	<b>Genomic characterization of <i>Ca. Accumulibacter</i>-related polyphosphate-accumulating organisms</b> <b>Guanglei Qiu, South China University of Technology, Guangzhou</b>
<b>17:00-17:15</b>	<b>Enhanced nitrogen removal in anammox coupled with heterotrophic denitrification processes via directly doing waste activated sludge</b> <b>Liang Zhang, Sun Yat-Sen University, Guangzhou</b>
<b>17:15-17:40</b>	<b>Intensifying wastewater treatment with sulfur bacterial biofilms</b> <b>Di Wu, Ghent University, Ghent (Online)</b>
<b>17:40-17:45</b>	<b>Closing ceremony</b>

<b>Nov 17<sup>th</sup> Applied Microbiology (Venue 2)</b> <b>Venue: Nanyue Hall</b>	
<b>Session 1</b>	
<b>Chair</b>	<b>Gamini Seneviratne, National Institute of Fundamental Studies, Kandy</b> <b>Junyan Liu, Zhongkai University of Agriculture and Engineering, Guangzhou</b>
<b>8:30-8:55</b>	<b>Molecular biology - opportunities and challenges</b> <b>Herbert Schellhorn, McMaster University, Hamilton</b>
<b>8:55-9:20</b>	<b>Soil biofilm induction to increase crop production and bioremediation: a novel approach</b> <b>Gamini Seneviratne, National Institute of Fundamental Studies, Kandy</b>
<b>9:20-9:35</b>	<b>Microfluidic investigation on the role of flow dynamics, surface roughness, and bacterial motility on biofilm formation</b> <b>Judy Yang, University of Minnesota, Twin Cities (Online)</b>
<b>9:35-9:50</b>	<b>Bacteria interactions in soil biofilms: emerging insights from microfluidic techniques</b> <b>Peng Cai, Huazhong Agricultural University, Wuhan</b>
<b>9:50-10:05</b>	<b>Screening and inhibition mechanism of natural active ingredients on biofilm</b> <b>Zaixiang Lou, Jiangnan University, Wuxi</b>
<b>10:05-10:20</b>	<b>Biofilm formation in biocontrol <i>Bacillus</i> against plant disease</b> <b>Yan Li, China Agricultural University, Beijing</b>
<b>10:20-10:35</b>	<b>Coffee break</b>
<b>Session 2</b>	
<b>Chair</b>	<b>Yigal Achmon, Guangdong Technion-Israel Institute of Technology, Shantou</b> <b>Zhenbo Xu, South China University of Technology, Guangzhou</b>
<b>10:35-11:00</b>	<b>Diverse functions of the type VI secretion system in complex communities</b> <b>Tao Dong, Southern University of Science and Technology, Shenzhen</b>
<b>11:00-11:25</b>	<b>Decoding the microbiome volatilome: insights from food waste prevention and valorization</b> <b>Yigal Achmon, Guangdong Technion-Israel Institute of Technology, Shantou</b>
<b>11:25-11:50</b>	<b>Biofilm electrochemistry: from characterization to electrofermentation</b> <b>Enrico Marsili, University of Nottingham, Ningbo</b>
<b>11:50-12:05</b>	<b>Electrochemical biofilm control</b> <b>Haluk Beyenal, Washington State University, Pullman (Online)</b>
<b>12:05-12:20</b>	<b>Characterization of 3D bacterial adhesion and detachment dynamics</b> <b>Xiangjun Gong, South China University of Technology, Guangzhou</b>
<b>12:20-12:35</b>	<b>Constructions and applications of biofilm living materials</b> <b>Jiaofang Huang, Jiangxi Normal University, China</b>
<b>12:35-14:00</b>	<b>Lunch</b>



<b>Session 3</b>	<b>Biofilms in Central Asia</b>
<b>Chair</b>	<b>Enrico Marsili, University of Nottingham, Ningbo</b> <b>Maresh Premarathna, South China University of Technology, Guangzhou</b>
<b>13:45-14:10</b>	<b>Emerging nanotechnologies for targeting pathogenic bacterial biofilms</b> <b>Vesselin Paunov, Nazarbayev University, Astana (Online)</b>
<b>14:10-14:25</b>	<b>Microbial strategies for enhancing plant stress tolerance in future farming systems</b> <b>Dilfuza Egamberdieva, TIAME, National Research University, Tashkent (Online)</b>
<b>14:25-14:40</b>	<b>Multi-modal imaging unveils complex biofilm dynamics of probiotic <i>Lactobacillus</i> strains from traditional Kazakh dairy</b> <b>Almagul Kushugulova, Nazarbayev University, Astana (Online)</b>
<b>14:40-14:55</b>	<b>Biofilm mediated bioremediation of heavy metals and organic waste polluted environments</b> <b>Iram Liaqat, Government College University, Lahore (Online)</b>
<b>14:55-15:10</b>	<b>Cyanobacterial biofilms as a strategy to revitalize and innovate the inoculant technology in agriculture</b> <b>Radha Prasanna, ICAR-Indian Agricultural Research Institute, New Delhi (Online)</b>
<b>15:10-15:25</b>	<b>Bio solubilization of Eppawala Rock Phosphate (ERP) by fungal-bacterial biofilms and its impact on crop enhancement of potatoes (<i>Solanum tuberosum</i> L)</b> <b>Amila Henagamage, Uva Wellassa University, Badulla (Online)</b>
<b>15:25-15:40</b>	<b>Coffee break</b>
<b>Session 4</b>	
<b>Chair</b>	<b>Yanrui Ye, South China University of Technology, Guangzhou</b> <b>Cheng Li, Massachusetts Institute of Technology, Cambridge</b>
<b>15:40-16:05</b>	<b>Enhancing industry / academic partnerships</b> <b>Darla Goeres, Montana State University, Bozeman (Online)</b>
<b>15:05-16:20</b>	<b>Metabolic engineering of non-model microorganisms</b> <b>Cheng Li, Massachusetts Institute of Technology, Cambridge</b>
<b>16:20-16:35</b>	<b>Accelerating the design of pili-enabled living materials by synergizing bioinformatics, structural biology and synthetic biology</b> <b>Yuanyuan Huang, Columbia University, Columbia (Online)</b>
<b>16:35-16:50</b>	<b>Heterogeneity of metabolites excreted by fungal, bacterial and fungal - bacterial biofilms</b> <b>Darshani Singhalage, Uva Wellassa University, Badulla (Online)</b>
<b>16:50-17:05</b>	<b>Biofilm formation and production of EPS by perchlorate reducing microorganisms isolated from serpentine soils in Sri Lanka</b> <b>Wajira Balasooriya, Wayamba University of Sri Lanka, Makandura (Online)</b>
<b>17:05-17:20</b>	<b>The potential of fungal biofilms in desert soil rehabilitation</b> <b>Ishara Manawasinghe, Zhongkai Univ. Agriculture and Engineering, Guangzhou</b>

**Keynote speaker****Nov 14<sup>th</sup> 9:00-9:25****Garth D. Ehrlich (Onsite)**

Professor

Drexel University, Philadelphia

**Biofilm metabolism: the interplay among the stringent response, virulence factor production, and quorum sensing**

Dr. Ehrlich is Professor of Microbiology and Immunology, and Otolaryngology-Head and Neck Surgery at Drexel University College of Medicine in Philadelphia, PA, USA. His scientific career has been characterized by his integration of technologies and ideas across a broad spectrum of academic and clinical disciplines and the continuous development of highly significant advances that span a range of disciplines including diagnostics, informatics, artificial intelligence, infectious diseases, etc. He was elected a fellow of both the American Association for the Advancement of Science and the American Academy of Microbiology based on his works in the development of molecular diagnostics, genomic technologies, and evolutionary modelling of chronic bacterial pathogenesis.

**Keynote speaker****Nov 14<sup>th</sup> 9:25-9:50****Chuanwu Xi (Onsite)**

Chair Professor

Eastern Institute of Technology, Ningbo

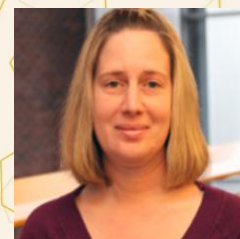
**Environmental surveillance of infectious diseases for informed risk assessment and public health measures**

Dr. Xi is a chair professor at Eastern Institute of Technology, Ningbo. He was a professor of Environmental Health Sciences & Global Public Health and director of Global Environmental Health in the Department of Environmental Health Sciences at University of Michigan. He received his PhD from Catholic University of Leuven Belgium in 2010. Prof. Xi's research focuses on biofilms, water quality and treatment, and human health. Dr. Xi was a Scholar-in-Residence at US FDA, a chair and council of Division Q of American Society for Microbiology, a former president of Sino-Micro, and a co-director of U-M-BICI Partnership Program. Dr. Xi currently also serves as chair of Public Health Council of NSF International and an associate editor for mLife.

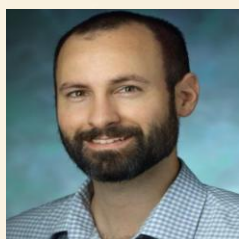
**Invited speaker****Nov 14<sup>th</sup> 9:50-10:05****Janette Harro (Virtual)**

Assistant Professor

University of Maryland, Baltimore

**Co-culture of *Pseudomonas aeruginosa* and *Staphylococcus aureus* triggers *S. aureus* fermentative metabolism in an *in vitro* biofilm flow reactor**

Janette Harro is an Assistant Professor in the Department of Microbial Pathogenesis in the School of Dentistry at the University of Maryland, Baltimore. She initially joined the Dept. of Microbial Pathogenesis in the laboratory of well-known biofilm researcher, the late Dr. Mark Shirtliff, and was promoted to Assistant Professor in 2018. Her research fields include host pathogen interactions, biofilm infection and treatment of infection using animal models. She has expertise in biofilm-based vaccinology.

**Invited speaker****Nov 14<sup>th</sup> 10:05-10:20****Nathan Archer (Virtual)**

Assistant Professor

Johns Hopkins University, Baltimore

**Host-directed therapies in the fight against antimicrobial-resistant infections**

Dr. Nathan Archer is an Assistant Professor in the Johns Hopkins School of Medicine Department of Dermatology. Dr. Archer's research focuses on understanding immunity to *Staphylococcus aureus* skin infections and the role of *S. aureus* in inflammatory skin diseases such as atopic dermatitis. His long-term research goals are to develop novel immunotherapies for the treatment of skin infections and inflammatory skin disorders. Dr. Archer has received independent funding from the NIH, LEO Foundation, and private industry, including Pfizer. He is also the recipient of the Dermatology Foundation Career Development award, LEO Foundation award, and an NIH K01 Career Development award.



**Keynote speaker****Nov 14<sup>th</sup> 10:35-11:00****Matthew Parsek (Virtual)**

Professor

University of Washington, Seattle

**How *Pseudomonas aeruginosa* senses surfaces**

Dr. Parsek received his undergraduate degree from the University of Illinois at Champaign-Urbana in 1989. He received his PhD from University of Illinois at Chicago in 1995 from the lab of Al Chakrabarty. He did a postdoc in the lab of Pete Greenberg at the University of Iowa from 1995-1999. He is currently a Professor in the Microbiology Department at the University of Washington.

**Keynote speaker****Nov 14<sup>th</sup> 11:00-11:25****Courtney Reichhardt (Onsite)**

Assistant Professor

Washington University in St Louis, St Louis

**Molecular mapping of the biofilm matrix**

Courtney Reichhardt graduated from Montana State University with a BS in Chemistry in 2010. She then attended Stanford University where she joined Lynette Cegelski's laboratory in the Department of Chemistry, and then she did her postdoctoral training in the Department of Microbiology at the University of Washington with Matthew Parsek. Courtney joined the Department of Chemistry at Washington University as an Assistant Professor in 2021. Her research program leverages her unique multidisciplinary training to answer important questions about the molecular biophysical principles of biofilm assembly.

**Keynote speaker****Nov 14<sup>th</sup> 11:25-11:50****Rajendar Deora (Onsite)**

Associate Professor

The Ohio State University, Columbus

**Bacterial biofilm formation: beyond *in vitro* models**

Dr. Deora received his PhD from the University of Illinois at Chicago, USA. After completing his postdoctoral training at the University of California at Los Angeles, he joined the Wake Forest School of Medicine as an Assistant Professor. Currently, he is a faculty member in the department of Microbial Infection and Immunity and Microbiology at the Ohio State University in the USA.

**Keynote speaker****Nov 14<sup>th</sup> 11:50-12:15****Luyan Ma (Onsite)**

Professor

The Institute of Microbiology of Chinese Academy of Sciences, Beijing

**Extracellular aminopeptidase regulates exopolysaccharide production of *Pseudomonas aeruginosa* via quorum sensing**

Luyan Ma graduated from Beijing Agricultural University and got the PhD from the same university in 1996. She got training at the Institute Pasteur in France, University of Connecticut and Wake Forest University in USA. She joined the State Key Laboratory of Microbial Resources at Institute of Microbiology, CAS since 2010 and awarded the CAS' Hundred Talent Program. The goal of her research group is to explore and define molecular mechanisms of biofilm formation and disassembly as well as bacterial cell-cell communications in order to develop specific anti-biofilm strategies or utilize bacterial biofilm. Current works are focused on the biofilm of opportunistic pathogen *Pseudomonas aeruginosa* as well as nitrogen-fixing bacteria, such as *Pseudomonas stutzeri* and *Azospirillum brasilense*.

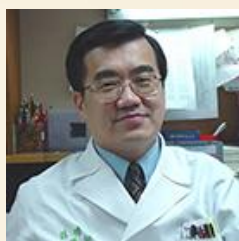
**Invited speaker****Nov 14<sup>th</sup> 12:15-12:30****Lei Cheng (Onsite)**

Professor

Sichuan University, Chengdu

**Iron oxide nanoparticles in the prevention and treatment of dental caries and apical periodontitis**

Dr Lei Cheng is Professor and Director of the Department of Cariology and Endodontics. He was awarded his Ph.D. in Dentistry by West China School of Stomatology in Sichuan University and Joint Training Ph.D. in the Academic Centre for Dentistry in Amsterdam. He worked as a postdoctoral fellow in the University of Maryland at Baltimore. He has published more than 100 peer reviewed papers. he was recognized among the World's top 2% scientists on both the "single year impact" and "career-long impact" lists in 2023.

**Keynote speaker****Nov 14<sup>th</sup> 13:45-14:10****Po-Ren Hsueh (Virtual)**

Professor

National Taiwan University Hospital, Taipei

**Gut biofilms, microbiota, and pathobionts**

Prof. Hsueh is Professor in the Departments of Laboratory Medicine and Internal Medicine at National Taiwan University College of Medicine. Prof. Hsueh is now the Editor-in-Chief of Journal of Microbiology, Immunology, and Infection (JMII), Section Editor of International Journal Antimicrobial Agents (IJAA) and Funding editor of Journal of Global Antimicrobial Resistance (JGAR). His main research interests include epidemiology and mechanisms of antimicrobial resistance, including bacteria, mycobacteria, and fungi, molecular epidemiology of emerging pathogens, molecular diagnosis of infectious agents, and infection control. Prof. Hsueh has published more than 800 original and review articles.



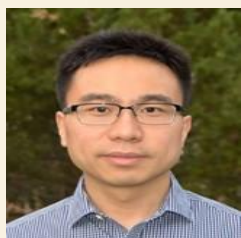
**Keynote speaker****Nov 14<sup>th</sup> 14:10-14:35****Thomas Bjarnsholt (Virtual)**

Professor

University of Copenhagen, Copenhagen

**The role of the infectious microenvironment in chronic infections**

Prof Bjarnsholt is a global expert in the role of biofilms in chronic infections, with over 270 peer reviewed publications in the biofilm field. His research focuses on biofilm formation and the role of bacterial biofilm in chronic infections, both *in vitro*, animal models and *ex vivo* material from chronic infections. Bjarnsholt is interested as to how bacteria initiate biofilms in the human body and why the immune defense seems to fail both in the initial infection and later in the chronic infection. His research also seeks to develop tools and methods to enable fast diagnosis of these infections, for better treatment and possible prevention. For this, Bjarnsholt works in close collaboration with clinicians at most of the major hospitals in Denmark.

**Keynote speaker****Nov 14<sup>th</sup> 14:35-15:00****Jintao Liu (Onsite)**

Associate Professor

Tsinghua University, Beijing

**Essential phage component induces resistance of bacterial community**

Dr. Liu got bachelor's degree in physics from University of Science and Technology of China in 2004, got PhD in physics from University of Pittsburgh in 2011, did postdoctoral research at University of Pittsburgh between 2011-2012 and at University of California San Diego between 2012-2017. He became Principal Investigator at Tsinghua University in 2017. Dr. Liu and his team focus on developing new technologies to study bacterial biofilms, investigating their spatial and dynamical properties, and the implications for human health.

**Keynote speaker****Nov 14<sup>th</sup> 15:00-15:25****Claus Moser (Virtual)**

Professor

University of Copenhagen, Copenhagen

**Supportive treatment with S100A8/A9 and hyperbaric oxygen therapy of chronic wounds – experimental studies.**

For almost my entire clinical career as a medical doctor specialized in clinical microbiology, I have been involved with prevention, diagnosing and treating biofilm related infections. The focus has especially been within chronic *Pseudomonas aeruginosa* lung infections, chronic wounds and urinary tract infections, and not the least infective endocarditis. This includes clinical studies as well as experimental research and establishing relevant model systems. Our aim is and has been to better understand the pathogenesis of biofilms through analyses of the host response, as well as to identify novel treatment candidates to support and improve the antibiotic treatment of biofilm infections.

**Invited speaker****Nov 14<sup>th</sup> 15:25-15:40****Zhijun Song (Virtual)**

Clinical Associate Professor

University Hospital of Southern Denmark, Esbjerg, Denmark

**Diagnosis and treatment of urinary biofilm infections**

Zhijun Song, M.D., Ph.D., Chief physician, clinical associate professor and Ph.D. supervisor at Department of Clinical Microbiology, University Hospital of Southern Denmark. Previously professor of pathophysiology and immunopathology at Guangxi Medical University, China. He involved in the research area of bacterial biofilms since 1995; got Ph.D. from University of Copenhagen and did postdoctoral at Florida International University on biofilm infections. Dr. Song was a member of the organizing committee and session chair of the 8th European Biofilm Conference in June 2024. He has published more than 100 articles or book chapters.

**Keynote speaker****Nov 14<sup>th</sup> 15:55-16:20****Gordon Ramage (Virtual)**

Professor

University of Glasgow, Glasgow

**One step closer to uncertainty - diabetic foot ulcers, biofilms, antimicrobials and fungi?**

Professor Gordon Ramage, Ph.D., Programme Lead of MSc Oral Sciences, Chair of the ESCMID Study Group for Biofilms, Editor-in-Chief of Critical Reviews in Microbiology, University of Glasgow, Scotland, UK. Prof. Ramage is actively involved in collaborative projects with GlaxoSmithKline and other multinational industrial partners to establish and develop novel biofilm models that reflect both bacterial and fungal biofilms of the oral cavity, respiratory tract, and biomedical devices, which can be utilised for small molecule research.

**Keynote speaker****Nov 14<sup>th</sup> 16:20-16:45****Ute Römling (Virtual)**

Professor

Karolinska Institute, Stockholm

**Horizontally transferred cyclic GMP-AMP signaling network in *Escherichia coli* ECOR31 and physiological consequences**

Prof. Ute Römling is Professor of Medical Microbial Physiology at the Karolinska Institute, Stockholm, Sweden. Dr. Römling's long-standing research interest is the molecular and epidemiological analysis of biofilm formation in microorganisms with a certain focus on regulation by cyclic di-nucleotide second messenger signaling and implication of extracellular matrix production including microbial-host interactions. Another major long-standing research interest concerns the survival and persistence mechanisms of *Pseudomonas aeruginosa* clone C world-wide predominant in patients and aquatic habitats.



## Keynote speaker

Nov 14<sup>th</sup> 16:45-17:10

**Xin Deng (Onsite)**

Professor

City University of Hong Kong, Hong Kong



### **Global regulatory network in *Pseudomonas***

Xin Deng is Professor of Department of Biomedical Sciences at City University of Hong Kong. He is interested in bacterial virulence, including gene regulation, signalling pathways, and RNA epigenetics. His research lies on the interface of multi-disciplinary approaches with the ultimate goal of developing novel therapies to combat bacterial infection.

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## Keynote speaker

Nov 14<sup>th</sup> 17:10-17:35



**Mette Burmølle (Virtual)**

Professor

University of Copenhagen, Copenhagen

### **Interspecific interactions alter functionality and promote the key-stone species in a synthetic four-species community**

Mette Burmølle is Professor at Section for Microbiology, University of Copenhagen. Here, she heads the Biofilm Research Group, specialised in analysis of multispecies biofilms. Dr Burmølle's research aims to reveal the underlying mechanisms and functional impacts of interspecies interactions in biofilm communities. Diverse model systems are used, composed of bacterial isolates from the environment, industry and the clinic, ensuring the broad relevance and application potential of the findings.

**Invited speaker****Nov 14<sup>th</sup> 17:35-17:50****Thomas Seviour (Virtual)**

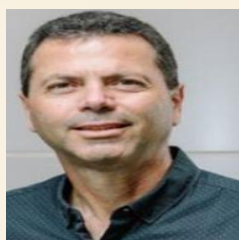
Associate Professor

Aarhus University, Aarhus



### **G-quadruplexes and extracellular RNA co-exist in *Pseudomonas* biofilm matrices**

Dr. Seviour helped build SCELSE's biofilm biophysics program on addressing fundamental questions in biofilm biology through the molecular basis of EPS. His discoveries of G-quadruplexes and eRNA as structural features of *Pseudomonas* biofilms drew attention to higher order extracellular nucleic acid structures in biofilm viscoelasticity and emergent properties. He subsequently joined Aarhus University and established the Biofilm Engineering and Sustainable Technologies Lab for delivering sustainable technologies to valorize and improve control of biofilms through an understanding of the matrix. Dr. Seviour firmly believes that the matrix is a key biological frontier, and that tackling it will create many biotechnological opportunities.

**Keynote speaker****Nov 15<sup>th</sup> 9:00-9:30****Mark Schembri (Onsite)**

Professor

University of Queensland, Brisbane

### **Uropathogenic *E. coli* biofilms**

I am a Research Group Leader at UQ and Deputy Director of the Australian Infectious Diseases Research Centre. The focus of my research is the study of uropathogenic *E. coli* (UPEC), the major cause of urinary tract infection and a leading cause of sepsis. My work examines the genetics, genomics and virulence of antibiotic resistant UPEC clones, and the role of cell-surface factors in UPEC adhesion, aggregation, biofilm formation and colonisation of the urinary tract. I have published >200 papers, including seminal research discoveries on the role of UPEC adhesins in disease, the evolution and pathogenesis of the antibiotic resistant UPEC ST131 clone, and UPEC biofilm dynamics. I am a founding Director of the UTI Global Alliance – an international society of clinical, research and biomedical professionals.

## Invited speaker

Nov 15<sup>th</sup> 9:30-10:00

### Zlatko Kopecki (Onsite)

Professor

University of South Australia, Adelaide



## Advanced approaches for management of bacterial biofilm wound infections

Dr. Kopecki is a past NHMRC ECR Fellow, inaugural Future Industries Institute (FII) Foundation Fellow, and a current Mid-Career Fellow in Childhood Wound Infections at UniSA. His research integrates cell therapy and biomaterials to develop frontier technologies for improved wound care. His translational research integrates industry partners to develop a therapy with broad implications for millions of Australians suffering from impaired healing and wound infection. Dr. Kopecki's transdisciplinary approaches to therapy development using preclinical models of acute and biofilm wound infection provide a platform for testing novel wound dressings and pharmacological and material delivery systems hence providing translational outcomes and a clear pathway towards clinical trials.

## Invited speaker

Nov 15<sup>th</sup> 10:00-10:30



### Katharina Richter (Virtual)

Funded Research Fellow

The University of Adelaide, Adelaide

## New weapons against superbugs

The rise of antibiotic-resistant bacteria, so called 'superbugs', is one of the greatest threats to human health. If we fail to rapidly create new ways to fight superbugs, 10 million people are projected to die every year by 2050. Dr Katharina Richter and her team develop new treatments to join the war on superbugs, pursuing the goal to bring innovations from the lab to real-life applications. Amongst them, shooting lasers and cold plasma technology at bacteria and feeding them a "toxic cocktail". These innovations may become essential weapons for our arsenal against superbugs and therefore save lives.



## Invited speaker

Nov 15<sup>th</sup> 10:45-11:15

### Mark Willcox (Onsite)

Professor

The University of New South Wales, Sydney

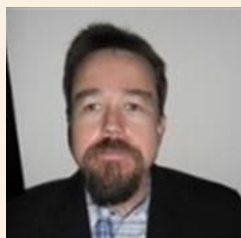


### Control of ocular bacterial biofilms by antimicrobial peptides

I am a medical microbiologist who has worked for many years in the area of contact lenses and the ocular surface. My laboratory focuses on development of drug delivery contact lenses and novel antimicrobials that have applications as antibiotics and disinfectants. We also develop new antimicrobial coatings that can be used to coat contact lenses and so reduce infections and inflammation during contact lens wear. We have taken several of these through to pre-clinical testing, and antimicrobial contact lenses through to Phase III clinical trials. My research studies have led to the publication of 15 patents and over 570 peer reviewed papers. I have trained over 30 post-doctoral scientists and 72 post-graduate (PhD) students. I am currently supervising 2 associate professors, 1 senior lecturer, 1 lecturer and 8 post-doctoral scientists. I currently supervise 28 PhD students.

## Invited speaker

Nov 15<sup>th</sup> 11:15-11:40



### Peter Kingshott (Virtual)

Professor

Swinburne University of Technology, Melbourne

### Manipulating bacteria-material interactions with complex surfaces

Peter is Professor in The Department of Chemistry and Biochemistry at Swinburne University of Technology in Melbourne. He is also Deputy Director of the ARC Industrial Training Centre in Surface Engineering for Advanced Materials. His research has a strong emphasis on controlling the interfacial interactions of biological materials with advanced material surfaces. Application areas include medical implants, infection control, tissue engineering and regenerative medicine, and industrial biofouling. He has published over 200 papers and has a H-Index of 55 and ~11,000 citations. His research has also included a focus on developing surfaces for industrial applications where he has 10 patents. He has also been awarded over \$30M in research income over his career.

## Invited speaker

Nov 15<sup>th</sup> 11:40-12:00

### Heema Vyas (Onsite)

Post Doctoral Research Associate

The University of Adelaide, Australian



### Power of plasma-activated water: a novel anti-biofilm tool

Dr Heema Vyas completed her PhD at the University of Wollongong in 2021. Shortly after earning her PhD, Heema took on a Post-Doctoral Research position at the University of Sydney (Faculty of Engineering, 2021-2024). Recently, Heema has commenced a new Post-Doctoral Research role at the University of Adelaide (July, 2024) in the team led by Dr Katharina Richter. Here, Heema continues her research in the PAW-biofilm space. In addition to her research, Heema is dedicated to advancing the field of microbiology and biofilms, which has led her to establish and lead the Biofilm Special Interest Group within the Australian Society for Microbiology.

## Invited speaker

Nov 15<sup>th</sup> 12:00-12:25



### Simon Swift (Virtual)

Associate Professor

University of Auckland, Auckland

### Bovine lactoferrin enhances antibiotic killing of *Staphylococcus aureus* biofilms.

Simon Swift is Associate Professor of Microbiology and Infectious Disease at Waipapa Taumata Rau the University of Auckland. He obtained a BSc(hons) and PhD from Nottingham University, UK specialising in food microbiology. As a postdoctoral scientist he was involved in research on quorum sensing and then microbial iron acquisition. He moved to Auckland in 2001 and has since been involved in research investigating biocides, biofilms and extracellular vesicles. He is part of a multidisciplinary group investigating bone infections, and particularly those involving *Staphylococcus aureus*.

## Keynote speaker

Nov 15<sup>th</sup> 14:00-14:30

**Anton Peleg (Onsite)**

Professor

Monash University, Melbourne



### **Biofilms in ventricular assist device driveline infections: current understanding and perspective**

Anton is a Professor of Infectious Diseases and Microbiology, and is the Director of the Department of Infectious Diseases at The Alfred Hospital and Central Clinical School, Monash University. He completed his infectious diseases clinical training in Australia in 2005 and then went to the USA for four years and worked at the Harvard-affiliated hospitals: Beth Israel Deaconess Medical Center and Massachusetts General Hospital. He completed a Masters of Public Health at Harvard School of Public Health, and also completed a Ph.D. in Infectious Diseases and Microbiology. His research interests are in hospital-acquired infections, antibiotic resistance, mechanisms of pathogenesis and infections in immunocompromised hosts. He is also an active clinician working in the area of hospital-acquired infections and transplant infectious diseases.

## Invited speaker

Nov 15<sup>th</sup> 14:30-15:00



**Yue Qu (Onsite)**

Senior Research Fellow

Monash University, Melbourne

### **Our biofilm journey in RVVC**

Dr. Qu is a senior research fellow at the Department of Infectious Diseases of the Alfred Hospital and the Department of Microbiology at Monash University. Since 2010, Qu has published over 60 research papers in leading medical journals including Journal of Heart and Lung Transplantation and Chemistry Society Reviews and several book chapters. Over the last five years, he received more than A\$3.5 M funding. He was elected as the fellow of Australian Society for Microbiology in 2023 and appointed as the associate theme leader of Clinical Microbiology by ASM in 2024. He is also the Director of Operations for the Monash-WMU Alliance in Clinical and Experimental Biomedicine and an Australian National Fabrication Facilities VIC Technology Fellow and Ambassador.



**Invited speaker****Nov 15<sup>th</sup> 15:00-15:30****Michael Radzieta (Onsite)**

Research Fellow

Western Sydney University, Sydney

**Biofilms in chronic wounds and the use of non-medicated wound dressings**

Michael Radzieta is a Postdoctoral Research Associate at Western Sydney University working in Prof Slade Jensen's lab. Based at the Ingham Institute for Applied Medical Research, his area of research has focused primarily on chronic wounds, with particular focus on diabetic related foot ulcers. He received his PhD in 2019 for his work on novel antimicrobials and antibiotic resistance in clinically relevant bacterial pathogens. He then started a postdoc working for the South West Sydney Limb Preservation and Wound Research academic unit in which he studied the role of biofilm and the microbiome in chronic wounds. Currently, he is working as a postdoc on a CRC-P funded project to discover novel mechanisms to identify biofilm within chronic wounds in order to improve patient treatments and outcomes.

**Invited speaker****Nov 15<sup>th</sup> 15:30-16:00****Freya Harrison (Virtual)**

Associate Professor

University of Warwick, Coventry

**A new model of endotracheal tube biofilm for basic research and antimicrobial drug discovery**

I am a microbiologist with a longstanding interest in chronic, polymicrobial biofilm infections - primarily in the respiratory tract and in non-healing wounds. I lead a group that works to design and build laboratory platforms for growing biofilms in conditions that mimic the infected host as accurately as possible, while remaining tractable and cheap. We investigate how the microbes in these environments are able to become so resistant to antibiotics, and we collaborate with colleagues in the the UK and around the world to test potential new treatments in these models.

**Invited speaker****Nov 15<sup>th</sup> 14:30-15:00****Yingfei Ma (Onsite)**

Professor

Shenzhen Institutes of Advanced Technology, Shenzhen

**Phage synthetic biology and phage therapy**

Dr. Ma Yingfei, PhD, Professor, Institute of Synthetic Biology, Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences. His laboratory mainly focuses on phage synthetic biology and phage therapy. His researches have been published in the journals Cell Host Microbe (2023), Nucleic Acids Res (2022,2023), mSystems (2023), Nat Commun (2022), Microbiome (2018), J Virol (2018), etc. as correspondence/first author. As the project leader, he undertook the grants of NSFC, the key research and development subject of the Ministry of Science and Technology, Shenzhen Peacock Team, etc.

**Invited speaker****Nov 15<sup>th</sup> 15:00-15:30****Liang Yang (Onsite)**

Professor

Southern University of Science and Technology, Shenzhen

**Adaptive evolution of bacterial pathogen *Pseudomonas aeruginosa* against bacterial phages**

Dr. Yang did postdoc training in Technical University of Denmark and University of Hamburg (Germany) from 2010 to 2011. Dr. Yang joined Nanyang Technological University (NTU, Singapore) as an Assistant Professor in 2012 and was promoted as an Associated Professor (with tenure) in Feb 2018. Dr. Yang was appointed as the Assistant Chair in the School of Biological Sciences and the Deputy Research Director of the Public Health Cluster in Singapore Centre for Environment Life Science Engineering (SCELSSE) in NTU.

**Invited speaker****Nov 15<sup>th</sup> 15:30-16:00****Xiaoxue Wang & Yunxue Guo (Onsite)**

Professor

South China Sea Institute of Oceanology, Guangzhou

**Host-phage interaction mediated by prophage-encoded toxin/antitoxin systems**

Dr. Guo's study focuses on the phage-host interactions, and have delved into the intricate mechanisms governing bacteriophage activities within microbial communities, particularly in biofilm environments. His recent research has involved in the critical role of filamentous bacteriophages (Pf) in biofilm formation and virulence in *Pseudomonas aeruginosa*. By studying the Pf4 and Pf6 prophages, he has uncovered novel functions of toxin-antitoxin (TA) systems encoded by these prophages, shedding light on their impact on phage production, defense against lytic phages, and phage genome dynamics, expanding our understanding of phage biology and its influence on microbial community dynamics within biofilms. His research has been published in Nature Communications, Cell Reports, Nucleic Acids Research, Environmental Microbiology, and Journal of Bacteriology.

**Invited speaker****Nov 15<sup>th</sup> 16:00-16:30****Haihua Liang (Onsite)**

Professor

Southern University of Science and Technology, Shenzhen

**A dual-functional bacteriophage protein Dap1 regulates bacterial biofilm and evades Lon protease-mediated anti-phage immunity**

Dr. Haihua Liang is a professor in the School of Medicine at the Southern University of Science and Technology. He earned his BSc from JiangXi Agricultural University in 2003 and his PhD from Northwest University in 2009. He worked with Chuan He at The University of Chicago from 2011 to 2014. Prior to SUSTech, he was a full professor in Department of Life Sciences at Northwest University. Dr. Liang's research focuses on microbial functional genomics and the interactions between pathogen and phage. He is an associate editor of Microbial cell factories and Microorganisms.



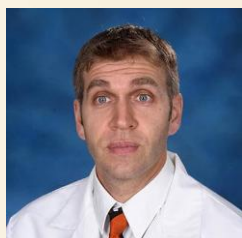
**Invited speaker****Nov 15<sup>th</sup> 16:30-16:45****Yanrui Ye (Onsite)**

Associate Professor

South China University of Technology, Guangzhou

**Genome editing and synthesis of *Pseudomonas aeruginosa* phages**

Yanrui Ye has long been engaged in research in the fields of microbiology, synthetic biology and enzyme engineering, including bacterial/phage genome synthesis and editing, development of targeted antimicrobial biomolecules, and construction and application of highly efficient biocatalysts, etc. The technologies and products that he has developed and constructed have been mainly applied in the fields of food, agriculture, and medicine. He has guided the International Genetically Engineered Machine Competition (iGEM) gold and silver awards for many times. He has presided over a number of scientific research projects, such as the National Natural Science Youth Foundation of China, the Natural Science Foundation of Guangdong Province, the sub-themes of the National Key Research and Development Program, and the sub-themes of the Guangdong Province's major projects on basic and applied basic research.

**Invited speaker****Nov 15<sup>th</sup> 16:45-17:00****James Doub & Guangchao Yu (Onsite)**

Assistant Professor

University of Maryland, Baltimore

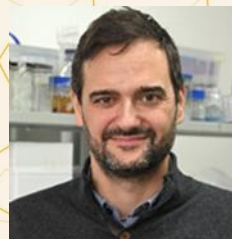
**Bacteriophage activity in synovial fluid and against synovial fluid induced bacterial aggregates**

Dr. Doub's research interest is focused on clinical and translational surgical infectious diseases research with specific interest in Musculoskeletal infectious diseases (MSK ID). His interest in this aspect of infectious disease started when I was in fellowship at the University of Maryland. He subsequently joined as faculty at the University of Maryland to further conduct clinical and translational research in surgical infections. Over the past six years he has started to test novel therapeutics in the treatment of prosthetic joint infections. Moreover, He is the PI on a multicenter prosthetic joint infection clinical trial using adjuvant phage therapy that starts in 2022.

**Keynote speaker****Nov 16<sup>th</sup> 9:00-9:25****Nuno Azevedo (Onsite)**

Associate Professor

University of Porto, Porto

**Modulation of multispecies biofilms employing antisense oligonucleotides**

Nuno Filipe Azevedo is an Associate Professor at the Faculty of Engineering of the University of Porto after carrying out studies at the University of Minho and the University of Southampton. His main research interests include exploring the potential of nucleic acid mimics for the characterization and modulation of multispecies biofilms. He has been invited to more than 40 oral presentations in national and international conferences and is regularly part of the scientific advisory committee of international conferences (e.g. Eurobiofilms 2024, XVth SPLC-CRS 2024). Recently, he was the main proposer of the funded ERA-CHAIR European Project e. Biofilm, a project that aims at the creation of a Group of Excellence in Engineered Biofilms.

**Invited speaker****Nov 16<sup>th</sup> 9:25-9:40****Jianxiong Hao (Onsite)**

Professor

Hebei University of Science and Technology, Shijiazhuang

**Mechanism of acid and alkali electrolyzed water on the elimination of  
*Listeria monocytogenes* biofilm based on proteomic analysis**

Educational Background: 1999.9-2003.6 Hebei University of Science and Technology, Bachelor of Engineering; 2003.9-2006.6 China Agriculture University, Master of Engineering; 2008.9-2011.6 China Agriculture University, Doctor of Engineering; Research Areas: 1) Storage and processing of fruits and vegetables; 2) Food safety.

**Invited speaker****Nov 16<sup>th</sup> 9:40-9:55****Qingping Zhong (Onsite)**

Professor

South China Agricultural University, Guangzhou

**Effects of lactic acid bacteria as quorum sensing inhibitors on biofilms of foodborne pathogens**

Professor, doctoral supervisor, renowned teacher at South China Agricultural University, former Vice Dean of College of Food Science, expert in compiling guidelines of the national key research and development project, executive director of Guangzhou Microbiology Society, and guest editor of Foods. Reviewers for Critical Reviews in Food Science and Nutrition, Food Research International, etc. Mainly engaged in teaching and research on food microbiology, food safety and nutrition, and food bioengineering, and has led and participated in a number of national, and provincial research projects. Won one second prize for provincial scientific and technological invention, one third prize for provincial scientific and technological progress, and six teaching achievement awards. Published over 170 papers, authored 11 academic books and textbooks, and applied for nearly 20 patents.

**Invited speaker****Nov 16<sup>th</sup> 9:55-10:10****Qingli Dong (Onsite)**

Professor

University of Shanghai for Science and Technology, Shanghai

**Progress of *Listeria monocytogenes* biofilm risk**

Dr. Qingli Dong is mainly studying on predictive food microbiology and its application on the quantitative microbiological risk assessment (QMRA), and he is a member of FAO/WHO JEMRA, International Conference on Predictive Modelling in Foods (ICPMF) board member, National Food Safety Risk Assessment Commission by the National Health Commission (NHC) of P. R. China. Dr. Dong is in the editor board of some journals such as Food Microbiology, Food Science and Human Wellness, Journal of Future Foods, and Food Science of Animal Products. Dr. Dong has published over 350 papers, and reviewed over 1500 manuscripts for over 50 international or Chinese journals.



**Invited speaker****Nov 16<sup>th</sup> 10:10-10:25****Chunlei Shi (Onsite)**

Professor

Shanghai Jiaotong University, Shanghai

**Identification of molecular targets of JX08806 as antibiofilm against *Staphylococcus aureus***

Dr. Shi received her B.S. on Food Science at Huazhong Agricultural University in 1999, and her Ph.D. on Biotechnology at Shanghai Jiao Tong University in 2006. Since then, she has worked in Department of Food Sci & Tech, Shanghai Jiao Tong University. And she was offered a position of Professor in Food Science in 2016. She has been a visiting postdoc at Martin Wiedmann's lab of Department of Food Science, Cornell University from 2011 to 2012. Her research interests focus on the prevalence, persistence and antimicrobial resistance of foodborne pathogenic bacteria on food chain. She has presided over twenty research projects, including 2 from National Key R&D Program of China and 5 from National Science Foundation of China. She has published 142 papers (93 papers were SCI indexed), and participated in compiling 8 books. She has been issued 18 patents.

**Invited speaker****Nov 16<sup>th</sup> 10:25-10:40****Xin Wang (Onsite)**

Professor

Northwest Agriculture and Forestry University, Xianyang

**Characterization of *Pseudomonas* spp. contamination and in situ spoilage potential in pasteurized milk production process**

Dr. Wang is a professor in the College of Food Science and Engineering, Northwest Agriculture and Forestry University. He is a member of the Chinese Society for Microbiology and the American Society for Microbiology. Dr. Wang's scientific interests: molecular prevalence, biofilms, pathogenic mechanisms of pathogenic microorganisms such as *Staphylococcus aureus*, *Listeria monocytogenes*, *Bacillus sporothermodurans* and *Escherichia coli* and their stress response mechanisms during food processing, poisoning mechanisms of *Staphylococcus aureus* and *Bacillus sporothermodurans* and their pathogenic mechanisms of heatstable toxins and their rapid detection.

## Invited speaker

Nov 16<sup>th</sup> 10:55-11:10

**Honghua Hu (Onsite)**

Research Fellow

Zhejiang University, Jinhua



### **Dry surface biofilm study: an underestimated concern for microbial contamination**

Dr. Hu obtained her PhD in molecular microbiology at the University of Sydney in 2005. Dr. Hu has dedicated her research to exploring the complexities of biofilms in chronic infections, medical devices, and dry surfaces within the hospital environment. Her research has resulted in 89 SCI scientific publications, an H index of 29 with 2905 citations, and 38 patent citations on the Web of Science.

## Invited speaker

Nov 16<sup>th</sup> 11:10-11:25



**Yu Ding (Onsite)**

Professor

Jinan University, Guangzhou

### **High-throughput, rapid, and non-destructive detection of common foodborne pathogens via hyperspectral imaging coupled with deep neural networks and support vector machines**

Dr. Yu Ding is a professor in Department of Food Science and Technology, College of Science & Engineering, Jinan University. He had obtained his Ph.D. degree at the Chinese University of Hong Kong. He enrolled into the National Talent Support Program, and is the PI of National Key R & D Program of China. He is a member of the Third Youth Committee of Chinese Institute of Food Science and Technology and Vice Secretary General of Guangdong Edible Fungi Association. The main research directions of Dr. Ding are food microbiological safety, plant derived functional food, etc.

**Invited speaker****Nov 16<sup>th</sup> 11:25-11:40****Junyan Liu (Onsite)**

Associate Professor

Zhongkai University of Agriculture and Engineering, Guangzhou

**Viable but nonculturable (VBNC) state: an underestimated microbial survival strategy**

Dr. Junyan Liu is an associate professor in Zhongkai University of Agriculture and Engineering, distinguished visiting professor in Rajamangala University of Technology Phra Nakhon, and adjunct associate professor in National Institute of Fundamental Studies. She has been a postdoc in University of Maryland-College Park, USA. She has published over 60 SCI papers as first or correspondence author, with 3 ESI high citation papers, total IF of 300. She has been funded by the National Natural Science Foundation of China and has awarded Young S&T Talent of Guangdong Province and Guangzhou City. The major research field of Dr. Liu is microbial behavior (Biofilms, VBNC state, Polymicrobial interaction) and safety control.

**Invited speaker****Nov 16<sup>th</sup> 11:40-11:55****Mingming Guo (Onsite)**

Professor

Zhejiang University, Hangzhou

**Modification of cationic antimicrobial peptides and mechanism of antibacterial action at the single-molecule level**

Dr. Mingming Guo, a researcher and Ph.D. supervisor under Zhejiang University's "Hundred Talents Program". The primary research focuses on the Microbiological safety control technology of agricultural products, as well as food active and intelligent packaging. Over the past five years, Dr. Guo has led several significant research projects, including those funded by the National Natural Science Foundation of China, the Zhejiang Province Outstanding Youth Natural Science Foundation, and sub-projects of the National Key R&D Program. As first author or corresponding author, Dr. Guo has published 26 high-quality SCI academic papers in internationally renowned journals such as Advanced Science.



**Invited speaker****Nov 16<sup>th</sup> 11:55-12:10****Jun Yan (Onsite)**

Research Assistant

Shanghai Ocean University, Shanghai

**Role of bpfA in adhesion and biofilm formation of *Shewanella putrefaciens* CN32 under cold stress: a comprehensive transcriptomic analysis**

Dr Yan's current research interests include seafood storage and preservation, dairy product safety and quality control, and the adaptation of foodborne pathogens and spoilage organisms under environmental stresses. He has published over 20 peer-reviewed articles in leading journals such as Trends in Food Science & Technology, Food Research International, Journal of Agricultural and Food Chemistry. Additionally, he serves as a young editorial board member of the journal Food Science and Human Wellness and a special issue editor of the journal Foods. He has received six project grants from government agencies and industry. His work has provided the theoretical basis and technical support for microbiological control and product development in the aquatic and dairy industries.

**Invited speaker****Nov 16<sup>th</sup> 12:10-12:25****Rongrong He (Onsite)**

Associate Professor

Hainan University, Haikou

**Study on inhibitory mechanism of linalool against *Listeria monocytogenes***

Rongrong He, Doctor of engineering, associate professor, Class E talents of Hainan Free Trade Port. The research interests mainly include processing and preservation of tropical agricultural products, and microbial defense and control based on omics technology. In the past five years, she has published 13 academic papers, including 10 SCI papers. Participated in 2 national projects, 1 Hainan Provincial Natural Science Foundation project, and 2 other projects.

**Keynote speaker****Nov 16<sup>th</sup> 14:00-14:25****Manuel Simões (Virtual)**

Associate Professor

University of Porto, Porto

**How chemicals of emerging concern are affecting microbial communities**

Manuel Simões is Associate Professor with Habilitation of the Faculty of Engineering of the University of Porto and a senior researcher in the Laboratory for Process Engineering, Environment, Biotechnology and Energy (LEPABE). He is Deputy Editor-in-Chief for Journal of Applied Microbiology, Section Editor-in-Chief for Antibiotics journal, Assistant Editor for Biofouling: The Journal of Bioadhesion and Biofilm Research (the oldest journal on biofilm research). His main research interests are focused on the mechanisms of biofilm formation and their control with antimicrobial agents, particularly using new antimicrobial molecules. Since 2020 he has been among the restricted number of Portuguese researchers recognized by the Web of Science/Clarivate Analytics as a highly cited researcher, recognizing the exceptional research influence demonstrated by the production of multiple highly-cited papers.

**Invited speaker****Nov 16<sup>th</sup> 14:25-14:40****Xiaodong Xia (Onsite)**

Professor

Dalian Polytechnic University, Dalian

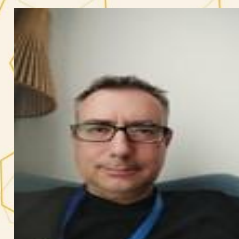
**The role of *rcpA* gene in regulating biofilm formation and virulence in *Vibrio parahaemolyticus***

Dr. Xia's research mainly focuses on stress tolerance in foodborne pathogens and microbial control technologies, the interaction among food, gut microbiota and health, and health benefits and antimicrobial potential of natural compounds. He has published more than 170 articles in journals including iMeta, Journal of Advanced Research, and Cancer Research. He serves as associate editor for Frontiers in Microbiology and editorial board member for Food Research International. He has been awarded as New Century Talent by Ministry of Education. He has obtained more than 20 extramural funding from governmental agencies and industry.

**Invited speaker****Nov 16<sup>th</sup> 14:40-14:55****Efstathios Giaouris (Virtual)**

Associate Professor

University of the Aegean, Mytilini



**Investigating the potential of L (+)-lactic acid as a green inhibitor and eradicator of a dual-species *Campylobacter* spp. Biofilm formed on food processing model surfaces**

Dr. Giaouris has a Ph.D. in Agricultural Sciences from the Agricultural University of Athens and is currently an Associate Professor in Food Microbiology at the Department of Food Science and Nutrition at the University of the Aegean. He has published more than 60 scientific articles (h-index = 27, Scopus), 9 chapters in international collective volumes, and has announced his work more than 100 times in conferences and workshops. His research focuses on pathogenic bacterial biofilms, especially in terms of the risk of this inherent microbial lifestyle for food hygiene and safety, and their control using novel, cost-efficient, and sustainable methods.

**Invited speaker****Nov 16<sup>th</sup> 14:55-15:10****Yingwang Ye (Onsite)**

Professor

Hefei University of Technology, Hefei

**Platinum-based fluorescent nanozyme-driven “loong frolic pearls” multifunctional nanoplatform for ultrasensitive detection and synergistic sterilization of *Burkholderia gladioli***

Dr. Ye is a professor in Hefei University of Technology, Anhui province, China. He had received doctoral degree from South China Sea Institute of Oceanology, Chinese Academy of Sciences and Institute of Microbiology, Guangdong Academy of Sciences in 2009. His major research field include detection and biosensor, safety control, microbial biofilm of foodborne pathogens. Prof. Ye has published over 100 manuscripts as first or correspondence author. He was awarded the Outstanding Youth Award by the Chinese Society of Food Science and Technology, the first prize for scientific and technological progress by the China Light Industry Federation.



**Invited speaker****Nov 16<sup>th</sup> 15:10-15:25****Huhu Wang (Onsite)**

Professor

Nanjing Agricultural University, Nanjing


**Regulation of non-coding small RNA named SaaS in biofilm formation and virulence of *Salmonella***

His research interests focused on meat processing and quality control, and he is a regular researcher of the State Key Laboratory of Meat Quality Control and Cultured Meat Development. He presided over 13 research projects such as the National Natural Science Foundation and the sub-projects of the "14th Five-Year Plan" key research and development Plan, and 11 enterprise cooperation projects. He has published 61 SCI papers on famous journal including *Gut Microbes*, and *Journal of Advanced Research* as the first/corresponding author. And he also served as the deputy chairman of the Youth Committee of Jiangsu Society of Food Science and Technology, the editorial board of "LWT" and "Food Science of Animal Products".

**Invited speaker****Nov 16<sup>th</sup> 15:25-15:40****Xiudong Xia (Onsite)**

Professor

Jiangsu University, Zhenjiang

**Valorization of soy whey through synthetic biology**

Microbial cell factories could produce 70% of global goods, but high medium costs limit their application. Soy whey, a nutrient-rich by-product of soybean processing, is often wasted. To repurpose soy whey, we engineered *Escherichia coli* to utilize its carbohydrates and developed a cost-effective auto-induction system using soy whey-derived galactose. This system achieved a 96% conversion rate of soy whey to (*S*)-equol, a valuable isoflavone metabolite. Separately, we produced medium-chain fatty acids at a record yield of 16.42 g/L, while reducing medium costs by 88%. This approach offers a sustainable route for producing high-value natural products.

## Keynote speaker

Nov 16<sup>th</sup> 15:55-16:20

### Romain Briandet (Virtual)

Research Director

University of Paris-Saclay, Paris



## Unlocking the potential of biofilm properties in beneficial microbes for One Health advancements

Romain Briandet is a researcher specialising in microbial biofilms, intricate microbial communities found in diverse environments, including farm and food processing surfaces. His work aims to elucidate biofilm structure and emerging properties, especially concerning food safety and public health. Key research areas include investigating biofilm dynamics through advanced imaging, understanding biofilm tolerance to antimicrobials, and developing innovative control strategies like positive biofilms to protect surfaces from unwanted microorganisms.

## Invited speaker

Nov 16<sup>th</sup> 16:20-16:35



### Jingyu Chen (Onsite)

Professor

China Agricultural University, Beijing

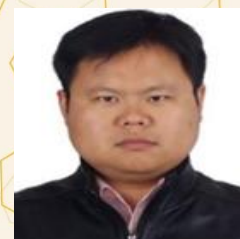
## Role of stringent response factors in response to environmental stress in *Yersinia enterocolitica*

Professor, College of Food Science and Nutritional Engineering, China Agricultural University. She is an executive member of the Beijing Society for Microbiology, an executive member of the Beijing Society for Food Science. She has published more than 110 peer-reviewed journal publications, including more than 60 SCI-indexed papers, and holds 14 invention patents. Her research mainly focuses on the adaptive responses of food-borne pathogens and the design of microbial cell factories. Her research has been funded by National Natural Science Foundation of China, National Key R&D Program of China, Specialized Research Fund for the Doctoral Program of Higher Education, Beijing Natural Science Foundation, etc.

**Invited speaker****Nov 16<sup>th</sup> 16:35-16:50****Yong Chen (Onsite)**

Professor

Nanjing Tech University, Nanjing

**Research and application of key technologies for enhancing biological reaction processes based on cell aggregation effects**

Dr. Chen serves as the deputy director of National Engineering Research Center for Biotechnology. His main focus is on the development of continuous fermentation and catalytic technology principles based on microbial population effects, as well as their industrial applications. As a project leader, he has undertaken several national-level projects, including the National Science and Technology Support Program, the National Key Research and Development Program, etc. He has published 37 papers as the first or corresponding author and has applied for over one hundred patents. He has received multiple national and provincial scientific and technological awards. Additionally, he has been recognized as a national-level candidate in the "The new century talents project", Jiangsu Outstanding Youth Fund and Jiangsu Province Youth Science and Technology Award.

**Invited speaker****Nov 16<sup>th</sup> 16:50-17:05****Su Ma & Yulong Tan (Onsite)**

Professor

Shandong Univ. &amp; Qingdao Agricultural Univ., Qingdao

**Screening of foodborne active components based on quorum sensing and its effect on *Streptococcus mutans* biofilm and its mechanism**

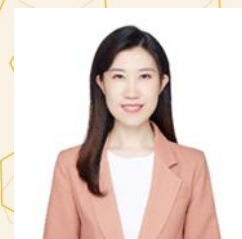
Prof. Tan worked for Katholieke Universiteit Leuven, Medical University of Vienna, University of Natural Resources and Life Sciences. Since 2021, he has been employed as a full professor at Qingdao Agricultural University. His research interest is food safety and antibiofilm efficacy of compound and biomaterial, fungal/bacterial polymicrobial infection and anti-infection efficacy of compound and biomaterial. He presides over Natural Science Foundation of Shandong Province grant for Distinguished Young Scholars (2023), and was awarded 2019 Top 10 leading Chinese Talents for Science and Technology in Europe and 2021 Young Taishan Scholar of Shandong Province.



**Invited speaker****Nov 16<sup>th</sup> 17:05-17:20****Xinyi Pang (Onsite)**

Associate professor

Nanjing University of Finance and Economics, Nanjing

**Combating biofilms of foodborne pathogens with bacteriocins by lactic acid bacteria in the food industry**

Xinyi Pang received her Ph.D. from National University of Singapore. She is mainly engaged in the research of stress response mechanisms of foodborne pathogens, biofilm formation and intervention strategies. She has undertaken the National Natural Science Foundation Youth Fund, the Jiangsu Academy of Agricultural Sciences Independent Innovation Project, the Jiangsu Provincial Department of Education College General Project, and the Jiangsu Province Double Innovation Doctor in 2020. She has published more than 10 papers as the first or corresponding author in journals such as Comprehensive Reviews in Food Science and Technology, Food Control, Food Microbiology, and International Journal of Food Microbiology.

**Invited speaker****Nov 16<sup>th</sup> 17:20-17:35****Yue Ma (Onsite)**

Associate Professor

University of Shanghai for Science and Technology, Shanghai

**Strategies of developing food contact materials with antibiofilm function**

Dr. Yue Ma is an associated professor and master's supervisor at the University of Shanghai for Science and Technology (USST). She earned her bachelor's degree in textile science and engineering from Donghua University in 2016. Then, she studied at the University of California, Davis, USA, and received her master's degree in textiles and Ph.D. degree in biological system engineering in 2018 and 2021, respectively. Dr. Ma has published 14 SCI papers as the first author or corresponding author. Her research is focus on the development of antimicrobial polymeric materials and the application on food, medical, and textile areas, mainly supported by the Natural Science Foundation of China (NSFC), Shanghai Municipal Natural Science, and Shanghai Municipal Education Commission.

**Invited speaker****Nov 16<sup>th</sup> 17:35-17:50****Danielle Duanis-Assaf (Virtual)**

Researcher

Volcani Center, Rishon LeZion

**From raw ingredients to product-*Salmonella* survival during chocolate production**

Danielle is a food technologist and microbiologist. She finished her B.Sc. with honors at the Hebrew University and continued to direct track for PhD investigating microbial interaction during biofilm formation. Danielle was a postdoctoral fellow at the Department of Postharvest Science, Volcani Center. Danielle's research focused on developing new eco-friendly alternatives to chemical fungicides. In the last year, Danielle has been the head of the Microbial Food Safety Laboratory at the Food Science Department, Volcani Center. Danielle's research focuses on bacterial defense and survival mechanisms in complex food environments along the supply chain.

**Keynote speaker****Nov 16<sup>th</sup> 8:45-9:10****Ruifu Yang (Onsite)**

Professor

Beijing Institute of Microbiology and Epidemiology, Beijing

**Acquisition of biofilm-producing capability made *Yersinia pestis* a flea-transmitted pathogen**

Dr. Ruifu Yang is a professor at the Beijing Institute of Microbiology and Epidemiology, focusing on bacterial pathogenesis using genomics- and proteomics-based techniques. Graduated in 1985 from Hebei medical university with a bachelor degree of medicine, he continued his study in Beijing institute of microbiology and epidemiology with getting a master degree of science and later he also got his Ph.D. degree in this institute. His research concentrations at present are host-bacterial pathogen interaction, pathogenesis evolution by comparative genomics and development of rapid diagnostic assays. His prior research at the Institute, where he served as assistant and associate professor prior to his promotion, was on the use of molecular techniques to detect and identify medically important microorganisms and on Legionella. In 1996, he was also visiting professor at Gifu University in Japan.

**Keynote speaker****Nov 16<sup>th</sup> 9:10-9:35****Boo Shan Tseng (Onsite)**

Associate Professor

University of Nevada, Las Vegas

**Revealing the heterogeneity of *Pseudomonas aeruginosa* biofilms using single-cell probe-based RNA-sequencing**

Dr. Boo Shan Tseng is an Associate Professor and the Graduate Coordinator in the School of Life Sciences at the University of Nevada Las Vegas (UNLV). She received her BS from MIT in 2003 and her PhD from Rockefeller University in 2010 working under Dr. Hironori Funabiki on eukaryotic chromosome segregation. Dr. Tseng transitioned to studying *Pseudomonas aeruginosa* biofilms as a postdoctoral fellow with Dr. Matthew R. Parsek at the University of Washington. She started her faculty position at UNLV in 2016. The Tseng lab mainly focuses on biofilm physiology and envelope stress response in *Pseudomonas aeruginosa*.

**Invited speaker****Nov 16<sup>th</sup> 9:35-9:50****Rikke Meyer (Virtual)**

Professor

Aarhus University, Aarhus

**Extracellular DNA: A multifunctional biofilm component**

Rikke Louise Meyer is Professor at the Interdisciplinary Nanoscience Center (iNANO) at Aarhus University, Denmark, where she established her research group in 2005. Her research combines microbiology and nanoscience in the pursuit to understand the mechanisms of bacterial attachment and biofilm formation. She uses this knowledge to develop new strategies for biofilm control in collaboration with industry – either through development of new materials, discovery of new antibiotics, or targeted delivery of antimicrobial therapies.



**Invited speaker****Nov 16<sup>th</sup> 9:50-10:05****Hideyuki Kanematsu (Virtual)**

Professor

National Institute of Technology, Tokyo

**Antibiofilm coating and its evaluation methods by ISO.**

Dr. Hideyuki Kanematsu is particularly interested in biofilms on materials' surfaces as materials scientist. He was awarded the Minister of Education, Culture, Sports, Science and Technology Award for his Outstanding Career and is an NASF Scientific Achievement Award Winner. Since November 2020, he worked as a guest professor for Nagoya University of Tokai National Higher Education and Research System. At the end of March 2021, he retired from NIT (KOSEN), Suzuka College, and became a Professor Emeritus of NIT, Suzuka College at the beginning of April 2021. At the same time, he became a Specially Appointed Professor to continue the GEAR 5.0 Materials Science project as the unit leader. Now his concern for the research activity is how to measure and also control the infectious capability of materials' surfaces.

**Invited speaker****Nov 16<sup>th</sup> 10:05-10:20****Lichuan Gu & Kundi Zhang (Onsite)**

Professor

Shandong University, Qingdao

**LasA from *Pseudomonas aeruginosa* selectively disrupts *Gardnerella vaginalis* biofilm**

In a study addressing bacterial vaginosis (BV), caused by *Gardnerella vaginalis*, we discovered that LasA, an elastase from *Pseudomonas aeruginosa*, effectively disrupts *G. vaginalis* biofilms and eradicates entrapped bacteria, outperforming antibiotics and lysozyme. LasA also shows probiotic compatibility with *Lactobacillus crispatus* and is non-toxic to murine vaginal epithelium, as confirmed by tissue sections. These findings were validated in vitro and in vivo, including in murine infection models and a naturally susceptible fox model, offering a promising therapeutic approach for BV treatment.

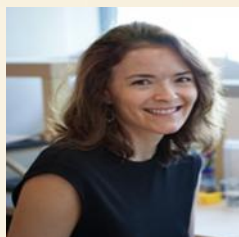
**Keynote speaker****Nov 16<sup>th</sup> 10:35-11:00****Yilin Wu (Onsite)**

Professor

The Chinese University of Hong Kong, Hong Kong

**Large-scale mechanical spiral waves in bacterial communities**

Yilin Wu obtained his B.S. in Physics from the University of Science and Technology of China in 2004 and Ph.D. in Physics from University of Notre Dame in 2009. After postdoctoral research at Rowland Institute of Harvard University (with Howard C. Berg), he joined the Department of Physics of the Chinese University of Hong Kong and currently holds the position of Professor. His research has substantially advanced the understanding on the collective motion and self-organization of primitive life forms and active matter. He is named as an inaugural RGC Research Fellow of Hong Kong SAR (2021-2025) and a recipient of The Xplorer Prize from New Cornerstone Science Foundation.

**Keynote speaker****Nov 16<sup>th</sup> 11:00-11:25****Kimberly Kline (Virtual)**

Professor

University of Geneva, Geneva

**Go with the flow: how shear stress and quorum sensing shape enterococcal virulence in infective endocarditis**

Deputy Research Director (Biofilm Biology), NRF Fellow and Associate Professor, School of Biological Sciences, Nanyang Technological University, Singapore.

Research interests in the Kline lab center around 2 themes: 1) molecular mechanisms of cell-wall associated virulence factor assembly in Gram positive pathogens, and 2) pathogenesis of polymicrobial infections, with an emphasis on those involving *Enterococcus faecalis*. The Kline lab employs a variety of model systems for these studies including in vitro mammalian cell-associated biofilm models, and mouse models of gut colonization, ascending and catheter-associated urinary tract infection, and wound infections.

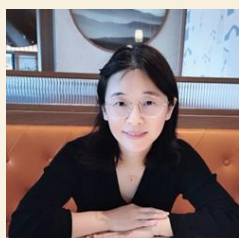
**Invited speaker****Nov 16<sup>th</sup> 11:25-11:40****Sophie E. Darch (Virtual)**

Professor

University of South Florida, Tampa

**Exploring unique aggregate mechanisms in a chronic infection model**

Originally from the UK, Dr Darch completed her PhD at The University of Nottingham with Dr Steve Diggle. She then relocated to the USA for a postdoctoral position with Dr Marvin Whiteley. Now, as an Assistant Professor in the College of Medicine at The University of South Florida, her lab is focused on identifying unique traits of *Pseudomonas aeruginosa* aggregates to better understand the dynamics of persistent antibiotic-resistant infections.

**Invited speaker****Nov 16<sup>th</sup> 11:40-11:55****Beile Gao (Onsite)**

Principle Investigator

South China Sea Institute of Oceanology, CAS, Guangzhou

**Novel tetrameric PilZ protein stabilizes stator ring in complex flagellar motor**

I am a principal investigator at South China Sea institute of Oceanology, Chinese Academy of Science. I received my PhD in Biochemistry and Biomedical Science from McMaster University, Canada and completed postdoctoral training at Yale University before taking my current position. My research interests focus on bacterial signal transduction and genome evolution. At this conference, I would like to share our unpublished results on a novel flagellar protein that is required to stabilize the stator ring and belongs to tetrameric PilZ family.



**Invited speaker****Nov 16<sup>th</sup> 11:55-12:10****Boyang Qin (Onsite)**

Associate Professor

Shanghai Jiao Tong University, Shanghai

**Collective fountain-like flow and fractal wrinkling drive bacterial community morphogenesis**

Boyang Qin is a tenure-track associate professor in the Department of Microbiology, Shanghai Jiao Tong University. He obtained his Ph.D. from the University of Pennsylvania in 2018 and worked as a postdoctoral researcher at Princeton University primarily under the guidance of Prof. Bonnie L. Bassler. His research focuses on the formation, differentiation, and metabolism mechanisms of bacterial biofilms using advanced microscopy technologies. He has published in leading journals such as Science, PNAS, Nat. Commun., and Sci. Adv. and received numerous awards including the Burroughs Wellcome Fund CASI Career Award, Shanghai High-level Talent Award, and Shanghai Pujiang Talent Award.

**Invited speaker****Nov 16<sup>th</sup> 12:10-12:25****Xinjiong Fan (Onsite)**

Professor

Anhui Medical University, Hefei

**Anti-biofilm enzymes strategy**

Professor Fan has been engaged in the research of prevention and control strategies and mechanisms of drug-resistant microorganisms. She has deeply explored the structure-function relationship of enzymes, revealed the molecular mechanism of enzyme property changes, and obtained mutant enzymes with excellent performance; she has also studied the inhibitory effect of enzymes on the formation of bacterial biofilms and virulence factors, and applied them to the adjuvant treatment of animal infections. Recent work has been published in International Journal of Biological Macromolecules (2024), Antimicrobial Agents and Chemotherapy (2023, 2 articles), Chemosphere (2023, 2 articles) and so on. She is currently presiding over National Natural Science Foundation of China, Anhui provincial funds, and university-enterprise cooperation funds.

**Keynote speaker****Nov 16<sup>th</sup> 13:45-14:10****Lianhui Zhang (Virtual)**

Professor

South China Agricultural University, Guangzhou

**Virulence programing and reprogramming in bacterial pathogens**

Lianhui Zhang is the Professor and of Microbiology and Plant pathology in South China Agricultural University, where he heads the Integrative Microbiology Research Center. His research interest is in microbial quorum sensing and pathogen-host chemical communication systems, and has published more than 150 papers with SCI citation over 8,000 times. He had been invited as an invited speaker in Asia-Pacific Biofilms 2021 and China Biofilms 2019 in Guangzhou China.

**Keynote speaker****Nov 16<sup>th</sup> 14:10-14:35****Tim Tolker-Nielsen (Virtual)**

Professor

University of Copenhagen, Copenhagen

**Tn-Seq based identification of genes that play a role in antibiotic tolerance of *Pseudomonas aeruginosa* aggregates**

Tim Tolker-Nielsen has a Master of Science degree (chemical engineering) and a PhD degree (molecular microbiology) from the Technical University of Denmark, and a DMSc degree (biofilm infections) from the University of Copenhagen. His work has uncovered mechanisms of biofilm formation and dispersion, and the regulation of these processes via the signaling molecule c-di-GMP. Based on this knowledge he has developed anti-biofilm drug candidates that can force bacteria out of the biofilm state and into an antibiotic-susceptible single-cell state. In addition, his research has uncovered mechanisms of biofilm-associated antibiotic tolerance.

**Keynote speaker****Nov 16<sup>th</sup> 14:35-15:00****Yinyue Deng (Onsite)**

Professor

Sun Yat-sen University, Guangzhou

**Bacterial language: from quorum sensing signal to nucleotide second messenger**

Yinyue Deng is now a professor of Sun Yat-sen University in China. He studied at the Department of Microbiology at the Nankai University from 1997 to 2004 and obtained his bachelor's and master's degrees. He then obtained a PhD degree from the Department of Biological Sciences at the National University of Singapore in 2010. His major research interests focus on microbial quorum sensing, intracellular nucleotide second messenger and antibacterial drugs, etc. In the past 5 years, he published more than 30 research papers as corresponding author in journals such as *Nature Communications*, *PNAS*, *Cell Reports*, *Cell Death and Differentiation*, *ISME J*, *PLOS Pathogens*. He has also hosted several research projects in China.

**Invited speaker****Nov 16<sup>th</sup> 15:00-15:15****Zunying Liu (Onsite)**

Professor

Ocean University of China, Qingdao

**Bacterial quorum sensing and the strategies of seafood preservation**

Zunying Liu, Ph.D., professor, graduated from China Agricultural University in 2003, and she worked at Oregon State University from 2008 to 2009 as a visiting Scholar. She is a member of the Chinese Society of Agricultural Engineering and the American Pacific Fisheries Association, and the FDA BPCS certified trainer. Her research area included aquatic product preservation theory and technology, focusing on the research and development of new technology for aquatic product preservation and biological preservatives. The publications cited times is 2092, and the H-Index is 23.



**Invited speaker****Nov 16<sup>th</sup> 15:15-15:30****Aiqun Jia (Onsite)**

Professor

Hainan University, Haikou



**The mechanism of quorum sensing signaling deterrence of *B. cenocepacia* by rhododendrol and other endophytic metabolites of *A. catechu* L. derived endophytes**

Dr. Jia is currently professor of School of Life and Pharmaceutical Sciences of Hainan University. His research interest is in the research and development of important physiologically active natural products. Before April 2019, he has published more than 80 SCI papers in academic journals such as Angewandte Chemie, Chemical Communications, Journal of Agriculture and Food Chemistry (ACS), Food Chemistry, Scientific Reports and 25 papers (including reports) exchanged at academic conferences at home and abroad. He also applied for 6 Chinese patents.

**Invited speaker****Nov 16<sup>th</sup> 15:30-15:45****Gongliang Zhang (Onsite)**

Professor

Dalian Polytechnic University, Dalian

**Study on the synergistic mechanism of bacterial inhibition by ITC flavouring substances and essential oils in wasabi**

Dr. Zhang received his PhD from Okayama University, Japan, and had been a Visiting Scholar in Purdue University, USA. He is a Deputy Director in Liaoning Provincial Key Laboratory of Quality, Safety and Control of Aquatic Product Processing. His main research direction is food safety and the application of flavor compounds in food processing. Expert of Liaoning Food Safety Committee in the direction of aquatic products; Thousand level of Liaoning Province's 'One Million Talents Project'; Member of the American Institute of Food Science and Technology (IFT); Visiting Scholar at Purdue University in the United States.

**Keynote speaker****Nov 16<sup>th</sup> 16:00-16:25****Tom Coenye (Virtual)**

Professor

Ghent University, Ghent

**Novel approaches and tools to predict antimicrobial susceptibility in biofilms**

Tom Coenye leads the Laboratory of Pharmaceutical Microbiology at Ghent University in Belgium. His research is focused on microbial biofilm formation, novel strategies to prevent biofilm formation and the molecular basis of tolerance and resistance in biofilms. In addition, he is working on novel approaches for rapid detection and susceptibility testing in the context of biofilm-related infections. He has co-authored over 350 scientific papers and since 2019 he has been included on Clarivate's annual list of Highly Cited Researchers. He is past-chair of the Study Group for Biofilms from the European Society for Clinical Microbiology and Infectious Diseases and is one of the co-editors in chief of the journal 'Biofilm'.

**Invited speaker****Nov 16<sup>th</sup> 16:25-16:40****Jinju (Vicky) Chen (Virtual)**

Professor

Loughborough University, Loughborough

**A multifaceted approach to combating biofilms: computational modeling and novel nanocoatings**

Prof. Jinju (Vicky) Chen is Chair in Advanced Materials & Biointerfaces at Loughborough University. Her passion lies in tackling fundamental scientific questions at the intersection of cells and materials. This knowledge is then translated into innovative materials designs, aiming to accelerate breakthroughs in human disease treatment and biofilm control. Prof. Chen has secured £9.35 million in funding from various sources. Her research has garnered significant recognition, evidenced by her publication of 84 peer-reviewed journal papers and over 90 invited talks. She serves Loughborough in key roles such as Departmental Research Director and University Senate Member. She is Fellow of Royal Microscope Society and Member of UK Research and Innovation Talent Panel College.

**Invited speaker****Nov 16<sup>th</sup> 16:40-16:55****Haiyan Hu (Onsite)**

Professor

Sun Yat-Sen University, Guangzhou

**Tailored multilayer nanoparticle against resistant *P. aeruginosa* by disrupting the stubborn triad of thickened mucus, dense biofilm and hyperinflammation**

Dr. Hu has been working for Sun Yat-sen University, China more than for 20 years and engaged in R&D and novel drug delivery systems. She led and accomplished a few R&D projects. She has developed 3 research directions up to now: 1) Biofilm targeted drug delivery system; 2) Tumor targeted drug delivery system; 3) Transdermal drug delivery system. Prof. Hu published more than 30 academic papers on J Control Release, Carbohydr Polym, ACS Appl Mater Interfaces, Mol Pharmaceut, Int J Pharm, and obtained more than 10 Chinese patent authorizations, two of which obtained multinational patents including the United States and Japan Authorization.

**Invited speaker****Nov 16<sup>th</sup> 16:55-17:05****Yang Wu (Onsite)**

Associate Professor

Fudan University, Shanghai

**The *Staphylococcus aureus* arlS kinase inhibitor tilmicosin has potent anti-biofilm activity in both static and flow conditions**

Yang Wu received his Ph.D. degree from Fudan University in 2008. He studied as a visiting scholar at the University of Tübingen and Johns Hopkins University. He is currently an associate professor at the Department of Medical Microbiology and Parasitology, School of Basic Medical Sciences of Fudan University. His major research interest has been focused on investigation of gene regulation during bacterial biofilms formation and antibiotic resistance & tolerance, exploration of drug targets in bacterial biofilms as well as screening of anti-bacterial/anti-biofilm compounds on *in vivo* & *in vitro* models.



**Invited speaker****Nov 16<sup>th</sup> 17:05-17:20****Oana Ciofu (Virtual)**

Professor

University of Copenhagen, Copenhagen

**Evolution of antimicrobial resistance in biofilms**

Prof Dr. med. Oana Ciofu is a professor of Antimicrobial Resistance at the Department of Immunology and Microbiology, University of Copenhagen, Denmark. She is medical doctor by training holding her PhD in Microbiology from University of Copenhagen (1993-1996) and Doctor in Medical Sciences (2003). She has been employed at the Faculty of Medical Sciences, Department of Immunology and Microbiology since 1998 and promoted to full professor in 2022. Oana Ciofu has published > 120 peer-reviewed articles and co-authored 14 chapter books. Her research focuses on bacterial evolution and adaptation in biofilms, with special interest in development of antibiotic resistance with the aim of optimizing the treatment and improving the outcome of patients with chronic infections.

**Invited speaker****Nov 16<sup>th</sup> 17:20-17:35****Lei He (Onsite)**

Associate Professor

Shanghai Jiaotong University, Shanghai

**The mechanism of Agr mutation causing persistent *S. aureus* infection**

Has a longstanding focus on the epidemiology of *Staphylococcus aureus* and the molecular mechanisms underlying its persistent infections, with the aim of identifying pathogenic molecular markers based on clinical *Staphylococcus aureus* strains in China, leading to a series of original findings. In this field of research, has published 15 papers as first or corresponding author in leading SCI journals such as *Nature Microbiology*, *Genome Medicine*, and *NPJ Biofilms and Microbiomes*. Principal investigator of three General Projects (2019, 2022, and 2024) and one Young Scientists Fund project (2015) from the National Natural Science Foundation of China, as well as three Shanghai municipal and university-level clinical research projects. Currently serves as a member of the Shanghai Society of Medical Microbiology and the Clinical Microbiology Committee of the Shanghai Medical Education Association etc.

**Invited speaker****Nov 16<sup>th</sup> 17:35-17:50****Chaoqin Sun (Onsite)**

Doctor

Guizhou Medical University, Guizhou



**An antibiofilm peptide AMP-17 inhibits hyphal development in *Candida albicans* exerting antibiofilm effect**

Chaoqin Sun, MD, graduated from Guizhou Medical University. Currently, she works at the Clinical Laboratory Center of the Affiliated Hospital of Guizhou Medical University. She serves as the secretary of the Guizhou Branch of the Norman Bethune Spirit Research Association. In recent years, she has led one natural science project funded by the provincial science and technology department and participated in two National Natural Science Foundation projects. As the first author, she has published three SCI papers. She is a member of the team that won the second prize for scientific and technological progress by the medical association and has been involved in two invention patents.

**Keynote speaker****Nov 17<sup>th</sup> 9:00-9:25****Yan Zhou (Onsite)**

Professor

Nanyang Technological University (SCElse), Singapore

**Energy efficient wastewater treatment-past to future**

Dr. Zhou is currently a Professor, Program Director and Assistant Chair (Faculty) in the School of Civil and Environmental Engineering (CEE). She received her PhD degree in Chemical Engineering, from Advanced Water Management Centre (AWMC), University of Queensland, Australia, in 2008, and joined Nanyang Environment and Water Research Institute (NEWRI) as a Research Fellow in the same year. She joined CEE as a faculty in Sep 2014, and concurrently served Advanced Environmental Biotechnology Center (AEBC) as Deputy Director in 2014 - 2020. Her research efforts have been focused on energy efficient water treatment and reclamation, and resources recovery from sludge and waste. Specifically, her research interests are (1) Energy harvesting from municipal and industrial wastewater, (2) Energy reduction in nutrient removal process, (3) Sludge management and energy recovery, (4) Nutrient recovery and reuse.

## Keynote speaker

Nov 17<sup>th</sup> 9:25-9:50

### Tamas Felfoldi (Onsite)

Senior research fellow

Institute of Aquatic Ecology, HUN-REN Centre for Ecological Research, Budapest, Hungary



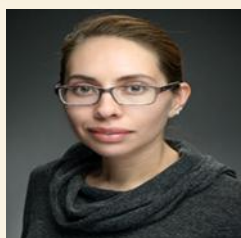
### Physical, chemical and microbiological features of saline lakes in Europe

Biologist (MSc): 2003; PhD: 2011; Habilitation: 2017. Society membership: Hungarian Society for Microbiology (MMT); International Society for Microbial Ecology (ISME). Research area: Microbial ecology of aquatic habitats: extremophile microbial communities; microbiology of wastewater treatment; Taxonomy of bacteria and algae (species descriptions); Molecular taxonomic characterization of enchytraeids. Publications: 110; H-index: 27; citations: 2313.

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## Invited speaker

Nov 17<sup>th</sup> 9:50-10:05



### Erika Espinosa-Ortiz (Virtual)

Assistant Research Professor

Montana State University, Bozeman

### Fungal biofilms: beneficial, harmful, and mysterious frontiers

Research Interests:

- Fungal-based technologies for water, wastewater and soil remediation
- Biodeterioration of building materials due to multi-domain biofilm formation
- Biomineralization processes applied to the medical field (e.g. formation of kidney stones induced by urine)



## Invited speaker

Nov 17<sup>th</sup> 10:05-10:20

**Faqian Sun (Onsite)**

Professor

Zhejiang Normal University, China



### **Quorum quenching driven biofouling control in membrane bioreactor for high-strength wastewater treatment**

Dr. Sun works at the College of Geography and Environmental Science in Zhejiang Normal University. He has published 90+ SCI articles with over 4000 citations and h-index 36. His research efforts have been focused on energy efficient water treatment, and resource recovery from sludge and waste. Specifically, his research interests are (1) Quorum sensing enhanced pollutants removal; (2) Energy reduction in membrane bioreactor; (3) Waste management and resource recovery.

## Invited speaker

Nov 17<sup>th</sup> 10:20-10:35



**Albert Parker (Virtual)**

Associate Research Professor

Montana State University, Bozeman

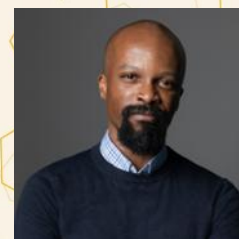
### **After the biofilm: bacterial transfer, infections and hand hygiene in a healthcare environment**

PhD in math, post docs at UC Santa Cruz in image analysis and at University of Otago in Bayesian computational statistics, 16 years as biostatistician at the CBE, providing statistical expertise on clinical, industrial, regulatory and environmental studies.

**Keynote speaker****Nov 17<sup>th</sup> 10:50-11:15****Olivier Habimana (Onsite)**

Associate Professor

Guangdong Technion-Israel Institute of Technology, Shantou

**Impacts of silver nanoparticles on freshwater biofilms**

Prof. Habimana is a prominent independent researcher in biofilm studies. His international recognition stems from his Ph.D. in microbiology from the University of Paris Sud in 2009, demonstrated by over 60 peer-reviewed articles, +3000 citations, an h-index of 28. His research primarily focuses on food and environmental microbiology, specifically the mechanisms of microbial adhesion, biofilm formation, and detachment on inert surfaces. Recently, he has engaged in biofilm research initiatives to investigate microbial community dynamics, gene expression, and metabolite profiles in various contexts. After joining the Guangdong Technion-Israel Institute of Technology in September 2022, he founded the Environmental Microbiomes and Biofilm Research Laboratory, leading a team of 11 qualified members. In 2023, he received a Foreign Expert Project Award for his significant contributions to microbial biofilms and environmental microbiology.

**Keynote speaker****Nov 17<sup>th</sup> 11:15-11:40****Jinping Cheng (Onsite)**

Assistant Professor

The Education University of Hong Kong, Hong Kong

**Selective succession and enrichment of pollutants in (Micro) plastic biofilms and environmental risks**

Dr. Cheng's research interests include particle-microbe interactions, environmental microbiomes, biofilm and biofouling, environmental DNA, ecotoxicology, and risk assessment studies, with an aim to promote environmental health through technological innovations. Jinping has published over 70 SCI research articles and filed five patents (including 2 US patents), with an H-index of 33. Her research as the principal investigator has been funded by the Research Grants Council of Hong Kong, the Hong Kong SAR government's Environment and Conservation Fund, China's Natural Science Foundation, the Ministry of Education of China, etc. She serves as the Associate Editor for Frontiers in Marine Science and Editor for Cambridge Prisms: Plastics.

**Invited speaker****Nov 17<sup>th</sup> 11:40-11:55****Xiaoqing Xu (Onsite)**

Postdoctoral Researcher

Hong Kong University, China

**Advanced genomic sequencing-enhanced wastewater-based epidemiology for monitoring viruses and antibiotic-resistant pathogens**

Xiaoqing Xu is a Postdoctoral Researcher at the Environmental Microbiome Engineering and Biotechnology Laboratory, Center for Environmental Engineering Research, Department of Civil Engineering, The University of Hong Kong. She obtained her Ph.D. from the University of Hong Kong in 2023. Dr. Xu's research is focused on wastewater-based epidemiology (WBE), specifically tracking viruses, antimicrobial-resistant pathogens, and mobile gene elements. With her extensive proficiency in genomic sequencing, like Nanopore technology, she excels in unraveling the complexities of bacterial and viral dynamics and diversity using sequencing platforms.

**Invited speaker****Nov 17<sup>th</sup> 11:55-12:10****Xing Liu (Onsite)**

Professor

Fujian Agriculture and Forestry University, Fuzhou

**Stopping the decay of *Geobacter* electroactive biofilm**

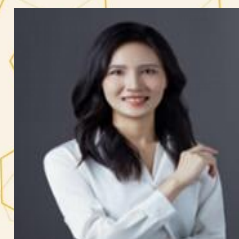
Xing Liu, Professor in Fujian Agriculture and Forest University, China. My research focuses on the mechanisms and the related ecological effects of microbial extracellular electron transfer. I mainly worked on electrogens of *Geobacter* species and cable bacteria. The contributions of my study include: 1. Revealed cytochromes-mediated direct interspecies electron transfer; 2. Identified the functions of nanowires in extracellular electron transfer; 3. Discovered electron-driven dark carbon fixation. I have published more than 50 papers in such SCI journal as Science Advances, ISME, Environmental Science & Technology, mBio.



**Invited speaker****Nov 17<sup>th</sup> 12:10-12:25****Wei Ding (Onsite)**

Associate Professor

Ocean University of China, Qingdao

**Lifestyle of marine biofilm bacteria and antimicrobial resource mining**

Dr. DING has been an associate professor in the College of Marine Life Sciences at Ocean University of China since 2020. She serves as the executive associate editor of iMetaOmics and the Youth Editor of iMeta, and is a member of both the Chinese Society for Microbiology and the American Society for Microbiology. In 2019, she obtained her PhD degree from Hong Kong University of Science and Technology. Additionally, she has gained post-doctoral research experience at the University of Hong Kong. Her research focuses on marine biofilm bacteria, specifically their lifestyle and bioprospecting potential. Since 2015, she has published over 30 papers in SCI journals such as Nature Communications, iMeta, mLife, Appl Environ Microbiol.

**Keynote speaker****Nov 17<sup>th</sup> 14:00-14:25****Bin Cao (Virtual)**

Associate Professor

Nanyang Technological University (SCELSE), Singapore

**Extracellular DNA and RNA in the drinking water microbiome: quantification, sequencing analyses, and implications**

Prof. Cao Bin worked on U.S. DOE-funded projects during his postdoctoral training in Washington State University and Pacific Northwest National Laboratory (PNNL). Since he joined NTU in Dec 2011, his research efforts have been focused on biofilm engineering—a highly interdisciplinary research topic at the interface between engineering and microbiology. Dr. Cao's specific research interests cover (i) elucidation of fundamental mechanisms in biofilm-mediated environmental processes and biofilm-contaminant interactions and (ii) development of novel approaches to harnessing the power of beneficial biofilms and combating detrimental biofilms for environmental biotechnological applications.

**Keynote speaker****Nov 17<sup>th</sup> 14:25-14:50****Liang Duan (Virtual)**

Researcher

Chinese Research Academy of Environmental Sciences, Beijing

**Carbon-emission characteristics of wastewater treatment plants in the Beijing-Tianjin-Hebei region**

Prof. Liang Duan is the Deputy Director of Basin Research Center for Water Pollution Control at Chinese Research Academy of Environmental Sciences. He obtained his Ph.D. in 2009 from Tongji University, after which he received postdoctoral training at the Department of Civil and Environmental Engineering, University of California, Berkeley. Dr. Duan is a recipient of the Young Scientist Gold Medal from Chinese Society of Environmental Sciences. He now serves as the Editorial Board Member for Journal of Environmental Engineering Technology and Youth Editorial Board Member for Chinese Chemical Letters. His research interests include water pollution control and reuse technology.

**Invited speaker****Nov 17<sup>th</sup> 14:50-15:05****Yanping Mao (Virtual)**

Associate Professor

Shenzhen University, Shenzhen

**Effect of microplastics and antibiotics on the microbiome and resistomes on activated sludge in wastewater treatment process**

Dr. Yanping Mao, associate professor of college of chemistry and environmental engineering at Shenzhen University. Dr. Mao interests in learning about the mechanism responsible for wastewater treatment process, the ecology of significant functional bacteria and antimicrobial resistance. Metagenomics and post-genomics methods are used to study how gene expression is regulated, and to discover previously unrecognized biochemical pathways that may be critically important for unveiling the biodegradation mechanisms of emerging contaminants, and understanding the energy, carbon, nitrogen and phosphorus budgets within the cell.

**Invited speaker****Nov 17<sup>th</sup> 15:05-15:20****Bin Ji (Onsite)**

Professor

Hunan University of Technology, Zhuzhou

**Microalgal-bacterial granular sludge: a novel low-carbon wastewater treatment process sustained by natural light**

Bin Ji, born in 1987, is a professor at Wuhan University of Science and Technology, Wuhan China. He obtained his PhD and bachelor degrees of Wuhan University, Wuhan China. He was a visiting scholar of Nanyang Technological University and National University of Singapore. Dr. Ji's research is mainly dedicated to innovative biological processes for wastewater treatment and reclamation. Dr. Ji has published more than 40 SCI journal papers, serving as peer reviewers for more than 30 SCI journals. He is an Associated Editor for Frontiers in Microbiology and Discover Applied Sciences. He has been selected for the 2024 Global Top 2% Scientists Lifetime Impact List.

**Invited speaker****Nov 17<sup>th</sup> 15:20-15:35****Jialiang Kuang (Onsite)**

Associate Professor

South China University of Technology, China

**Rapid recognition of potential microbial resources for bioremediation of organochlorine pesticides and flame retardants**

My research interests are to understand the effects of ecological factors, such as environmental stress, climate change and land-use change, on the spatial-temporal patterns, network interactions and functions of microbial communities using stable isotope probing, high-throughput sequencing and functional gene microarray. By exploring the responses of microbial communities, I address the ecological questions and mechanisms about how these ecological factors mediate community assembly processes and microbially-driven ecosystem functioning.



## Keynote speaker

Nov 17<sup>th</sup> 15:50-16:15

### Fangang Meng (Onsite)

Professor

Sun Yat-Sen University, China



### **The development of membrane bio-contactors for improving nitrogen removal**

Fangang Meng is a Professor in School of Environmental Science and Engineering at Sun Yat-sen University in China. His research interest includes i) characterization and control of membrane biofouling in MBRs and ii) development of the coupling process of membrane separation and biodegradation. He has published over 180 papers in journals such as ES&T, Water Research, Applied Environmental Microbiology, etc., with a total citation of more than 11000.

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## Invited speaker

Nov 17<sup>th</sup> 16:15-16:30



### Song Lin Chua (Virtual)

Assistant Professor

Hong Kong Polytechnic University, Hong Kong

### **Engineering 'trap then release' biofilms for microplastics removal**

Dr. Song Lin Chua is an assistant professor in the Department of Applied Biology and Chemical Technology at the Hong Kong Polytechnic University, Hong Kong. He earned his BSc from Nanyang Technological University in 2011 and his PhD from National University of Singapore in 2015. Dr. Chua's research focuses on microbial biofilms and their interactions with the host and environment. His work was featured in more 50 papers, such as PNAS, Nature Communications, Advanced Science and ES&T. He is also co-founder for two startup companies, focusing on engineering solutions that detect and mitigate microbial and pollutant contamination in the environment.

## Invited speaker

Nov 17<sup>th</sup> 16:30-16:45

### Le Han (Onsite)

Professor

Chongqing University, Chongqing

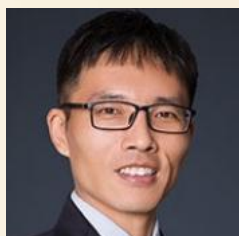


## Hybrid of benthic bioturbation and membrane aerated biofilm ecologically in-situ eliminates overloaded nitrogen in sediments of freshwater system

Dr. Le Han focuses on water treatment process with special interest in membrane separation, toward building a greener and sustainable society. He obtained his PhD in University of Toulouse, France and had post-doc experience in industry and Nanyang Technological University, Singapore. He has over 60 peer-reviewed publications and ten patents, and two Chinese prizes was granted to him for his contribution in industrial wastewater disposal and resource recovery.

## Invited speaker

Nov 17<sup>th</sup> 16:45-17:00



### Guanglei Qiu (Onsite)

Professor

South China University of Technology, Guangzhou

## Genomic characterization of *Ca. Accumulibacter*-related polyphosphate-accumulating organisms

Research area:

Membrane bioreactors: process development, membrane fouling control

Enhanced biological phosphorus removal: Microbiology, Ecophysiology and Biochemistry

New biological nitrogen and phosphorus removal principles and technology

Microbial ecology in biological wastewater treatment processes

**Invited speaker****Nov 17<sup>th</sup> 17:00-17:15****Liang Zhang (Onsite)**

Associate Professor

Sun Yat-Sen University, Guangzhou

**Enhanced nitrogen removal in anammox coupled with heterotrophic denitrification processes via directly doing waste activated sludge**

Dr. Liang Zhang is an Associate Professor in the School of Environmental Science & Engineering at Sun Yat-sen University. He received his Ph.D. from Aarhus University, Denmark, and subsequently worked as a Research Fellow at Nanyang Environment and Water Research Institute (NEWRI) at Nanyang Technological University, Singapore. His research interests include sulfur-based wastewater treatment, biological nitrogen removal, acid mine drainage treatment, heavy metal recovery, and anaerobic sludge digestion. He has published over 50 journal articles in leading journals such as *Environmental Science & Technology* and *Water Research*. Dr. Zhang received the Extraordinary Potential Prize of the 2018 Chinese Government Award for Outstanding Self-Financed Students Abroad.

**Keynote speaker****Nov 17<sup>th</sup> 17:15-17:40****Di Wu (Virtual)**

Associate Professor

Ghent University, Ghent

**Intensifying wastewater treatment with sulfur bacterial biofilms**

Dr Wu is a tenured associate professor at the Faculty of Bioscience Engineering, Ghent University, Belgium, and Centre for Green Chemistry and Environmental Biotechnology (GREAT), Ghent University Global Campus at South Korea. He has around 20 years R&D experiences in Water and Environmental Engineering, he published 100+ papers at SCI journal papers and completed 30+ large-scale or lab-scale research projects to advance wastewater treatment and reuse technologies.



**Keynote speaker****Nov 17<sup>th</sup> 8:30-8:55****Herbert Schellhorn (Onsite)**

Professor

McMaster University, Hamilton

**Molecular biology – opportunities and challenges**

Dr. Schellhorn received both his B.Sc. and M.Sc. in Microbiology at the University of Guelph. He obtained a Ph.D. in Microbiology from North Carolina State University. His group studies gene regulation and physiological adaptation in *E. coli* and other bacteria to better understand how bacteria cause disease and persist in the environment. He has many collaborative projects with biochemists, engineers, industry and government agencies to develop new tools for monitoring water quality and understanding waste treatment processes from a microbiological perspective. Dr. Schellhorn's group uses new DNA sequencing technology and bioinformatics analysis tools to track microorganisms, characterize composition of complex microbial communities and conduct comprehensive studies of gene expression.

**Keynote speaker****Nov 17<sup>th</sup> 8:55-9:20****Gamini Seneviratne (Onsite)**

Senior Professor

National Institute of Fundamental Studies, Kandy

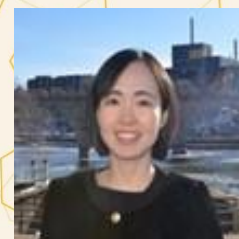
**Soil biofilm induction to increase crop production and bioremediation:  
a novel approach**

Professor Seneviratne obtained BSc and Ph.D. from University of Peradeniya, Sri Lanka in 1984 and 1993, respectively. He is a senior research professor of the National Institute of Fundamental Studies, Sri Lanka, and is ranked one of the top 2% global scientists. At present, he is a Fellow of the National Academy of Sciences of Sri Lanka. He was a former Editor of the *Agriculture, Ecosystems & Environment* (Elsevier), and *Ceylon Journal of Science*. He introduced beneficial microbial biofilm concept to biofertilizers, being the inventor of Biofilm biofertilizers.

**Invited speaker****Nov 17<sup>th</sup> 9:20-9:35****Judy Yang (Virtual)**

Assistant Professor

University of Minnesota, Twin Cities

**Microfluidic investigation on the role of flow dynamics, surface roughness, and bacterial motility on biofilm formation**

Judy Yang is currently a McKnight Land-Grant assistant professor in the Department of Civil, Environmental, and Geo-Engineering and Saint Anthony Falls Laboratory at the University of Minnesota. She obtained her Ph.D. degree in Environmental Engineering at MIT in 2018. She had been a postdoctoral researcher at Princeton University from 2018 to 2020. She is interested in designing multiscale experiments, ranging from microfluidics to flume experiments, to unravel impacts of micro-scale transport processes on macro-scale environmental and health issues, including coastal erosion, soil carbon dynamics, bacterial spreading in soil, and bacterial lung infections.

**Invited speaker****Nov 17<sup>th</sup> 9:35-9:50****Peng Cai (Onsite)**

Professor

Huazhong Agricultural University, Wuhan

**Bacteria interactions in soil biofilms: emerging insights from microfluidic techniques**

Cai Peng is a prestigious awardee of both the National Outstanding Youth Fund and the Excellent Youth Fund. His research field is soil biofilm and environmental health. He has been the principal investigator for over 20 scientific research projects, spanning from the National Natural Science Foundation of China to the prestigious Royal Society Newton Senior Scholar Fund and the Key Research and Development Program. He has published over 100 academic papers in leading journals such as Nature Communications, The ISME Journal, Environmental Science & Technology, Geochimica et Cosmochimica Acta, Soil Biology and Biochemistry.

## Invited speaker

Nov 17<sup>th</sup> 9:50-10:05

### Zaixiang Lou (Onsite)

Associate Professor

Jiangnan University, Wuxi



## Screening and Inhibition mechanism of natural active ingredients on biofilm

Doctor, graduate supervisor. In 2010, he graduated from the School of Food Science and Technology of Jiangnan University. From December 2014 to December 2015, he was a visiting scholar at the University of California, Davis. Served as provincial Special Commissioner of Science and Technology of Fujian Province, Served as an expert of the National Science and Technology expert database of the Ministry of Science and Technology, and an expert of the National Nature Foundation; International academic journals Food Chemistry, Analytica Chimica Acta, Applied Microbiology and Biotechnology, Journal of Food Science. He is an associate editor of the Journal of Food Measurement and Characterization.

## Invited speaker

Nov 17<sup>th</sup> 10:05-10:20



### Yan Li (Onsite)

Professor

China Agricultural University, Beijing

## Biofilm formation in biocontrol *Bacillus* against plant disease



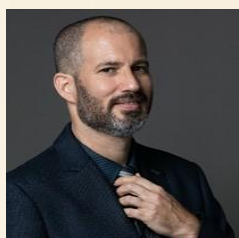
**Keynote speaker****Nov 17<sup>th</sup> 10:35-11:00****Tao Dong (Onsite)**

Professor

Southern University of Science and Technology, Shenzhen

**Diverse functions of the type VI secretion system in complex communities**

Dr. Tao Dong is a professor and associate dean in the School of Life Sciences at the Southern University of Science and Technology. He earned his BSc from Shandong University in 2003 and his PhD from McMaster University in 2010. Funded by the prestigious Banting Fellowship, he worked with John Mekalanos at Harvard Medical School from 2011 to 2013. Prior to SUSTech, he was a full professor and Canada Research Chair in Molecular Ecology of Waterborne Microbes at the University of Calgary. He also served as the department chair of Biochemistry at Shanghai Jiao Tong University. Dr. Dong's research focuses on the molecular mechanisms that enable bacterial survival in diverse environments and their interactions with competing species. He is on the editorial boards of mLife and the Journal of Bacteriology.

**Keynote speaker****Nov 17<sup>th</sup> 11:00-11:25****Yigal Achmon (Onsite)**

Associate professor

Guangdong Technion-Israel Institute of Technology, Shantou

**Decoding the microbiome volatilome: insights from food waste prevention and valorization**

Yigal Achmon is an Associate Professor at the Guangdong Technion Israel Institute of Technology, specializing in food waste treatment and prevention. His research focuses on the interactions between organic materials and the microorganisms that metabolize them, with a particular interest in how these relationships can be studied through the volatiles emitted during the metabolic process. Yigal earned his PhD in Biotechnology and Food Engineering at Prof. Ayelet Fishman's lab, where he worked on biotechnological processes for producing 2-phenylethanol. He then continued his research on sustainable agriculture in Prof. Christopher Simmons' lab at the University of California, Davis.

**Keynote speaker****Nov 17<sup>th</sup> 11:25-11:50****Enrico Marsili (Onsite)**

Associate Professor

University of Nottingham, Ningbo

**Biofilm electrochemistry: from characterization to electrofermentation**

Enrico Marsili is an Associate Professor in Life Science and Health at University of Nottingham, Ningbo, China. His research focuses on the characterization of mixed biofilms using electrochemical methods and the development of novel bioprocess for efficient biosynthesis of commodity chemicals in biofilms. He collaborates with South China University of Technology (SCUT), Shenzhen Institute of Advanced Technology (SIAT) and Shanghai Institute of Materia Medica (SIMM). He has received competitive funding from Collaborative Research Programme and Marine Research Program (National Research Foundation, Singapore), Public Utility Board, Singapore, and municipal level funding (Ningbo, China). Dr Marsili has published key contributions in Biofilm Electrochemistry and weak electricigens on PNAS, Electrochimica Acta, and Bioresource Technology. To date, he has published 82 papers, which have received nearly 8100 citations.

**Invited speaker****Nov 17<sup>th</sup> 11:50-12:05****Haluk Beyenal (Virtual)**

Professor

Washington State University, Pullman

**Electrochemical biofilm control**

Dr. Beyenal is widely known for his biofilm engineering expertise in the area of microscale biofilm characterization and electron transfer processes in biofilms. The research in his laboratories has focused on the fundamental understanding of biofilm processes, their characterization, and applications of biofilm processes. He has developed many research tools for understanding biofilm processes at the microscale, including microelectrodes for monitoring local chemistry and electron transfer mechanism inside biofilms. He has developed mathematical models for predicting biofilm activity, electron transfer rates, and biofilm structure. He pioneered the studies of electron transfer processes in biofilms using microelectrodes and powering electronic devices using microbial fuel cells.

**Invited speaker****Nov 17<sup>th</sup> 12:05-12:20****Xiangjun Gong (Onsite)**

Professor

South China University of Technology, Guangzhou

**Characterization of 3D bacterial adhesion and detachment dynamics**

Dr. Gong is a professor, in School of Materials Science and Engineering, South China University of Technology. She graduated with a bachelor's degree in physics from the University of Science and Technology of China in 2005 and obtained his Ph.D. in physics from the Chinese University of Hong Kong in 2011. From 2011 to 2013, she conducted postdoctoral research at the Department of Chemistry, Chinese University of Hong Kong. In 2014, she joined the School of Materials Science and Engineering at South China University of Technology as an associate professor and professor since 2017. Her research interests include designing high-precision real-time optical techniques to study the dynamic behavior of particles, microorganisms and biological molecules near interfaces.

**Invited speaker****Nov 17<sup>th</sup> 12:20-12:35****Jiaofang Huang (Onsite)**

Professor

Jiangxi Normal University, China

**Constructions and applications of biofilm living materials**

Prof. Jiaofang Huang is currently a Distinguished Researcher at Jiangxi Normal University (JXNU), and East China University of Science and Technology (ECUST), China. She received Ph.D. degree in microbiology from Shanghai JiaoTong University (SJTU) in 2011.

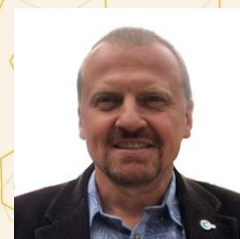
During 2011-2014, Dr. Huang worked as a Research Assistant in the Biorefinery Lab in Shanghai Advanced Research Institute (SARI) of CAS. During 2014-2019, she worked in the Materials Biology Center in ShanghaiTech University. Since 2019, she worked as a research professor in the State Key Laboratory of Bioreactor Engineering, School of Biotechnology, ECUST. Since 2023, she worked as a full professor in the College of Life Science, Jiangxi Normal University, China.



**Keynote speaker****Nov 17<sup>th</sup> 13:45-14:10****Vesselin Paunov (Virtual)**

Professor

Nazarbayev University, Astana

**Emerging nanotechnologies for targeting pathogenic bacterial biofilms**

Professor Paunov received his PhD in Physical Chemistry in 1997 from the University of Sofia. He spent 20 years as a Professor of Physical Chemistry and Advanced Materials at the University of Hull, UK. He is currently working as a professor and Chair of the Department of Chemistry at Nazarbayev University, Astana, Kazakhstan. Prof Paunov's group ([www.paunovgroup.org](http://www.paunovgroup.org)) does highly interdisciplinary research in nanoscience and bio-nanomaterials. His research interests include smart surfaces, stimulus triggered release of actives, directed cell assembly, tissue engineering, bioimprints and antimicrobial nanocarriers. He has published over 185 scientific papers with a current h-index of 59 and over 12700 citations. He has delivered over 140 conference and company presentations.

**Invited speaker****Nov 17<sup>th</sup> 14:10-14:25****Difuza Egamberdieva (Virtual)**

Professor

National Research University, Tashkent

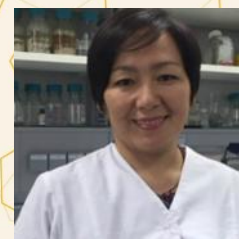
**Microbial strategies for enhancing plant stress tolerance in future farming systems**

Dr. Egamberdieva is the head of the Biological Research and Food Safety Lab, Institute of Fundamental and Applied Research, National Research University (TIAME). She pioneered research on the soil and plant microbiome. Her remarkable contributions to science in the field of microbiology received the UNESCO-Carlos J. Finlay Prize for Microbiology (2023), SCOPUS-2019 Regional Award, etc. She is a fellow of the Global Young Academy, the World Academy of Sciences, and the Islamic World Academy of Sciences. She is co-editor of the Environmental Sustainability Journal and serves on the editorial board of BMC Microbiology, Frontiers in Microbiology, and Plants. She authored/co-authored over 200 research articles and edited 8 books published by Springer and Elsevier.

**Invited speaker****Nov 17<sup>th</sup> 14:25-14:40****Almagul Kushugulova (Virtual)**

Professor

Nazarbayev University, Astana



**Multi-modal imaging unveils complex biofilm dynamics of probiotic  
*Lactobacillus* strains from traditional Kazakh dairy**

Dr. Kushugulova, a Doctor of Medical Sciences and the Laureate of the Al-Farabi State Prize in Science and Technology in 2017, serves as the Project Leader. She is the Head of the Microbiome Laboratory at the National Laboratory Astana, Nazarbayev University. Dr. Kushugulova is an expert in human microbiome, immunology, and functional food products. She is a member of the International Human Microbiome Consortium, FEMS, the Kazakhstan Association of Human Microbiome Researchers. Dr. Kushugulova has authored 66 articles in international peer-reviewed journals, 4 chapters in Springer Nature, and over 100 scientific works in domestic scientific publications and international conferences. She has received state awards, and her H-index is 12 (Scopus).

**Invited speaker****Nov 17<sup>th</sup> 14:40-14:55****Iram Liaqat (Virtual)**

Associate Professor

Government College University, Lahore

**Biofilm mediated bioremediation of heavy metals and organic waste  
polluted environments**

Dr. Liaqat is serving as Tenured Associate Professor at Govt. College University, Lahore, Pakistan. She is a Ph.D. in Microbiology and Molecular Genetics, Pakistan and part of her research work was accomplished at The Sheffield University, UK. She did postdoc at University of Western Australia, Australia via Endeavour awards. On her return to Pakistan she joined Lahore university of Management Sciences, Lahore, Pakistan as postdoc fellows. She has participated in more than 200 plus national and international conferences and authored 155 publications alongwith 30 book chapters in peer reviewed international and national Journals. She is Editor of two Books and has been Reviewer/Editorial Board member of various national and international journals.

**Invited speaker****Nov 17<sup>th</sup> 14:55-15:10****Radha Prasanna (Virtual)**

Head, Principal Scientist

ICAR-Indian Agricultural Research Institute, New Delhi



**Cyanobacterial biofilms as a strategy to revitalize and innovate the  
inoculant technology in agriculture**

Dr. Prasanna has made significant and pioneering contributions through a strong multi-disciplinary focus with more than 36 years of research experience in microbiology. She is serving as Head, Division of Microbiology, ICAR-Indian Agricultural Research Institute, New Delhi, India and actively engaged actively in post-graduate teaching and research at ICAR-IARI and guided several M. Sc. and Ph.D. students. She has published more than 300 research papers in peer reviewed journals [Google Scholar h-index: 67; Scopus Index: 53]. She has been identified among the top 2% scientists in the world ranking in the respective subject areas in 2020 onwards and as a top-ranking scientist in Agronomy and Plant Sciences & Agriculture. She has been conferred with several National awards.

**Invited speaker****Nov 17<sup>th</sup> 15:10-15:25****Amila P. Henagamage (Virtual)**

Associate Professor

Uva Wellassa University, Badulla

**Bio solubilization of Eppawala Rock Phosphate by fungal-bacterial biofilms  
and its impact on crop enhancement of potatoes (*Solanum tuberosum* L)**

Asso. Prof. Henagamage is the Head of the Department/Associate Professor in Biotechnology, Department of Science and Technology, Faculty of Applied Sciences, Uva Wellassa University of Sri Lanka. Further, he is a member of the Bio Fertilizer Technical Advisory Committee under the State Ministry of Agriculture, Sri Lanka since 2022. He obtained Ph.D. in Plant Sciences from University of Peradeniya, Sri Lanka collaborated with University of Sydney, Australia in 2015. His fields of specialization are possible uses of microbial consortia on bioremediation and plant-microbe interactions on crop enhancement. He has obtained several research grants including National Science Foundation Sri Lanka research grant and published number of research articles in many reputed international/local journals on his field of expertise.



## Keynote speaker

Nov 17<sup>th</sup> 15:40-16:05

**Darla Goeres (Virtual)**

Research Professor

Montana State University, Bozeman



### Enhancing industry / academic partnerships

Dr. Goeres is a Research Professor of Regulatory Science at the Center for Biofilm Engineering, Montana State University (MSU) where she leads the Industrial Associates Program. Dr. Goeres works closely with the US regulatory bodies, and her and her team are responsible for the development and validation of Standard Test Methods for growing, treating, sampling, and analyzing biofilm bacteria that enable for informed decision making at the regulatory level. In this context, she is interested in enhancing industrial and academic partnerships and exploring the regulatory pathways available to take antibiofilm products to market.

## Invited speaker

Nov 17<sup>th</sup> 15:05-15:20



**Cheng Li (Onsite)**

Research scientist

Massachusetts Institute of Technology, Cambridge

### Metabolic engineering of non-model microorganisms

Researcher in the Department of Biology at Massachusetts Institute of Technology, co-founder and CTO of Polynovo Biotechnology Co., Ltd. He is engaged in synthetic biology, metabolic engineering, enzyme engineering, etc. He mainly uses engineering cell factories to produce value-added products or chemical material platform molecules using straw or plastic as carbon sources. He is an editorial board member of journals such as Genes and Frontier Genome Editing. He has published dozens of articles, patents and multiple books, as well as collaborated with numerous Fortune 500 companies to develop product pipelines.

## Invited speaker

Nov 17<sup>th</sup> 16:20-16:35

### Yuanyuan Huang (Virtual)

Associate Research Scientist

Columbia University, Columbia



### **Accelerating the design of pili-enabled living materials by synergizing bioinformatics, structural biology and synthetic biology**

Research Interests: Yuanyuan Huang's researches focus on synergizing bioinformatics, synthetic biology and structural biology for the mining, designing, and engineering of new living materials for industrial and medical applications.

Positions: 2022-present, Assistant Professor of Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences; 2020-2022, Postdoctoral Fellow of Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences; 2018-2020, Postdoctoral Fellow of Shanghai Tech University.

## Invited speaker

Nov 17<sup>th</sup> 16:35-16:50



### Darshani Singhalage (Virtual)

Senior Lecturer

Uva Wellassa University, Badulla

### **Heterogeneity of metabolites excreted by fungal, bacterial and fungal-bacterial biofilms**

Dr. Singhalage earned her B.Sc. in Botany in 2005 from the University of Peradeniya. She then went on to obtain her Ph.D. in Plant Sciences in 2015, also from the University of Peradeniya, while collaborating with the National Institute of Fundamental Studies. Her research focused on microbial biofilms and led to the discovery of a novel biofilmed biofertilizer that enhances the growth and yield of strawberries.

Currently, Dr. Singhalage serves as a Lecturer in the Department of Science and Technology of the Uva Wellassa University. Her primary research interests include microbial biofertilizers, biofilms, and Angiosperm Diversity.

**Invited speaker****Nov 17<sup>th</sup> 16:50-17:05****Wajira Balasooriya (Virtual)**

Senior Lecturer

Wayamba University of Sri Lanka, Makandura



**Biofilm formation and production of extracellular polymeric substances by perchlorate reducing microorganisms isolated from serpentine soils in Sri Lanka**

Dr. Balasooriya is a Senior Lecturer at the Department of Biotechnology since 2014 and has served as the Head of the Department during 2017 - 2020. She serves as a Visiting Lecturer at the Postgraduate Institute of Agriculture, University of Peradeniya. Her current work is focused on soil and aquatic microalgae, cyanobacteria and biofilms and their potential applications. Her research works have been published in several SCI journals and she serves as a reviewer in number of journals as well. She has memberships in American Society for Microbiology, Global Soil Laboratory Network by FAO, etc. She currently serves as the Editor of the journal of the soil science society of Sri Lanka.

**Invited speaker****Nov 17<sup>th</sup> 17:05-17:20****Ishara Manawasinghe (Onsite)**

Associate researcher

Zhongkai Univ. Agriculture and Engineering, Guangzhou

**The potential of fungal biofilms in desert soil rehabilitation**

Dr. Manawasinghe is an associate researcher at Zhongkai University of Agriculture and Engineering, Guangzhou, China. She graduated from Mae Fah Luang University, Thailand, and obtained her PhD in biosciences. Her fields of expertise are fungal taxonomy, molecular phylogeny, population biology, and plant pathology. In addition, she works on endophytic, saprobic, and pathogenic fungal species from various ecosystems in south China with the aim of developing biocontrol agents and understanding the fungal biodiversity variations. She has published her work in over 80 SCI publications. Dr. Ishara Manawasinghe is the editor in chief of Current Research in Environmental and Applied Mycology journal (Q3), senior associate editor of Mycosphere (Q1), and special issue editor of Fungal Diversity (Q1).



# **Asia-Pacific Biofilms 2026**

**Late February, 2026**

**Australia**



华南理工大学  
South China University of Technology



南方科技大学  
SOUTHERN UNIVERSITY OF SCIENCE AND TECHNOLOGY

**SCElse**  
Singapore Centre for Environmental Life Sciences Engineering



中国微生物学会  
Chinese Society for Microbiology

 **ESC MID**



AMERICAN  
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MICROBIOLOGY



CENTER FOR BIOFILM  
**CBE**  
ENGINEERING



海外华人微生物学会  
Overseas Chinese Society for Microbiology



The Australian Society  
for Microbiology   
bringing Microbiologists together



**National Biofilms  
Innovation Centre**



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