

1st ASIAN CONFERENCE ON COLD CHAIN Sep. 23-25, 2019, Wuhan, China

ACCC 2019

1st ASIAN CONFERENCE ON COLD CHAIN

ACCC2019 Programme

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General Information

Language

The official language for the conference is English. All papers and presentations should be prepared in English.

Oral Presentation Guide

The slide size of your PowerPoint is better to be 16:9.

Bring your PowerPoint on a USB key to the conference.

Oral presenters are required to copy their presentation to the computer 15 minutes before the scheduled session.

To avoid disruption of the session, the author will not be allowed to use their own computers.

Poster Guide

Do not mail posters in advance, bring your printed posters to the conference.

During the poster session, presenters should stand next to their posters to discuss their work with delegates.

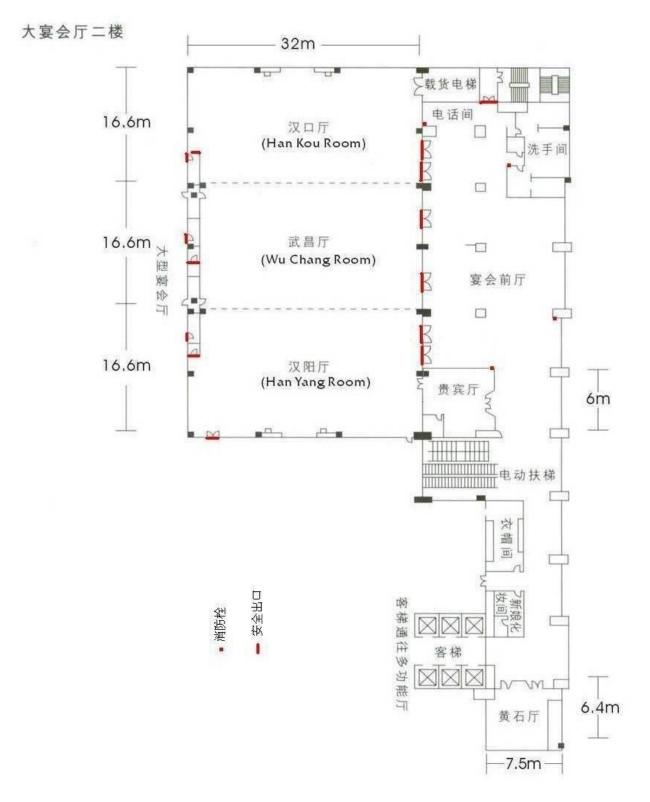
Authors are responsible for the setup and the removal of their posters according to the

following schedule:

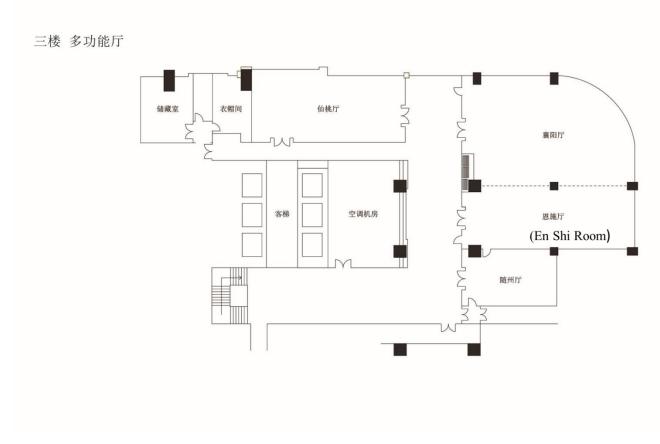
Setup: September 24, Tuesday, 15:30-17:30

Removal: No later than Wednesday, September 25 at 14:00 in the afternoon.

Venue Shangri-La Hotel



Second Floor



Third Floor

Note:

Buffet (September 23, Monday): Western restaurant on the first floor Conference (September 24, Tuesday): Wu Chang Room on the second floor Lunch (September 24-25): Western restaurant on the first floor Conference Banquet (September 24, Tuesday): Han Yang Room on the second floor Session 3 (September 25, Wednesday): Wu Chang Room on the second floor Session 4 (September 25, Wednesday): En Shi Room on the third floor Coffee Break: Reception hall on the second floor (September 24, Tuesday), Reception hall on the second and third floor (September 25, Wednesday)

Programme at a Glance			
September 23, Monday			
14:00	21:00	Registration	
18:00	21:00	Buffet	
September 24, Tuesday			
07:30	12:00	Registration	
08:30	09:00	Opening Ceremony	
09:00	09:25	Keynote Report 1	
09:25	09:50	Keynote Report 2	
09:50	10:15	Keynote Report 3	
10:15	10.45	Coffee Break	
10:45	11:10	Keynote Report 4	
11:10	11:35	Keynote Report 5	
11:35	12.00	Keynote Report 6	
12:00	13:30	Lunch	
13:30	15:30	Session 1: Quality Control & Cold Chain (8)	
15.30	15.45	Coffee Break	
15:45	17:30	Session 2: Material & Component & System (7)	
17:30	18:30	Poster Session	
18:30	20:30	Conference Banquet	
September 25, Wednesday			
08:30	08:55	Keynote Report 7	
08:55	09:20	Keynote Report 8	
09:20	9:45	Coffee Break	
9:45	12:00	Session 3: Cold storage (8)	Session 4: Precooling & Freezing (7)
12:00	13:00	Lunch	
14:00	16:30	Technical Tour (Visiting Wuhan-New World Refrigeration Industrial Co.,Ltd)	

Programme at a Glance

Programme

DAY 1

September 23, Monday

14:00-21:00 Registration

Location: Hotel Lobby

18:00-21:00 Buffet

Location: Western restaurant on the first floor

DAY 2

September 24, Tuesday

08:30-09:00 Opening Ceremony

Location: Wu Chang Room on the second floor

Chair: Prof. Changqing Tian, Technical Institute of Physics and Chemistry, CAS

Welcome speech 1, Prof. Yuan Zhou, Academician, Technical Institute of Physics and

Chemistry, CAS, Conference Chairperson

Welcome speech 2, Prof. Jiawei Jin, President of Chinese Association of Refrigeration

Welcome speech 3, Prof. Takashi Matsumoto, Tokyo University of Marine Science & Technology

Welcome speech 4, Prof. Jae Dong Chung, President of Division of Low Temperature

Facilities Engineering, The Society of Air-Conditioning and Refrigerating Engineers

of Korea

09:00-10:15 Keynote Reports

Location: Wu Chang Room on the second floor

Chairs: Prof. Bin Liu, Tianjin University of Commerce

Prof. Jong-Taek Oh, Chonnam National University

09:00-09:25, Prof. Maoqiong Gong, Technical Institute of Physics and Chemistry, CAS, Equipment developments for ultra-low temperature cold chain based on the mixed-gases Joule-Thomson refrigeration

09:25-09:50, Dr. Torben Funder-Kristensen, Head of public and industry affairs at Danfoss cooling segment, Smart supermarkets as flexible energy providers 09:50-10:15, Dr. Kristina N. Widell, Senior research scientist at SINTEF Ocean in

Trondheim, Norway, Managing the cold chain of seafood in Norway

10:15-10.45 Coffee Break

Location: Reception hall on the second floor

10:45-12:00 Keynote reports

Location: Wu Chang Room on the second floor

Chairs: Prof. Xiaoyan Li, Harbin University of Commerce

Prof. Kamil Smierciew, Białystok University of Technology 10:45-11:10, Prof. Manabu WATANABE, Tokyo University of Marine Science and

Technology, History and future of Japanese cold chain

11:10-11:35, Mr. Marcio Silvera, Acoustic Senior Manager of Donper, Joinville, Brazil, The main challenges of low noise approach in highly efficient cold chain system

11:35-12.00, Mr. Nikhil Raj, Managing Director, Neptune Refrigeration Co P Ltd, Chennai, India, Technical progress of Indian refrigeration and cold chain industry

12:00-13:30 Lunch

Location: Western restaurant on the first floor

13:30-15:30 Session 1: Quality Control & Cold Chain

Location: Wu Chang Room on the second floor

Session Chairs: Prof. Jae Dong Chung, Sejong University

Prof. Shuangquan Shao, Huazhong University of Sci&Tech

13:30-13:45, Xin Li, Technology innovation and development trend of losses control and fresh preservation in meat production

13:45-14:00, Kang Li, Regional cold chain solution based on the balance supplying of cold and heat

14:00-14:15, Akihiro Ozeki, Influence of fish freshness on freezing process and quality

14:15-14:30, Hongxia Zhao, Performance evaluation of the CO₂ parallel compression supermarket refrigeration system with a subcooler

14:30-14:45, Hui Li, Effect of different packaging methods on micro-environmental

regulation and quality change of lychee

14:45-15:00, Yao Wang, Flesh quality differences between freeze-thawed fish and squid

15:00-15:15, Torben, The need for a global cold chain model

15:15-15:30, Bin Liu, Calculation of cold chain carbon footprint of agricultural products in china

15.30-15.45 Coffee Break

Location: Reception hall on the second floor

15:45-17:30 Session 2: Material & Component & System

Location: Wu Chang Room on the second floor

Session Chairs: Dr. Zhenyi Qian, MAYEKAWA MFG. CO., LTD

Prof. Guanghai Liu, Guangzhou University

15:45-16:00, Jae Dong Chung, Analysis of a full scale thermal storage tank by effective thermal conductivity model

16:00-16:15, Shen Tian, Experimental study on melting process of vacuum insulated cold thermal energy storage panel based on embedded heat pipes

16:15-16:30, Yi Zhao, Phase change material preparation for cold chain logistics

16:30-16:45, Puyue Jia, Influencing factors of supercooling degree of composite

phase change material TMP- NH₄CI- H₂O

16:45-17:00, Oh. Jong Taek, Numerical and experimental investigation on ejector

nozzle for R404A heat pump system

17:00-17:15, Yangfeng Xu, Performance evaluation of R-449A as a replacement forR-404A in low and medium temperature refrigeration

17:15-17:30, Syed Muhammad Ammar, Heat transfer performance of falling film evaporation on small diameter fabricated tubes of absorption chiller

17:30-18:30 Poster Session

Location: Reception hall on the second floor

18:30-20:30 Conference Banquet

Location: Han Yang Room on the second floor

DAY 3

September 25, Wednesday

08:30-09:20 Keynote reports

Location: Wu Chang Room on the second floor

Chairs: Prof. Manabu Watanabe, Tokyo University of Marine Science and Technology

Prof. Xueming Xu, Jiangnan University

08:30-08:55, Dr. Piyush Kumar Jha, Interface Process and Material Hygiene (PIHM) unit of the National Institute of Agronomic Research (INRA), France, Electromagnetic waves assisted crystallization

08:55-09:20, Mr. Sungkyu Lee, Chief Executive Officer, Arneg Korea, Innovative

solution for korea cold chain market

09:20-9:45 Coffee Break

Location: Reception hall on the second and third floor

9:45-11:45 Session 3: Cold storage

Location: Wu Chang Room on the second floor

Session Chairs: Prof. Takashi Matsumoto, Tokyo University of Marine Sci & Tech Mr Zhiqiang Wang, Fujian Snowman CO.,LTD.

09:45-10:00, Zhenyi Qian, Refrigeration system using natural refrigerant and its application in cold storage

10:00-10:15, Yubi Kang, An analytical study on the performance comparison of walk-in freezers using R404A and R449A

10:15-10:30, Zhaojun Ban, Creation and development of phase coupling thermostatic storage for fruit and vegetable

10:30-10:45, ŚMIERCIEW K., Investigation of operation of cold storage chamber with indirect cooling system

10:45-11:00, Xueming Xu, Impact of frozen storage on whole wheat starch and its A-Type and B-Type granules isolated from frozen dough

11:00 -11: 15, Cicci Xi, Application analysis for vsd drive semi-hermetic screw industrial refrigeration with new technology

11:15-11:30, Yongseok Jeon, Performance characteristics of condenser outlet split ejector-based domestic refrigerator-freezers using R600a

11:30-11:45, Jiarui Liu, Performance analysis of a modified domestic refrigerator-freezer cycle with dual ejector

9:45-11:30 Session 4: Precooling & Freezing

Location: En Shi Room on the third floor

Session Chairs: Dr. Kristina N. Widell, SINTEF Ocean

Prof. Sheng Liu, Beijing Academy of Agriculture and Forestry Sciences

09:45-10:00, Sheng Liu, An overview on development of Chinese fruit and vegetable precooling equipment and technology

10:00-10:15, Xiaoyan Song, A novel vacuum cooling for cooked pork with small porosity: bubbling vacuum cooling

10:15-10:30, Guanbang Wang, Air-based precooling experiments of apple and peach: performances comparison among methods and species

10:30-10:45, Ryunosuke Maekawa, Examinations of quantitative evaluation method of food freezing process

10:45-11:00, Yao Liu, Effect of slurry iced precooling treatment on quality of sweet corn

11:00-11:15, Bin Li, Cold-chain logistics technologies and equipments for fruits and vegetable

11:15-11:30, Lina Cheng, Effects of high pressure freezing on the thermodynamics and conformation characteristics of PPO

12:00-13:00 Lunch

Location: Western restaurant on the first floor

14:00-16:30 Technical Tour

Visiting Wuhan-New World Refrigeration Industrial Co.,Ltd