CONFERENCE PROGRAM

THURSDAY, 26 SEPTEMBER 2024

03:00 pm **Lab tour**

Venue: HCMUTE, No.1, Vo Van Ngan Street, Linh Chieu Ward, Thu Duc City, HCMC

FRIDAY, 27 SEPTEMBER 2024

07:30 am **Registration**

Venue: Conference Foyer (Meeting Room II, A1-602, Central Building)

09:00 am **Opening Ceremony**

Venue: Meeting Room II, A1-602, Central Building

Welcome Speech

Assoc. Prof. Dr. Le Hieu Giang, *Acting President, HCMUTE, Vietnam*

Opening Speech

Dr. Ta Quang Ngoc, *President of Vietnam Society of Refrigeration and Air Conditioning Engineers*

Prof. Jong-Taek Oh, *Society of Air Conditioning and Refrigerting Engineers of Korea*

09:30 am **Keynote Lecture**

Venue: Meeting Room II, A1-602, Central Building

Chair person: ***Prof. Jong-Taek Oh***, *Society of Air Conditioning and Refrigerting Engineers of Korea*
Dr. Ta Quang Ngoc, *President, VISRAE, Viet Nam*

Keynote Lecture 1: Low carbon technologies and improvement of Energy Efficiency for Refrigeration and Air conditioning in Vietnam: Challenges and Prospectives

Assoc. Prof. Dr. Nguyen Viet Dzung

Hanoi University of Science and Technology, Viet Nam

Keynote Lecture 2: Key Issues in Heat Pump Research

Prof. Dr. Min Soo Kim

Seoul National University, Republic of Korea

10:20 am **Q&A**

10:30 am **Photo session and Tea break**

Venue: Meeting Room II, A1-602, Central Building

10:45 am **Keynote Lecture**

Venue: Meeting Room II, A1-602, Central Building

Chair person: ***Prof. Jong-Taek Oh***, *Society of Air Conditioning and Refrigerting Engineers of Korea*
Dr. Ta Quang Ngoc, *President, VISRAE, Viet Nam*

Keynote Lecture 3: Parametric study of cryogenic CO2 separation with counter flow vortex tube

Prof. Dr. Sangseok Yu

Chungnam National University, Republic of Korea

Keynote Lecture 4: Upgrading waste heat temperature using AHT cycles: recent developments

Assoc. Prof. Dr. Kyaw Thu

Kyushu University, Japan

11:35 am **Q&A**

11:45 am **Guest Address**

1. **Technical Presentation of Japan Society of Refrigeration and Air conditioning Engineers**
   Dr. Sasaki Masabuno, Vice-President of JSRAE
2. **Technical Presentation of Danfoss Company**
   Mr. Vinod Jethanil, Regional Business Development, Danfoss

12:15 pm - 01:45 pm **Lunch Break (Meeting Room II, A1-602, Central Building)**

02:00 pm - 05:30 pm **Afternoon Technical Session and Poster Presentation**

06:00 pm - 08:30 pm **Gala Banquet (KIM DUNG RESTAURANT)**

PROGRAM OUTLINE

FRIDAY, 27 SEPTEMBER 2024

IMPORTANT INFORMATION FOR PARTICIPANTS

- Please ensure you always wear your ICSERA 2024 attendance card to access presentations in the break-out rooms.
- Attendance card and tickets are required for entry to the lunch and Gala Banquet.
- If you need any information or assistance regarding the conference, please reach out to the volunteers or committee members.

07:30 am - 10:00 am	**Registration** Venue: The Main Hall, Sector A, HCM City University of Technology and Education
09:00 am - 09:30 am	**Opening Ceremony** Venue: The Main Hall **Welcome Speech** Assoc. Prof. Dr. Le Hieu Giang, Acting President of HCMUTE, Vietnam **Opening Speech** Dr. Ta Quang Ngoc, President of Vietnam Society of Refrigeration and Air-Conditioning Engineers Prof. Jong-Taek Oh, Society of Air Conditioning and Refrigerting Engineers of Korea
09:30 am - 09:55 am	**Keynote Lecture 1** Venue: Meeting Room II, A1-602, Central Building
09:55 am - 10:20 am	**Keynote Lecture 2** Venue: Meeting Room II, A1-602, Central Building
10:20 am - 10:30 am	**Q&A** Venue: Meeting Room II, A1-602, Central Building
10:30 am - 10:45 am	**Tea break** Venue: Meeting Room II, A1-602, Central Building
10:45 am - 11:10 am	**Keynote Lecture 3** Venue: Meeting Room II, A1-602, Central Building
11:10 am - 11:35 am	**Keynote Lecture 4** Venue: Meeting Room II, A1-602, Central Building
11:35 am - 11:45 am	**Q&A** Venue: Meeting Room II, A1-602, Central Building
11:45 am - 12:15 am	**Guest Address** Venue: Meeting Room II, A1-602, Central Building
12:15 am - 01:45 pm	**Lunch Break (Meeting Room II, A1-602, Central Building)**

02:00 pm – 05:30 pm	**Afternoon Break-out Session**	
Break-out session No.1 *Topic:* ***Heat and Mass Transfer*** *Venue: Room No.01, A1-602, Central Building*	**Break-out session No.2** *Topic:* ***Energy Saving and Efficient Use of Energy*** *Venue: Room No.02, A1-603, Central Building*	
Break-out session No.3 *Topic:* ***Heat Pump & Energy Conservation and Utilitisation*** *Venue: Room No.03, F1-207, F1 Building*	**Break-out session No.4** *Topic:* ***Refrigerating Systems and Heat Exchangers*** *Venue: Room No.04, F1-708, F1 Building*	
Break-out session No.5 *Topic:* ***Green and Well-being Buidings & Advanced Application in HVAC*** *Venue: Room No.05, F1-609, F1 Building*	**Break-out session No.6** *Topic:* ***Sorption Technology and Energy Storage*** *Venue: Room No.05, F1-608, F1 Building*	
05:30 pm - 06:00 pm	**End all sessions and move out to the restaurant.**	
06:00 pm - 08:30 pm	**Gala banquet** Venue: KIM DUNG Restaurant Address: No. 02 Pasteur Street, Binh Tho Ward, Thu Duc City, Ho Chi Minh City	SCAN FOR LOCATION

SESSION CHAIRS & TIME

FRIDAY, 27 SEPTEMBER 2024

AFTERNOON BREAKOUT SESSION (Location: F1 BUILDING, HCMUTE)

Break-out session No.1 *Topic:* ***Heat and Mass Transfer*** *Venue: Room No.01, A1-602, Central Building*	02:00 pm – 05:30 pm	**1. Prof. Honghyun Cho,** Chosun University, Korea **2. Dr. Nguyen Ba Chien**, HUST, Viet Nam
Break-out session No.2 *Topic:* ***Energy Saving and Efficient Use of Energy*** *Venue: Room No.02, A1-603, Central Building*	02:00 pm – 05:30 pm	**1. Prof. Chan Wook Park,** Jeonbuk National University, Korea **2. Dr. Dang Hung Son,** HCMUTE, Viet Nam
Break-out session No.3 *Topic:* ***Heat Pump & Energy Conservation and Utilitisation*** *Venue: Room No.03, F1-207, F1 Building*	02:00 pm – 05:30 pm	**1. Assoc. Prof. Dang Thanh Trung,** HCMUTE, Viet Nam **2. Assoc. Prof. Kyaw Thu,** Kyushu University, Japan
Break-out session No.4 *Topic:* ***Refrigerating Systems and Heat Exchangers*** *Venue: Room No.04, F1-708, F1 Building*	02:00 pm – 05:30 pm	**1. Prof. Jong-Taek Oh,** Chonnam National University, Korea **2. Assoc. Prof. Nguyen Viet Dzung,** HUST, Viet Nam
Break-out session No.5 *Topic:* ***Green and Well-being Buidings & Advanced Application in HVAC*** *Venue: Room No.05, F1-609, F1 Building*	02:00 pm – 05:30 pm	**1. Dr. Nadzirah Mohd Mokhta,** University Malaysia Pahang, Malaysia **2. Dr. Nguyen Dinh Vinh,** HUST, Viet Nam
Break-out session No.6 *Topic:* ***Sorption Technology and Energy Storage*** *Venue: Room No.05, F1-608, F1 Building*	02:00 pm – 05:30 pm	**1. Assoc. Prof. Nguyen The Bao,** HCM City University of Technology, Viet Nam **2. Prof. Honghyun Cho** Chosun University, Korea

BREAKOUT SESSION

FRIDAY, 27 SEPTEMBER 2024

Break-out session No.1: Heat and Mass Transfer (7 papers)

Venue: Room No.01, A1-602, Central Building

Time: 02:00 pm – 05:00 pm (Afternoon Breakout session)

Chairs: Prof. Honghyun Cho, Chosun University, Korea

Dr. Nguyen Ba Chien, HUST, Viet Nam

1. **ID 1** - Yijun Wang, Xuan Quang Duong and Jae Dong Chung, *A novel cold plate design for liquid-based battery thermal management through multi objective topology optimization*
2. **ID 3** - Muhammad Aidil Safwan Abdul Aziz, *Nor Atiqah Zolpakar, Izuan Amin Ishak and Nofrizalidris Darlis, Experimental Analysis on the heat transfer rate of microchannel heat sink based on different input temperature*
3. **ID 15** - Nayoung You, Hyemin Kim and Honghyun Cho, *Performance analysis of immersion cooling system for cooling 21700 battery module*
4. **ID 23** - Heechan Chun and Hoseong Lee, *The Effect of Entropic heat in Li-ion Battery Thermal Model*
5. **ID 25** - Piljun Park, Sunoh Jeong and Hoseng Lee, *Enhancing Heat dissipation performance of Electro-Mechanical Brake Motors using Phase Change Material in Extreme conditions*
6. **ID 33** - Tan Pei Yee, Nadzirah Mohd Mokhtar, Nor Atiqah Zolpakar and Ahmad Hafizal Mohd Yamin, *Development of Solar Thermal Collector with V-Trough Concentrator Enhanced with Palm Wax as Phase Change Material*
7. **ID 57** - Nadhirah Shahiera Shahriel, Mohd Faizal Bin Hasan and Norazila Othman, *Effect of solution type on fuel properties of palm kernel shell pretreated by washing and torrefaction*

Break-out session No.2: Energy Saving and Efficient Use of Energy (8 papers)

Venue: Room No.02, A1-603, Central Building

Time: 02:00 pm – 05:00 pm (Afternoon Breakout session)

Chairs: Prof. Chan Wook Park, Jeonbuk National University, Korea

Dr. Dang Hung Son, HCMUTE, Viet Nam

1. **ID 24** - The Bao Nguyen and Trong Tin Nguyen, *Research on Freezing Seafood with Ultrasonic wave Assistance to Save Energy*
2. **ID 11** - Yun Ha Song, Thi Nhan Nguyen, Thanh Phuong Nguyen and Chan Woo Park, *A study on the synthesis of the reinforced aerogel composites for thermal insulation application*
3. **ID 12** - Van Cong Le, Thi Nhan Nguyen, Thanh Phuong Nguyen, Tan Loc Huynh, Dang Quoc Tran and Chan Woo Park, *A Study on Heat and Wastewater Recovery from Saturated Air using Membrane Heat Exchangers*
4. **ID 18** - Phuoc Hien Huynh, *Evaluating the energy/exergy efficiency of utilizing cold energy from LNG regasification for cooling and power generation*
5. **ID 20** - Huy Le Dang, Bao Nguyen The and Minh Ngo Van, *Application of blade element momentum theory with guaranteed convergence to analyze a straight-blade horizontal axis wind turbine*
6. **ID 47** - Van Kien Pham and Anh Duc Le, *The Effects of Different Drying Methods on Sliced Mango Drying*
7. **ID 58** - Deukwon Kim, Dongwon Lee and Jaehyeok Heo, *Analysis of Empirical Operation Results of Bi-directional Heat trading using Multi Thermal Energy Storage System*
8. **ID 66** - Nguyen Dinh Vinh, Tran Van Quang, Nguyen Tien Hung and Nguyen Ba Chien, *Experimental Performance Analysis of Cellulose Cooling Pad in Indoor Conditions*

Break-out session No.3: Heat Pump & Energy Conservation and Utilitisation (7 papers)

Venue: Room No.03, F1-207, F1 Building

Time: **02:00 pm – 05:00 pm (Afternoon Breakout session)**

Chairs: **Assoc. Prof. Dang Thanh Trung,** HCMUTE, Viet Nam

Assoc. Prof. Kyaw Thu, Kyushu University, Japan

1. **ID 9** - Min Seong Lee, Tan Loc Huynh, Thi Nhan Nguyen, Van Cong Le and Chan Woo Park, *A Study on the Basic Characteristics of the Dyeing Process Heat Pump*
2. **ID 10** - Jaehyeok Heo, Deukwon Kim, Dongwon Lee, Gilbong Lee, Yong Cho and Jeongsik Seo, *Heating Operation Performance Analysis of a River Water Source Heat Pump System with a TES*
3. **ID 14** - Su Heon Ha, Van Hau Duong, Thanh Phuong Nguyen and Chan Woo Park, *Investigation of pinch point and performance improvement in CO2 heat pump systems for electric vehicles*
4. **ID 16** - Minji Kwon, Duhyun Kim and Rin Yun, *Design of a heat pump with R744/R290 mixture for mobile applications*
5. **ID 34** - Min Seong Lee, Tan Loc Huynh, Thi Nhan Nguyen, Van Cong Le and Chan Woo Park, *A Simulation Study on the Heat Pump Using Waste Heat Water in the Dyeing Process*
6. **ID 55** - Zakir Hussain, Hyunwoong Kim, Tsogtbilegt Boldoo and Honghyun Cho, *Assessment of Heat Pump Efficiency with Alternative Refrigerants for Ecofriendly Cooling*
7. **ID 48** - Anh Duc Le and Thanh Phong Nguyen, *Experimental study to determine of drying methods for Celery (Centella asiatica L.)*

Break-out session No.4: Refrigerating Systems and Heat Exchangers (8 papers)

Venue: Room No.04, F1-708, F1 Building

Time: **02:00 pm – 05:00 pm (Afternoon Breakout session)**

Chairs: **Prof. Jong-Taek Oh,** Chonnam National University, Korea

Prof. Nguyen Viet Dzung, HUST, Viet Nam

1. **ID 17** - Anjaz Shofi Mhd-Saufi, Normah Mohd-Ghazali and Yushazaziah Mohd-Yunos, *Entropy Generation Minimization of Two-Phase Flow of Natural Refrigerants R744 and R290 in a Mini-Channel*
2. **ID 61** - Hoang Ngoc Hieu, Jong-Taek Oh and Jong-Kyu Kim, *Experimental study of the two-phase heat transfer and pressure drop of R448A in mini-channel*
3. **ID 37** - Van Cong Le, Thi Nhan Nguyen, Dang Quoc Tran and Chan Woo Park, *A Numerical Study on Capillary-assisted Evaporation and Heat Transfer Performance on Finned Plates*
4. **ID 42** - Su Heon Ha, Van Hau Duong and Chan Woo Park, *Numerical analysis of Pool Boiling and Flow Condensation in Shell and Plate Heat Exchangers*
5. **ID 50** - Hoang Thi Nam Huong and Hoang Dohuu, *Research to Determine the Freezing time of White Prawns on a Mesh IQF Conveyor Belt*
6. **ID 59** - Hoangtuan Nguyen, Thanhtrung Dang and Pracha Yeunyongkul, *A Numerical Simulation on Heat Transfer Process of the Cascade Heat Exchanger in a Cascade Refrigeration System Using R134a/R744*
7. **ID 64** - Dang Van Lai, *Formula develoment for predicting surface heat transfer of cylindrical food*
8. **ID 65** - Vinhnghi Le, Thanhtrung Dang, Huuquyen Nguyen, Hay Nguyen, and Hoangtuan Nguyen, *Evaluation on the cooling capacity of a cascade freezing system using refrigerant pair R513A/R744*

Break-out session No.5: Green and Well-being Buidings & Advanced Application in HVAC (8 papers)

Venue: Room No.05, F1-609, F1 Building

Time: **02:00 pm – 05:00 pm (Afternoon Breakout session)**

Chairs: **Dr. Nadzirah Mohd Mokhta,** University Malaysia Pahang, Malaysia

Dr. Nguyen Dinh Vinh, HUST, Viet Nam

1. **ID 5** - Huiyi Tan, Mohd Hafiz Dzarfan Othman, Kai Ying Tan, Normah Mohd Ghazali, Yi Ka Fong, Muhammad Faiz Hilmi Rani, Shafinaz Suhaila Sabari and Keng Yinn Wong, *Mitigating Airborne Particles in University Bus Cabins: The Impact of Ventilation*
2. **ID 44** - Quoc Dung Trinh, Tien Anh Nguyen, Huu Phung Ho, Viet Dung Nguyen, Manh Tu Hoang, Tuan Phong Vu, *A study on evaluation of indoor air quality at residential houses in Hanoi (Vietnam)*
3. **ID 62** - Quang Tran Ngoc, Dat Mac Van and Hoa Hoang Xuan, *Impact of Ventilation and Air Filtration System on Indoor Residential Apartment's Air Quality*
4. **ID 60** - Hoang Ngoc Hieu, Jong-Taek Oh and Jong-Kyu Kim, *CFD study of the heat transfer of R448A inside mini-channel*
5. **ID 6** - The Bao Nguyen and Tan Phat Le, *Research to Increase the Temperature of Water in and out of the Evaporator to Increase the Cooling Coefficient for the Chiller Systems*
6. **ID 63** - Quang Tran Ngoc, Dat Mac Van and Hoa Hoang Xuan, *Impact of Inverter and Non-inverter Air Conditioners to Indoor Thermal Comfort and Energy Consumption*
7. **ID 53** - Vu Tuan Ngoc, Truong Minh Thang, Phung Ho Huu and Chien Nguyen Ba, *CFD Simulation Analysis of Thermal Comfort and Air Ventilation in an Office*
8. **ID 4** - Badry Putra Muhamad, Sherwin Aron Smith, Muhammad Faiz Hilmi Rani, Normah Mohd Ghazali, Zuradzman Mohamad Razlan, Shahriman Abu Bakar, Nur Saifullah Kamarrudin and Wong Keng Yinn, *Investigating the Impact of Portable Humidifier on Coefficient of Performance (COP) and Power Consumption of Non-Inverter Split Unit Air Conditioner in Malaysian Climate*

Break-out session No.6: Sorption Technology and Energy Storage (7 papers)

Venue: Room No.05, F1-609, F1 Building

Time: **02:00 pm – 05:00 pm (Afternoon Breakout session)**

Chairs: **Prof. Honghyun Cho,** Chosun University, Korea

Assoc. Prof. Nguyen The Bao, HCM City University of Technology, Viet Nam

1. **ID 2** - Xuan Quang Duong, Yijun Wang and Jae Dong Chung, *Enhanced the adsorption cooling system performance by topology optimization*
2. **ID 13** - Minjung Lee, Jaehoon Yang and Honghyun Cho, *Absorption and Separation Performance Analysis of R22 and R1234yf Refrigerants in [HMIM][Tf2N] Ionic Liquids*
3. **ID 22** - Minjae Kim, Hyoun Soo Kim Kim and Yong Tae Kang, *CO2 capture – energy recovery ventilation hybrid system for indoor CO2 removal and energy load reduction*
4. **ID 28** - Dae Young Jung, Hyung Won Choi and Yong Tae Kang, *Investigation of LiOH composite adsorbent based sorption thermal battery with optimized energy storage density*
5. **ID 31** - Kyungjin Bae, Dahyuk Shin, Taekkeun Kim and Ohkyung Kwon, *Performance Evaluation of 3-bed Adsorption Refrigeration System with Operation Conditions*
6. **ID 45** - Quoc Dung Trinh, Thi Thu Ha Tran, Tuyet Mai Pham, Minh Thang Truong, *Investigation on heat transfer characteristics in a thermosiphon desorber of an absorption chiller*
7. **ID 54** - Ji-Woon Ko, Kyung Jin Bae and Oh Kyung Kwon, *A Study on the Influence of Absorber Operating Conditions on Heat Transfer Characteristics*