



GMCC 美芝

The 10th International Conference on Compressor and Refrigeration, 2025

Guide

Organizers

Xi'an Jiaotong University

Chinese Association of Refrigeration (CAR)

China Refrigeration and Air-Conditioning Industry Association (CRAA)

State Key Laboratory of High-End Compressor and System Technology

National Engineering Research Center of Fluid Machinery and Compressors

Principally Supported by GMCC

2025

7.9 Wed **7.11** Fri

Xi'an, China

<http://www.iccr-xjtu.org/>



ICCR
2025

会议指南

2025 年 7 月 9 日，星期三	
9:00am-9:00pm	注册报到 地点：西安国际会议中心 2 号楼 大厅
2025 年 7 月 10 日，星期四	
8:00am-9:00pm	注册报到 地点：西安国际会议中心 2 号楼 大厅
8:30am-9:00am	开幕式 地点：西安国际会议中心 1 号楼 2 层 建章厅
主题报告 地点：西安国际会议中心 1 号楼 2 层 建章厅	
9:00am-9:40am	席 光 教授 西安交通大学 西安交通大学离心压缩机研究的最新进展 主席：王如竹 教授 和 Ahmed Kovacicvic 教授
9:40am-10:20am	Ahmed Kovacevic 教授 英国城市大学 容积式压缩机和膨胀机的新兴技术 主席：王如竹 教授 和 Ahmed Kovacicvic 教授
10:20am-10:40am	茶 歇
10:40am-11:20am	Stefan Elbel 教授 柏林工业大学 空调、制冷和热泵技术的最新研究趋势 主席：王如竹 教授 和 Ahmed Kovacicvic 教授
11:20am-12:00am	Vikrant C. Aute 教授 马里兰大学 面向可持续冷却、供热、制冷需求的换热器再思考 主席：王如竹 教授 和 Ahmed Kovacicvic 教授
12:00am-1:30pm	午 餐 地点：西安国际会议中心 1 号楼负一层 多功能厅

1:30pm-2:10pm	Yunting Ge 教授 伦敦南岸大学 采用 hydrogen-metal 技术和废热回收的高压氢气压缩机性能分析 主席：张 华 教授 和 Vikrant C. Aute 教授
2:10pm-2:50pm	Andrej Kitanovski 教授 卢布尔雅娜大学 固态制冷和热泵技术：从绝对零度到工业加热 主席：张 华 教授 和 Vikrant C. Aute 教授
2:50pm-3:30pm	Hoseong Lee 教授 高丽大学 电动汽车和储能系统锂离子电池的热管理 主席：张 华 教授 和 Vikrant C. Aute 教授
3:30pm-3:50pm	茶 歇
3:50pm-4:30pm	郭 怡 副教授 西安交通大学 动力增压设备在氢能领域的应用、发展与挑战 主席：Yunting Ge 教授和 Stefan Elbel 教授
4:30pm-5:10pm	袁玲玲 阿特拉斯科普柯 热泵系统能效测量标准与性能改进 主席：Yunting Ge 教授和 Stefan Elbel 教授
5:10pm-5:50pm	廖健生 广东美芝制冷设备有限公司 宽频高效低噪声压缩机关键技术研究 主席：Yunting Ge 教授和 Stefan Elbel 教授

技术会议
 2025 年 7 月 11 日，星期五

论坛 1: 压缩机I

地点： 建章厅 1 号

主席： Xiaolin Wang, 贾晓晗

8:30 am-8:50 am	滚动转子式压缩机的应用拓展和技术进步 周 易 上海海立电器有限公司 (特邀报告)
8:50 am-9:10 am	滚动推力轴承设计的有限元分析 张 强 比泽尔制冷技术(中国)有限公司 (特邀报告)
9:10 am-9:25 am	非对称型变壁厚涡旋压缩机的建模与流动分析 Zengyao Li 中国石油大学 (华东)
9:25 am-9:40 am	CO ₂ 大规格转子压缩机的流场仿真研究 李 莉 西安庆安制冷设备股份有限公司
9:40 am-9:55 am	涡旋压缩机技术进展与展望——从高效节能到多场景应用 高 博 冰山松洋压缩机 (大连) 有限公司
9:55 am-10:15 am	茶 歇
主席： 王增丽, 余小玲	
10:15 am-10:30 am	转子式压缩机排气温度半经验模型适用性研究 吴清清 上海海立电器有限公司
10:30 am-10:45 am	转子式压缩机蓄能器回油孔对 RAC 性能和压缩机可靠性的影响研究 Yuxuan Zhang 青岛海信空调股份有限公司
10:45 am-11:00 am	液化天然气船用低负荷 (LD) 压缩机应用技术及关键技术研究 Anna Diao 上海船用柴油机研究所
11:00 am-11:15 am	多因素耦合下活塞偏置控制方法对线性压缩机输出特性的影响 Binbin Hu 扬州大学
11:15 am-11:30 am	高速转子压缩机摩擦损失降低的创新 Yuanpei Hu 珠海格力电器股份有限公司
11:30 am-11:45 am	数据增量场景下天然气压缩机异常检测 Menghua Zhang 西安交通大学

技术会议 2025 年 7 月 11 日, 星期五	
论坛 2: 压缩机II 地点: 建章厅 2 号	
主席: Ahmed Kovacevic, 郭 怡	
8:30 am- 8:50 am	工业高温热泵螺杆压缩机技术及应用 武晓昆 珠海格力电器股份有限公司 (特邀报告)
8:50 am- 9:10 am	无油螺杆压缩机与自然工质在工业热泵中的应用探索 李 军 冰轮环境技术股份有限公司 (特邀报告)
9:10 am- 9:25 am	螺杆压缩机新型剖面 and 传动设计的创新与实践 王 楠 顿汉布什 (中国) 工业有限公司
9:25 am- 9:40 am	工业浸油螺杆压缩机内部变形的根本原因分析 Abhishek Kumar 伦敦大学圣乔治学院
9:40 am- 9:55 am	基于数值模拟的液态活塞压缩机在两种运行模式下的热分析 Bo Wu 沈阳工业大学
9:55 am- 10:15 am	茶 歇
主席: 李红旗, 杨 旭	
10:15 am- 10:35 am	高性能压缩机系统研究进展: SKL-HCST 的最新研究成果 王 乐 高端压缩机及系统技术全国重点实验室(特邀报告)
10:30 am- 10:45 am	压缩机发展与变频技术协同控制 李希志 青岛海信日立空调系统有限公司(特邀报告)
10:45 am- 11:00 am	无油单螺杆压缩机的研制与实验研究 Xudong Ma 北京工业大学
11:00 am- 11:15 am	BOG 螺杆压缩机转子变形分析 Yuebo Zeng 上海船用柴油机研究所
11:15 am- 11:30 am	基于螺栓预紧力对隔膜压缩机中的液压油压力进行无损监测 Da Chen 西安交通大学
11:30 am- 11:45 am	螺杆压缩机管道系统压力脉动的预测与抑制 Huan Wei 西安交通大学
11:45am- 12:00am	150m³/min 螺杆压缩机的极致效率与超凡寿命研究 张 震 苏州强时压缩机有限公司

技术会议
 2025 年 7 月 11 日，星期五

论坛 3：空调和制冷
 地点：建章厅 3 号

主席：Stefan Elbel, 钱苏昕

8:30 am-8:50 am	热交换器创新的智能设计方法： 利用算法和工具 黄 龙 西交利物浦大学 （特邀报告）
8:50 am-9:10 am	空调自适应温度复位控制，提高办公楼光伏现场用电 Yanxin Li 华南理工大学
9:10 am-9:25 am	基于冷板的数据中心冷却系统不同方法节能优化及比较分析 屈胜利 西安交通大学
9:25 am-9:40 am	自复叠制冷系统中成分的在线测量和迁移行为研究 Yinlong Li 西安交通大学
9:40 am-9:55 am	管翅式换热器最佳管径的理论研究 李一鸣 西安交通大学
9:55 am-10:15 am	茶 歇
主席: Vikrant Aute C., 孙志利	
10:15am-10:30 am	低温冰箱内水分转移和霜分布的研究 Guixiang He 西安交通大学
10:30am-10:45 am	带自动回油功能的喷射器增强型 R290 冷冻机动态行为实验研究 Zhidong Wen 西安交通大学
10:45am-11:00 am	带压力交换器的跨临界二氧化碳制冷循环的热力学分析 Haoyue Zhang 西安交通大学
11:00am-11:15 am	低温脉动热管的两相流动不稳定性 Xuan Tao 浙大城市学院
11:15am-11:30 am	CO ₂ 制冷剂应用的最新进展：制冷、热泵和 VRV 系统的简短回顾 Jianfei Zhang 大连宣科空调压缩机有限公司
11:30am-11:45 am	基于注意力机制的多功能校园建筑的多能源负荷预测方法 Xiaojie Lin 浙江大学
11:45am-12:00am	不同入口压力和喷嘴数对涡管性能的影响的实验研究 Wen Li 西安工程大学

技术会议 2025 年 7 月 11 日, 星期五	
论坛 4: 热泵 地点: 建章厅 4 号	
主席: Andrej Kitanovski, 杨 昭	
8:30 am- 8:50 am	空气源热泵系统中制冷剂和油流分布的瞬态模拟 乔洪涛 美国三菱电机研究实验室 (特邀报告)
8:50 am- 9:10 am	基于双回路增压热泵控制策略的超低温区域供热系统仿真研究 Yuexuan Gong 北京工业大学
9:10 am- 9:25 am	基于多目标优化的级联冰浆源热泵系统分析 Yujie Zhou 中国科学院广州能源研究所
9:25 am- 9:40 am	使用热气的空气源热泵多室外机组轮流除霜实验研究 Xiang Li 北京工业大学
9:40 am- 9:55 am	采用两级高速离心压缩机的热泵实验研究 Linbo Zhang 西安交通大学
9:55 am- 10:15 am	茶 歇
主席: 赵红霞, 张振涛	
10:15am- 10:30 am	基于蒸汽注入和喷射器协同效率提高的非共沸混合热泵系统熵生成优化 Zhengyong Li 华南理工大学
10:30am- 10:45 am	热泵系统中润滑机理与润滑剂选型机理探讨 纪晨晨 上海旌屹新材料科技有限公司
10:45am- 11:00 am	基于注意力机制的跨临界二氧化碳热泵系统故障诊断 Congcong Du 郑州大学
11:00am- 11:15 am	热泵热水器的数据驱动模型 李一鸣 西安交通大学
11:15am- 11:30 am	多户住宅楼空气源热泵系统在能源和环境性能方面的比较分析 Daneun Kim 高丽大学
11:30am- 11:45 am	中高温热泵用低 GWP 制冷剂润滑油的研制 Cheng Lu 西安交通大学

技术会议 2025 年 7 月 11 日, 星期五	
论坛 5: 汽车热管理及其它系统 地点: 多功能厅 201	
主席: Hoseong Lee, 谷 波	
8:30 am- 8:50 am	提高新能源汽车电动压缩机可靠性应用技术 陈祥吉 南京奥特佳新能源科技有限公司 (特邀报告)
8:50 am- 9:10 am	电动汽车动力电池高温热管理技术研究进展 李兆凯 长安大学 (特邀报告)
9:10 am- 9:25 am	提高寒冷气候下混合动力汽车燃油经济性的热泵热管理系统开发 Hayeon Kim 高丽大学
9:25 am- 9:40 am	电动汽车超临界 CO ₂ 热泵空调系统性能优化研究 Bowen Zhang 山东大学
9:40 am- 9:55 am	汽车空调用线性压缩机的动态特性 Chengzhan Li 天津商业大学
9:55 am- 10:15 am	茶 歇
主席: 孙亚松, 王文毅	
10:15am- 10:30 am	海上风电利用的电转冰框架: 具有电池储能冰浆系统的多目标优化 Fuchao Li 中国科学技术大学
10:30am- 10:45 am	CO ₂ 超高温热泵熔盐储存介质热性能的分子动力学模拟 Qingsheng Yu 西安交通大学
10:45am- 11:00 am	低温带阀线性压缩机在空间氦气节流制冷器中的应用研究 Ran Hu 中国科学院上海技术物理研究所
11:00am- 11:15 am	5t/d 氢液化装置用氢气涡轮膨胀机的相似性建模 Bingyao Niu 西安交通大学
11:15am- 11:30 am	用于吸入预处理冷冻干燥机的压缩空气系统性能研究 Wenting Zhu 江苏科技大学
11:30am- 11:45 am	电动汽车二氧化碳涡旋压缩机径向泄漏特性和齿顶密封效果研究 Zhixiang Liu 上海理工大学

技术会议 2025 年 7 月 11 日, 星期五	
论坛 6: 其它 地点: 多功能厅 202	
主席: Yunting Ge, 陈 良	
8:30 am-8:50 am	使用差分进化的压缩机旋风分离器几何形状优化 沈仲华 上海海立电器有限公司
8:50 am-9:10 am	用于制冷和冷冻行业的新型先进压缩机阀钢 Anders Hoel 合瑞迈(上海)材料科技有限公司
9:10 am-9:25 am	低温防爆电气贯穿件的开发及应用 彭 斌 西安泰金新能科技股份有限公司
9:25 am-9:40 am	罗茨真空泵启动过程的抽气性能、动力学以及实验研究 Chongzhou Sun 西安交通大学
9:40 am-9:55 am	合瑞迈高性能精密带钢及应用 张国蕃 合瑞迈(上海)材料科技有限公司
9:55 am-10:15 am	茶 歇
主席: 王驿凯, 孟现阳	
10:15am-10:30 am	DiPEC7 和 DiPEiC9 中 R1336mzz(Z)的溶解度测定: 293.15 K 至 343.15 K Xiaopo Wang 西安交通大学
10:30am-10:45 am	制冷压缩机润滑油开发设计 刘 军 瑞孚化工(上海)有限公司
10:45am-11:00 am	使用完整压缩机模型对 R290 和 R32 进行理论比较压缩机评价 Thomas Meyer 柏林工业大学
11:00am-11:15 am	宽低频高效吸声材料的研究 Mengtao Liang 西安交通大学
11:15am-11:30 am	液滴冲击水平圆柱面动态行为的实验研究 Guoqiang Wu 江西科技师范大学
11:30am-11:45 am	天然气集输管道射流增压器研究 Luyang Dai 西安交通大学
11:45am-12:00 am	低温氢透平在带液工况下的气体流动分析与优化 Shenrui Xie 上海船用柴油机研究所

Program at a Glance

Wednesday, 09/ 07/ 2025	
9:00am-9:00pm	Registration Location: Xi'an International Convention Center, Lobby, Bldg.2
Thursday, 10/ 07/ 2025	
8:30am-9:00pm	Registration Location: Xi'an International Convention Center, Lobby, Bldg.2
8:30am-9:00am	Opening Ceremony Location: Jianzhang Hall, 2st Floor, Bldg.1
Plenary Session	
Location: Jianzhang Hall, 2st Floor, Bldg.1	
9:00am-9:40am	Prof. Guang Xi Some Latest Research Advances in Centrifugal Compressors at Xi'an Jiaotong University Chair: Prof. Ruzhu Wang and Prof. Ahmed Kovacic
9:40am-10:20am	Prof. Ahmed Kovacic Emerging Technologies for Positive Displacement Compressors and Expanders Chair: Prof. Ruzhu Wang and Prof. Ahmed Kovacic
10:20am-10:40am	Coffee Break
10:40am-11:20am	Prof. Stefan Elbel Latest Research Trends in Air Conditioning, Refrigeration, and Heat Pump Technology Chair: Prof. Ruzhu Wang and Prof. Ahmed Kovacic
11:20am-12:00am	Prof. Vikrant C. Aute Rethinking Heat Exchangers for Sustainable Cooling, Heating, and Refrigeration Chair: Prof. Ruzhu Wang and Prof. Ahmed Kovacic
12:00am-1:30pm	Lunch Location: Multi-function Hall, B1, Bldg.1

1:30pm-2:10pm	Prof. Yunting Ge Performance Analysis of High-Pressure Hydrogen Compression Using Hydrogen-Metal Technology and Waste Heat Recovery Chair: Prof. Hua Zhang and Prof. Vikrant C. Aute
2:10pm-2:50pm	Prof. Andrej Kitanovski Solid State Refrigeration and Heat Pump Technologies: From Absolute Zero to Industrial Heating Chair: Prof. Hua Zhang and Prof. Vikrant C. Aute
2:50pm-3:30pm	Prof. Hoseong Lee Thermal Management of Lithium-ion Batteries for Electric Vehicles and Energy Storage System Chair: Prof. Hua Zhang and Prof. Vikrant C. Aute
3:30pm-3:50pm	Coffee Break
3:50pm-4:30pm	Prof. Yi Guo Application, Development, and Challenges of Compressors in the Hydrogen Energy Field Chair: Prof. Yunting Ge and Prof. Stefan Elbel
4:30pm-5:10pm	Lingling Yuan Energy Efficiency Measurement Standards and Performance Improvement of Heat Pump Systems Chair: Prof. Yunting Ge and Prof. Stefan Elbel
5:10pm-5:50pm	Jiansheng Liao Research on Key Technologies of Wide-Frequency High-Efficiency and Low-Noise Compressors Chair: Prof. Yunting Ge and Prof. Stefan Elbel

Technical Sessions Friday, 11/ 07/ 2025

Session 1: Compressors I Location: Jianzhang hall, Room 1

Chair: Xiaolin Wang, Xiaohan Jia

8:30 am- 8:50 am	Rolling rotor compressors: application expansion and technological advances Yi Zhou Shanghai Highly Electrical Appliances Co., Ltd. (Keynote)
8:50 am- 9:10 am	FEA for scroll thrust bearing design Qiang Zhang BITZER Refrigeration Technology (China) Co., Ltd. (Keynote)
9:10 am- 9:25 am	Modeling and unsteady flow analysis of asymmetric scroll compressors with variable wrap thickness Zengyao Li China University of Petroleum (East China) .
9:25 am- 9:40 am	Flow field simulation reseach on CO2 large-scale rotary compressor Li Li Xi'an Qingan Refrigeration Equipment Co., Ltd
9:40 am- 9:55 am	Advances and prospects in scroll compressor technology —efficiency to versatility Bo Gao Sonyo Compressor (Dalian) Co., Ltd.
9:55 am- 10:15 am	Coffee Break
Chair: Zengli Wang, Xiaoling Yu	
10:15 am- 10:30 am	Study on the applicability of semi-empirical models for the discharge temperature of rotary compressors Qingqing Wu Shanghai Highly (Group) Co., Ltd.
10:30 am- 10:45 am	Research on the impact of oil return holes in rotary compressor accumulators on the performance of RAC and the compressor reliability Yuxuan Zhang Hisense Air Conditioning Co., Ltd
10:45 am- 11:00 am	Research on application technology and key technologies of low-duty (LD) compressors for LNG carrier Anna Diao Shanghai Marine Diesel Engine Research Institute.
11:00 am- 11:15 am	The impact of piston offset control methods on the output characteristics of linear compressors under multifactor coupling BinBin Hu Yangzhou University
11:15 am- 11:30 am	Innovation in reducing friction loss of high-speed rotary compressor Yuanpei Hu Gree Electric Appliances, Zhuhai.
11:30 am- 11:45 am	Anomaly detection of natural gas compressor in data increment scenario Menghua Zhang Xi'an Jiaotong University

Technical Sessions Friday, 11/ 07/ 2025

Session 2: Compressors II Location: Jianzhang hall, Room 2

Chair: Ahmed Kovacevic, Yi Guo

8:30 am- 9:50 am	Industrial high-temperature heat pump screw compressor technology and application Xiaokun Wu Gree Electric Appliances, Zhuhai. (Keynote)
8:50 am- 9:10 am	Exploration of oil-free screw compressors and natural refrigerants in industrial heat pump applications Jun Li Moon Environment Technology Co.,Ltd. (Keynote)
9:10 am- 9:25 am	Innovation and practice of new profile and transmission design in screw compressors Nan Wang Dunham-Bush (China) Industrial Co., Ltd
9:25 am- 9:40 am	Root cause analysis and finite element analysis (FEA) of internal deformation in an industrial oil-flooded air screw compressor to mitigate frequent seizures Abhishek Kumar City St George's, University of London.
9:40 am- 9:55 am	Heat analysis of liquid piston compressor under two operating modes based on numerical simulation Bo Wu Shenyang University of Technology
9:55 am- 10:15 am	Coffee Break
Chair: Hongqi Li, Xu Yang	
10:15 am- 10:30 am	Progress in high-performance compressor systems: recent research from SKL-HCST Le Wang National Key Laboratory of High-end Compressor and System Technology
10:30 am- 10:45 am	Compressor development and inverter technology for synergistic control Xizhi Li Qingdao Hisense Hitachi air conditioning system Co., Ltd.
10:45 am- 11:00 am	Development and experimental study of oil-free single screw compressor Xudong Ma Beijing University of Technology
11:00 am- 11:15 am	Analysis of rotor deformation of BOG screw compressor Yuebo Zeng Shanghai Marine Diesel Engine Research Institute
11:15 am- 11:30 am	Non-destructive monitoring of hydraulic oil pressure in diaphragm compressors based on bolt preload Da Chen Xi'an Jiaotong University
11:30 am- 11:45 am	Research on the extreme efficiency and extraordinary life for 150 m ³ /min screw compressor Zhen Zhang Suzhou Stronix Compressor Co.,Ltd.
11:45am- 12:00am	Prediction and suppression of pressure pulsation for the screw compressor pipeline system Huan Wei Xi'an Jiaotong University

Technical Sessions Friday, 11/ 07/ 2025

Session 3: Air-conditioning and Refrigeration Location: Jianzhang hall, Room 3

Chair: Stefan Elbel, Suxin Qian

8:30 am- 8:50 am	Smart design methods for heat exchanger innovation: harnessing algorithms and tools Long Huang Xi'an Jiaotong-Liverpool University (Keynote)
8:50 am- 9:10 am	Adaptive temperature reset control of air-conditioner to improve photovoltaic on-site consumption for an office building Yanxin Li South China University of Technology
9:10 am- 9:25 am	Energy-saving optimization and comparative analysis under different methods for data centers cooling systems based on cold plates Shengli Qu Xi'an Jiaotong University
9:25 am- 9:40 am	Research on online measurement and migration behavior of compositions in auto-cascade refrigeration systems Yinlong Li Xi'an Jiaotong University.
9:40 am- 9:55 am	Theoretical investigation of the optimal tube diameter in tube-fin heat exchangers Yiming Li Xi'an Jiaotong University
9:55 am- 10:15 am	Coffee Break

Chair: Vikrant Aute C., Zhili Sun

10:15 am- 10:30 am	Study of moisture transfer and frost distribution in low-temperature refrigerators Guixiang He Xi'an Jiaotong University.
10:30 am- 10:45 am	Experimental study on the dynamic behaviors of an ejector-enhanced R290 freezer with automatic oil return Zhidong Wen Xi'an Jiaotong University.
10:45 am- 11:00 am	Thermodynamic analysis of a transcritical CO ₂ refrigeration cycle with pressure exchanger Haoyue Zhang Xi'an Jiaotong University.
11:00am- 11:15 am	Two-phase flow instabilities in cryogenic pulsating heat pipes Xuan Tao Hangzhou City University
11:15 am- 11:30 am	Recent progress in CO ₂ refrigerant applications: a short review of refrigeration, heat pump and VRV systems Jianfei Zhang Dalian Xuanke Air Conditioning Compressor Co., Ltd.
11:30 am- 11:45 am	A multi-energy load forecasting method for multi-functional campus buildings based on attention mechanism Xiaojie Lin Zhejiang University.
11:45 am- 12:00 am	Experimental investigation of the effects of different inlet pressures and nozzle numbers on vortex tube performance Wen Li Xi'an Polytechnic University. Chinaperformance

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Session 4: Heat Pump Location: Jianzhang hall, Room 4

Chair: Andrej Kitanovski, Zhao Yang

8:30 am- 8:50 am	Transient simulation of refrigerant and oil flow distribution in air source heat pump systems Hongtao Qiao Mitsubishi Electric Research Laboratories, USA (Keynote)
8:50 am- 9:10 am	Simulation study of ultra-low temperature district heating system based on double-loop booster heat pump control strategy Yuxuan Gong Beijing university of technology
9:10 am- 9:25 am	Analysis of cascade ice slurry source heat pump system based on multi-objective optimization Yujie Zhou Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences
9:25 am- 9:40 am	Experimental study on defrosting multi outdoor units in turn for air source heat pump using hot gas Xiang Li Beijing university of technology
9:40 am- 9:55 am	Experimental study of a heat pump using two-stage high speed centrifugal compressor Linbo Zhang Xi'an Jiaotong University
9:55 am- 10:15 am	Coffee Break
Chair: Hongxia Zhao, Zhentao Zhang	
10:15 am- 10:30 am	Entropy generation optimization of a zeotropic mixture heat pump system based on the synergistic efficiency enhancement of vapor injection and ejector Zhengyong Li School of Electric Power Engineering, South China University of Technology
10:30 am- 10:45 am	Lubrication mechanism and selection methodology of lubricants for heat pump systems Chenchen Ji Shanghai Jingyi New Material Technology Co., Ltd.
10:45 am- 11:00 am	Fault diagnosis of transcritical carbon dioxide heat pump system based on attention mechanism Congcong Du ZhengZhou University
11:00 am- 11:15 am	A data-driven model for heat pump water heater Yiming Li Xi'an Jiaotong University
11:15 am- 11:30 am	Comparative analysis of air source heat pump systems for multi-family residential buildings in terms of energy and environmental performance Daneun Kim Korea university
11:30 am- 11:45 am	Development of lubricants for moderately-high-temperature heat pumps with low GWP refrigerants Cheng Lu Xi'an Jiaotong University

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Session 5: Automotive Thermal Management and Other Systems

Location: Multi-function Hall 201

Chair: Hoseong Lee, Bo Gu

8:30 am- 8:50 am	Improve the reliability of electric compressors for new energy vehicles Xiangji Chen Aotecar New Energy Technology Co.,Ltd (Keynote)
8:50 am- 9:10 am	Research progress of high temperature thermal management technology for electric vehicle power battery Zhaokai Li Chang'an University (Keynote)
9:10 am- 9:25 am	Development of thermal management system utilizing heat pump for fuel economy improvement of hybrid electric vehicles in cold climates Hayeon Kim Korea university
9:25 am- 9:40 am	Research on performance optimization of transcritical CO ₂ heat pump air conditioning system for electric vehicles Bowen Zhang School of Nuclear Science, Energy and Power Engineering, Shandong University
9:40 am- 9:55 am	Dynamic characteristics of linear compressors for automotive air conditioning applications Chengzhan Li Tianjin university of commerce
9:55 am- 10:15 am	Coffee Break
Chair: Yasong Sun, Wenyi Wang	
10:15 am- 10:30 am	A power-to-ice framework for offshore wind utilization: multi-objective optimization of ice slurry systems with battery energy storage Fuchao Li Univesity of Science and Technology of China
10:30 am- 10:45 am	Molecular dynamics simulation of the thermal properties of molten salt storage media for CO ₂ ultra-high temperature heat pumps Qingsheng Yu Xi'an Jiaotong University
10:45 am- 11:00 am	Research on a low temperature valved linear compressor for space helium throttling cryocooler Ran Hu Shanghai Institute of Technical Physics, Chinese Academy of Sciences
11:00 am- 11:15 am	Similarity modeling of hydrogen turbo-expander for 5t/d hydrogen liquefier Bingyao Niu Xi'an Jiaotong University
11:15 am- 11:30 am	Research on the performance of compressed air system with the freeze dryer used for suction pretreatment Wenting Zhu Jiangsu University of Science and Technology
11:30 am- 11:45 am	Research on the radial leakage characteristics and tooth top sealing effect in CO ₂ scroll compressor for electric vehicles Zhixiang Liu University of Shanghai for Science and Technology

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Session 6: Others

Location: Multi-function Hall 202

Chair: Yunting Ge, Liang Chen

8:30 am- 8:50 am	Optimization of the compressor cyclone separator geometry using differential evolution Zhonghua Shen Shanghai Highly Electrical Appliances Co.,Ltd.
8:50 am- 9:10 am	A new advanced compressor valve steel for the refrigeration and freezer industry Anders Hoel Alleima Materials Technology (Shanghai) Co.,Ltd.
9:10 am- 9:25 am	Development and application of low-temperature explosion-proof electrical penetrating components Bin Peng Xi'an Taijin New Energy & Materials Sci-Tech Co.,Ltd.
9:25 am- 9:40 am	Pumping performance, dynamic and experimental research on the startup process of roots vacuum pumps Chongzhou Sun Xi'an Jiaotong University
9:40 am- 9:55 am	Alleima high-performance precision strip steel & application Guofan Zhang Alleima (Shanghai) Materials Technology Co., Ltd
9:55 am- 10:15 am	Coffee Break
Chair: Yikai Wang, Xianyang Meng	
10:15am- 10:30 am	Solubility measurement of R1336mzz(Z) in DiPEC7 and DiPEiC9 from 293.15 K to 343.15 K Xiaopo Wang. Xi'an Jiaotong University.
10:30am- 10:45 am	Lubricant design for refrigeration compressor Jun Liu Shrieve Chemical(Shanghai)Co.,Ltd.
10:45am- 11:00 am	Theoretical comparative compressor evaluation using integral compressor models for R290 and R32 Thomas Meyer Technische Universität Berlin
11:00am- 11:15 am	Research on wide low-frequency high-efficiency sound absorption Mengtao Liang Xi'an Jiaotong University
11:15am- 11:30 am	Experimental study of the dynamic behavior of droplet impact on horizontal cylindrical surfaces Guoqiang Wu Jiangxi University of Science and Technology
11:30am- 11:45 am	An investigation on jet booster for natural gas gathering and transportation pipelines Luyang Dai Xi'an Jiaotong University
11:45am- 12:00 am	Gas Flow Analysis and Optimization for Cryogenic Hydrogen Turbine Expander Operation under Wet Conditions Shenrui Xie Shanghai Marine Diesel Engine Research Institute.

