

CONTENTS

Host Chapter, Officers, and Conferences and Expositions Committee	vii
State of the Society Address, Bjarne W. Olesen, 2017–2018 ASHRAE President	viii
Technical Program	xiii

TECHNICAL PAPERS

CH-18-001	Strategies to Increase Deployment of Renewables Using Cool Thermal Energy Storage (RP-1607) Amy Van Asselt, Student Member ASHRAE; Douglas T. Reindl, PhD, PE, Fellow Member ASHRAE; Gregory F. Nellis, PhD, Fellow Member ASHRAE	3
CH-18-002	Analysis of Magnetic Refrigeration Designs with Three Different Magnet Array Geometries Erim Yanik, Student Member ASHRAE; Serdar Celik, PhD, Member ASHRAE	12
CH-18-003	Modeling Variable-Airflow Series Fan-Powered Terminal Units with a Mass and Energy Balance Approach Peng Yin, PhD, Associate Member ASHRAE; Carl Reid, Associate Member ASHRAE; Dennis L. O'Neal, PhD, PE, Fellow/Life Member ASHRAE	22
CH-18-004	Modeling Variable-Airflow Parallel Fan-Powered Terminal Units with a Mass and Energy Balance Approach Peng Yin, PhD, Associate Member ASHRAE; Dennis L. O'Neal, PhD, PE, Fellow/Life Member ASHRAE	33
CH-18-005	Modeling and Testing of a Single-Speed DX Air-Conditioning System Nabil Nassif, PhD, PE, Member ASHRAE	44
CH-18-006	Commissioning an Existing Heat Recovery Chiller System at a Large District Plant Lei Wang, PhD, PE, Member ASHRAE; Yasuko Sakurai, DrEng, Member ASHRAE; Steven J. Bowman; David E. Claridge, PhD, PE, PCC, Fellow/Life Member ASHRAE	52
CH-18-007	Valve Flowmeter Enhancement Through Computing Valve Dynamic Behaviors Shima Shahahmadi, Student Member ASHRAE; Li Song, PhD, PE, Member ASHRAE	61
CH-18-008	Analysis of Whole-Building HVAC System Energy Efficiency Jiajun Liao, Student Member ASHRAE; David E. Claridge, PhD, PE, PCC, Fellow/Life Member ASHRAE; Linyan Wang	72
CH-18-009	Cool Roof Use in Commercial Buildings in the United States: An Energy Cost Analysis Thomas J. Taylor, PhD; Christian Hartwig	88
CH-18-010	Improving the Energy Efficiency of a Midsize Power Plant by Increased Recovery and Reuse of Waste Heat Jeffrey Green; James Mathias, PhD, PE, Member ASHRAE	97
CH-18-011	Comprehensive Analyses of Variable- and Constant-Speed Pumps and Heat Exchanger and Energy Cost Savings Potential in University of Kansas' Power Plant Raof Jameel Ahmed Alabdullah; Ronald L. Dougherty, PhD, PE, Member ASHRAE	105
CH-18-012	A Comparison of Fixed- and Variable-Airflow Series Fan-Powered Terminal Units Dennis L. O'Neal, PhD, PE, Fellow/Life Member ASHRAE; Peng Yin, PhD, Associate Member ASHRAE; Di Lu	121
CH-18-013	Energy and Control Performance Investigation of Dual-Branch Air-Handling Units with Return Air Bypass Koosha Kiamehr, Student Member ASHRAE; Gang Wang, PhD, PE, Member ASHRAE	137

CH-18-014	Annual Energy Performance Evaluation of Series and Parallel Fixed-Airflow Fan-Powered Terminal Units Peng Yin, PhD, Associate Member ASHRAE; Dennis L. O'Neal, PhD, PE, Fellow/Life Member ASHRAE, Di Lu	148
CH-18-015	Software-Based Fault Detection for Multicircuit Building Lighting Systems Jayson Bursill, Student Member ASHRAE; William O'Brien, PhD, Associate Member ASHRAE; Ian Beausoleil-Morrison, PhD, PEng, Member ASHRAE	159
CH-18-016	A Preliminary Study on Text Mining Operator Logbooks to Develop a Fault-Frequency Model H. Burak Gunay, PhD, Associate Member ASHRAE; Weiming Shen, PhD, PEng; Chunsheng Yang, PhD; Brent Huchuk, Student Member ASHRAE; Zixiao Shi, Student Member ASHRAE	171
CH-18-017	Energy Modeling Methodology for Community Master Planning Scott Bucking, PhD, Associate Member ASHRAE	185
CH-18-018	Simulation of Radiant Cooling Systems in Cleanroom Applications Using Computational Fluid Dynamics Mohamed Al Beltagy, PE; Mohamed El Morsi, PhD, Ahmed El Baz, PhD; Ahmed El Assy, PhD	194
	Index of Technical Papers, Volume 124, Part 1	208