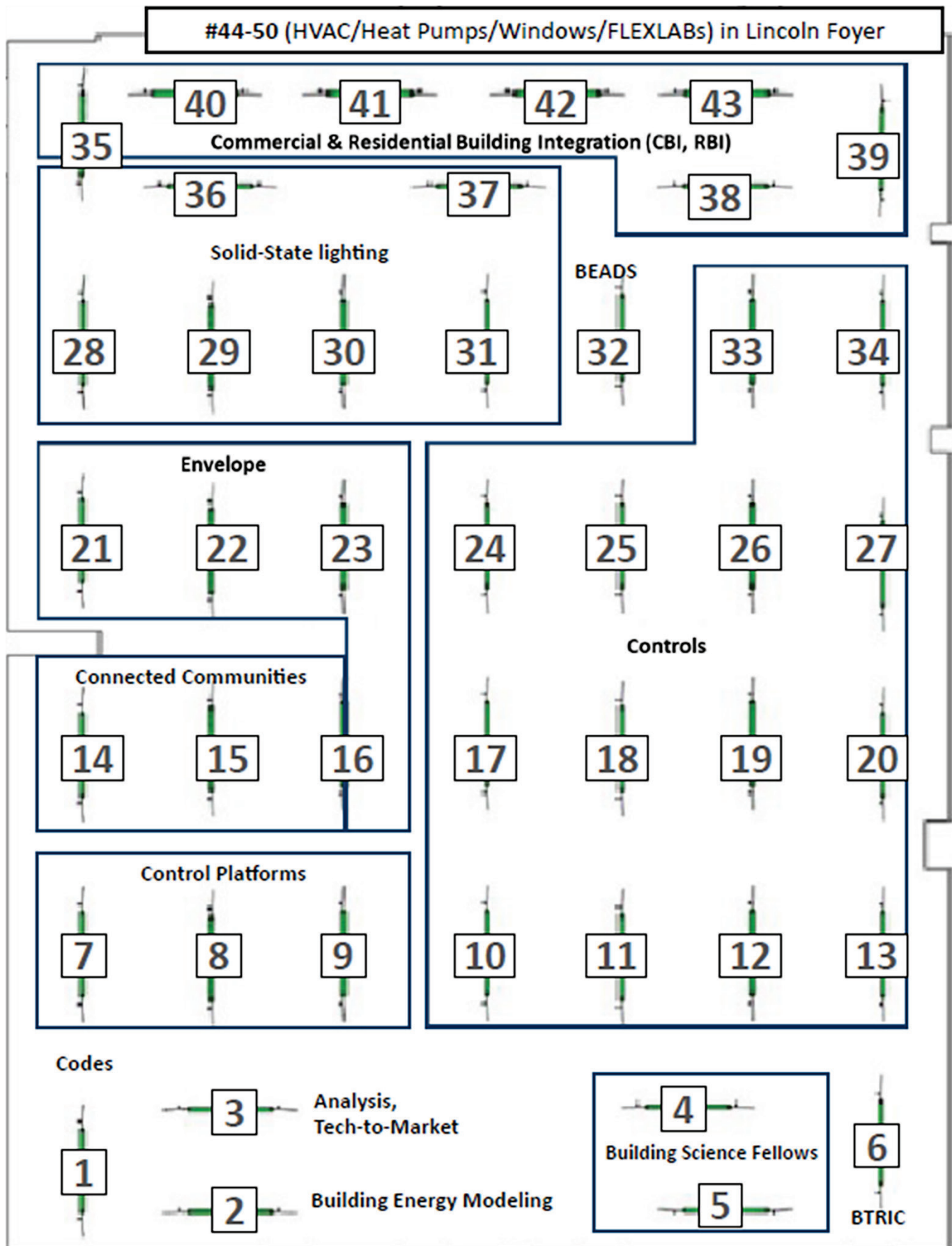


I.POSTER HALL LAYOUT



II. POSTERS (full list)

TRACK	TITLE	PRESENTER	BOARD
Analysis	Demand Flexibility Benchmarking	Jingjing Liu	3
	Multi-Scenario Extreme Weather Simulator	Daniel Villa	
Tech-to-Market	AutoBEM CRADAs	Joshua New	
	TCFs: DER as a Service (Ecolong and VOLTTRON), Remote Deployment and Setup of VOLTTRON Instances (Intellimation and VOLTTRON)	Shwetha Niddodi	
Building Energy Modeling (BEM)	Empirical Validation of Building Energy Simulation	Piljae Im	2
	OCHRE: Object-Oriented Controllable High-Resolution Residential Energy Model	Jeffrey Maguire	
	BEMCyclopedia - Building Energy Modeling Training Resources	Cindy Regnier	
	Deep Design Data Portal (D3P) & AIA 2030 Design Data Exchange (DDx)	Cindy Regnier	
Codes	Building Performance Standards: Policy Movement	Billierae Engelman	1
	Building Energy Codes Technical Assistance	Kelly Gordon	
	Modular Multifamily Construction: A Field Study of Energy Code Compliance and Performance Through Offsite Prefabrication	Kevin Grosskopf	
	Residential Energy Code: Is Compliance Equitable?	Michael Tillou	
	Efficiency for Energy Resilience	Tianzhen Hong	9
Building Science Fellows	Carbon Capture and Storage Using Building Materials	Malavika Bagapalli	4
	Sustainability and Performance of Bio-Based Materials for Construction 3D-Printing	Katy Bradford	
	Lower Critical Solution Temperature (LCST) Materials Used for Solar-Powered Cooling	Jordan Kocher	
	Development of Phase-Change Material Composites for Thermal Energy Storage via Vat Polymerization	Isabel Melendez	
	Residential Human Behavior Modeling Approaches	Katherine Bassett	5
	Vapor Selective Membranes for Efficient Dehumidification: Materials and Systems	Andrew Fix	
	Biomimetic Integrated Community Energy and Power Systems (BICEPS)	Kathryn Hinkelman	
	Evaluation of System-Level Performance of Closed Thermochemical Energy Storage Systems for Space Heating	Kate Rivera	
BTRIC (Building Tech Research & Integration Ctr)	Innovative Energy Panel	Mahabir Bhandari	6
	Cellular Shades	Niraj Kunwar	
	Exterior Shades	Niraj Kunwar	
	Exterior Fixed Shading	Niraj Kunwar	
Control Platforms	ConStrain (Control Strainer): A Data-Driven Building Control Performance Verification Framework	Yan Chen	7
	ASHRAE 229P	Supriya Goel	
	Equitable Reference Development and Deployment Platform (VOLTTRON)	Jereme Haack	
	Benchmarking Smart Thermostats for Multifamily and Small/Medium Commercial Buildings	Jermy Thomas	
	Open Building Control	Paul Ehrlich	8
	Deep Decarbonization Scenarios for U.S. Buildings Highlight the Importance of Demand-Side Efficiency Deployment	Chioke Harris	
	Alfalfa: Virtual Building Service	Tobias Shapinsky	
	Spawn/Modelica Buildings Library	Michael Wetter	
	Power Integrations CRADA	Daniel Gerber	9
	Sensor Data Integration	Tianzhen Hong	
	Smart Thermostat Specifications	Alan Meier	

TRACK	TITLE	PRESENTER	BOARD
Controls (continued on next page)	Benchmark Buildings Datasets	Tianzhen Hong	10
	Fault Detection and Diagnostics: Test Datasets and Prioritization Methods	Piljae Im	
	A Low-cost, Scalable Control Solution for Grid-Interactive Small and Medium Sized Commercial Buildings	Donghun Kim	
	Electric Panel Survey	Alan Meier	
	Develop and Disseminate Interoperability Standard	Avijit Saha	11
	Virtual Control Testing and Evaluation	David Blum	
	Adaptive Cyber-Physical Resilience for Building Control Systems	Draguna Vrabie	
	Comprehensive Pliant Permissive Priority Optimization	Draguna Vrabie	
	Federated Architecture for Secure and Transactive Distributed Energy Resource Management Solutions (FAST-DERMS)	Annabelle Pratt	12
	GMLC 2.4.2 Multi-Port	Jamie Lian	
	Time-Sensitive Value Calculator: User-Requested Advances	Margaret Pigman	
	Behind the Meter (BTM) Analysis	Matt Mitchell	
	Open Data for Building Performance Innovation	Armando Casillas	13
	Fault Prevalence in Commercial Buildings	Armando Casillas	
	Accelerating Optimal Fault-Free Control	Armando Casillas	
	Rapid, Low-Cost, Dynamic Commissioning and Integration of Sensors	Mahabir Bhandari	
	Assessing Equity and Affordability for Efficiency and DER Programs	Natalie Mims Frick	17
	GMLC 4.2.4 Distribution Plan	Natalie Mims Frick	
	GMLC 4.2.5 Grid-Interactive Efficient Buildings Technical Assistance	Natalie Mims Frick	
	NASEO-NARUC: Overview of GEB Working Group	Rodney Sobin	
	Learning-Driven Scalable Configurable Control Strategies for SMCB	Helia Zandi	18
	Smart Neighborhoods Research & Field Verification	Helia Zandi	
	TVA-ORNL Bidirectional EV Charging for Building Benefit	Helia Zandi	
	Scalable Load Management Using Reinforcement Learning	Helia Zandi	
	Energy Efficiency and Demand Flexibility State-Level Potential	Matt Leach	19
	ARIES: Capabilities Overview	Roderick Jackson	
	Multi-objective Deep Reinforcement Learning for Grid-Interactive Efficient Building	Rohit Chintala	
	Target Efficiency and Demand Flexibility to Reduce Electrification Peak Demand for Small and Mid-Size Cities	Sean Murphy	
	Using Structure Threat for Better Cybersecurity from GLMC-Deep Learning Malware	Meng Yue	20
	Building Intelligence with Layered Defense Using Security-Constrained Optimization and Security Risk Detection (BUILD-SOS)	Qun Zhou	
	Finding Malicious Code in Firmware from GLMC Firmware Command and Control	Rita Foster	
	Adaptive Cyber-Physical Resilience for Building Control Systems	Subhrajit Roychowdhury	
	Sensors and Controls Cost Analysis	Michael Deru	24
	Hot, Cold, or Just Right? Using a Wide-view Infrared Biometric Sensor to Improve Occupant Comfort and Reduce Overcooling in Buildings via Closed-loop Control	Ronnen Levinson	
	Understanding the Human Element in Advanced Roof-Top Unit Controls Adoption	Ruth Taylor	
	Compressor is a Sensor (CRADA Emerson)	Zhenning Li	

TRACK	TITLE	PRESENTER	BOARD
Controls (continued from previous page)	GMLC 2.5.2 Energy Services Interface	Rich Brown	25
	Equity-Focused Control Solutions for Affordable, All-Electric Multifamily Housing (foresee)	Xin Jin	
	Smart Community Design and Control for Enhanced Efficiency and Resilience	Xin Jin	
	Machine-Learning-Driven, Site-Specific Weather Inference for Building Energy Forecasting	Xin Jin	
	Dynamic Decarbonization Through Autonomous Physics-Centric Deep Learning and Optimization of Building Operations	Aaron Tuor	26
	SPIA: Flexible Loads	Ella Zhou	
	Automated and Continual Commissioning of Building Energy Management Systems	Marco Pritoni	
	Co-Design of HVAC Systems, Controls, and Sensing for Energy-Flexible Buildings	Veronica Adetola	
	Advancing Market-Ready Building Energy Management by Cost-Effective Differentiable Predictive Control	Jan Drgona	27
	Scaling of Building Transactive Control and Coordination to Support Grid Operations	Srinivas Katipamula	
	Development and Validation of Low-Cost, Interoperable, User-Centric, Supervisory Controller Kit for Small and Medium Size Commercial Buildings	Srinivas Katipamula	
	Autonomous Energy Management Software System for Small Commercial Buildings in Support of Decarbonization	Srinivas Katipamula	
	Connected Loads - Grid Connected Appliances	Jian Sun	33
	Advanced Building Controls for Airports	Korbaga Woldekidan	
	Airport Electrification Through Advanced Controls for Buildings and Electric Vehicle Charging	Korbaga Woldekidan	
	Securing Grid-Interactive Efficient Buildings (GEB) Through Cyber Defense and Resilient System (CYDRES)	Zheng O'Neill	
	Valuation Framework to Capture Co-Benefits of Energy Efficiency and Demand Response	Andrew Satchwell	34
	Transactive-Control-Based Connected Home Solution for Existing Residential Units and Communities	Michael Brambley	
	Sensor Suitcase	Michael Brambley	
	Get K-12 Ready for Future Utility Tariff Changes and Aggressive Carbon Reduction Requirements: Wholistic Control Package	Sang Woo Ham	
Connected Communities	Utility Managed Distributed Energy Resources Intelligent Community (UDERMS)	James Campbell	14
	Advanced Clean Communities Collaborative (AC3)	Andrew Poerschke	
	Connected Communities - National Coordinator 1	Cindy Regnier	
	Connected Communities - National Coordinator 2	Cindy Regnier	
	Spokane Connected Communities Project: Advancing a New and Scalable Business Model Which Demonstrates a Mutually Beneficial Framework for the Grid, the People it Serves, and the Built Environment	Easan Drury	15
	Evaluating Transactive Energy for Rural America	Seth Hoedl	
	SmartGrid Advanced Load Management & Optimized Neighborhood (SALMON)	Timothy Treadwell	
	Connecting Communities for Sustainable Solutions	Joe Zhou	
	Gateway Cities Unplugged: (em)Powering Affordable Housing	Christina McPike, Darien Crimmin	16
	DESIRED – Deep Efficiency and Smart Grid-Integrated Retrofits in Disadvantaged Communities	Siva Sankaranarayanan	
BEADS (Building Electric Appliances, Devices, and Systems)	High-Fidelity Self-Learning Tool for Residential Load and Load Flexibility Forecasting	Hannah Fontenot	32
	Grid-Interactive, Resilient Lighting and Plug Load Management System Using DC Power	Rich Brown	
	BE-SATED: Building Energy Storage at the Edges of Demand	Saul Griffith	
	Affordable and Equitable Residential Electrification Under Electrical Panel and Service Constraints	Xin Jin	

TRACK	TITLE	PRESENTER	BOARD
Opaque Envelope	Fire Resilient, Affordable Housing and Manufactured Homes	Diana Hun	16
	Self-Healing Sealants for Building Envelopes	Diana Hun	
	High Filler, Low Water: A Low Carbon Concrete Technology	Denise Silva	21
	Cost-Effective Thermally Activated Building Systems to Support a Power Grid System with High Penetrations of As-Available Renewable Energy Resources	Jialai Wang	
	Scalable and Cost-Effective Roll-to-Roll Additive Manufacturing of Highly Durable Silica Aerogel Building Insulation	Shenqiang Ren	
	Energy-Efficient, Low Embodied Carbon, Hemp-Based Materials for Building Envelope Applications	Tommy Gibbons	
	Fast, Accurate, and Reliable Thermal Metrology to Assess the Thermal Resistivity on Small Samples of Thermal Insulation	Andre Desjarlais	22
	Developing a Database of Bio-based Materials Used in Building Envelope Applications	Andre Desjarlais	
	Energy Savings Potential of Buildings Constructed with Mass Timber: Combining Established and Novel Methods of Monitoring Energy Reduction Potentials	Mikael Salonvaara	
	Machine-Learning (ML) Assisted Low-Carbon Building Material Development and Integration Tool	Mikael Salonvaara	
	Lightweight and Thermally Insulating Nanowood	Jiaqi Dai	23
	IEA EBC Annex 80 Resilient Cooling Support	Ronnen Levinson	
	Facer Barriers for Aged Foam Boards with $\geq R8/in$	Som Shrestha	
	Models to Evaluate and Guide the Development of Low Thermal Conductivity Materials for Building Envelopes	Som Shrestha	
Solid-State Lighting (continued on next page)	Validating and Demonstrating GUV In-Field Performance	Belal Abboushi	28
	Comparing the Effectiveness, Energy Use, and GHG Emissions of Measures to Reduce the Spread of Airborne Pathogens	Cary Faulkner	
	Polariton Enhancement of the Purcell Effect for Extending Blue PHOLED Lifetime	Haonan Zhao	
	Testing Commercially Available GUV Products	Jason Tuenge	
	Lighting System Field Demonstrations in Workplaces	Andrea Wilkerson	29
	Lighting System Field Demonstrations in Healthcare Facilities	Andrea Wilkerson	
	Lighting System Field Demonstrations in Classrooms	Andrea Wilkerson	
	Cadmium-Free Quantum Dot Building Blocks for Human Centric Lighting	William Zhang	
	Optimizing Tunable Lighting for Human Health	John Hanifin	30
	Addressing Flicker in Lighting to Prevent Harm to Building Occupants	Michael Royer	
	Towards Effective Discomfort Glare Metrics	Michael Royer	
	Optimizing Light Source Spectrum to Increase Efficiency and Improve Wellbeing	Michael Royer	
	Solutions to Droop and the Green Gap by Novel Carrier Injection	James Speck	31
	Using Observational Research to Understand Technology Deployment Barriers	Ruth Taylor	
	Solutions to Connected Lighting System Performance Issues	Ruth Taylor	
	Improvements to High-Resolution Spectral Simulation Tools for Daylight and Electric Light	Sarah Safranek	
	L-Prize Drives Next Generation Lighting for Commercial Buildings	Gabe Arnold	35
	High Aspect Ratio OLEDs	Chris Giebink	36
	Low Refractive Index OLEDs for Practical High Efficiency Outcoupling	Dorukalp Dumus	
	Microassembly Printer for LED Lighting and Beyond	Eugene Chow	
	Blue and Green Phosphorescent Emitters with Short Radiative Lifetimes and Their OLEDs	Jonas Schaab	

TRACK	TITLE	PRESENTER	BOARD
Solid-State Lighting (continued from previous page)	Lossless Beam-Width Adjustment with Low-cost Mechanics	Chris Gladden	37
	Characterizations of Materials and 3D-Printed LED Secondary Optics for General Illumination	Jean Paul Freyssinier	
	Sustainability and Life Cycle Assessment of Electrical Products	Kate Hickcox	
	Microprinting Waveguides for Ultra-Thin and Flexible LED Lighting Panels	Sergiy Vasylyev	
Commercial & Residential Building Integration (CBI, RBI) (continued on next page)	Integrated Lighting Campaign	Axel Pearson	35
	The Integration of Wi-Fi Location-Based Services (LBS) to Optimize Energy Efficient Commercial Building Operations	Lester Shen	
	Scaling Efficiency and Efficient Electrification Building Upgrades	Kassandra Grimes	
	AI-Enabled IoT-Based Platform to Deliver Energy Efficiency and Grid Services for Commercial Buildings	Robert Lutes	38
	Field Validation Simple Retrofit Commercial Building Controls: Sidewalk Labs Mesa	Michael Myer	
	Performance Demonstration of an Occupancy Sensor-Enabled Integrated Solution for Commercial Buildings	Gang Wang	
	A Simple Control Score for Evaluating Building Control Performance	Tim Yoder	
	Increasing the Adoption of Very High Efficiency (Heat Pump) Technology	Dan Golden	39
	Field Validation of Variable Refrigerant Flow System Performance in Cold Climates	David Korn	
	Next Level Energy Savings with Very High Efficiency HVAC Systems	Tim Yoder	
	Technology Analysis and Validation of Integrating Connected Grid-interactive Flexible Building Loads, Lighting, Automated Shades, and Intelligent Energy Storage to Provide Grid-Interactive Flexible Building Loads	Xiaohui Zhou	
	Systems Technology Energy Equity and Justice Working Group	Kathryn Hickcox	40
	ENERGY STAR MIE Product Category - Better Buildings Healthcare Sector Partner Outreach & Sub Metering Studies	Amy LeBar	
	Small/Light Commercial Buildings Energy Equity Engagement	Ebony Mayhorn	
	Heat Pump Strategies in Underserved Communities	Ebony Mayhorn	
	A Methodology for Defining Affordability in Commercial Buildings and its Impact on Underserved Communities	Ardelia Clarke	41
	Working with Trusted Local Organizations to Address Barriers that Impede Access to Cost-Effective, Holistic, Building Performance Improvements	Ardelia Clarke	
	Overlapping Value Streams that Support Underserved Community and Utility Needs	Rois Langner	
	Supporting Minority-Focused Developer Incubator Programs for, and Within, Underserved Communities	Shanti Pless	
	Supporting the Growth of a Skilled Workforce in the Building Energy Efficiency Industry	Cynthia Finley	42
	Home Energy Score Updates	Noel Merket	
	Summary of Advanced Building Construction (ABC): Integrated Building Retrofits	Tyler Pilet	
	Better Climate Challenge - Emissions Reduction Planning Framework	Jordan Wilkerson	
	LBNL: Data and Tools Overview	Joshua Kace	43
	PNNL Data and Tools Overview	Juan Gonzalez	
	NREL Data and Tools Overview	Nicholas Long	
	Field Validations of HVAC Dehumidification Systems: Altaire & Conservant	Wale Odukomaiya	

POSTERS IN LINCOLN FOYER

TRACK	TITLE	PRESENTER	BOARD
CBI, RBI (continued from previous page)	Ecosizer, a Tool for Sizing Central Water Heating System, Development, and Upgrades	Ahmed Elatar	44
	Integrated Efficiency and IAQ Retrofit Packages for K-12 and Commercial Utility Programs	Cindy Regnier	
	FLEXLAB - Recent Projects at DOE's Integrated Building and Grid Services Test Facility at Berkeley Lab	Cindy Regnier	
HVAC/Wind ows	Liquid Piston with Spray Cooling Near Isothermal Compressor	Stephen Kowalski	45
	Heat Pump Water Heater Installation	Cheryn Metzger	
	Heat Pump Decision Tools	Alek Parsons	
	Heat Pump Water Heater Decision Tools	Alek Parsons	
	Low-Cost, High-Performance Polymer Composite Heat Exchangers Manufactured by Additive Manufacturing	Kai Li	46
	High Power Density Magnetocaloric and Elastocaloric Systems	Julie Slaughter	
	Highly Efficient Microemulsion-Based Absorption Chillers for HVAC Application	Bao Yang	
	Stress and Fatigue of High Performance, Reduced Charge Heat Exchangers	Mingkan Zhang	
	Smart Frost Sensor for HVAC Frost Diagnostics and Defrosting Control	Zhiming Gao	47
	Demand Flexibility with Dynamic Facades	Christoph Gehbauer	
	Liquid Piston with Spray Cooling Near Isothermal Compressor	Stephen Kowalski	
	Adaptable - A High Efficiency Vacuum Insulated Panel Modular Building System	Vanessa Stevens	
	Cast Heat Exchanger Using the Novel Aluminum-Cerium Alloy	Jamieson Brechtel	48
	Ionic Fluids as Novel Lubricant Additives for HVAC Compressors for Enhanced Efficiency and Durability	Jun Qu	
	Commercial Space Cooling/Direct Air Capture System with Waste Heat Utilization	Kashif Nawaz	
	MaxTech Heat Pump Water Heater Using Ultra-Low GWP Refrigerants (CRADA A.O. Smith)	Kashif Nawaz	
	Heat Exchanger Solutions for High Glide Refrigerants <150 GWP	Cheng-Min Yang	49
	Adhesive Bonding of Aluminum and Copper in HVAC&R Applications	Vishal Sharma	
	Impact of Refrigerant Leaks from Zeotropic Refrigerant-Based Commercial Refrigeration Systems	Vishal Sharma	
	System Design Modelling and Evaluation of Low-GWP Refrigerant-Based Fry Dispenser for Quick Service Restaurants (CRADA Taylor)	Vishal Sharma	
	Novel Heat Exchanger Design Based on Porous Materials (CRADA Baltimore Air Coil)	Brian Fricke	50
	Next Generation Transcritical CO ₂ Refrigeration System	Brian Fricke	
	Technical Support for the IEA Heat Pump Annex 54: Heat Pump Systems with Low GWP Refrigerants	Brian Fricke	
	Thermoelectric Heat Pump Water Heater Priced for Mass Market Deployment with 30% less CO ₂ (CRADA A.O. Smith)	Kyle Gluesenkamp	

POSTERS IN MADISON ROOM (only on 4-6 PM, TUESDAY, APRIL 25)

TRACK	TITLE	PRESENTER	BOARD
IMPEL*	LATCHES: A Novel Envelope Thermal Management System	Shantonio Birch	NA
	ecoLong's Community Virtual Power Plant	Judy Min	
	Fully Electric Fully Autonomous Buildings in Underserved Communities	Thomas Hunter	

* This session may feature additional posters.