

| Poster # | Time | Last Name | First Name | Judging Category | Poster Title |
|----------|-------------|------------|-------------|------------------|--|
| 1 | 11:00-12:00 | Adam | Ryan | BME | Abnormal Airway Growth In Cystic Fibrosis Piglets |
| 2 | 10:00-11:00 | Beauchene | Madeline | BME | Nanoparticles and Drug Release using Ultrasonic Waves: novel approach to drug delivery |
| 3 | 11:00-12:00 | Conlan | Henry | BME | Human Engineered Skin as an In Vitro Model of Wound Healing |
| 4 | 11:00-12:00 | Corrigan | Rae Ann | BME | Advanced Physics-Based Models of Cancer Therapeutics |
| 5 | 9:00-10:00 | El-Hattab | Mariam | BME | Perturbation of Fibrin Gels Seeded with Fibroblast Cell Aggregates using a Linearly Actuated Acupuncture Needle |
| 6 | 11:00-12:00 | Gerard | Sarah | BME | Convolutional Neural Networks for Pulmonary Fissure Detection and Segmentation in Computed Tomography Datasets |
| 7 | 1:00-2:00 | Halberg | Spencer | BME | A Functional Model of Cell Migration on a Dynamic Neo-Hookean Substrate |
| 8 | 3:00-4:00 | Keil | Anna | BME | Comparison of Image Registration Direction on Pulmonary 4DCT Datasets |
| 9 | 1:00-2:00 | Mendenhall | Alyssa | BME | Response of Epithelial Thyroid Cells to Vibrational Stimuli |
| 10 | 2:00-3:00 | Moghram | Waddah | BME | A Combined Approach of Traction Force Microscopy (TFM) and Magnetic Tweezers (MT) to Study the Structure of Keratin Intermediate Filament-Desmosome-Hemidesmosome Network in Human Epidermal Keratinocytes |
| 11 | 1:00-2:00 | Muckenhirn | Logan | BME | Nanoscale Surface Modification Through "Click Chemistry" and Its Effect on Biofilm Formation |
| 12 | 1:00-2:00 | O'Connell | Claire | BME | Accelerating Computational Protein Design via Advanced Thermodynamic Paths |
| 13 | 10:00-11:00 | Rendleman | Michael | BME | Developing Machine Learning Tools for Cancer Prediction from Genomic Data |
| 14 | 2:00-3:00 | Thompson | Jessica | BME | Optimizing the photopolymerization parameters of high-resolution, 3D biodegradable tissue scaffolds |
| 15 | 9:00-10:00 | Algharrawi | Khalid | CBE | Production of Theobromine from Coffee Waste |
| 16 | 11:00-12:00 | Aljaafari | Haydar | CBE | Effect of Heat Shock on Growth Rate of Pseudomonas aeruginosa Biofilms |
| 17 | 3:00-4:00 | Alsaedi | Abdulsattar | CBE | Improved electro dialysis by using complex 3-D electrode architecture |
| 18 | 10:00-11:00 | Bartley | Alex | CBE | Carbon Capture and Sequestration Technology for the State of Iowa |
| 19 | 9:00-10:00 | Bess | Alexandra | CBE | Analysis of the Protein Effects on Nanoparticle-Cell Association |
| 20 | 3:00-4:00 | Countryman | Alec | CBE | Integrated Lab-On-A-Chip Life Support Device for Human Space Missions |
| 21 | 1:00-2:00 | Delcau | Michael | CBE | Determination of Sugar Composition and Distribution in Pseudomonas sp. ADP by Fluorescent Lectin Binding Analysis |
| 22 | 2:00-3:00 | Do | Anh-Vu | CBE | Using Ultrasound to Enhance Tumor Cell Killing by anti-PD1 and Doxorubicin-loaded Particles |
| 23 | 9:00-10:00 | Ford | Chad | CBE | Ethanol: Fuel of the future |

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| 24 | 11:00-12:00 | Giles | Katherine | CBE | Shining a Light on the Irradiance and Wavelength Properties of Light Emitting Diodes in Dental Applications |
| 25 | 10:00-11:00 | Givens | Brittany | CBE | The Effect of Solution Properties on Protein Corona Formation and Nano-Bio Interactions |
| 26 | 10:00-11:00 | Green | Brian | CBE | Improving 3D Photocured Systems |
| 27 | 10:00-11:00 | Hasa | Erion | CBE | Nano/Microstructured Materials Obtained Using Photopolymerization-Induced Phase Separation (PhIPS) |
| 28 | 9:00-10:00 | Kaalberg | Sara | CBE | Cationic Photopolymerization of Epoxides and Oxetanes: Effect of Secondary Functional Groups on Kinetics and Viscosity |
| 29 | 11:00-12:00 | King | Benjamin | CBE | Copper Oxide Nanoparticle Toxicity in Acute Lung Cell Exposure |
| 30 | 10:00-11:00 | Kloepfer | Nicole | CBE | A Recipe for Success: Correlating Monomer Chemistry to Dose Rate Effects in Electron Beam Polymerization |
| 31 | 1:00-2:00 | Knapp | Eric | CBE | Evaluating the absorption spectra of cationic photoinitiators |
| 32 | 10:00-11:00 | Koonce | Jonathan | CBE | Hydrogen as Fuel for the Future |
| 33 | 1:00-2:00 | Kurpius | Rena | CBE | Curing Dose Rate Effects: Predicting Polymer Properties in Electron Beam Polymerization |
| 34 | 2:00-3:00 | Leigh | Braden | CBE | Engineered Zwitterion |
| 35 | 9:00-10:00 | Lennartson | Elizabeth | CBE | Preliminary Analysis of the Diurnal Variation of Aerosol Optical Depth during the KORUS-AQ Campaign |
| 36 | 2:00-3:00 | Lewis | Devyn | CBE | Opportunities and Barriers of Electric Vehicles in Iowa |
| 37 | 10:00-11:00 | Mat Desa | Wan | CBE | Improving the Estimates of Particulate Matter Impact on Human Health through Remote Sensing |
| 38 | 3:00-4:00 | Mat Desa | Wan | CBE | UI Nuclear Power Plant Installation |
| 39 | 2:00-3:00 | Mattingly | Taylor | CBE | Team Solar |
| 40 | 9:00-10:00 | McKee | Austin | CBE | Electrochemical Reduction of CO ₂ into Usable Chemicals and Fuels |
| 41 | 9:00-10:00 | McLaughlin | Jacob | CBE | Improved Toughness in Photopolymerized Films via RAFT Modification |
| 42 | 2:00-3:00 | Pattee | Emily | CBE | The Effect of Cyanuric Acid on the Expression of Atrazine-degrading Genes in Pseudomonas sp. ADP |
| 43 | 11:00-12:00 | Qian | Jiajie | CBE | Development and application of electrospun nanofiber mats as passive sampler media for hydrophilic and hydrophobic organic compounds |
| 44 | 10:00-11:00 | Rassoolkhani | Alan | CBE | Acid Stable Bismuth Vanadate for Photo Electrochemical Chlorine production |
| 45 | 12:00-1:00 | Ricker | Erica | CBE | Combined Treatment of Heat and Antibiotic to Mitigate Pseudomonas Aeruginosa Biofilm Implant Infections |
| 46 | 2:00-3:00 | Seibt | Michael | CBE | Recovery Storage Unit for The Seamans Center |
| 47 | 2:00-3:00 | Shamsul Akmal | Zubair | CBE | UI Wind Power Installation |
| 48 | 2:00-3:00 | Sobhani | Negin | CBE | Modeling the Climatic Effects of Black Carbon and Arctic Snow and Ice |
| 49 | 1:00-2:00 | Weis | Adam | CBE | Economics-Informed Discovery of Solar Energy Conversion Systems |
| 50 | 1:00-2:00 | Wersinger | Kyle | CBE | Outreach and Environmental Education about Air Pollution |

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| 51 | 1:00-2:00 | Young | Graham | CBE | Porous Aluminum Oxide: Templates for High Throughput Production of Ordered Metallic and Semiconducting Nanowires |
| 51.5 | 1:00- 2:00 | Koonce | Jonathan | CBE | Low Iridium Content Transparent Electrocatalyst for Oxygen Evolution Reaction |
| 52 | 3:00-4:00 | Black | Ellen | CEE | The impact of freshwater mussels on anaerobic ammonium oxidizers and other nitrogen-cycle bacteria in upper Mississippi river sediment |
| 53 | 2:00-3:00 | Ewald | Jessica | CEE | Polychlorinated Biphenyl Biodegraders in a Altavista Lagoon |
| 54 | 11:00-12:00 | Herkert | Nicholas | CEE | Calibration and Evaluation of PUF-PAS Sampling Rates across the Global Atmospheric Passive Sampling (GAPS) Network |
| 55 | 1:00-2:00 | Jahnke | Jacob | CEE | Is Paint a Significant Source of PCBs to Indoor Air? |
| 56 | 2:00-3:00 | Mattson | Rebecca | CEE | Treating Ammonia in Small Town Iowa Wastewater Systems: A Case Study on a Submerged Attached Growth Reactor |
| 57 | 11:00-12:00 | Yildirim | Enes | CEE | Flood Emergency Decision Support System and Loss Estimation on the Web using HAZUS |
| 58 | 10:00-11:00 | Amir | Asgharzadeh Shishavan | ECE | The Effect of PV System Size and Installation Parameters on the Performance of Bifacial Arrays |
| 59 | 12:00-1:00 | Biswas | Sampurna | ECE | Convex recovery of continuous domain piecewise constant images from non-uniform Fourier samples |
| 60 | 11:00-12:00 | Cho | Myung | ECE | Phaseless Super-Resolution In The Continuous Domain |
| 61 | 2:00-3:00 | Davidson | Lauren | ECE | Improved Efficiency of Silicon Solar Cells utilizing Sputtered Silicon Nitride Films |
| 62 | 2:00-3:00 | Duan | Wenqi | ECE | A Novel Approach to the Development of a Highly Sensitive Silicon Nanowire Biosensor |
| 63 | 3:00-4:00 | Finley | Matthew | ECE | System Development for Roadway Safety Study |
| 64 | 2:00-3:00 | Haque | K A S M Ehteshamul | ECE | Copper Catalyzed Etched Nanoporous Black Silicon for Efficient Solar Cells |
| 65 | 10:00-11:00 | Jin | Xin | ECE | Spectrally-selective solar window coatings to improve energy efficiency |
| 66 | 10:00-11:00 | McClurg | Josiah | ECE | Fast Demand Response with Datacenter Loads |
| 67 | 1:00-2:00 | Mo | Yuanqiu | ECE | Robustness of the Adaptive Bellman-Ford Algorithm |
| 68 | 9:00-10:00 | Nadeem | Syed Ahmed | ECE | An iterative method for airway segmentation using multiscale leakage detection |
| 69 | 1:00-2:00 | Poddar | Sunrita | ECE | Clustering of data in the presence of missing entries |
| 70 | 1:00-2:00 | Salino-Hugg | Michael | ECE | A Flexible Electronic Flash for Ophthalmology Research |
| 71 | 3:00-4:00 | Sink | Joseph | ECE | E-beam lithography: Nanohole patterning and InAs nanowire-based device fabrication |
| 72 | 11:00-12:00 | Snyder | Adam | ECE | Cardiac Catheter Control Using Actuator Wire |
| 73 | 1:00-2:00 | Xiaoliu | Zhang | ECE | Human Femur Active Shape Model From Hip MRI |
| 74 | 2:00-3:00 | Esmailpour | Mehdi | ME | Computational Fluid Dynamics Study of the Dead Water Problem |

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| 75 | 9:00-10:00 | Feldmeier | Chris | ME | Modeling of Wheel and Rail Profile Wear on Small Radius Curved Track in Vehicle Dynamics Simulation |
| 76 | 3:00-4:00 | He | Li | IE | Additive Manufacturing of Support-free Ceramic Components |
| 77 | 3:00-4:00 | He | Yusen | IE | Modeling and performance evaluation of wind turbines |
| 78 | 10:00-11:00 | Heiderscheit | Tim | ME | Experimental Study of Single-Pass Laser Machining of CFRP |
| 79 | 11:00-12:00 | Rojas-Murillo | Salvador | IE | Identification of Object Features - Edges, Landmarks and Texture - That Visually Guide an Assembly Process In Real and Virtual Environments |
| 80 | 11:00-12:00 | Samanta | Avik | ME | Simulations of Microstructure Evolution during Friction Stir Blind Riveting using a Cellular Automaton Method |
| 81 | 1:00-2:00 | Sun | Zhiyu | IE | Deep Spectral Descriptors Learning the point-wise correspondence metric via Siamese deep neural networks |
| 82 | 11:00-12:00 | Wang | Qinghua | ME | Nanosecond Laser Shock Processing of Steel for Superhydrophobic, High Absorption and Mechanically Enhanced Surface |
| 83 | 2:00-3:00 | Weger | Nathaniel | ME | Gasification and Combustion of Miscanthus |
| 84 | 10:00-11:00 | Brown | Bartley | CBCB | A Pipeline for RNAseq-Based Differential Expression Analysis of Neuroendocrine Tumors |
| 85 | Withdrawn | | | | |
| 86 | 11:00-12:00 | LuCore | Stephen | CBCB | Asymptotically optimal and intrinsic scaling constant-pH simulations with physically rigorous sampling and a polarizable multipolar potential |
| 87 | 1:00-2:00 | Nishimura | Jacob | CBCB | The International Clubfoot Registry Database |
| 88 | 11:00-12:00 | Tessmann | Jonathon | CBCB | Genomic Analysis for Identifying Mutations in Neuroendocrine Tumors |
| 89 | 10:00-11:00 | Tollefson | Mallory | CBCB | Evaluating Genetic Variants of Unknown Significance Using Protein Thermodynamic Simulations in the Context of Non-Syndromic Hearing Loss. |
| 90 | 11:00-12:00 | Walls | Daniel | CBCB | AudioGene: Predicting Hearing Loss Genotypes from Phenotypes to Guide Genetic Screening |
| 91 | 2:00-3:00 | Schutz | Lauren | CCAD | Analysis and Comparison of the Plie to Functional Dance Movement |
| 92 | 10:00-11:00 | Abdi-Oskouei | Maryam | CGRER | Understanding Methane and VOC Emissions from Natural Gas Operation |
| 93 | 9:00-10:00 | Dong | Can | CGRER | Physical and Model-Based Characterization of Ultrafine Particle Size Distributions, Nucleation, and Particle Growth in the Central US |
| 94 | 9:00-10:00 | Nathan | Janecek | CGRER | Experimental Characterization of Secondary Aerosol from D5 Cyclic Siloxane Oxidation |
| 95 | 11:00-12:00 | Berdon | Randall | IIHR | Rolling Wings At High Angles of Attack |
| 96 | 10:00-11:00 | Boesen | Aaron | IIHR | Air-Water Exchange of PCBs in Southern Lake Michigan: Chicago a Source of Airborne PCBs |
| 97 | 10:00-11:00 | Drake | Chad | IIHR | Modeling and measurements to estimate nitrate removal from a large constructed wetland |

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| 98 | 9:00-10:00 | Haghighi | Babak | IIHR | Multiscale Imaging-Based Clusters in Current Smokers of the COPD (SPIROMICS) |
| 99 | 3:00-4:00 | Jadidoleslam | Navid | IIHR | Soil Moisture Dynamics Assessment in Different Scales. |
| 100 | 12:00-1:00 | Perez | Gabriel | IIHR | Classification of streamflow and flood conditions at ungauged sites for the State of Iowa |
| 101 | 10:00-11:00 | Sermet | Yusuf | IIHR | Knowledge Discovery, Integration and Communication for Extreme Weather and Flood Resilience Using Artificial Intelligence: Flood Ai Alpha |
| 102 | 10:00-11:00 | Volpi | Silvia | IIHR | Towards the High-fidelity Multidisciplinary Design Optimization of a 3D Composite Material Hydrofoil |
| 103 | 1:00-2:00 | Balachandrasekaran | Arvind | IIBI | Novel Structured Low rank algorithm for accelerated parameter mapping |
| 104 | 12:00-1:00 | Guo | Zhihui | IIBI | Machine learning in a graph-based framework for subcortical segmentation |
| 105 | 11:00-12:00 | Hammond | Emily | IIBI | Development of A Lung Cancer Pig Model: Non-Invasive Characterization with Computed Tomography |
| 106 | 2:00-3:00 | Pan | Yue | IIBI | Varifold-Based Registration of Lung Vessel and Surface. |
| 107 | 2:00-3:00 | Shao | Wei | IIBI | Estimation of pulmonary function by total variation of regional lung volume |
| 108 | 10:00-11:00 | Su | Qingyang | IIBI | Spectral-Domain Optical Coherence Tomography Optic-Nerve-Head and Macular En-Face Image Registration in Cases of Papilledema |
| 109 | 2:00-3:00 | Uthoff | Johanna | IIBI | Reduction and Selection of Uncorrelated Features for Lung Cancer Computer Aided Diagnosis |
| 110 | 11:00-12:00 | Xie | Hui | IIBI | An Innovative Four-Neighbour Stepping Interpolation |
| 111 | 10:00-11:00 | Austin | Brett | Creative Kick-Start | T4: Table Top Tension Tester |
| 112 | 9:00-10:00 | Butler | Sy | Creative Kick-Start | The Bandit: A DIY Quadcopter |
| 113 | 2:00-3:00 | Gharse | Sachin | Other | Novel antibiotic formulations for eradication of biofilms of a Pseudomonas aeruginosa clinical isolate |
| 114 | 11:00-12:00 | Gowdampally | Bharath Kumar | Other | Particle - Lung Surfactant Interactions Depend on Particle Surface Properties |
| 115 | 2:00-3:00 | Hagan | Liam | Creative Kick-Start | Smart Mirror |
| 116 | 3:00-4:00 | Ismail | Abdualrahman | Creative Kick-Start | Iowa Marine Autonomous Racing Club (IMARC) |
| 117 | 11:00-12:00 | Moore | James | Creative Kick-Start | Hand Garment to Provide Additional Grip Assistance in Peripheral Neuropathy Patients. |
| 118 | 3:00-4:00 | Regan | David | Creative Kick-Start | Creative Kick-Start Project: Custom CNC Machine/3d Printer Build |
| 119 | 12:00-1:00 | Remy | Matthew | Creative Kick-Start | Improving AAA Surgery Utilizing 3D Modeling |
| 120 | 1:00-2:00 | Truka | Alicia | Creative Kick-Start | The Little Jonny That Could: Providing Independence for Congenital Arm Amputees |
| 121 | 9:00-10:00 | Watkins | Michael | Creative Kick-Start | Precision Landing System for Unmanned Aircraft |
| 122 | 9:00-10:00 | Zarei | Kasra | Creative Kick-Start | Buccal Drug Delivery System |

