



Fall 2023 ISF Research Expo

Sorted by category & registrant/presenters

Biodiversity	
1	Reyes, Hannah College of Agriculture <i>The Intersection of Bobcat Migrations and Public Sentiment in Indiana</i>
2	Hunnicut, Sierra College of Science <i>How does road proximity in Tippecanoe County impact acoustic richness and dispersal of birds using comparative AI vs human-based recognition?</i>
3	Seybert, Abby College of Agriculture <i>Developing a Wildlife Corridor: How Vegetation influences Bobcat (Lynx rufus) Habitat Preference in Tippecanoe County, Indiana</i>
4	Tan, Anthony Honors College <i>How does a detection algorithm perform when adapting a current CNN to monitor human influence on a remote acoustic sensing project?</i>
5	Iacobucci, Luca Honors College <i>How can acoustic monitoring and AI-CNN technology predict the influence that other mesocarnivores have on bobcat (Lynx rufus) habitat selection in a midwestern river valley?</i>
6	Jeon, Jong Yoon Department of Forestry and Natural Resources <i>The use of genomic diversity as a key conservation metric: An example using mammalian whole-genome resequencing data</i>
7	Heenkenda, Erangi FNR <i>Population genomics supports the elevation of Evolutionary Significant Units to taxonomic species: the case of the White Sands Pupfish (Cyprinodon tularosa)</i>
8	Paliwal, Kush Department of Civil Engineering <i>Role of para fluvial processes on downstream transport of eDNA in lotic environments</i>
Climate and Weather	
9	Aleksinski, Adam Department of Earth, Atmospheric and Planetary Sciences <i>Modeling Eocene-Aged Oceanic ϵNd Distribution with CESM 1.2</i>
10	Kong, Qinqin EAPS <i>Scaling of human heat stress with global warming: is it misleading to look at temperature only?</i>
11	Liu, Xiaoqing EAPS <i>Influence of opening the Miocene Canadian Archipelago gateways on the Intertropical Convergence Zone: a model study</i>
12	Messman, William Department of Physics, Department of Mathematics <i>ISF: Data-Driven Discovery of the Nonlinear Schrödinger Equation as a Governing Equation for Extreme Weather Events</i>
Electric Vehicles	
13	Cervini, Gaia Civil Engineering <i>Exploring the Relationship between Temperatures and EV Adoption: The Case of California and New York</i>
14	Verma, Rajat and David Hoguen Lyles School of Civil Engineering <i>Measuring Indiana's transportation and environmental equity using large-scale data</i>
15	Krause Moras, Bruno Cesar Lyles School of Civil Engineering <i>EV ADOPTION AND CHARGING STATIONS IN INDIANA: EVIDENCE FROM A STATED PREFERENCE SURVEY</i>
16	Wijaya, Kenny Civil Engineering <i>Experienced and non-experienced EV users charging preferences: A multivariate analysis using a stated-preference survey in Indiana</i>

Cyber	
17	Zhao, Lan RCAC <i>Purdue IT Research Computing Resources</i>
18	Zhao, Lan and I Luk Kim, RCAC <i>Simplifying and Streamlining Scientific Data Exploration, Visualization and Dissemination</i>
19	Shin, Jaewoo and Lan Zhao RCAC <i>A scalable streaming sensor data analysis cyberinfrastructure</i>
Risk and Resilience	
20	Ahmadi Gharehtoragh, Mohammad Industrial Engineering <i>Prediction of storm surge on slowly evolving landscapes under climate change</i>
21	Li, Fanyuan School of Industrial Engineering <i>Agent-Based Modeling of Resident Flood-Hazard Relocation Decisions With Relocation Subsidies</i>
22	Jha, Pragathi Engineering, IE <i>Alternative Risk Metrics to Evaluate Tradeoffs between Efficiency and Equity of Risk Reduction</i>
Environmental Stressors	
23	Han, Subin Human and Health Science <i>Assessment of fine particulate matter (PM2.5) in Purdue campus after Canadian wildfire in June 2023</i>
24	Lee, Chang Geun School of health Sciences <i>Metals in toenails as biomarkers for assessing chronic exposure to welding fumes</i>
25	Grier, Thomas School of Health Sciences/College of Health and Human Sciences <i>Experimental design and testing of a portable x-ray tube based KXRF system to measure lead in bone</i>
26	Patra, Satya Sundar Civil Engineering <i>New Insights on Indoor New Particle Formation in Residential Buildings</i>
27	Cross, Jordan CE <i>Coupling an Olfaction Chamber with Proton Transfer Reaction Mass Spectrometry for Evaluating Human Response to Scented Product Emissions</i>
28	Lu, Hongbo Lyles School of Civil Engineering <i>Field Evaluation of a Photoionization Detector for the Real-time Measurement of Volatile Organic Compounds During Chemical Disinfection Activities in Residential Buildings</i>
29	Shinde, Akshada Department of Health Sciences (Toxicology) <i>Lipid-Mediated Inflammation Contributes to Metabolic Syndrome-Associated Pulmonary Susceptibility Nanoparticles</i>
30	Pitchai, Arjun School of Health Sciences <i>Lipid Regulation of Nanoparticle-Induced Pulmonary Inflammation: Sex and Disease Variations</i>
31	Stradtman, Sydney Health Sciences <i>The kisspeptin system in the developing zebrafish and differential gene alterations following two exposure periods to the agricultural herbicide atrazine</i>
32	Tamagno, Wagner HHS <i>Classification of the toxicity in early-life exposure to lead in zebrafish sorl1 mutants</i>
33	Horn, Sophia Biology Department/College of Science <i>Molecular Markers of Thermal Oil Refinery Effluent Exposure in Fish</i>
Environmental Stressors, PFAS	
34	Choi, Younjeong AGRY <i>Evaluation of PFAS in animal feeds used for lab-based toxicity testing</i>
35	Johnson, Alyssa Department of Forestry and Natural Resources <i>Assessing How Parasite Exposure Frequency and Dosage Influences Infection Risk in PFAS-exposed Grey Tree Frogs</i>

36	Morehouse, Jack Science <i>Chronic Exposure to Aqueous Film-Forming Foams Leads to Evolutionary Responses in Daphnia magna</i>
37	Hoverman, Jason FNR <i>The Relative Toxicities of Current Use Aqueous Film-Forming Foams and Next-Generation Alternatives to Aquatic Species for Informing Risk Assessment</i>
38	Wagner, Dane Chemistry <i>Addressing Interferent Effects Using a Ratiometric Approach for PFAS Detection Using Molecularly Imprinted Polymer (MIP) Based Environmental Sensors</i>
39	Zhao, Xihui Engineering <i>Pre-differentiation short-chain PFAS exposure induce neurotoxicity via altering ER vulnerability in dopaminergic-like neurons</i>
40	Klamerus, Jamie Ecological Sciences and Engineering <i>In situ lysimeter measurement of PFAS leaching at a historically biosolids applied agricultural site</i>
41	Alvarez Ruiz, Rodrigo Agronomy <i>Accumulation and leaching of PFAS from biosolids land-applied as a waste management strategy</i>
42	Guarin Pava, Angelly Zharick Agronomy <i>USE OF GOOSEBERRY SHELL FOR THE BASIC RED 46 REMOVAL THROUGH ADSORPTION</i>
43	Peter, Lynda Agronomy <i>Per- and polyfluoroalkyl substances (PFAS) occurrence in an agriculture-dominated watershed: Relative contribution of land-applied biosolids</i>
Sustainable Communities	
44	Lutomia, Anne College of Agriculture ASEC <i>Transforming Communities through Biodiversity Sustainability Activities: The Case of a Restoring a Sacred Forest in Benin and Peacebuilding in Mali</i>
45	MUGABO, AIMABLE ASEC <i>Scientific Animation Without Borders (SAWBO) and the Rwanda Agriculture and Animal Resources Development Board (RAB) collaboration</i>
46	Strickland, Mary ESE/FNR <i>Understanding the Opportunities for Conservation-oriented Adaptations in Rhode Island</i>
47	Narayanaswami, Meenakshi Mechanical Engineering <i>Impact of Steel Industry Decarbonization on Workers</i>
48	Jarrett, Joel, Joon Kang, and Ben Traylor; Polytechnic Institute <i>Production Sustainability Amongst the Big 3 Hoosier Multinational Automobile Organizations: A Consideration of Whole Life Carbon Emissions Records</i>
Sustainable Communities, Food Security	
49	Malott, Meredith Food science <i>When Blue is Green</i>
50	Pivaral, Katherine HLA <i>Emerging markets for diversifying agriculture: Case studies in the U.S. Corn Belt</i>
51	Ulloa, Camila Horticulture, Landscape and Architecture <i>Unveiling consumer segmentation in the U.S. salad mix market: insights into environmental preferences and sustainable marketing</i>
52	Li, Wenbo Entomology <i>Improving the Effectiveness of PICS bags through Hand warmers: A Practical Approach to Minimize Post-harvest losses.</i>

Sustainable Communities, Materials	
53	Simmons, Reva and Harry Lee College of Biomedical Engineering <i>Investigation of Fiber Orientation and Mechanical Properties of Pyrolysis Recycled Carbon-Fiber Reinforced Thermoset Composite</i>
54	Choi, Sung Jun SATT/polytechnic <i>Enhancing Structural Performance of Recycled Fiber-Reinforced Thermoplastic Composites Through Additively manufactured Continuous Fiber Reinforced Preform</i>
55	Montrose, Jacob School of Aviation and Transportation Technology <i>ENHANCING STRUCTURAL PERFORMANCE OF RECYCLED FIBER-REINFORCED THERMOPLASTIC COMPOSITES THROUGH INCORPORATING COMPOSITE LAMINATE PRECUTS</i>
56	Zhang, Guyuan SATT <i>Recycled Carbon Fiber-Reinforced Polymer Composite Additives for Cement</i>
57	Shekhar, Abhimanyu Raj Agricultural & Biological Engineering <i>A Hybrid Mechanistic Machine Learning Approach to Model Industrial Network Dynamics for Sustainable Design of Emerging Carbon Capture and Utilization Technologies</i>
58	Stevens, Miriam EEE/Engineering <i>Material flow analysis of end-of-life electric vehicle batteries using agent-based modeling</i>
59	Ngooi, Kah Soon College of Engineering <i>Life Cycle Assessment of Sustainable Construction Materials</i>
60	Duan, Junyi School of Construction Management Technology <i>Computational Investigation of the Flood Impact on Bridge Infrastructures in the Great Lakes Region</i>
Great Lakes	
61	Warren, Les FNR; College of Agriculture <i>Isotopic analysis of alewife, <i>Alosa pseudoharengus</i>, otoliths to determine early life habitat utilization and growth in Lake Michigan</i>
62	Pham, Nhu Civil Engineering / Ecological Sciences and Engineering <i>A Data-Driven Approach to Lake Michigan Turbulence Mixing</i>
63	Ahsan, Tasmiah Civil Engineering <i>Using LiDAR Imagery to Quantify Indiana Coastline Changes along Lake Michigan</i>
64	Abdelhady, Hazem, Sophia Ung Civil Engineering <i>Lake Michigan Shoreline Monitoring, Evaluation, and Modelling Using High Resolution</i>
Water Challenges	
65	Slotke, Andrea Agricultural and Biological Engineering / Agriculture & Engineering <i>Improving the Remote Sensing of the Biogeochemical State of Midwestern In-land Waters</i>
66	cordoba renteria, sandra Mechanical Engineering <i>Energy Efficient Water Desalination using Batch Reverse Osmosis</i>
67	Garrison, James, Eric Smith and Archana Choudhari AAE <i>Hydrological Remote Sensing using Signals of Opportunity below 400 MHZ</i>
68	Rudko, Noah Agricultural and Biological Engineering <i>Water quality sampling provides insight into nutrients sources and pathways in an agricultural watershed in the Midwestern USA</i>
69	Welp, Lisa EAPS and Keith Cherkauer (ABE) <i>What would you do with a watershed Digital Twin?</i>

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