

FALL UNDERGRAD RESEARCH EXPO

PURDUE UNIVERSITY

TALKS | NOV. 18, 2026

Only presenting authors (italicized) and mentors are listed. Contributing authors and acknowledgements are listed in the online abstract book.

RESEARCH TALK SESSION 1 | 9:00AM-10:00AM

ROOM: STEW 214A

9:00am **7000** Evaluating Precision–Efficiency Trade-offs in Systolic Array Architectures for Edge AI Inference
Aiyan Alam; Vijay Raghunathan

9:20am **7001** Microwave Theory and Technology Society Synthetic Aperture Radar Project
Jaswant Singh; Vikram Madhusudan Chakrabhavi; Elena Gutierrez; Azamat Eshmuratov; Priya Adiga; Andrew Owen Fewell

9:40am **7002** EPICS Junior Achievement Shelves
Robert Charles Feeney; Olivia Grace Hart; Aparajita Jaiswal

ROOM: STEW 214B

9:00am **7003** ATTEST: Auditable AI Guidance for Manufacturing
Amogh Bysani; Wenzhuo Wu

9:20am **7004** Evaluating the Cardiotoxicity of Doxorubicin via 4D Echocardiography in a Murine Model
Alekh Shah; Craig Goergen; Benjamin Zeidler

9:40am **7005** A Survival Analysis Framework for Predicting Flexible Pavement Deterioration in Wet-Freeze Climates
Mark Waldron; Mohammad Jahanshahi; Nikkhil Vijaya Sankar

ROOM: STEW 214C

9:00am **7006** Deep Learning-Based Automated Detection of Cardiac Cycle Events in Echocardiography
Jeremy Zhang; Shubh Mehta; Craig Goergen; Benjamin Landis

9:20am **7007** CVGM: Contact-Guided Flow Matching for Articulated Piano Hand Animation
Rishi Bagri; Nimisha R Rangarajan; Luca Chen; Callum Roderick Sizer; Yung-Hsiang Lu

9:40am **7008** Semiconductor-Based Electrochemical Sweat Sensors for a Physiological Digital Twin
Iniya Venkat; Robert Jose Ccorahua santo; Wenzhuo Wu

ROOM: STEW 214D

9:00am **7009** A Cycle-Level Simulation Framework for Early Design-Space Exploration of the Atalla AI Accelerator
Rafael Monteiro Martins Pinheiro; Hassan Al-alawi; Mark Johnson

9:20am **7010** Sequential Extraction Process to Recover Rare Earth Elements and Other Metals From E-Waste
Grayson D Givens; Rajan Joshi; Nadezhda N Zyaykina

9:40am **7011** Physical Design Flow Architecture for SoCET AFTx08+
Vladimir D Bondar; Niels van Ritbergen; Timothy Francis Hein; Mark Johnson

ROOM: STEW 218A

9:00am **7012** Comparing Experimental Protocols for Measuring Magic on a Single Quantum Computer
Medhansh Garg; Andy Jung; Noah Charles Singer

9:20am **7013** A 3D DIPG-Microglia Spheroid Co-Culture Model for Developing NK Cell Immunotherapies
Rohan Joseph Eapen; Sandro Matosevic; Soumyajit Das; Valentina Andrade Perez; Shuyi Zhou; Tyler Parker Fritsch

9:40am **7014** Device Engineering for STM Studies of Correlated Electron Behavior in 2D Semiconductors
Priya Mishra; Tiancong Zhu; Kyung Jun Lee

ROOM: STEW 218B

9:00am **7015** Simulating Stable Isotope Partitioning in Atmospheric Chemistry Using Modified CMAQ Modules
Samin Sanjana; Greg M Michalski

9:20am **7016** Longitudinal Count Data with Varying Treatment Trajectories in Clinical Trials: A Simulation Study
Danica Althea Diva; Ulysses Diva, Jr

9:40am **7017** Automating Paired Colony Picking and High-Throughput Ambient Mass Spectrometry for Directed Evolution
Juan Pablo Goyes Bucheli; Nicolas Mauricio Morato Gutierrez; Alexis Toney Owen

ROOM: STEW 218C

9:00am **7018** Improving Robustness and Safety of Autonomous Vehicle Using Multi-Sensor Fusion Methods
Natalie Bozinovski; Yi-Lien Chen; Max Lu; Skyler R Wenger; Greyson Andrew Altaffer; Andres Felipe Hoyos Moreno; Reed Joseph Freer; Samuel Labi; Richard Ajagu

9:20am **7019** Identifying Longitudinal Immune Cell Predictors of Treatment Response Using XGBoost, SHAP, and Elastic Net
Ramya Prasanna; Nan Kong

9:40am **7020** Genetic Domination of the Host in Eukaryogenesis
Alexander Whitaker Raber; Sergio Munoz-Gomez

ROOM: STEW 218D

9:00am **7021** Improving the Solubility and Selectivity of a Targeted Cancer Immunotherapy
Peter Gyusung Yoon; Cameron Joseph Smith

9:20am **7022** STEM Stop: Integrated STEM Lesson on Bus Stop Design for Middle School Students
Yunsoo Cha; Nathan Mentzer

9:40am **7023** Behavioral and Neuroinflammatory Effects of Chlorpyrifos Exposure in Pon1(-/-) and Wild-Type Rats.
Karis Ge Fu; Reeya Tanwar; Jason R Cannon

RESEARCH TALK SESSION 2 | 10:00AM-11:00AM

ROOM: STEW 214A

10:00am **7024** Influence of Electrochemiluminescence Co-Reactants on Cell Viability for Improved In Vitro Bioanalysis
Hadley June Rumbach; Samuel Patrick Nortz; Jeffrey Edward Dick

10:20am **7025** Developing Graduate Student Personas for Graphical Abstract Construction
Matthew Dunlap; Stephanie M Gardner; Traven Levar Cargill

10:40am **7026** Security Vulnerabilities of AI-Driven Software Development
Boris Konstantine Smaguine; Harris J Bras

ROOM: STEW 214B

10:00am **7027** Cervical Cancer Screening Perspectives Among People Experiencing Homelessness: A Thematic Analysis
Lauren M Hopkins; Lara Nicole Balian; Natalia Maria Rodriguez; Rebecca A Ziolkowski

10:20am **7028** Development of a Human Induced Pluripotent Stem Cell Derived Placental Barrier
Benjamin Thomas Barnaby; Aaron B Bowman; Anke Marije Tukker

10:40am **7029** Investigating Excitation-Inhibition Balance in Autistic Children Using Aperiodic EEG
Yao Yao; Brandon Keehn

ROOM: STEW 214C

10:00am **7030** Digital Twins of Physio-Cognitive Stress Responses Using Mixed Reality and Wireless Wearables
Kanishka Seiharia; Prisha Marpu; Robert Jose Ccorahua Santo; Wenzhuo Wu

10:20am **7031** Computational Insights into the Active Assembly of Physiologically Relevant Actin Bundles
Hamsikasree Vedavinayagam; Tae Yoon Kim; Jeffery Coulter

ROOM: STEW 214D

10:00am **7032** From Research to Peer Support: A Purdue-High School Mentoring Pilot in Rural Indiana
Paola Scolletta Tagashira; August Twopearls Masonheimer

10:20am **7033** Bringing Our Boilermakers Home: Research, Collaboration, and Commitment Towards Purdue's Vietnam War MIA Servicemen
Elijah James Patton; Andrew Harold Bellisari

10:40am **7034** Low-Cost Triboelectric Smart Glove for Contact Detection and Pressure Sensing During Manual Lifting
Rohan S Thakur; Anthony David Schmok; An Quoc Kieu; Ben Darin Xu; Hettiarachchige D Perera; Wenzhuo Wu

ROOM: STEW 218A

10:00am **7035** Analysis of Fast Tuning Methods for Coupled Resonator Cavity Filters
Peter Robertson Skrdla; Alex Santiago-Vargas

10:20am **7036** Variable-Stiffness Wearable Device Using Core-Shell Electroadhesive Fibers
Anandi Durgam; Alex Chortos; Mohammed Jamal Al-Rifaie

10:40am **7037** Development of a Deformable Benchtop Model for Hemodynamic Analysis of Norwood Shunt
Aishwarya Kunigal; Calvin Adriaan VanderSchee; Nicholas George Doherty; Lincoln Ariel Alicea; Brett A Meyers; Hyeondong Yang

ROOM: STEW 218B

10:00am **7038** Demand Specification Matters: Calibrated Choice Modeling for Dynamic EV Fast-Charging Pricing on the I-210 Corridor
Nakul Sreekanth; John Lance Clark; Avi Gupta; Riya Chamala; Sivaranjani Seetharaman

10:20am **7039** EmbedEval – Benchmarking LLMs for Embedded Systems
Devesh Maheshwari; Alex Chuan Yang Zhang; Richard Z Zhang; Aadi Gupta; James C Davis

ROOM: STEW 218C

10:00am **7040** Creating a Consistent Workflow for Amorphous Oxide Structure Generation in OxRAM Research
Pablo De Leon Devia; Tillmann C Kubis; Manas Pratap; Namita Narendra

10:20am **7041** Effect of Cerebrospinal Fluid Albumin on Nanoparticle Aggregation, Binding, and Transport in Collagen-Based Matrices
Yuan Heidi Yue; Julie C Liu; Marisa Ann Egan

10:40am **7042** Closed-Loop Path Tracking Control for an Autonomous Racing Go-Kart
Manav Nikhil Gagvani; Jiashu Liu; Jaden Tang; Rithvik Praveen Kumar; Aran Pandey; Reed Joseph Freer; Andres Felipe Hoyos Moreno

ROOM: STEW 218D

10:00am **7043** Comparing EI vs CI High-resolution Mass Spectrometry Libraries to Identify Cycloalkanes, Alkenes, and Aromatic Hydrocarbons
Gauri Srinath; Hilkka Kenttamaa

10:20am **7044** New Ways of Maintaining Drone Stability Using Computer Vision AI's
Brandon Vu Loehr; Yexiang Xue

10:40am **7045** Agentic Onboarding for Empirical Evaluation of Machine-Learning Defense Interactions
Adarsh Siva; Aniketh P Upadhya; Arjun Jagannathan; Felipe da Paixao; Samuel Yanqi Li; Tiffany Yung; Zahra Ghodsi

RESEARCH TALK SESSION 3 | 11:00AM-12:00PM

ROOM: STEW 214A

11:00am **7046** Co-Designing a Sensory Table: How Stakeholder Interaction Shapes Engineering Decisions
Gourav Pany; John Regan; Luke Alexander Macrina; Nathan Robert Walsh; Aparajita Jaiswal

11:20am **7047** Measurement of Tissue Elastography through Ultrasound on Human Kidneys to Assess Fibrosis
Anna Julie Astrid Webb; Meera Pancholi Doran; Craig Goergen

11:40am **7048** Music-Induced Cardio-Autonomic Response with Wrist-Worn Triboelectric Pulse Sensors
Shashwat Goel; Wenzhuo Wu; Robert Jose Ccorahua santo

ROOM: STEW 214B

11:00am **7049** Investigating Transfer Learning from Clinical to Thigh-Based ECG for Automated Signal Classification
Sidh Jain; Hardayal Singh Harpal Singh Bajwa; Ishaan Vijaywargiya; Jaina Yeonho An; Soudabeh Taghian Dinani

11:20am **7050** Modeling Dust Deposition In Equine Airways Using A 3D-Printed Negative Tracheal Mold
Ken Lynch; Nora Fatzinger; Skylar Grace Weinstein; Henry Tran; Nathan Crute; Takuto Tominari; Curtis Earl Marshall

ROOM: STEW 214C

11:00am **7051** Polynomial Trim Cryogenic CMOS Smart Temperature for Quantum Computing Applications
Elijah Guison-Dowdy; Shayna Messler; Seyedehmarzieh Rouhani

11:20am **7052** Commercial Satellite Self Defense
Henry Thomas Gleason; Dana Tulodziecki; Frankie Knuckles

ROOM: STEW 214D

11:00am **7053** Language as a Window into Cognition: The Real-Time Processing of Grammatical and Ungrammatical Questions
Carys Baglia; Deepti Aksharra Ramasamy; Kyle Robert Swanson

11:20am **7054** Sociocultural Linguistic Analysis of English and Russian via the Niche Language Hypothesis
Nicholas James Berger; Olga Lyanda-Geller

11:40am **7055** Wanting What Others Have: How Social Comparison and Materialism Change from Adolescence to Adulthood
James Ren; Harris J Bras

ROOM: STEW 218A

11:00am **7056** Developing Adenine Base Editing to Correct a Splice-Site Variant in SCN2A and Restore NaV1.2 Function
Jonathan Sam Suresh; Manasi Suchit Halurkar; Yang Yang

11:20am **7057** Identifying Oncogenic Driver Genes in Glioblastoma to Overcome Treatment Resistance via Targeted Immunotherapy
Carol Marion Hercules; Quazi Arisha Mahmud; Claire Martel; Alex Adrian Rivera; Sandro Matosevic

11:40am **7058** Effects of alpha-Synuclein Variants on Synapsin 1 Condensates: Turbidity, FRAP and FRET/FLIM Analysis of LLPS
Laura Sofia Gomez Toscano; Jean-christophe Rochet; Bryce Colon; Katie Lynn Whitcomb

ROOM: STEW 218B

11:00am **7059** Modeling the Effects of Bowden Cable Compliance and Friction on Torque Transmission in a Two-Degree-of-Freedom Robotic Ankle
Parwa Alexandra Alagon Aguilar; Mo Rastgaar; Jorge Enrique Neira Garcia

11:20am **7060** How the Agentic AI Model Will Continue to Shape the Modern World
Nathan Eli Adamson; Harris J Bras

11:40am **7061** Multimodal Monitoring and Data Driven Machining Parameter Optimization for Carbon Fiber Reinforced Thermoplastic Composites
Alejandro Diaz Pinales; Garam Kim; Sucheol Woo

ROOM: STEW 218C

11:00am **7062** Calibration of Polymarket Daily Temperature Markets
Kayla H Lee; Qifan Song

11:20am **7063** Characterization and Stacking of 2D Materials
Sri Krishna Teja Mannava; Andres Eduardo Llacsahuanga Allcca; Leonid P Rokhinson

11:40am **7064** Developing a Framework for Least-cost Path Modeling of Wildlife Corridors in the Northern United States
Aidan Feirstein; Kristen Marie Bellisario

ROOM: STEW 218D

11:00am **7065** MVP-Tac: A Miniaturized Dual-Modal Vision and Photoelastic Tactile Sensor for Robot-Assisted Minimally Invasive Surgery
Adyaa Khera; Yu She; Md Rakibul Islam Prince

11:20am **7066** Evanescent-Mode Resonators Coupling Extraction for Multipurpose Filtering Devices
Nishaant Guptan Veemboor; Alex Santiago-Vargas; Dimitrios Peroulis

11:40am **7067** Workload-Aware Python Code Optimization Using Local LLMs
Aybars Yunusoglu; Amr El Sayed Rageh; Ishaan Sahu; Ian Mitchell Yao; James C Davis

RESEARCH TALK SESSION 4 | 12:00PM-1:00PM

ROOM: STEW 214A

12:00pm **7068** Food Volume Estimation Using Stereo Video from Smart Glasses
Vivan Kumar; Fengqing Zhu; Gautham Vinod

12:20pm **7069** Analyzing Patterns to Develop Successful Studying Habits
Erich Hetz; Linda E Haynes

12:40pm **7070** The Effect of Kabuki Syndrome on the MAP-Kinase Cascade and its Implications
Lillian Deetz; Harris J Bras

ROOM: STEW 214B

12:00pm **7071** Evaluating Moral Reasoning Across Large Language Models and Model Generations
Srikrishna Brihadishwara Rajarajan; Pragathi Durga Rajarajan

12:20pm **7072** Automated Radio Evaluation Suite: Multi-port Antenna Measurements
Joseph Timothy Kritenbrink; Alex Santiago-Vargas

12:40pm **7073** Reducing Data Transmission Latency in Autonmous Racing Systems
Christian Scheckel; Brandon Christopher de Jong; Isaac Paul Grosman; Marcus Milewski; Richard Ajagu; Reed Joseph Freer; Andres Felipe Hoyos Moreno; Samuel Labi

ROOM: STEW 214C

12:00pm **7074** A Machine Learning Approach to Automatic Music Transcription for Guitar
Arnav Ashish Kalekar; Vishaal Iyer; Sooji Lee; Ricky Wong; Yung-Hsiang Lu; Ojas Chaturvedi; Kayshav Bhardwaj; Yeon Ji Yun

12:20pm **7075** Process Development of Chemical Mechanical Planarization (CMP) and Wafer Thinning for Through-Silicon Vias (TSVs)
Sabastian Hunter Hamilton; Roxsonna Nika Janiszewski; Athavan Arvind; Aarav M Shah; Ava R Assante; Rushabh Rahul Shah; Peter Bermel

12:40pm **7076** Process Development and Integration of Through-Silicon-Vias (TSVs) for Advanced Packaging and Heterogeneous Integration
Rex Wu; Changyun Lee; Wei Lun Chang; Owen Chen; Peter Bermel; Zhihong Chen; Joerg Appenzeller; Saeed Mohammadi

RESEARCH TALK SESSION 5 | 1:00PM-2:00PM

ROOM: STEW 214A

1:00pm **7077** Service Life Assessment of a Multilayer Metamaterial Composite Antenna System for Low Earth Orbit Satellite Constellations
Changho Lee; Garam Kim; Eduardo Barocio Vaca

1:20pm **7078** Neural Space Cap: A Novel Framework for Integrating Biometrics to Advance Human Spaceflight Health
Hetasri Galla; Farah Elbohofy; Soumil Bhandari; Sravani Mahankali; Aishi Lalitha Garimella; Curtis Earl Marshall

1:40pm **7079** Design of a Radiation-Hardened by Design X-Band Receiver in 90nm FDSOI
Arthur Prudius; Randolph Nathan Ha; Andrew Paul Becker; Nezar Fahmi; Andrew Owen Fewell; Boyuan Chen

ROOM: STEW 214B

1:00pm **7080** Understanding the Phase Formation of M4AlC3 MAX Phase for the Synthesis of Novel 2D MXenes
Paula Andrea Zapata Palmezano; Juan Esteban Torres Ramos; Babak Anasori; Muhammad Sharif Uddin

1:20pm **7081** External Validation of a Deep Learning Aortic Root Segmentation Model on an Independent Echocardiographic Cohort
Julia Kang; Shubh Parag Mehta; Craig Goergen; Benjamin Landis

1:40pm **7082** BTact: A Rounded Vision-Based Tactile Sensor for Multidirectional Contact Sensing and 3D Reconstruction
Akimizu Sugiyama; Yu She; Md Rakibul Islam Prince

ROOM: STEW 214C

1:00pm **7083** FEA of the Compressive Behavior of Multilayer 316L Stainless Steel with Localized Peening-Induced Hardening
Mirza Orunav Shahper; Shreejith Ravisankar; Michael P Sealy

1:20pm **7084** Design and Performance of a 1.0 W PocketQube Direct-Sampling Receiver for Soil Moisture Sensing using Signals of Opportunity
Elena Lehner; Sebastian Pirela; James Garrison; Benjamin Nold

1:40pm **7085** Audio Source Separation Using Artificial Intelligence
David Dang; Haoxuan Tong; Shashwat Goel; Yung-Hsiang Lu; Yeon Ji Yun; Ojas Chaturvedi; Kayshav Bhardwaj

ROOM: STEW 214D

1:00pm **7086** Assembly and Transfer of Striped-Phase Polydiacetylene onto Biocompatible Hydrogels
Sarah Elizabeth Bohne; Denniell Ann Hurboda

1:20pm **7087** The Hallucination Cascade: Measuring State Tracking Collapse in Multi-Agent LLMs
Brook Netsanet Animut; Garrett Ivan Colon

ROOM: STEW 218A

1:00pm **7089** Eurocentrism in Medicine and the Effects On Marginalized Communities
James LeClerc; Linda E Haynes

1:20pm **7090** Extracurricular Activity Participation and Adolescent Substance Use: Examining Differences by Activity Type
Nicole Ibarra; Vaibhavi Goyal; Shandey Malcolm; Madeline Moser

1:40pm **7091** Evaluating Insurance for Dietician Services
Aaron Jafri; Catherine Jean Shukle

ROOM: STEW 218B

1:00pm **7092** Enhancing the DMAIC Framework in Aerospace Manufacturing Through Artificial Intelligence (AI)
Ronan Edward Lang; James Tyler Lyuke; Michael Martin Zielinski; Jaehu Lee; Abner Del Cid Flores

1:20pm **7093** Effect of Bead Orientation and Bolt Preload on Adhesively Bonded Joints in 3D-Printed Composite Tooling Under Thermal Cycling
Paul Kyu-Hwan Park; Garam Kim

1:40pm **7094** Spectrally Selective Transparent Materials for Solar - Thermal Heat Retention and Reflection
Japteg Singh Bamrah; Anne M Lucietto

ROOM: STEW 218C

1:00pm **7095** Large Scale Quasi-Steady State Industrial Dual Module Humidity Pump Dryer Prototype
Ishan Gopu Nair; David Warsinger; Junyan Ren

1:20pm **7096** TRON STARS Chip Design Project
Maximillian Li; Vikram Madhusudan Chakrabhavi; Kerry Zhang; Andruw Kuang-Le Lin; Alexander J Weyer

1:40pm **7097** Streaming Failure Forecasting: Closed-Form Online Learning of VLA Failure Monitors under Drift
Shaurya Beriwala; Amit H Jadhav; David Liu; Yanfei Liu

ROOM: STEW 218D

1:00pm **7098** Establishing an Evidence-Based Hierarchy of Immunodominant B-Cell Epitopes on the Human Metapneumovirus Fusion Protein
Chaeyeon Lee; Harris J Bras; Bradley Keith Broyles

1:20pm **7099** Stochastic Risk Analyses: HJB-embedded AKF PINNs with the AS Model for Multi-Asset Portfolio Operations
Ashrith Ponna; Yexiang Xue

1:40pm **7100** Standardizing Bioacoustic Data Processing: Evaluating a Single-Step Pipeline in StreamCI
Julianna Victoria Vishnyakova; Kristen Marie Bellisario

RESEARCH TALK SESSION 6 | 2:00PM-3:00PM

ROOM: STEW 214A

2:00pm **7101** Developmental Neurotoxicity of Trifluoroacetic Acid (TFA) in Zebrafish: Cellular, Mitochondrial and Neurotransmitter Response
Maxwell J Gootee; Jennifer Freeman; Umamaheswari Sathisaran

2:20pm **7102** Developing a Sycophancy Index for AI Career Advice: Emotional Framing and Plan Quality
Ananya Reddy Depa; Marisa E Exter

2:40pm **7103** Learning by Doing: Initial Qualitative Analysis of Emergency Responders' Perceptions of an Equine-assisted Learning Program
Kelly Marie Makovic; Leanne Nieforth

ROOM: STEW 214B

2:20pm **7105** Bone-Targeted Radiotherapy for the Treatment of Multiple Myeloma
Parvesh Venugopallavanya; Erin Elizabeth Bigelow; Charles Key Stone; Madduri Srinivasarao

2:40pm **7106** WordFinder: A Word Retrieval Tool for Individuals with Aphasia Using Large Language Models
Adikesh S Nathan; Shaiv Mehra; Bradley S Duerstock

ROOM: STEW 214C

2:00pm **7107** Investigating the Effects of VPS35 Knockdown on Organelle Morphology in Human iPSC-Derived Astrocytes
Leonel Baskin Sesuraj Baskin; Rohan Joseph Eapen; Matthew Thomas Tegtmeyer; Md Nazmul Hasan

2:20pm **7108** Intersections of Curves and Arcs on Orientable Surfaces with Boundary
Sam Pierce; Ailesh Verma; Karthik Duvvuri; Thi Hanh Vo

2:40pm **7109** Prediction Markets Are Not Stock Markets: Evidence from 86 World Cup Contracts
Prabhat Mani James Nayagam; Harris J Bras

ROOM: STEW 214D

2:00pm **7110** OFDM Synchronization for Satellite Communications: Software Simulation and FPGA Implementation
Sourish Manthati; Tanmay Deshmukh; Paul C Bergeson-dana; Paul Shannon Slack; Priya Adiga; Andrew Owen Fewell

2:40pm **7112** Automated Pipeline for Benchmarking Computer Vision Models on Authentic, Synthetic and Tampered Image Datasets
Li-Yen Lai; Dongyun Lim; Thirukumaran Veleyudham; Ryan Reddy; Vedant Arora; Yung-Hsiang Lu

ROOM: STEW 218A

2:00pm **7113** Student Perceptions of Learning With and About AI: A Qualitative Analysis Using Keller's ARCS Model
Shivani Ramkumar; Lisa B Bosman

2:20pm **7114** Evaluating Performance-Based Drift Detection for Localizing Data Corruption in Machine Learning Pipelines
Bo-Cheng Lu; Jahid Hasan; Romila Pradhan

2:40pm **7115** Simulation-Driven Design of a Steel Beam Fastening End Effector
Megan Amy Rudo; Nicolas Sosa Fraga; Madison Jeanne Gomes; Jiansong Zhang; Meta Soy; Jingyi Lai

ROOM: STEW 218B

2:00pm **7116** The application of Magnetic Sugarcane Bagasse on Methylene Blue adsorption
Nguyen Khanh; An Thien Nguyen

2:20pm **7117** Aligning ATC Communications with Aircraft State Data for UAV Language Models
Debarya Saha; Daksh Santhosh; Aaron Yuncong Zhang; Leo-Paul Perrin; Christopher Rashidian; Sabine Brunswicker

2:40pm **7118** Life Cycle Assessment of Recovering Paracetamol from End-of-Use Over-the-Counter Pharmaceuticals for Circular Reuse
Jijnasu Prakash Rout; Abheek Chatterjee

ROOM: STEW 218C

2:00pm **7119** Ejército Espía: Surveillance Technology and Attribution in Mexico's Grey-Zone Conflict
Sophie Salazar; Andrea Njakara; Chiara Cervini

2:20pm **7120** Atrocities as Military Doctrine in the Bosnian War - Unconventional Tactics and Grey Zone Operations
Timothy Brandon Irwin; Chiara Cervini

ROOM: STEW 218D

2:00pm **7121** Protecting Women Before the Deepfake: A Consent-Aware Approach to Preventing Non-Consensual Sexual Deepfakes
Ananya Shaurya; Jennifer Bay

2:20pm **7122** Water Supply in the Dominican Republic- An Interdisciplinary and Holistic Approach to Safe Water in Developing Countries
Karina Jones Peate; Rebecca Johnson; Ernest R Blatchley

2:40pm **7123** Seeing the Economy from Space
Siyuan Zuo Guan; Victoria L Prowse

RESEARCH TALK SESSION 7 | 3:00PM-4:00PM

ROOM: STEW 214A

3:00pm **7124** The Spell of Disinformation: Weaponization of Illusion in Late Medieval and Early Modern Europe
Amanda Jean Laughery; Kat Mccormick; Kristin Browning Leaman

3:20pm **7125** Not Just a Kid: An Exploration of Childhood in the United States through Puppets
Angela Emily Clark; Dada Docot

3:40pm **7126** Assessing Functional Variation in Astragali for Dice Games Through Experimental Replication of Bone Preparation Techniques
Kat Mccormick; Benjamin J Schoville

ROOM: STEW 214B

3:00pm **7127** Metals versus malignancy: How do essential metals mediate carcinogenesis?
Cael Hinde; Harris J Bras

3:20pm **7128** TRACE (Transformer-based Reference-line Autonomy for Course Estimation)
Connor Coladonato; Liam Yates; Anand Krishnan; Andres Felipe Hoyos Moreno; Reed Joseph Freer; Richard Ajagu; Samuel Labi

3:40pm **7129** Design and Optimization Through Experimental Validation of a Microgreen Growth Chamber for Lunar and Terrestrial Applications
Mia Schecter; Gregory Glenn; Sushma Katta; Emilio Alejandro Meza Viera; Suya Shen; D. Marshall Porterfield; Richard Barker

ROOM: STEW 214C

3:00pm **7130** Automated Detection of Right Coronary Artery Stenosis via Retrograde Flow Analysis
Ngoc Anh T Nguyen; Ernest Francis Talarico, Jr.; Loc Vu

3:20pm **7131** Mindful Versus Non-Mindful HIIT Recovery: A Secondary Analysis of Physiological and Psychological Outcomes
Tithi Gohil; Shih-chun Kao

3:40pm **7132** Retrofitting a UAV Landing Skid for In-House Design and Manufacturing using Carbon Fiber
Nik Auclair; Caden Cole Cowles; Damon Lercel; Nathan Tyler Rose; Garam Kim

ROOM: STEW 214D

3:00pm **7133** How Rising Severe Convective Storms Expose Gaps in Insurance Risk Models
Logan Labno; Linda E Haynes

3:20pm **7134** 3D Printing G-Quadruplex DNA: Making Handheld Tools for Molecular Visualization and Understanding
Shawn Kongzhao Liu; Jinho Jang; Danzhou Yang

3:40pm **7135** The Medical Applications of CRISPR
Claire Hack; Harris J Bras

ROOM: STEW 218A

3:00pm **7136** Deep Learning for Dendritic Spines Resolution Restoration and Segmentation in Two-Photon Microscopy
Leonor Antunes Sinogas; Shulan Xiao; Linlin Li

3:20pm **7137** Temperature-Dependent Weak Localization In Ultrathin Gallium-doped Zinc Oxide Films
Muhammad Mahdi Marzan; Alexandra Boltasseva; Miroslava Marinova Marinova; Kyu Ri Choi

3:40pm **7138** The Impact of Degrees of Freedom and Weight Distribution on Quadrupedal Robot Power Consumption and Locomotion
Matthew Manuel; Rohan Rahul Pradhan; Jaeeun Kim

ROOM: STEW 218B

3:00pm **7139** Mechanical Testing Chamber for Cells
Miram Elag; Grace Lincoln; Julie Ying Hui Ji; Sungsoo Na

3:20pm **7140** Copper Electroplating Optimization for High Aspect Ration Through-Silicon Via Fabrication
Tim Jacques van Antwerpen; Annabelle Nakamura Defosse; Ekagra Agarwal; Sophia Yixuan Lu; Logan Scott Fergusson; Qiming Chai; Peter Bermel; Saeed Mohammadi

3:40pm **7141** Accelerating Data Movement on the AFT RISC-V Microcontroller with a Peripheral-Triggered Multi-Channel DMA Controller
Yujia Alina Li; Ronald Oum; Drew Babel; Cole Aaron Nelson

ROOM: STEW 218C

3:00pm **7142** Shader Core: Replacing Fixed-Function GPU Hardware with Flexible Execution
Raghuv Potdar; Nikolai Viswanath; Khoi Anh Nguyen; Andy Hanjun Hu; Caleb Enos Zhang; Dongliang Luo; Zach Anthony Barna; Charles Spencer Bowles

3:20pm **7143** Rooftop Photovoltaic Generation for Refrigerated Heavy-Duty Truck Trailers
Yash Dalal; Daniel Jungil Lee; Andre Penna Fontana; Peter Bermel; Muhammad A Alam

3:40pm **7144** Sex-specific Proteomic Signatures of Cognitive Resilience in Asymptomatic Alzheimer's Disease
Navya Dewan; Priyanka Baloni; Purba Mandal

ROOM: STEW 218D

3:00pm **7145** Frequency and Duration Mismatch Negativity as a Neurophysiological Correlate of Psychosis-Proneness in a Non-Clinical Sample
Alexander Jamison Merchant; Daniel J Foti

3:20pm **7146** Maraviroc and Recovery After Traumatic Brain Injury in Mice
Ashley Fontana; Harris J Bras

3:40pm **7147** Tuning Out the Noise: Auditory Filtering and Classroom Attention in Autistic College Students
Grace Lauren Scott; Brandon Keehn

VIRTUAL PRESENTATIONS

Virtual presentations are available on the Fall Expo website Nov. 16-20.

9000 *Noshin Atiya Rahman;* Ahmed Mustafa; Rebecca Palu

9001 *Ainsley Elizabeth Benson-Catellier; Sonia Vipul Bhagat; Madison Rose Compher; Brianna Rachelle Pastran-Pacheco;* Genell Wells Ebbini

9002 *Michael Borokhov; Kieran Ray Neill; Nathan Leong; Aaron Guo;* Jayaditya Borah

9003 *Peyton Rose Collier;* Ellen M Schellhase; Monica Miller

9004 *Sophia Cunningham; Kara Wang;* Pablo D Zavattieri; Dylan Kenji Wainwright

9005 *Noah Alston Dyer;* Curtis Earl Marshall

9006 *Miranda J Freeman; Lila Renee James; Sonja E Glover; Anneka Christine Zylstra;* Genell Wells Ebbini

9007 *Ryan Gelston;* Carla Zoltowski; James Corbett Beasley; Beth J Hess

9008 *Lauren Danielle Gogna; Lucy Marie Courtney; Alaina Caitlin Koch; Emily Elizabeth Breit;* Genell Wells Ebbini

9009 *Mikayla Elizabeth Haak; Raina Sanders;* Genell Wells Ebbini

9010 *Liana Havanjian; Natalie Grace Dunn; Maggie Lynn Pettyjohn; Kaitlynn Stricklin;* Genell Wells Ebbini

9011 *Safa Islam;* Seyedehmarzieh Rouhani

9012 *Megan Elsa Jerrell; Hannah Hj Shin; Jennifer Castro-Espiritu; Melissa June Nelson;* Genell Wells Ebbini

9013 *Soham Jindal;* Andrew Li Niu

9014 *Harshil Bijal Joshi; Isaac En Kai Then;* Jaeeun Kim

9015 *Arnav Juneja; Drew Forrest Sullivan; Matthew Du; Lucas Michael Mallen; Rohan Mihir Gandhi;* Cole Aaron Nelson; Mark Johnson

9016 *Jay Amit Katariya;* Curtis Earl Marshall

9017 *Ian Knight; Anushka Erra;* Peter Bermel; Muhammad A Alam

9018 *Jacob Lawrence;* Cole Aaron Nelson

9019 *Leslie Lim; Reem Hussam Al Zubi; Natalie Margaret Hallaert; Sam Raveesh;* Genell Wells Ebbini

9020 *Claire Liu; Jiya Kaur Dhiman; Zijie Lou; Saif Nasser Zagha;* Yung-Hsiang Lu

9021 *Felix Ramazov Marikashvili;* Andrew Owen Fewell; Peter Bermel

9022 *Stefan Maxim;* James C Davis; Huiyun Peng

9023 *Ajay Ramesh; Elijah Gallup; Vani Tiwari; Satyanandana Sivani Thallam; Derek Purka; Julian Foley; Aditya Satish Musale;* Curtis Earl Marshall

9024 *Ellen Grace Rath; Hailey Lyn Ford; Ashlyn Kristine Welte; Rachael Sheridan Wilson;* Genell Wells Ebbini

9025 *Shreraj Singh Sanjay Sainani; Carolina Sun;* Jiansong Zhang; Meta Soy; Jingyi Lai

9026 *Hirthik Gopal Shanmugam; Nicholas Zhang;* Cole Aaron Nelson

9027 *Kulpreet Singh;* Esra Tepeli

9028 *Adam Song; Cade Stogsdill; Adhitya Shantharam;* Jiansong Zhang; Meta Soy; Jingyi Lai

9029 *Rohan Sunil;* Jaeeun Kim

9030 *Said Taghiyev; Talon Matthew Hooten;* Gregory David Sturm

9031 *Josh Truman; Isabelle Jacqueline LeBlanc; Max Mayer; Divya Anantkumar Patel; Marcus Abraham Zee; Liang-Hua Chao;* Curtis Earl Marshall; Alexander Repikov

9033 *Henan Wang;* Seyedehmarzieh Rouhani

9034 *Kallie Jane Watson; Hannah Faith Haskins; Caroline Gillig Close; Sophia Caroline Fox;* Genell Wells Ebbini

9035 *David Changhong Yang;* Jozue Kim

9036 *Aaron Yin; Julian Arun Creel; Saket Manoj Kanagal;* Luke J Ferrer

9037 *Mingze Zhang;* Harris J Bras

9038 *William Hongyi Zhong;* Joseph Jeong

SCHEDULE OF EVENTS

NOV. 17, 2026 | PMU BALLROOMS

9:00AM-10:00AM	Poster Session 1
10:30AM-11:30AM	Poster Session 2
12:00PM-1:00PM	Poster Session 3
1:30PM-2:30PM	Poster Session 4

NOV. 18, 2026 | STEWART CENTER

9:00AM-4:00PM	Talks, 214 & 218
10:30AM-11:30AM	AM Final Call, 278
1:30PM-2:30PM	PM Final Call, 278

NOV. 16-20, 2026 | ONLINE

View virtual talks at **purdue.edu/undergrad-research/conferences/fall**

SCAN FOR ABSTRACT BOOK

SAVE THESE DATES:

April 12-16, 2027: Spring Conference
April 28, 2027: Student Showcase in Indy
July 29, 2027: Summer Symposium
Nov. 15-19, 2027: Fall Expo

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