



THE UNIVERSITY OF TENNESSEE  
**Oak Ridge Innovation Institute**

**2025 Second Annual Research Symposium**

March 25, 2025

**Location: University of Tennessee Conference Center, 600 Henley Street, Knoxville, TN 37902**

**AGENDA**

9:00 AM – 9:20 AM

**Welcome & Opening Remarks**

*UT-ORII progress, funding for FY 2024, convergent research initiatives*

David Sholl, UT-ORII Executive Director & UT Knoxville Vice Provost

Shawn Campagna, UT-ORII Director of Scientific Programs & Science Alliance

**Clean Manufacturing & Advanced Materials**

9:20 AM – 9:40 AM

**Prototyping Quantum Magnets for Spintronic Application**

Yishu Wang, Assistant Professor, Materials Science and Engineering; StART awardee

9:40 AM – 9:50 AM

**Bredesen Center - 1st Energy Science & Engineering (ESE) Student Presentation**

9:50 AM – 10:10 AM

**Engineering Quantum Interfaces and Phase Transitions for Next-Generation Quantum Microelectronics**

Joon Sue Lee, Assistant Professor, Physics; StART awardee

10:10 AM – 10:20AM

**Bredesen Center - 2nd ESE Student Presentation**

10:20 AM-10:40 AM

**Engineering Transport Pathways in Nanostructured Electrolytes**

Gila Stein, Professor, Chemical and Biomolecular Engineering; StART awardee

10:40 AM – 10:50AM

**Bredesen Center - 3rd ESE Student Presentation**

10:50 AM – 11:00 AM

**Break**

## **Radiopharmaceutical & Health-Related Research**

11:00 AM – 11:20 AM

### **Special Presentation: Ion Beam**

Khalid Hattar, Director of the Tennessee Ion Beam Materials Lab; Associate Professor, Department of Nuclear Engineering; STaRT awardee

11:20 AM – 11:30 AM

### **Bredesen Center - 1st Genome Science & Technology (GST) Student Presentation**

11:30 AM -11:50 AM

### **Microbial Cascades from Animal Decomposition Hot Spots in Sphagnum Bogs**

Hannah Noel, Grad Research Assistant, Microbiology for Jennifer DeBruyn, Professor, Biosystems Engineering and Soil Science; StART awardee

11:50 AM – 12:00 PM

### **Bredesen Center - 2nd GST Student Presentation**

12:00 PM – 12:20 PM

### **Diagnosing Neuroendocrine Tumors with Radiopharmaceuticals**

Ivis Chaple Gore's Graduate Student

12:20 PM – 12:30 PM

### **Bredesen Center - 3rd GST Student Presentation**

12:30 PM – 1:45 PM

**Student Poster Session** – Conference Center atrium

**Lunch** – Conference Center

## **Transportation, Energy Storage & Other Energy-Related Research**

1:45 PM – 2:05 PM

### **Optimizing Switches and Distributed Generation Placement for Enhanced Power System Resilience**

Hugh Medal, Assistant Professor, Industrial and Systems Engineering; StART awardee

2:05 PM – 2:15 PM

### **Bredesen Center - 1st Data Science & Engineering (DSE) Student Presentation**

2:15 PM – 2:35 PM

### **Enhancing the Security of Connected and Automated Vehicle (CAV) Ecosystem**

Doowon Kim, Assistant Professor, Electrical Engineering and Computer Science; StART awardee

2:35 PM – 2:45 PM

**Bredesen Center - 2nd DSE Student Presentation**

2:45 PM – 3:05 PM

**Quantum Computing in Cybersecurity and Cyber-Physical Systems**

Himanshu Thapliyal, Associate Professor, Electrical Engineering and Computer Science; StART awardee

3:05 PM – 3:15 PM

**Bredesen Center - 3rd DSE Student Presentation**

3:10 PM – 3:30 PM

**Flexible Turbine for Efficient Wave Energy Harvesting**

Haochen Li, Assistant Professor, Civil and Environmental Engineer; StART awardee

3:30 PM-3:50 PM

**Storage and Conversion at ORNL and UT (SCOUT)**

Tom Zawodzinski, Governor's Chair, Chemical and Biomolecular Engineering; PACT awardee

3:50 PM – 4:00 PM

**Wrap-Up**

4:00 PM

***Thank You for Attending the UT-ORII's Second Annual Research Symposium***