

**THURSDAY, NOVEMBER 17, 2022**  
**RESEARCH, INNOVATION & STRATEGIC PARTNERSHIPS COMMITTEE MEETING**

Lewis Von Thær, chair  
Reginald A. Wilkinson, vice chair  
Alexander R. Fischer  
Tanner R. Hunt  
Phillip Popovich  
Hiroyuki Fujita (*ex officio*)

Location: Sanders Grand Lounge, Longaberger Alumni House  
2200 Olentangy River Rd, Columbus, Ohio 43210

Time: 10:30am-12:00pm

**Public Session**

*ITEMS FOR DISCUSSION*

1. *Committee Chair's Remarks – Mr. Lou Von Thær* 10:30-10:35am
2. *Highlights of New Research, Innovation and Knowledge Achievements:  
Year-in-Review – Dr. Grace Wang* 10:35-10:55am
3. *Interdisciplinary Research Facility and Energy Advancement & Innovation Center  
Update – Dr. Peter Mohler* 10:55-11:05am

*ITEM FOR ACTION*

4. Approval of August 2022 Committee Meeting Minutes – Mr. Lou Von Thær 11:05-11:10am

**Executive Session**

11:10am-12:00pm



# Research, Innovation and Strategic Partnerships Committee



# Research, Innovation and Knowledge - Year in Review

Grace Wang, Executive Vice President

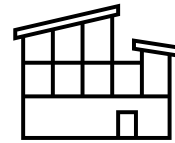


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# Strategic Priorities for the Enterprise



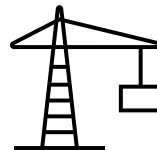
Enable Curiosity-Driven Discoveries and Creative Expression



Build Large-Scale, Interdisciplinary Research and Centers



Nurture Innovation and Entrepreneurship



Design and Develop Carmenton



# Delivering Impact



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# Strong Focus on Supporting Faculty

**43**

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**President's Research  
Excellence**

Projects Awarded To-Date

## **BiG Collaborations**

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Building Innovative Interdisciplinary Groups and Collaborations

Engage faculty across the entire university and help develop and nurture interdisciplinary teams



# Technology Commercialization Milestones

**363**

**Total Invention  
Disclosures Filed**

Fiscal Year 2022

**331**

**U.S. Patents  
Filed**

Fiscal Year 2022

**1,743**

**Contracts  
Executed**

Fiscal Year 2022

# Entrepreneurship Milestones

**95**

**Operational Ohio  
State Startups**

End of Fiscal Year 2022

**\$1.01 B**

**Total Private Capital  
Raised**

Since 2010

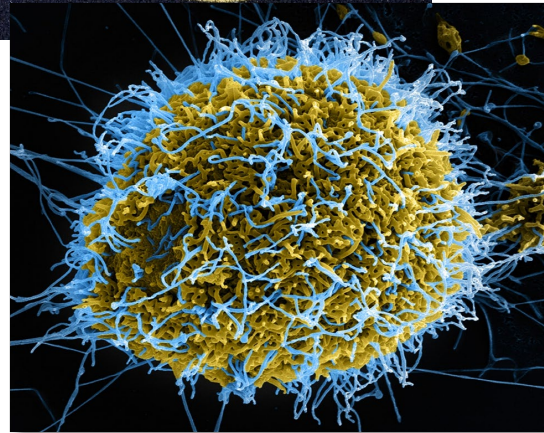
**11**

**New Startups  
Launched**

Fiscal Year 2022



# Changing the world through impactful research



# Inspiring the world through creative inquiry



# **Growing Large-Scale, Interdisciplinary Efforts in Strategic Areas**



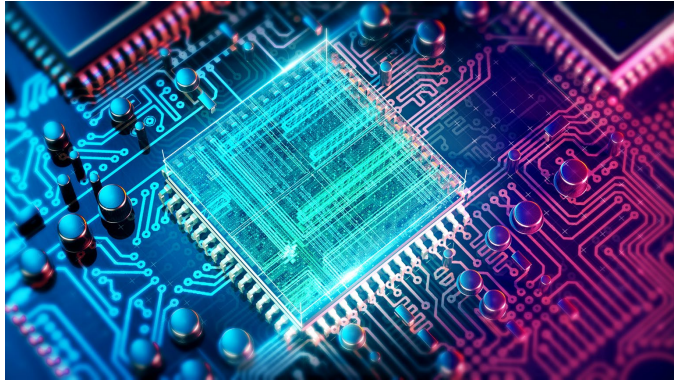


# Advanced Computing and Communication



THE OHIO STATE UNIVERSITY

ENTERPRISE FOR RESEARCH, INNOVATION  
AND KNOWLEDGE



**Center for Quantum Information  
Science and Engineering  
Established**



**\$15 million NSF Grant for  
Ohio State Imageomics  
Institute**

**\$20 million NSF Grant for AI Institute  
for Intelligent Cyberinfrastructure  
with Computational Learning in the  
Environment (ICICLE)**

**\$20 million NSF Grant for AI  
Institute for Future Edge Networks  
and Distributed Intelligence  
(AI-EDGE)**



# Smart and Sustainable Systems





**Up to \$52 Million from NSF to Enable Hybrid Autonomous Manufacturing**



**\$4.2 Million U.S. DOE Grant to Transform the Way Communities Use Energy**



**\$18 Million Funding for Watershed Project in Northwest Ohio**



**\$26.5 Million Funding from FTA for Bus Testing Facilities**



# Life Science Frontiers



**THE OHIO STATE UNIVERSITY**  
ENTERPRISE FOR RESEARCH, INNOVATION  
AND KNOWLEDGE



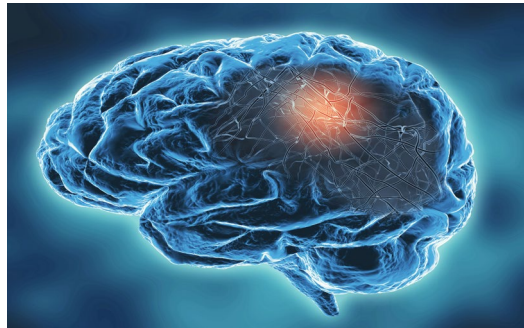


**\$17 Million NIH grant to establish  
Center for Maternal and Pediatric  
Drug Research**



**Gene  
Therapy  
Institute**

**\$14.6 Million NIH award to  
accelerate gene therapy research  
for rare disorder**



**NeuroTech Institute Powered by  
Battelle-Ohio State Partnership**



**Funded by NASA, Ohio State is lead  
academic partner to develop low-earth  
orbit space station and Ag/Bio  
research pipeline**



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# Building Strategic Partnerships

- **AgTech Innovation Hub** - Nationwide-Ohio State
- **Terrestrial Analog Facility** - Voyager/Nanoracks, Ohio State, JobsOhio and One Columbus partnership
- **Center for Advanced Semiconductor Fabrication Research and Education** - Intel-Ohio State partnership
- **Midwest Semiconductor Network** - 19 Multistate Academic Members





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# Carmenton

Historic partnership with the City of Columbus to develop the innovation district

STEAMM Rising partnership with Columbus City School District and Columbus State Community College



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# Looking to the Future...

- Build on the momentum and grow in key strategic research areas
- Continue to nurture a campus-wide culture of innovation and entrepreneurship
- Deliver sustained, measurable outcomes

# **Interdisciplinary Research Facility and Energy Advancement and Innovation Center Update**

Peter Mohler

Vice President, Research



# Objectives for IRF and EAIC



- Accelerate interdisciplinary research
- Create efficient portal for external relationships
- Expand space to grow research portfolio
- House advanced technologies
- Create facilities that can rapidly evolve with science

The **Interdisciplinary Research Facility** will catalyze convergence research in life sciences and biomedical engineering while providing new opportunities for the community and industry to engage Ohio State researchers.



INTERDISCIPLINARY RESEARCH FACILITY

# Interdisciplinary Research Facility: Opening in June 2023





# Interdisciplinary Research Facility – By the Numbers

**305,000**

Square Feet

**18**

Research  
Neighborhoods

**150**

New Faculty  
Labs

**10**

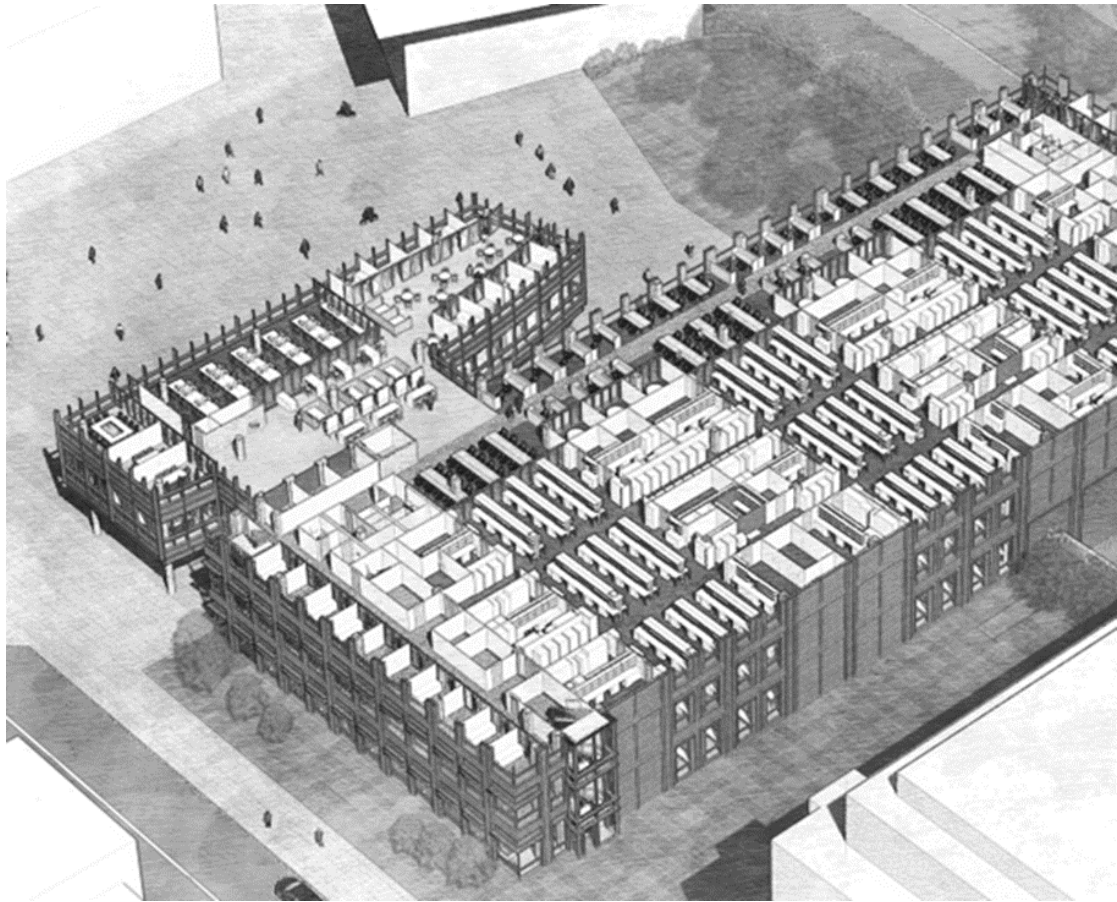
New Core Labs

**May 2023**

Opening



# What makes the IRF different?



- Community 'neighborhoods' versus separate, individual labs
- Computational and wet labs in same building and on same floor
- Program density
- Focus on lab spaces not offices
- Advanced features, including vibration sensitivity, floor to ceiling height, power and IT
- Ability to evolve with science
- Connection with outside community
- Neighborhoods are solution based, not department or college-based.



# Impact on attracting top talent



Evans Hall Lab



IRF Lab

# IRF Neighborhoods

Immuno-oncology

Gene Therapy

Aging

Alzheimer's disease

Cancer Engineering

Artificial Intelligence

Microbiome

Cardiopulmonary disease

Social and Environmental Determinants of Health

RNA Biology and Advanced Therapeutics

Neuro-engineering

Food Systems and Health

Addiction/Behavioral Health

Sensory Biology



The Energy  
Advancement and  
Innovation Center  
will focus on artificial  
intelligence and  
machine learning  
research as well as  
smart and  
sustainable systems  
research.



ENERGY ADVANCEMENT AND INNOVATION CENTER

# EAIC – By the Numbers

**66,200**

Square Feet

**15**

Research Labs

**2**

Floors for  
industry partners  
(6 suites)

**2**

New Core Labs

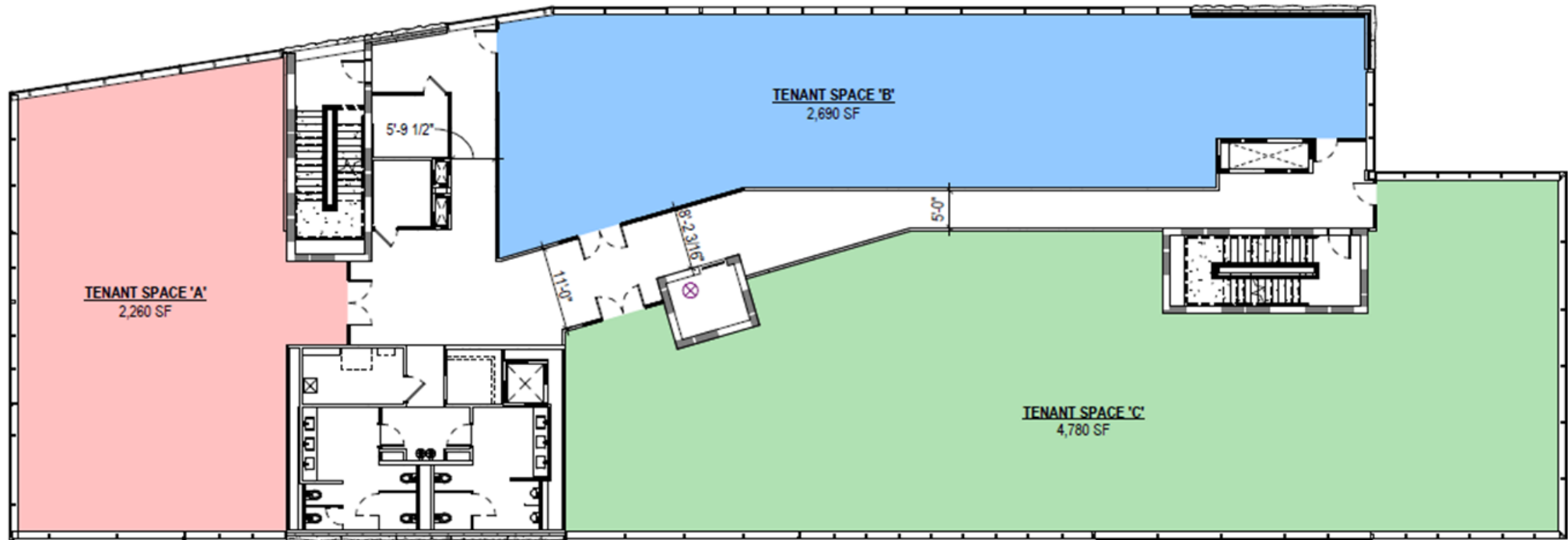
**250**

Seat auditorium, 50  
seat seminar room,  
Café and Food Service

**Oct. 2023**

Opening

# Two Floors for Industry Partners



# Energy Advancement and Innovation Center: Opening in October 2023







**SUMMARY OF ACTIONS TAKEN**

*August 18, 2022 – Research, Innovation & Strategic Partnerships Committee*

**Members Present:**

Lewis Von Thaeer  
Reginald A. Wilkinson

Alexander R. Fischer  
Tanner R. Hunt

Hiroyuki Fujita (ex officio)

**Members Present via Zoom:**

N/A

**Members Absent:**

Phillip Popovich

The Research, Innovation & Strategic Partnerships Committee of The Ohio State University Board of Trustees convened on Thursday, August 18, 2022, in person at Longaberger Alumni House on the Columbus campus. Committee Chair Lewis Von Thaeer called the meeting to order at 1:00 p.m.

**PUBLIC SESSION**

***Items for Discussion***

1. **Committee Chair’s Remarks:** Mr. Von Thaeer kicked off the meeting by thanking for Dr. Wilkinson for agreeing to serve as the committee’s new vice chair. He also welcomed Mr. Hunt as the committee’s new student member. Mr. Von Thaeer continued by congratulating President Kristina Johnson and Dr. Grace Wang, Executive Vice President for Research, Innovation and Knowledge, on the major announcement that the National Science Foundation had awarded funding for a multi-institutional engineering research center that Ohio State is leading. The Hybrid Autonomous Manufacturing, Moving from Evolution to Revolution – or HAMMER – will change the way manufacturing is done in the future by building on Ohio State’s strengths in advanced manufacturing, artificial intelligence, robotics and sensors.
2. **Highlights of New Research, Innovation and Knowledge Achievements:** Dr. Wang, Executive Vice President for Research, Innovation and Knowledge, shared highlights from across Ohio State related to four strategic priority areas: 1) Enable Curiosity-Driven Discoveries and Creative Expression; 2) Build Large-Scale, Interdisciplinary Research and Innovation Centers; 3) Design and Develop the Innovation District; and 4) Nurture Innovation and Entrepreneurship. She discussed research related to the diversity of RNA viral species in the Arctic and also disaster mitigation efforts for specific populations. She also discussed the new HAMMER engineering research center and the announcement of the Midwest Semiconductor Network. Next steps include developing a governance structure for the new semiconductor network, which is currently made up of twelve institutions – Ohio State, Purdue University, University of Dayton, Michigan State University, Case Western Reserve University, Lorain County Community College, University of Notre Dame, University of Michigan, Sinclair Community College, Wright State University, Columbus State Community College and University of Cincinnati.

(See Attachment X for background information, page number XX)



3. Recognition and Conversation with select group of the President's Buckeye Accelerator Winners: Cheryl Turnbull, Senior Director of the Keenan Center for Entrepreneurship, gave an update on the President's Buckeye Accelerator program. More than 100 students representing approximately 35 teams participated in a six-week-long, pre-accelerator "Boost Camp" designed to help prepare them for the pitch finale. Each team worked with a world-class startup mentor who provided guidance. At the end of the camp, the teams delivered their pitches to a panel of judges, and 10 ventures were selected to present at the pitch finale. At the conclusion of the pitch finale, six ventures were ultimately selected as the first cohort of the President's Buckeye Accelerator. Students from three of those ventures – Adithya Ramaswami, Garrett Carder and Anjali Prabhakaran – shared their progress and information about their ventures.

(See Attachment X for background information, page number XX)

#### ***Items for Action***

4. Approval of Minutes: No changes were requested to the May 18, 2022, meeting minutes; therefore, a formal vote was not required, and the minutes were considered approved.

#### **EXECUTIVE SESSION**

It was moved by Mr. Von Thaer, and seconded by Dr. Wilkinson, that the committee recess into executive session to consider business-sensitive trade secrets required to be kept confidential by federal and state statutes, and to consult with legal counsel regarding pending or imminent litigation.

A roll call vote was taken, and the committee voted to go into executive session with the following members present and voting: Mr. Von Thaer, Dr. Wilkinson, Mr. Fischer, Mr. Hunt and Dr. Fujita.

The committee entered executive session at 1:35 p.m. and the meeting adjourned at 2:38 p.m.