AI and Robotics at Oregon State University:
Collaborative Robotics and Intelligent Systems (CoRIS) Institute

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Oregon State University

Robotics and AI at Oregon State University: Vision

Create robotics and AI solutions with positive impact on society

Science
Technology
Education
Economics
Ethics
Policy
Law

Robots and AI in everyday life

Oceans
Forests
Hospitals
Homes
Roads
Farms
Coasts
Schools
Warehouses

Oregon State University

Robotics and AI at OSU : What enables our Vision
What's our competitive advantage?

200+ Graduate Students
- Robotics (~100)
- AI (~100)

1000+ Undergraduates

Unencumbered by the past:
Envision robotics and AI of 2030, not 2000

Dynamic, world class faculty

Talented, bright students

Strong "consumer" base:
oceanography, forestry, ag sci.

45+ Faculty
- Robotics
- Artificial Intelligence
- Cybersecurity
- Sensors

25+ Faculty
- Oceanography
- Forestry
- Ag Science
- Veterinary Med
- Engineering

Oregon State
University

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Collaborative OSU culture

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CoRIS Institute: Study Full Impact of Technology

Collaborative Robotics and Intelligent Systems (CoRIS) Institute

Research

Education

Societal Impact

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CoRIS Institute: Research

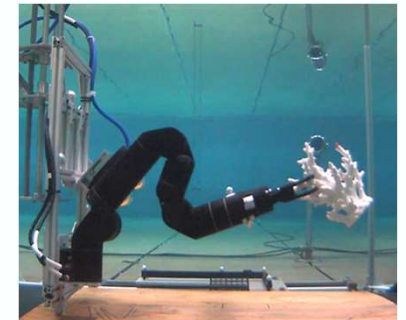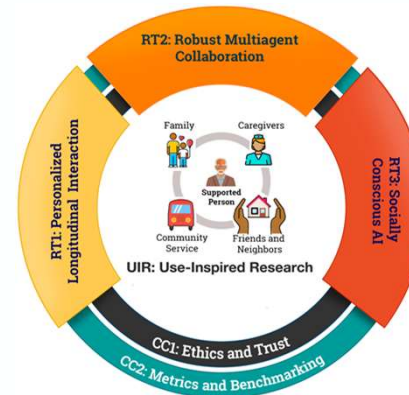**Collaborative Robotics and Intelligent Systems (CoRIS) Institute**

Research

NSF AI Institute: AgAID (Washington State, Lead) 2021-2026

NSF AI Institute: AI-Caring (Georgia Tech, Lead) 2021-2026

ONR: Underwater autonomy & manipulation (2019-2026)

DARPA: Explainable AI (Oregon State, Lead) 2017-2023

RT2: Robust Multiagent Collaboration

Family   Caregivers

RT1: Personalized Longitudinal Interaction

Supported Person

RT3: Socially Conscious AI

Community Service   Friends and Neighbors

UIR: Use-Inspired Research

CC1: Ethics and Trust

CC2: Metrics and Benchmarking

CoRIS Institute: Education

Collaborative Robotics and Intelligent Systems (CoRIS) Institute

Education

NSF site for Robotics: Research Experiences for Undergraduates (REU) 2014-now: ~200 students

Robotics Club: 400+ students
AI club: 180+ students

(1st place International Mars Rover Competition)

~100 undergrad researchers

Capstone in AI & Robotics

3rd Robotics PhD program in US (2014)

400-500 applications

1st Artificial Intelligence PhD program in US (2021)

300-400 applications

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CoRIS Institute: Societal Impact

Collaborative Robotics and Intelligent Systems (CoRIS) Institute

Impact: Robots without Borders: NSF project on deploying robots for treating Ebola

Ethics: AI-CARING NSF Institute: Double fiduciary duty of AI systems in extended elder care

Regulation: Inform FAA on integrating UAS to national airspace

Education: Introduce "Robotics and Society" course into curriculum

Policy: Sponsor and organizer for "National Robotics Roadmap 2.0"

Law: Theory of Fault for Autonomous Systems (in Scholarly Commons Boston School of Law)

Societal Impact

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Robotics and AI at Oregon State University

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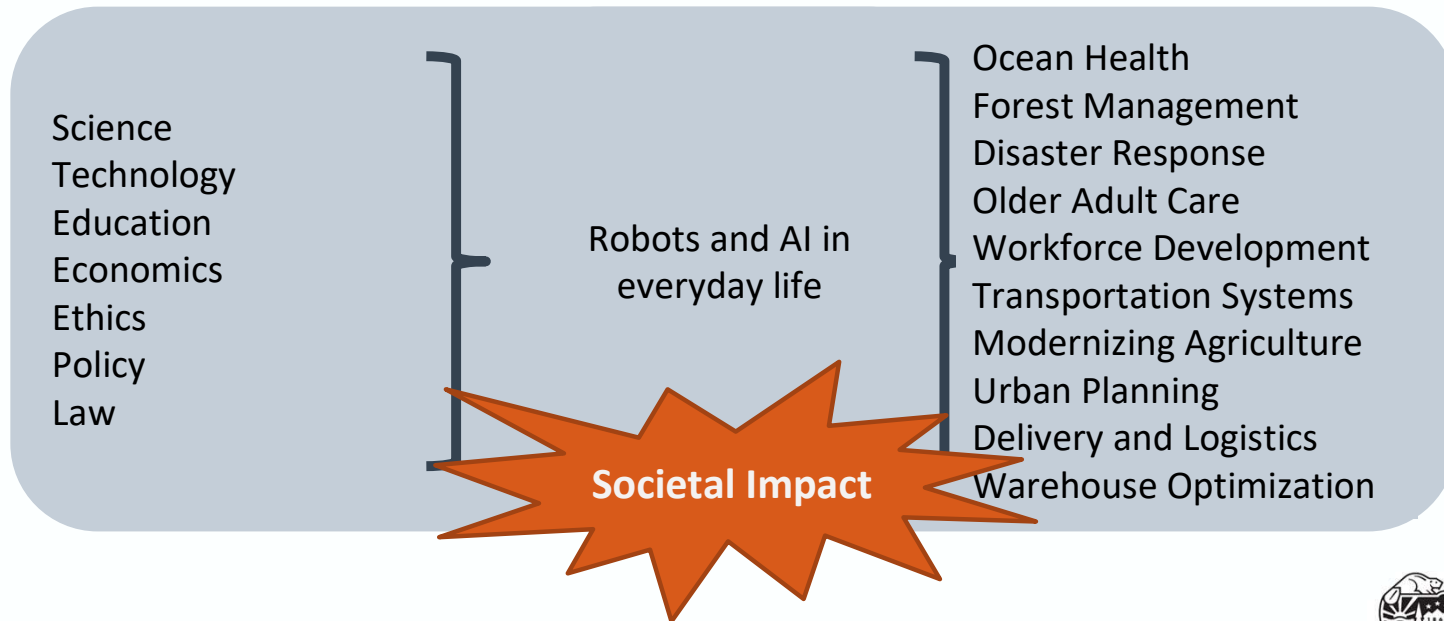
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Robots and AI in everyday life

Ocean Health
Forest Management
Disaster Response
Older Adult Care
Workforce Development
Transportation Systems
Modernizing Agriculture
Urban Planning
Delivery and Logistics
Warehouse Optimization

Societal Impact
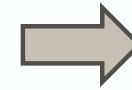
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Robotics and AI at Oregon State University: Next Steps

Jen-Hsun and Lori Huang Collaborative Innovation Complex (to open 2025)

Thanks to a donation from Jen-Hsun and Lori Huang, OSU will be home to the fastest supercomputers on the west coast

University of Florida received a similar gift from NVIDIA

Strong partnership between University and state of Florida

Tremendous opportunity for partnership in Oregon to increase support for AI, robotics, and semiconductor industries.

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GLOBAL FUTURES FORUM

SAVE THE DATE

April 12, 2024

Global Futures Forum: Artificial Intelligence

Join us for the inaugural Global Futures Forum and celebrate the program launch of the Jen-Hsun and Lori Huang Collaborative Innovation Complex.

The Forum will include a conversation with Jen-Hsun Huang,

Founder and CEO of NVIDIA, and OSU President Jayathi Y. Murthy.

For more information, please contact OSU.Provost@oregonstate.edu or visit this

site: https://leadership.oregonstate.edu/provost/global-futures-forum.

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OSU AI/Robotics Research Partners