Christopher Ninatanta

Mechanically Intelligent Autonomous Robotics Laboratory (MIAR Labs)
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Education

AUG 2023 – Present
Ph.D. in Mechanical Engineering
Washington State University
Advisor: Dr. Ming Luo
Expected: May 2029

AUG 2019 – MAY 2023
B.S. in Mechanical Engineering
Washington State University

AUG 2016 – JUNE 2019
A.A. Direct Transfer Agreement
Yakima Valley College

Research Experience

AUG 2023 – Present
Graduate Research Assistant
Mechanically Intelligent Autonomous Robotics Lab

OCT 2022 – MAY 2023
Undergraduate Research Assistant
Mechanically Intelligent Autonomous Robotics Lab

JAN 2022 – MAY 2022
Undergraduate Research Assistant
Autonomous Microrobotic Systems Laboratory

Teaching Experience

MAR- 2024
WSU Pullman School of Mechanical and Materials Engineering
Mechanical Engineering – Lecturer
Taught face-to-face
Organized class lectures, proctored exams, and designed assignments.

Publications

Journal Articles

1. J. Allen, R. Dorosh, **C. Ninatanta**, A. Allen, L. Shui, K. Yoshida, J. Luo, M. Luo, "Modeling and Experimental Verification of a Continuous Curvature-Based Soft Growing Manipulator," in IEEE Robotics and Automation Letters, vol. 9, no. 4, pp. 3594-3600, April 2024

Conference Articles (Peer-Reviewed)

1. **C. Ninatanta** et al., "Design and Evaluation of a Lightweight Soft Electrical Apple Harvesting Gripper," 2024 IEEE 7th International Conference on Soft Robotics (RoboSoft), San Diego, CA, USA, 2024, pp. 479-484

2. Ryan Dorosh, Justin Allen, Zixuan He, **Christopher Ninatanta**, Jack Coleman, Jack Spieker, Ethan Tuck, Jordan Kurtz, Qin Zhang, Matthew D. Whiting, Jiecai Luo, Manoj Karkee, and Ming Luo, "Design, Modeling, and Control of a Low-Cost and Rapid Response Soft-Growing Manipulator for Orchard Operations", IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), (2023).

Abstracts

1. **Christopher Ninatanta**, Justin Pilgrim, Ryan Dorosh, and Ming Luo, "Design of a Lightweight Soft Electrical Apple Harvesting Gripper", IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), (2023).
2. Justin Allen, Ryan Dorosh, **Chris Ninatanta**, Lyndell Martin, Ming Luo, "System Identification of a Continuous Curvature-based Kinematic Model of a Soft Growing Manipulator", IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), (2023).

Presentations

MAY 2025 | **Enhancing Orchard Robotics Through Human-Teleoperated Systems with Haptic Feedback**
NSF-NRT LEAD Research Symposium, Washington State University, 2025, Pullman, WA

MAY 2025 | **Feeling the Future: User Reactions to Haptic Devices**
NSF-NRT LEAD Research Symposium, Washington State University, 2025, Pullman, WA

MAY 2024 | **Design and Evaluation of a Lightweight Soft Electrical Apple Harvesting Gripper**
NSF-NRT LEAD Research Symposium, Washington State University, 2024, Pullman, WA

APR 2024 | **Design and Evaluation of a Lightweight Soft Electrical Apple Harvesting Gripper**
International Conference on Soft Robotics (RoboSoft), 2024, San Diego, CA

OCT 2023 | **Design of a Lightweight Soft Electrical Apple Harvesting Gripper**
International Conference on Intelligent Robots and Systems (IROS), 2023, Detroit, MI

OCT 2022 | **Low-cost Reliable Soft Arm for Automated Tree Fruit Harvesting**
MME Research Symposium, *Washington State University, 2022, Pullman, WA*

Scholarships and Fellowships

JUL 2025 | **Robert F. Boehm Endowed Scholarship in Mechanical and Materials Engineering**
Scholarship awarded in recognition to outstanding achievements as a Mechanical and Material Science Engineering student; $4,000

NOV 2024 | **Homer J Dana Memorial Fund Scholarship**
Scholarship awarded to students in recognition of their outstanding achievements as mechanical and Material Science Engineering Student; $1,000

OCT 2024 | **Harold P. Curtis Scholarship**
Scholarship awarded to graduate students supporting bright, inquisitive minds in their pursuit of education; $2,500

AUG 2024 | **NSF NRT - Leadership, Entrepreneurship, and Adaptive Design Fellowship**
One-year fellowship providing tuition and stipend for students pursuing cutting edge technical innovation and training; $32,000

APR 2024	**RoboSoft 2024 Full Travel Grant for Under-Represented Groups** *Aimed to support PhD students who have not been to RoboSoft, particularly from countries institutes and demographics not typically represented at RoboSoft; $1,500*
AUG 2016	**College Bound scholarship** *Awarded to low-income students with aspirations and determination to pursue higher education; $1,500*

Mentoring

MAY 2025 – JUL 2025	**Yukta Karki** *University of Louisiana Monroe, Undergraduate Student on NSF Cyber Physical Systems*
JAN 2024 – MAY 2025	**Carlos Trejo** *Washington State University, Undergraduate Student on Soft Gripper*
AUG 2021 – MAY 2022	**Eduardo Mata** *Washington State University, Undergraduate Student*

Outreach and Service

JUN 2016 – Present	**First Robotics Competition Mentor, Wapato High School** *Guided high school students in robotics design, programming, and teamwork for competitions*
JUN 2016 – Present	**Wapato Robotics and Engineering Club Mentor, Wapato High School** *Organized projects and guided members in robotics and engineering design and innovation*
AUG 2021 – MAY 2022	**Peer Mentor, Washington State University** *Supported peers with academic guidance, skill development, and personal growth*

Interview and Press

JAN 2025	AI Comes to the Apple Orchard — From Pollinating to Picking
OCT 2024	Robotic Gripper Could Offer A Helping Hand In The Apple Orchard – Washington State University's *Here We Go* marketing campaign
AUG 2024	Hawaii News Now, *This Hawaii-born researcher is putting robots to work to help state's agriculture industry*
JUN 2024	The Lewiston Tribune, *Could robotics lend a hand in agriculture*
JUN 2024	WSU Insider, *Robotic gripper for automated apple picking developed*
NOV 2023	WSU Insider, *Grant aims for smarter harvesting*
JUL 2015	Capital Press, *Wapato students seek support for NASA apple project*
MAY 2014	Heritage University Newsletter, *Apples in orbit students help NASA in HUNCH program*