

# BENJAMIN T. WALT

5 Transportation Building ★ 104 S. Matthews Ave. ★ Urbana, IL 61801  
walt@illinois.edu

## EDUCATION

---

**University of Illinois Urbana-Champaign**  
Ph.D. Student  
Department of Mechanical Engineering

*August 2020 - Present*  
*Advisor: Girish Krishnan*

**University of Illinois Urbana-Champaign**  
Masters of Science  
Department of Mechanical Engineering

*January 2018 - August 2020*  
*Advisor: Girish Krishnan*

**University of Illinois Urbana-Champaign**  
Bachelors of Science  
Department of Mathematics  
Minor in East Asian Languages and Cultures  
Member of Pi Mu Epsilon

*January 2004 - May 2007*

## WORK EXPERIENCE

---

**University of Illinois**  
*Research Assistant*

December 2020 - Present

- Research Assistant in the Monolithic Systems Lab.
- Built and maintained a hybrid soft-rigid agricultural robot research platform.
- Conducted research in soft manipulator control
- Conducted research in grasp stability and slip detection

**University of Illinois**  
*Teaching Assistant*

August 2018 - December 2020

- Teaching Assistant for ECE 470: Introduction to Robotics.
- Topics taught include: Rigid body motions, Forward and Inverse Kinematics, Velocity Kinematics, MDPs, Bayes Filters, Particle Filters

**Interac**  
*Assistant English Teacher*

April 2012 - March 2015

- Taught English and cultural lessons in a public junior high school and elementary school.
- Developed lesson material.

**Utsunomiya Board of Education**  
*Assistant English Teacher*

April 2010 - March 2011

- Created and taught English and cultural lessons in a public junior high school and elementary school as part of a teaching team.
- Developed lesson material.

**Heart English School**  
*Assistant English Teacher*

April 2009 - March 2010

- Created and taught English and cultural lessons in a public junior high school.
- Developed lesson material.

**Aeon Corporation**

February 2008 - February 2009

*English Conversation Teacher*

- Taught conversational English to adults and high school age children.

**U.S. Navy**

January 2002 - July 2003

*Leading Engineering Laboratory Technician*

- Supervised and trained a 7 person division in the daily chemistry and radiological operations on board a nuclear submarine. Trained sailors at the divisional, departmental and ship wide levels in a classroom setting.
- Analyzed the results of laboratory work and coordinated corrective actions.
- Successfully led the division through 3 major external assessments of operational knowledge.
- Developed, executed and assessed a training plan that resulted in an increase from an 'average' to an 'above-average' rating by external assessment.

**U.S. Navy**

July 1999 - January 2002

*Engineering Laboratory Technician*

- Conducted, as part of a team, the daily chemistry and radiological operations on board a nuclear submarine.
- Performed precise laboratory analysis and maintained detailed records of all results.
- Trained groups of 30 at the divisional and departmental levels in a classroom setting.
- Promoted to Leading Engineering Laboratory Technician.

**U.S. Navy**

July 1997 - July 1999

*Mechanical Operator in Training*

- Completed 2 years of intensive theoretical and practical training in the operation and maintenance of Naval nuclear reactors

**PUBLICATIONS**

---

1. N. K. Uppalapati, **B. T. Walt**, A. Havens, A. Mahdian, G. Chowdhary, and G. Krishnan, "A Berry Picking Robot With A Hybrid Soft-Rigid Arm: Design and Task Space Control," in *Robotics: Science and Systems Foundation*, 2020.
2. S. K. Kamtikar, S. Marri, **B. T. Walt**, N. K. Uppalapati, G. Krishnan, and G. Chowdhary, "Visual Servoing for Pose Control of Soft Continuum Arm in a Structured Environment," in *IEEE Robotics and Automation Letters*, 2022.