**JASSIM O. ALHAMID, Ph.D.**

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**EDUCATION**

**Washington State University,** Richland, WA 2016 – May 2020

Ph.D. Mechanical Engineering GPA: 3.6/4.00

**University of Technology,** Iraq 1994 - 1999

Bachelor of Mechanical Engineering (Material Engineering) GPA: 3.7/4.00

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# PROFESSIONAL EXPERIENCE

**Washington State University**, Richland, WA

**Postdoctoral Research Associate** May 2020 – Present

* WSU-PNNL, Robotic Air-slot Volumetric Inspection System **RAVIS** project conduct analytical and computational.
* Conduct analytical and computational research in the area heat trasnfer, vibration, energy harvesing, roboting, polymers, nanomaterials.

**Washington State University**, Richland, WA

**Graduate Research Assistant** May 2016 – May 2020

* Supported research on the modeling/simulation of dynamic systems, Heat Transfer, including piezoelectric energy harvesters, Ultrasound Piezoelectric Power Transfer System for Medical Implants, vibration, Polymers, NanoMaterial, Developing research proposals for piezoelectric energy harvesters, vibration and aanalysis and Design of an Auxiliary Catching Arm for an Apple Picking Robot
* MATLAB code, C++ development.
* Heat Transfer Numerical Analysis using Computational fluid dynamics (CFD) ANSYS
* Ultrasound Piezoelectric Power Transfer System for Medical Implants Numerical Analysis using Comsol.
* Teaching the following courses
* ME 449 Mechanical Vibration
* ME 405 Thermal Systems Design
* ME 401 Mechatronics
* ME 305 Thermal and Fluids Laboratory
* ME 301 Fundamentals of Thermodynamics

**Washington State University**, Richland, WA

**Teacher Assistant** Jun. 2014 - May 2016

* Assisted with the followings classes and mentor undergraduate and graduate students
* ME 436 Combustion Engines
* ME 449 Mechanical Vibration
* ME 405 Thermal Systems Design
* ME 305 Thermal and Fluids Laboratory
* ME 401 Mechatronics ( Raspberry Pi, Arduino, robotics, electrical circuit)
* ME 461 Intro to Nuclear Engineering
* ME 313 Engineering Analysis
* ME 301 Fundamentals of Thermodynamics
* ME 514 Thermodynamics of Solids
* In charge of supervising lab sessions, assisting students with data analysis and report writing, and grading lab reports
* Rewrote course lab manual to improve clarity, streamline time spent in lab, and correct theoretical and procedural errors
* Implemented web-based pre-lab training to familiarize students with lab equipment before coming to lab

**Al Dar International Company (Badra Oil Field),** Middle East

Project Manager Dec. 2010 - Jan. 2014

* Managed the resources of multiple projects, oversee design engineering, planning, coordinated all site construction activities and supervised all field personnel as required until completed the project on schedule.

**Tetra- Tech. LLC,** US project in the Middle East

Design Engineer Dec. 2008 - Aug. 2010

* Possessing a comprehensive knowledge of designing and developing projects to required specifications, quality, and sustainability. At present working for an established company that is involved in construction and maintenance projects.

**Versar –VIAP US Air force,** Mosul airbase

QA (Quality Assurance) Engineer Dec. 2005 - Aug. 2008

* Reviewing quality specifications and technical design documents to provide timely and meaningful feedback. Creating detailed, comprehensive, and well-structured test plans and test cases. Estimating, prioritizing, planning and coordinating quality testing activities.

**CERTIFICATION, HONORS, AND AWARDS**

* HDPE Pipe Welding Training and Certification PETRONAS 2012.
* AutoCAD 2012 Associated Certification.
* Letter of Recommendation from Tetra-Tech US Construction Company.
* Letter of Recommendation from USA-AFCEE-VERSAR.
* Construction Management Basics course (LiveMeeting).AFCEE-Versar 2007.
* ACI-code certification (ACI FWT/FWF Course Material). AFCEE-Versar 2007.
* Certificate of OSHA - Construction Industry Training Program. AFCEE-Versar 2007.
* ACI-code certification (concrete field testing). AFCEE-Versar 2006.
* Certificate of Appreciation from Tetra-Tech US Construction Company.
* Construction Quality Control Engineer. Parsons US 2006.
* Basic construction Safety and Health Training. Parsons 2005.
* Basic construction Safety and Health Training. Tetra Tech EC. 2005.
* Auto-Cad (2D, 3D) Certificate. University of technology, 2004.
* Mechanical equipment and maintenance. Batteries Company in the ministry of industrial 2002.
* Windows and computer maintenance. University of technology, 2002.
* Member of the Iraqi Union of Engineering.
* Graduate Assistant Teaching Workshop WSU 2017

# SERVICE ACTIVITIES

* Hosted multiple Science, Technology, Engineering, & Math (STEM) events, including robotics and programming workshops, for middle and high school students in the Tri-Cities, WA

# PROFESSIONAL AFFILIATIONS

* American Society of Mechanical Engineers (ASME), Member ID: 101982489
* Institute of Electrical and Electronics Engineers (IEEE), Member ID: 95481944
* Project Management Institute (PMI), Member ID: [6301210](https://my.pmi.org/profile/membership)

# SKILLS

* Programming Languages: C++
* Software: Solidworks, AutoCAD, Matlab, ANSYS, COMSOL, LabVIEW, Arduino, RStudio, OpenCV and Microsoft Office
* Other: Project management PM

# RELATED COURSEWORK

* Fundamentals of Fluids, Advanced Topics in Mechanical Engineering, Applied Mathematics, Introduction to Nuclear Engineering, Advanced Dynamics, Control Systems. Nuclear Reactor Engineering, Mechatronics, Continuum Mechanics, Thermal Systems Design, Finite Elements, and Numerical Analysis & Modeling

# PUBLICATIONS

### **Journal Articles:**

* **Alhamid,** J., Mo, C., Zhang, X., Wang, P., Whiting, M., and Zhang, Q. (2018). Cellulose nanocrystals reduce cold damage to reproductive buds in fruit crops. Biosystems Engineering Journal, 172: 124-133.

### **Chapter in Book**

* **Chapter 3**: Mohammed, A., Miller, J., **Alhamid**, J., & Mo, C. (2020). Attenuation of Hand-Transmitted Vibration Application on Weed Wacker. In Challenges in Mechanics of Time-Dependent Materials, Fracture, Fatigue, Failure and Damage Evolution, Volume 2 (pp. 17-20). Springer, Cham. 2019 Annual Conference on Experimental and Applied Mechanics

### **Articles Submitted to Journals:**

* **Alhamid**, J., Arnoldussen, B., Mo, C., Zhang, X., Wang, P., Whiting, M., and Zhang, Q. Plant-based dispersions show promise for protecting tree fruit buds from cold damage (to appear) ASABE, 2020.
* **Alhamid**, J., Mo, C.,Numerical Analysis of Cellulose Nanocrystals CNC for reducing cold damage to reproductive buds in fruit crops (to appear) Thermal Science and Engineering Progress journal 2020

**Refereed Conference and Workshop Publications:**

* **Alhamid**, J., Arnoldussen, B., Mo, C., Zhang, X., Wang, P., Zhang, Q., and Whiting, M. (2018). Cellulose Nanocrystals reduce cold damage to reproductive buds in fruit crops. 11th International Plant Cold Hardiness Seminar (IPCHS): Importance of Cold Hardiness in a Warming Climate; 5-10 August; Univ. of Wisconsin-Madison. Madison, WI.
* Mohammed, A., Miller, J., **Alhamid**, J., & Mo, C. (2020). Attenuation of Hand-Transmitted Vibration Application on Weed Wacker. In Challenges in Mechanics of Time-Dependent Materials, Fracture, Fatigue, Failure and Damage Evolution, Volume 2 (pp. 17-20). Springer, Cham. 2019 Annual Conference on Experimental and Applied Mechanics
* Ahmed, A**, Alhamid**, J., (2020). Numerical Investigation of Fluid Flow, Characteristics of Thermal Performance and Enhancement of Heat Transfer of Corrugated Pipes with Various Geometrical Configurations (Submitted to TMAE 2020 - 2nd International Conference on Trends in Mechanical and Aerospace (TMAE 2020)

### **Abstracts, Posters, and Other Publications:**

* **Alhamid,** J., Mo, C., Zhang, X., Wang, P., Whiting, M., and Zhang, Q. (2018). Cellulose nanocrystals (CNC) for preventing cold damage in tree fruit and grapes, Washington State University SHOWCASE 2018; Pullman, WA.
* **Alhamid,** J., Arnoldussen, B., Mo, C., Zhang, X., Wang, P., Whiting, M., and Zhang, Q. (2019). Cellulose nanocrystals create Thermal Barrier to reduce Cold Damage in Tree Fruits, Ag Tech Day, Washington State University, Irrigated Agriculture Research and Extension Center (WSU Prosser IAREC).
* **Alhamid,** J., Arnoldussen, B., Mo, C., Zhang, X., Wang, P., Whiting, M., and Zhang, Q. (2020). Cellulose nanocrystal dispersions protect reproductive buds of tree fruit from cold damage by forming a thermal barrier Washington State University SHOWCASE 2020; Pullman, WA.
* **Alhamid**, J., Arnoldussen, B., Mo, C., Zhang, X., Wang, P., Zhang, Q., and Whiting, Cellulose nanocrystals reduce cold damage to reproductive buds 114TH Annual Meeting & North West Horticulture  Exposition Yakima, Washington December 4th, 2018
* **Alhamid**, J., Mo, C., Zhang, X., Wang, P., Whiting, M., and Zhang, Q. Understanding the Thermal [Behavior of CNC Treated and Non-Treated Buds using Differential Scanning Calorimetry](https://www.sciencedirect.com/science/article/pii/S0011224005001616) (DSC) ( under review)
* **Alhamid**, J., Arnoldussen, B., Mo, C., Zhang, X., Wang, P., Zhang, Q. Freeze and frost protection methods in plants and tree fruit crops: A Review (under review)
* **Alhamid**, J. Mo, C. Cellulose Nanocrystals (CNC) Dispersion for Improved Cold-hardiness, ME 598 Seminar Presentation, WSU-Tricities February 28,2020
* Mohammed, A., **Alhamid**, J., Miller, J., & Mo, C. (2020) Ultrasound Piezoelectric Power Transfer System for Medical Implants (under review)
* Michael A. Mo, C. **Alhamid**, J. (2020) Analysis and Design of an Auxiliary Catching Arm for an Apple Picking Robot (under review)

# References

**Dr. Changki Mo**

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Engineering Washington State University, Tri-Cities

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