

Curriculum Vitae  
Jeongmoon (Josh) Park

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EDUCATION

**Doctor of Philosophy**

Texas A&M University - College Station

- Mechanical Engineering (2018)
- Dissertation: Characterization of Fluids and Thermal Performance of Tab-Induced Counter-Rotating Vortex Pairs on Surface Cooling

**Master of Science in Aeronautical and Astronautical Engineering (MSAAE)**

Purdue University - West Lafayette

- Aeronautical and Astronautical Engineering (2013)
- Thesis: Development of Vortex Pair Fuel Mixers for Aerospace Applications

**Bachelor of Science**

Korea Aerospace University

- Aerospace Engineering (2011)
- Capstone Project: Solar Powered Unmanned Aerial Vehicle (UAV)

EXPERIENCES

**Assistant Professor**

Arkansas State University (Aug. 2021 – Present)

- Teaching courses: Fluid Mechanics, Heat Transfer, Thermodynamics 1 & 2
- Expertise areas: Turbulent flow, Heat transfer, Thermodynamics
- Research applications: Cold plate heat exchangers (NSF, NASA), Dry-cooling heat exchangers (U.S. Army Corps of Eng.), Transverse Jets

Hanyang University International Summer Camp (July 2022, South Korea)

- Teaching courses: Fluid Mechanics, Heat Transfer

Mount Vernon Nazarene University (Aug. 2018 – May. 2021)

- Teaching courses: Fluid Mechanics, Heat Transfer, Thermodynamics, Dynamics, Statics, Strength of Materials, Computer Aided Design

**Research Intern**

Seoul National University (Micro-Thermal System Research Center, 2010 – 2011)

- Research: Round jet impingement on a cylinder rod using Particle Image Velocimetry (PIV)

University of Maryland - College Park (Microfluidics Research Laboratory, 2009 – 2010)

- Research: Discharge coefficient at the carburetor intake of miniature engines

**Air Mechanic**

The Republic of Korea Air Force Academy (2004 – 2006)

- Flight viability inspection for T-41 Cessna and T-130 Ilyushin
- Management of aircraft parts and supplies

PROFESSIONAL  
LICENSE

**Engineer Intern (EI)**

- The State Board of Registration for Professional Engineers and Surveyors of the State of Ohio, License#: EI.12323

**Professional Engineer (PE)**

- The State Board of Registration for Professional Engineers and Surveyors of the State of Arkansas, License#: 21669

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SKILLS	Infrared (IR) Thermography Analysis, Particle Image Velocimetry (PIV) Analysis, Flow Visualization, 7-Hole Pressure Probe Analysis, NI data acquisition systems (DAQ) and LabVIEW, ANSYS FLUENT, Tecplot, CATIA, Autodesk Inventor, Fortran, MATLAB
PUBLICATIONS	<p>Jeongmoon Park, Jorge L. Alvarado, Leonardo P. Chamorro, Scott Lux, and Charles P. Marsh, 2022, "Characterization of the Flow and Surface Temperature Around Multiple Vortex Generators." <i>Journal of Fluids Engineering</i> 144(9):091301 DOI: 10.1115/1.4054049</p> <p>Jorge Alvarado, Jeongmoon Park, Leonardo P. Chamorro, and Charles Marsh, 2020, "Surface Cooling Effects of a Counter Rotating Vortex Pair Induced by Vortex Generators," <i>Bulletin of the American Physical Society</i></p> <p>Jeongmoon Park, 2018, "Characterization of Fluids and Thermal Performance of Tab-Induced Counter-Rotating Vortex Pairs on Surface Cooling" Doctoral dissertation, Texas A&amp;M University – College Station</p> <p>Jeongmoon Park, Jorge Alvarado, Leonardo P. Chamorro, and Charles Marsh, 2018, "Experimental Investigation of Tab-Induced Counter-Rotating Vortex Pair for Mixing and Heat Transfer Applications," <i>The 3rd Thermal and Fluids Engineering Conference</i>, March 4-7. DOI: 10.1615/TFEC2018.hte.021621</p> <p>Jeongmoon Park, Jorge Alvarado, Leonardo P. Chamorro, and Charles Marsh, 2018, "Effects by Multiple Trapezoidal Vortex Generators on Flow and Surface Cooling," <i>The 16th International Heat Transfer Conference</i>, August 10-15, DOI: 10.1615/IHTC16.cov.022270</p> <p>Jeongmoon Park, Axy Pagan-Vazquez, Jorge Alvarado, Leonardo P. Chamorro, Scott Lux, and Charles Marsh, 2016, "Characterization of Tab-Induced Counter-Rotating Vortex Pair for Mixing Applications." <i>Journal of Fluids Engineering</i>, 139(3), DOI: 10.1115/1.4034864</p> <p>Jeongmoon Park, Axy Pagan-Vazquez, Jorge Alvarado, Leonardo P. Chamorro, Scott Lux, and Charles Marsh, 2016, "Experimental and Numerical Visualization of Counter Rotating Vortices." <i>Journal of Heat Transfer</i> 138(8), DOI: 10.1115/1.4033825</p> <p>Jeongmoon Park, Axy Pagan-Vazquez, Jorge Alvarado, Leonardo P. Chamorro, Scott Lux, and Charles Marsh, 2014, "Characterization of counter-rotating vortices past trapezoidal tabs: simulations and visualization via 3D digitized reconstruction." <i>Bulletin of the American Physical Society</i> 59</p> <p>Jeongmoon Park, Stephen D. Heister, and John Sullivan, 2013, "Development of a counter rotating vortex pair (CVP) mixer for aerospace applications." MSAA Dissertation, School of Aeronautics and Astronautics, Purdue University – West Lafayette.</p> <p>Jeongmoon Park, Stephen D. Heister, John Sullivan, "Development of Counter Rotating Vortex Pair (CVP) Mixer for Aerospace Applications." <i>49th AIAA/ASME/SAE/ASEE Joint Propulsion Conference</i>, 2013, 10.2514/6.2013-3832</p> <ul style="list-style-type: none"> <li>• Copyright for the CVP mixer design (U.S.): Jeongmoon Park, 2014, "Development of a Counter Rotating Vortex Pair (CVP) Mixer for Aerospace Applications", Registration No. TX 6-767-948, Effective since May 26, 2014.</li> </ul>
GRANTS	<p>National Science Foundation (2022, External, PI)</p> <p>NASA Research Infrastructure Development Special Award (2022, External, PI)</p> <p>Arkansas NASA Research Infrastructure Development (2022, External, Co-PI)</p> <p>Faculty Research Award (2021, Internal)</p> <p>Innovation in Education Grant (2020, Internal)</p>

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