

Research Interests

Mechatronics Systems, Medical Instrumentation, High performance Devices, Machine and Mechanisms Design, Faithful System Modeling, Controls Engineering

Education

4.00/4.00	M.S., Mechanical Engineering, University of Michigan, Ann Arbor MI Departmental Master's Fellowships	2013-Present
3.95/4.00	B.S., Mechanical Engineering, The University of Texas at El Paso, El Paso TX UTEP Top 10 Senior, Outstanding Mechanical Engineer Senior, Top 5 Engineering Graduate, Honors Degree, Summa Cum Laude	2008 -2013

Current Projects

Robotic Instrument Tracking Endo-illuminator for Intraocular Surgeries
Diaphragm Flexure Design applied to Novel Moving Magnet Actuators
Enhancing the Gasoline Fuel Injection System

Publications

Pownuk, R. Pinon "Monotonicity of the solution of the interval equations in structural mechanics", UTEP Research Article No. 2009-01, El Paso, TX

Funded Research Grants

Electro-Mechanical Prosthetic Hand for Low Resource settings \$4,000
1st place award – UTEP Office of research initiatives

Research Experience

Measurement, Instrumentation, Controls and Automation (MICA) Cubes Massachusetts Institute of Technology Bioinstrumentation Laboratory	May 2012
Novel Method for Determining Ball Joint Center of Rotation via IMUs University of Michigan Vibrations and Acoustics Laboratory	Jun 2011
Performance of Enhanced Fused Deposition Model Fabricated Parts with Metallic Inserts The University of Texas at El Paso W.M. Keck Center for 3D Innovation	Jan 2012

Honors and Awards (Selected)

Mechanical Engineering Departmental Fellowship	Aug 2013
Top 10 Senior	May 2013
Outstanding Engineering student of the year – Rotary Club El Paso	July 2013
Outstanding Mechanical Engineering Senior – UTEP Mechanical Engineer	May 2013
Who's Who Among American Colleges and Universities Award	Dec 2013
Outstanding International Undergraduate Student Award	May 2012
Leadership 10 Honorary	2011, 2012
Huston Endowed Scholar	2010 - 2013
No. 1 College of Engineering Student at UTEP	May 2013
Texas Society of Professional Engineers Award for Leadership	Jan 2010
UTEP Presidential Scholarship	2009 - 2012
XEROX Outstanding STEM Undergraduate	2008 - 2012