

Objective To obtain a position at a University that puts students learning first and provides ample opportunities to mentor undergraduates.

Education

Masters in Applied Mathematics (2021)

GPA: 3.73

Arizona State University

Tempe, Arizona, United States

M.S.E., Aerospace Engineering (2011)

Arizona State University

Tempe, Arizona, United States

Plan of study GPA 3.87

Masters Committee: Marc Mignolet, Marcus Hermann, Kangping Chen

Masters Culminating Event: "*Development of a Three Dimensional Multi-block Hydrodynamic Solver*"**B.S., Aerospace Engineering (2006)**

Arizona State University

Tempe, Arizona, United States

GPA 3.71

Minors: Philosophy

Certificate Program: International Business

Undergraduate Honors Advisor: Dr. Pavlos Mikellides

Undergraduate Honors Thesis: "*Numerical Simulation of a MW-Class Self Field Magnetoplasma dynamic Thruster using MACH 2 Code,*"

Teaching Experience

In total : 190 Courses Taught Across All Schools in 15 years**Fall 2014 – Spring 2025 (Instructor Rank attained December 24')****Arizona State University****Instructor, Honors Faculty**

Course Prefix | Number | Name | Times Taught (In Person / Online)

Courses Taught: 63 in person, 50 online

MAT 210 – Brief Calculus (4 / 4)

MAT 211 – Math for Business Analysis (2 / 0)

MAT 242 – Elementary Linear Algebra (8 / 14)

MAT 251 – Calculus for Life Sciences (2 / 0)

MAT 265 – Calculus for Engineers I (6 / 9)

MAT 266 – Calculus for Engineers II (8 / 5)

MAT 267 – Calculus for Engineers III (17 / 9)

MAT 270 – Calculus with Analytic geometry I (2 / 0)

MAT 271 – Calculus with Analytic Geometry II (3 / 0)

MAT 275 – Modern Differential Equations (12 / 8)

2012 – 2018 Maricopa Community College District

*Estrella Mountain (EMCC), Chandler Gilbert (CGCC)
Paradise Valley (PVCC), South Mountain (SMCC)*

Courses Taught: 24 Labs Taught: 9 (Course / Lab)

ECE 102 – Engineering Analysis Tools and Techniques (4)
ECE 103 – Engineering Problem Solving and Design (3)
PHY 101 – Introduction to Physics (3/3)
PHY 121 – University Physics I (2/5)
PHY 131 – University Physics II (1/1)
MAT 142 – College Mathematics (1)
MAT 151 – College Algebra/Functions (1)
MAT 182 – Plane Trigonometry (1)
MAT 213 – Brief Calculus (2)
MAT 221 – Calculus with Analytic Geometry I (1)
MAT 231 – Calculus with Analytic Geometry II (2)
MAT 241 – Calculus with Analytic Geometry III (1)
MAT 276 – Modern Differential Equations (2)

March 2010 – September 2014 ITT Technical Institute

Courses Taught: 44 Course Number Course Name (Times Taught)

GE 127 College Math 1 (2)	GE 192 College Math 2 (3)
GE 253 Physics (1)	MA3110 Statistics (1)
ET 215 Electronic Devices I (1)	ET 245 Electronic Devices II (1)
ET 255 Digital Electronics I (5)	ET 285 Digital Electronics II (7)
ET 345 Control Systems (6)	ET 355 Microprocessors (4)
ET156 Introduction to C Programming (5)	MA3310 Calculus I-II (1)
ET 365 Computer and Electronics Capstone Project (2)	
NT1210 Introduction to Networking (2)	TB143 Intro to Personal Computers (3)

2004 – 2008 Arizona State University*Grading:*

Thermodynamics	Fall 2006, Spring 2007
Rocket Propulsion	Fall 2007
Aerodynamics	Fall 2005

Teaching Assistantship:

Gas Dynamics	Fall 2006
Mechanical Engineering Lab	Spring 2007

Research Assistantship:

Undergraduate 2004 – 2006

Analyzed results of various MHD simulations and made performance predictions

Graduate 2006 – 2008

Worked towards implementing additional physics models for the Hall Effect and Ion Slip terms of Ohms Law within the MACH 2 code

Additional
Experience

STEM Summer Boot Camp at PVCC

Sophomore 2014

Junior 2013 & 2014

Developed curriculum for Engineering Portion and presented for Science and Physics

STEM - Joaquin Bustoz Math-Science Honors Program (ASU)

Calculus with Analytical Geometry II - Summer 2015

Calculus with Analytical Geometry II - Summer 2016

Taught an extended course for a summers honors program for high school students from underrepresented population demographics

2001 – 2010 General Tutoring

Mesa Community College 2001 – 2002

A+ Math Tutoring 2002

ASU Disability Resource Center 2003 – 2006

ASU Engineering Tutoring Center 2004 – 2006

Private Tutoring 2006 – 2010

Professional Projects

Web Page

www.TheEnglandUniversity.com

Maintain lectures, examples, for all the courses I teach

Software Proficiency

Analysis : Labview, Ansys, SolidWorks, Tecplot, Paraview, Inventor

Programming : C, C#, C++, Java, Matlab, Fortran, HTML

Typesetting: Latex, CSS

Research Interests

Numerical Modeling and Computational Physics

Laminar and Turbulent Fluid Mechanics

Electricity and Magnetism and Plasma Physics

Applied PDE's

Meta data analysis and Optimization

Publications:

“Numerical Simulation of a MW-Class Self Field Magnetoplasma dynamic Thruster using MACH 2 Code,” B. England and P.G. Mikellides, *IEPC paper 2005-2006*, Presented at the 29th International Electric Propulsion Conference, -Princeton University, N.J. Nov. 2005.

“Modeling of Plasma Thrusters”, Mikellides, P.G.; Ratnayake, N, England, B. The 33rd IEEE International Conference on Plasma Science, 2006.

“Energy Deposition via Magnetoplasmdynamic Acceleration”, *Pavlos G. Mikellides; Brian England; James H. Gillant, Proceedings of the 2006 International Congress on advances in Nuclear Power Plants, “ ICAPP06 2006*

“Energy Deposition via Magnetoplasmdynamic Acceleration, Part II: Modeling and Performance Predictions,” *Pavlos G. Mikellides and Brian England, Plasma Sources Science and Technology.*

Affiliations

Sigma Gamma Tau

Professional

American Institute of Aeronautics and Astronautics

Societies

American Mathematical Society

Society for Industrial and Applied Mathematics