

CONTACT INFORMATION

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EDUCATION

2014	Ph.D.	Mechanical Engineering	University of Florida	Dissertation Title: <i>Fundamental Computation of Molecular Flux in Knudsen-Regime Nanopores</i>
2013	M.S.	Mechanical Engineering	University of Florida	
2010	B.S.	Physics	Minnesota State University	<i>Summa Cum Laude</i>
2010	B.A.	Mathematics	Minnesota State University	<i>Summa Cum Laude</i>

TEACHING

2021 – present	Florida Gulf Coast University	Visiting Faculty	EGM3420C Engineering Mechanics BCN2405C Construction Mechanics EGS1006L Introduction to the Engineering Profession
2019 – 2021	Florida Gulf Coast University	Visiting Instructor	PHY2048 Physics with Calculus 1 PHY2049 Physics with Calculus 2 PHY2053 College Physics 1 PHY2054 College Physics 2
2015 – 2018	Santa Fe College	Adjunct Professor	PHY2004 Applied Physics 1 PHY2048 Physics with Calculus 1 PHY2049 Physics with Calculus 2 PHY2053 College Physics 1 PHY2054 College Physics 2
2014	University of Florida	Recitation Instructor	EGM3353 Fluid Mechanics
2010 – 2014	University of Florida	Teaching Assistant	EGM2511 Engineering Statics EML5515 Gas Turbines and Jet Engines EML4304 Thermodynamics & Fluid Mechanics Lab
2008 – 2010	Minnesota State University	Tutor	MATH127 College Algebra
2009	Minnesota State University	Teaching Assistant	AST104 Introduction to Astronomy

RESEARCH

Publications

2020	Journal of Applied Physics	<i>Theoretical Study of Fast Diffusion in Carbon Nanotubes</i>
2019	Physical Review E	<i>Statistical Method for Modeling Knudsen Diffusion in Nanopores</i>

Grant Awards

2019	Florida Gulf Coast University	Student Associates for a Greener Environment	\$600
2018	Santa Fe College	Sustainability Curriculum Grant	\$2300
2018	Santa Fe College	Natural Sciences Department Grant	\$1300
2017	Santa Fe College	Sustainability Curriculum Grant	\$1800
2009	Minnesota State University	Dille Foundation Research Grant	\$1000

Conference Presentations

2018	Southeast Society of the American Physical Society	<i>Modeling Diffusion in Gaseous Nanopores</i>
2018	Southeast Theoretical Chemistry Association	<i>Anomalous Knudsen Diffusion in Silicate Membranes</i>
2018	Transportation Research Board Annual Meeting	<i>Mobile Retroreflectivity Unit – Optimized Data Processing</i>
2013	Florida Energy Summit	<i>Ultra-Compact Portable Power: Direct Methanol Fuel Cell Open-Cathode System</i>
2010	National High Magnetic Field Laboratory	<i>Heat Transfer in Helium-Injected Liquid Nitrogen</i>
2010	Minnesota State University	<i>Temperature Control for NMR Spectroscopy</i>
2009	Minnesota State University	<i>Atomic Force Microscopy</i>

Laboratory Experience

2015 – 2017	Florida Department of Transportation	Research Assistant	LabVIEW programming MATLAB data analysis Algorithm development
2010 – 2014	University of Florida	Research Assistant	MATLAB modeling Graduate research
2010	National High Magnetic Field Lab	Research Assistant	Experimental methods of heat transfer LabVIEW programming
2009	Wright-Patterson Air Force Research Lab	Research Assistant	MATLAB data analysis MATLAB image processing
2008 – 2010	Minnesota State University	Research Assistant	Perl programming

Other Written Work

2020	Lunar and Planetary Science Conference	<i>Preliminary Experiments to Constrain the Effect of Cl on the Activity of NiO in Silicate Melts Using Diffusion Profiles of Ni into Pt Wire Loops</i>
2018	Journal of Membrane Science	<i>Estimating Knudsen and Surface Diffusivity in Nanopores</i>
2016	Final Report to the Florida DOT	<i>Optimized Mobile Retroreflectivity Unit Data Processing Algorithms</i>
2015	Journal of Chemical Physics	<i>Fundamental Formulation of Molecular Flux in a Knudsen-Regime Pore</i>

SERVICE

Supervised Student Research

2019 – present	Florida Gulf Coast University	Solar energy	Jesus Ramos ¹ Christopher Frank
2017 – 2019	Santa Fe College	Ion propulsion	Emiliyan Aslanyan

University Business

2019	Staff Advisory Council - Professional Development Program	Florida Gulf Coast University
2019	Adjunct Representative to the College Senate	Santa Fe College
2018 – 2019	Salary and Benefits Committee Member	Santa Fe College

Community Outreach

2020	FGCU Literacy Festival	Florida Gulf Coast University
2018	Buchholz High School summer STEM camp	Santa Fe College
2008	College For Kids summer program	Minnesota State University

¹ Poster presentation of results at the Florida Undergraduate Research Conference 20-21 February 2020 in Fort Myers, FL

MISCELLANEOUS

Awards

2013	Outstanding Poster Award	Plaque award at Florida Energy Summit conference
2010 – 2014	Graduate School Fellowship Award	Premier graduate scholarship offered by the University of Florida
2006 – 2010	Honor's Apprentice Scholarship	Premier undergraduate scholarship offered by Minnesota State University
2009	Junior Mathematics Achievement Award	Scholarship award from the Mathematics Department at Minnesota State University
2007	Hart-Sipson Physics Scholarship	Scholarship award from the Physics Department at Minnesota State University

Certifications

2018	Certificate for Online Development and Instruction	Semester long training program to prepare instructors for the rigor of online teaching. Based on Chickering and Gamson's <i>Seven Principle for Good Practice in Undergraduate Education</i> .
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Community Service

2014	Volunteer	HOPE Worldwide
2011 – 2012	Volunteer	Saint Francis House
2008 – 2010	Youth Leader	Knollbrook Covenant Church
2004 – 2008	Volunteer	Salvation Army