LUCA D. MURG

10449 W. Medill Ave Melrose Park, IL 60164 (773) 939-4897 lmurg2@uic.edu

OBJECTIVE:	A dynamic and focused Nuclear Engineering graduate student, resolved to advance applied science, currently pursuing this objective through the application of accelerated molecular simulations		
EDUCATION:	University of Illinois at Urbana Champaign The Grainger College of Engineering Doctoral student in Nuclear Engineering	August 2022-Present	
	University of Illinois at Chicago (UIC) College of Mechanical Engineering Honors College	August 2018-May 2022	
	• Bachelor of Science in Mechanical Engineering GPA 4.00/4.00; Graduation expected May 2022		
EXPERIENCE:	IUC, ZLab August 2022-Present Graduate Student under Doctor Yang Zhang (University of Michigan) • • Creating and analyzing molecular dynamic simulations		
	UIC Micro/Nanoscale Fluid Transport Laboratory <i>Research Employee under Doctor Megaridis (UIC)</i>	August 2021-May 2022	
	 Investigate the condensation on wettability-patterned surfaces in the absence of non-condensable gases within the large subject of multiphase heat transfer applications Investigated droplet impact on non-uniform wettability surfaces specifically working on a model that can predict droplet spreading behavior depending on the impact Weber number and the wettability of the two regions (as characterized by the respective advancing contact angles). 		
	UIC. Senior Design	August 2021-May 2022	
	igineering Team Leader, Assignment: Math, Coding supervised by Doctor Komperda (UIC)		
	• Researched uses of light to model charged oil's topography when sprayed on a surface		
	• Created Matlab codes to evaluate grid pattern imaging on t distortions and mapping of the liquid's topography utilizing	he micron scale for g iso parametric equations	
	Sloan, Franklin Park, ILJune 2021-August 2021Design Intern supervised by Jon Demczewski (Lead Engineer in Experiments and Design Dep.)•Researched on pressure compensated flow control devices•Created Python codes to analyze the data		
	• Prepared continuity equations for the mathematical modeling of the system		
	Spicy Products, Inc, Niles, IL Product and Price Analyst	June 2020-August 2020	
	 Used mathematical analysis to study pricing trends Besearched methods for improving the company profits 		
	Researched methods for improving the company profits		
	Argonne National Laboratory, Lemont, IL Nuclear Waste Intern supervised by Cindy Rock (Division Director)	June 2019 - August 2019	

	Researched radiation containment			
	Assisted in the storing of the lab's nuclear material			
	Implemented new standards for lab nuclear waste			
	 Reconfigured data storage 			
PROJECTS:				
	Created MATLAB code with COOL Prop add-in to systematically analyze potential			
	pressure and temperature for a combined Brayton & Rankine Cycle to maximize			
	system efficiency			
	Robotic Arm			
	• Designed and constructed a robotic arm for an intervarsity competition Dynamic Systems Control Projects			
	• Modeled multiple mechanical, electrical, fluid, and thermal systems as well as analyzed and designed the feedback control systems using analytical, computer and experimental solution methods and time/frequency domain technique			
AWARDS:	Exelon Scholarship:	2021-		
		22		
	Sargent & Lundy Scholarship:	2021-		
	Chicago Chapter Scholarship (from Alliance of Hazardous Materials Professionals):	22		
	Credit Union 1 Scholarship:	2020- 21		
	Faydor Litvin Scholarship:	2019- 20		
	Olubusayo Awomolo Scholarship:	2019- 20		
SKILLS:	Computer			
	• Python, MATLAB and Simulink, Ansys Finite Element Analysis, C++, Octave			
	SolidWorks, Arduino, 3D Printers, Microsoft Office, CAD			
	Certifications			
	Radiation Worker Level I			
	Proficient in Romanian			
A FEIL LA TIONS.				
AFFILIATIONS.	• Robotics Club at LIIC (2019-2020)			
STRENGTHS.	Leadershin			
STRENGTIS.	• Team Leader for UIC senior design project			
	Church youth group leader - Volunteer work			
	Team leader in Robotics project Organization			
	• Duplicated and archived of 5 million dollars' worth of company information			
	during the Argonne internship Communication			
	Presented for Argonne Seminar the research on shielded containers for nuclear			
	waste			
	• Presented for Sloan Capstone the research on pressure compensated flow			
	control valves			
	Commitment to professionalism			
	Current GPA 4.0/4.00 Encolled in Honore College			
	Emoned in nonors Conege			

REFERENCES:

Yang Zhang (YZ), PhD

University of Michigan Professor Department of Nuclear Engineering & Radiological Sciences Email: yzyz@umich.edu

Constantine M. Megaridis, PhD

UIC Distinguished Professor Director, Micro/Nanoscale Fluid Transport Laboratory Department of Mechanical and Industrial Engineering Email: CMM@uic.edu Jamison Szwalek, PhD Clinical Assistant Professor Department of Mechanical and Industrial Engineering Email: jszwalek@uic.edu

Carmen Lilley, PhD

Associate Professor Department of Mechanical and Industrial Engineering Email: clilley@uic.edu