

Nicholas Sanders

RM-306 Taeknigardur
University of Iceland

777-6108
nbs7@Hi.is

EDUCATION	Master of Science, Theoretical Physics <i>University of Iceland - Nordita Research Insitute</i>	Present
	Bachelor of Science, Physics Spring 2021 <i>California State University Sacramento</i>	May 2021
RESEARCH EXPERIENCE	CSUS - Intrinsic Property of the Luminosity function of Short GRBs: Finding a connection between the mass accretion rate of black holes formed from neutron-star binary mergers and the luminosity of short GRBs. The accretion rate and the luminosity functions are proportional to each other and are both broken power laws suggesting the luminosity of GRBs is intrinsic and influenced by the accretion rate of the black hole formed from the merger event.	
	CSUS - Jet Structure and Radiation of Short Gamma Ray Bursts, 2018: Modeling the structure of the astrophysical jet from short gamma ray bursts and the synchrotron radiation from the afterglow as resulting from the binary neutron star merging event.	
	UC Davis - Encapsulation of Polymerized Actin, 2018: Modeling a living cell in the lab by encapsulating polymerized actin proteins within giant vesicles to study the physics of the membrane of cells and their cytoskeletal structure.	
SKILLS	Scientific Computation and instrumentation: C++, Python, L ^A T _E X Computational modeling, data analysis, and scientific simulation. Electronics and instrumentation, circuit analysis, CNC machining.	
LEADERSHIP ORGANIZATION	Physics Stockroom Assistant January 2018 - May 2020 Organizing and repairing equipment for experiments in lower division lab work.	Tom Scarry CSUS, Sequia Hall, Physics Stockroom
	SPS Officer May 2018 - May 2019 Organizing events, fund raising, weekly meetings, outreach, and facilitating controlled communication between faculty and students. Our SPS chapter is one of the more active chapters in our region and has won Outstanding Chapter for 16 years.	Society of Physics Students Chapter 18 Sacramento
	Volunteer Tutor May 2018 - Present Explaining fundamental physics concepts and problem solving skills.	Physics Department CSUS
Awards	Cal-Bridge Scholarship Fall 2019, Fall 2020 Awarded to students studying physics in a California State University. The scholarship offers students mentorship from UC professors and workshops meant to prepare the scholars for graduate programs and research opportunities.	Physics Department Cal Poly Pomona

	Maxwell Award Fall 2018, Spring 2019 Given to students majoring in physics to award high academic achievements	Physics Department CSUS
	P-SURE Summer 2018 The P-SURE award funds Summer undergraduate research in the CSU Sacramento physics department	Haideh Partovi CSUS
Poster Presentations	Physcon 2019 Fall 2019, 2020 Gamma-ray bursts and neutron star mergers at physics conference in Rhode Island.	Physics and Astronomy Brown University
	NSM Student Research Symposium Fall 2019, 2020 Gamma-ray bursts and neutron star mergers at science conference on campus.	Physics Department CSUS
	CSUPERB Symposium Spring 2019 Encapsulation of polymerized actin and modeling of the living cell.	Physics Department CSUS
	Provost's Student Research Fall 2018 Encapsulation of polymerized actin and modeling of the living cell.	Physics Department CSUS
	NSM Student Research Symposium Spring 2018 Encapsulation of polymerized actin and modeling of the living cell.	Physics Department CSUS
Outreach	Physics Demonstrations Spring 2019 Performed physics demonstrations at Schriners Hospital for Children and families.	Society of Physics Students Schriners Hospital for Children
	Community Perseid Viewing Summer 2018 Performed physics demonstrations at the Folsom Powerhouse Perseid meteor shower viewing for families and students	Society of Physics Students Folsom Powerhouse