

Christopher P. Knowles

CONTACT INFORMATION	cknowles@regis.edu	
EDUCATION INTERESTS	Advanced Level: Physics, Astrophysics, Applied Mathematics, Computational Physics Introductory Level: Geophysics, Space Physics, History, Computer Science	
EDUCATION	Graduate Adult Learning Certificate , Colorado State University	2020
	M.S. Physics , University of Alaska Fairbanks	2018
	B.S. Applied Physics, B.S. Mathematics CSU Channel Islands,	2015
RESEARCH EXPERIENCE	Graduate Research Assistant Topic: Glaciology University of Alaska Fairbanks Advisor: Martin Truffer, Ph.D	2016 - 2018
	Undergraduate Research Assistant Topic: Algebraic Geometry California State University Channel Islands Advisor: Ivona Grzegorzcyk, Ph.D	2013 - 2014
WORK EXPERIENCE	Term Physics Faculty at Regis University <ul style="list-style-type: none">Created course work in an instructional design capacity to conduct physics content to a virtual and in-person format.Facilitating virtual and in-person classes with a focus on inquiry-based learning for kinematic and electrodynamics physics.Highlight real-world problems that will arise within the majority of student degrees through MRI inspection, anatomical kinesiology, and head injury analysis.	2020 - Present
	Online Physics Faculty at CCCOnline <ul style="list-style-type: none">Facilitate online discussions where I focus on converging ideas of learners into cooperative understanding.Incorporate inquiry based learning strategies within discussions, and work to build a motivating learning environment in the online format.Create videos for lecture and feedback to further humanize the online format.	2020-2021
	Physics Adjunct Faculty at UAF <ul style="list-style-type: none">Created and managed all aspects of curriculum for intro physics course designed for students without a mathematical background.Presented methods in class to develop students' analytic approach to problem solving.Focused on peer communication by keeping questions conceptual to engage students who shy away from equations.	2019
	Physics RA at UAF <ul style="list-style-type: none">Worked with Geophysical Institute scientists using finite element analysis for solving nonlinear equations in glacier fluid dynamics.Utilized advisor's time effectively during meetings by refining questions in advance and cutting out irrelevant data for clarity.Translated my research into a public lecture for all levels of experience.Attended seminars weekly to learn more about ongoing scientific research at UAF.	2015 - 2018
	Physics TA at UAF <ul style="list-style-type: none">Proctored physics lab for calculus based physics of 16 students twice a week.	2015 - 2018

- Constructed labs that required more contemplation and exploration from students with supervisor and instructor.
- Volunteered for physics outreach programs at UAF and surrounding schools.

Physics/Mathematics Head Tutor at CSUCI 2012 - 2015

- Tutored Physics, Mathematics, Computer Science, Chemistry, and ESRM.
- Provided mentorship and educational resources to Hispanic communities through outreach programs and events.
- Taught problem-solving strategies to address core student comprehension difficulties.
- Invited feedback during weekly meetings regarding tutoring methods and challenges.

Peer-Led Team Learning – Leader for Calculus based Physics 2013 - 2014

- Organized and ran physics workshops dedicated to practicing a Socratic method of group study/learning.
- Fostered learning by helping develop positive study habits and group study skills.

AWARDS William Lowell Putnam Mathematical Competition 2013
 • 74th Annual Putnam Exam 2013
 CSU Channel Islands
 • Mathematics Program Honors 2015

PRESENTATIONS M.S. Thesis Defense, UAF - Physics Presentation March 26, 2018
 • Interaction of Two Tributary Glacier Branches and Implications for Surge Behavior
 SAGE Conference, CSUCI - International Experience Poster May 9, 2015
 • The Physics Inside a Didgeridoo
 SAGE Conference, CSUCI - Electric Fish Poster May 9, 2015
 • Robotic Mapping Electric Fields in Water
 SCCUR Conference, CSU Fullerton - Algebraic Geometry Poster November 22, 2014
 • Properties of Degree Four Algebraic Surfaces: Dance, Helix, and Miau
 MAA, Pomona College - Algebraic Geometry Presentation November 1, 2014
 • Properties of Degree Four Algebraic Surfaces: Dance, Helix, and Miau
 SAGE Conference, CSUCI - Algebraic Geometry Poster May 11, 2014
 • Properties of the Degree Four Algebraic Surface Helix
 MAA, Concordia University - Algebraic Geometry Poster Apr 12, 2014
 • Properties of the Degree Four Algebraic Surface Helix

AUTHOR M.S. Thesis, UAF
 • Interaction of Two Tributary Glacier Branches and Implications for Surge Behavior

LEADERSHIP TRAINING NOLS Alumni 2018
 • Spent 28 days mountaineering on the Matanuska Glacier in the Chugach mountain range, Alaska.
 • Developed leadership skills and successfully resolved conflict between peers in high stress situations involving objective and subjective hazards.
 • Explored multiple leadership styles and how best to collaborate with others towards collective goals.

REFERENCES Upon Request