

Christian M. Denis

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GOALS

I would like to be part of a stimulating team pursuing physics related goals, and, hopefully, bring my own contribution. I am dedicated and a fast-learner. If given a task, I can work in an autonomous manner as well as in a team. The two things that captivate me the most are: the solving of elegant problems and the execution of creative (possibly artistic) tasks.

EDUCATION

Université de Montréal, Montréal

Physics (M. Sc.)

May 2025

CUM GPA : N/A

McGill University, Montréal

Honours Physics (B. Sc.)

December 2022

CUM GPA : 3.94/4.00

John Abbott College, Ste-Anne de Bellevue

Arts and Sciences (DEC)

May 2019

R-Score : 33.939

SKILLS

Languages (spoken and written): French, English

Computer Skills: Solid programming skills in Julia, Python and Mathematica. Knowledgeable with LaTeX, JavaScript, HTML, CSS and Matlab. Competent with programs such as the Office Suite from Microsoft, GIMP, Pages (Apple) and Overleaf.

Data Analysis: Usage of Python, Julia and other statistical tools to analyze data

Driver's License: Class 5 Permit (Canada)

EXPERIENCE

Université de Montréal: Research Assistant

Winter 2023

Working on modelling nonlinear oscillators in presomitic tissue as a research assistant within Paul François' biophysics group at Université de Montréal.

McGill Physics: Undergraduate Summer Intern

Summer 2022

Internship as research assistant at McGill University within Paul François' theoretical biophysics research group. Studied the topology of the "Arnold Tongue Skeleton" of a set of nonlinear mappings. Also worked on creating a model for an entrained embryonic somite segmentation clock.

McGill Physics: Undergraduate Summer Intern

Summer 2021

Internship as research assistant at McGill University within Paul François' theoretical biophysics research group. Worked on numerical computations for non-linear oscillators and 2D bifurcation diagrams (mainly Arnold Tongues) for variations of the radial isochron clock. This was applied to the modelling of the somite segmentation clock.

Phytronix Technologies: Research Assistant

Summer 2020

Internship as research assistant at Phytronix technologies. Worked on characterization of a FAIMS system. Assisted the R&D department in the development of an automated pipetting robot. Used mass spectrometer to carry out a variety of tests. This involved a lot of Python programming.

Math, Physics and Chemistry Tutor

2018 - Now

Kruger Packaging: Student Worker

Summer 2019

Norsk Hydro: Student Worker

Summer 2018

PUBLICATIONS	Arnold tongue entrainment reveals dynamical principles of the embryonic segmentation clock Layague Sanchez PG, Mochulska V, Mauffette Denis C, Mönke G, Tomita T, Tsuchida-Straeten N, Petersen Y, Sonnen KF, François P, Aulehla A eLife 11:e79575. 2022	
AWARDS AND GRANTS	McGill McGameJam 2023 2nd Position. I mainly worked on audio production for our video game during the event. Access the game here .	
	NSERC USRA Research Award 2022 6 000 \$ grant for undergraduate summer research.	
	SURA - Dixie Park Science Undergraduate Research Award 2021 4 000 \$ grant from donors, for undergraduate summer research.	
	McGill Faculty of Science Scholarship - Dean's Honour List 2020	
	Summer Internship Grant From BioTalent Canada 2020 7 000 \$ grant for undergraduate summer research.	
	2nd Position at John Abbott College at CAP exams 2019	
	Certificat du Mérite en histoire pour résultat scolaire exceptionnel 2017	
	Prix Coup de cœur francophone (song lyrics) 2017	
	Méritas d'excellence au collège Ste-Anne in a variety of classes 2012 - 2017	
	Concours Soliste de Victoriaville (Provincial Music Contest) 2015 Bronze, Clarinet	
	Concours Soliste de Victoriaville (Provincial Music Contest) 2013 Silver, Clarinet	
ACTIVITIES AND INTERESTS	VP Brewing - McGill Brewing Club 2022	
	TVM Admin Position - Music Composer 2022	
	Executive Member of TVM (Student Television at McGill) 2021 - 2022	
	Participant in the 2022 McGill Physics Hackathon 2022	
	Participant in the 2021 McGill Physics Hackathon 2021	
	Participant in the 2020 McGill Physics Hackathon 2020	
	Member of the McGill Visual Arts Society 2020 - 2021	
	Organization of Crater Sketching Workshops 2019	
	VP - John Abbott College Space Club August 2018 - May 2019	
	Music recording and composition 2015 - now Recording and composition of soundtracks and of studio albums.	
	Many Travels More than 40 countries, including a year-long trip around the world (2013-2014). I completed my second year of High-School autonomously.	

DISCOGRAPHY	“Lab Day 23 (feat. Jona Rada & Ali Seleit)” (as Chris Mauden)	2023
	Music single, composed, recorded, produced, mixed, mastered and published	
	“LMP1” (as Chris Mauden)	2022
	Music single, composed, recorded, produced, mixed, mastered and published	
	“The Sunset Experiment” (as Chris Mauden)	2020
	Music EP, composed, recorded, produced, mixed, mastered and published	
	“T.H.E.C.O.R.O.N.A” (as Chris Mauden)	2020
	Music EP, composed, recorded, produced, mixed, mastered and published	
	“Differential” (as Chris Mauden)	2019
	Music Album, composed, recorded, produced, mixed, mastered and published	
FILMOGRAPHY	“Posing in Bondage” (Short)	2023
	Original Music Composer	
	<u>Awarded “Best Student Short” at the Cannes Short Film Festival.</u>	
	“Reminiscence Of The Fading Memories” (Short)	2023
	Original Music Composer	
	“Just A Kid” (Short Documentary)	2022
	Original Music Composer. <u>Link to NFB page.</u>	
	“Love Triangle” (TVM Short)	2022
	Original Music Composer	
	“A Quirky Indie” (TVM Short)	2021
	Original Music Composer, Cameraman, Actor	
	“Bloom” (Short)	2020
	Original Music Composer	
	“Philippe” (Short Documentary)	2018
	Original Music Composer	
	“ShadowChasers 2017: The Great American Total Solar Eclipse”	2018
	Original Music Composer	