

Christian M. Denis
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Location: Montréal, Canada

EDUCATION	Université de Montréal , Montréal <i>Physics</i> (M. Sc.) May 2025	CUM GPA : 4.30/4.30
	McGill University , Montréal <i>Honours Physics</i> (B. Sc.) December 2022	CUM GPA : 3.94/4.00
	John Abbott College , Ste-Anne de Bellevue <i>Arts and Sciences</i> (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. Solid audio-editing and producing skills using Ableton and Reason. 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 in 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 in Paul François' theoretical biophysics research group. Worked on simulations of non-linear oscillators and 2D bifurcation diagrams (mainly Arnold Tongues). 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, using Python. Used mass spectrometry to carry out calibration tests.	
	Math, Physics and Chemistry Tutor	2018 - Now
	Summer Jobs	2016 - 2019
	2019: Kruger Packaging, student factory worker	
	2018: Norsk Hydro, student factory worker	
	2017: McDonald's, Kitchen employee	
	2016: House maintenance work	

PUBLICATIONS **Unclocklike biological oscillators with frequency memory** Mauffette Denis C, François P. (Preprint). <https://arxiv.org/abs/2405.05180v1>

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	<p>FRQNT Graduate Scholarship 2024 20 000 \$ — Québec Provincial Graduate Scholarship — Master’s program.</p> <p>NSERC Graduate Scholarship 2024 27 000 \$ — Canada Graduate Scholarship — Master’s program.</p> <p>BLUE Fellowship 2024 3 000 \$ — McGill University, Building 21.</p> <p>McGill McGameJam 2023 2nd Position. I mainly worked on audio production for our video game during the event. Access the game here.</p> <p>NSERC USRA Research Award 2022 6 000 \$ grant for undergraduate summer research.</p> <p>SURA - Dixie Park Science Undergraduate Research Award 2021 4 000 \$ grant from donors, for undergraduate summer research.</p> <p>Summer Internship Grant From BioTalent Canada 2020 7 000 \$ grant for undergraduate summer research.</p> <p>2nd Position at John Abbott College at CAP exams 2019</p> <p>Certificat du Mérite en histoire pour résultat scolaire exceptionnel 2017</p> <p>Prix Coup de cœur francophone (song lyrics) 2017</p> <p>Concours Soliste de Victoriaville (Provincial Music Contest) 2013-2015 Silver - Clarinet (2013), Bronze - Clarinet (2015)</p>
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ACTIVITIES AND INTERESTS	Home-Brewing (Beer, Kombucha, Wine, etc.)	2022 - now
	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 McGill Physics Hackathon	2020-2022
	2020: Generative artworks using random walks and weather data as seed (link).	
	2021: Sound production of a vibrating membrane with thermal fluctuation (link).	
	2022: Simulation of sharks feeding on a prey (link).	
	Member of the McGill Visual Arts Society	2020 - 2021
	Organization of Crater Sketching Workshops	2019
DISCOGRAPHY	VP - John Abbott College Space Club	August 2018 - May 2019
	Music recording, composition and production	2015 - now
	Many Travels 40+ countries. A year-long trip around the world (2013-2014).	
	“Boxberg” (as Chris Mauden)	2024
	Music EP, composed, recorded, produced, mixed, mastered and published. Link .	
	“Should’ve Stayed Home Tonight” (as Chris Mauden)	2024
	Music EP, composed, recorded, produced, mixed, mastered and published. Link .	
	“Lab Day 23 (feat. Jona Rada & Ali Seleit)” (as Chris Mauden)	2023
	Music single, composed, recorded, produced, mixed, mastered and published. Link .	
	“LMP1” (as Chris Mauden)	2022
	Music single, composed, recorded, produced, mixed, mastered and published. Link .	
	“The Sunset Experiment” (as Chris Mauden)	2020
	Music EP, composed, recorded, produced, mixed, mastered and published. Link .	
	“T.H.E.C.O.R.O.N.A” (as Chris Mauden)	2020
	Music EP, composed, recorded, produced, mixed, mastered and published. Link .	
	“Differential” (as Chris Mauden)	2019
	Music Album, composed, recorded, produced, mixed, mastered and published. Link .	
	“Signals” (as Chris Mauden)	2018
	Music single, composed, recorded, produced, mixed, and mastered. Made using samples of the cosmic microwave background noise. Link .	

FILMOGRAPHY	“I Worry About My Teeth” (Short)	2024
	Original Music Composer, Sound Recordist	
	“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. <u>Link to video.</u>	
	“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
MULTIMEDIA	Original Music Composer. <u>Link to video.</u>	
	“ShadowChasers 2017: The Great American Total Solar Eclipse”	2018
	Original Music Composer	
	“Music from modelling the segmentation clock” (Projection)	2024
	Procedural projections in Touch Designer reactive to music. Music samples from numerical simulations of <u>a model for the entrainment of the segmentation clock</u> . Made in the context of the BLUE fellowship at Building 21 (McGill University).	
	“Raccoon raider & the temple of thrash” (Video Game)	2023
	Original Music Composer and sound designer. Video game project done at the McGameJam 2023 (McGill University). <u>Link to project.</u>	
	“Scène de la mer” (VR)	2022
	Original Music Composer. VR project done at Building 21 (McGill University). <u>Link to project.</u>	