

# PIERRE-OLIVIER PARISÉ

CITIZENSHIP: CANADIAN  
French (native), English (fluent)

University of Hawai'i at Manōa  
Dept. of Mathematics  
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## SKILLS

### Hard skills

- Programming languages (Python, Java,  $\text{\LaTeX}$ , Git, HTML, CSS)
- Mathematics (many areas)
- Object Oriented Programming
- Statistical analysis
- Grant writing

### Soft skills

- Problem-solving
- Effective communication
- Organization
- Integrity
- Willingness to learn

## EDUCATION

- 2021 Doctorate in Mathematics, *Université Laval (Québec City, Canada)*.
- 2017 Master's in Computer Science and Mathematics, *Université du Québec à Trois-Rivières (Trois-Rivières, Canada)*.
- 2015 Bachelor's in Mathematics (Teaching Profile), *Université du Québec à Trois-Rivières*.

## WORK EXPERIENCE

### Teaching experience

- 2021–24 Temporary Assistant Professor, *University of Hawai'i at Manoa*, Current Position.  
Courses taught: Linear Algebra, Complex Analysis, Calculus I, Calculus IV, Probability, Differential equations, Introduction to Real Analysis.

### Supervision of undergraduate research projects

- 2024 *Quentin Charles*. Mathematics major, University of Hawai'i at Mānoa.  
Project: Bicomplex conjugacy classes and fractals.  
Financial support: UROP Entering Research and Creative Work funding.
- 2022-23 *Trey Summers*. Program final project, Marine Option Program, UH at Manoa.  
Main project advisor: Margaret Anne McManus.  
Project: Effects of Tsunamis on Sea Level Along the South Shore of O'ahu, Using Real Time Observations From the Pacific Islands Observing System.

## SOFTWARES

Github <https://github.com/popa13>

### Python Programming

- 2023 *Rational Lemniscates*. <https://github.com/popa13/RationalLemniscates>.
- 2021 *Julia Orbit*. <https://github.com/popa13/Julia-Orbit>.

### Java Programming

- 2017 *3D Mandelbrot-Voyager*. <https://github.com/popa13/3DMandelbrot-Voyager>.

### C# programming

- 2017 *Fractal Image Compression*. <https://github.com/popa13/Fractal-Image-Compression>.

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## COURSE WORK

- 2015 Advanced concepts in applied mathematics and computer science.  
Material: Markov Chains, Principal component analysis, Fourier transform.
- 2015 Data structures and algorithms.  
Material: Main data structures, Searching, Sorting, Recursion algorithms.
- 2014 Introduction to object-oriented programming.  
Material: Class, objects, Encapsulation, Inheritance, Polymorphism, learn Java using Eclipse.

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## SCHOLARSHIPS, AWARDS, AND PRICES

- 2022-2024 *Postdoctoral Scholarship*, National Sciences and Engineering Research Council of Canada.
- 2018 *Governor General's Academic Gold Medal*. Université du Québec à Trois-Rivières.  
Desc.: Awarded to a graduate student who has obtained the best cumulative average in a university (only one is awarded at UQTR).
- 2018 *4-th place out of 20 teams*. Coveo Blitz.  
Desc.: Programming competition at the COVEO company, in Quebec City.

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## PUBLICATIONS

### Top 2

- 2022 J. Mashreghi, P.-O. Parisé, T. Ransford, Power-series methods in de Branges–Rovnyak spaces, *Integral Equations Operator Theory*, 94, paper #20, 2022.
- 2019 G. Brouillette, P.-O. Parisé, D. Rochon, Tricomplex distance estimation for filled-in Julia sets and multibrot sets, *Internat. J. Bifur. Chaos Appl. Sci. Engrg.* 29, paper #1950085, 15pp.

### Submitted articles

- 2024 N. Doyon, P.-O. Parisé, W. Verreault, *Counting Involutions on Multicomplex Spaces*, submitted, 2023.

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## REFERENCES

1. Rufus Willet, Chair of the math department, University of Hawai'i at Mānoa (Honolulu, Hawai'i).  
Email: rufus@math.hawaii.edu.
2. Mirjana Jovovic, Assistant Specialist, Director of Undergraduate Studies, University of Hawai'i at Mānoa (Honolulu, Hawai'i).  
Email: mirjanaj@hawaii.edu.
3. Malik Younsi, Associate Professor, University of Hawai'i at Mānoa (Honolulu, Hawai'i).  
Email: malik.younsi@gmail.com.
4. D. Rochon, Full Professor, Université du Québec à Trois-Rivières, (Trois-Rivières, Canada)  
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