

EDUCATION

- 2020 **Master of Architecture**
University of Toronto, Toronto ON
- 2015 **Bachelor of Environmental Design Studies (Architecture)**
Dalhousie University, Halifax NS
- 2012 **Bachelor of Science: Mathematics and Biology**
Minor in Computer Science
McGill University, Montreal QC

PROFESSIONAL EXPERIENCE

- 2023- **Computational Design Consultant** *Self-Employed*
- Concept design, design-to-fabrication processes, and custom plugin development for clients in industrial design, fabrication, architectural design, and installation art
 - Advising clients on transition to digital process: software integration and workflow
- 2022-2023 **Consultant** *Metafold (Additive Manufacturing Startup) and MESH Consultants*
- Developed custom computational design workflows to client specifications for a major manufacture
 - Volumetric design using custom lattice structures
 - Communicated across business lines to extend functionality of existing codebase
- 2019-2021 **Teaching Assistant: ARC253/381/355/2023** *University of Toronto*
- Planned and led Rhino and Grasshopper tutorials; software assistance and grading.
- 2018-2019 **Computational Design Intern** *Schmidt Hammer Lassen Architects, Copenhagen DK*
- Wrote Grasshopper and Python tools deployed across the competition department
 - Script-assisted digital fabrication of competition models
 - Developed and rolled out a Rhino plugin for internal use
- 2017-2018 **Research Assistant** *Architecture (Prof. Brady Peters), University of Toronto*
- Led a team of undergraduates in the parametric design of a competition entry, culminating in a museum installation with a digitally fabricated 1:1 mockup that won a People's Choice Award for best proposal; developed scripts for acoustic simulation
- 2016-2017 **Product Developer** *IPPINKA (Industrial Design/ECommerce Startup), Toronto ON*
- Developed warehouse management software using the Amazon WMS API
 - Oversaw design of a bike hook leading to a successful \$10,000 Kickstarter Campaign
 - Managed a three-person team through design, fabrication, promotion
- 2014 **Architectural Design Intern** *Sahuri + Partners Architecture Inc, Calgary AB*
- Prepared design development packages for three K-12 school renovations

SKILLS

Design Software

Rhino + Grasshopper + V-Ray
Unity 3D + Steam Audio
Adobe Creative Suite
AutoCAD, Revit, Solidworks

Computational Modelling

Grasshopper, GHPython,
RhinoCommon, Kangaroo,
Ladybug, Pachyderm,
WallaceiX, Galapagos

Additional Software

MS Office: Word, Excel, PowerPoint
Slack, Zoom, Miro, MS Teams
Google Drive automation, Git

Programming and Scripting

Professional experience:

Python 3 + numpy + scipy
Ironpython, C#, MATLAB,
Javascript + HTML + CSS

Some experience:

Java, C, PHP, Shell Scripting

Building and Fabrication

Prototyping:

3-Axis CNC Milling
5-Axis Robot Milling (Kuka)
3D Printing
Laser Cutting

Design for manufacturing:

Experience with sheet metal
and wood design

Small scale building:

Installations, residential decks

COMMUNITY EXPERIENCE

2013-2014

VP Finance Dalhousie Architecture Student Association

2013-2014

Design Committee Representative Dalhousie School of Architecture

AWARDS

2017

People's Choice Award

University of Toronto Art Center (Team Lead - competition entry and gallery installation)

2015

Newfoundland and Labrador Alumni Scholarship

Dalhousie School of Architecture

PUBLICATIONS

2018

Spatial Sonic Networks: Simulating and Prototyping Acoustic Mirrors

Peters, B., Akiyama, M. Lamb, S., and Abu Ras, O.
eCAADe 2018 Conference Proceedings