

SUMMARY

Five years working at the intersection of computation and design, well versed in contemporary software development practices. Professional experience in software development, computational biology research, custom plugin development for CAD software. Three years experience as teaching assistant; recurring guest critic for undergraduate studios at Daniels School of Architecture. Enthusiastic interest in teaching; clear and confident communicator in online settings for class sizes ranging from 20-300 students.

Though much of my personal work deals with computation, I am interested in critical and exploratory modes of design and representation, computation-adjacent or otherwise.

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

TEACHING

- 2020- **Guest Critic** *University of Toronto*
Recurring guest critic for Modelling and Fabrication in Design
- 2019-2021 **Teaching Assistant** *University of Toronto*
Undergraduate:
Technology Studio IV - 2021 (Remote Synchronous)
History of Urbanism - 2021 (Remote Synchronous)
Close Readings In Urban Design - 2020
Graduate:
Intermediate Computing - 2019, 2020
- Planned and led tutorials on simulation and urban design theory, virtual one-on-one design sessions, software assistance, grading, in-person and virtual office hours
- 2014 **Teaching Assistant** *Dalhousie University*
Software assistance assistant: prepared and led design software tutorials; provided on-call software assistance

WORK

- 2021- **Computational Design Consultant** *Self-Employed*
- Concept design and visualization, custom software, transition to digital design processes. Client domains: installation art, residential design, digital fabrication
- 2022-2023 **Consultant** *Metafold and MESH Consultants, Toronto ON*
- Custom design solutions to client specifications for a major sportswear manufacturer
 - Communicated across business lines to extend functionality of existing software for design with complex geometry
 - Developed and presented design options, tutorials, and graphics.
- 2018-2019 **Computational Design Intern** *Schmidt Hammer Lassen Architects, Copenhagen DK*
- Design and digital fabrication of competition models
 - Wrote Grasshopper and Python tools deployed across the competition department
 - Member of Computation Knowledge Group: planned rollout strategy for design tools
- 2017-2018 **Research Assistant** *Architecture (Prof. Brady Peters), University of Toronto*
- Led a team of four undergraduates in the design of a competition entry, culminating in a museum installation that won a People's Choice Award.
 - Developed optimization methods for acoustic architecture and form-active structures in RhinoPython
- 2016-2017 **Product Developer** *IPPINKA (Industrial Design/ECommerce Startup), Toronto ON*
- Oversaw design of a bike hook leading to a successful \$10,000 Kickstarter Campaign
 - Managed three industrial design interns through design, fabrication, promotion; taught drawing standards.
 - Developed warehouse management software in GScript with Amazon WMS API
- 2014 **Architectural Design Intern** *Sahuri + Partners Architecture Inc, Calgary AB*
- Prepared design development packages for three K-12 school renovations
- 2012-2013 **Research Technician** *Physiology, McGill University*
- Experimental design, grant writing, custom software for display of visual stimuli
- 2010-2012 **Research Assistant** *Neurology and Biology, McGill University*
- Experimental design, statistical analysis, molecular biology

SKILLS

Design Software

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

Computational Modelling

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

Additional Software

Word, Excel, PowerPoint
Slack, Zoom, Miro, MS Teams
Google Drive suite, Git,
Blackboard Learn

Programming and Scripting

Python 3 + numpy + scipy
HTML + CSS + Javascript
Ironpython, C#, MATLAB
Gscript, Processing, Java
Shell Scripting

Building and Fabrication

Prototyping:
3-Axis CNC Milling
5-Axis Robot Milling (Kuka)
Laser Cutting
3D Printing: Ultimaker, Project

Small scale building:

Installations, residential decks

Design for manufacturing:

Experience with sheet metal
and wood design

AWARDS

- 2017 **People's Choice Award - Making Models**
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

EXHIBITIONS

- 2017 *Making Models* University of Toronto Art Centre
- 2012 *Emerging Artists* Prestige Studios, Montreal QC
- 2011 *Liminal Spaces* Fridge Door Gallery, Montreal QC
- 2011 *Nuit Blanche* McGill University, Montreal QC

COMMUNITY EXPERIENCE

- 2013-2014 **VP Finance** Dalhousie Architecture Student Association
- 2013-2014 **Design Committee Representative** Dalhousie School of Architecture