

# Nina Lutz

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Profile	Graduate student at the MIT Media Lab. Interested in bringing interactive affordances to the physical world, especially in context of social identity, spatial interfaces, and cosmetics. Always seeking opportunities to learn and engage with academics around computational, architectural, simulation, and design spaces.	
Education	Massachusetts Institute of Technology Candidate for M.S in Media Arts and Sciences	June 2019 - June 2021 (expected) MIT Media Lab - Object Based Media
	Massachusetts Institute of Technology B.S in Computer Science and Engineering with Design	September 2015 - June 2019
Research Experience	Research Assistant; MIT Media Lab - Object Based Media	2018–Present
	Working to examine the intersection between creative and display technologies. Individual research currently focusing on scattering models for alternatives to interior lighting as well as interactive, identity affirming experiences around cosmetics and technology. Group research including repairing old demonstrations and preparing an exhibition piece for the MIT Museum centered around interactive coral. Mentoring undergraduate students.	
	Research Assistant, MIT Media Lab - City Science; Cambridge, MA	2015 - 2018
	Programming software for tangible intervention systems. Formulating math models for urban simulation. Developing algorithms to make complex systems more realistic and efficient for real time changes and interaction. Processing, analyzing, and visualizing large sets of spatial data for user intervention. Utilizing computer vision, embedded electronics, and projection mapping. Managing projects, work sessions with member companies, and off site deployments to a variety of academic and industrial institutes internationally.	
Industry Experience	Software Engineering Intern, Apple; Cupertino, CA	Summer 2017
	Developed software in context of various Apple products in the Cloud Services Localization (CSL) team and analyzed device interaction and behavior through international consumers.	
	Software Developer and Designer, PJ's Radio Control; Scottsdale, AZ	2012-2015
	Designed and developed website. Integrated e-commerce. SEO for Amazon and other third party retailers. Configured part fitment database and search parts by model tool in website.	
Teaching and Advising	Research Supervisor and Mentor	Summer 2019
	Mentoring and supervising 3 undergraduate students' research.	
	Co-Instructor, MIT Department of Urban Studies and Planning Course: Computational Urban Science Workshop	Spring 2019 Co-Instructor: Ira Winder

Teaching and Advising	Teaching Assistant, MIT Department of Architecture Course: Advanced Interaction Design (4.043)	Spring 2019 Prof: Marcelo Cohelo
	Teaching Assistant, MIT Department of Media Arts and Sciences Course: Designing Consumer Electronics (MAS.A19)	Fall 2017 - Fall 2018 Prof: V. Michael Bove
	Associate Advisor (Seminar) Advising first year students in adapting to MIT.	Fall 2016 - Spring 2018 Faculty Advisor: V. Michael Bove
Skills	<p><i>Software</i>            Java, Python, C++, C, JavaScript, Processing, Unity</p> <p><i>Web</i>                    Javascript, CSS, HTML, SQL, Ruby on Rails, three.js, OpenGL</p> <p><i>Visualization</i>        Processing, p5.js, d3.js, Tableau</p> <p><i>Electronics</i>          Arduino, Eagle, PID, general electronics and controllers, circuit design</p> <p><i>Design</i>                CAD (Rhinoceros and Grasshopper), Photoshop, Illustrator, Lightroom, InDesign, Drafting</p> <p><i>Fabrication</i>          Laser cutter, 3D Printer, CNC, Woodworking, Hand tools, Waterjet</p> <p><i>Misc.</i>                  QGIS, ArcGIS, Madmapper, Projection mapping, basic optics equipment</p>	
Publications	<p><i>Demo Abstract: Colloidal Luminaries for Architectural Lighting</i> ACM BuildSys 2019 (Accepted) November 2019 <b>N. Lutz</b>, V. M. Bove</p> <p><i>Routing Optimizing Algorithm for Electric Vehicles Applied in North Italy</i> IEEE Industrial and Commercial Power Systems Europe (2018) M Longo, P Maffezzoni, <b>NM Lutz</b>, L Daniel, X Lu</p> <p><i>A predictive model to support the widespread diffusion of electric mobility.</i> IEEE International Conference on Models and Technologies for Intelligent Transportation Systems (2017) M Longo, P Maffezzoni, D Zaninelli, <b>NM Lutz</b>, L Daniel</p> <p><i>Towards an impact study of electric vehicles on the Italian electric power system using simulation techniques.</i> IEEE 3rd International Forum on Research and Technologies for Society and Industry M Longo, <b>NM Lutz</b>, L Daniel, D Zaninelli, M Pruckner</p> <p><i>Analysis of Tourism Dynamics and Special Events Through Mobile Phone Data</i> Bloomberg Data for Good Conference (2016) Y Leng, A Noriega, AS Pentland, I Winder, <b>N Lutz</b>, L Alonso</p>	
Exhibits and Demos	<p>Demonstration: Colloidal Luminaries; BuildSys 2019 (Accepted)    Nov 2019 — New York, NY</p> <p>Exhibit: Turning Light; Council Arts MIT Arts on the Radar        Sept 6 2019 — Cambridge, MA</p> <p>Exhibit: Connected Coral; MIT Museum                                Nov 2018 - Apr 2019 — Cambridge, MA</p> <p>Demonstration: Bits and Bricks; IEEE FTC with Ira Winder        Nov 2017 — Vancouver, BC, CA</p> <p>MIT Media Lab Members Week    (Semesterly) Spring 2016 - Present</p> <p style="padding-left: 40px;">Cover featured in <a href="#">Fall 2017</a>, <a href="#">Fall 2018</a>, <a href="#">Spring 2019</a></p>	
Awards and Grants	Graduate Community Fellow for Institute Community Equity Office CAMIT Director's Grant Best Demonstration at IEEE FTC with Ira Winder	Fall 2019 Spring 2019 Fall 2017