

ELDY S. LAZARO VASQUEZ

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EDUCATION

- 2020 (expected) Master of Fine Arts in Design, University of California, Davis, CA, USA
2018 Fabricademy Program. FabTextiles, Fab Lab BCN & TextileLab Amsterdam, Waag Society.
2014 Licensed Architect. CAP 16114. College of Architects of Peru. Lima, Peru.
2013 Bach. Architecture and Urban Planning. San Pedro University. Chimbote, Peru

RESEARCH INTERESTS

Human-Computer Interaction, Wearable Technology, Personal Fabrication, Tangible and Interactive Interfaces, Biodesign, Biomimicry, Parametric Design, Shape-changing materials. Social innovation, circular economy.

PUBLICATIONS

- 2020 **Eldy S. Lazaro Vasquez**, Hao-Chuan Wang, and Katia Vega. 2020. Introducing the Sustainable Prototyping Life Cycle for Digital Fabrication to Designers. To appear in Proceedings of the 2020 ACM Designing Interactive Systems Conference DIS '20, July 6–10, 2020, Eindhoven, Netherlands. DOI: <https://doi.org/10.1145/3357236.3395510>
- 2020 **Eldy S. Lazaro Vasquez** and Katia Vega. 2020. Towards Environmental Sustainability in Digital Fabrication Classes: DIY Prototyping with Biomaterials- for the 2nd Annual ACM SIGCHI Symposium on HCI Education (EduCHI 2020). Published at <https://educhi2020.hcilingcurriculum.org>
- 2020 **Eldy S. Lazaro Vasquez**, Hao-Chuan Wang, and Katia Vega. 2020. The Environmental Impact of Physical Prototyping: a Five-Year CHI Review- for the CHI 2020 Workshop on self-powered sustainable interfaces and interactions (SelfSustainableCHI 2020). Published at <http://cs.swansea.ac.uk/~SelfSustainableCHI/>
- 2019 **Eldy S. Lazaro Vasquez** and Katia Vega. 2019. Myco-accessories: sustainable wearables with biodegradable materials. In Proceedings of the 23rd International Symposium on Wearable Computers (ISWC '19). ACM, New York, NY, USA, 306-311. DOI: <https://doi.org/10.1145/3341163.3346938>
- 2019 **Eldy S. Lazaro Vasquez** and Katia Vega. 2019. From plastic to biomaterials: prototyping DIY electronics with mycelium. In Adjunct Proceedings of the 2019 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2019 ACM International Symposium on Wearable Computers (UbiComp/ISWC '19 Adjunct). ACM, New York, NY, USA, 308-311. DOI: <https://doi.org/10.1145/3341162.3343808>
- 2019 B. Ferguson and **E. Lazaro**. 2019. Methods in Eco Prototyping (abstract/poster)- for the Symposium of 3D Printing, August 12-13, 2019. Dartmouth College, Hanover, NH, USA. <https://3d-printing-2019.org>
- 2019 **Eldy S. Lazaro Vasquez**. 2019. Auto-adjustable Bra for Women with a Pronounced Alteration in Breast Volume. In Proceedings of the Thirteenth International Conference on Tangible, Embedded, and Embodied Interaction (TEI '19). ACM, New York, NY, USA, 429-435. DOI: <https://doi.org/10.1145/3294109.3300982>

RESEARCH EXPERIENCE

- 2020 **Graduate Student Researcher (GSR), Interactive Organisms Lab (<http://iolab.ucdavis.edu/>), Department of Design, UC Davis, Davis, CA, USA.**
June 2019 – Present
- Researched the emergence of novel biological materials, such as mycelium, the root network of mushrooms, to study further use in Wearable Technology and Human Computer Interaction (HCI).
 - Researched the intersection of design, digital fabrication, and biology to extend the functionality of bio-based materials in applications such as embedded electronics and DIY-prototyping waste reduction.
 - Conducted surveys, interviews and workshops for data collection.
 - Currently researching the use of biosensors for wearables biotechnology.
 - Performed research under the direction of Professor Katia Vega, PhD
- 2020 **Resident at San Francisco Autodesk Technology Center, San Francisco, CA, USA.**
September 2019 – Present
- Research bio-based materials applications for digital fabrication under UC Davis Professor Beth Ferguson
 - Consultant on SeaShift Collaborative lifecycle analysis for the 2020 Bio Design Challenge.
- 2019 **Attended and presented at ISWC '19 (International Symposium on Wearable Computers), London, UK.**

- Presented accepted paper in Design Exhibition track, Category Fiber Art. Student Volunteer.
- 2019 **Attended and presented at UbiComp '19 (Pervasive and Ubiquitous Computing), London, UK.**
- Presented accepted paper in the Demo session. Student Volunteer.
- 2019 **Attended DIS '19 (Designing Interactive Systems), San Diego, USA.**
- Workshop participant in "Exploring Noticing as Method in Design Research" given by Szu-Yu (Cyn) Liu, Jen Liu, Kristin Dew, Patrycja Zdziarska, Maya Livio, Shaowen Bardzell. Student Volunteer, and DIS Accessibility Support.
- 2019 **Attended and presented at TEI '19 (International Conference on Tangible, Embedded, and Embodied Interaction), Tempe, Arizona, USA.**
- Presented accepted paper in the Work in Progress session.

WORK EXPERIENCE

- 2020 **Teaching Assistant, Department of Design** (<https://arts.ucdavis.edu/design>), **UC Davis, Davis, CA, USA**
September 2018 – Present
- Spring Quarter 2020: DES 111 -Coding for Designers
 - Winter Quarter 2020: DES 127A -Sustainable Design
 - Fall Quarter 2019 : DES 177 -Computer-Assisted Fashion Design
 - Spring Quarter 2019: DES 191B -Interactive Objects, DES 165 -Studio Practices in Industrial Design
 - Winter Quarter 2019: DES 178 -Wearable Technologies, DES 50 -Introduction to 3D Design
 - Fall Quarter 2018 : DES 178 -Wearable Technologies, DES 111 -Coding for Designers
- 2019 **Prototyping Lab teaching assistant, Department of Design, UC Davis, Davis, CA, USA**
March – June
- Oversaw the operations of the Prototyping Lab, including monitoring, mentoring and consultation activities for undergrad and graduate students regarding projects and prototyping techniques.
- 2017 **Manager Fab Lab Lima, Peru**
January – December
- Oversaw the operations of the Fabrication Laboratory, including mentoring and consultation activities for members regarding project and idea development.
 - Supervised, led, and trained current and new staff members, interns, and volunteers in the use of the Fab Lab software, technology, and manufacturing equipment.
 - Developed key programs for stakeholders, including a variety of primary interest groups, including the pioneering of the "Summer Volunteers Program".
 - Collaborated with C-Level Executives to promote the lab in and around the community.
- 2017 **FabKids Tutor, Fab Lab Lima, Lima, Peru**
January 2016 – December 2017
- Fab Lab Latin America - Kids: is a Fab Lab network program focused on educational activities for Latin American children. The program operates a variety of workshops, where children are taught about digital fabrication methods and electronics, while they develop different soft skills.
 - Developed and executed FabKids sessions and workshops locally and internationally.
 - Created outreach strategies to disseminate program information to local communities and built stakeholder engagement.
- 2016 **Independent Architect / Designer, Lima, Peru**
January – December
- Designed interior and exterior of high-value projects such as beach houses and apartment complexes.
 - Drafted designs using relevant 3D-design software such as Rhinoceros, Revit, and 3D max.
 - Utilized digital fabrication techniques to develop product designs for clients.
 - Developed Minimum Viable Products (MVPs): BraceShock, TumiLamp, Light & Culture Lamp.
- 2015 **Construction Supervisor (Resident Architect), L&S Contratistas Generales, Lima, Peru**
January – December
- Served as supervisor and resident architect of Peru's leading multinational Telecommunications company, Telefonica.
 - Managed and approved remodeling of current and newly acquired office space in company's headquarters.

- Presided over project management duties and assured projects were completed within the scope of project deadlines and budgets.

2014 **Junior Architect, ZAHE Projects Firm, Lima, Peru**

January – December

- Planned and designed new buildings, collaborating with a team of engineers and architects.
- Drafted project proposals and included personal designs on AutoCAD software, so as to guide the team from ideation to implementation.

GRANTS & AWARDS

- 2020 **Role Models Competition 2020** (1st place), Healthy Materials Lab, Parsons School of Design, NYC (\$1,000)
- 2020 **Savageau Award**, MFA Graduate Exhibition, Manetti Shrem Museum UC Davis, Davis, CA, USA (\$2,000)
- 2020 **The Green Initiative Fund Grant**, DIY Eco Materials Library, UC Davis, Davis, CA, USA (\$20,000)
- 2019 **Best Design Award**, Category Fiber Art in Design Exhibition at *ISWC '19 (International Symposium on Wearable Computers)*, London, UK
- 2019 **Graduate Student Association (GSA) Fall Travel Award** for publishing two papers in UbiComp '19 and ISWC '19 international conferences. London, UK (\$500)
- Graduate Student Association (GSA) Spring Travel Award** for publishing a paper in TEI 2019 conference. Tempe, Arizona (\$500)
- 2019 **Nominated: Outstanding Graduate Student Teaching Award**, UC Davis, Davis, CA, USA.
- 2018 **Honored Award**: Interactive garment selected for the 5TH DIGITAL FASHION & WEARABLES EXHIBITION curated & produced by Fabtextiles & TextileLab Amsterdam. Paris, France during FAB14
- 2017 **Entrepreneurship award to Braceshock**. "Projects under development and/or incubation, Potential with the strategic axes of FAB13 and scalable prospective characteristics" Santiago, Chile
- 2017 **First Prize Trotec Latin American Competition**. Category: Jewelry design using digital fabrication. Lima, Peru (\$1000)

EXHIBITIONS

- 2020 **MIT Media Lab**, Wearable Biotech & Growable Interfaces 2020, Boston, USA. Myco-accessories collection.
- 2020 **Rome Fashion Week-Altaroma**, Biomaterials Category, Rome, Italy. Myco-accessories collection.
- 2019 **3D Fashion Week**, Lima, Peru. Myco-accessories collection.
- 2019 **LGS 5th Annual Gratitude Gala**, Davis, CA, USA. Myco-accessories collection.
- 2019 **MakerFaire San Mateo**, CA, USA. Bio DIY Electronics with mycelium and Myco-accessories.

INVITED LECTURER / TALKS

- 2019 **"Sustainable Prototyping for Digital Fabrication"**. (*Guest lecturer*)
Wearable Technologies Class - DES 178. UC Davis, CA, USA.
- 2019 **"Addressing sustainability in DIY Prototyping"**. (*Guest lecturer*)
Engineering Material Science Class - EMS 180. UC Davis, CA, USA.
- 2018 **"Bio-based materials for digital fabrication"**. (*Presentation*)
San Francisco Autodesk Technology Center, CA, USA.
- 2019 **"Ecological materials in DIY Prototyping"**. (*Guest lecturer*)
ARCHT-5400-1: BT: Constructed Ecologies at California College of the Arts (CCA), San Francisco, CA, USA.
- 2019 **"DIY Prototyping with Mycelium"**. (*Recitation*)
Online. Fabricademy programme: textile and technology academy.
- 2019 **"Addressing sustainability in Wearable Technology"**. (*Guest lecturer*)
Online. Biomedics Engineering class - C1129 at Pontifical Catholic University of Peru (PUCP) and Cayetano Heredia University (UPCH), Lima, Peru.
- 2018 **"Biomaterials"**. (*Recitation*)
Web Seminar Fab Lab ESAN, ESAN University, Lima, Peru.
- 2018 **"New advances in technology in the Fashion Industry"**. (*Guest lecturer*)
Center of Advanced Fashion Studies (CEAM). Miraflores, Lima, Peru.
- 2018 **"Reducing the lag: Women in Technology"**. (*Talk*)
Euroidiomas Foundation. Miraflores, Lima-Peru.
- 2018 **"Women Makers 2018"**. (*Talk*)
Municipality of San Isidro, Lima-Peru.

WORKSHOPS

- 2020 "Designing modular patterns for laser cutting". DES 178 -Wearable Technologies. UC Davis, CA, USA.
- 2019 "DIY Prototyping with bio-based materials". DES 191B -Interactive Objects. UC Davis, CA, USA.
- 2019 "3D-Modeling in Tinkercad". DES 191B -Interactive Objects. UC Davis, CA, USA.
- 2019 "3D-Modeling in Rhinoceros". DES 165 -Studio Practices in Industrial Design. UC Davis, CA, USA.
- 2019 "Digital Fabrication in Design". DES 50 -Introduction to Three-dimensional Design. UC Davis, CA, USA.
- 2018 "3D-Modeling and 3D-Printing on textiles". DES 178 -Wearable Technologies. UC Davis, CA, USA.
- 2018 "3D-Printing on Textiles". International Fab Lab Conference (FAB 14). Toulouse, France.
- 2018 "Innovation in Textiles with Digital Fabrication". InGenio Learning and Fab Lab Lima, Peru.
- 2017 "Light & Culture: Interactive Lamp for Kids". International Fab Lab Conference (FAB 13). Santiago, Chile.
- 2016 "Emosilla: Make Your Own Chair". FabKids Program, Fab Lab Lima, Peru.
- 2016 "Tumi Lamp: Interactive Lamp for Kids". International Fab Lab Conference (FAB12). Shenzhen, China.

SKILLS & SOFTWARE PROFICIENCY

- 2D Design & Editing:** Autocad, Adobe Illustrator, Adobe Photoshop, Adobe Premiere Pro, Adobe InDesign, Corel.
- 3D Modeling** : Rhinoceros, Fusion 360, SketchUp, Revit, 3D Max, 123 Make, Tinkercad, Unity.
- Programming** : Grasshopper, Arduino, LaTeX, Processing, Kinect, Computational couture, HTML and CSS.
- Digital Fabrication** : Laser cutting, 3D-Printing, 3D-Scanning, CNC machining (ShopBot, OMAX waterjet, HAAS mill, PCB milling), Electronics, Eagle PCB Design, Soft robotics.
- Biotechnology** : Microfluidics, Biosensors.
- Fashion** : E-textiles, Modular fashion, Textile Printing (Mimaki Digital-to-Fabric Printer), Pattern Digitizer.
- Languages** : Spanish (native), English (proficient), German (A2).