

Architectural Designer

Oksana Gritcai

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- 7 years of experience in architectural and computational design
- 4 years of experience leading design teams and R&D initiatives
- Collaborating with cross-functional teams on more than 100 projects of all sizes on value-based priorities
- Master's degree in architecture and design research from SCI-Arc
- Proficient in various 3D and visualization software, including Rhino 3D, Grasshopper 3D, Revit, and others
- Successfully created designs in collaboration with architects, such as Zaha Hadid Architects, UN studio and others.

Skills

Software: Rhinoceros 3d, Grasshopper 3d, Revit, Adobe Creative Suite, Unreal Engine 5, Twinmotion, Enscape, Maya 3d, AutoCAD.

Industry Knowledge: Architectural design, interior design, product management, product development, 3d modeling, 3D visualization, parametric design, AR/VR, prototyping, CNC milling and 3d printing.

Experience

August 2024 – Present

Architectural Designer

MomentX, San Francisco, CA

- Contributing on all phases of residential design, ADU and remodeling, including conceptual development and construction documentation.
- Coordinating with contractors, owners, and consultants to ensure project progress and completion.

Main projects: Residential addition and second-floor remodeling on Clayton Drive, Menlo Park, CA (3,900 sq ft) – Led the creation of 3D models in Revit, developed exterior and interior design, and produced visualizations in Rhino 3D. Responsible for permit drawings and planning/building approvals.

October 2022 – Present

Freelance Architectural Designer

Los Angeles, CA

- Produced designs, 3D models and visualizations for exterior and interior residential remodeling projects.
- Created computational models, layouts and drawings for acoustic ceilings addition in gymnasium.

Main projects: *Highlands University* (17 000sqft), *Dishchii'bikoh Community School*, *Payson High School* (20,000sqft)

April 2019 – October 2022

Computational Designer

Arktura, Los Angeles, CA

- Developed custom interfaces in Rhino/Grasshopper 3D for Sales and Design teams, reducing product packaging, layout, and estimation drawing time and costs by 17%. These interfaces enabled standard products to be configured for custom ceiling or wall outlines, predicted module configurations, and generated material and cost estimates. Scripts also optimized crate packing, automated crate calculations, and produced diagrams, as well as created an image sampling script for the punch press machine. Some scripts were developed independently, while others were in collaboration with engineers.
- Designed custom 3D proposals for complex architectural surfaces, including sculptural entrance elements, feature walls, and accent details. Assisted architects with detail development and fabrication drawings during the Construction Documents (CD) phase, and contributed design ideas and solutions during the Design Development (DD) phase, leveraging product knowledge.

Main projects:

Google Moffett Park Cloud Ceilings Designed a custom parametric ceiling surface resembling clouds, incorporating controlled randomness while adhering to fabrication constraints.

Textron Systems Technology Center created a faceted modular wall design, reducing manufacturing time while maintaining a custom appearance.

Phoenix Sky Harbor International Airport, Designed bespoke ceilings with dramatic height variations, modifying an existing product to stay within manufacturing limitations.

- Collaborated with the product development team to expand the company's portfolio with new designs and products.

Key products:

Breeze and *Bloom* parametric patterns, introduced biophilic elements, winning *Architectural Record* Product of the Year.

Table and workspace partitions made from acoustic felt, Created table and workspace partitions, a highly successful design to meet pandemic-era demand.

December 2014 – March 2019

Staff Designer | Computational Design Lead

USG/Ceilings Plus, Los Angeles, CA

- **Project Leadership & Design Development:** Led the conceptualization and 3D design of 100+ architectural projects, supporting architects during the DD phase with innovative patterning techniques and custom engineering solutions for complex surfaces. Engaged directly with clients, creating pre-sale presentations to effectively communicate design concepts.

Main projects:

Atlanta Airport Ceilings. Designed a 1.2 million sq ft parametric pattern, leading the initial design and pre-sale presentation, securing the bid for Ceilings Plus. Communicated with clients, developed prototypes, and created Grasshopper 3D scripts to automate production drawings. Opened doors for large-scale projects.

Alston International Served as Interior Architect, creating an interior featuring a double-layered ceiling with integrated lights and acoustics and a custom biophilic pattern for an industrial setting in Irvine, CA.

KAFD station in Riyadh Metro Supported ZHA with feasibility studies to achieve complex shapes using sheet metal, optimized panel designs, and developed custom perforation tools, helping Ceilings Plus win the bid.

The other important projects included SFO Ceilings (completed), LAX Ceilings (completed), Bahrain Marina (Milky Way pattern and façade system), Atlanta Airport Security Zone (pattern development), Future Energy Hall in Astana (Night Sky ceiling design), Doha Metro with UN Studio (column cover study and mock-up), Caltech CAST Gates (completed), Oculus for Patricia and Philip Frost Museum of Science (paneling study, production, and fabrication drawing automation, completed) and many others.

- **Product Development & Patents:** Studied sheet metal fabrication processes and developed new products, securing two patents: one for a double-layer panel system with unique attachment, structural stiffening, and integrated lighting and acoustics; the other for a modular acoustic ceiling with an on-site customizable hinge and pulley system. Developed facade systems, expanding the company's portfolio.
- **Computational Design Automation:** Integrated computational design into engineering workflows through custom Grasshopper 3D scripts that automated patterned panel production and fabrication drawings. This reduced bottlenecks, facilitated large-scale custom projects, and established a computational engineering team for process automation and optimization.
- **Innovation & Prototyping Enhancements:** Led innovation integration, notably introducing virtual reality tools into the prototyping phase, reducing mock-up costs by 48% and turnaround time by 50%.
- **R&D and Team Leadership:** Directed R&D and computational design research, establishing design workflows and documentation standards. Advanced from team member to leading a team of five, driving innovation that attracted large projects and ultimately contributing to the company's acquisition by USG Corporation.

June 2010 – May 2011

Architectural Designer Intern

V.Korolev Architects, Vladivostok, Russia

- Conceptualized prefabricated wooden houses for Russia's Eastern seaboard, designed by V. Korolev with a patented nail-free joinery method that allows assembly by just two people. Assisted in creating configurations from single-family to multi-story multifamily houses. Produced digital drawings in AutoCAD and 3D visualizations in 3ds Max.

Education & Certification

2014 Master of Design Research Studies (Emerging Systems, Technologies & Media Post Professional Program), Southern California Institute of Architecture (SCI-Arc), Los-Angeles, US

2011 Bachelor of Architectural Design, Far Eastern State Technical University VV Kuibyshev, Vladivostok, Russia

2018 Art Directing Multidisciplinary teams, Art Center

Awards

2010 Competition winner for "Solar Attached House" project in 7th National Research Youth School, Moscow, Russia

2009 Fourth place for "Acapulco Green Tower" in the International Competition, Acapulco, Mexico

2009 Exceptional project for "Attached Solar House" in 17th Specialized Exhibition of "Construction", Vladivostok, Russia

2008 Competition winner for "Solar school" in 6th National Research Youth School in renewable energy Moscow, Russia

Publications and Patents

Modular Dynamic Acoustical Ceiling Panel. Patent No US 11,692,345 B2

Gritcai O. (2010). Solar Attached Houses. Renewable Energy, volume I (ISBN- 976-5-91304-048-9), p. 122-125.

Gritcai O. (2008). Solar School. Renewable Energy, volume I (ISBN- 978-5-91304-066-4), p. 109-111.

Kazantsev P.A., Gritcai O. (2008). Solar Attached Houses, Solar School, Acapulco Eco tower. Basics of Environmental Architecture and Design. (ISBN 978-5-7596-0901-8), p.41, 65, 74