

BURCU GOCEN Dallas, TX | burcugocen@gmail.com | 980 347 2868 | burcugocen.com

Computational designer and researcher with academic and professional experience spanning Turkey, Germany, and the United States. Background in interior architecture, computational design, robotics, and material research, with work ranging from adaptive reuse to emerging architectural technologies. Focused on connecting experimental research and architectural practice through interdisciplinary collaboration.

SKILLS

Computational Design: Rhino, Grasshopper, Revit, Rhino.Inside, Solidworks, 3DBlender, Fusion 360, Unity, Autocad, Sketchup, Netfabb, environmental analysis, acoustic simulation, spatial analysis

Fabrication: ABB, KUKA, UR robotic arms, RobotStudio, ROS, clay printing, CNC milling, hot-wire cutting, powder bed printing, vacuum forming

Programming & AI: Python, C#, JavaScript, MATLAB, machine learning, computer vision, YOLOv8, OpenCV, ComfyUI, Arduino, Raspberry Pi

EDUCATION

University of Pennsylvania • Philadelphia, PA

Fall 2024 - May 2025

Master of Science in Design: Robotics & Autonomous Systems, GPA: 3.97, graduated with distinction

Hochschule für Technik Stuttgart • Stuttgart, Germany

Fall 2022 - Spring 2023

Istanbul Technical University • Istanbul, Turkey

Fall 2020 - Spring 2023

International Master of Interior-Architectural Design

Istanbul Technical University • Istanbul, Turkey

Fall 2015 - Spring 2020

Bachelor of Science in Interior Architecture & Minor in Chemistry, Dean's Honor List (multiple semesters)

PROFESSIONAL EXPERIENCE

Computational Design Professional II • HKS // LINE, Dallas, TX

July 2025 – Present

- Build parametric and automated design workflows in Rhino/Grasshopper, Revit and Rhino.Inside for large-scale architectural projects, including stadium, façade and enclosure systems.
- Develop performance-driven computational studies integrating environmental analysis, fabrication logic and design automation to support early-stage architectural decision-making.

Researcher • DumoLab*, Philadelphia, PA

Nov 2024 – July 2025

- Conducted interdisciplinary research on bio-based composite materials and advanced fabrication methodologies, investigating chemically responsive behavior, ecological performance, and applications in sustainable architectural systems.

Graduate Research Assistant • MSD-RAS, University of Pennsylvania, Philadelphia, PA

Nov 2024 – July 2025

- Produced technical diagrams, research documentation, and publication layouts for robotics and autonomous systems projects, communicating computational workflows, fabrication processes, and research findings.

Researcher / MasterArbeit • Additive Tectonics, Stuttgart, Germany

Aug 2022 – Aug 2023

- Investigated Selective Cement Activation (SCA) alongside robotic fabrication and additive manufacturing methods, including FDM and WAAM..
- Established fabrication parameters and process guidelines, and built a physical demonstrator to assess material behavior, geometric constraints, and potential applications in cement-based construction.

Architect / Concept Designer • Zoom TPU, Istanbul, Turkey

Dec 2020 – Jan 2022

- Contributed to the Historical Sinop Prison Heritage Interiors Re-Programming Process, an adaptive-reuse initiative associated with ITU-TTO, Turkish Ministry of Culture and Tourism, and EU Commission IPA Projects.
- Produced concept design and technical documentation for healthcare and commercial projects in coordination with multidisciplinary teams.

Interior Architect • Doggan, Istanbul, Turkey

Nov 2019 – Dec 2020

- Designed residential and commercial interiors, developing spatial layouts, material selections, and construction details.
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Selected Publications:

- SALPIDA: Locally-Adaptive Robotic Heating, Inflation and Assembly of Additively Manufactured Thermoplastic Blowforms. ACADIA, 2025. <https://doi.org/10.52842/conf.acadia.2025.2.102>
- Tegula Series: Chemically Interactive & Ecologically Benign Bio-Composites. ACADIA, 2025. <https://doi.org/10.52842/conf.acadia.2025.1.086>

Selected Exhibitions & Presentations:

- Biogenic Futures: Women Shaping Material Ecologies. CU Boulder Art Museum, Boulder, CO, 2025.
- Inner Forms. SCULPT Symposium, 2025.
- Pioneering Biomaterials: Academia and Industry Convergence. California College of the Arts, San Francisco, CA, 2025.

Awards & Academic Recognition:

- The Next House: USA, Honorable Mention, *Multi-Scale Adaptive Housing System*, Buildner, 2026.
- AIA Dallas Unbuilt Design Awards, *Net Positive Senegal*, 2026.
- Weitzman Scholarship, \$20,000 merit-based award for academic excellence, University of Pennsylvania, 2024.
- BEST OF 22 Faculty Award, Hochschule für Technik Stuttgart, 2022.
- CanSat Competition, 3rd Place, Houston, TX, 2018.

Selected Fellowships: HKS Southeast Design Fellowship, Orlando, FL, 2026; *Lost in Transition / The Speculative Threshold Workshop*, CEPT University, India, 2022; *Practicing Universal Design Principles in Design Education through a CAD-Based Game (PUDCAD)*, Erasmus Project, Italy & Turkey, 2019.