

PROFESSIONAL EXPERIENCE

Material Processes + Systems Group, Harvard GSD : Research Associate : 2016 – Present : Cambridge, MA

Post-tensioned Ceramics: Lead Designer of a novel structural system using post-tensioned slender ceramic extrusions and custom 3D printed connectors. Responsibilities included mechanical testing, development of parametric models for fabrication and analysis, prototype fabrication, and project management for the fabrication of a full-scale mock-up.

Ceramic Tectonics - Tile Grid Shell: Project lead for an all-ceramic grid shell structure exhibited at Cevisama 2018.

Ferro-tiles: Development of a dynamic, reusable mold system for various cast-able building materials.

Ceramic 3d Printing: Ongoing research of additive manufacturing techniques for ceramic building components, including research of functionally-graded materials, 5-axis robotic printing.

Ceramic Morphologies: Development and project management of a novel 3d printing strategy for ceramic building components, including the fabrication of a pavilion exhibited at Cevisama 2017.

VanHeusen Seibold : Co-Founder, Principal: 2012 – Present : Somerville, MA

Farm Lane Residence, Westwood, MA: Schematic design through construction administration for renovations to an existing single family residence. Construction completed Summer 2018.

Massey-Norman Residence, Brooklyn, NY: Design and construction of renovations to an existing multi-family residence. Construction completed in 2013.

Höweler + Yoon Architecture : Designer/Fabricator : 2015 – 2016 : Boston, MA

FloatLab, Philadelphia, PA: Schematic design and project management of a 75' diameter floating platform devoted to art and ecology on the Schuylkill River, including the testing and deployment of a occupiable design prototype.

Honorable Mention: 65 th Annual Progressive Architecture Awards

Swingtime 3.0, Boston, MA: Design, prototyping, fabrication and installation of translucent roto-molded swings, including the design and production of custom electronics.

Empathy Pavilion, Dubai Expo 2020, Dubai, UAE: Concept design of 80,000sf Expo Pavilion, including the development of parametric tools for evaluating design iterations.

Peppertree Residence, Great Falls, VA: Produced construction documents, preliminary cost estimates and managed the bidding process for a 6,000sf residence.

Fabrication: Managed in-house fabrication shop, including 3-axis CNC mill, laser cutter and wood shop. Generated 3d models for CNC production and direct communication with fabricators.

MOS Architects : Intermediate Architect : 2011 - 2012 : New York, NY

Foreclosed: Rehousing the American Dream: Produced physical models and films for 2011 MoMA exhibition.

Produced schematic design and construction documents for multiple commercial and residential projects.

226 W 135th St: Produced DoB submittal, coordinated consultants, designed details and managed construction.

Syracuse University : Project Manager : 2009 - 2011 : Syracuse, NY

Collaborated with multiple organizations to convert an abandoned residence into a center for art, writing and entrepreneurship. Created graphic and written content for major grant applications, governmental approval hearings, social media, speaking engagements, press packets and community events. Coordinated the sourcing, processing and re-purposing of local building materials.

EDUCATION

Harvard University : Graduate School of Design : Cambridge, MA : 8.2013 - 5.2015

Master of Design Studies: Technology

Thesis: Adaptive Frames

Courses in computational design, digital fabrication, material systems, art design + the public domain.

Massachusetts Institute of Technology : School of Architecture + Planning : Cambridge, MA : 08 - 12.2014

Course in Media Arts and Sciences: How to Make Almost Anything

Syracuse University : School of Architecture : Syracuse, NY : 8.2003 - 12.2008

Bachelor of Architecture awarded Magna Cum Laude

Thesis: From the Ashes of Fordism

Spring 2006 Study Abroad: Florence, IT

Cornell University : College of Architecture Art + Planning : Ithaca, NY : 6 - 8.2002

Courses in architecture theory and design.

TEACHING EXPERIENCE

Wentworth Institute of Technology : Boston, MA

Adjunct Professor : 01.2017-Present

Spring 2018: "ARCH 3800: Techniques and Technologies in Digital Fabrication" a graduate-level course on advanced digital fabrication techniques in architecture

Spring 2017: "ARCH 3700: Techniques and Technologies in Digital Fabrication" an advanced undergraduate-level course on advanced digital fabrication techniques in architecture

Harvard University Graduate School of Design: Cambridge, MA

Instructor : Digital Skills Workshop : 08-09.2014, 08-09.2015

Introduced incoming students to software, workflows, model-making techniques and conceptual expectations within the GSD.

Architecture Studio Instructor : Career Discovery: 6-7.2015

Taught a design studio, wrote project briefs, taught fundamental design skills and concepts

Teaching Assistant : (Re)Fabricating Tectonic Prototypes : 1.2015 – 5.2015

Introduced students to modeling techniques in Grasshopper, Assisted in the conceptual development of student work

Technical Assistant : Fabrication Lab : 8.2013-5.2015

Provided advice and assistance to students completing fabrication projects requiring CNC milling and wood shop resources

Syracuse University : Syracuse, NY

Teaching Associate : The 601 Tully Project : 8.2009-6.2011

Co-developed and taught a non-hierarchically structured course for university and high school students.

SKILLS

Digital Fabrication

Robotics, CNC Machining, Laser Cutting, 3d Printing, Electronics Design + Production

Digital Media

Proficient: Rhino, V-Ray for Rhino, Grasshopper, Adobe (Ps, Ai, Id, Pr), AutoCAD, MasterCAM, Multiframe, 3d Scanning, Embedded Knowledge: C#, Processing, Arduino, HTML

Analog Fabrication

Composites, Concrete, Ceramics, Light Frame Construction, Finish Carpentry, Rotational Molding, Metalwork, Molding and Casting

PUBLICATIONS, PRESENTATIONS + EXHIBITIONS

Seibold, Z; Grinham, J; Geletina, O; Ahanotu, O; Sayegh, A; Weaver, J; Bechthold, M: "Fluid Equilibrium: Material Computation in Ferrofluidic Castings" in Re/Calibration: On Imprecision and Infidelity: Proceedings of the 38th Annual Conference of the Association for Computer Aided Design in Architecture, 2018.

Seibold, Z; Hinz, K; Garcia del Castillo, J.L; Alonso, N.M; Mhatre, S; Bechthold, M: "Ceramic Morphologies: Precision and Control in Paste-Based Additive Manufacturing" in Proceedings of ACADIA Conference: Re/Calibration: On Imprecision and Infidelity, Proceedings of the 38th Annual Conference of the Association for Computer Aided Design in Architecture, 2018.

Seibold, Z., Mesa, O., Stavric, M., Bechthold, M.: Ceramic Tectonics: Tile Grid Shell – Proceeding of the IASS Symposium 2018, MIT Press Journals, Cambridge. 2018.

Bernstein, Fred. "The Brilliant Trick That Turned an Old Brooklyn Storefront Into a Modern Pied-à-Terre." New York Magazine Design Hunting Fall/Winter 2018, Oct. 2017, <https://www.thecut.com/2017/10/the-trick-that-turned-a-storefront-into-a-pied-terre.html>.

Seibold, Zach, et al. "Voxel Beam: Re-Fabricating a Structural Beam." Proceedings of the 20th International Conference of the Association for Computer-Aided Architectural Design Research in Asia, CAADRIA 2015.

GSD Platform 7, Harvard GSD : Work from the Spring 2014 semester featured in publication and exhibition of current research at the Graduate School of Design

Seibold, Zach, et al. "Robotic Fabrication of Components for Ceramic Shell Structures." Journal of the International Association for Shell and Spatial Structures 55.4 (2014): 237-42.

Seibold, Zach, et al. "Robotic Fabrication of Components for Ceramic Shell Structures. Presented at the International Association for Shell and Spatial Structures IASS-SLTE 2014 Symposium, Brasilia, Brazil, September 15-19, 2014; paper 319.

"601 Tully" Lecture presented at Upstate: Syracuse University School of Architecture, Syracuse, NY, November, 2009.

"MLAB: Mobile Literacy Arts Bus" Lecture presented at Massachusetts College of the Arts, Boston, MA, February 2009.

AWARDS + AFFILIATIONS

2014: Hangai Prize, International Association for Shell and Spatial Structures

2008: Deans Citation for Outstanding Thesis

2006, 08, 09: Chancellor's Award for Public Engagement

2003-2008: Founder's Scholarship