benjamin eric jenett / cv

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objective

▷ to participate in high-level research at MIT and contribute to projects which align with my interests

education

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, MASTERS OF ENGINEERING (09/13-TBD)

▷focus on High Performance Structures
▷research topics include structural optimization, bio-inspired material science, and new digital fabrication techniques

TU DELFT, NETHERLANDS, INDEPENDENT RESEARCH , DEPTS OF ARCH. AND CIVIL ENG. (09/10-05/11)

▷recipient of Justus en Louise van Effen Scholarship, provided to research in selected fields
▷research of thin shell structures, form finding, and fabrication technologies and applications
▷successful completion of multiple prototypes and digital experiments with research engineers

UNIVERSITY OF CALIFORNIA, BERKELEY, B.A. ARCHITECTURE (08/03-12/07)

▷graduation with honors
▷graduating GPA: 3.599/4.0

professional experience

NOUS ENGINEERING (los angeles, ca). *head of computational modeling* (07/12-07/13)

nous engineering is a multidisciplinary engineering consultancy, capable of providing structural engineering, fabrication administration, computational optimization and rationalization for geometrically complex projects at all scales.

__sci arc graduation pavilion, los angeles, ca (08/12-expected completion 04/13). *lead computation, lead fabrication administrator*

▷description: architects: P-A-T-T-E-R-N-S. Combination Space Frame and Membrane design for permanent graduation pavilion/multi use space at Southern California Institute of Architecture (SCI arc).
▷overall dim: 60' h x 40'w x 20'l
▷budget: $200,000 USD
▷responsible for form-finding of membranes via soap film analysis through interface of Rhino 3D and GSA.
▷non-linear analysis of steel armature structure, sizing, and overall structural validation.
▷management of 3d model and data transfer with both architect and fabricators.

__ruins house, london, uk (07/12-expected completion 03/13) *design engineer, lead computation, lead fabrication administrator*

▷description: architects: Lily Jencks Architects. free form interior inside existing historic barn structure- plywood eggshell armature with doubly curved surface finish.
▷overall dim: 20' h x 15'w x 100'l
▷budget: $125,000 USD
▷responsible for non-linear analysis of entire structure in ROBOT. and sizing of all components, detailing, and joinery.
▷management of 3d model and data transfer with both architect and fabricators.
▷1:1 mockup supervision and execution, on-site installation supervision and management

BALL-NOGUES STUDIO (los angeles, ca). *project manager, lead computation, lead fabricator* (05/11-07/12)

ball nogues studio is a full scale design and fabrication studio defined by its synthesis of art, architecture, and industrial fabrication techniques into unprecedented three dimensional experiments and installations.

__*yucca crater*, twenty-nine palms desert, ca (10/11) *project manager, lead computation, lead fabrication*

▷description: repurposing of Talus Dome formwork into synthetic earthwork/diving pool in the middle of desert.
▷overall dim: 35.5'h x 38.5' w x 30'd

▷managed site excavation, formwork deconstruction, and panel transport via shipping trucks to remote site 200 miles away.
▷oversaw and executed reassembly of formwork in desert, lining with luan strips and general reinforcement
▷coordinated lining of bottom 8 feet with expanding polyurethane foam, delivery of 7,000 gal. potable water

__*talus dome formwork*, burbank, ca (06-11/11) *lead computation, lead fabrication*

▷description: cnc cut plywood formwork for Talus Dome sculpture- consisting of 937 SS spheres welded in place
▷overall dim: 35.5'h x 38.5' w x 30'd

▷created parametric definition allowing multiple iterations to be studied based on joinery, member size, and overall shape
▷managed production of cutfiles and oversaw CNC fabrication of 1239 unique parts, cut over 4 straight weeks
▷managed 12 person crew to execute assembly of panels and overall formwork

BALL-NOGUES STUDIO (los angeles, ca). *computational designer/fabricator* (03/10-09/10)

__*cradle*, santa monica, ca (05-08/10) *lead computation, lead fabrication*

▷description: large organic shaped sculpture made up of 335 welded SS spheres, suspended 15' above a sidewalk
▷overall dim: 15'h x 40'w x 10'd

▷coordinated parametric modeling and execution of CNC fabrication of plywood formwork for sculpture
▷designed and coordinated 5 axis milling of 800 lb. SS 3" Plate into custom bracket with 335 unique holes
▷coordinated and oversaw installation of sculpture with 16 man crew over 8 hours

__*ucla table cloth*, los angeles, ca (10/11) *lead computation, lead fabrication*

▷description: temporary panelized surface consisting of over 250 custom CNC cut plywood tables
▷overall dim: 25'h x 20'w x 30'd

▷developed custom scripting to populate form found surface with oval shaped tables based on delaunay triangulation
▷coordinated and executed CNC fabrication of custom plywood tables and connection pieces from digital model
▷managed and executed construction of entire installation over 3 weeks to meet strict opening deadline

__instruction

__Southern California Institute of Architecture: *sci arc graduation pavilion studio, fall 2012*

assistant lecturer

▷instruct a mixed class of undergraduate and graduate architecture students in Structures, Materials and Applications and Tectonics. specifically oriented towards design of graduation pavilion, teach students parametric modeling and design optimization strategies, and exploiting material and fabrication sensibilities in design.

__tools / skills

FEA: Oasys GSA (+2 yrs), ROBOT (+1.5 yrs), Ansys (+1 yrs), Matlab (+1 yrs)
3d/2d: Rhino (+8 yrs), AutoCad/Revit (+6 yrs), CATIA/Digital Project (+3 yrs)
programming: Grasshopper (+4 yrs), Rhinoscript (+3 yrs), Processing (+2 yrs), C#/C++ (+1.5 yrs), Python (+1.5 yrs)
fabrication: CNC 3/5 axis (+5 yrs), CAD/CAM laser cutting (+8 yrs), MIG/TIG welding (+2 yrs), woodworking/carpentry (+8 yrs)

__skills / interests

▷rapid prototyping, graphic statics, mathematics, fitness