

RICKEY CRUM

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EDUCATION

2007 - 2009 | **MASTERS OF ARCHITECTURE**
University of Texas at Austin, School of Architecture

2004 - 2007 | **BACHELOR OF SCIENCE: ARCHITECTURAL STUDIES**
University of Texas at Austin, School of Architecture

2002 - 2004 | Extensive additional coursework in Aerospace Engineering
University of Texas at Austin, Cockrell School of Engineering

WORK EXPERIENCE

August 2018 - CURRENT | **ADJUNCT PROFESSOR**
Master of Arts in Design and Innovation, Southern Methodist Univ., Dallas TX

DSIN 5302/7302 Form and Composition
ENGR 7190 Sketching for Visual Communication

June 2018 - CURRENT | **FREELANCE DESIGNER AND FABRICATOR**
Rickey Crum, Design and Fabrication, Dallas TX

My work focuses on developing design and fabrication solutions to non-typical design problems. Ranging in scope and scale, from artwork to architecture, our mission is to leverage cutting edge digital fabrication tools and design software to explore the intersections of design and fabrication in new and innovative ways. Notable clients include Brad Oldham Studio, bcWorkshop, and PDM Constructors.

May 2016 – June 2018 | **TEACHING LAB MANAGER**, Deason Innovation Gym
Southern Methodist University, Lyle School of Engineering, Dallas TX

The Deason Innovation Gym (DIG) is a multi-disciplinary makerspace / prototyping lab open to all students at the university and houses many tools with a focus on digital fabrication.

Tasks included:

- Co-create vision for the lab with a focus on culture, pedagogy, financial strategy, and strategy for student engagement
- Design and lead Immersive Design Challenges (IDC's), a sprint-based design/build program that engages students with real clients on engineering projects
- Create informal skill-building workshops to help students increase proficiency in lab resources and coach students on independent, maker-based projects
- Manage and facilitate outreach with student orgs, classes, tours, and corporate partners
- Oversee all operational procedures for the lab, including user access, training, usage data collection, social media relations, space improvements, budget management, grant writing, and donor relations
- Facilitate course work and in the M.A. in Design and Innovation program
- Project planning and facilitation for Intro. to Engineering Design class, KNW 2300

**WORK
EXPERIENCE
(CONT.)**

2011 - 2016 | **SENIOR DESIGNER**

CallisonRTKL, Commercial Practice Group, Retail and Entertainment, Dallas TX

CallisonRTKL is an award-winning architecture, planning and design practice that is shaping the built environment on a global scale. With significant projects in major cities world-wide, CallisonRTKL is a leader across all sectors in the architectural spectrum. I personally worked on many projects internationally, as well as domestically, including in China, Kuwait, Mexico, Panama, El Salvador, Canada, and many projects across the US.

Tasks included:

- Computational design leader, tasked with incorporating computational design tools and processes into our project work flow
- Design through all phases of the architectural process
- Parametric design, modeling, and visualization

2009 - 2011 | **OPERATIONS COORDINATOR & DIRECTOR OF SPECIAL BUILDS**

Billings Productions, Dallas TX

Billings Productions is one of only a few companies in the world that produce life-size animatronic dinosaurs and giant animatronic bugs for traveling and permanent exhibits. Specializing in creating animatronic creatures for both indoor and outdoor exhibits, they also provide customized design and build services for a wide range of static and animatronic wildlife replicas. My work has been exhibited at over 20 zoos, museums, and conferences around the world, including in: France, Singapore, Australia, Japan, England, the UAE, and many locations across the US.

Tasks included:

- Robot construction and electronic/pneumatic assembly and repair
- Exhibit design and installation
- Sculpting, mold-making, and casting of skins and various body parts
- Concept artwork from authentic dinosaur bone measurements
- Painting (airbrush and spray gun primarily) using both solvent based and water based paints, metal and fiberglass fabrication
- Operations coordination, including scheduling assembly and general project management

2006 - 2009 | **DESIGNER**

Estudioazul Architects, Austin TX

Estudioazul is a small design firm in Austin, TX with a practice focusing on single family residential and small commercial development. With our projects primarily focused in and around the Austin area, deep consideration to regional vernacular was inherent in our work.

**ACADEMIC
WRITING/
CONFERENCE
PRESENTATIONS**

Rouse, R., Krummeck, K., Higginbotham, D., **Crum, R.** (2018). Extending the Reach of Academic Makerspaces into K-12 Schools: Delivering Maker-Based Instruction with a Mobile Makerspace. Paper presented at the 3rd International Symposium on Academic Makerspaces, Palo Alto, CA.

**ACADEMIC
WRITING/
CONFERENCE
PRESENTATIONS
(CONT.)**

Torralba, J., Rouse, R., Krummeck, K., **Crum, R.** (2018). Affordances of Immersive Design Challenges in Academic Makerspaces. Paper presented at the 3rd International Symposium on Academic Makerspaces, Palo Alto, CA.

Crum, R., Krummeck, K., & Aggarwal, S. (2017). Designing an Immersive Design Challenge: Digitally Fabricated, Solar Charging Station for Public Spaces. Paper presented at the 2nd International Symposium on Academic Makerspaces, Cleveland, OH.

Aggarwal, S., **Crum, R.**, Krummeck, K. (2017). Immersive Design Challenge: Digitally Fabricated, Solar Charging Station for Public Spaces. Poster presented at the 2nd International Symposium on Academic Makerspaces, Cleveland, OH.

Rouse, R., Krummeck, K., & **Crum, R.** (2017). University makerspaces as workplaces for K-12 STEM educators. Paper presented at the 2nd International Symposium on Academic Makerspaces, Cleveland, OH.

Krummeck, K., Rouse, R., & **Crum, R.** (2017). Designing to support a maker culture in a university makerspace. Poster presented at the 2nd International Symposium on Academic Makerspaces, Cleveland, OH.

Jezyk, M. (Autodesk), **Crum, R.** (RTKL), & Holland, N. (NBBJ) (2014). Breaking Down the (Design) Barriers. Presentation on computational design in practice at Facades Plus, Dallas, TX.

Woods, M., **Crum, R.**, & O'Grady, B. (2014). Media Mash-up: Changing Tools and Objectives for Architectural Presentations. Presentation at the American Institute of Architects National Convention with Mike Woods and Brendan O'Grady, Chicago, IL.

**PROFESSIONAL
DEVELOPMENT
& AFFILIATIONS**

Board member, FD18 Event and pavilion design/build competition (2018)

Board member, FD17 Event and pavilion design/build competition (2017)

Facilitator, St Philip's School WeCreation Center Design Workshop (2017)

Judge, Furniture 4 Kids Design Competition (2015 and 2016)

Graduate, American Institute of Architects Emerging Leaders Program (2014)

Committee member, UTSOA Graduate Advisory Committee (2009)

AWARDS

Winner, JSI Chair Design Challenge (2013)

Runner-up, TEX-FAB; Applied Research Through Fabrication Competition (2012)

Winner, IIDA Lavish Vignette Design Competition (2010 and 2012)

Winner, Furniture 4 Kids Design Competition, Best Craftsmanship (2011)

Design Excellence Award, University of Texas School of Architecture (2008)

Eagle Scout Award, Boy Scouts of America, Troop 219 (2002)

**ACADEMIC
PROJECTS**

Course work, Mini Design Challenge

KNW 2300 Introduction to Engineering Design (2016-Present)

Design, facilitate and judge a two-week, introductory robotics challenge that requires the use of the 3d printer and laser cutter.

Spaceport America Cup: Payload Design Challenge

Immersive Design Challenge (2018)

Developed a program to support students in the design of a payload experiment to be launched in the Mustang Rocketry 10,000' challenge rocket for the Spaceport America Cup. The experiment focused on comparing the dynamic properties of newtonian vs. non-newtonian fluids in flight in the hopes of proposing an alternative to traditional liquid rocket fuels.

ModPod: Digitally Fabricated, Solar Charging Station

Immersive Design Challenge (2017)

Design and facilitate a week long, sprint-based challenge to create a digitally fabricated, solar charging station easily deployable in public spaces in partnership with local non-profit, Better Block, and solar installation start-up, Good Faith Energy.

SMU MakerTruck Redesign/build

Immersive Design Challenge (2017)

Structure and facilitate the redesign and build out of the SMU MakerTruck, formerly the SparkTruck, a nationally-recognized maker education project and mobile makerspace previously associated with Stanford University.

Pipe Marimba

Community Design Challenge (2016)

Semester long, student directed project to construct a marimba out of PVC pipes. Course work on the topic of Joinery

DSIN 5302/7302 Form and Composition (2016)

Paper assembly of abstracted hand connection, and modular wood screen projects. Focus on learning skillsets to manipulate and join materials with an emphasis on wood.

**PUBLIC ART &
COMMUNITY
ENGAGEMENT**

Geodesic Sphere Bandshell

FD18 by Better Block (2018)

The geodesic bandshell was designed to be the stage and focal centerpiece for the FD18 Design Competition event. The design intent was to challenge the expectations of cnc-routed fabrication techniques and no-fastener assembly. In addition to the FD18 event, the geodesic sphere was displayed (in a slightly different configuration) at the EARTHx2018 conference in April of 2018. Funded by Better Block.

Mobility Parklet

"Let's Talk About Bike Share" panel discussion, Better Block (2018)

The mobility parklet offers an easy-to-assemble solution for bike share parking while also converting parking spaces into useable public space, promoting biking as an alternate mobility option and creating additional amenity for pedestrians. Funded by Better Block.

**PUBLIC ART &
COMMUNITY
ENGAGEMENT
(CONT.)**

Dallas WonderPhone

Activating Vacancy Downtown Dallas (2017)

The WonderPhones are a series of 5 interactive payphones in colorful enclosures that connect the people in Downtown Dallas to the city and each other. The team combined old and new technology to allow people to play and record their stories.

Funded by the National Endowment for the Arts, and in collaboration with bcWorkshop, Downtown Dallas, Inc. and the City of Dallas. Created with Katie, Krummeck, Edward Li, Justin Childress, and Gray Garmon.

Golden Pillow

FD17 by Better Block (2017)

The Golden Pillow is a 7'x13' gold mylar balloon. It was designed and crafted to be the focal and iconic centerpiece for FD17 Pavilion Design competition. Funded by Better Block, and created in collaboration with Gray Garmon.

AIA Dallas Retrospect Exhibit

American Institute of Architects, Dallas (2011-2016 annually)

Annual exhibit organized by AIA Dallas to showcase Dallas architects and architecture firms through 3D displays exhibited in North Park Mall. The displays are designed with a focus on current trends and practices in architecture. Designed and built in collaboration with a team of colleagues from CRTKL. Funded by CallisonRTKL.

TREC Giving Gala Playhouse

Texas Real Estate Commission (2013 and 2014)

Co-designed and created a playhouse to be auctioned off as part of the TREC Giving Gala to raise money for the TREC Foundation. Built in collaboration with colleagues at CRTKL, Turner Construction, and Aspenmark Roofing.

**NOTABLE
ARCHITECTURE
PROJECTS**

WASA Cinema – Forest City, Washington D.C. (CRTKL)

Lead Designer of the roughly 75,000 sf, double level movie theater. The space houses 16 individual theaters and an upscale lounge, and is prominently located between the Nationals Ballpark and the blooming Naval Yards neighborhood.

Greenland City – Greenland Development Group, Chengdu, China (CRTKL)

Led computational design efforts through the progression of this roughly 4.6 million sf mixed-use development, including four high-rise office towers, one hotel tower, and five level retail mall. My efforts focused on environmental simulation, project metrics, interoperability, and optimization, as well as providing significant direction to the overall design.

Al Kout Multipurpose Hall– Tamdeen, Kuwait City, Kuwait (CRTKL)

Lead Designer of the +40,000 sf multipurpose hall built on top of the Al Manshar Mall. A key component to the design was a unique rain-screen façade assembly I designed using computational design tools in direct collaboration with the structural engineer and material manufacturers.

**NOTABLE
ARCHITECTURE
PROJECTS
(CONT.)**

360 Mall Tennis Complex – Tamdeen, Kuwait City, Kuwait (CRTKL)

An expansion to the 360 mall, the tennis complex houses additional retail, a 5-star hotel, and a world class tennis facility with 2 main arenas and a combined 16 additional courts both indoors and out. My work focused primarily on computational design and environmental analysis. I performed an in-depth lighting, visibility and heat gain study of the main mall promenade skylight.

Town Center Costa Del Este – Empresas Bern, Panama City, Panama (CRTKL)

Co-designed 850,000sf mixed-use retail and office complex in the heart of Panama City. Project is currently under construction.

Orlando Sports and Entertainment District - Orlando Magic, Orlando, FL (CRTKL)

Design lead on base level retail, iconic central kiosk and media towers. The estimated \$200 million mixed-use development provides new offerings to the downtown Orlando sports district, including 250 room hotel, an office building, multi-family residential and a variety of retail and dining venues.

**ADDITIONAL
ARCHITECTURE
PROJECTS**

Multiplaza San Salvador – Grupo Roble, San Salvador, El Salvador (CRTKL)

Dallas Maritime Museum – DMMF, Dallas, TX (CRTKL)

Renaissance Master Plan – Crow Holdings, Dallas, TX (CRTKL)

Usos Mixtos Parks Leon – Ares Arquitectos, Leon, Mexico (CRTKL)

Paseo Colorado – DDR Corp., Pasadena, CA (CRTKL)

Patio Satellite – MRP, Mexico (CRTKL)

Deerfoot Meadows – Ivanhoe Cambridge, Calgary, Canada (CRTKL)

Cottonwood – Howard Hughes, Cottonwood, CO (CRTKL)

Madero Harbour – GNV, Buenos Aires, Argentina (CRTKL)

Northfield – Forest City, Denver, CO (CRTKL)

Knox Park Village – Open Realty, Dallas, TX (CRTKL)

Bonton Farms Community Center – Bonton Farms, Dallas, TX (AIA)

**PUBLICATIONS
& MEDIA**

BetterBlock.org Blog, FD18: May the Fourth Be With You (2018, May)

<http://betterblock.org/blog/2018/05/14/fd18-may-the-fourth-be-with-you/>

FOX News, Dallas non-profit creates bike share docks for neighborhoods (2018, February)

<http://www.fox4news.com/news/dallas-non-profit-creates-bike-share-docks-for-neighborhoods>

BetterBlock.org Blog, From Pavement to People, Building the Street of Tomorrow

(2018, February) <http://betterblock.org/blog/2018/02/15/from-pavement-to-people-building-the-street-of-tomorrow/>

**PUBLICATIONS
& MEDIA (CONT.)**

CBS News, What Are 'Payphones' Doing In Downtown Dallas? (2017, October)
<http://dfw.cbslocal.com/2017/10/18/pay-phones-downtown-dallas/>

NBC News, You'll Be Surprised to Hear About Dallas' WonderPhones (2017, October)
<https://www.nbcdfw.com/news/weird/Youll-Be-Surprised-to-Hear-About-Dallas-Wonder-Phones-450382123.html>

D Magazine, Calling from the Downtown Dallas WonderPhone (2017, October)
<https://www.dmagazine.com/frontburner/2017/10/wonderphone-dallas/>

Dallas Innovates, Design Nonprofit Selects 2 Artist Groups for Community Project (2017, August) <https://dallasinnovates.com/dallas-design-nonprofit-selects-2-artist-groups-for-community-project/>

bcWorkshop.org, Artists Selected for Activating Vacancy Downtown Dallas! (2017, August)
<http://www.bcworkshop.org/posts/artists-selected-for-activating-vacancy-downtown-dallas>

SMU Video, DIG Maker Truck (2017, June)
<https://www.youtube.com/watch?v=Uzj4R3djarw>

BetterBlock.org Blog, FD17: Better Block's First Design Competition (2017, May)
<http://betterblock.org/blog/2017/05/26/fd17-better-blocks-first-design-competition/>

Dallas Innovates, Mobile Makerspace Once Known as SparkTruck Rolls Into Town (2017, May) <https://dallasinnovates.com/mobile-makerspace-once-known-as-sparktruck-rolls-into-town/>

Dallas Innovates, SMU Students Create Solar Charging Station for WikiBlock (2017, February) <https://dallasinnovates.com/smu-students-create-solar-charging-station-wikiblock/>

Texas Architect, Reflex by RTKL Associates (2014, March/April)
Expanded content - <https://texasarchitects.org/wordpress/re-flex-by-rtkl-associates/>

D Magazine, Behind the Scenes: Architects as Retrospect Exhibit Builders (2013)
Co-authored with Clemente Jaquez. <https://www.dmagazine.com/home-garden/2013/04/behind-the-scenes-architects-as-retrospect-exhibit-builders/>

ISSUE 005, UTSOA Publication, Vertical Studio project (2009) https://issuu.com/utsoa/docs/005_pages

ISSUE 004, UTSOA Publication, Studio Project (2008) <https://issuu.com/utsoa/docs/issue004>