

BIO



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Elijah Williams is the digital technology specialist and an instructor at the New York Institute of Technology School of Architecture and Design, where he has taught on the Fourth Year Comprehensive Design Studio Team and focuses on advanced modelling and fabrication techniques. His work as the founding member of ARTIFEX TOOLS challenged the technical proclivity of the design profession by creating tools to improve access to complex systems and data structures. His design studios and work at the recently founded STUDIO ALBATROSS in Long Island City focus on hands-on model making, public data systems and challenging formal design logics relationship to urban development. He attended Cal Poly San Luis Obispo and has previously taught at Spitzer CCNY, Cal Poly SLO and the Boston Architectural College.

ABSTRACT

On Mounting a Robot

In my role at the New York Institute of Technology Digital Technology Specialist I have been tasked with building, prototyping and experimenting with a diverse set of mounts related specifically to moving objects (robots). It is my hope that the audience at IMF will find this information relevant technically and interesting. Although it varies from the traditional world of mount making, this presentation intends to expose attendees to this closely related work ending with a discussion of the role of these kinds of projects in the future.

The presentation will include images and techniques I have used here to mount robots of different scales here, as well as a review of other interesting applications and implementation of these ideas.

Outline:

Intro:

Four Studies in Mounting Moving Objects

Table Scale Small Robotics:

Max Jr, Movement Components for Calibration and Zeroing .

Existing System in the Lab:

Torque force calculations for toppling over potential, Jordan Wolfson and WEDA Workshop on moving objects .

Examples in other shops and applications:

Industry Mounting, Academic Environments , use of Advanced Welding Tables.

Standardization with variability built in: Unit Grids, Limiting expensive custom pieces

Mounting of Mid-Size Robotics: Mobile KUKA LBR, Locking Wheel Stability.

Examples in other shops and applications: Industry Mounting, Academic Environments, Use of Welding Tables