INVESTIGATIONS INTO THERMALLY RESPONSIVE A R C H I T E C T U R E

THECIC DV. DOD CADI O

THESIS BY: ROB GARLO YEAR: 2012

BASE THESIS ARGUEMENT

How can a better understanding of a material's reaction to thermal energy allow us to design an architecture that participates and mediates amidst the presence of bodies and/or environmental stimuli?





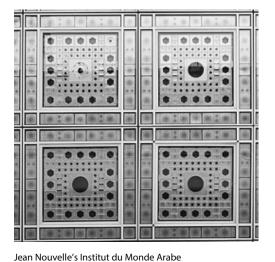


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LITERATURE REVIEW

ab active boundaries







Boda Rasch's Medina Umbrellas

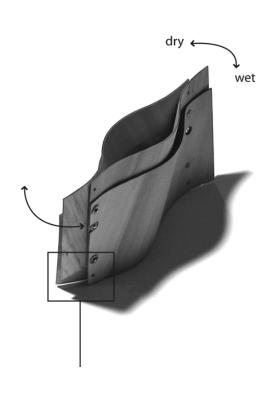
The Musde Projects: ONL and Hyperbody Research Group

- -ALL MAKE USE OF SENSORS
- -ALL ARE "HIGH TECH"

[sm]

SMART [USE OF] MATERIALS





- -WARPED: MATT HUME
- RESPONSIVE SYSTEMS USE SENSORS AND ELECTRONICS TO ACHIEVE FULL AND TOTAL CONTROL
- -MATERIAL BEHAVIOR FORCES US TO RELEASE THAT CONTROL
- PHASE CHANGE MATERIALS
 PARAFFIN WAX
 WOOD WITH HUMIDITY

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SUMMARY OF METHODS

[ma] MATERIAL ACTUATION

[ma] MATERIAL ACCUMULATION

[qd] QUANTIFYING DEFLECTION

[dp] DEFORMATION POTENTIAL

[to] THERMAL OCCUPATION

[cg] CONGRUENT GEOMETRY

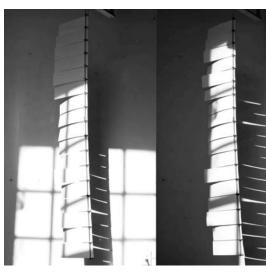
[ca] CONGRUENT ASSEMBLY

[hi] HINGE

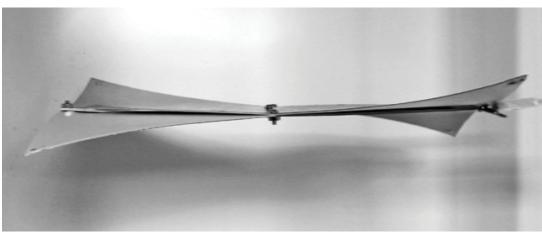


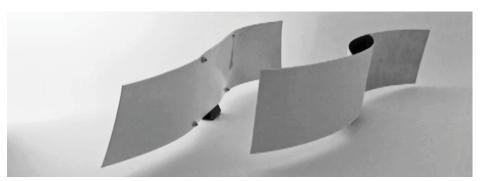


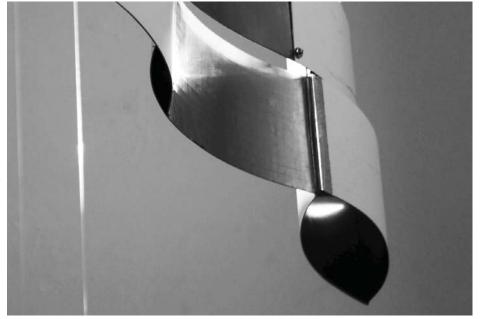












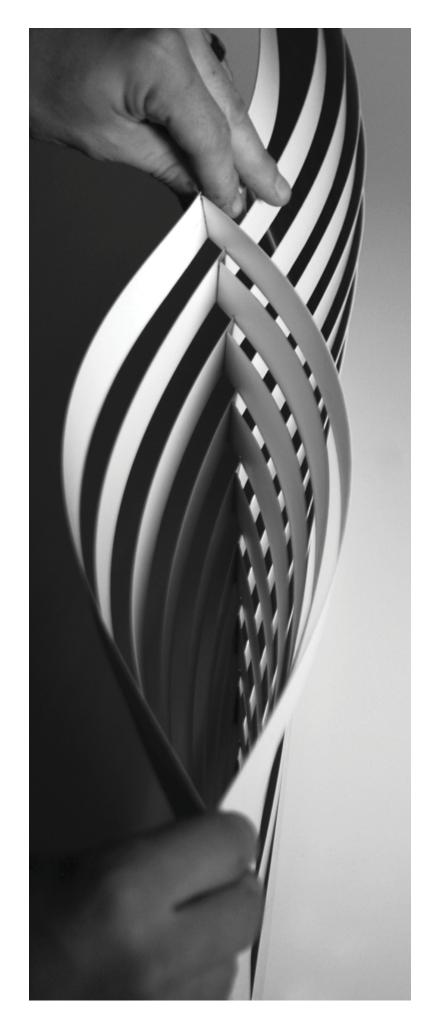
INVESTIGATIONS_INTO THERMALLY_RESPONSIVE ARCHITECTURE

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SUMMARY OF METHODS







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CRITIQUE



