

s. R. Crown Hall
3360 South State Street Chicago IL 60616
arch@iit.edu 312.567.3260

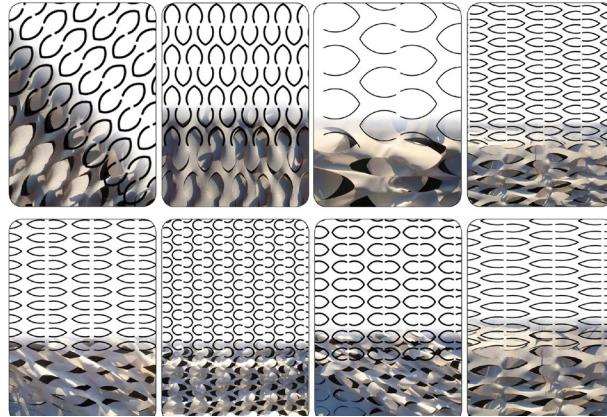
Maria Paulina Carvallo



Master of Science in Architecture

IIT offers a strong technical and design education. Through the IIT program and the AIA Chicago I have had the opportunity to connect and work with renowned architects and engineers such as Prof. Werner Sobek at the ILEK Institute in Stuttgart, creating an invaluable experience in my education. IIT offers a research program unlike many other institutions. Also, its location near the dynamic city of Chicago allows me to continually learn.

My thesis explores the importance of the building envelope and is meant to gain a deeper understanding of architectural fabrics. While there has been a great interest in novel architecture and technical textiles for the use in architecture, systems utilizing advanced materials have been developed almost exclusively for the highest architectural design projects, without addressing the concerns of openings in the textiles-based systems which are primordial.



Maria Paulina has a Bachelor of Architecture from the University of Arizona. She was awarded the prestigious 2010 Martin Roche Travel Scholarship from AIA Chicago.

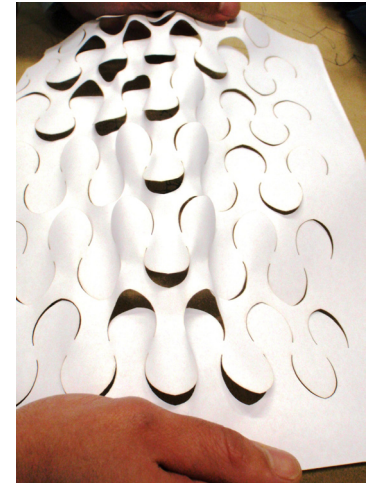


Image above: Different materials, such as paper, are used to examine deformations and openings to eventually transfer to textiles. Image Left: To analyze the material behavior due to different cutting patterns visual analysis were made to evaluate mechanisms and to identify potential patterning which are promising for further experiments. This analysis is also important in detecting so called "soft qualities" like haptics and light shadow interaction.

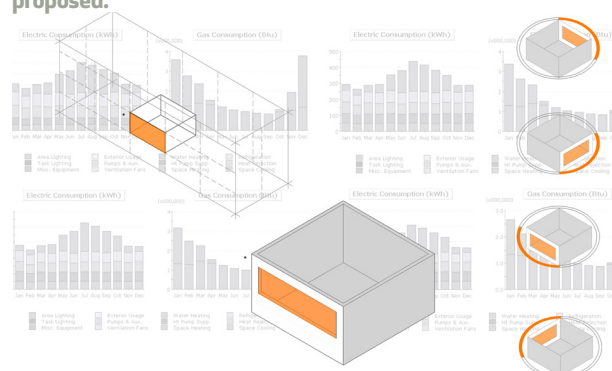
Maria Palencia Muro



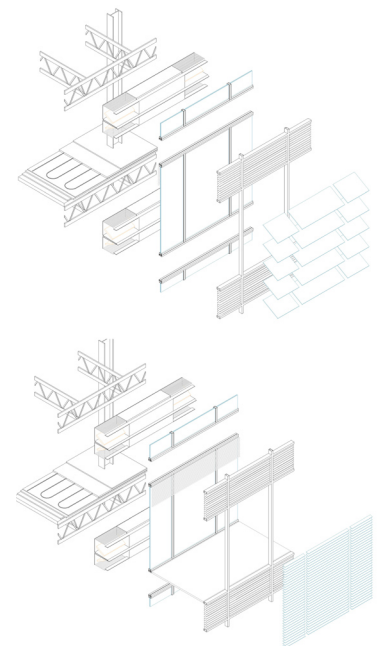
Master of Science in Architecture

I decided to apply to the Master of Science in Architecture at IIT not only because of its international architectural reputation, but also because of its attractive, flexible and challenging research program. Being able to study in depth the opportunities of glass in architecture, analyzing first hand how Chicago's architecture had put this in practice and doing so with experts in the field, has been a unique and once-in-a-life-time occasion for me.

The main purpose of my thesis is to analyze the components for an energy efficient façade and evaluate the space comfort within the context of an economically derivable solution. The work has been staged in various steps where literature reviews, case study analyses, and simulation processes have been crucial in the decision-making process. After these steps are completed the conclusions extracted will be applied in an existing case scenario, where the upgrade of an existing building envelope will be proposed.



Maria has a Master of Architecture from the Universidad Politecnica de Valencia in Spain and she is currently pursuing a Ph.D. in Architecture from there as well.



Images above represent wall principles, while the image to the left represents the simulation process.