


American Concrete Institute®
Advancing concrete knowledge

International Session, Structural Concrete: An Art Form, Part 1

ACI Spring 2012 Convention
March 18 – 21, Dallas, TX

ACI WEB SESSIONS





Maria Garlock is an Assistant Professor of Civil Engineering at Princeton University. Before becoming a professor, she spent several years as a consulting structural engineer in New York City designing concrete and steel structures with Leslie E. Robertson Associates. Professor Garlock is of Argentinean origin and fluent in the Spanish language. Since much of the primary sources for this project were in Spanish, her language skills and her structural engineering background were an indispensable component to understanding the process and context of Candela's thoughts when designing these great works of art. Professor Garlock is engaged in other structural engineering research such as innovative structural systems for resisting earthquakes and improved analysis and design methods for steel structures in fire. The overarching goal of her research is to expand engineering knowledge for the purpose of enhancing professional practice.

ACI WEB SESSIONS

ACI ConventionMarch 18, 2012

FÉLIX CANDELA: Structural Artist






Maria E. Moreyra Garlock
 Department of Civil and Environmental Engineering
 Princeton University




Zarzuela Race Tracks
(by Eduardo Torroja)

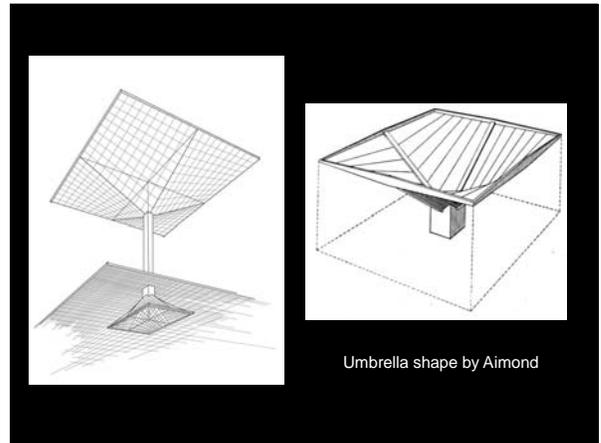
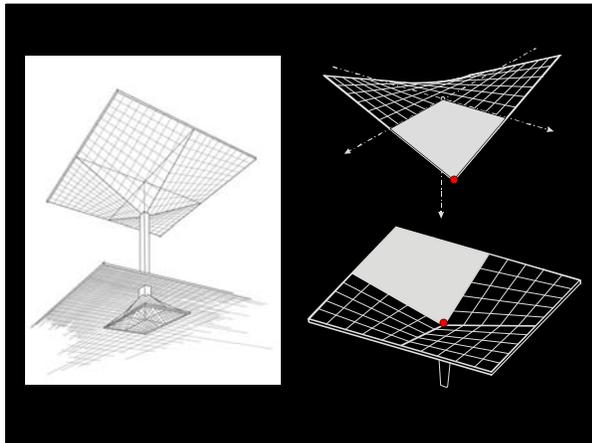
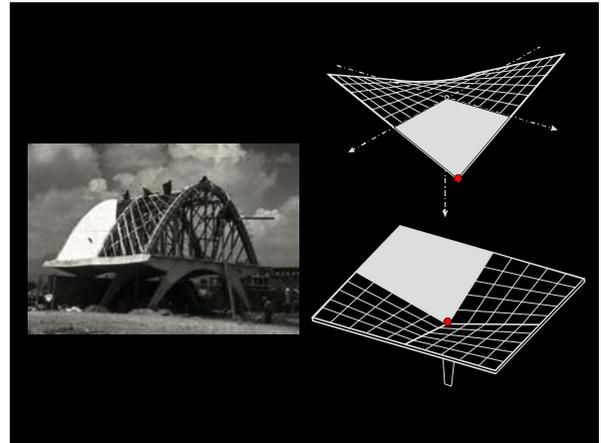
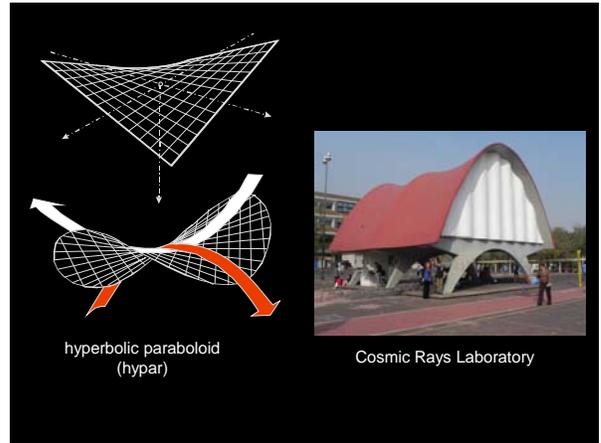
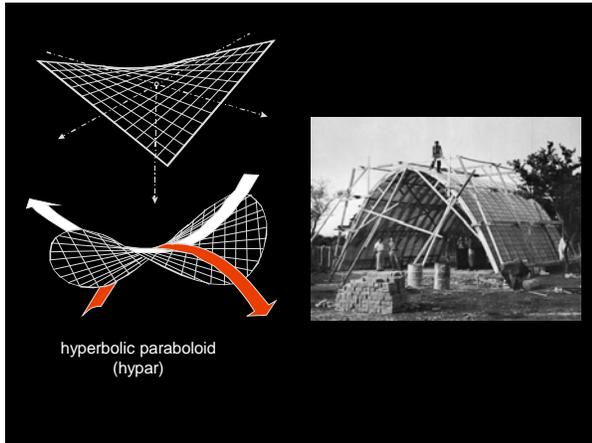


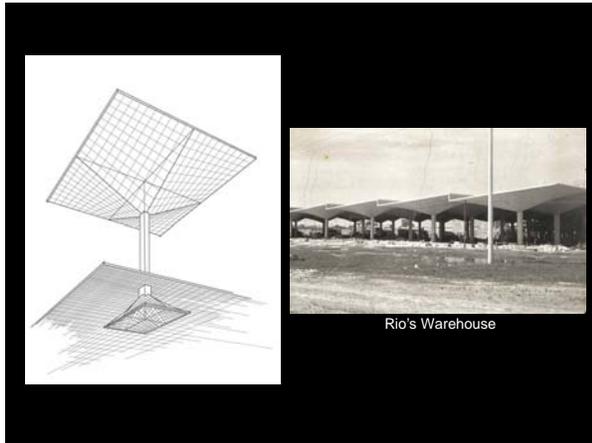


Zarzuela Race Tracks
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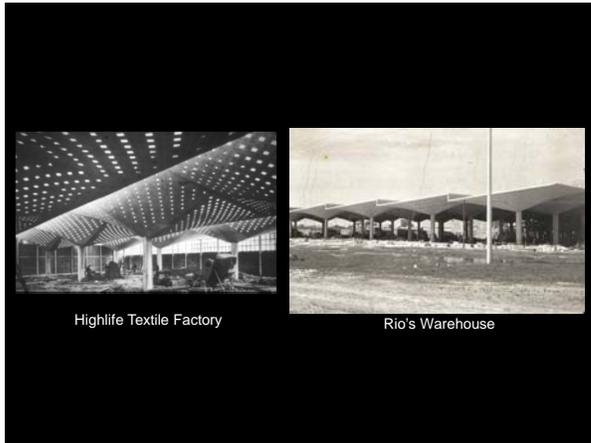






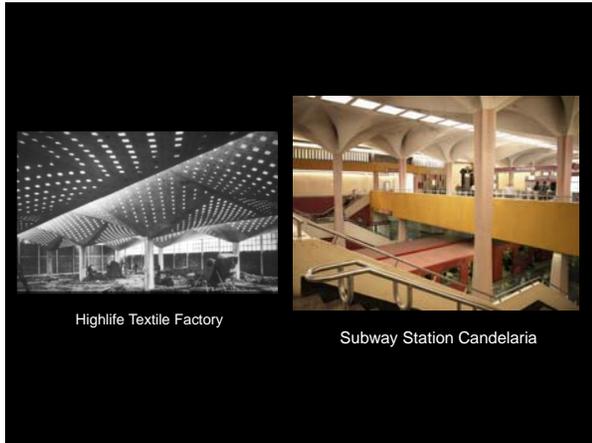


Rio's Warehouse



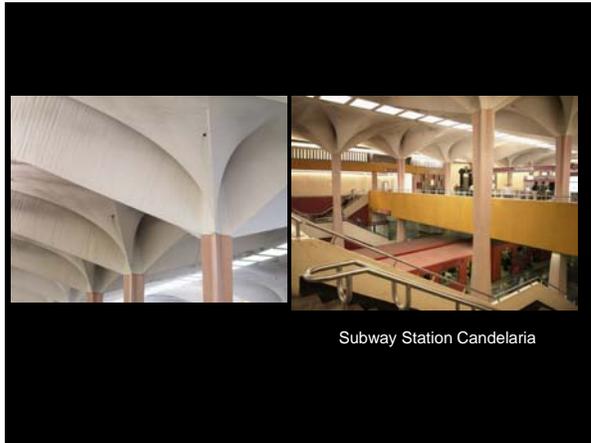
Highlife Textile Factory

Rio's Warehouse

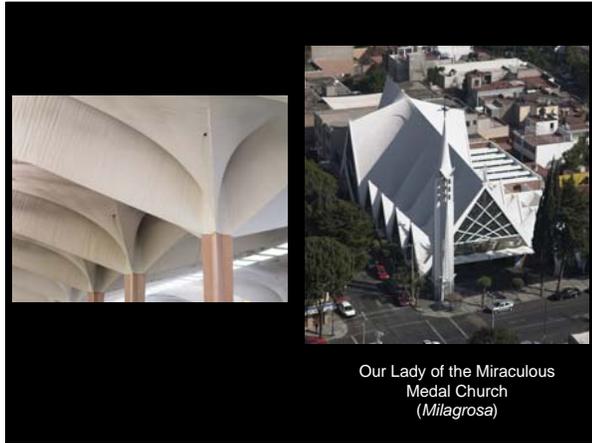


Highlife Textile Factory

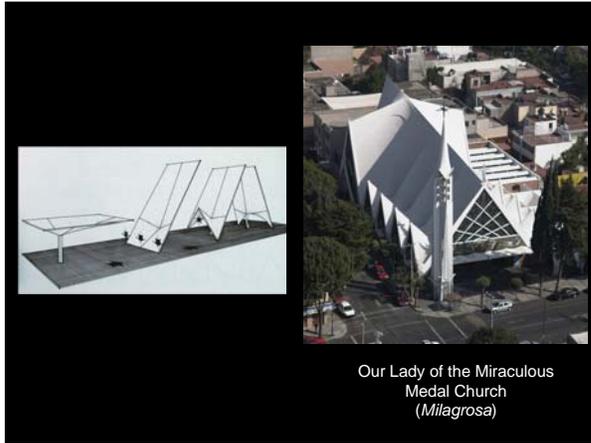
Subway Station Candelaria



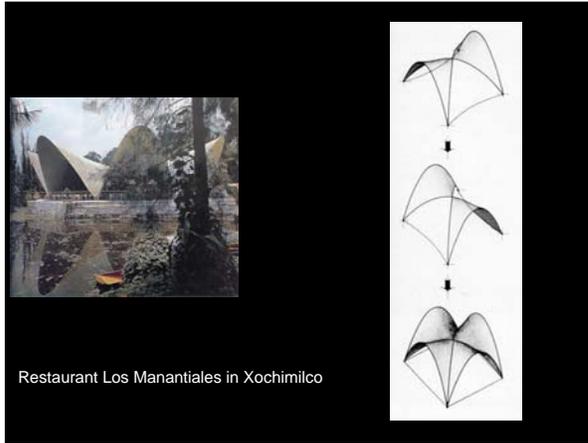
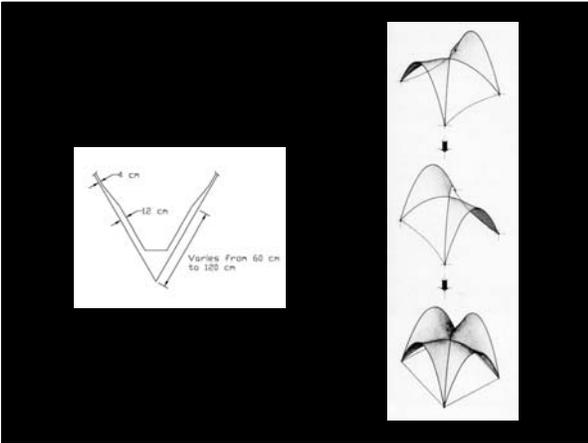
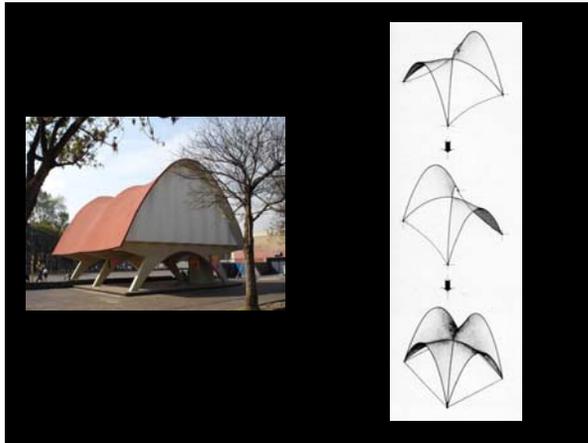
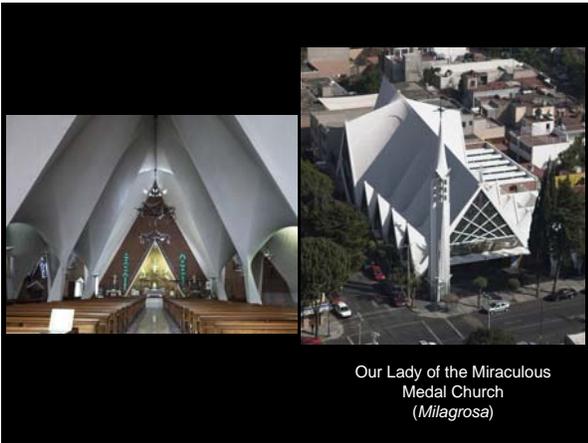
Subway Station Candelaria

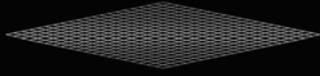
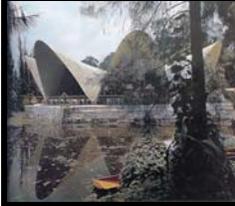


Our Lady of the Miraculous
Medal Church
(*Milagrosa*)



Our Lady of the Miraculous
Medal Church
(*Milagrosa*)





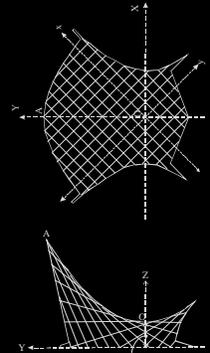
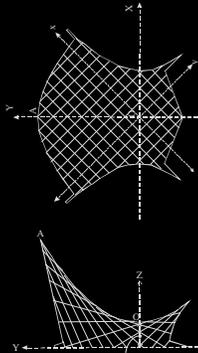
Restaurant Los Manantiales in Xochimilco

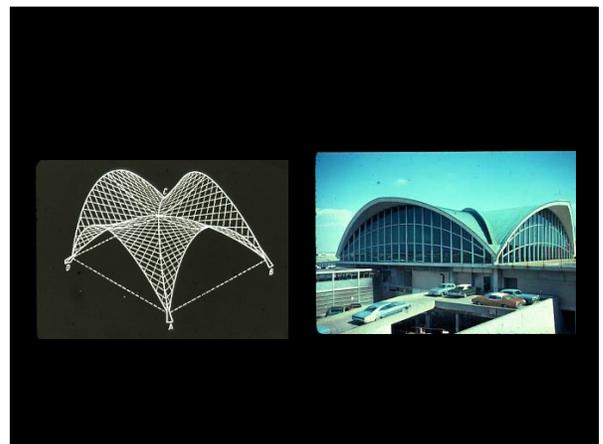
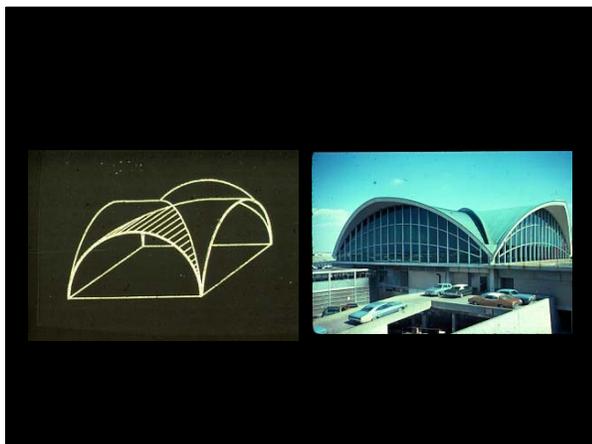
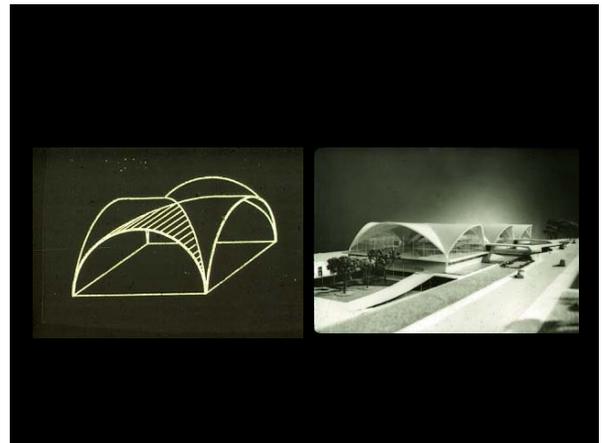
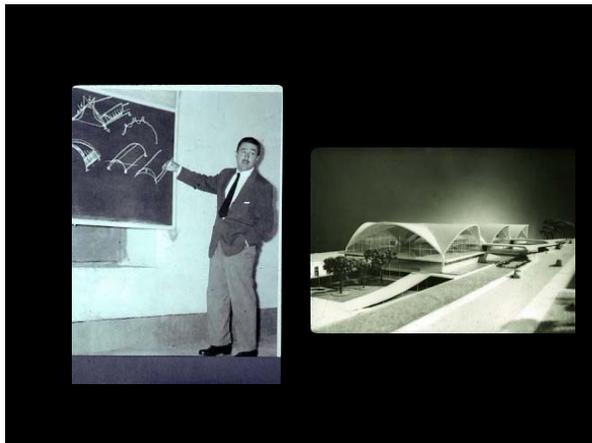


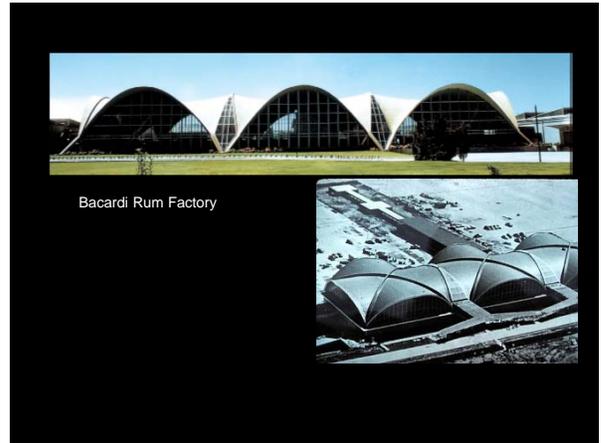
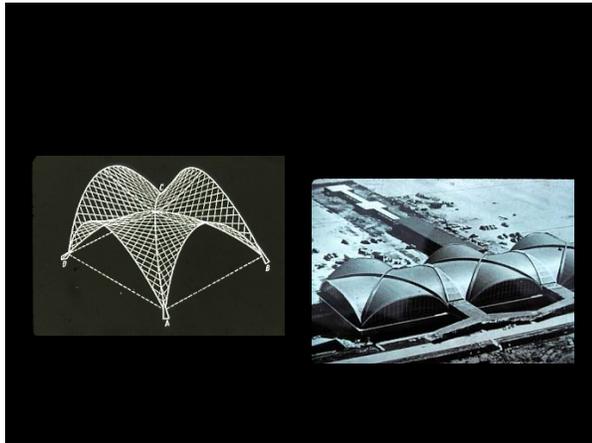
Restaurant Los Manantiales in Xochimilco



Chapel Lomas de Cuernavaca







Structural Artists

- Minimum Materials
 - *efficiency*
- Minimum Cost
 - *economy*
- Aesthetic Intention
 - *elegance*



Structural Artists

- Minimum Materials
 - *efficiency*
 - **ENGINEERS**
- Minimum Cost
 - *economy*
 - **BUILDERS**
- Aesthetic Intention
 - *elegance*
 - **ARTISTS**

Master Builder

Structural Artist




imitation



innovation



inspiration