



Daniel Cardoso Llach joined Penn State as an Assistant Professor in 2012. At the Stuckeman School of Architecture, Daniel leads the Design Ecologies Lab (DeLab), which critically engages technology to rethink the relationships between design, society and the built environment.

Before joining Penn State, Daniel was a Presidential Doctoral Fellow at the Massachusetts Institute of Technology (MIT), and worked as a consultant and researcher at Gehry Technologies. He studied at Universidad de los Andes (B.Arch) and MIT (SMArchS, PhD), and has practiced as an architect, researcher and computational designer in Latin America, the US and the Middle East.

Daniel recently co-chaired the editorial board of the Iberoamerican Society of Digital Graphics international conference (Sigradi), and is a member of the scientific committee of several academic bodies including Sigradi, the International Committee for Design History and Design Studies, and the Dearq journal. He has lectured and conducted numerous workshops internationally, and published several articles on peer-reviewed publications.

Research interests

- Generative design and fabrication
- Data-visualization
- Software studies
- Digital Humanities

Education

Ph.D., Architecture: Design and Computation. Massachusetts Institute of Technology (2012).

SMArchs, Architecture: Design and Computation. Massachusetts Institute of Technology (2007, Best Thesis Prize)

B.Arch, Universidad de los Andes, Bogotá, Colombia (2001)

Current courses

ARC497c Algorithmic tectonics

ARC231 Architectural Design I

Projects

CROMA

Builders of the vision (book project)

Visualizing BIM coordination

Selected Publications

Peer Reviewed Journal Articles

Daniel Cardoso Llach, "Perfect slaves: brief history of cyber-architecture at MIT," *Dearq*, no. 10 (July 2012): 48-59.

Daniel Cardoso Llach, "Inertia of an Automated Utopia: Design Commodities and Authorial Agency 40 Years After the 'Architecture Machine,'" *Thresholds*, no. 39 (July 2011): 39-44.

Daniel Cardoso Llach, "Shift-Design: Scripts and Other Design Artifacts," *International Journal of Architectural Computing* 8, no. 1 (January 1, 2010): 17-28.

Daniel Cardoso Llach and Remei Capdevila Werning, "Arquitectura y Computación," *Anthropos*, no. 214, *Inventiones técnicas y dimensión ética* (2007): 108-113. (in Spanish)

Conference papers

Cardoso, D. (2010). *The Poetics of Automation: Conceptions of human and non-human agency in design*. 4S: Society for the Social Studies of Science. Tokyo: 4S.

Cardoso, D. (2009). *New Geography of Design*. IACAP: European Conference of Computation and Philosophy. Barcelona: IACAP.

Cardoso, D., Argun, A., Rocha, C. A., & González, J. (2009). *Drawing Transparencies: 'Responsible Responsiveness' in spaces through organic electrochromism*. eCAADe: Education and Research in Computer Aided Architectural Design in Europe (pp. 83-88). Istanbul: eCAADe.

Cardoso, D. (2009). *Generative Craft*. SIGraDi Sociedad Iberoamericana de Gráfica Digital. Sao Paulo: Universidad de Mackenzie.

Cardoso, D. (2008). *Design and the Automated Utopia: Certain assumptions in digital design culture*. *Proceedings of the First International Conference on Critical Digital*. Cambridge: Harvard University Graduate School of Design.

Cardoso, D., & Nagakura, T. (2008). The Melnikov Grammar. 3A International Conference of Computer Graphics and Artificial Intelligence. Athens.

Cardoso, D., & Sass, L. (2008). Generative fabrication. DCC08: Design, Computation and Cognition. Atlanta: DCC08.

Sass, L., Michaud, D., & Cardoso, D. (2007). Materializing a Design with Plywood. eCAADe: Education and Research in Computer Aided Architectural Design in Europe (pp. 629-636). Frankfurt: eCAADe.

Cardoso, D., Michaud, D., & Sass, L. (2007). Soft Facade: Steps towards the definition of a responsive facade for high-rise towers. eCAADe: Education and Research in Computer Aided Architectural Design in Europe (pp. 567-573). Frankfurt: eCAADe.

Cardoso, D. (2006). Controlled Unpredictability: Constraining Stochastic Search as a Form Finding Method in Architectural Design. SIGRADI. Santiago de Chile.

Editorial

Editorial co-chair for Sigradi 2010 Conference Proceedings: Disrupción, Modelación y Construcción: Diálogos cambiantes (in Spanish).

Fellowships and Awards

MIT Council for the Arts Grant (2009)

Awarded funding for research project CROMA.

MIT Presidential Fellowship (2007) Grant towards doctoral studies.

Best SMArchS Thesis Prize (2007)

Awarded to the best SMArchS thesis.

Center for Bits and Atoms Fellowship (2006)

One year full tuition and stipend support, awarded by the Center for Bits and Atoms at the MIT MediaLab to support thesis research.

Tuition Support Grant, Department of Architecture, MIT (2005)

Special Merit Recognition, Department of Architecture, MIT (2005)

Andres Bello National Award. Andres Bello Foundation, Colombia (1996)

Granted to the Top 50 scores nationwide on the ICFES (Colombian equivalent to the SAT in the US) test (ranked 26th). The award included financial aid towards college tuition.