Proceedings of the 30th Annual Conference of the Association for Computer Aided Design in Architecture, ACADIA
Table of Contents

Introductions
7 Nancy Yen-wen Cheng
ACADIA: an Ecosystem for Ideas
8 Aaron Sprecher, Shai Yeshayahu, Pablo Lorenzo-Eiroa
ACADIA 2010 Conference Chairs
On Responsive Information and Variations in Architecture
10 Aaron Sprecher
Informed Architecture
14 Shai Yeshayahu
Hack-on-Life
16 Pablo Lorenzo-Eiroa
In:forming a Critical Digital Architecture
Autonomy into Life

Keynote Essays
24 Antoine Picon
Digital Culture and Architecture: Evolution or Revolution
26 Georges Teyssot
The Membrane and the Fold
32 Karl Chu
The Global Brain
36 George L. Legendre
Parametric Surface Redux: IJP (Finally) Explained
40 Evan Douglis
In Search of Synthetic Immortality

Affluence - Work In Progress
45 Antonino Saggio
Information is the Raw Material of a New Architecture
49 Alexis Meier
Computation against design? Toward a New Logico-centrism in Architecture
53 Ingeborg M. Rocker
Interface: Between Analog and Digital Systems
61 Christian Derix
Mediating Spatial Phenomena through Computational Heuristics
67 David Gersten
Time Promise Land: Notes on our Current Geographies

Affluence - Peer Reviewed Essay Sessions
73 Anijo Punnen Mathew
Just in Place Learning: A Novel Framework for Employing Information in “Place” for Urban Learning Environments
81 Carlos L. Marcos
Complexity, Digital Consciousness and Open Form: A New Design Paradigm
88 Kyle Steinfeld, Pravin Bhiwapurkar, Anna Dyson, Jason Vollen
Situated Bioclimatic Information Design: a new Approach to the Processing and Visualization of Climate Data
97 Ming Tang, Jonathon Anderson
Mathematically Driven Forms and Digital Tectonic: A Formula for Realizing the Digital
103 Simon Flöry, Helmut Pottmann
Ruled Surfaces for Rationalization and Design in Architecture
110 Antonino Di Raimo
Caregiver Architecture: Human Body - Information - Cognition
117 Joanna Crotch, Robert Mantho, Martyn Horner
Social Spatial Genesis: Activity Centered Space Making
125 Paul Andersen, David Salomon
The Pattern That Connects
133 Jong Bum Kim, Mark J. Clayton
Support Form-based Codes with Building Information Modeling – The Parametric Urban Model Case Study
139 Nathan Miller
[make]SHIFT: Information Exchange and Collaborative Design Workflows
145 Danelle Briscoe
Information Controlled Erosion
151 Achim Menges
Material Information: Integrating Material Characteristics and Behavior in Computational Design for Performative Wood Construction
**Influence - Work In Progress**

159  Martin Bressani  
Towards a Digital Theory of Affect

164  Alessandra Ponte  
Notes for an Archeology of Responsive Environments: The Case of Montreal 1965-1975

168  Alberto T. Estévez  
Application of Life Information in Architecture: Biodigital Architecture and Genetics

174  Jenny E. Sabin  
Digital Ceramics: Crafts-based Media for Novel Material Expression & Information Mediation at the Architectural Scale

**Confluence - Work In Progress**

271  Mohamed Sharif  
Notes on Abductive Experimentation

276  Nader Tehrani  
Interview: On the Abstraction of Information and the Physical Tectonics of Materials

282  Mark Linder  
Literal Digital

286  Scott Marble  
Designing Design, Designing Assembly, Designing Industry

293  David Theodore  
The Limits of Digital Architecture: Interpretation versus Data

**Influence - Peer Reviewed Essay Sessions**

183  Tim Ireland  
Stigmergic Planning

190  Jennifer G. Wall, Erik D. Hegre  
Expel Binary Assumptions

196  Vlad Tenu  
Minimal Surfaces as Self-organizing Systems

203  Tomasz Jasikiewicz  
(In)forming Interactive Architectural Systems, Case of the xMAIA Meta-model

211  Scott Crawford  
A Breathing Building Skin

218  Kermin Chok, Mark Donofrio  
Structure at the Velocity of Architecture

227  Flora Dilys Salim, Hugo Mulder, Przemyslaw Jaworski  
Demonstration of an Open Platform for Tangible and Social Interactions with Responsive Models

234  Nicholas de Monchaux, Shivang Patwa, Benjamin Golder, Sara Jensen, David Lung  
Local Code: The Critical Use of Geographic Information Systems in Parametric Urban Design

243  Anke Pasold, Isak Worre Foged  
Performatve Responsive Architecture Powered by Climate

250  Isak Worre Foged, Esben Skouboe Poulsen  
Environmental Feedback and Spatial Conditioning

258  Christina Doumpioti, Evan L. Greenberg, Konstantinos Karatzas  
Embedded Intelligence: Material Responsiveness in Façade Systems

263  Michael Leighton Beaman, Stefan Bader  
Responsive Shading | Intelligent Façade Systems

**Confluence - Peer Reviewed Essay Sessions**

299  Rhett Russo  
Information as Material: Data Processing and Digital Fabrication Technologies

305  Chris Perry  
Anticipatory Architecture | Extrapolative Design

313  Pablo Banda  
Parametric Propagation of Acoustical Absorbers

320  Vinu Subashini Rajus, Robert Woodbury, Halil I. Erhan, Bernhard E. Riecke, Volker Mueller  
Collaboration in Parametric Design: Analyzing User Interaction during Information Sharing

327  Shahin Vassigh, Silvana Herrera  
Interactive Teaching through Simulation Environments

333  Lawrence Blough  
Digital Tracery: Fabricating Traits

340  Martin Tamke, Jacob Riiber, Hauke Jungjohann  
Generated Lamella

348  Heinz Schmiedhofer  
Interactive Geometric Design of Architectural Freeform Hulls with Embedded Fabrication Information

357  Sigrid Brell-Cokcan, Johannes Braumann  
A New Parametric Design Tool for Robot Milling

364  Mark Cabrinha  
Parametric Sensibility: Cultivating the Material Imagination in Digital Culture

372  Karola Dierichs, Achim Menges  
Material Computation in Architectural Aggregate Systems

379  Jordan Geiger, Virginia San Fratello  
Hyperculture: Earth as Interface

386  Authors Biographies

410  Credits

410  ACADIA 2010 Sponsors