

# HONORABLE MENTION

## Blooming Bamboo House



Vietnam suffers from a relentless cycle of floods, landslides, earthquakes, and more. Because much of the country's housing stock is poorly constructed—and unsanctioned—the natural disasters destroy thousands of families' homes every year.

To minimize the risk of destruction, Hanoi-based **H&P Architects** developed the Blooming Bamboo House, a residential housing model that utilizes local materials and can be built by laypeople at a low cost.

The 62-square-meter (670-square-foot) prototype is the first structure in Vietnam to be built almost entirely out of bamboo, according to H&P principal Doan Thanh Ha. The material's high tensile strength enables the house to withstand strong winds and earthquakes, while a foundation of salvaged plastic drums will allow it to endure floods of up to 1.5 meters (4.9 feet).

Bamboo poles ranging in diameter from 8 to 10 centimeters are tied or bolted together to create the

building frame, followed by smaller lengths that are tied onto the walls or lined on the floors as finishes, and sealed with bitumen to prevent water infiltration. The house can also be finished with other local materials, such as wooden planks, coconut leaves, plastic sheets, and bottles.

With an open floor plan and simple structural system, the house is designed to be built in modules of square rooms quickly and inexpensively; the prototype was built in just 25 days for \$2,500, and accommodates six residents. Owners can adapt and expand their homes to include porches and veranda windows. Along with its storm resistance, the house's cubic shape and pitched roof establish an eye-catching vernacular that alludes to the traditional homes of the region.

Juror Mic Patterson called the house "a reminder of what can be realized with indigenous materials and building practices sensitively handled." —N.B.

## Jury

**Mic Patterson** is founding principal of Los Angeles–based Design Tectonics, a consultancy that focuses on innovative façade technology applications and research. He was formerly the vice president of strategic development at Enclos. Patterson is a Ph.D. candidate in the University of Southern California School of Architecture with a focus on sustainable façade renovation practices.

**Douglas Stockman**, AIA, is a founding principal at El Dorado in Kansas City, Mo. He also serves on the Kansas State University College of Architecture, Planning, and Design Dean's Advisory Council, and is chair of the Downtown Council of Kansas City. Stockman received a B.Arch. from Kansas State University.

**Elizabeth Whittaker**, AIA, is founder and principal of Merge Architects in Boston. In 2015, she was a recipient of the AIA Young Architects Award and the Emerging Voices award from the Architectural League of New York. Whittaker received an M.Arch. from the Harvard Graduate School of Design, where she is an assistant professor in the practice of architecture.

## Credits

### **Cricket Shelter: Modular Edible**

#### **Insect Farm, page 112**

*Client:* Randy Jayne Rosenberg  
*Design Firm:* Terreform ONE, Brooklyn, N.Y. · Mitchell Joachim, ASSOC. AIA, (co-founder and primary investigator); Jiachen Xu, Lissette Olivares, Cheto Castellano, Ivan Fuentealba, Sung Moon, Kamila Varela, Yucel Guven, Chloe Byrne, Miguel Lantigua-Inoa, AIA, Alex Colard, Melanie Fessel, Maria Aiolova, ASSOC. AIA, Vivian Kuan (project management); Felipe Molina, Matthew Tarpley (research assistants)  
*Consultant:* Seek Food · Robyn Shapiro  
*Fabricators:* Shandor Hassan, Christian Hamrick  
*Funding:* Art Works for Change; Terreform ONE  
*Photography:* Mitchell Joachim, Matthew Tarpley  
*Special Thanks:* David Stewart, Christian Hubert, Heather Lord, Scott Pobiner, New Lab, Brooklyn Navy Yard, GMD Shipyard, New York University Gallatin School of Individualized Study

### **BayArc: A Tidal Responsive Barrier, page 116**

*Design Firm:* Skidmore, Owings & Merrill, San Francisco · Craig Hartman, FAIA (concept and interdisciplinary leader); Mark Schwettmann, AIA, Alex Cruz, Ross Findly, David Kwon (project team)  
*Project Adviser:* Moffatt & Nichol  
*Drawings:* Skidmore, Owings & Merrill  
*Structural Engineer:* Mark Sarkisian, Eric Long, David Shook, Geoffrey Brunn  
*Marine Engineering Concept:* Moffatt & Nichol · Dilip Trivedi, Richard Dornhelm

### **The Tower at PNC Plaza, page 118**

*Client:* PNC Financial Services Group  
*Design Firm:* Gensler, San Francisco · Doug Gensler, AIA (principal-in-charge); Hao Ko, AIA (principal and architectural design director); Benedict Tranel, AIA (principal and technical director); Lisa Adkins, AIA (project manager); Anastasia Huggins, AIA, David Hall, Gunwook Nam, Alison Wilkinson, AIA, Daniel Nauman, AIA, Jorge Barrero, AIA, Ethel Macleod, Eugene Lee, Joe Chisholm,

Brent Van Gunten, AIA, Len Sciarra, Philip Kaefer, AIA, Joel McCullough, AIA, Rich Peake, Mariana Vaida, Jessica Yin, Yooju No (project team)  
*Rendering:* Space Matrix; Tangram 3DS  
*Construction Manager:* PJ Dick  
*Lighting Designer:* Fisher Marantz Stone  
*Structural and M/E/P Engineer:* BuroHappold  
*Sustainability Consultant:* Paladino & Co.  
*Photography:* Connie Zhou Photography

### **LELU Exit Sign, page 122**

*Client:* Architectural Safety Components  
*Design Firm:* Interloop—Architecture, Houston · Mark Wamble, Dawn Finley, AIA (design principals); Eric Hughes, Peter Muessig, Jack Mussett (project team)  
*Project Adviser:* Architectural Safety Components · Sam Youdal  
*Consultant:* Martin Co. · John Martin  
*Fabricators:* Moore Fabrication · Kerry Krumbek; Professionalized Products and Services · Jerry Huang; Southwest Electronic Energy Group · Alex Marin; Anodizing Graphics of Houston · Linda Sayers  
*Special Thanks:* Underwriters Laboratories · Abdul Ahad (investigating engineer)

### **Tally, page 124**

*Design Firm:* KieranTimberlake, Philadelphia · Roderick Bates, Stephanie Carlisle, Billie Faircloth, AIA, Elizabeth Friedlander, AIA, Ryan Welch (project team)  
*Development Partners:* Autodesk; Thinkstep (previously PE International)  
*Project Team:* Autodesk · Jonathan Rowe; Thinkstep · Heather Gaddoniex, Nick Santero, Maggie Wildnauer  
*Special Thanks:* Emma Stewart, Jacky Liang

### **Pulled Plaster Panels, page 128**

*Design Firm:* Young Projects, New York · Bryan Young, AIA (principal); Jon Cielo, AIA (project architect); Noah Marciniak, Samantha Eby, Nayoung Kim (project team)  
*Lighting Designer:* Architectural Lighting · Rick Shaver  
*Structural Engineer:* Silman · Nat Oppenheimer

*Electrical Engineer:* Engineering Solutions · John Ryan  
*Consultants:* Butter and Eggs · Judy Dunne (interiors); Taocon (general contractor); Engineering Solutions · John Ryan (M/E/P engineering)  
*Drawings:* Young Projects  
*Fabricators:* Kammetal (stainless steel screen); Balmer Architectural Mouldings  
*Photography:* Young Projects and Jon Cielo

### **Chicago Horizon, page 130**

*Client:* Chicago Architecture Biennial, Chicago Park District  
*Design Firm:* Ultramoderne, Providence, R.I. · Yasmin Vobis, Aaron Forrest, AIA, Emily Yen, ASSOC. AIA, Tida Osotsapa, Will Gant, Hua Gao, Ronak Hingarh (project team)  
*Design Structural Engineer:* Guy Nordenson and Associates · Brett Schneider  
*Structural Engineer of Record:* Thornton Tomasetti  
*Architect of Record:* Animate Architecture · Joe Lambke  
*Fabricator:* Nordic Structures  
*Funding:* BP; Chicago Park District; Chicago Architecture Biennial; Rhode Island School of Design; ReThink Wood; Nordic Structures  
*Photography:* Naho Kubota  
*Special Thanks:* Laura Briggs

### **Spray-On House, page 132**

*Design Firm:* Patrick Tighe Architecture, Los Angeles · Patrick Tighe, FAIA, Zachary Teixeria, Evelina Sausina, ASSOC. AIA, Risa Tsutsumi, Bran Arifin (project team)  
*Structural Engineer:* Nous Engineering · Matt Melnyk  
*Consultant:* Demilec  
*Fabricator:* Machineous  
*Life-Cycle Assessment:* Department of Civil and Environmental Engineering, School of Engineering, Stanford University  
*Prototype:* Built at Southern California Institute of Architecture (SCI-Arc), as part of the SCI-Arc Gallery Series  
*Drawings, Renderings, and Photography:* Courtesy Patrick Tighe Architecture  
*Special Thanks:* SCI-Arc team

**Vegas Altas Congress Center and Auditorium, page 134**

*Client:* Junta de Extremadura  
*Design Firm:* Pancorbo + de Villar + Chacón + Martín Robles, Madrid · Luis Pancorbo, José de Villar, Carlos Chacón, Inés Martín Robles (project team)  
*Drawings and Lighting Designer:* Luis Pancorbo, José de Villar, Carlos Chacón, Inés Martín Robles  
*Structural Engineer:* Mecanismo · Juan Rey, Pablo Vegas, Jacinto Ruiz Carmona  
*Electrical and Facilities Engineering:* Úrculo Ingenieros · Rafael Úrculo, Sergio Rodríguez  
*Acoustics:* Arau Acústica · Higiní Arau  
*Models:* Gilberto Ruiz  
*Construction:* Placonsa · Eloy Montero; Julio Oreja (site manager)  
*Ropes Installation:* Cotesi; Lastra & Zorrilla  
*Funding:* Junta de Extremadura  
*Cost:* €10,505,187 (\$11.7 million, approx.)  
*Photography:* Jesús Granada (building); Ignacio Bisbal Grandal (model)

**Nanobiome Building Skin, page 136**

*Design Firm:* Michael K Chen Architecture (MKCA), New York · Michael Chen, Justin Snider, AIA, Alan Tansey, Natasha Harper, Elena Hasbun, Braden Caldwell, AIA, Julian Anderson, AIA (project team)  
*Drawings:* MKCA  
*Landscape Architect:* Local Office Landscape Architecture · Walter Meyer, Jennifer Bolstad, AIA, Jenny Hindelang  
*Conservation Consultant:* State University of New York College of Environmental Science and Forestry, Department of Environmental and Forest Biology · Danilo Fernando (associate professor and graduate program director)  
*Façade and Structural Engineer:* Buro Happold  
*General Contractor:* IA Construction Management  
*Manufacturer:* Boston Valley Terra Cotta  
*Photography:* MKCA

**Infundibuliforms: Kinetic Tensile Surface Environments, page 138**

*Design Firms:* Matter Design, Boston · RVTR, Ann Arbor, Mich., and Toronto · University of Michigan  
*Primary Investigators:* Wes McGee, Geoffrey Thün, Kathy Velikov  
*Design Research Associate:* Daniel Tish  
*Fabrication Assistants:* Asa Peller, Dustin Brugman, Andrew Kremers, Andrew Wald, Iram Moreno Pinon  
*Wireless Sensing Adviser:* Jerome Lynch  
*Technical Partners:* Buckeye Polymers; Industrial Fabricating Systems; Beckhoff  
*Funding:* Taubman College of Architecture and Urban Planning; 2016 Research Through Making Program; University of Michigan Office of Research; Small Projects Grant  
*Photography:* Peter Smith

**Timber Waste Modular Unit ("TwMU"), page 140**

*Design Firm and Fabricator:* IKD, Boston · Yugon Kim, Tomomi Itakura (leaders); Yuki Kawae, Steven Hien, Brendan Casimir, David Morgan, Erin Kim, James Fan, Miguel Lorenzo Gumila (student research assistants)  
*Drawings:* IKD  
*Funding:* Heritage Museums & Gardens; Rhode Island School of Design  
*Photography:* IKD  
*Special Thanks:* Windy Hill Farm Sawmill

**Grove, page 141**

*Client:* Design Biennial Boston, Boston Society of Architects (BSA)  
*Design Firm and Fabricator:* GLD Architecture, Brookline, Mass. · Joel Lamere, Cynthia Gunadi, Sophia Chesrow, Grigori Enikolopov, Zain Karsan, Dohyun Lee, Elizabeth Galvez (project team)  
*Drawings:* GLD  
*Funding:* Design Biennial Boston; GLD  
*Photography:* Jane Messinger  
*Special Thanks:* Rose F. Kennedy Greenway Conservancy, Boston Art Commission, Pinkcomma Gallery, BSA Space, Boston Mayor's Office of New Urban Mechanics, David Costanza, Sixto Cordero, Caitlin Mueller, Steven O. Anderson, John Skibo, Matt Wagers, Chris Dewart, Christopher Gunadi

**Blooming Bamboo Home, page 142**

*Design Firm:* H&P Architects, Hanoi, Vietnam · Doan Thanh Ha, Tran Ngoc Phuong, Chu Kim Thinh, Erimescu Patricia, Nguyen Van Manh, Nguyen Khanh Hoa, Nguyen Quynh Trang, Tran Quoc Thang, Pham Hong Son, Hoang Dinh Toan, Pham Quang Thang, Nguyen Hai Hue, Nguyen Khac Phuoc (project team)  
*Fabricator:* H&P Architects  
*Photography:* Doan Thanh Ha  
*Cost:* \$2,500  
*Special Thanks:* Nguyen Tri Thanh