



Architecture Follows Nature: Biomimetic Principles for Innovative Design

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Biology influences design projects in many ways; the related discipline is known as biomimetics or biomimicry. The presentation will focus on architectural proposals that by finding inspiration for their development in nature processes, systems, functions and forms are able to co-exist with nature rather than exploit it. In my most recent book "Architecture Follow Nature. Biomimetic Principles for Innovative Design" I seek to instill a shift in thinking about the application of biological principles to design and architecture and focus on the analysis of how organisms have adapted to different environments and translates the learned principles into the built environment. In order to do so, I draw inspiration from the diversity of animal coverings, i.e., the skin.

Skin is a complex organ that performs a multitude of functions; namely, it serves as a link between the body and the environment. Similarly, building envelopes act as interfaces between their inhabitants and external elements. The resulting architectural designs illustrate an integrative methodology that allows architecture to follow nature.

Ilaria Mazzoleni an architect and the founder of IM Studio Milano/Los Angeles (www.imstudio.us). Her conceptual work has been published globally, and her built work can be found in Italy, California, and Ghana. Since 2005 she has been a full-time faculty member at the Southern California Institute of Architecture (SCI-Arc) in Los Angeles. Her professional and academic investigation relates to sustainable architecture on all scales of design with a research focus on biomimicry, where innovation in architecture and design is inspired by the processes and functions of nature.

Ilaria's work focuses on the analysis of how organisms have adapted to different environments, to translate the learned principles into the built environment. Often in collaboration with evolutionary biologist Dr. Shauna Price, she uses the animal kingdom as a source of inspiration, to instill a shift in thinking about the application of biological principles to design and architecture. Her book *Architecture Follows Nature - Biomimetic Principles for Innovative Design*, was published by CRC in March 2013 (<http://www.crcpress.com/product/isbn/9781466506077>).