

## INCOSE NSWG Community of Practice Webinar

Chair: George Studor — Co-chair: Curt McNamara  
nswg-info@incose.org <https://sites.google.com/site/incosenswg/>

**Friday, May 16, 2014 12:00 – 1:00 p.m. CST**

### Architecture Follows Nature: Biomimetic Principles for Innovative Design

Ilaria Mazzoleni, IM Studio Milano, Los Angeles, Southern California Institute of Architecture

#### Abstract

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: first, toward a focus on analyses of how organisms have adapted to different environments, and second, translation into a set of learned principles that we can use as we develop architectural environments. In order to do so, my students and I drew inspirations from the diversity of animal coverings, i.e., the skin, and applied them in 12 case studies for the design of building envelopes. I will present two projects and the methodology applied, and I will discuss the biomimetic design process that I have developed.

#### Biography

**Ilaria Mazzoleni** is an architect and the founder of IM Studio Milano in Los Angeles ([www.imstudio.us](http://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, and the translation of learned principles into built environments. 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>).

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**Contact George Studor or Curt McNamara at** [nswg-info@incose.org](mailto:nswg-info@incose.org)

**Join with us to influence SE processes to routinely consider: "What can we learn from Natural Systems?"**