

Eflena Baseta

Open Lecture #16
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Adaptive structures and material performance

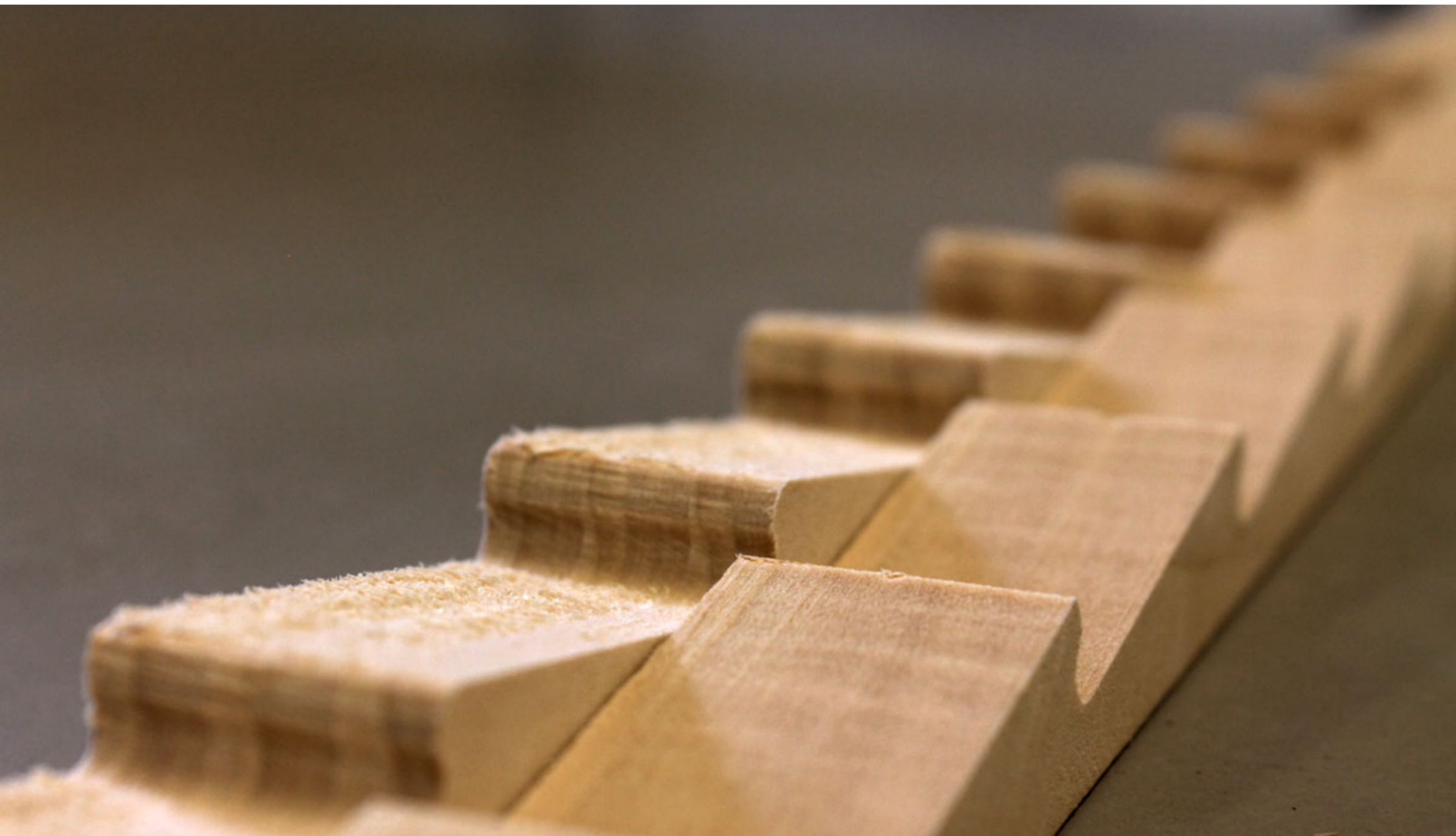


image: Eflena Baseta, dynamic wooden beams

What if architecture was responsive to its surroundings, like living beings, instead of being a static foreign body that cannot evolve with its environment? Which would be the design principles of a new kind of architecture in this framework and from which materials would it be made of? Material engineering is nowadays a growing field and scientists are not only able to invent new materials but also to discover new properties of existing ones. Design applications of such materialities have been mostly developed in academia in the form of demonstrative prototypes, that vary from wearables, to small scale artistic installations. In architecture, the few experimental projects that have been realized, focus mostly on adaptive envelope skins or room separators, but no self-standing adaptive structure has been developed due to the difficulties of scaling up material properties. This lecture will focus on experimental prototypes of adaptive structures based on material intelligence, eliminating the use of electronics and active mechanical parts.

Eflena Baseta is an architect engineer who studied in the National Technical University of Athens (NTUA), with a Master degree in Advanced Architecture from the Institute for Advanced Architecture of Catalonia (IAAC). Her interest lies in exploring material behaviors, physically and digitally, in order to create adaptive structures. Since 2014 Eflena is a partner of Noumena, an experimental architectural practice based in Barcelona. Moreover Eflena is part of "Reshape - Digital Craft Community" which focuses on Wearable Technology. During 2015-2016 she collaborated with IAAC as the coordinator of the Visiting Programs and tutor of the Global Summer School. She is currently a Marie Curie PhD candidate in the University of Applied Arts Vienna on the topic of "Dynamic Active Bending Structures."



Institute of Architecture and Media
Kronsgasse 5/3
iam.tugraz.at