

Automated Terrestrial and Planetary Construction By Contour Crafting

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Abstract: The nature of construction has remained intensely manual throughout recorded history. Unlike in manufacturing, the growth of automation in construction has been slow. A promising new automation approach is Contour Crafting (CC). Invented by the speaker, Contour Crafting is a mega-scale fabrication process aiming at automated on-site construction of whole structures as well as subcomponents. The potential of CC has become evident from experiments with various materials, geometries and scales. Using this process, a single building or a colony of buildings may be constructed automatically with all plumbing and electrical utilities imbedded in each; yet each building could have a different design which can include complex curved features. The technology also has astounding environmental and energy impacts. The entry level implication is especially profound for emergency shelter construction and low income housing. NASA is exploring possible application of CC in building on other planets. This new mode of construction will be one of the very few feasible approaches for building using in-situ material on planets such as Moon and Mars, which are being targeted for human colonization before the end of the century. CC has received international attention and could soon revolutionize the construction industry.

For more information please visit:

www.ContourCrafting.org