

Title: Pre-buildings as sheaves on the site of enclosures

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Abstract: Given an affine apartment with action of the affine Weyl group, we can look at compact convex subsets whose boundaries are reflection hyperplanes. The category of these “enclosures” has a natural Grothendieck topology, whose sheaves constitute a natural environment in which to consider spaces which look like buildings or subsets thereof. This provides a technical tool, of a rather combinatorial nature, in our ongoing work with Katzarkov, Noll and Pandit on the construction of pre-buildings and versal harmonic maps.