



Speaker: Julia Knight
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Friday, November 22, 2013
4:00 PM
229 Hayes-Healy Hall

Title: How hard is it to compute a floor function?

Abstract:

For the field of real numbers, we have the usual floor function, with range equal to the set of integers. If we expand the reals, adding the function 2_x , then for a positive integer x , 2_x is also a positive integer. Mourgues and Ressayre showed that every real closed field has an "integer part". The construction is complicated. Ressayre showed that every real closed exponential field has an "exponential integer part". This construction is even more complicated. The talk will describe results on the complexity of these constructions, from the point of view of computable structure theory.