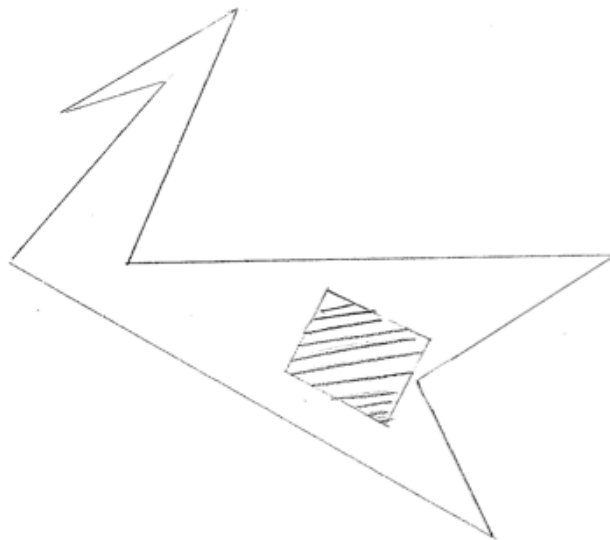


# The SUMO Speaker Series for Undergraduates

*(food from Pizza Chicago)*  
Wednesday, April 21  
4:40-5:30, room 380C

## The Art Gallery Problem

Amy Pang



Abstract: Imagine you are the curator of an art gallery with the above floor plan. How many (stationary) CCTV cameras do you need so they can see all points of the gallery, assuming they each have a 360 degree view? Chvatal proved that  $\lceil n/3 \rceil$  cameras are sufficient to guard a  $n$ -sided polygonal gallery without holes. I'll reproduce Fisk's proof of this result, using graph colourings, then discuss how to generalise it for galleries with holes like the one shown.

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